

Graf



TSG – Instruction Manual

Traversing Resharpening Device, pneumatic lift-off

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Superior Performance



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Instruction manual TSG; pneumatic lift-off

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Premium Swiss Quality



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EC Declaration of incorporation

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Rapperswil,

Graf + Cie AG declare that the product:

Bezeichnung: Traversing Resharpening Device, pneumatic lift-off

Typ: TSG

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

Responsible for the documentation: Quality Manager
Graf + Cie AG, Bildaustrasse 6, 8640 Rapperswil, Switzerland

Graf + Cie AG

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1. Safety

1. Safety

1.1 Symbols in the document

Example of a note on safety

<p>Gefahr</p> <p>1</p> <p>Bei eingeschaltetem Hauptschalter könnte die Maschine jederzeit in Bewegung gesetzt werden Verletzungen an Händen können die Folgen sein.</p> <p>2</p> <p>Der Hauptschalter ist unbedingt aus zu schalten</p> <p>3</p>  	<p>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".</p>
<p>1 Signal word</p> <p>"Danger", "Warning", "Caution", "Important" classify the safety precautions.</p>	<p>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</p>
<p>2 Risk</p> <p>Description of the risk situation The potential consequences of the damage are also described. The description of the risk involved is emphasised by a symbol.</p>	<p>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.</p>
<p>3 Directions for avoiding danger</p> <p>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.</p>	<p>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.</p> <p>IMPORTANT Low level of danger is used when there is a risk of slight damage to property.</p>

Danger symbols



General hazard area



Risk of 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

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

Symbols in the Document



The page indicated refers to the currently selected chapter.



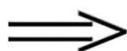
More information on this subject can be found on the page indicated



Incorrect application, not permissible



Correct application, OK



Outcome. For example, after an operation step

1.2 Legal stipulations

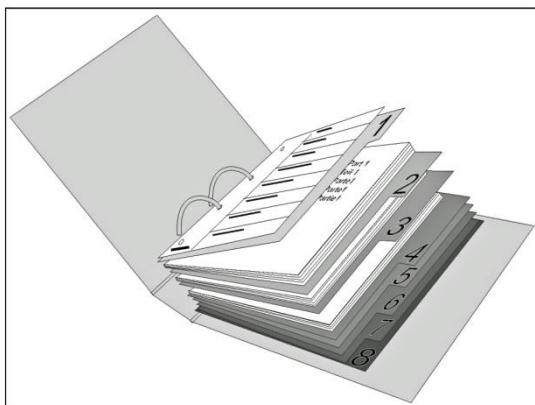
1.2.1 Liability

Graf has issued this instruction manual to the best of its knowledge and belief. Graf cannot accept any liability for possible editorial deficiencies and errors within this instruction manual. Graf reserves the right to implement changes at any time in the instruction manual or on the device described therein without prior advice. No part of this instruction manual 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 German edition is relevant for the contents of this instruction manual.

1.3 General notes on safety

1.3.1 Safety precautions

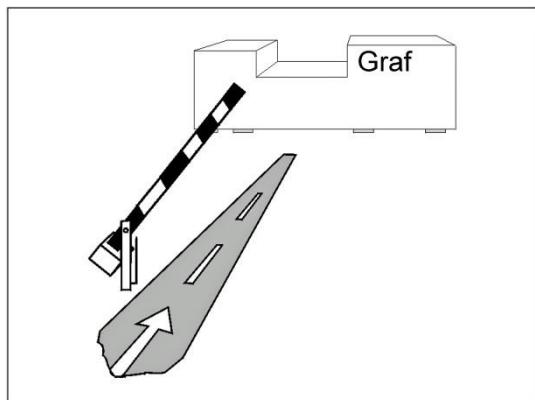
Availability of the operating instructions



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

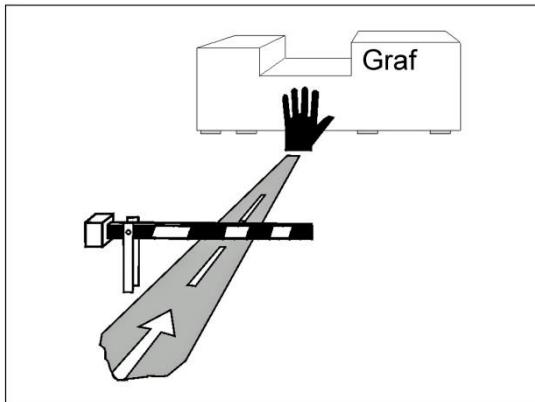
Only those who have access to correct information can work safely and efficiently.

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.

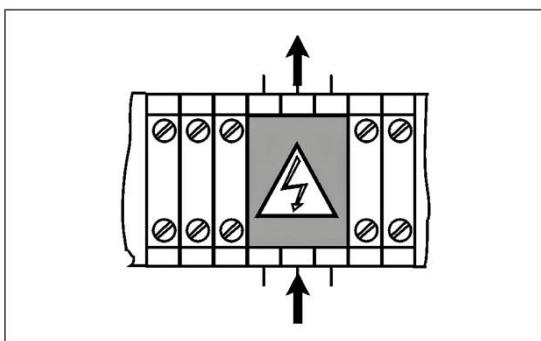
Work on electric components

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.

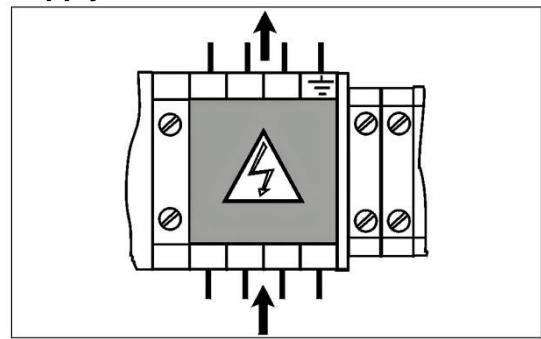
In order to guarantee correct operating process the sensors must not be actuated during normal running.

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

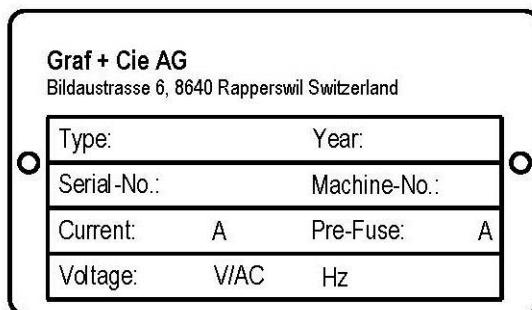
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Fax +41-(0)55-221-7233

1.4.1 Name plate

The information contained in this instruction manual refers to the Traversing Resharpening Device TSG with the following particulars:

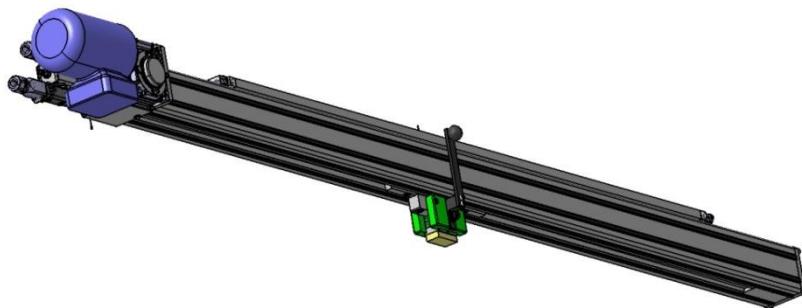


- Machine type
- Year of make
- Serial number
- Machine number
- Current (Ampere)
- Pre-Fuse (Ampere)
- Voltage (Volt/Alternating current)
- Hertz

The above details have to be indicated on possible enquiries for spare parts.

1.5 Machine description

1.5.1 Traversing Resharpening Device TSG



Graf + Cie AG have manufactured a device for the activating of the tooth points of metallic card clothings: the Traversing Resharpening Device TSG, referred to in this manual as 'device'.

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

1.5.2 Intended application

The intended purpose of the TSG is for the activating of the tooth points of metallic card clothings. The TSG can be used for the activating of newly installed cylinder and doffer clothings as well as for the resharpening of slightly worn metallic card clothings.

The concentricity and straightness of the basic roller have to correspond to the tolerances indicated by Graf:

- Concentricity within 2/100 mm
- Straightness within 4/100 mm

The TSG must be used in combination with the card-specific supports supplied by Graf only. The supports and the TSG have been designed to assure the grinding stone being set tangentially to the clothing carrier of the card in question.

Any application exceeding the intended application is considered improper. Graf cannot be held responsible for possible damage caused by improper application; the respective risk lays solely with the operator.

1.6 Technical data

Working width of card	40"	51"	60"
Power supply / frequency	230V	50/60Hz	1P+N+E
Current consumption		0.37 A	
Nominal rating		0.09 kW	
Fuse protection		10 A	
Weight of control box		9 kg	
Weight of transport truck		18 kg	
Total weight of grinding unit	21 kg	22 kg	23 kg
Grinding pressure of grinding stone		1 Newton	
Traversing speed cylinder		6 m/min.	
Traversing speed doffer		1 m/min.	
Compressed air supply		4 – 8 bar	

1.7 Emissions

Noise nuisance < 70 dB

1.8 Commissioning

Machines manufactured by Graf + Cie AG must always be assembled and commissioned by Graf's own staff.

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 when it is idle 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 resharpening device is governed by national and regional laws. For detailed information on the correct disposal please contact the local authorities responsible.

2. Transportation / Installation

2. Transportation / Installation

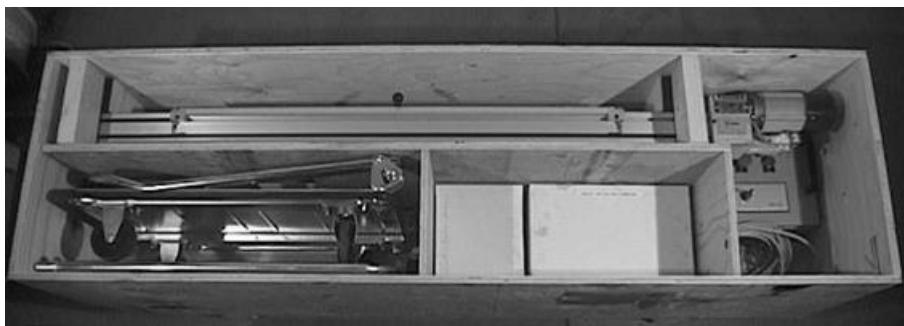
2.1 Transportation / Storage

The TSG is supplied ready for use, packed into a box. The mechanical and electrical part are separated. We recommend to always store the TSG in the original box in a dry and dust free environment. Transportation to the card is by means of the transport truck supplied.

IMPORTANT!

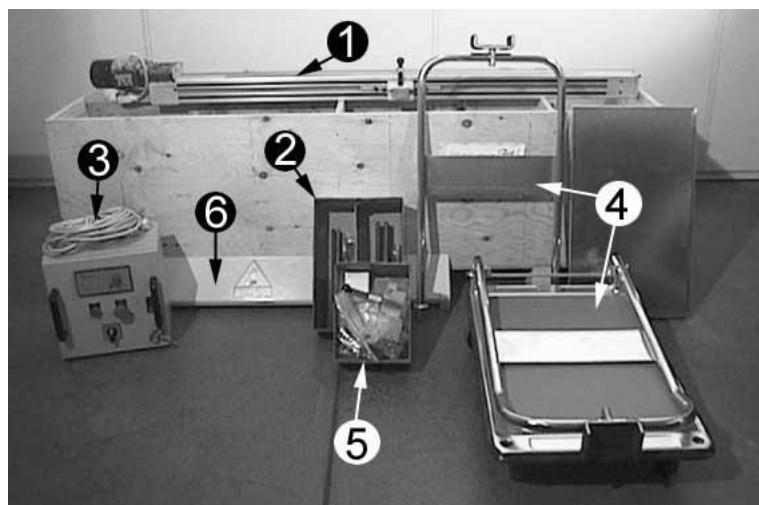


When opening the case initially, remove nails from wooden case permanently!



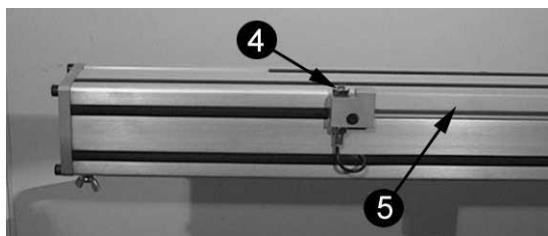
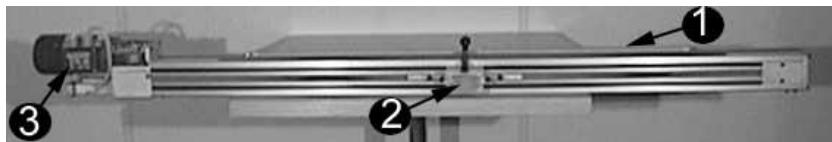
2.2 Scope of delivery

- Resharpening device (1)
- Supports for cylinder and doffer (2) (depending on type of card)
- Control unit (3)
- Transport truck (4)
- 1 pair of feed slides, regenerating plate, tools, parts for wear and tear (5)
- Safety cover (6)



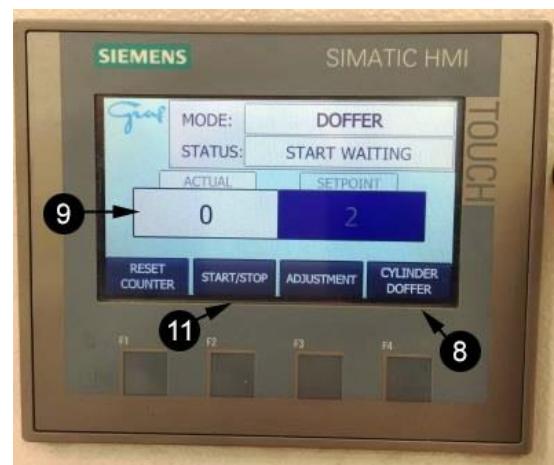
2.3 Description of equipment

Traversing Resharpening device



- Grinding unit (1)
- Grinding head (2)
- Gear motor (3)
- Inductive limit switch (4)
- Distance rod (5)

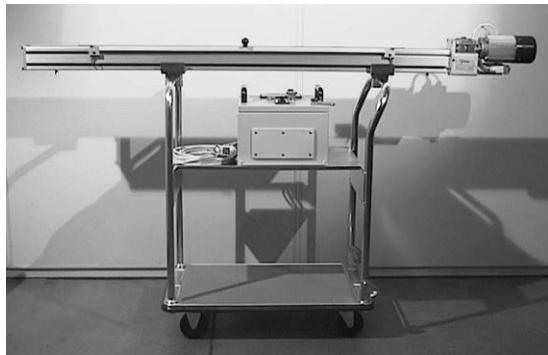
Control Unit



- Main switch (6)
- EMERGENCY SWITCH (7)
- Speed control switch (8)
- Counter (traversing movements) (9)
- Cable with plug (10)
- Start switch (11)



Transport Truck with TSG



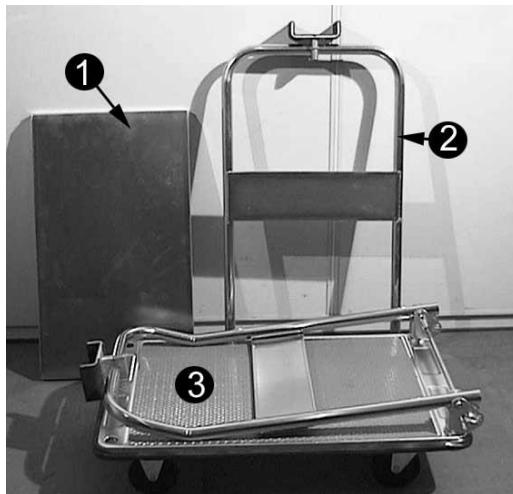
For the transportation of the device and the control unit to the card

3. Installation

3. Installation

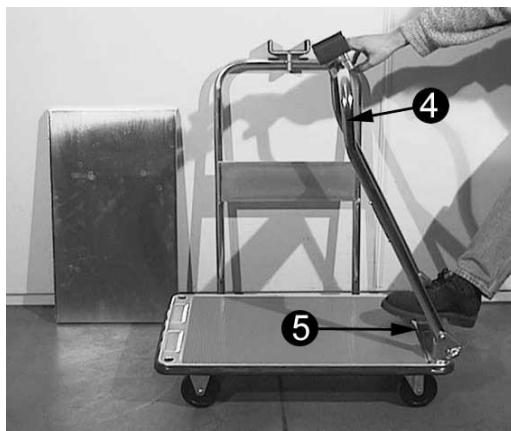
3.1 Construction of the transport truck

Assembly of transport truck 1



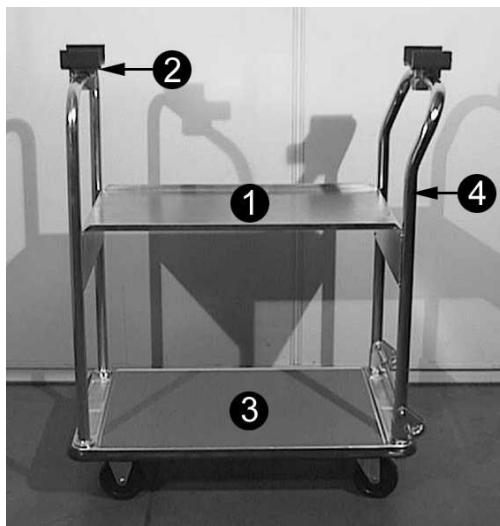
- The transport truck consists of 3 parts:
Plate (1)
Handle (2)
Support (3)

Assembly of transport truck 2



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

Assembly of transport truck 3



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

3.2 Preparation of the card

- The card has to completely run-out to assure that no fibres remain in the working zone



With the main switch in the 'on'-position, the card can be put into operation at any time. Fatal and incurable injuries can be the consequence.



- The card has to be at a complete stand-still following the running-out (main switch to be turned off and secured with lock)

- Remove possible fibre tufts from the attachment area of the TSG on the card.
- Remove fibre accumulations stuck to the edge of the clothing carrier.



Only expose openings on the card that are required for the grinding process (guide plates of stationary flats; protective covers)

3.3 Installation of the TSG

The installation of the TSG requires special supports for each individual type of card for cylinder and doffer.

IMPORTANT!

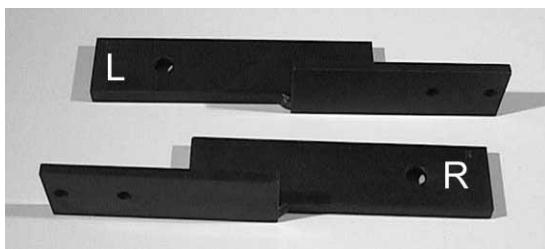
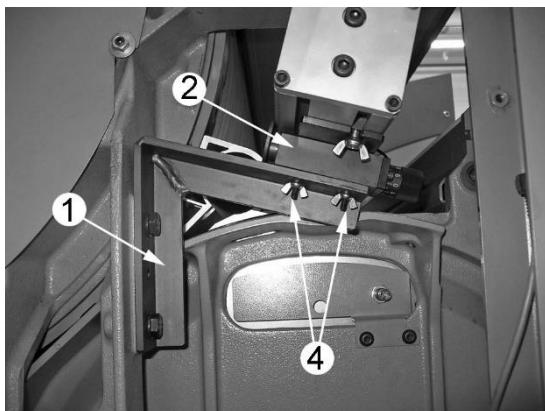


Only the card-specific supports supplied by Graf assure the correct position for resharpening device.

