

THREE DISC SANDING MACHINE TRIO



- AUS
- CAN
- GB
- IRL
- NZ
- USA

# Operation, Maintenance, Safety

Operating instructions for the three disc sanding machine

## TRIO

**Lägler**  
WORLD LEADERS IN FLOOR  
SANDING TECHNOLOGY

TRIO - MAIN COMPONENTS

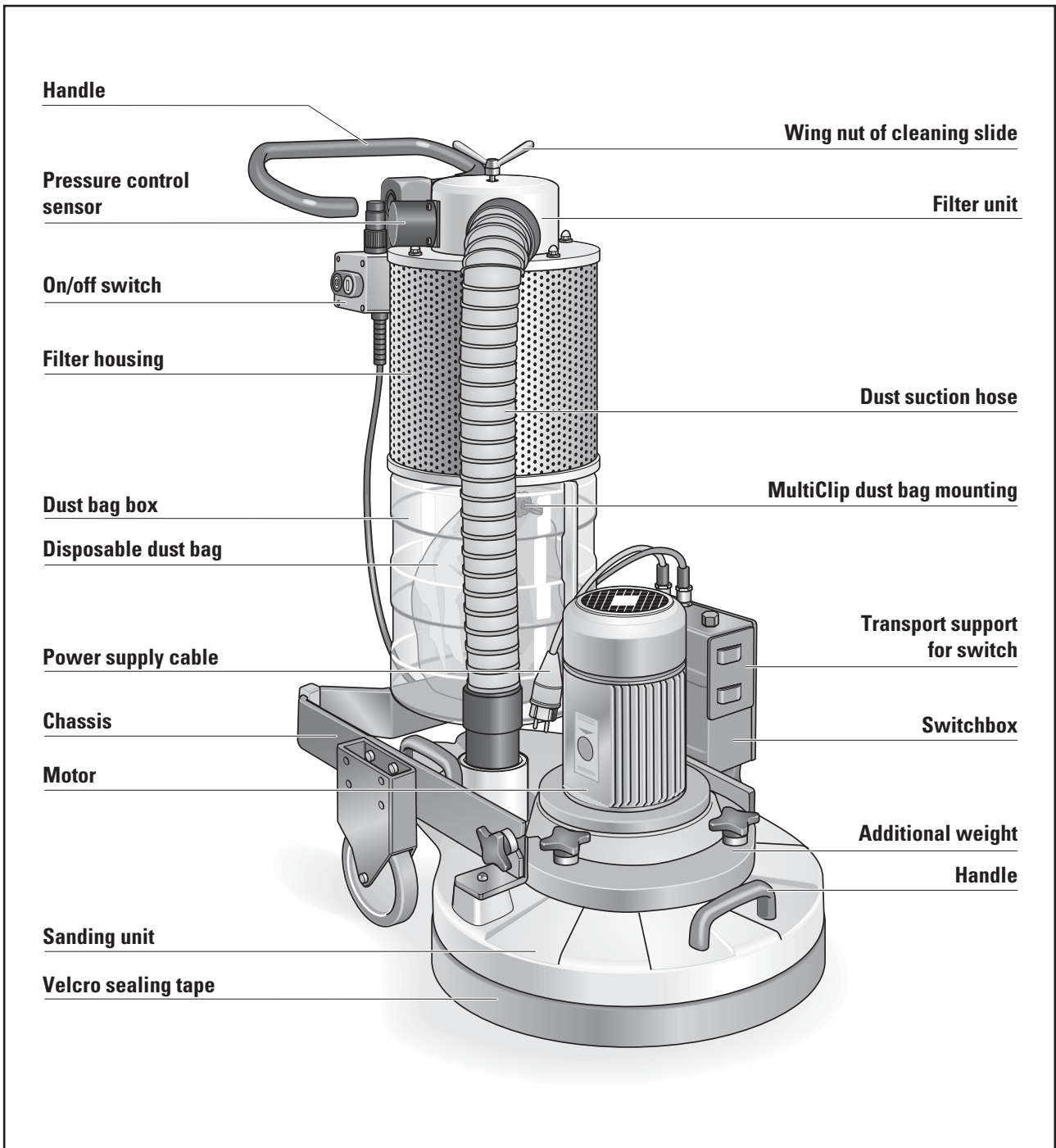


Fig. 1 Main components of the three disc sanding machine TRIO.

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# Introduction

**You have chosen a high quality product made by LÄGLER. We wish you every success working with the TRIO. The machine has been designed and constructed up to the latest state-of-the-art standards. You can be assured that each and every machine we produce is submitted to a thorough operational test before leaving our premises.**

**Please read this operating manual in its entirety prior to working with your TRIO for the first time. It contains important information which will help you to operate the machine safely and without any problems. Should a specific point of interest to you not be addressed in this booklet, please don't hesitate to contact our service department or your LÄGLER dealer. They have completed a highly qualified training course and are thus thoroughly acquainted with all aspects of TRIO. They will be more than happy to give you all the help and advice you need.**

## 1.1 MACHINE FEATURES

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*Figure 1* (on page 2) depicts the TRIO with the main components designated. Please take a little time to familiarize yourself with the machine.

## 1.2 DESCRIPTION OF THE MACHINE

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The TRIO works with three sanding discs that are suspended in a freely rotating support. The working area is fully covered by the machine housing. The motor and switchbox are positioned vertically on the machine housing. One of the plugs leads to the power supply, the other to the on/off switch which can be positioned either on the switchbox or below the guide handle. The chassis consisting of the bracket with wheels, tubular, adjustable handle is mounted to the sanding unit with two crossnut fasteners and can be removed for transport purposes.

A dust separator is fixed to the chassis and connected to the dust suction system of the sanding unit by a flexible suction hose. Dust is separated by a coarse filter system and collected in the disposable dust bag. Inside the dust bag box the dust bag is fastened to the separator with a MultiClip. The transparent dust bag box can be opened using two fasteners. The air coming from the separator passes through a fine particle filter behind the perforated cover before being blown out into the environment. A sensor checks the air-pressure in the separator and a red warning lamp lights up when the suction capacity is too low.

To return to the correct suction capacity, the cleaning slide must be used to clean the fine particle filter.

### 1.3 PROPER USE

The three disc sanding machine TRIO is suitable for the dry sanding of all kinds of wooden floors or cork floors in a dry environment. It may be used to apply viscous polish or cleaning agent, or to wax polish the floor. Additional tools such as milling discs or steel brushes are available for dry work on composition floor or other sub-floors.

**Do not use TRIO for any other purpose without agreement by the manufacturer. No wet sanding!**

### 1.4 SAFETY PRECAUTIONS

Please read the following paragraphs carefully and instruct your personnel and colleagues accordingly. Otherwise you or they might risk incurring health hazards or injuries.

**The machine must not be switched on in a tilted position since you could be seriously injured by the rotating discs!**

Please use only original LÄGLER tools, accessories and spare parts. Warranty will not be granted if parts from other manufacturers are used! Otherwise, damage to the machine and the surface worked upon or danger for the operator cannot be ruled out.