3.4 List of supports for all types of cards, cylinder and doffer

Art.-No. Group		Art. left side	Art. right side
00602383	Cylinder Rieter C60 / C70	00603411	00603412
00602384	Doffer Rieter C60 / C70	00603413	00603414
00604500	Cylinder Rieter C4 / C10 / C50 / C51	00604505	00604502
00604525	Doffer Rieter C4 / C10 / C50 / C51	00603306	00603307
00604526	Cylinder Rieter C1, C1/1-3, Lakshmi LC100, LC300 and LC300A	00603303	00603305
00604540	Doffer Rieter C1/1-3, Lakshmi LC100, LC300, LC300A and LC333	00603319	00603320
00604941	Cylinder Lakshmi LC333	00602441	00602442
00604686	Doffer Rieter C1	00603377	00603378
00604528	Cylinder Trützschler DK 715 - 903 Zhengzhou FA 224, FA225, China FA 212A and FA 218C	00603308 00603308	00603309 00603309
00604529	Doffer Trützschler DK 715 - 903 Zhengzhou FA 224, FA225, China FA 212A and FA 218C	00602314 00602314	00602315 00602315
00604537	Cylinder and Doffer Marzoli C40 - CX400	00602316	00602317
00604538	Cylinder Crosrol MK4 / MK5 / MK 6 / MK 7	00602318	00602318
00604539	Doffer Crosrol MK4 / MK5 / MK 6 / MK 7	00602319	00602320
00604550	Cylinder and Doffer for Rosique, Textima and Various old cards	00603327 00603327	00603328 00603328
00604567	Cylinder and Doffer for Bonino cards	00602324	00602325
00604608	Cylinder for 60" SSI KU12	00603350	00603349
00604609	Doffer for 60" SSI KU12	00603351	00603351
00604922	Cylinder for Ming Cheng MC410	00603327	00303328
00604922I	Doffer for Ming Cheng MC410	00603327	00302227
00604641	Cylinder Platt 600	00604646	00604645
00604642	Doffer Platt 600	00604648	00604647
00604643	Cylinder for Trützschler DK 700 and 710	00603373	00603373
00604644	Doffer for Trützschler DK 700 and 710	00602363	00602364
00604666	Cylinder for Falubaz CZ 693 and CZ 693-A	00604663	00604664
00604698	Cylinder and Doffer for Qingdao FA 201, FA 203 A, FA 231 A and FA 201B - cards	00603327 00603327	00603328 00603328
00604700	Cylinder Marzoli C501	00603383	00603382
00604701	Doffer Marzoli C501	00603385	00603384
00604698I	Cylinder and Doffer for Qingdao A186	00603327	00603328
00604842	Cylinder and Doffer for Trützschler TC03 - TC 15	L	R
00604846	Cylinder for Marzoli C601	00602448	00602447
00604847	Doffer Marzoli C601	00602446	00602445

3.5 Installation of supports of the card

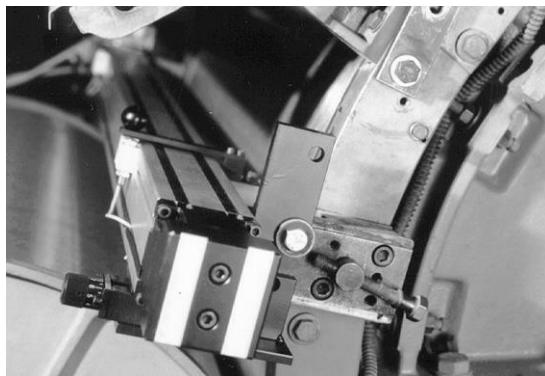


- Attach supports (1) to card frame (please refer to card specific pictures in chapter 6)
- Place feed slide (2) on the supports (1) (positioning screws to be placed in the respective bore holes).
- Attach feed slide (2) by lightly fastening wing nuts (4).
- The supports for the various types of cards are marked with the abbreviations L for left and R for right.

Attention!

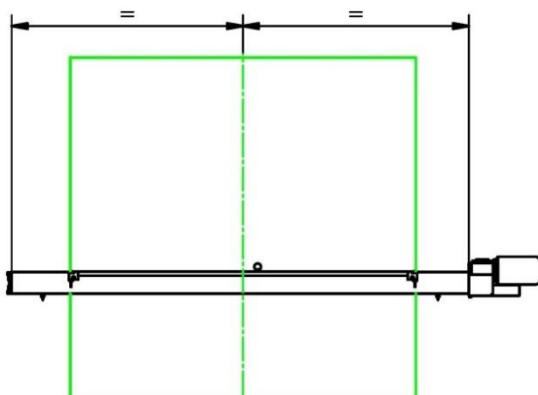
Before placing the device on the feed slide, pull back lever (3) to avoid the grinding stone touching the clothing. Move feed slide to the outermost position.

3.6 Installation of resharpening device (TSG) to the supports



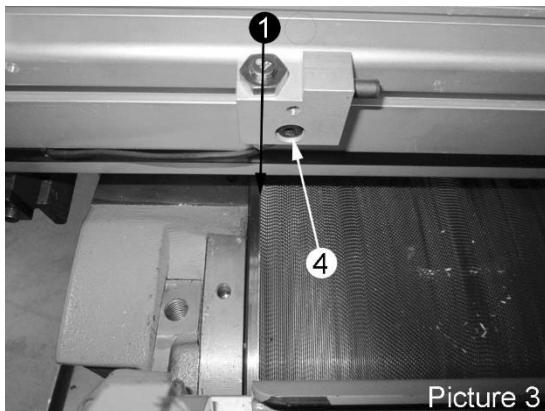
- Resharpening device (TSG) to be placed on the feed slide by two persons to assure the position of the unit at the correct angle to the clothed roller (cylinder or doffer).
- Provisionally fasten wing nuts for the attachment of the device.

3.7 Positioning of the resharpening device (TSG) on the card



Aluminium profile of the resharpening device (TSG) to be centred to the cylinder by two persons; fasten wing nuts to attach the resharpening device (TSG) (see picture 4).

3.8 Setting of the proximity switch (grinding passage)



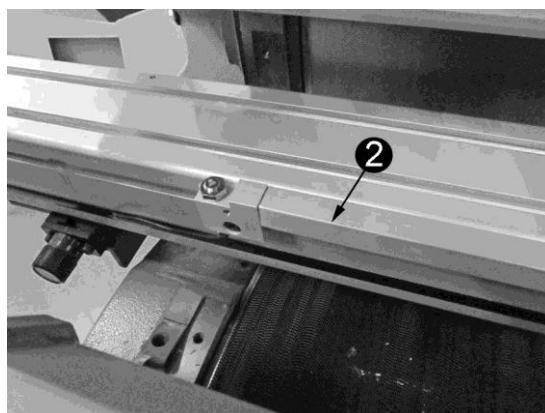
- Adjust the proximity switch (1) on the drive motor side (TSG) to the border wire of cylinder or doffer as shown in picture 3 and attach proximity switch with fastening screw (4).

Distance rods

Type of machine	Length mm	Article-No.
Rieter 40" C4 bis C51	920	00604516
Rieter 40" C1 bis C1/3 Lakshmi LC 100 bis LC 363	945	00604516V
Various Cards 40"	960	00604516I
Zhengzhou JWF 1204-120 / 1206-120	1135	00604516VIII
Crosrol MK 8	1165	00604516IX
Trützschler 51" TC11 / TC15 Jingwei Qingdao JWF 1213 Jinsheng Saurer JSC 326	1240	00604516VI
Saurer SC6	1315	00604516X
Rieter 60"	1425	00604516VII
Various Cards 60" Zhengzhou JWF 1208-150 Bonino CC 105 Jingwei Qingdao JWF 1209 Marzoli C 701	1460	00604516II

IMPORTANT!

Select distance rod (2) depending on type of card and insert it between the two proximity switches. Position proximity switch on opposite side against the distance rod and fasten it.



- The distance rod (2) defines the path of the grinding stone!

3.9 Verification / trial run of the resharpening device (TSG) and the grinding path



Setting and positioning of the grinding path only with card at a standstill ;
 see para. 3.2.

3.10 Connection of the control unit



Arrange the cables to be properly positioned to prevent tripping. The connection cables between the control box and the resharpening device have to be correctly placed and must not be crushed or damaged in any other way.



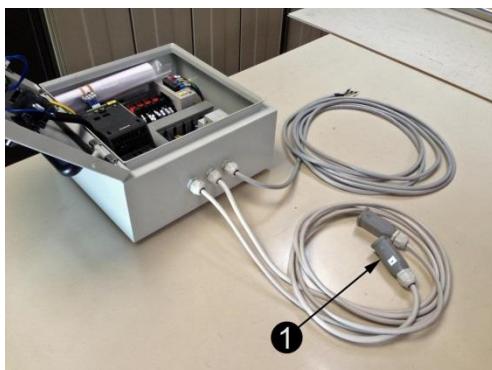
DANGER!



A loose cable with connection diagram is supplied or the power supply for the control unit (see attachment). The plug required locally is not part of the scope of delivery.



The connecting of the loose cable supplied and the locally required plug according to the connection diagram must be carried out by an expert / electrician.



The power connection between the control unit and the grinding device is effected by means of the 2 special square plugs (1) which are included in the scope of delivery and installed.



- Arrange electrical connection between control unit and the drive motor.

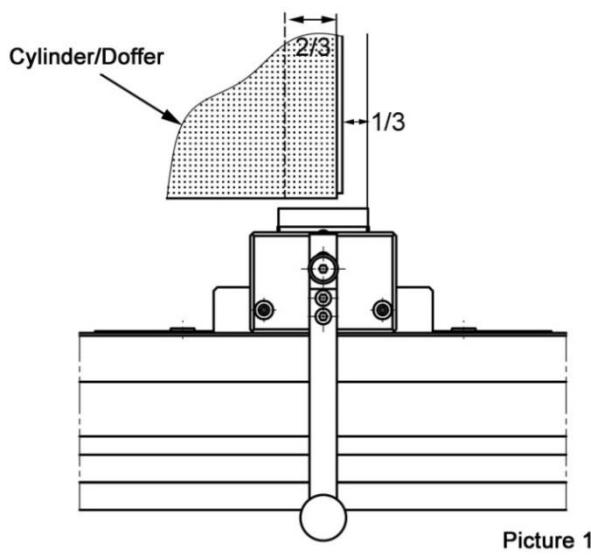


- During the automatic run of the grinding path, both hands of the operator must be placed on the control unit.
- The start button (3) triggers the grinding process.



- The pneumatic connection is made via a compressed air hose which has a connection suitable for the TSG on one side. The other side of the line must be equipped with a plug which is not part of the scope of delivery.

3.11 Verification of the point of change in direction of the grinding stone

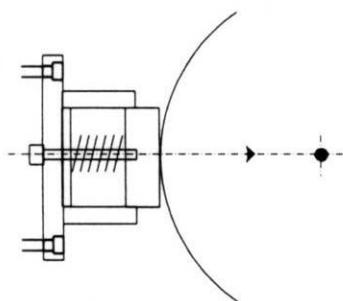


- The grinding stone may exceed the width of the clothing by no more than $\frac{1}{3}$ of its own width. This prevents the danger of the tilting of the grinding head.

IMPORTANT!

Should the grinding path continue beyond $\frac{1}{3}$ of the width of the grinding stone across the border wire of the roller to be ground (left and right) the distance rod (card-specific) needs to be checked (☞ see point 3.8) and the position of the resharpening device has to be verified (☞ see point 3.7).

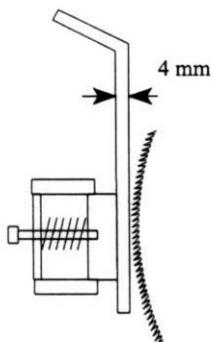
3.12 Setting of the grinding stone to the clothing



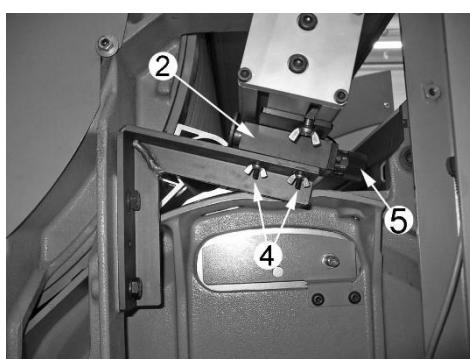
Caution!

- The grinding stone must be aligned tangentially in regard to the clothing, so that the middle of the stone is in contact with the clothing.
- The correct selection of supports and installation, depending on type of card, assures the proper positioning of the grinding stone to the clothing.

3.13 Setting of the grinding stone to the clothing (grinding pressure)



- Pull back the lever of the grinding stone and use the setting screws of the supports (5) and the 4mm setting gauge to set the grinding stone parallel to the cylinder on both sides. Pressing of button (6) results in the grinding stone returning to the other side in inactive position. Fasten the wing nuts (4) to secure the resharpening device to the supports (2).



- When the lever is released (pressed) the pressure of the grinding stone is correctly set for the grinding process

Attention!

Once the resharpening device (TSG) is installed according to our instructions and the verification and trial run have been carried out, the grinding of the clothings can be commenced.
Please pay attention now to the general information on grinding  as per point 3.14.

3.14 General information on resharpening

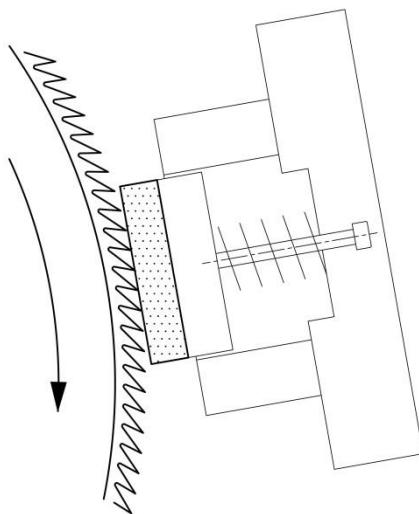


For the installation of the TSG only the intended grinding opening must be opened.



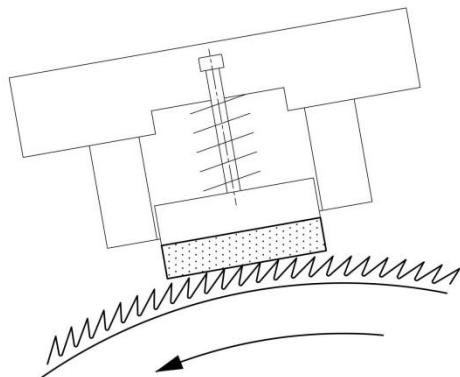
Cylinder and doffer wires are always resharpened in working sense of direction of the rollers.

Cylinder



If the card is left assembled with only the opening for the grinding exposed, we recommend the grinding of the cylinder clothing in working sense of direction with the necessary care; this to achieve optimum grinding results.

Doffer



If the card is left assembled with only the opening for the grinding exposed, we recommend the grinding of the doffer clothing in working sense of direction with the necessary care; this to achieve optimum grinding results.

IMPORTANT! The speed of the doffer must not be less than 40 rpm!!

3.15 Modes of operation / Control unit



- Prior to initiating the grinding process the speed selector (1) has to be set to ,doffer' or ,cylinder', depending on application. The two different speeds have been pre-set in our works and do not need to be adjusted.
- The number of traversing movements depends on the degree of wear of the clothing; it can be monitored by means of the traverse-counter (2). The reset button (3) is applied to set the counter to zero.
- With the start button (5) the TSG starts traversing and stops automatically after reaching the set number.
- With the stop button (5), the still running process can be interrupted. The next end position is approached while the process is running.
- Pressing of button (6) results in the grinding stone returning to the other side in inactive position.

3.16 Grinding process



Put up a well visible safety barrier around the card on which maintenance and grinding work will be executed.

Protective glasses have to be worn during the grinding process and both hands have to be kept outside the danger area.



Check:-

- all screws are fastened and all tools and loose items are safely outside the danger area of the card
- all protective covers are in place
- doors of the card are closed

Attention!

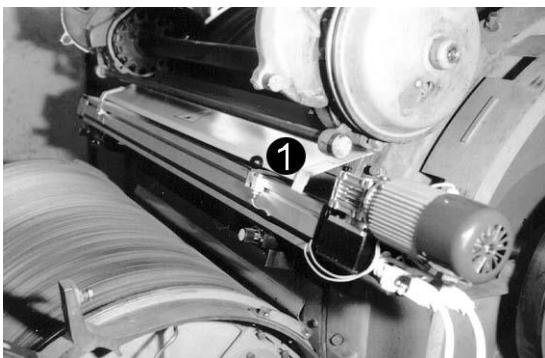
Installation of the resharpening device TSG according to

see para. 3.3 (installation of TSG).

Trial run of TSG / grinding passage must have been effected according to

see para. 3.11.

3.17 Resharpening of cylinder and doffer clothings



DANGER!



- Attach protective cover (1) to the resharpening device (TSG)

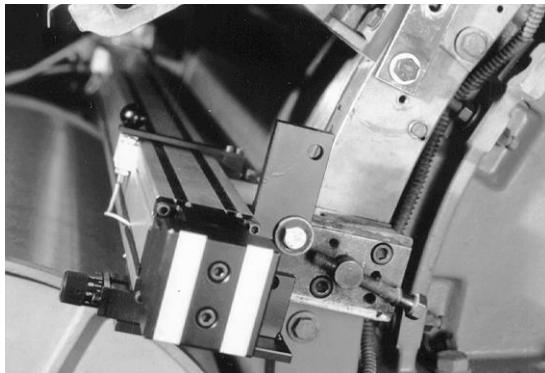


- Connect control unit to mains supply
- Turn on main switch (4) on control unit
- Connect compressed air to the TSG
- Set turn switch (1) to position of the element to be resharpened, either doffer or cylinder.

IMPORTANT!

Verify distance (4 mm) between grinding stone and card clothing as described in para. 3.13 to avoid damage to the clothing.

- Turn on main switch on card and accelerate card to working speed according to the instructions of the card manufacturer (program 'grinding of cylinder' or 'grinding of doffer').



- Enter and confirm the number of passages by touching (2) SETPOINT on the touch display ( see 3.15).
- Start up resharpening device (TSG) by touching START/STOP (5) on the touch display ( see 3.15).

Caution!



- Sparks start flying
- Run resharpening process for number of passages required ( refer to para. 3.18 for recommended numbers).
- Remove grinding stone from the clothing when it is positioned on either the right- or left-hand side by pulling lever (3).
- Press red stop button (6) when grinding head is positioned on either right- or left-hand side to stop the traversing movement.
- Set main switch on control unit of resharpening device (TSG) to ,0'.
- Decelerate and turn off card and secure against unauthorized restarting (secure main switch with lock).

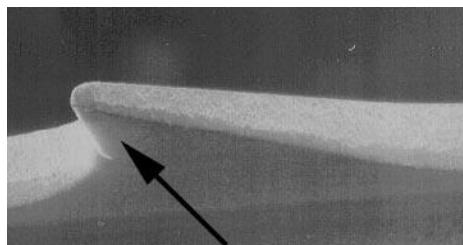
IMPORTANT!

Check result of resharpening with the magnifying glass supplied  see para. 3.18; depending on the result, further grinding passages may have to be done.