Make sure you fit the dust bag carefully and correctly to prevent unnecessary and harmful dust emissions for the operator and the environment.

Never work with the wing nut and cleaning slide of the filter unit pulled up, and observe the filter cleaning instructions to prevent clogging of the filter/separator system.

Clogging can otherwise make troublesome and time-consuming cleaning work necessary.

Improper transport can cause damage to the machine.

**In order to preclude any damages by fire or explosion, the dust bag must be removed, sealed and deposited in a non-combustible container outdoors after each work period!**

**Keep away from sources of fire.**

**Do not smoke when in a dusty environment (e.g. during work or when emptying the dust bag) → danger of dust explosion.**

**The TRIO three disc sanding machine can only be used for dry sanding. Never use it to carry out wet sanding jobs of any kind (Mortal danger)!**

**Not to be used for wet sanding of any kind!**

**When the machine is switched on, a considerable residual risk must be taken into account despite all the safety devices. For this reason, never reach into rotating tools and machine parts!**

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## INTRODUCTION

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Keep the power cable out of the working area to prevent mechanical or electrical damage.

**In order to prevent the motor being started unintentionally, the power cable must be disconnected from the mains when the machine is switched off!**

To protect yourself and the machine against faults in the main power supply it is advisable to use a DI safety plug (order no. in *Section 11, Spare parts*).

As long as TRIO is operated properly, the machine operates well within legal limitations and below maximum values for dust emission. As long as you change the disposable dust bag with great care and according to the instructions printed on the bag, you are not required to wear a P3 breathing mask (order no. in *Section 11, Spare parts*).

### 1.5 SAFETY DEVICES

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The following parts of the machine are safety devices and therefore have to always be in a perfect working condition:

Velcro sealing tape	=	Protection against dust
Machine housing	=	Protection against tools
Dust bag box	=	Dust bag protection
Dust separator	=	Protection of the filter element, protection against dust

# Technical data

Manufacturer .....	Eugen LÄGLER GmbH
Machine type .....	Three disc sanding machine
Serial number .....	see type plate
Year of manufacture .....	see type plate
Motor type .....	Single-phase AC motor
Voltage .....	230 V or 220 V
Frequency .....	50 or 60 Hz (CPS)
Power output .....	1.8 KW
Fuse .....	16 A
Insulation class .....	F
Protection class .....	IP 54
Safety devices .....	Zero voltage triggering, Temperature switch as overload protection in the motor
Capacitor .....	40 µF
Sanding gear diameter .....	200 mm (7 7/8")
Speed of sanding disc	
- with 50 Hz (CPS) motor .....	approx. 600 1/min (rpm)
- with 60 Hz (CPS) motor .....	approx. 720 1/min (rpm)
Weight of sanding unit .....	54 kg (119 lbs)
Weight of chassis/extraction element .....	24 kg (53 lbs)
Total weight .....	78 kg (172 lbs)
Overall length .....	870 mm (34 1/4")
Overall width .....	490 mm (19 1/4")
Overall height .....	990 mm (39")
Filter dimension .....	1.43 m <sup>2</sup> (15.4 square feet)
Filter class .....	C
Running time after shut off .....	< 5 sec.
Dust emission in working area (according to DIN 33892) .....	< 0.2 mg/m <sup>3</sup> (0.0024 gr. / cu. yd.) air
Noise emission in working area, (measurement taken 1.5 m (5 ft.) above floor at operator's ear)	
Sanding of beech parquetry	
Sanding paper grain 80 .....	80 dB(A)
Removal of glue residue	
- using milling discs .....	80 dB(A)
- using steel brushes .....	80 dB(A)
Tolerance for all measurements .....	4 dB(A)

## Note on noise emission:

The values given are emission measurements. It is important to note that these values cannot describe the entire noise level at the working place. Although there is of course a relation between emission and entire noise level, you cannot conclude if additional precautionary measures are necessary. The entire noise level is influenced by factors such as the duration of the emission, quality of the working area, other noise sources like other machines or processes. Legal noise levels may even differ from country to country. This information is given in order to allow users a better estimation of the risks of noise.

Filter examination certificate available on request.

## Note:

The above-mentioned motor data refers to the machines used in the Federal Republic of Germany or USA. Exported machines could have different data which can be found on the motor type plate.

**Application fields**

- Wooden floor finishing
- Intermediate varnish sanding
- Refurbishing pre-fabricated parquet
- Sanding cork floors, mastic and filler surfaces
- Roughing subfloors
- Removing dirt, glue, carpet and felt residue
- Application of cleaning agents, polish and cold wax
- Dry polishing of the surface

**Not to be used for wet sanding jobs of any kind!****Basic configuration**

TRIO machine ready to use, 1 supplementary weight 9 kg, 1 set of sanding plates for Velcro discs and mesh discs, extension cable 10 m, 3 x 2.5 mm<sup>2</sup> with strain relief; 25 dust bags; 1 MultiClip; 1 Phillips screwdriver; 1 closed mouth wrench; 2 open end wrenches SW 17; 1 hex. socket screw wrench 4 mm; 1 hex. socket screw wrench 5 mm; 1 hex. socket screw wrench 6 mm, 1 operating instructions.

**Special accessories**

3 milling discs with 3 reversible holders each, 3 brush discs, 3 steel brushes.

**Wearing parts or safety-related parts**

Please check the condition of the wearing parts listed below at regular intervals to make sure you are working with a safely functioning and optimally adjusted machine at all times:

- Replace extension cable if damaged
- Replace power cable if damaged
- Replace switch if damaged
- Replace Velcro sealing tape if damaged
- Replace MultiClip if damaged
- Replace V-belt when worn out
- Replace rubber jig when worn out
- Replace pad base of mesh sanding plate when worn out
- Replace sealing felt on cover when worn out

The relevant part numbers for the special accessories and wearing parts can be found in the spare parts lists in *Section 11*.



# Getting started

This paragraph contains instructions on how to put your TRIO machine into operation at the workplace. In order to prevent damage and malfunctions it is necessary to strictly stick to the sequence of steps indicated below.

**Before you start your first job with TRIO you have to receive instruction.**

## 3.1 PREPARING THE MACHINE

- 1 Unpack the machine carefully. Take care to deposit the packaging materials that are no longer required in an environmentally-friendly way.

**To ensure safe dispatch of the machine, the packaging should be used for transport purposes.**

- 2 After unpacking the machine, release the securing grip of the handle, press handle forward and pull, securing grip back into its prior position (Fig. 2).
- 3 While holding on to the handle, carefully tilt the machine backwards into a horizontal position. Make sure that the machine gets to rest safely on the guide tube and the two protective cushions. Now the sanding gear is accessible from the front (Fig. 3). **Make sure the machine is in a safe position!**
- 4 Mount the gear of your choice by placing one of the three locking bolts into the rubber jig and then fitting the other two bolts into their respective jigs. Then press gear onto the bearing as far as it will go (Fig. 4).

### ATTENTION!

**Make sure the gear is in place correctly. It must slide in place with a perceptible click. Always use three gears of the same type!**

- 5 Bring the machine back into vertical position so that the sanding gear is resting flat on floor surface. Adjust the handle height to your convenience.
- 6 Open the dust bag box by turning the two fasteners upwards; open up the movable half of the dust bag box.

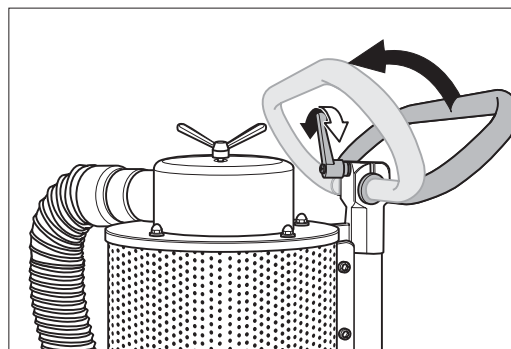


Fig. 2 To tilt the machine, release the clamping lever of the handle first and press the handle forward.

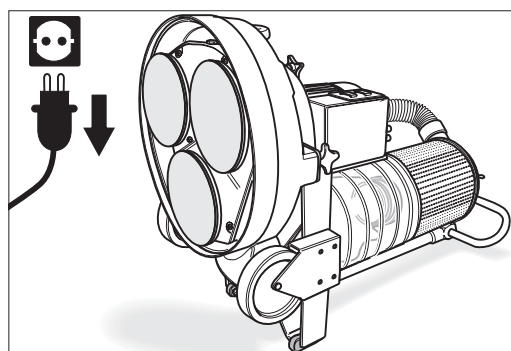


Fig. 3 Carefully tilt the machine backwards to be able to access the gears. **Make sure the machine is in a safe position!**

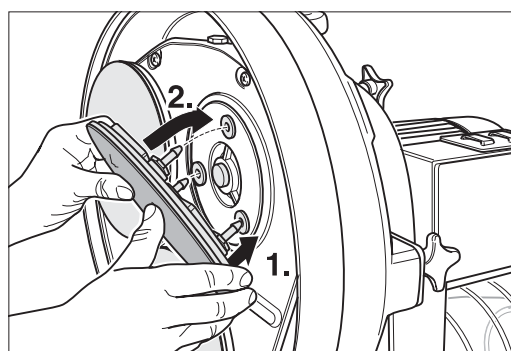


Fig. 4 Place one of the three bolts one of the jigs, fit others into their respective jigs, press the gear onto the bearing as far as it will go.

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## GETTING STARTED

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- 7 Check to make sure the dust bag is placed correctly on the neck of dust separator. The side of the bag with the print on it must be facing you.
- 8 If there is no dust bag attached to the dust separator, proceed according to *Section 4.5, Changing the dust bag*.
- 9 Close the dust bag box and lock it by turning the two fasteners back to their downward position.
- 10 Fix the Velcro sealing tape around the bottom edge of the machine housing in such a way that the two loose ends meet on the rear side. For optimum suction, there should be a gap approx. 1 mm wide between the lower edge of the sealing tape and the floor.
- 11 Connect the plug of the machine's power cable to the jack of the extension cable.
- 12 Connect the plug of the extension cable into a safety wall socket with adequate fuse protection and a voltage of 230 V (or 220 V). For even more safety, we recommend using a DI safety plug (order no. in *Section 11, Spare parts*).

The machine is now ready for use.

### ATTENTION!

**Do not use unnecessarily long extension cables and beware of underpowered, inadequately protected or otherwise hazardous electrical power sources. Only use safety sockets!**

**Prior to carrying out any work on the tools, the plug must be removed from the mains socket!**

### 3.2 STARTING THE MACHINE

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The machine can be started up after these preparations have been completed. Before you do this, though, it is necessary to give the sanding gear *a little leeway*. This is achieved by tilting the machine just slightly backwards using the black handle and starting the machine by pushing the green button on the on/off switch.

Please note that the sanding gear should not completely lose contact with the floor when the machine is started up. On the other hand, if the machine is switched on without tilting it first, it will not run.

### 3.3 SWITCHING OFF THE MACHINE

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To switch the machine off, press the red button on the on/off switch. Keep hold of the machine until the sanding gear comes to a complete standstill.

# Working with the TRIO

## 4.1 GENERAL INFORMATION AND TIPS

You may use your TRIO for many a wide range of dry floor treatment.

**The machine must never be used for wet sanding jobs of any kind!**

For the first sanding of newly laid parquet it is advisable to use the HUMMEL with sanding agents of up to 60 or 80 grain, whatever the job demands. The choice of sanding agent depends on the kind of wood involved, initial run, type of sealing and the required surface finish. Always only use half-decked diffuse sanding papers.

With the TRIO, you should always begin with 60 grain sanding discs. In the case of a poor first run, the amount sanded off can be increased by sanding without the flexible Velcro rings. As with belt sanding, the first run has to eliminate all the signs of previous sanding jobs!

Mesh discs must be used for intermediate varnish sanding. The choice of grain depends on the varnish used, the varnishing speed and the required finish.

For cork floors, use 60 grain discs for your first run and 80 grain discs for the second. Intermediate varnish sanding and sanding of cork and rubber floors should be done without the additional weight.

Suction the dust from the floor thoroughly after each sanding process. Keep the running wheels of the machine clean.

Further important and interesting information about sanding wooden floors can be found in the LÄGLER application techniques brochure „Sanding wooden floors“!

Further information can be obtained free of charge:

within Germany

- Phone: 0800 / 52 34 537

- Fax: 0800 / 48 66 353

within USA

- Phone: 800-848-6635

or

- Phone: +49 - 7135 - 98 90-0

- Fax: +49 - 7135 - 98 90-98

- e-mail: [info@laegler.com](mailto:info@laegler.com)

- Internet: <http://www.laegler.com>

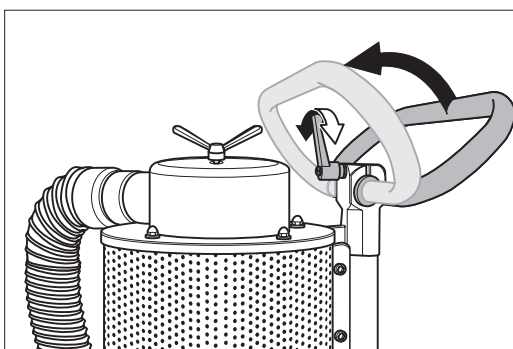


Fig. 5 To tilt the machine, release the clamping lever first and press the handle forward.