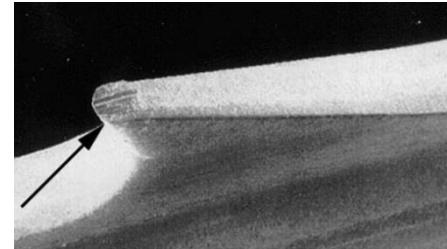
3.18 Number of passages (Cylinder and Doffer)

	Number of Passages:
Initial activating of cylinder	1 – (2)
Initial activating of Doffer	3 – 6
1. Resharpening service cylinder	4 – 6
1. Resharpening service doffer	4 – 6
2. Resharpening service cylinder	8 – 12
2. Resharpening service doffer	4 – 6
3. Resharpening service cylinder	15 – 25
3. Resharpening service doffer	4 – 6
4. Resharpening service cylinder	30 – 50
4. Resharpening service doffer	4 – 6

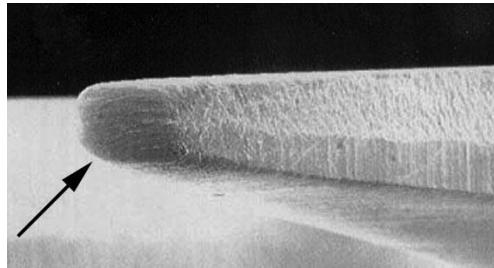
- The number of passages stated in above table are guide values, based on our own experience.
- A microscope should be used in all cases to evaluate the condition of the resharpened clothing. On a correctly resharpened clothing grinding traces will be visible throughout the entire landing as far as the carding edge (see picture (1) cylinder clothing and picture (2) doffer clothing)
- A new, correctly mounted cylinder wire can be equalised with one however no more than 2 passages.
- A new, correctly mounted doffer clothing has to be activated with a minimum of 3 - 6 passages. 100% of the tooth points have to be activated
- In case of a substantially worn clothing (4th resharpening service) up to 100 passages may be required
- The traversing motion of the grinding stone from left to right or from right to left is considered one passage



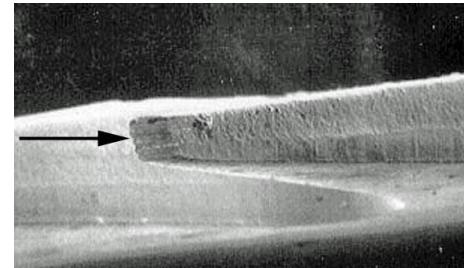
Worn cylinder clothing



Resharpened cylinder clothing (1)



Worn doffer clothing



Resharpened doffer clothing (2)

3.19 Further steps following the resharpening

- The clothings do not require any further treatment following the resharpening
- Check settings of the carding elements to each other and adjust if necessary:

Flat clothings – Cylinder

Licker in – Cylinder

Cylinder – Doffer

3.20 Dismounting of the resharpening device (TSG)

- Dismount resharpening device (TSG) once resharpening is completed and place it on the transport truck for further use.
- For protection against dust repack the TSG in the original transport box and store it in the workshop if it is not going to be used for time being.

3.21 What to do in case of dysfunction

In case of possible dysfunction please also pay attention to the display on the card and follow the instructions in the manual of the card.

IMPORTANT!



In case of malfunction of the grinding device (TSG) damage to the card clothing is possible!

In case of all malfunctions proceed as follows:



1. Press STOPP button (emergency-off button on the resharpening device TSG).



2. Switch off main switch of grinding device (TSG).
3. Switch off drive motor of card (emergency-off if available).
4. Secure resharpening device (TSG) and card against unauthorized re-starting.
5. Inform Graf agent / service engineer / electrician.

4. Service / Maintenance

4. Service / Maintenance

4.1 General

The drive motor as well as the gear are permanently lubricated and do not require any maintenance.

IMPORTANT!

The grinding head must be kept clean at all times to ensure free movement of the grinding stone. If the edge of the grinding stone is pressed lightly it should retract easily in the guide. If not => cleaning!

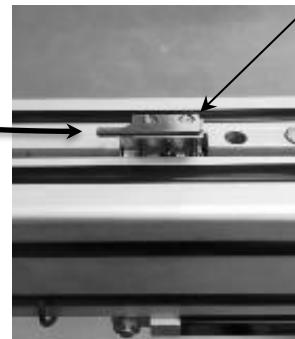
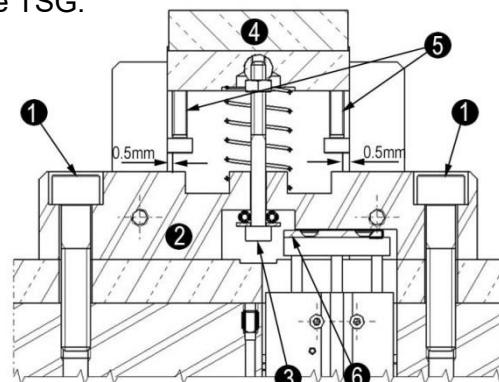
Should the grinding stone become soiled it has to be removed and cleaned (☞ see point 4.2). The most suitable agent is cleaning petrol. Following the resharpening of 5 – 7 cards it is necessary to dress the grinding stone (☞ please refer to para. 4.4).

Worn grinding stones need to be replaced.

There is no further maintenance required.

4.2 Replacement of the grinding stone (picture 5)

- Remove screws (1)
- Lift off support (2)
- Remove screws (3) and grinding stone
- Replace grinding stone
- Slide grinding stone together with the spring into support (2) and slightly fasten screw (3)
- Check lateral movement of approx. 0.5mm on both side of the grinding stone (4). The initial adjustment can be altered by pressing the two screws (5)
- At time of assembly attention needs to be paid that the heel of the cover plate (6) of the cylinder is properly inserted into the groove of the holder of the grinding stone. If the assembly is not carried out correctly the error message, **grinding stone not in position** will appear in the display of the TSG.



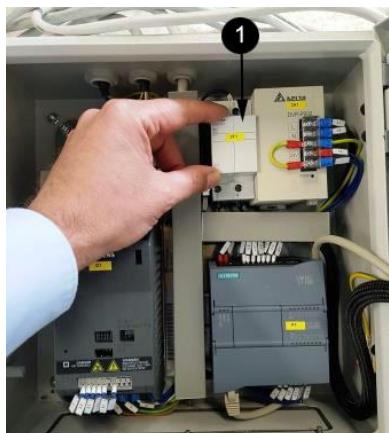
4.3 Changing of fuses / batteries

Caution!



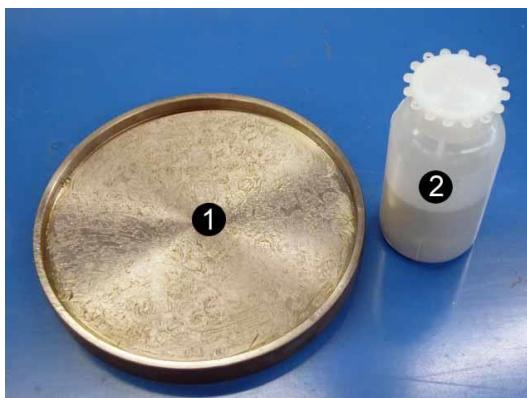
Disconnect mains supply prior to opening of the control unit.

Changing of fuses in the control unit:



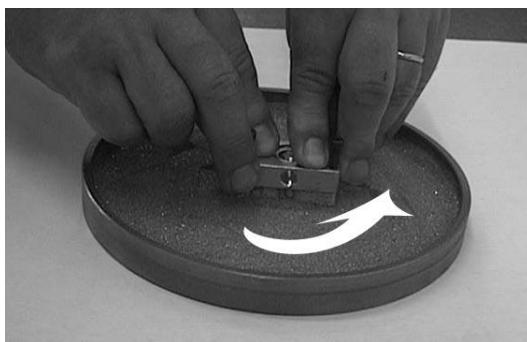
- Open the control unit and check fuse (1) for possible defect and replace as illustrated if necessary.

4.4 Regenerating of the grinding stone



Scope of delivery:

- Regenerating plate (1)
Art.-No. 006604580
- Silicon powder in Plastic bottle (2)
Art.-No. 81V223104



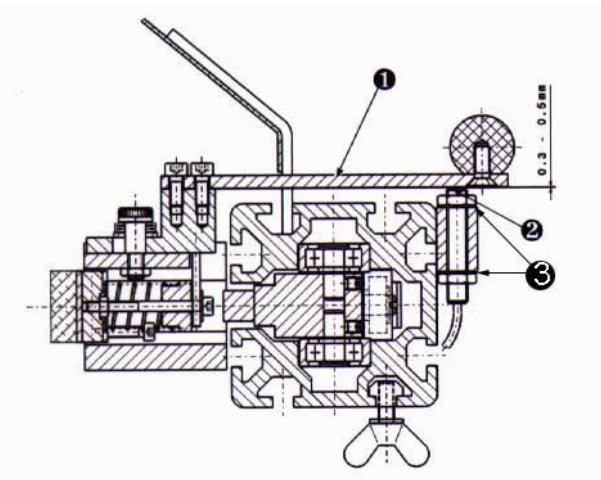
Procedure:

- Remove grinding stone as described under  point 4.2.
- Evenly distribute silicon powder in the regenerating plate (approx. 1 mm deep)
- Move grinding stone with moderate pressure in circular motion
- Check grinding stone for evenness
- Repeat procedure until grinding stone is plane
- Use pressured air to clean the grinding stone
- Install grinding stone as described  point 4.2

4.5 Trouble shooting

4.6 Distance between grinding head and tension lever

Control:



- In case the grinding head does not reverse after passing the initiator (2), the distance between the initiator and the tension lever (1) needs to be checked and adjusted if necessary (0.3 - 0.5 mm).

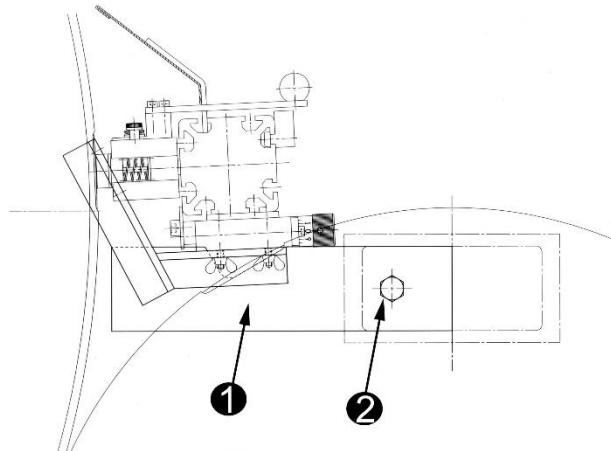
Adjustment:

The proximity switch (2) can be set to 0.3 to 0.5 mm with the nuts (3).

5. Specific types of cards

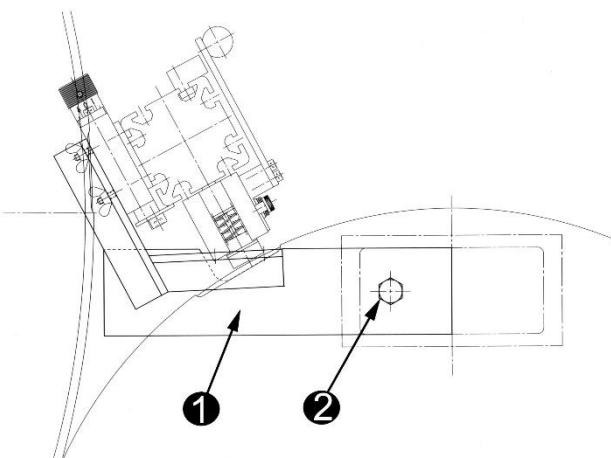
5. Specific types of cards

5.1 Bonino / Cylinder



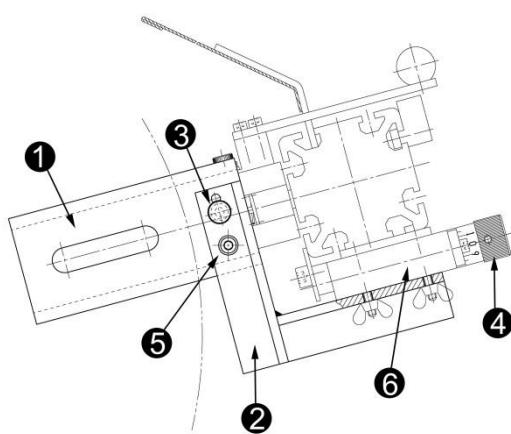
- Remove grinding brackets from the card
- Position the supports (1), Art.-No. 00604567 (pair) (support left, Art.-No. 00602324; support right, Art.-No. 00602325) in the seating of the grinding bracket of the doffer.
- Use screw (2) to attach support (1)
 Operation as per chapter 3!

5.1.1 Bonino / Doffer



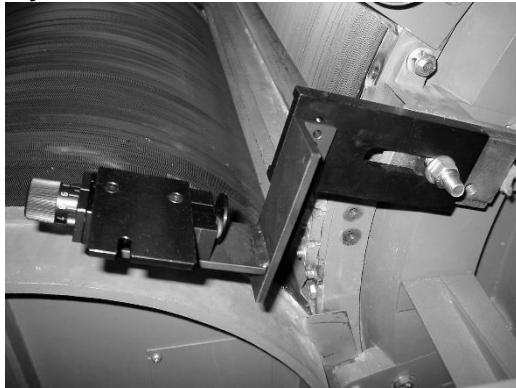
- Remove grinding brackets from the card
- Position the supports (1), Art.-No. 00604567 (pair) (support left, Art.-No. 00602324; support right, Art.-No. 00602325) in the seating of the grinding bracket of the doffer.
- Use screw (2) to attach support (1)
 Operation as per chapter 3!

5.2 China FA201 – FA231A – A186 Cylinder / Doffer

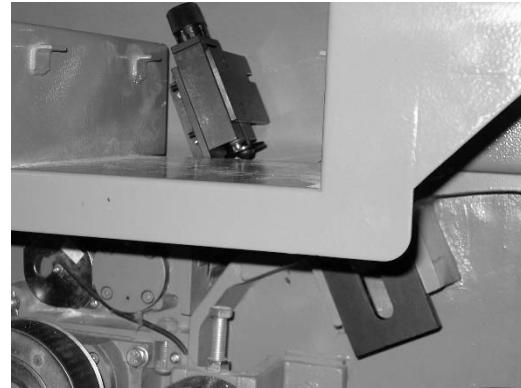


- The guide (1) is required for the attachment to the guide of the grinding bearing.
- Supports Art. 00604698 (2) (pair)
- Support left Art. 00603327 Support right Art 00603328 are supplied ex works in pivoting execution.
- The ideal tangential position of the grinding stone has to be set by pivoting with screw (5) being the pivot point (see para. 3.12).
- Once the ideal position is defined, the positioning hole (3) is drilled through and equipped with the pins supplied.

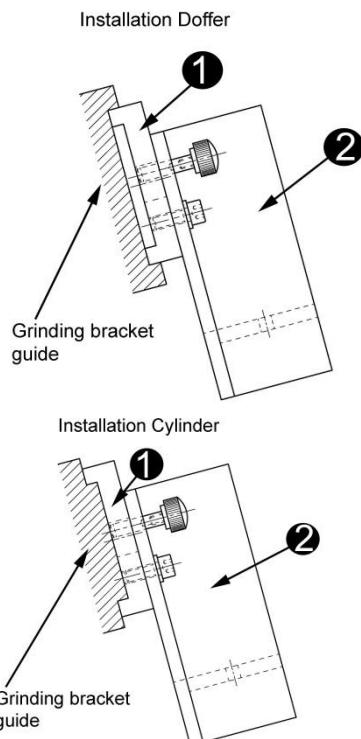
Cylinder



Doffer



5.2.1 Procedure



- Fit the bracket (1) on the guide ways.
- Fasten TSG on feed slide.
- Carefully turn supports Art.-No. 00604698 (pair) (support left Art.-No. 00603327; support right Art.-No. 00603328) on both sides and use setting screw (4) to adjust the distance to the clothing carrier till the grinding stone is set tangentially to the clothing (see para. 3.12).
- Tighten screw (5)
- Drill 6 mm holes for the dowel pins (3) and secure with dowel pin

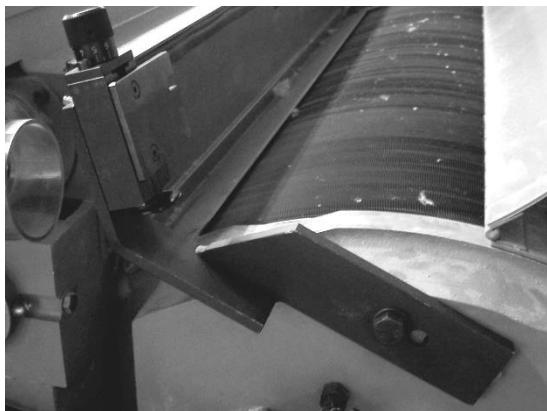
5.2.2 Jingwei Zhengzhou FA 224 Cylinder / Doffer

Cylinder



- Attach supports Art.-No. 00604528 (pair) (support left Art.-No. 00603308, support right Art.-No. 00603309) to card as illustrated.

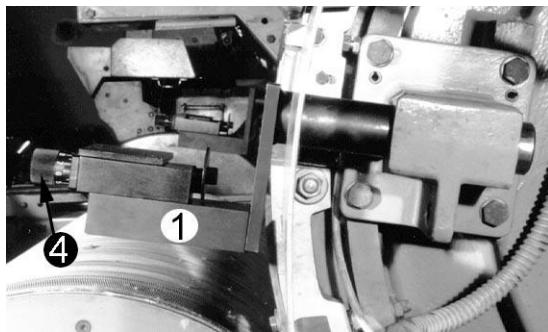
Doffer



- Support Art.-No. 00604529 (pair) (support left Art.-No. 00602314; support right Art.-No. 00602315)

5.3 Crosrol MK 4, MK 5 and MK 7 / Cylinder

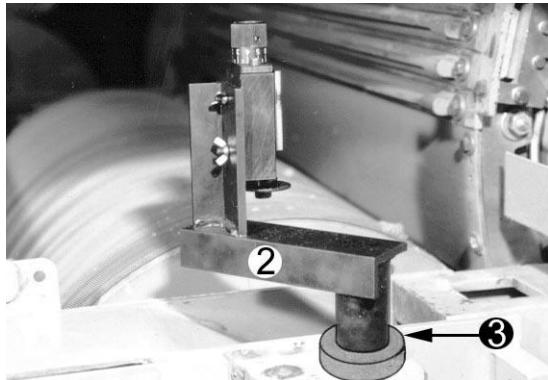
Attachment parts:



- Support (1) Art.-No. 00604538 (pair)
Support left and right Art.-No. 00602318
- Insert supports (1) into bore holes of the grinding brackets on both sides.
- Use setting screws (4) of the feed slide to set the distance to the cylinder.
 Operation as per chapter 3!

5.3.1 Crosrol MK 4, MK 5 and MK 7 / Doffer

Attachment parts:

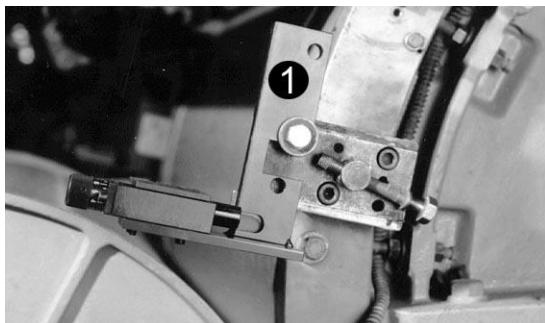


- Support (2) Art.-No. 00604539 (pair)
(support left Art.-No. 00602319; support right Art.-No. 00602320)
- Insert supports (2) into bore holes of the grinding brackets on both sides.
Use set collar (3) to set height. Precise settings by means of setting screws (4).
 Operation as per chapter 3!

5.4 Marzoli C40 – C41 and CX300 – CX400 / Cylinder

Attention!

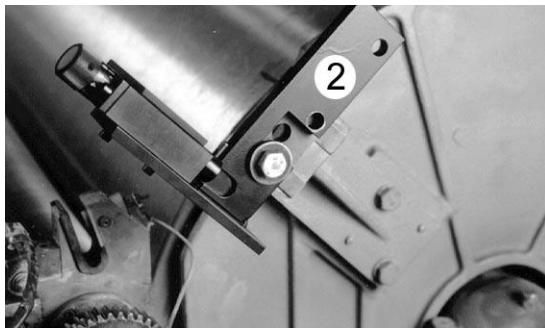
For Marzoli CX400 cards, the cylinder is being resharpened on the lickerin side.



Attachment parts:

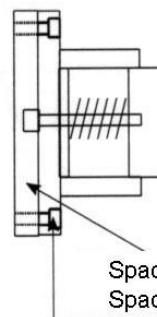
- Supports (1) Art.-No. 00604537 (pair) (support left Art.-No. 00602316; support right Art.-No. 00602317)
- Screw supports (1) to card frame on both sides.
☞ Operation as per chapter 3!