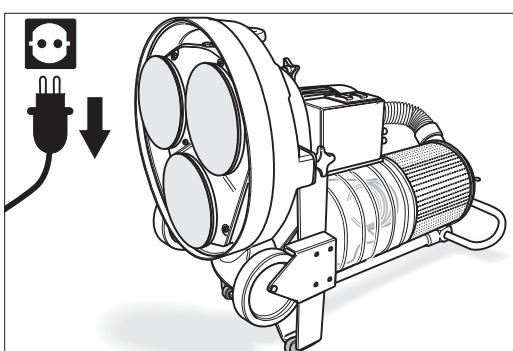


Fig. 6 Tilt the machine backwards so that you can access the gears. **Make sure the machine is in a safe position!**

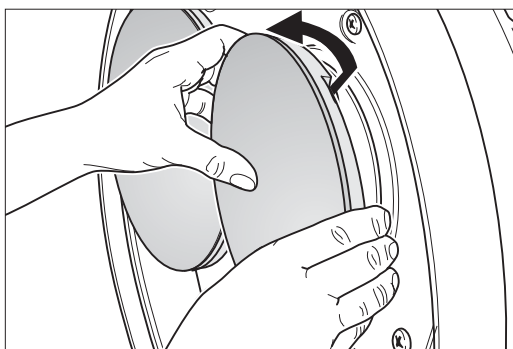


Fig. 7 Grasp the gear edges with your fingers and pull it out of the rubber jigs.

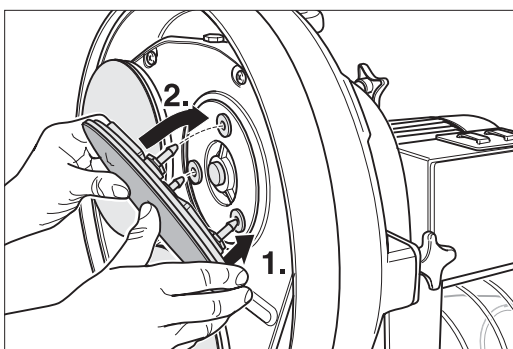


Fig. 8 Place one of the three bolts into the hole of one jig, fit the others respectively and press the gear on as far as it will go.

## 4.2 CHANGING SANDING GEAR

Depending on the different types of work to be done you may have to change the sanding gear. To do this, proceed as follows:

- 1 Switch the machine off.
- 2 **Disconnect power supply before commencing any work on the machine; this will prevent inadvertent motor action!**
- 3 Release clamping lever of the handle, press handle forward and pull the clamping lever back into its prior position (Fig. 5).
- 4 While holding on to the handle, carefully tilt the machine backwards into a horizontal position. Make sure that the machine gets to rest safely on the guide tube and the two protective cushions (Fig. 6). **Make sure the machine is in a safe position!**
- 5 To remove gear, grasp its edges with your fingers and pull it out of the rubber jigs of the bearing (Fig. 7).

**Never use a screwdriver or a chisel for this job as this could otherwise cause damage to the discs or the machine.**

- 6 Mount the gear of your choice by placing one of the three locking bolts into rubber jig and then fitting the other two bolts into their respective jigs. Then press gear onto the bearing as far as it will go (Fig. 8).

### ATTENTION!

**The gear must fit tightly on the bearing and slide into place with a perceptible click. Always use three gears of the same type!**

- 7 Bring the machine back into vertical position so that the sanding gear is resting flat on floor surface. Adjust the handle height to your convenience.

### 4.3 CHANGING THE SANDING AGENT

**Always disconnect power supply before commencing any work on the machine; this will prevent inadvertent motor action!**

If you want to work with mesh sanding discs you must first remove the three flexible Velcro adhesive rings and replace them by normal pads. Place the mesh disk on the pad base. Insert the plastic plug through the mesh into the central hole in the universal disk (Fig. 9). You use this plug to fasten sanding pads, too (Fig. 10).

To remove worn mesh discs, grasp beneath the mesh using both hands and pull this evenly off the sanding disk together with the plug.

If you want to work with sanding paper, convert the universal disk using the flexible Velcro adhesion discs. For increased sanding depth, place the sanding paper directly on the universal disk. To replace worn sanding paper, simply pull the sanding paper off the flexible base or universal disk (Fig. 11). Now place the new sanding paper in the center of the base or the universal disk and press it in place.

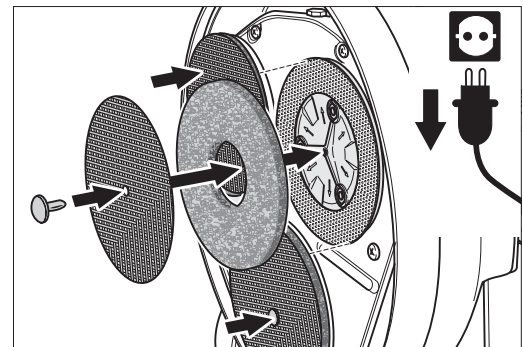


Fig. 9 The mesh discs are fixed quickly and securely to the pad base using the plastic plug.

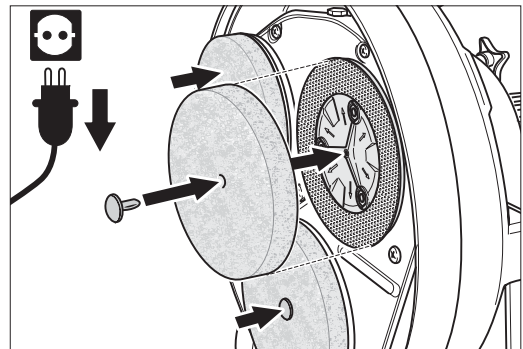


Fig. 10 The sanding pads are also fastened using the plastic plug.

### 4.4 WORKING WITH MILLING DISKS

The optional milling discs of the TRIO are used for subfloor treatments and processing. The discs are mounted in the same way as the sanding discs for mesh or conventional sanding discs.

The milling discs are equipped with six or three holders for carbide blades which are equipped with one or two carbide blade and a special screw to adjust cutting depth. Depending on the quality of the flooring can thus set the gears more or less aggressive accordingly.

To do this proceed as follows:

- 1 Switch the machine off.
- 2 **Always disconnect power supply before commencing any work on the machine; this will prevent inadvertent motor action!**

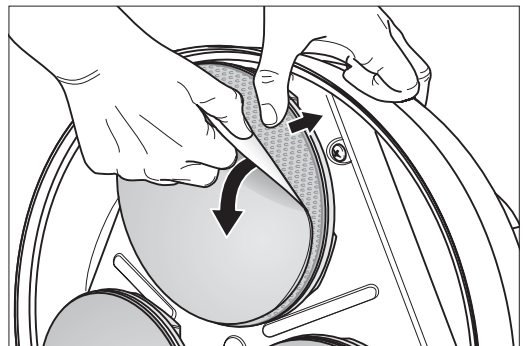


Fig. 11 Do not remove the base when removing worn-out sanding discs.

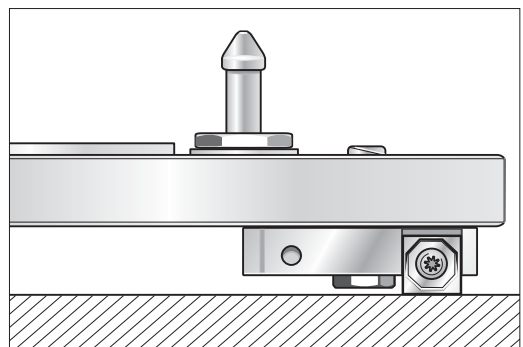


Fig. 12 Aggressive adjustment of the milling disc with special screw for working depth turned in.