5.4.1 Marzoli C40 – C41 / Doffer

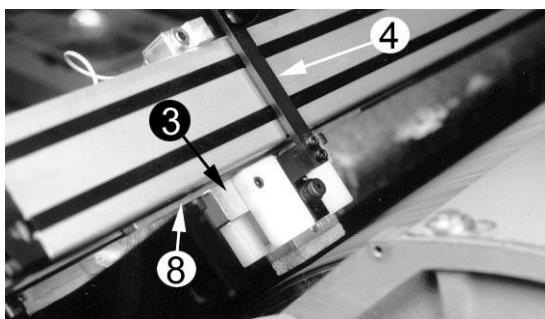


Attachment parts:

- Supports (2) Art.-No. 00604537 (pair) (support left Art.-No. 00602316; support right Art.-No. 00602317)
- Spacer bar 20 x 25 (10+15) x 120 mm



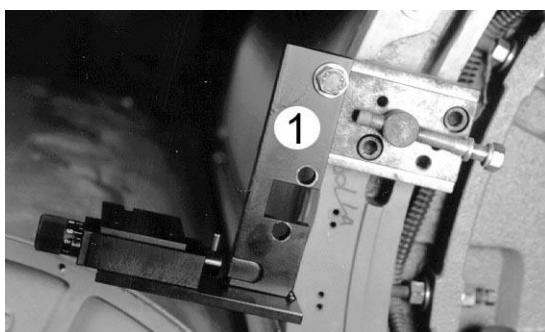
Spacer bar Art.00604545 (10mm)
Spacer bar Art.00604628 (15mm)
Screws M 8 X 65



- Fasten the extended draw-rod (160mm) (4)
- Attach supports (2) to both sides of card frame.

- Install spacer bar (20 x 25 x 120 mm) between slide (3) and support (8) (please refer to drawing 60-1-137).
- ☞ Operation as per chapter 3!

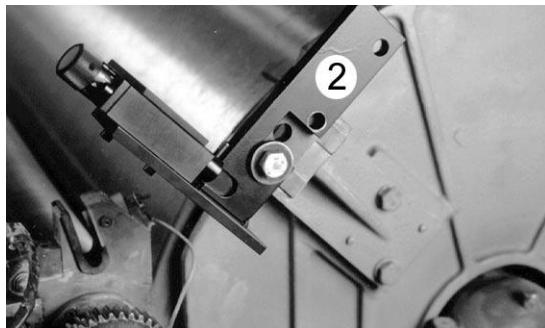
5.5 Marzoli C300 / Cylinder



Attachment parts:

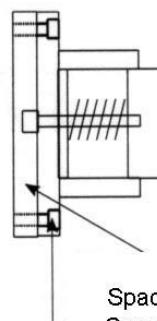
- Supports (1) Art.-No. 00604537 (pair) (support left Art.-No. 00602316; support right Art.-No. 00602317)
- Attach supports (1) to both sides of card frame.
- Operation as per chapter 3!

5.5.1 Marzoli C300 / CX300 / CX400 / Doffer

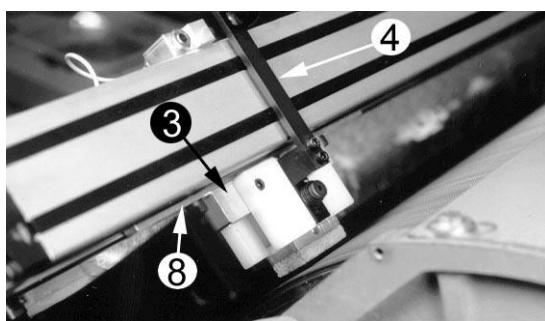


Attachment parts:

- Supports (2) Art.-No. 00604537 (pair) (support left Art.-No. 00602316; support right Art.-No. 00602317)
- Spacer bar 20 x 10 x 120 mm



Spacer bar Art.00604545 (10mm)
Screws M8 X 65



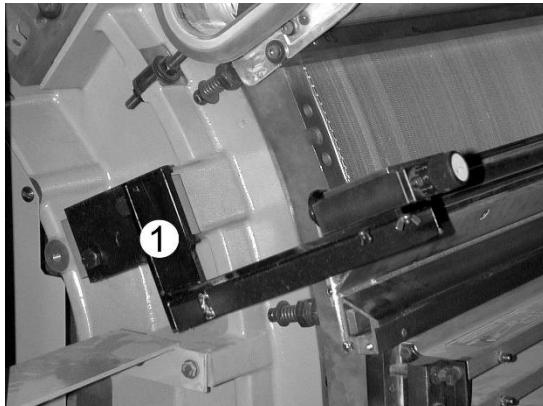
- Fasten the extended draw-rod (160 mm) (4)
- Attach support (2) to both sides of card frame.

- Install spacer bar (20 x 10 x 120 mm) between slide (3) and support (8) (please refer to drawing 60-1-137).
- Operation as per chapter 3!

5.6 Marzoli C501 / Cyinder

Attention!

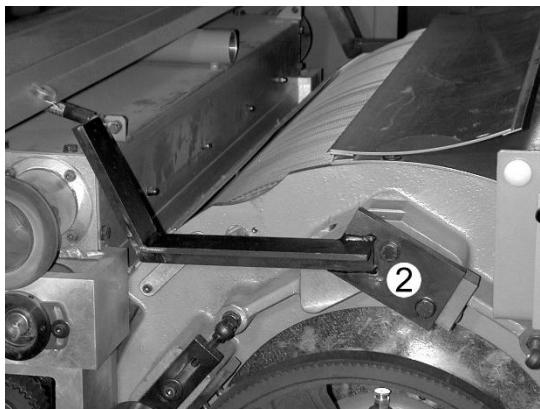
For Marzoli C 501 cards, the cylinder is being resharpened on the lickerin side.



Attachment parts:

- Supports (1) Art.-No. 00604700 (pair) (support left Art.-No. 00603383; support right Art.-No. 00603382)
- Attach supports (2) to both sides of card frame.
-  Operation as per chapter 3!

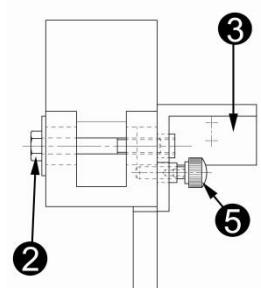
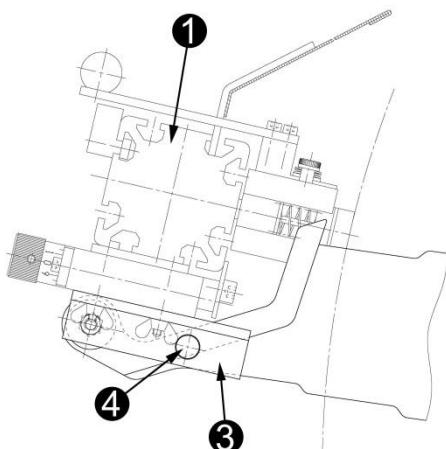
5.6.1 Marzoli C501 / Doffer



Attachment parts:

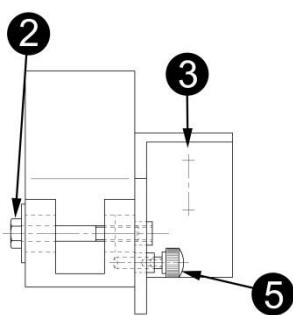
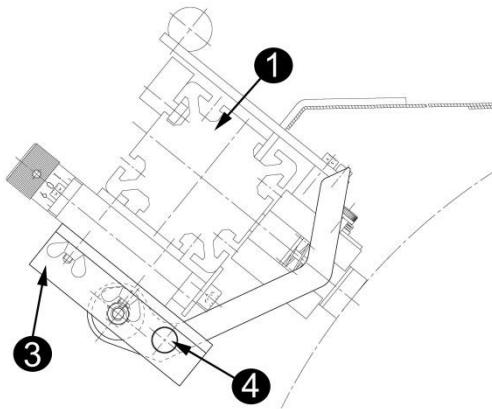
- Support (2) Art.-No. 00604701 (pair) (support left Art.-No. 00603385; support right Art.-No. 00603384)
- Attach supports (2) to both sides of card frame.
-  Operation as per chapter 3!

5.7 Platt 600 / Cylinder



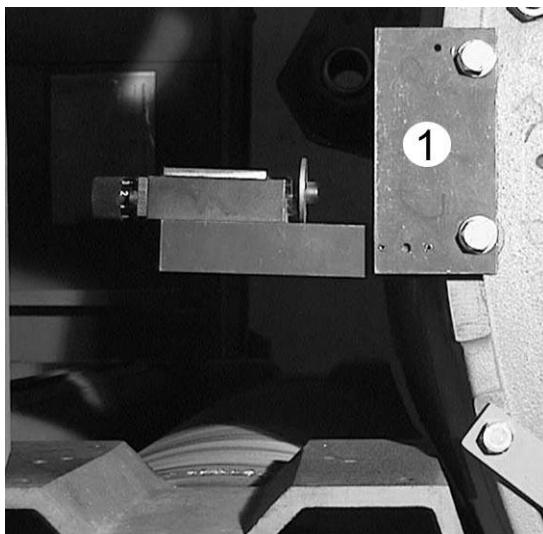
- Fasten supports Art.-No. 00604641 (pair) (support left Art.-No. 00604646; support right Art.-No. 00604645) to card frame on both sides.
- Place TSG (1) on mounting supports
- Tighten hex.-head screw (2) slightly and move the supports (3) on both sides until the grind stone touches the cylinder tangentially.  see para. 3.12)
- Subsequently, tighten the hex.-head screws (2), and drill a 6 mm hole through the drill (4) bush in both supports
- Secure the supports in this position by inserting the two pins (5) supplied.
-  For operation see chapter 3!

5.7.1 Platt 600 / Doffer



- Fasten supports Art.-No. 00604642 (pair) (support left Art.-No. 00604648; support right Art.-No. 00604647) to card frame on both sides.
- Place TSG on mounting supports
- Tighten hex.-head screw (2) slightly and move the supports (3) on both sides until the grind stone touches the doffer tangentially.  see para. 3.12)
- Subsequently, tighten the hex.-head screws (2), and drill a 6 mm hole through the drill (4) bush in both supports
- Secure the supports in this position by inserting the two pins (5) supplied.
-  For operation see chapter 3!

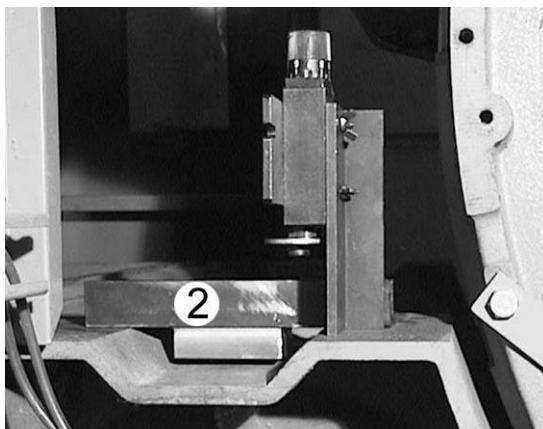
5.8 Rieter C4 – C50 / Cylinder



Attachment parts:

- Supports (1) Art.-No. 00604500 (pair) (support left Art.-No. 00604505; support right Art.-No. 00604502)
- Attach supports (1) to both sides of card frame.
-  Operation as per chapter 3!

5.8.1 Rieter C4 – C50 / Doffer

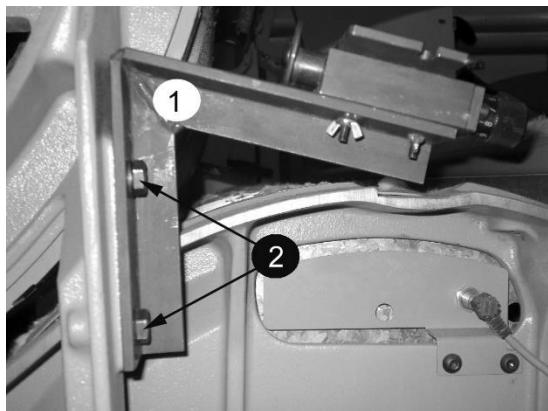


Attachment parts:

- Supports (2) Art.-No. 00604525 (pair) (support left Art.-No. 00603306; support right Art.-No. 00603307)
- Attach supports (2) to both sides of card frame
-  Operation as per chapter 3!

5.9 Rieter C60 – C70 / Cylinder

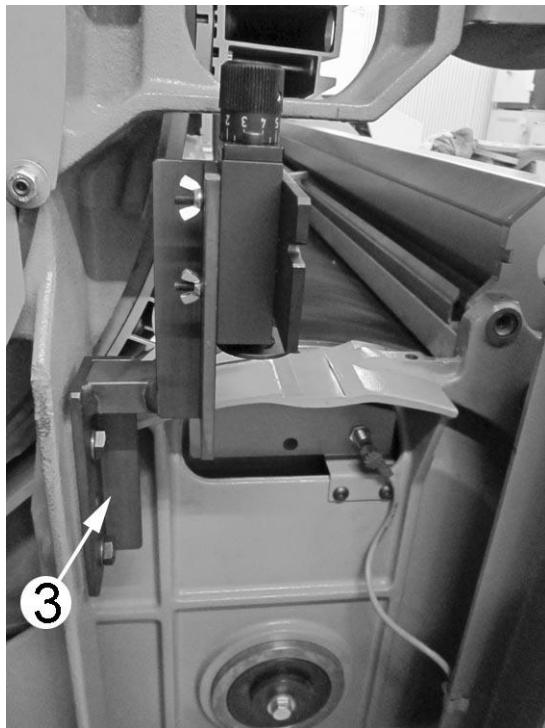
Attachment parts:



Attention!

- Drive motor of TSG on right-hand side
- Supports (1) Art.-No. 00602383 (pair) (support left Art.-No. 00603411; support right Art.-No. 00603412)
- Attach supports (1) to both sides of card frame with screws (2).
-  Operation as per chapter 3!

5.9.1 Rieter C60 – C70 / Doffer

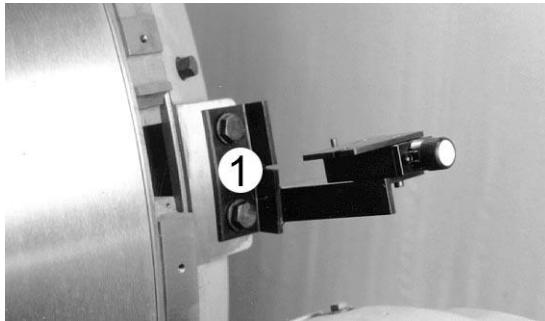


Attachment parts:

- Drive motor of TSG on left-hand side
- Supports (3) Art.-No. 00602384 (pair) (support left Art.-No. 00603413; support right Art.-No. 00603414)
- Attach supports (3) to card frame on both sides.
-  Operation as per chapter 3!

**5.10 Rieter C1/1 - C1/3 / Cylinder
Lakshmi LC C1/3, LC 100, LC 300, LC 300A, / Cylinder**

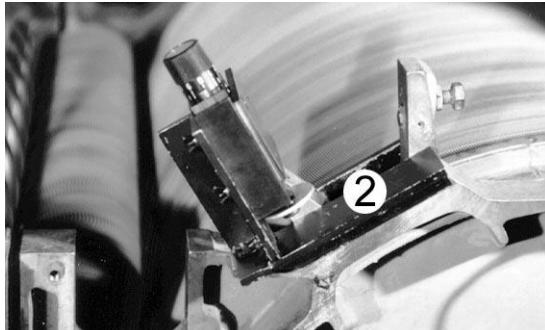
Attachment parts:



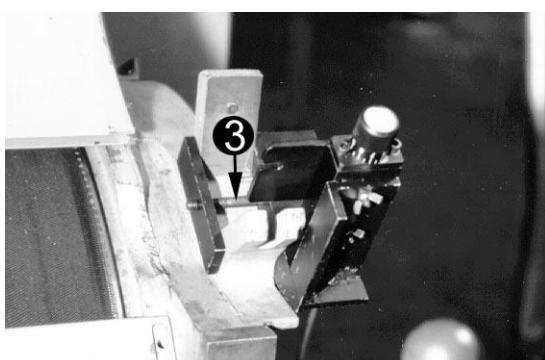
- Supports (1) Art.-No. 00604526 (pair)
(support left Art.-No. 00603303; support right Art.-No. 00603305)
- Attach supports (1) to both sides of card frame.
- Operation as per chapter 3!

**5.10.1 Rieter C1/1 - C1/3 / Doffer
Lakshmi LC C1/3, LC 100, LC 300, LC 300A, / Doffer**

Attachments parts:

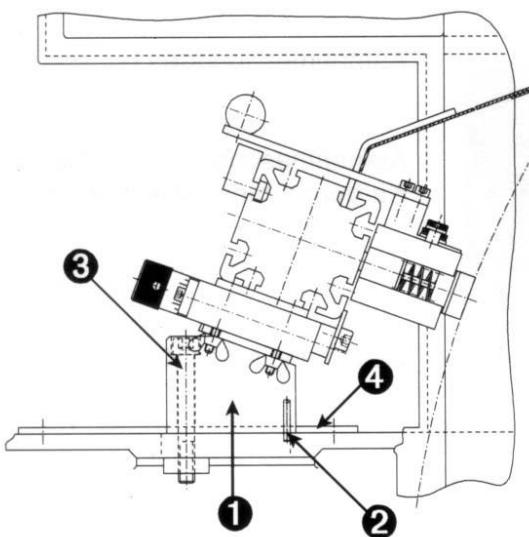


- Supports (2) Art.-No. 00604540 (pair)
(support left Art.-No. 00603319; support right Art.-No. 00603320)



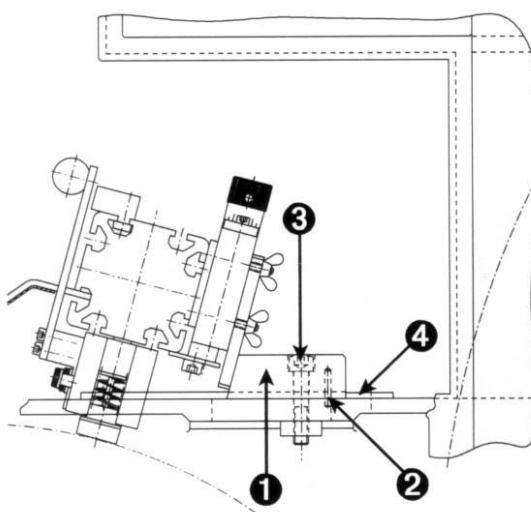
- Attach supports (2) to both sides of card frame Positioning pins (3) have to be placed in the grinding brackets.
- Operation as per chapter 3!

5.11 SSI KU12 60“ / Cylinder



- Remove grinding brackets from the card
- Slide supports (1) Art.-No. 00604608 (pair) (support left Art.-No. 00603350; support right Art.-No. 00603349) towards cylinder until pin (2) is positioned against guiding wedge (4).
- Use screw (3) to attach support
- Operation as per chapter 3!

5.11.1 SSI KU12 60“ / Doffer

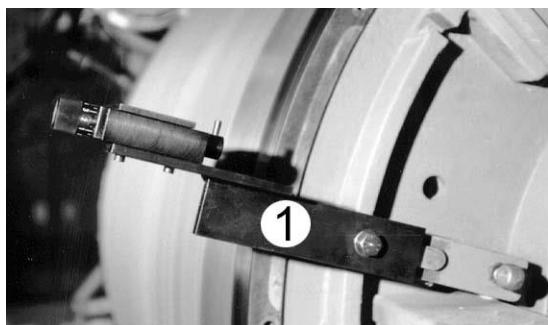


- Remove grinding brackets from the card
- Slide supports (1) Art.-No. 00604609 (pair) (support left and right Art.-No. 00603351) towards doffer until pin (2) is positioned against guiding wedge (4).
- Use screw (3) to attach support
- Operation as per chapter 3!

5.12 Trützschler DK 715 - DK 903 without Twin-Top / Cylinder and Jingwei Zhengzhou FA 224, FA 225 and Jiang Yin FA 212 and FA 218

Attention!

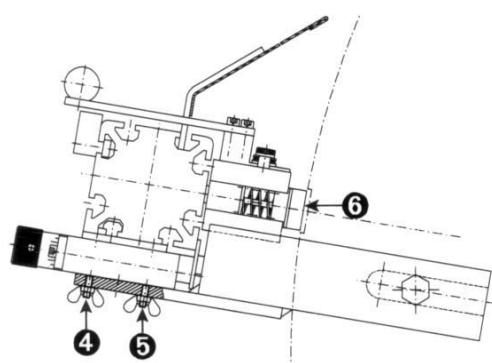
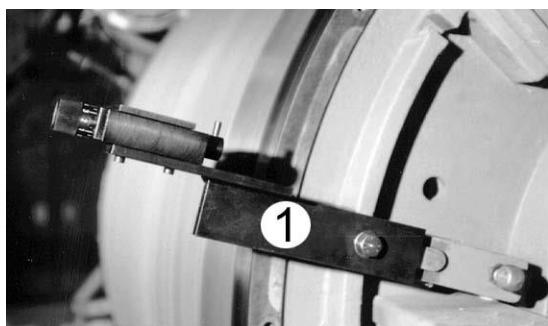
The cylinder wire on Trützschler cards is resharpened above the lickerin.



Attachment parts:

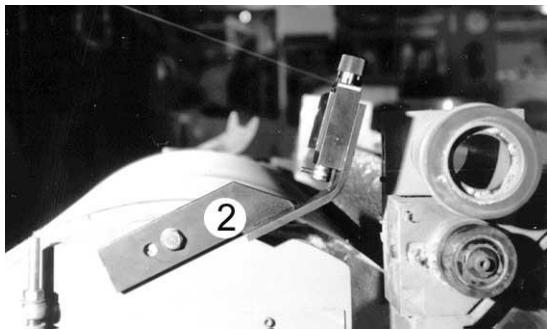
- Supports (1) Art.-No. 00604528 (pair) (support left Art.-No. 00603308; support right Art.-No. 00603309) with spacers (2)
- Attach supports (1) with spacers (2) to both sides of card frame
- Insert TSG into supports
- Turn setting screws (4) and (5) to set grinding stone (6) tangentially to cylinder on both sides
- Make sure that grinding stone clears the recess in the cylinder arch
- Fasten counter nuts to secure setting screws (4) and (5)
- For operation please refer  to chapter 3!

5.12.1 Trützschler DK803 and 903 with Twin-Top / Cylinder



- Attach supports (1) Art.-No. 00604528 (pair) (support left Art.-No. 00603308; support right Art.-No. 00603309) to both sides of card frame.
- Insert TSG into supports
- Turn setting screws (4) and (5) to set grinding stone (6) tangentially to cylinder on both sides.
- Make sure that grinding stone clears the recess in the cylinder arch
- Fasten counter nuts to secure setting screws (4) and (5)
- For operation please refer  to chapter 3!

5.12.2 Trützscher DK715 – DK903 / Doffer



Attachment parts:

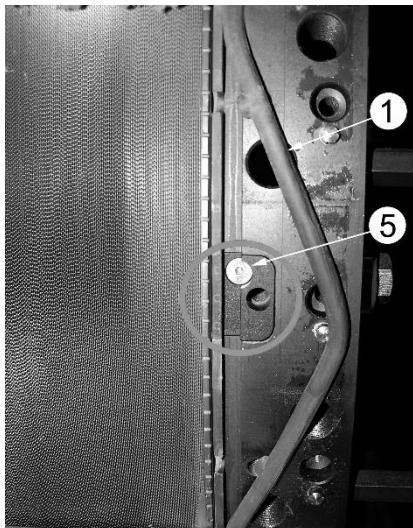
- Supports (2) Art.-No. 00604529 (pair) (support left Art.-No. 00602314; support right Art.-No. 00602315)
- Attach supports (2) to both sides of card frame.
- Operation as per chapter 3!

5.12.3 Trützscher TC03 – TC15 / Cylinder



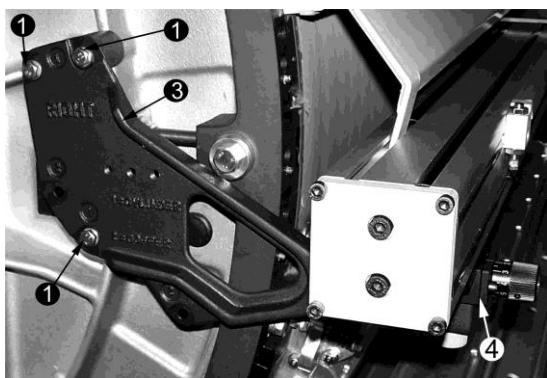
Attachment parts:

- Support (3) Art.-No. 00604842 for cylinder and doffer (left and right).



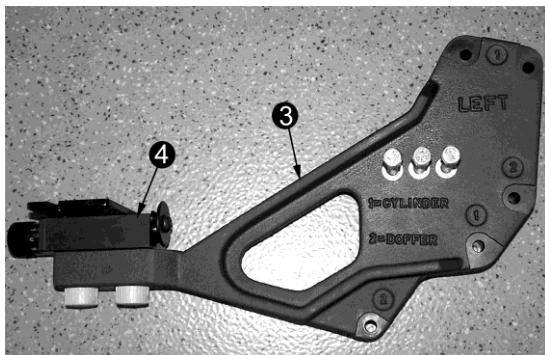
Preparation:

- Remove rubber seal (1) as shown in picture. Remove metal plate, encircled on picture, by unfastening screw (5).

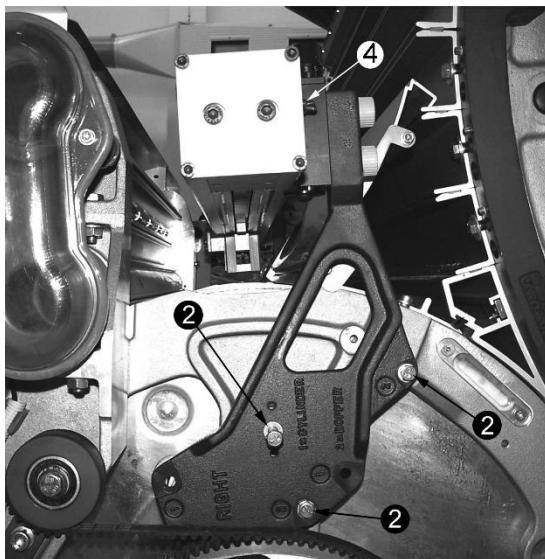


- Attach supports (3) left and right to the intended position on the card frame with hexagon head cap screws supplied. (use screw holes marked 1)
- Install feed slide (4) on supports and attach TSG with the thumb screws supplied
- For operation please refer to chapter 3!

5.12.4 Trützscher TC03 – TC15 / Doffer



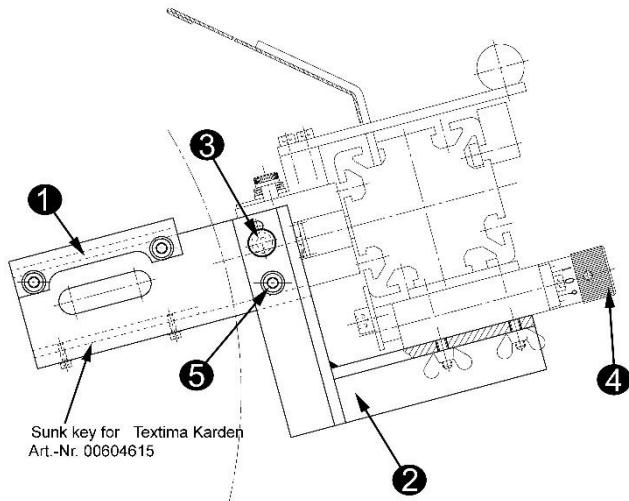
- Supports Art.-No. 00604842 with screws for cylinder and doffer (left and right).
- Attach supports (3) left and right to the intended position on the card frame with hexagon head cap screws supplied. (use screw holes marked 2)



- Install feed slide (4) on supports and attach TSG with the thumb screws supplied
- For operation please refer  to chapter 3!

5.13 Various conventional types of cards, eg. Platt, SSI-40“, Saco-Lowell, Whitin, Unirea, Rosique, Textima, Howa, SACM, Toyoda, Meikin and OKK

We have designed a universally applicable support for the above types of cards. It can be used for both cylinders and doffers.

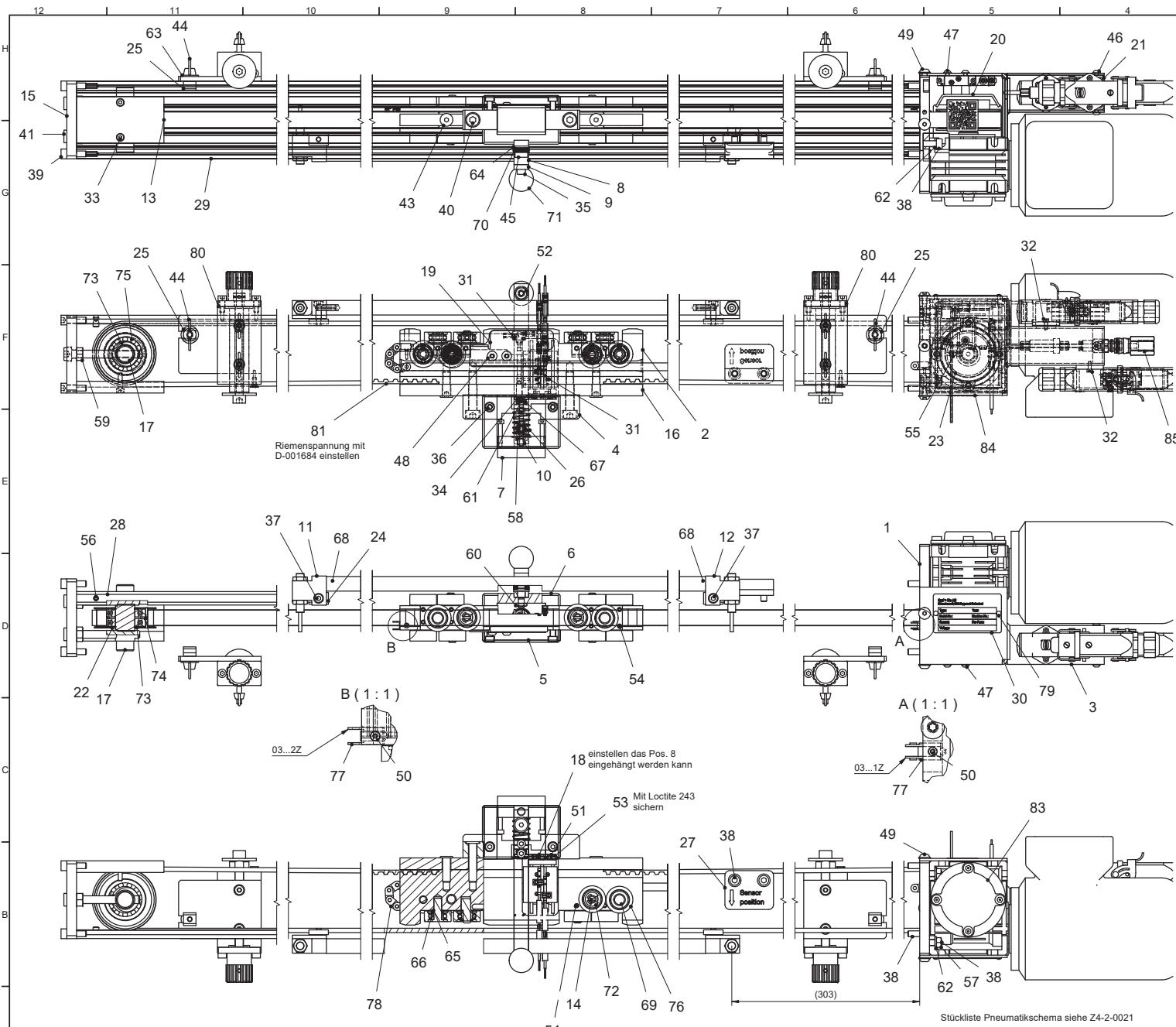


Guide (1) is laterally adjustable and is required for the attachment to the guide of the grinding brackets.

Supports Art.-No. 00604550 (2) (pair) (support left Art.-No. 00603327; support right Art.-No. 00603328) are supplied in swivelling design. The swivelling is necessary to set the optimum tangential position of the grinding stone to the clothing carrier ( see para. 3.12).

Once the ideal position is determined, the positioning hole (3) is drilled to take the pin supplied. If clothings on different types of cards are resharpened, different positioning holes need to be drilled side by side and marked.

6. Attachment



Stückliste Pneumatikschema siehe 74-2-1

Stückliste Elektroschema 1 x 230V, 50/60 Hz, Z4-4-0361
Stückliste Elektroschema 1 x 110V, 60 Hz, Z4-4-0368

Trafo für 3 x 415V, 50 Hz, Art.-Nr. 90501673

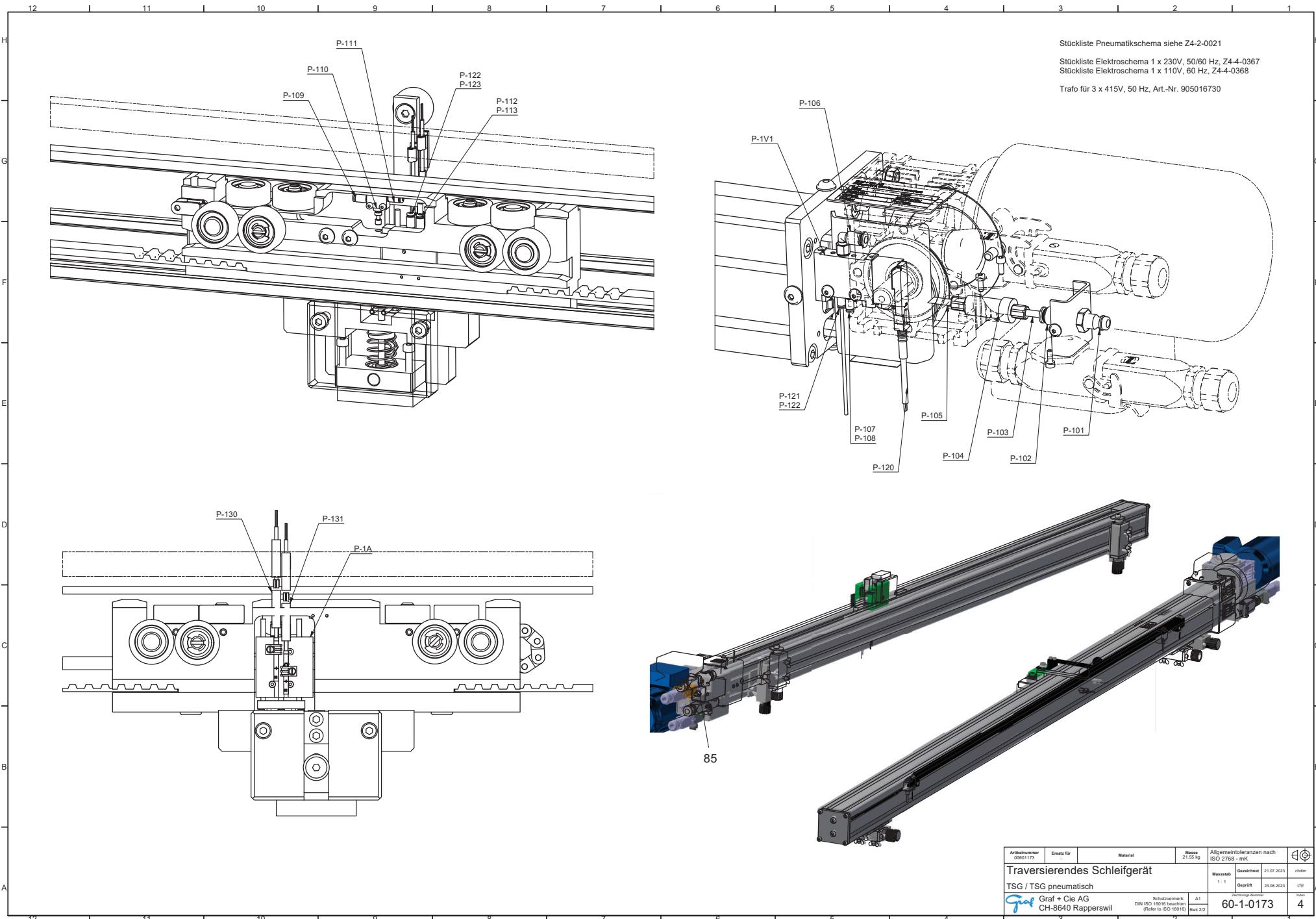
85	1	Pneumatikschema TSG	Z4-2-0021	00242021
84	1	Sticker QR-Code TSG	D-001785	110960
83	1	Getriebedeckel NMVR 030	Motovario	986030031
82	5	Abdeckstreifen PVC schwarz L=2150	-	811230011
81	1	Zahnmutter 10x16=16-L4320	-	810610453432
80	2	Schlitzenb.	-	640-0512
79	2	Blindniet TAPD 36 BS DIN 7337 A-2x7.5-A/ST	BN 924	27620150
78	2,025 m	E micro E-Kette 205mm	Igus	-
77	1	E-Kette Endstücke	Igus	-
76	12	Laufrolle KLRU 08.28.11Z P0	Ina	810811250
75	2	Rillenkugellager 16004	SKF	810811700
74	1	Sicherungsring DIN 472-4x21x1.75	BN 822	27290042
73	2	Sicherungsring DIN 471-20x1.2	BN 818	27280020
72	6	Sicherungsschelle DIN 679-7	BN 810	986200007
71	1	Kugelgriff e25 1025-0-M06	Lanker	25021003
70	6	Tellerfeder DIN 2093 C-16x8.2x0.4-FSt	BN 1375	-
69	6	Bohren ohne Spültrichto DIN 1434-2x0-St	BN 485	987308020
68	2	Spannstift VSM 12785-6x20-Si	BN 879	27270620
67	2	Spannstift VSM 12785-3x40-Si	BN 879	27270340
66	12	Fischbandring e8x17x2	BN 739	27450812
65	12	Pass-Schäfte DIN 988-8x14x0.5-St	BN 1976	2747081405
64	1	Scheibe ISO 7089-M140-HV-Stahl	BN 715	27100008
63	2	Scheibe DIN 9021-6-140 HV	BN 729	271106181
62	4	Scheibe ISO 7089-M140-HV-Stahl	BN 715	27100006
61	1	Scheibe ISO 7089-M140-HV-Stahl	BN 715	27100004
60	1	16kM 0.50 ISO 4035-M6-M4	BN 124	27070006
59	2	Sechskantschraube DIN 934-M8-8	BN 117	27060008
58	1	16kM 0.80 ISO 4032-M8-8	BN 117	27060004
57	2	Sechskantschraube DIN 934-M8-8	BN 117	27060006
56	2	Gew.-Stu.-6x10 ISO 4026-M2x10-St	BN 28	27300610
55	1	Gew.-Stu.-6x10 ISO 4026-M2x12-St	BN 28	27300512
54	13	Gew.-Stu.-6x10 ISO 4026-M5x6-St	BN 28	27300506
53	3	Gew.-Stu.-6x10 ISO 4026-M4x4-St	BN 28	27300404
52	1	Se-Schraube M6x10 ISO 14581-M6x12-8.8	BN 4851	27170612
51	2	Se-Schraube M6x10 ISO 14581-M2x8-8.8	BN 4851	110938
50	2	Se-Schraube M6x10 ISO 14581-M2x6-8.8	BN 4851	271702506
49	3	Linsenschraube In-Rund 4x5x5-St	BN 5128	27225008
48	2	Linsenschraube In-Rund 4x4x10-St	BN 5128	2722410
47	2	Linsenschraube In-Rund 4x3x20-St	BN 5128	2722320
46	2	Linsenschraube In-Rund 4x3x5-St	BN 5128	27223208
45	1	Passschlüsselschraube ISO 379-8x12/M-12.9	BN 1359	2754081206
44	2	Flügelzugschraube DIN 316-M16x80	BN 276	27800616
43	2	Zyl.-Schr.-In-6 E.N.K. M6x25-10-9	BN 20697	275010285
42	4	Zylinderschraube DIN 784-M6x12-8.8	BN 17	27060612
41	2	Zylinderschraube DIN 9124-M6x70-8.8	BN 3	27020870
40	2	Zyl.-Schr.-In-6 ISO 1472-M6x80-28-8.8	BN 4	27030840
39	4	Zylinderschraube DIN 9124-M6x50-8.8	BN 3	27020860
38	10	Zyl.-Schr.-In-6 ISO 1472-M6x18-8.8	BN 3	27020616
37	2	Zyl.-Schr.-In-6 ISO 1472-M6x20-8.8	BN 3	27020520
36	4	Zyl.-Schr.-In-6 ISO 1472-M6x18-8.8	BN 3	27020516
35	2	Zyl.-Schr.-In-6 ISO 1472-M6x17-8.8	BN 3	27020512
34	1	Zyl.-Schr.-In-6 ISO 1472-M4x50-20-8.8	BN 4	27030454
33	2	Zyl.-Schr.-In-6 ISO 1472-M4x18-8.8	BN 3	27020416
32	4	Zylinderschraube DIN 9124-M6x8-8.8	BN 3	27020308
31	4	Zyl.-Schr.-In-6 ISO 1472-M2x12-12.9	BN 11	27020210
30	1	Maschinenschlüssel klein ohne CE	Thomas	D 100.110, 100.091
29	1	Führung	-	60-34323, 60-0033231
28	1	Anschlag Umlenkung	-	60-01670, 110.885
27	1	Abdeckung Serviceöffnung	-	60-36559, 60-003559
26	1	Druckdelle 42x18x8	-	60-4519, 60-004519
25	2	Nummernstein DIN508 M6	-	3679, 3879001
24	2	Gewindedichten M5	-	60-4518, 60-004518
23	1	Zahnheimschraube	-	60-4549, 60-004549
22	1	Zahnmehrschraube	-	60-4548, 60-004548
21	1	Haltelblech Luftanschluss	-	60-4990, 60-004990
20	1	Schutzbügel Verdeck	-	60-3553, 60-003553
19	1	Abdeckblech Kabel	-	60-4989, 60-004989
18	1	Athbung	-	60-3550, 60-003550
17	1	Spannachse	-	60-4547, 60-004547
16	1	Zwischenleiste TSG	-	60-3548, 60-003548
15	1	Stirnplatte	-	60-4544, 60-004544
14	6	Exzenterbolzen	-	60-4543, 60-004543
13	1	Deckel	-	60-4542, 60-004542
12	1	Initiatorteller rechts	-	60-4517, 60-004517
11	1	Initiatorteller links	-	60-4515, 60-004515
10	1	Stift	-	60-4513, 60-004513
9	1	Zughebel	-	60-4948, 60-004948
8	1	Scheibe TSG	-	60-4988, 60-004988
7	1	Scheibe/Stein	-	60-4623, 60-004623
6	1	Führung vorne	-	60-4495, 60-004495
5	1	Führung hinten	-	60-4494, 60-004494
4	1	Halter TSG	-	60-3649, 60-003649
3	1	Riemenverdeck	-	60-3652, 60-003652
2	1	Schlitzen TSG	-	60-3647, 60-003647
1	1	Motorplatte	-	60-3651, 60-003651
Pos.	Anz.	Bezeichnung	Lieferant	Zeichnungs-Nr. Artikel-Nr.