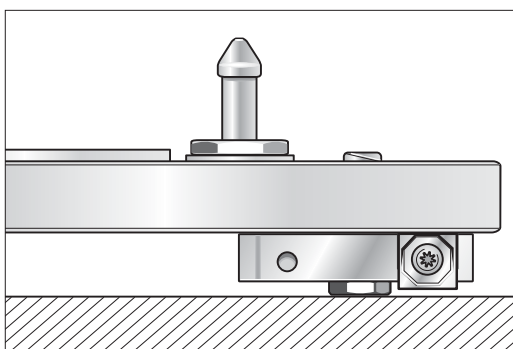


Fig. 13 Less aggressive adjustment of the milling disc with special screw for working depth turned out.

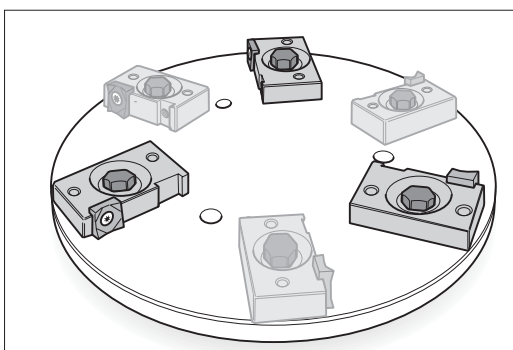


Fig. 14 You can use 3 or 6 holders on one milling disc. Each holder has to have at least a reversible carbide blade.

- 3 Remove the milling disc from the machine (see *Section 4.2, Changing sanding gear*).
- 4 Loosen the counter nut SW 13 on the top edge of the milling disc for the holder to be adjusted. Use the TORX screwdriver in the shaft of the thread to keep the adjustment screw in position.
- 5 Use the TORX screwdriver to adjust the adjustment screw. The carbide plate should be mounted in such a way that you can check the setting.
- 6 Tighten the counter nut again. Use the TORX screwdriver again to keep the adjustment screw in position.

**Make sure there is a carbide reversible blade on every insert. Otherwise the holder will be destroyed. Make sure that the equipment of carbide blades and holders is symmetrical. Make sure all screws are tight before you start working!**

#### 4.5 CHANGING THE DUST BAG

The disposable dust bag must be removed when it is full. Do not work with an overfilled bag, otherwise the dust emission in your working area will increase to a level that no longer fulfils the requirements for dust load at the workplace.

Please note that each dust bag can only be used once. Make sure you use the original LÄGLER dust bags only (order no. in *Section 11, Spare parts*). All other bags or sacks are inadequate.

- 1 Switch the machine off.
- 2 **Remove the plug from the mains socket!**
- 3 Clean the filter element of the dust separator as described in *Section 6.2, Cleaning the filter*.
- 4 Open the dust bag box by turning the two fasteners upwards; open up the movable half of casing.

- 5 Loosen the MultiClip by opening the nut, and remove it.
- 6 Carefully pull the full dust bag from the neck of the dust separator.
- 7 Pull cover foil from adhesive strip on flap near the opening of the dust bag.
- 8 Fold the flap over the opening of the dust bag and seal the bag (Fig. 15).
- 9 Slip the opening of new dust bag over the neck of the dust separator. The side of the dust bag with the print on it must be facing you (Fig. 16).
- 10 Circle the threaded strip of the MultiClip around the neck of the dust separator, insert through lash-on piece, then fasten by turning nut (fig. 17).
- 11 Close the dust bag box and lock it by turning the two fasteners back in downward position.

**ATTENTION!**

**In order to preclude any damages by fire or explosion, the dust bag must be removed, sealed and deposited in a non-combustible container outdoors after each work period!**

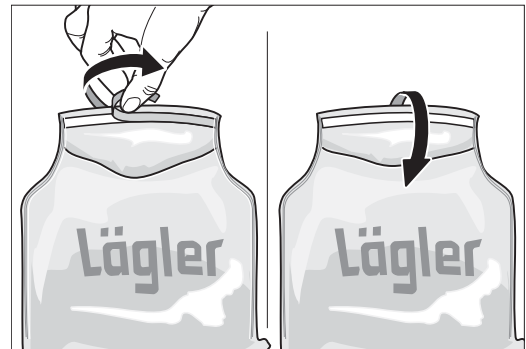


Fig. 15 Pull cover from the adhesive strip and seal the bag. **The dust bag must be deposited in the open air!**

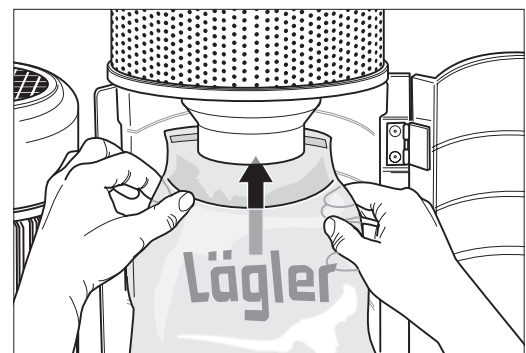


Fig. 16 Make sure the dust bag is in the correct position in the container (print towards you, adhesive strip towards the rear).

**Dust-free sealing of the dust bag is only possible when the dust bag has been mounted without any wrinkly on the neck of the dust separator.**

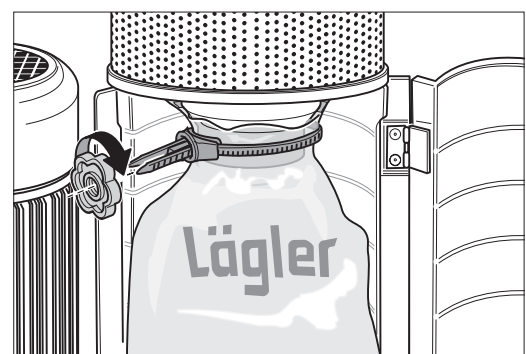


Fig. 17 Tighten the MultiClip threaded strip and screw the nut carefully.

# Transport and storage

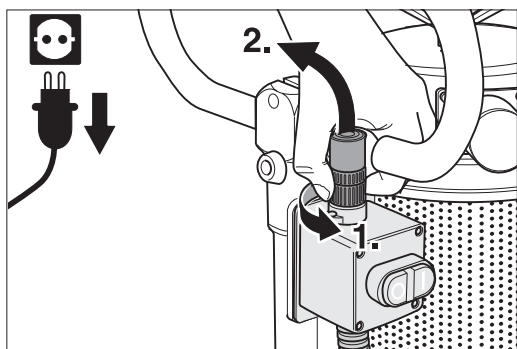


Fig. 18 Loosen the ring nut and remove the plug from the mains.

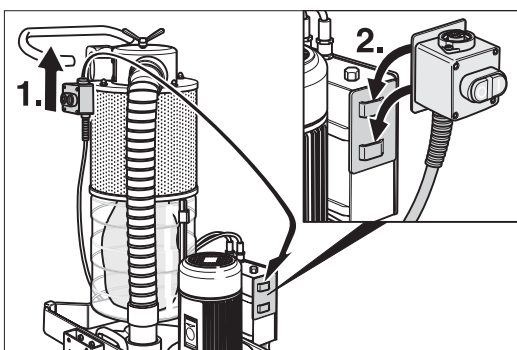


Fig. 19 Hook the on/off switch into the transport support on the motor switchbox.