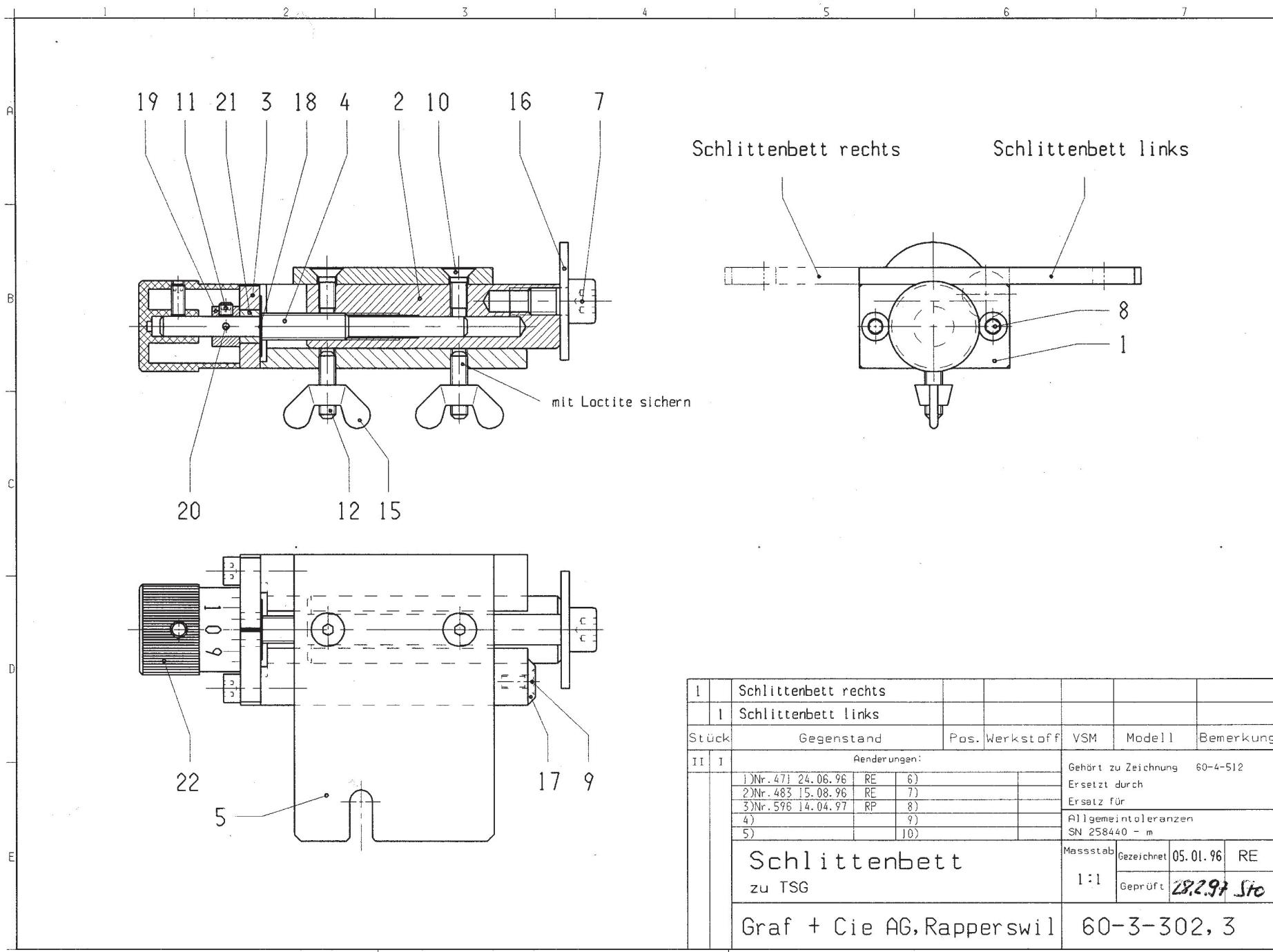
Artikelnummer 00601173	Ersatz für -	Material
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Traversierendes Schleifgerät

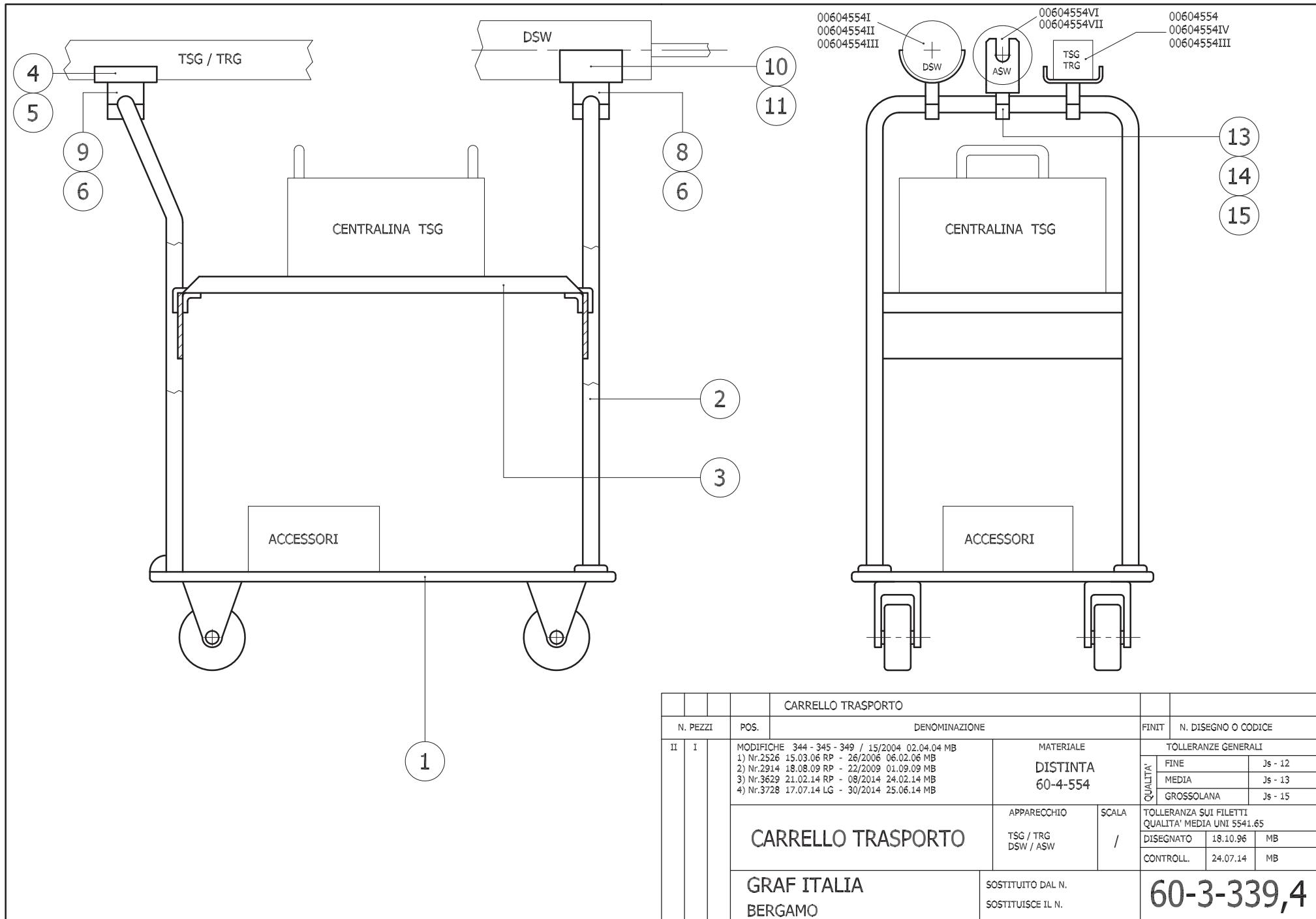
TSG / TSG pneumatisch

 Graf + Cle AG
CH-8640 Rapperswil





			30				
			29				
			28				
			27				
			26				
			25				
			24				
			23				
1	Drehknopf mit Skala	22	31021		MOZA		
1	Glissa - Lager	21	Ø6/10x6		ALADIN		
1	Spann-Sti Shwe	20	Ø2x12	879		27270212	
1	Stellring	19	Ø6xM4/12	705A			
1	Distanzscheibe	18	Ø6/18x0.5	988		2746061805	
1	U-Sch Se 90°	17	4.3/14			27160004	
1	U-Scheibe	16	8/35x2.5			27110835	
2	Flügelmutter	15	M5	315		27080005	
		14					
		13					
2	Gew-Sti In-6kt	12	M5x25	913		27300525	
1	Gew-Sti In-6kt	11	M4x4	913		27300404	
2	Se-Schr In-6kt	10	M5x12	7991		27170512	
1	Se-Schr In-6kt	9	M4x10	7991		27170410	
2	Zyl-Schr In-6kt	8	M5x12	912		27020512	
1	Zyl-Schr In-6kt	7	M8x12	912		27020812	
		6					
1	Befestigungsplatte	5				60-4-504	
1	Spindel	4				60-4-511	
1	Flansch	3				60-4-510	
1	Führungsbolzen	2				60-4-509	
1	Führung	1				60-3-301	
Stück	Gegenstand	Pos.	Werkstoff	VSM	Modell	Bemerkung	
II	I	Änderungen:				Gehört zu Zeichnung 60-3-302	
		1)Nr. 471 24.06.96	RE	6)		Ersetzt durch	
		2)Nr. 483 15.08.96	RE	7)		Ersatz für	
		3)Nr. 596 14.04.97	RP	8)			
		4)Nr. 1102 16.09.99	RP	9)		Blatt 1/1	
		5)		10)			
	Schlittenbett zu TSG					Massstab %	Gezeichnet
						05.01.96	RE
						Geprüft 25.9.99	9
	Graf + Cie AG, Rapperswil					60-4-512, 4	



Spare and wear parts TSG

Pos.	Qty	Item description	Item No.	Qty per machine
Traversierendes Schleifgerät siehe Zeichnung 60-1-173				
Traverse grinding gear see drawing 60-1-173				
7	1	Schleifstein auf Aluminium Platte Grinding stone on aluminum plate	00604623	1
26	1	Druckfeder Pressure spring	00604519	1
80	1	Zustellschlitten Feed slides	00604512	2
81	1	Zahnriemen 60" Toothed belt 60"	81C610453432	1
81	1	Zahnriemen 51" Toothed belt 51"	81C610453346	1
77	1	Zahnriemen 40" Toothed belt 40"	81C610453300	1

Halterungen

Supports

-	1	Halterungen Zylinder Rieter C80 Supports Cylinder Rieter C80	006041044	1
-	1	Halterungen Zylinder Rieter C60/C70/C72/C75 Supports Cylinder Rieter C60/C70/C72/C75	00602383	1
-	1	Halterungen Abnehmer Rieter C60/C70/C72/C75 Supports Doffer Rieter C60/C70/C72/C75	00602384	1
-	1	Halterungen Zylinder Rieter C4-C51 Supports Cylinder Rieter C4-C51	00604500	1
-	1	Halterungen Abnehmer Rieter C4-C51 Supports Doffer Rieter C4-51	00604525	1
-	1	Halterungen Zylinder Lakshmi LC300 und LC300A Supports Cylinder Lakshmi LC300 and LC300A	00604526	1
-	1	Halterungen Abnehmer Lakshmi LC300/LC300A/LC333/LC361/LC363 Supports Doffer Lakshmi LC300/LC300A/LC333/LC361/LC363	00604540	1
-	1	Halterungen Zylinder Lakshmi LC333/LC361/LC363 Supports Doffer Lakshmi LC333/LC361/LC363	00604941	1
-	1	Halterungen Zylinder und Abnehmer Trützscher TC03-TC19 Supports for Cylinder and Doffer Trützscher TC03-TC19	00604842	1
Halterungen Zylinder Trützscher DK715-DK903 / Trumac DK780 und DK800 Zhengzhou FA224A/B/C/D, FA225 Guss + Aludeckel, FA221A/B/C/D, JWF1202, JWF1204A/B, JWF1204-120, JWF1206, JWF1206A, JWF1206-120, JWF1206A-120, Qingdao JWF1207 und JWF1211, Jinsheng Saurer JSC228				00604528
				1

		Supports Cylinder Trützschler DK715-DK903 / Trumac DK780 and DK800 Zhengzhou FA224A/B/C/D, FA225 iron + alu flats, FA221A/B/C/D, JWF1202, JWF1204A/B, JWF1204-120, JWF1206, JWF1206A, JWF1206-120, JWF1206A-120, Qingdao JWF1207 und JWF1211, Jinsheng Saurer JSC228		
-	1	Halterungen Abnehmer Trützschler DK715 -DK903 / Trumac DK780 und DK800 Zhengzhou FA224A/B/C/D, FA225 Guss + Aludeckel, FA221A/B/C/D, JWF1202, JWF1204A/B, JWF1204-120, JWF1206, JWF1206A, JWF1206-120, JWF1206A-120, Qingdao JWF1207 und JWF1211, Jinsheng Saurer JSC228	00604529	1
-	1	Supports Doffer Trützschler DK715 -DK903 / Trumac DK780 and DK800 Zhengzhou FA224A/B/C/D, FA225 iron + alu flats, FA221A/B/C/D, JWF1202, JWF1204A/B, JWF1204-120, JWF1206, JWF1206A, JWF1206-120, JWF1206A-120, Qingdao JWF1207 und JWF1211, Jinsheng Saurer JSC228		
-	1	Halterung Zylinder Crosrol MK4/MK5/MK6/MK7 Supports Cylinder Crosrol MK4/MK5/MK6/MK7	00604538	1
-	1	Halterung Abnehmer Crosrol MK4/MK5/MK6/MK7 Supports Doffer Crosrol MK4/MK5/MK6/MK7	00604539	1
-	1	Halterung Zylinder und Abnehmer Saurer JSC326/JSC328/SC6 Supports Cylinder and doffer Saurer JSC326/JSC328/SC6	00604550	1
-	1	Halterung Zylinder und Abnehmer Qingdao FA201, FA201B, FA231A+C FA203A/B/C, JWF1203 Guss und Aludeckel Supports for cylinder and doffer Qingdao FA201, FA201B, FA231A+C FA203A/B/C, JWF1203 iron and alu flats	00604698	1
-	1	Halterungen Zylinder Marzoli C501 Supports cylinder Marzoli C501	00604700	1
-	1	Halterungen Abnehmer Marzoli C501 Supports doffer Marzoli C501	00604701	1
-	1	Halterungen Zylinder Marzoli C601 Supports cylinder Marzoli C601	00604846	1
-	1	Halterungen Abnehmer Marzoli C601 Supports doffer Marzoli C601	00604847	1
-	1	Halterungen Zylinder Marzoli C701 Supports cylinder Marzoli C701	00604963	1
-	1	Halterungen Abnehmer Marzoli C701 Supports doffer Marzoli C701	00604962	1

Distanzstangen

Spacer rods

-	1	Distanzstange 60" Rieter Spacer rod 60" Rieter	00604516VII	1
-	1	Distanzstange 60" diverse Karden Spacer rod 60" various cards	00604516II	1
-	1	Distanzstange Rieter C4-C51 Spacer rod Rieter C4-C51	00604516	1
-	1	Distanzstange 40" Lakshmi Spacer rod 40" Lakshmi	00604516V	1
-	1	Distanzstange 40" diverse Karden Spacer rod 40" various cards	00604516I	1
-	1	Distanzstange 51" Trützschler Spacer rod 51" Trützschler	00604516VI	1
-	1	Distanzstange 48" Zhengzhou Spacer rod 48" Zhengzhou	00604516VIII	1
-	1	Distanzstange 49" Crosrol MK8 Spacer rod 49" Crosrol MK8	00604516IX	1
-	1	Distanzstange 54" Saurer SC6 Spacer rod 54" Saurer SC6	00604516X	1