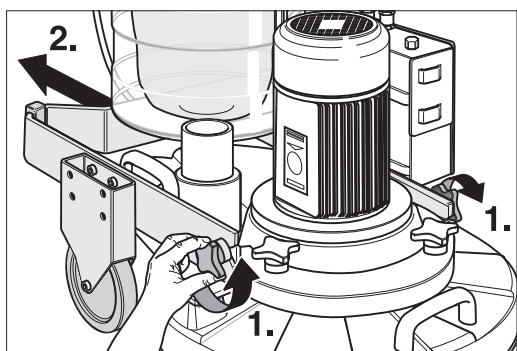


Fig. 20 The chassis can be moved backwards once the crossnut fasteners have been loosened.

## 5.1 DISMANTLING THE MACHINE

For transport purposes the machine can be dismantled into two pieces: chassis (frame with wheels, guide tube and dust separator) and sanding unit (machine casing with motor and sanding gears). Please make sure that sanding unit remains in an upright position during transport. It is necessary for the motor to stand vertically on top of the gear casing.

All parts of the machine must be secured during transport in the truck or similar in such a way that they can not move or topple over. When manually transporting the TRIO over roads and paths use LÄGLER's TransCart to protect the gear and wheels against damage.

The TRIO three disc sanding machine is dismantled as follows, please stick precisely to the suggested sequence of steps:

- 1 Switch the machine off.
- 2 **Remove the plug from the socket!**
- 3 Loosen the cable plug of the sensor on the on/off switch by turning the ring nut; pull out plug (Fig. 18).
- 4 Remove the on/off switch from the chassis and hook it into transport support on motor switchbox (Fig. 19).
- 5 Remove the dust suction hose from the neck of the dust separator or the neck of gear casing.
- 6 Loosen the two lateral crossnut fasteners on the casing and roll the chassis backwards in an upright position (Fig. 20).



## 5.2 REASSEMBLY AFTER TRANSPORT

When reassembling your TRIO after transporting it please proceed according to the following sequence:

- 1 Roll chassis into attachment position so that the two fasteners can be homed in.
- 2 Tighten the two crossnut fasteners firmly.
- 3 Remove the on/off switch from motor switchbox and hook it into support on the chassis.
- 4 Insert the plug of the sensor into the on/off switch and lock this fasten connection by turning the ring nut. Make sure the nose of the plug is inserted in the groove of the socket (Fig. 21).

**Machine will not start as long as this plug is disconnected!**

- 5 Mount dust suction hose to the neck of the dust suction and gear casing.

## 5.3 STORAGE

If the machine is to be stored for a longer period, make sure it is stored in a dry, frost-free room which is not subject to great fluctuations in temperature.

### ATTENTION!

**Always store your machine without a dust bag or with an empty one, never with dust in the bag (danger of fire!).**

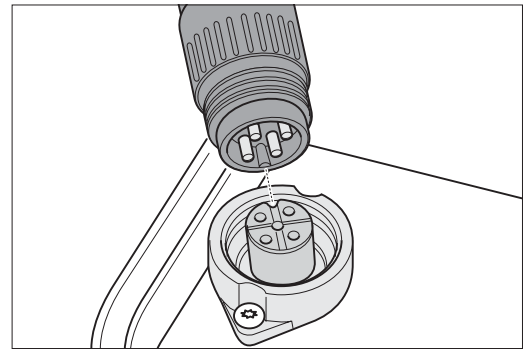


Fig. 21 Make sure that the nose of the plug is inserted into the groove of the socket.

### Professional tip:

**Remove the sanding gear from the machine when the machine is not to be used for longer periods, because otherwise the machine weight can damage the flexible sanding disc base.**

# Maintenance work and replacement of wearing parts

## ATTENTION!

**Comprehensive maintenance work, particularly work on the electrical equipment, must be done by an expert for safety reasons!**

**Maintenance work on the electrical equipment, motor or pressure control sensor may only be carried out when the machine is switched off and the mains plug disconnected from the wall socket. Otherwise mortal danger!**

**Never blow compressed air into the dust bag box or the neck of the suction hose on the dust separator as otherwise the highly sensitive pressure control sensor could be damaged.**

Certain maintenance jobs ought to be performed from time to time, at the latest, however, when damage is established or the red LED of the pressure control sensor lights up. Use only LÄGLER original spare parts. Perform the job in a clean, brightly lit working environment and follow the directions given in this manual. In the tool bag you will find all the tools needed for the jobs described below.

## 6.1 CLEANING AND CARE

### Never use solvent-based cleaning agents.

Before starting work you should carry out the following care and maintenance steps to guarantee proper machine function and a first-class sanding result:

- Clean the running wheels on the machine.
- Carry out a visual inspection of the electrical equipment (extension cable, plug, couplings).
- Check the sanding discs, rubber jigs and flexible bases of the sanding discs for damage.

## 6.2 CLEANING THE FILTER

In general the machine's filter should be cleaned after each dust bag change; at the latest this should be done when the red LED of the pressure control sensor lights up. If this happens while you are in the middle of a sanding job you may as well finish a half-trodden path first.

If you do not clean the filter in spite of the red light indicating that this is necessary, the suction performance will become less and less efficient with time, and the dust emission will increase. This, of course, will mean a higher health risk for the machine operator. Furthermore, the cleaning of filter cartridge and dust separator will prove troublesome and time-consuming.

To clean the filter proceed as follows:

- 1 **Switch your machine off.**
- 2 Grasp and turn the wing nut on top of the filter unit and gently pull it upwards, moving the cleaning slide integrated in the filter unit (Fig. 22).
- 3 Now push the cleaning slide gently back down while still continuously turning the wing nut. You will see dust dropping into the dust bag.
- 4 Repeat this process several times until no more dust drops into the dust bag.
- 5 Once you have finished cleaning, make sure the cleaning slide is pushed as deep as possible back into the filter unit (Fig. 23). Otherwise the filter will be burdened with more dust than necessary and will have to be cleaned more often.
- 6 You can now switch the machine back on again.

If you didn't succeed in cleaning the filter with the cleaning slide or if the intervals in between cleaning become too short, your filter is probably clogged with deposits such as old varnish or glue residue and must be dismantled for thorough cleaning. The next section describes the dismantling and reassembly of the filter cartridge.

### 6.3 DISMANTLING AND REASSEMBLY OF THE FILTER CARTRIDGE

Use only original Lägler filter cartridges (order no. in *Section 11, Spare parts*).

This section describes how to dismantle and reassemble the filter cartridge. This can become necessary when the filter is totally clogged by deposits and these cannot be removed by the normal cleaning method or if the filter has been damaged in any way.

- 1 **Switch the machine off and disconnect it from the power supply!**
- 2 Loosen the cable plug of the sensor on the on/off switch by turning the ring nut and pull the cable plug off (Fig. 24).

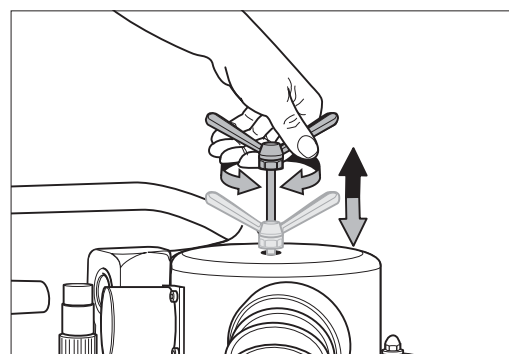


Fig. 22 Move the cleaning slide up and down while continuously turning the wing nut.

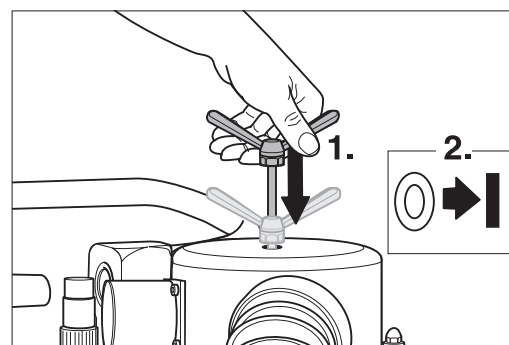


Fig. 23 Push the cleaning slide as deep as possible into the filter unit (1.). Then you can turn the machine back on again (2.).

**Since wood dust deposits can be released when the dust separator is dismantled, you have to wear an appropriate protective mask for all work on the dust separator system. Use the LÄGLER protective mask P3, for example.**

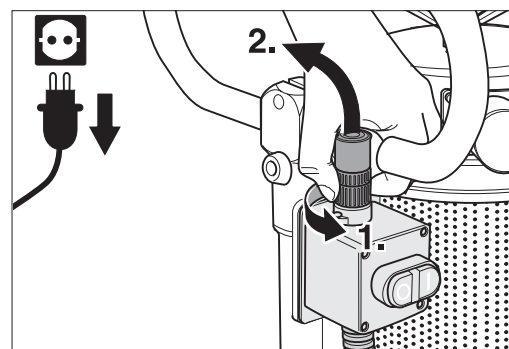


Fig. 24 Loosen the ring nut and remove the cable plug.

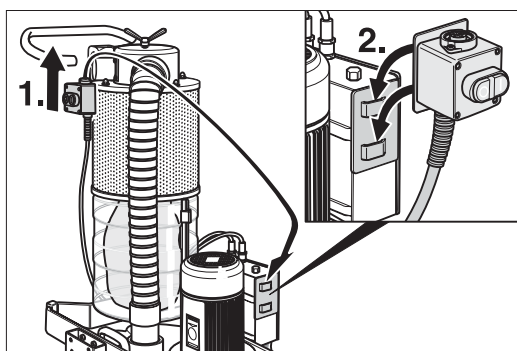


Fig. 25 Hook the on/off switch into the transport holder on the switchbox.

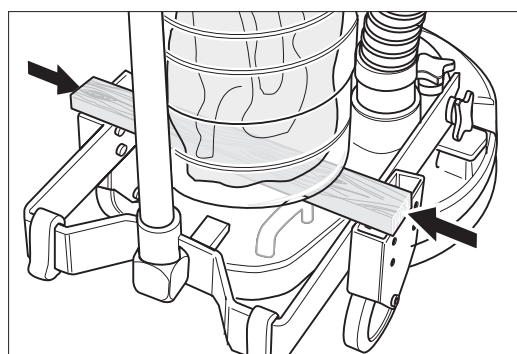


Fig. 26 Place a board between the closed dust bag box and the chassis.

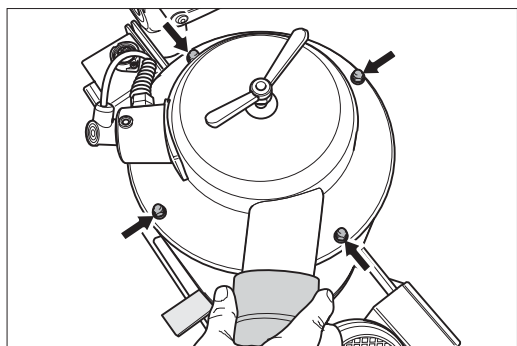


Fig. 27 Then remove the four cap nuts on the cover of the separator.

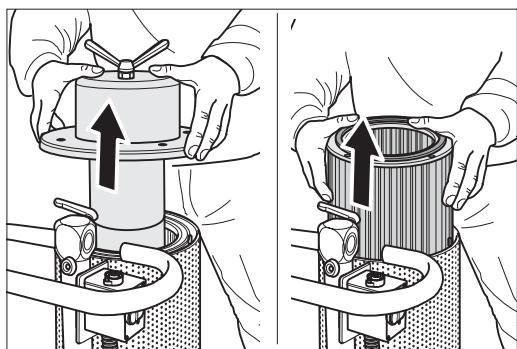


Fig. 28 Remove the cover and remove the filter insert.

- 3 Unhook the on/off switch from the chassis and onto the transport holder on the switchbox (Fig. 25).
- 4 Remove the dust suction hose from the neck of the dust separator.
- 5 Put a approx. 22 mm (7/8") board (e.g. piece of parquet flooring) between the closed dust bag box and the chassis to prevent the dust bag box from falling off when the top filter cover is removed (Fig. 26).
- 6 Remove the four cap nuts on the cover of the separator (Fig. 27) and lift off the cover of the dust separation system in one straight move (Fig. 28).
- 7 Lift the filter insert out of the filter casing (Fig. 28). Clean it or replace it by a new one. Only use original LÄGLER filter cartridges (order no. in the *Section 11, Spare parts*).

Reassembly is in reverse order:

- 1 Before you insert the new filter, make sure the rubber seals are in the groove on the filter element (Fig. 29).
- 2 Slide the filter onto the four screws from above. Make sure not to damage the filter. The system will not work properly otherwise (Fig. 30).
- 3 Now the cover can be replaced. Insert the perforated metal into the cover in such a way that it touches the inside of the ridge.
- 4 Put the washers on the screws which project out of the cover and put the cap nuts back on. Only place these on **loosely, don't tighten** them (Fig. 31).
- 5 If necessary, open the flap on the dust bag box for access to the bottom part of the fourth screw and move it around until it fits.

- 6 Put the washer of the fourth screw on before you put the cap nut back on.
- 7 Now it is time to push the cleaning slide all the way down to center the system (Fig. 32). Otherwise the system will be very hard to work with later.
- 8 Check the relative positions of all the parts again before tightening the cap nuts in a cross-like fashion. Tighten the cap nuts carefully, making sure the cover doesn't become bent.
- 9 Unhook the on/off switch from the transport holder on the switchbox and back into the working position. Insert the plug of the sensor into the on/off switch and secure the ring nut. Put the suction hose back on and connect the sander to the power supply.

The machine is now ready to use again.