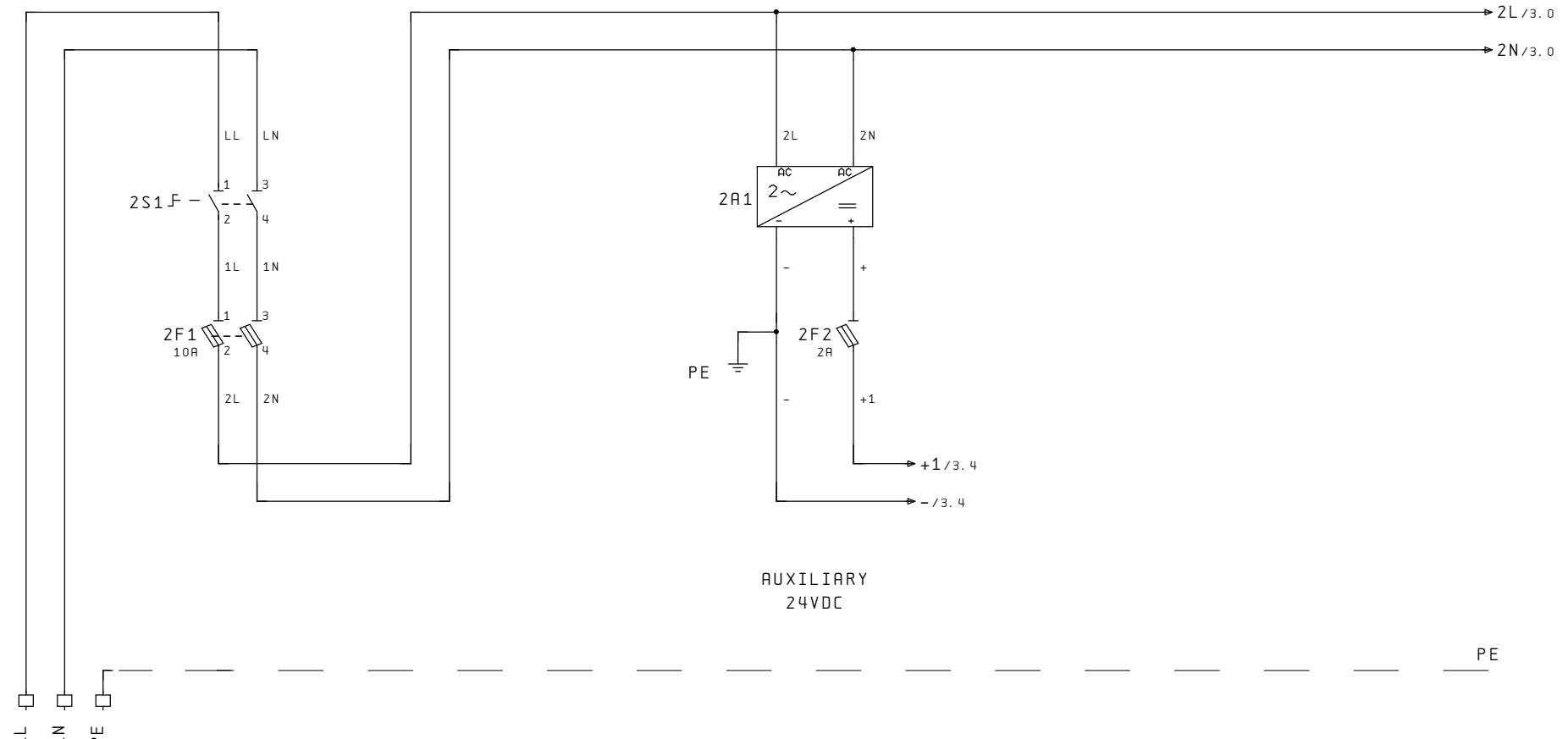
Schutzbleche
Protective covers

-	1	Schutzblech 40" Protective cover 40"	00603317	1
-	1	Schutzblech 51" Protective cover 51"	00603317II	1
-	1	Schutzblech 60" Protective cover 60"	00603526	1

Diverses
Various

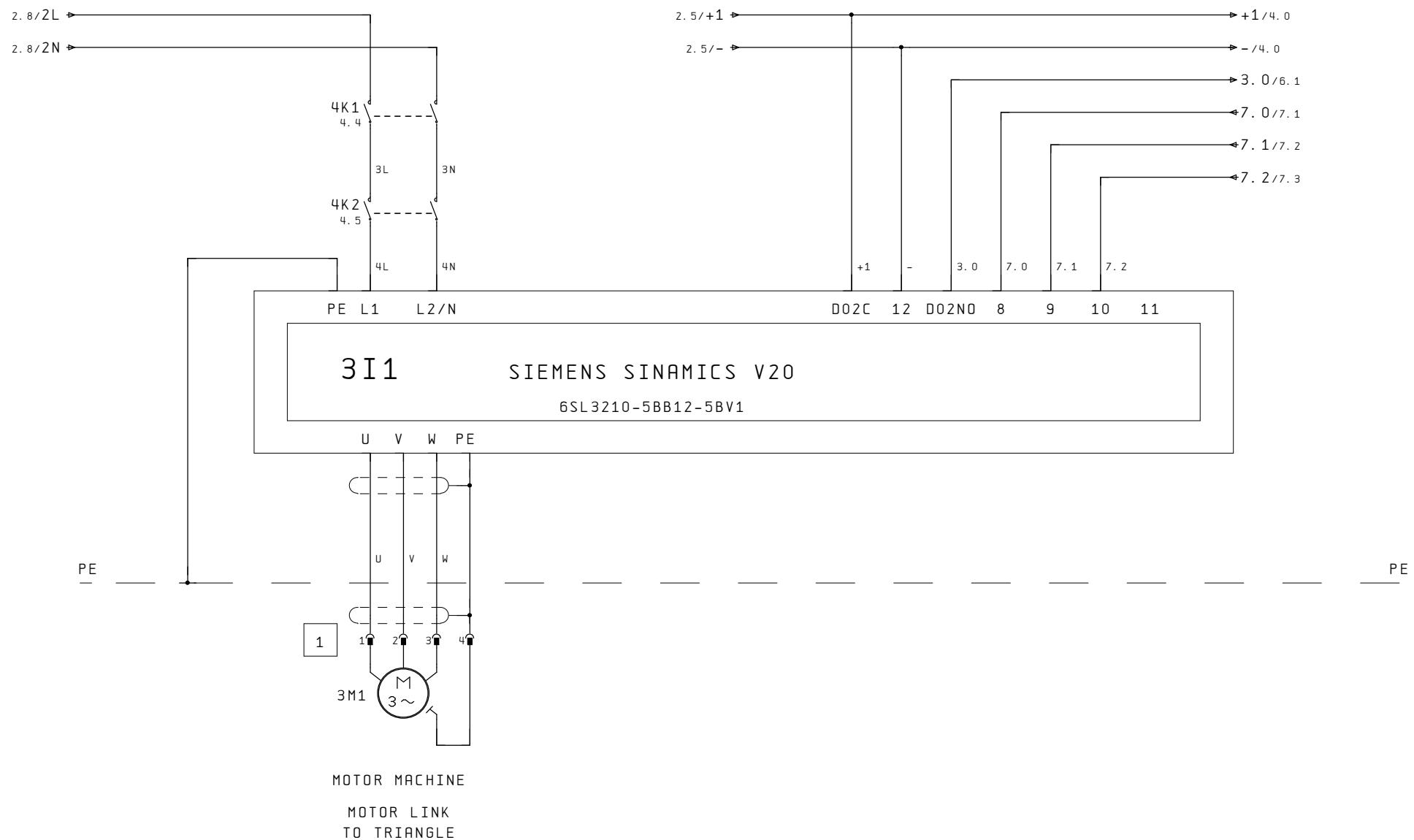
-	1	Regenerierplatte Regenerating plate	00604580	1
-	1	Siliziumpulver Silicon powder	81V223104	-
-	1	Touchpanel Touchpanel	110.357	1
-	1	Inverter Siemens 230 Volt Inverter Siemens 230 Volt	896030039	1
-	1	Sicherung 10A Fuse 10A	905013638	-

1		AS-BUILT		BAT				
0		ISSUED FOR CONSTRUCTION		BAT				
REV	DATE			DESIGNED	VERIFIED	APPROVED		
CONTRACT			DIAGRAM GIO05A23	PROJED			REGULATION	
DESCRIPTION					CUSTOMER			
WIRING DIAGRAM TSG PNEUMATIC SAFETY					GRAF ITALIA Via Zanica 47/49 24126 - BERGAMO			
DESTINATION					DESIGNER			
BUILDER					Elettromeccanica Frigeni Walter & C snc Via Petrarca 19 24052 Azzano San Paolo - BERGAMO			

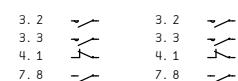
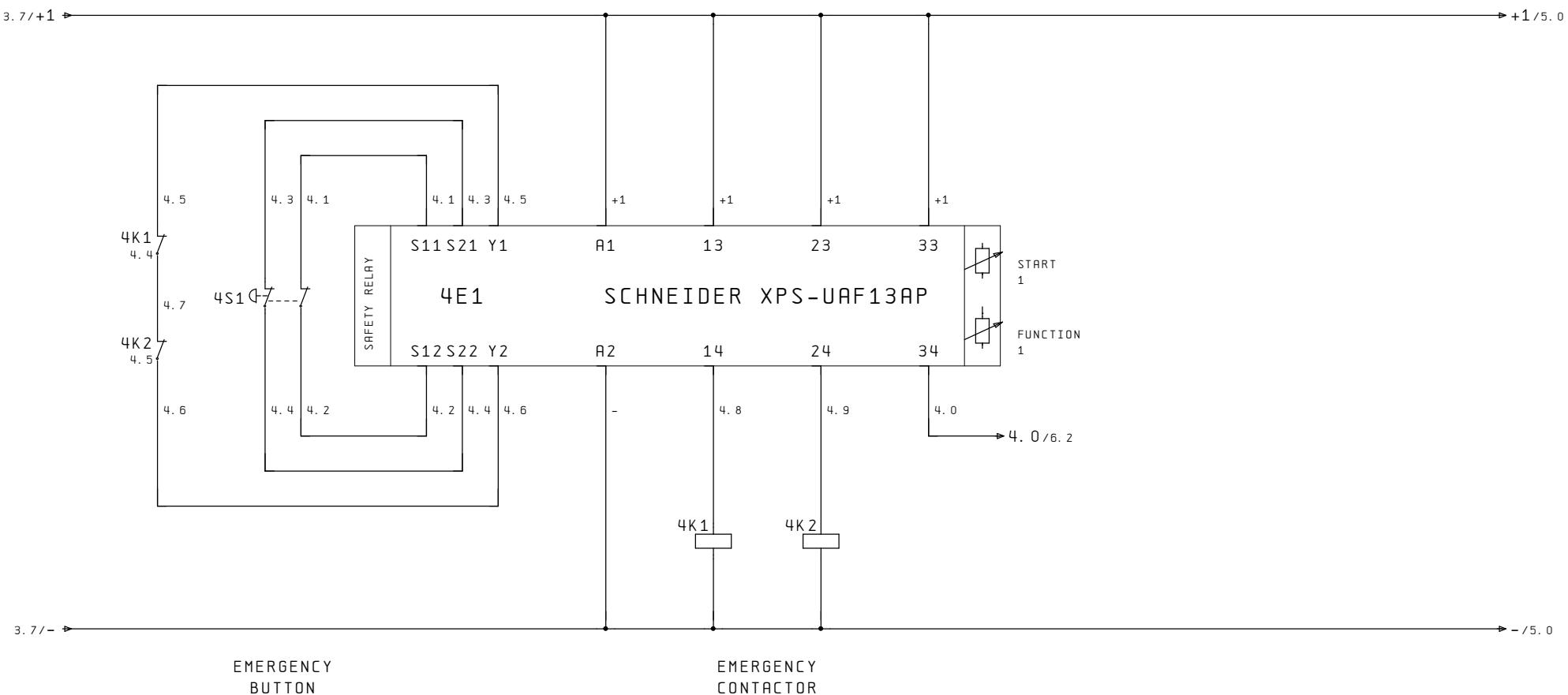


POWER SUPPLY
230V 50/60Hz

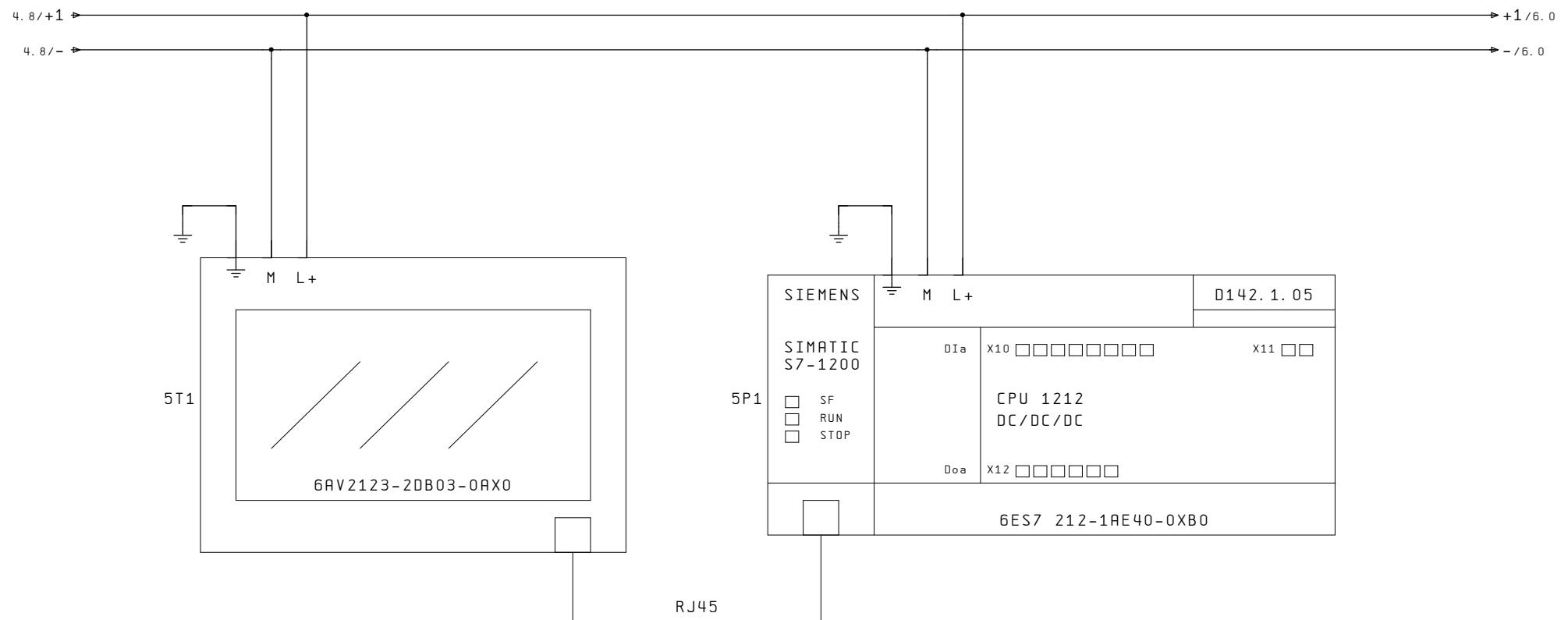
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Modifiche	Data	Nome	Norm.				00Z44367	Z4-4-367,3



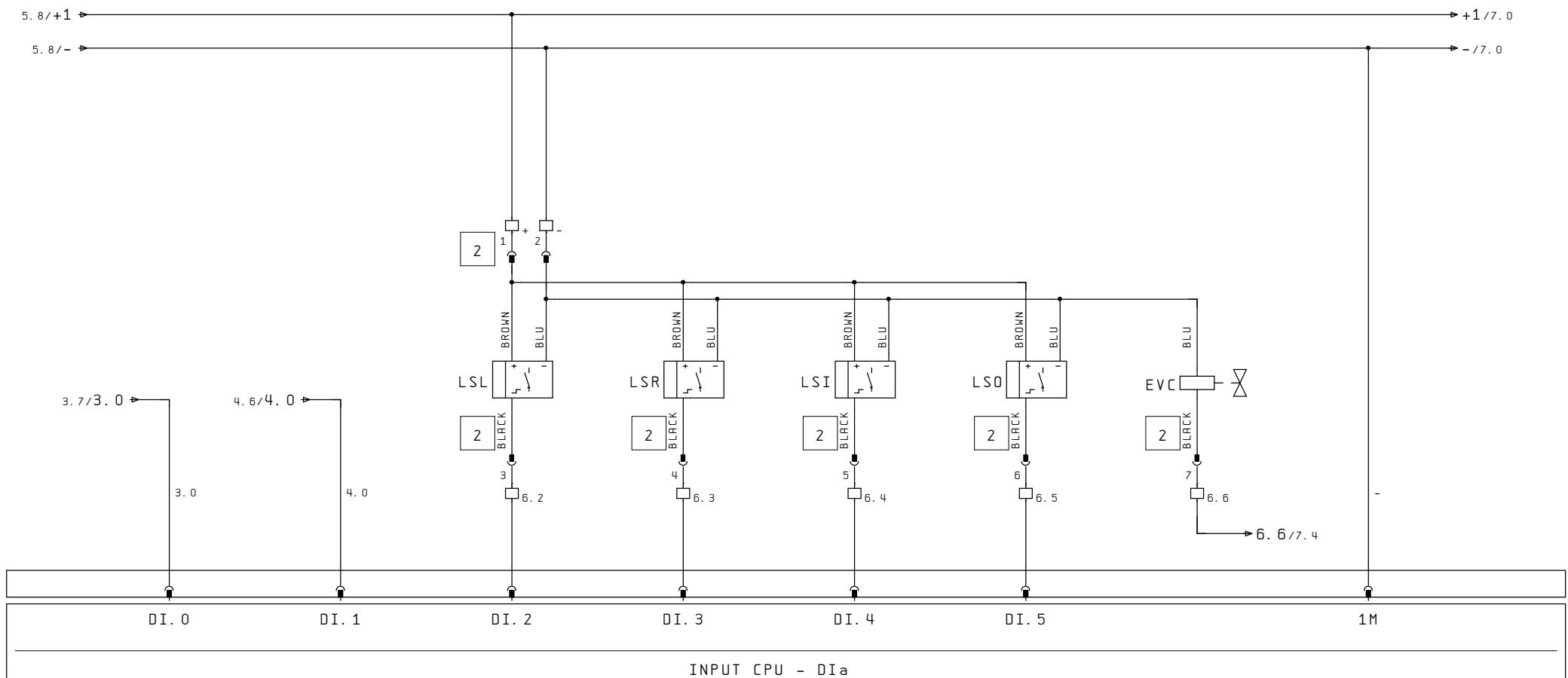
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Modifiche	Data	Nome	Norm.				00Z44367	Z4-4-367,3



			Data		MACHINE TSG PNEUMATIC SAFETY	GRAFIT	AUXILIARY CIRCUIT	G1005A23	=
			Diseq.	BAT					+ 00Z44367
3) Nr.5319	08.02.2024	MB	Plot.	19. Dic. 2023				Z4-4-367,3	Pag. 4 15
Modifiche	Data	Nome	Norm.						



		Data		MACHINE TSG PNEUMATIC SAFETY	GRAFIT	CONFIGURATION PLC	G1005A23	=
		Diseq.	BAT					+
3) Nr.5319	08.02.2024	MB	Plot.	19.Dic.2023			00Z44367	Z4-4-367,3
Modifiche	Data	Nome	Norm.					Pag. 5 15



INVERTER
OK

EMERGENCY
OK

LS END POS
LEFT

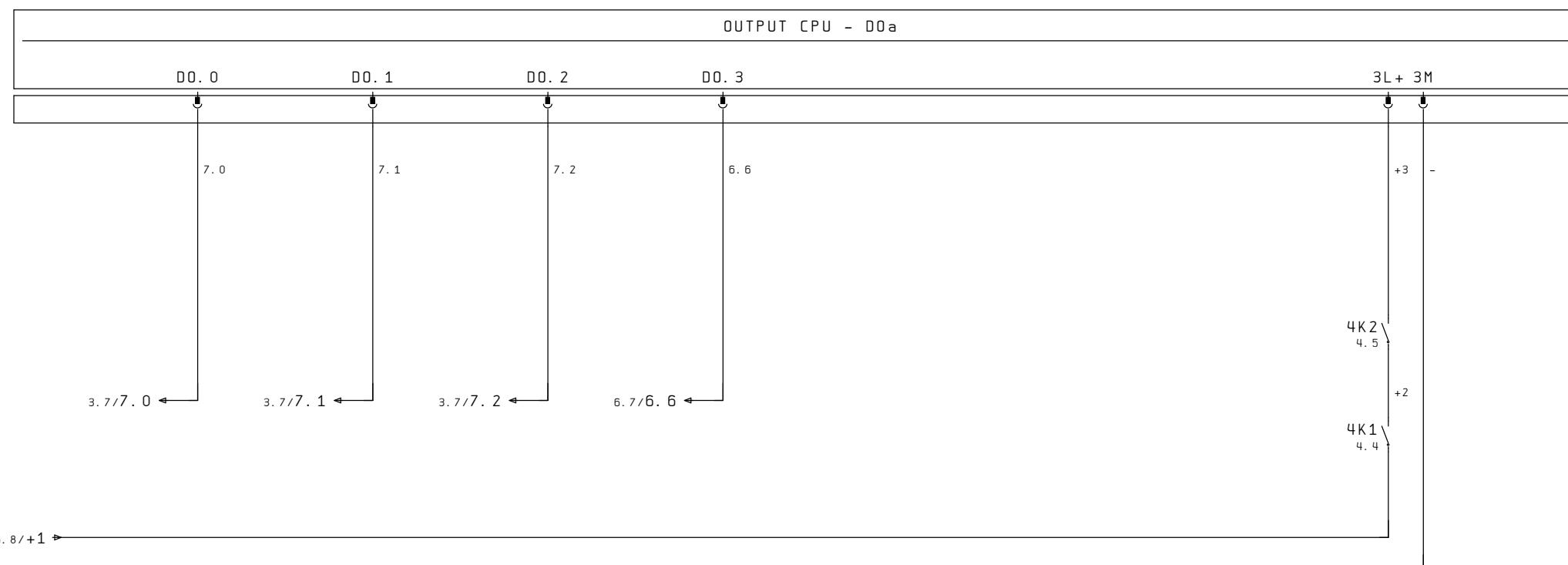
ON LS END POSITION
RIGHT

LS END POSITION
CYLINDER IN

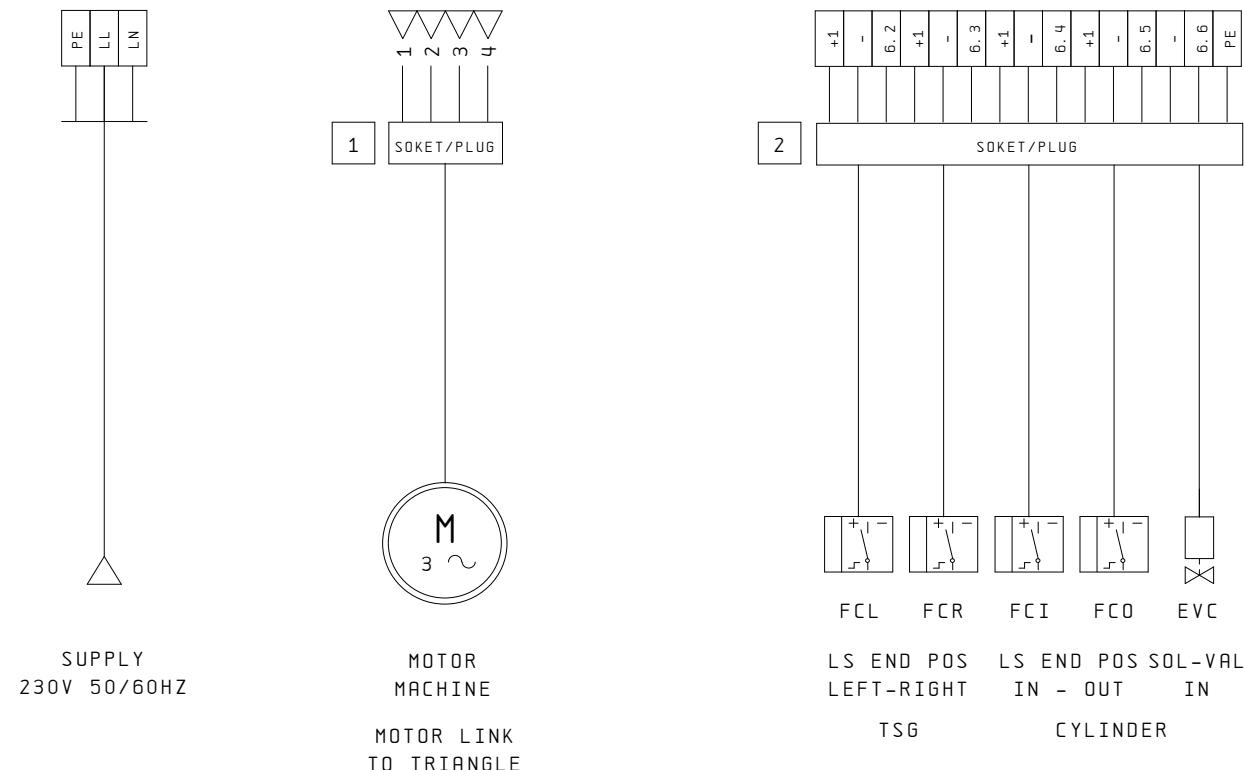
END POSITION
YLINDER OUT

SV
CILINDER IN

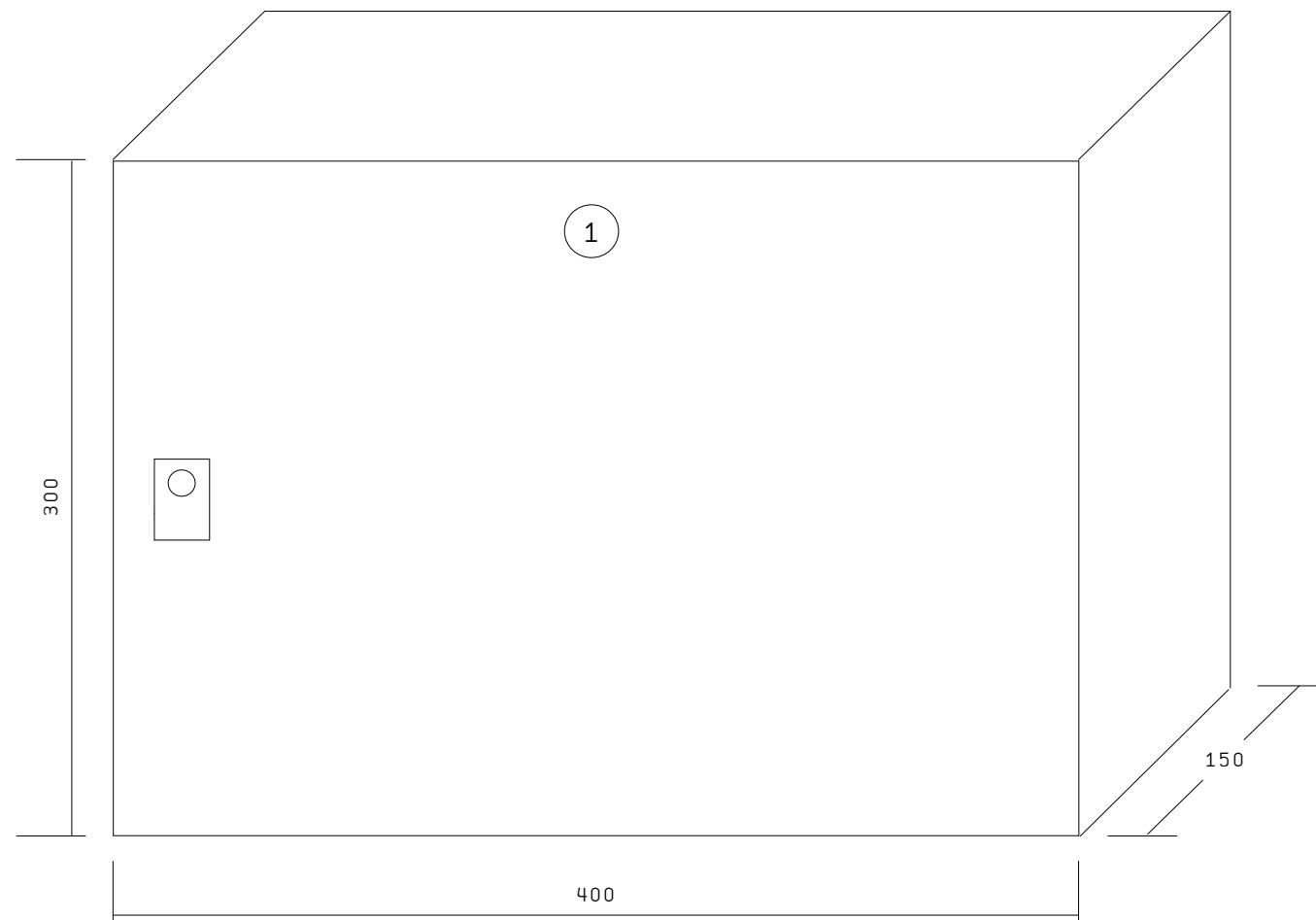
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Modifiche	Data	Nome	Norm.					Pag. 6 15

DOFFER
8. 3 HzCYLINDER
44. 9 HzCHANGE
DIRECTION SV
CYLINDER IN

		Data		MACHINE TSG PNEUMATIC SAFETY	GRAFIT	OUTPUT CPU	G1005A23	=
		Diseq.	BAT					+
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Modifiche	Data	Nome	Norm.				00Z44367	Z4-4-367,3

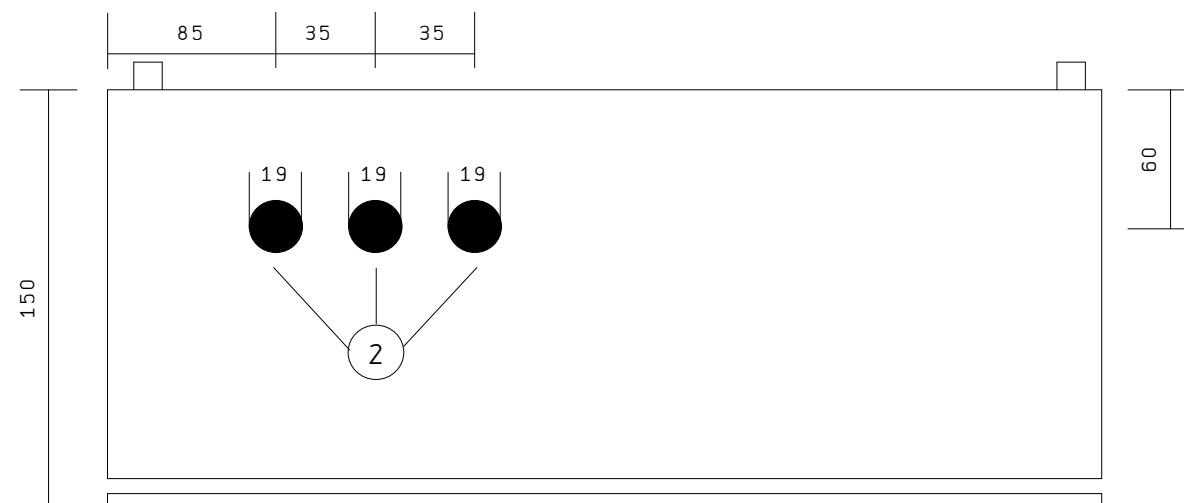


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Modifiche	Data	Nome	Norm.					Z4-4-367,3	Pag. 8



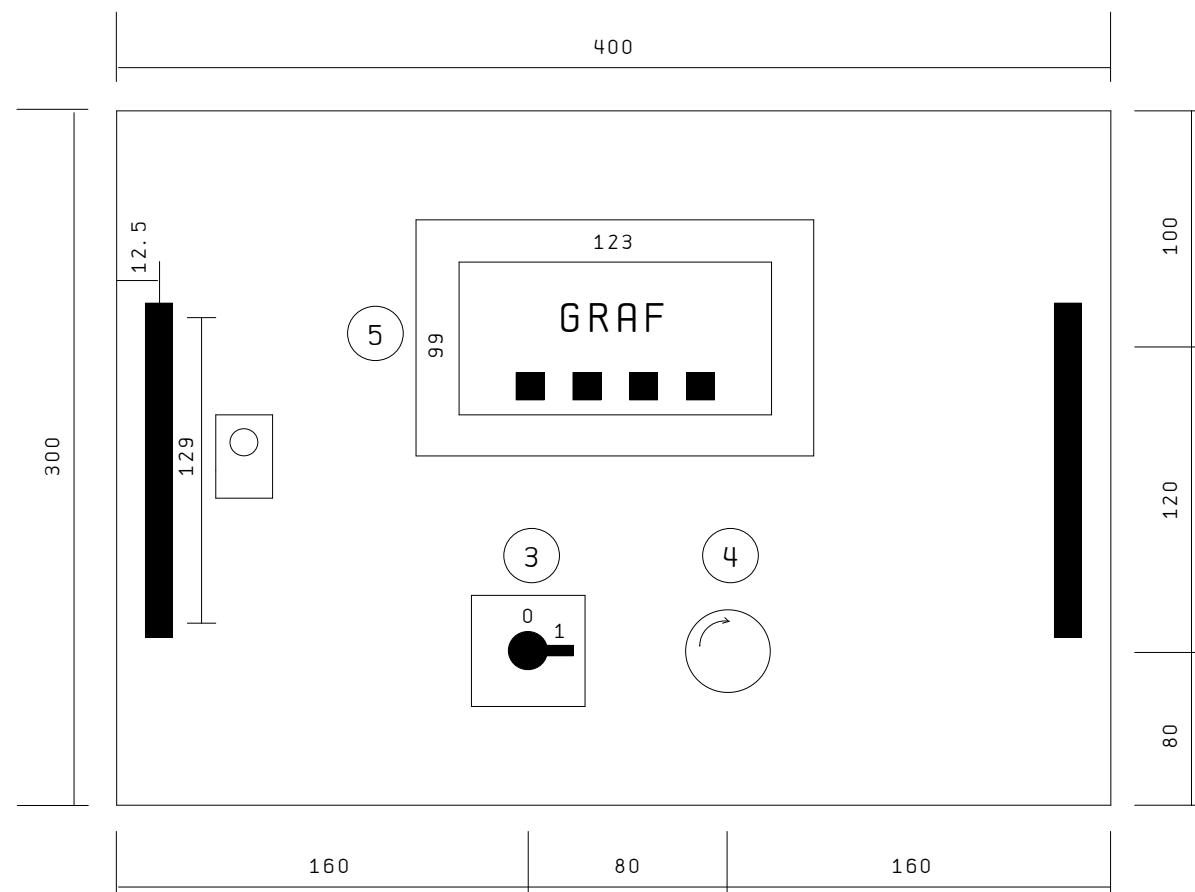
VIEW FROM FRONT

		Data		MACHINE TSG PNEUMATIC SAFETY	GRAFIT	BOARD PANEL	G1005A23	=
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Modifiche	Data	Nome	Norm.					Pag. 9 15



VIEW FROM TOP

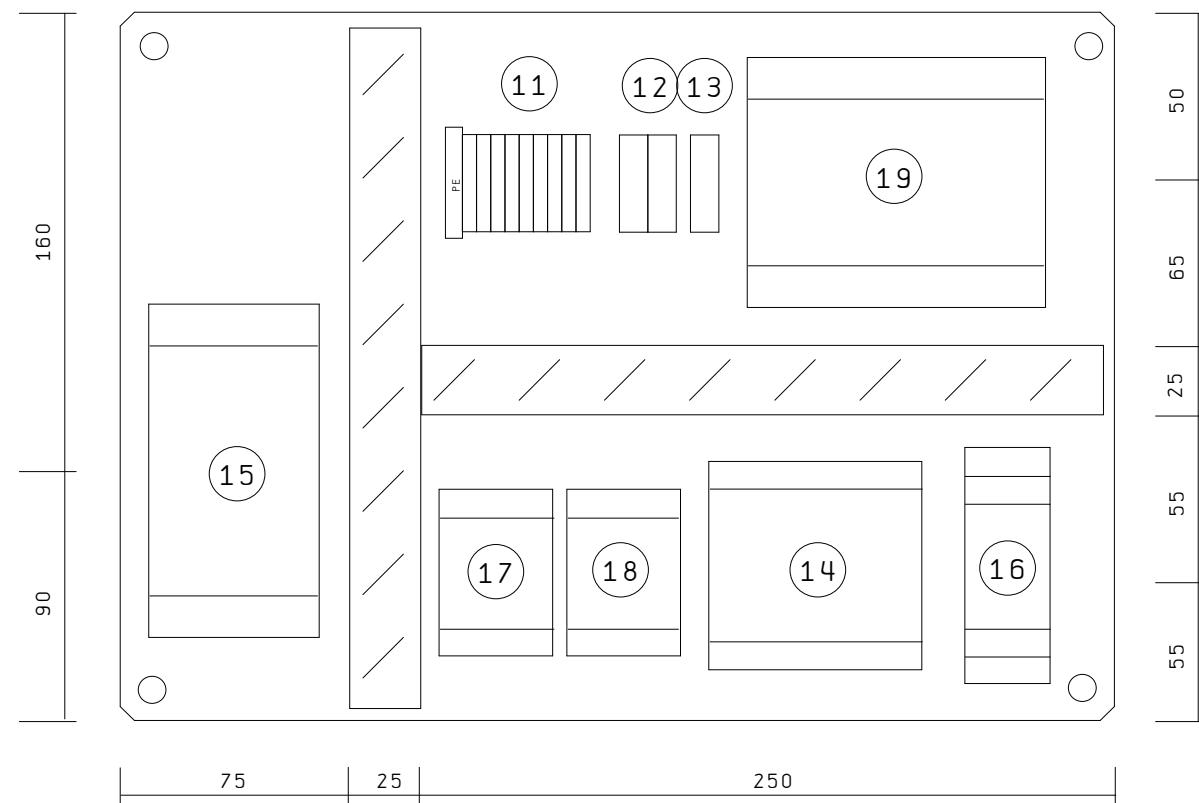
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Modifiche	Data	Nome	Norm.					15



		Data		MACHINE TSG PNEUMATIC SAFETY	GRAFIT	PANEL LAY-OUT	G1005A23	=
		Diseg.	BAT					+
3) Nr.5319	08.02.2024	MB	Plot.	19. Dic. 2023			00Z44367	Z4-4-367,3
Modifiche	Data	Nome	Norm.					Pag. 11 15

POS		SIGLE		DENOMINATION		MAKE		TYPE	
1				METALLIC BOX CASSA METALLICA		DKC		R5CE0341	
2				CABLEPRESSER PRESSACAVO		CEMBRE		1900.11 11420.11	
3		2S1		MAIN SWITCH INTERRUTTORE GENERALE		SCHNEIDER		K1B002ALH	
4		4S1		EMERGENCY BUTTON PULSANTE EMERGENZA		SCHNEIDER		ZB5-AS44 (2) ZB5-AZ102	
5		5T1		OPERATOR PANEL PANNELLO OPERATORE		SIEMENS		6AV2123-2DB03-0AX0	

0 1 2 3 4 5 6 7 8 9



12

14

			Data		MACHINE TSG PNEUMATIC SAFETY	GRAFIT	PANEL LAY-OUT	G1005A23 00Z44367	=	
			Diseq.	BAT						+
3) Nr.5319	08.02.2024	MB	Plot.	19.Dic.2023						
Modifiche	Data	Nome	Norm.						Z4-4-367,3	Pag. 13 15

0	1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---	---

DISPONIBLE

14

		Data		MACHINE TSG PNEUMATIC SAFETY	GRAFIT	DISPONIBLE	G1005A23 00Z44367	=
		Diseg.	BAT					+
3) Nr.5319	08.02.2024	MB	Plot.	19.Dic.2023				
Modifiche	Data	Nome	Norm.					Pag. 15 15

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