#### 6.4 CHANGING THE TOOTH BELT

Only use the original LÄGLER tooth belt (order no. in *Section 11, Spare parts*).

The tooth belt transmits momentum from the motor pinion to the three bearings of the sanding gear; it is necessary to clean it regularly and to replace it in case of damage. To remove the tooth belt proceed as follows:

- 1 Switch off the machine.
- 2 **Disconnect power supply before commencing any work on the machine; this will prevent inadvertent motor action!**
- 3 Release the clamping lever of the handle, press the handle forwards and pull the clamping lever back into its prior position (Fig. 33).
- 4 While holding on to the handle, carefully tilt the machine backwards into a horizontal position. Make sure that the machine gets to rest safely on the guide tube and the two protective cushions (Fig. 34). **Make sure the machine is in a safe position!**

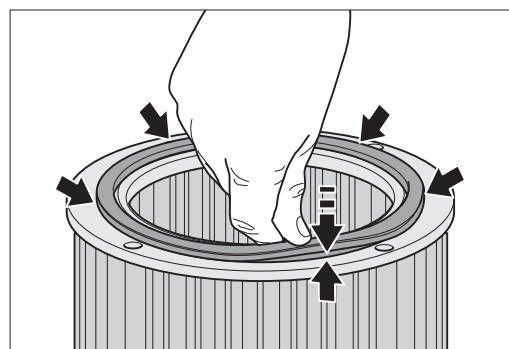


Fig. 29 Make sure the seal sits properly in the filter before replacing it in the dust separator.

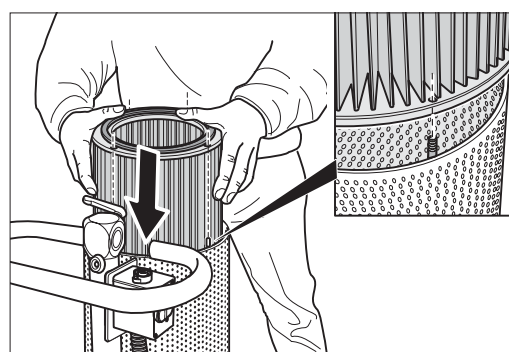


Fig. 30 Slide the filter onto the four screws from above.

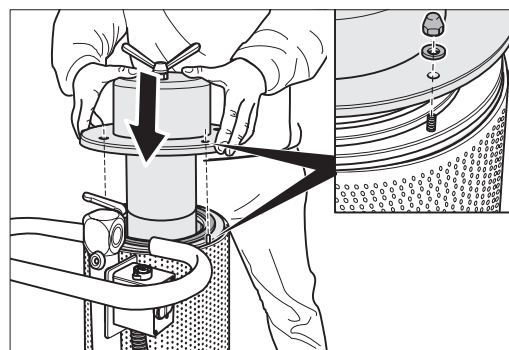


Fig. 31 Replace the cover and **loosely** replace the cap nuts!

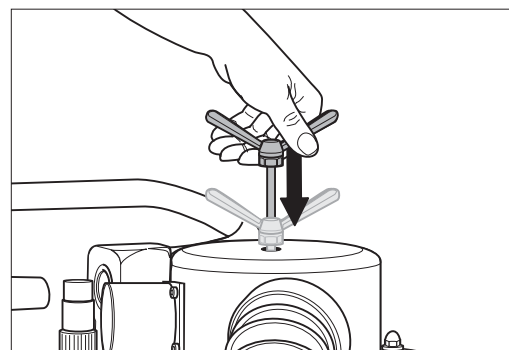


Fig. 32 Push the cleaning slide as far as possible into the filter unit.

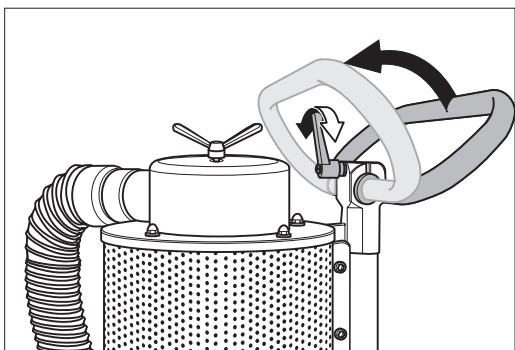


Fig. 33 To tilt the machine, release the clamping lever of the handle, press the handle forwards and pull the clamping lever back into its prior position.

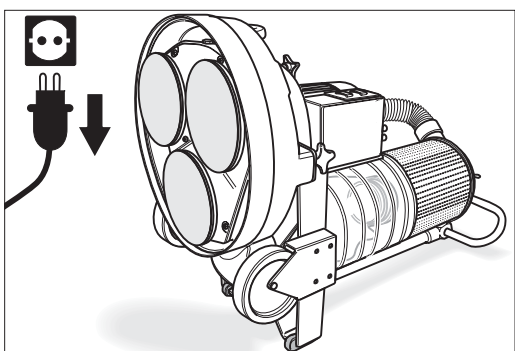


Fig. 34 Tilt the machine backwards to access the sanding gear. **Make sure the machine is in a safe position!**

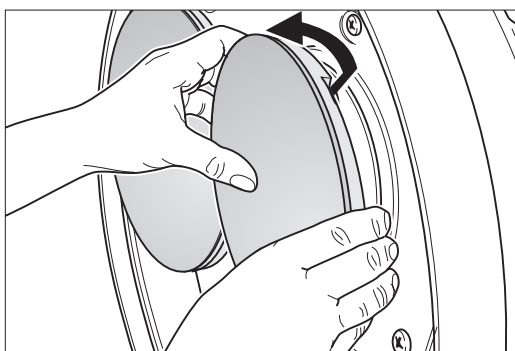


Fig. 35 Grasp the gear edges with your fingers and pull it out of the rubber jigs.

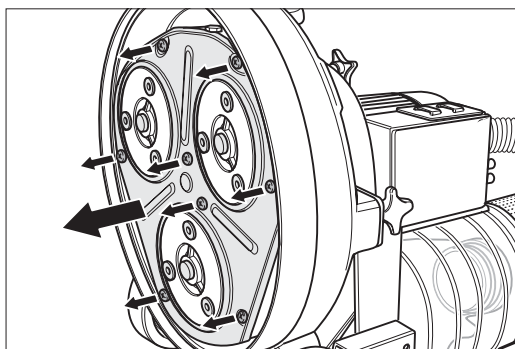


Fig. 36 Then remove the eight screws and pull off the cover.

- 5 Remove sanding or brush plates by grasping the edges with your fingers and pulling them out of the rubber jigs of their bearings (Fig. 35).

**Never use a screwdriver or a chisel for this job as this could otherwise cause damage to the discs or the machine.**

- 6 Remove the eight fixing screws of the cover and remove the cover (Fig. 36). Check at this point whether the sealing felt on the inside of the cover needs to be replaced (see *Section 6.6, Changing the sealing felt on the cover of the sanding disc gear*).
- 7 Loosen counter nut of tooth belt tensioner (using SW 17 wrench) and turn the nut all the way back to casing wall (Fig. 37).
- 8 To expand the spring, now turn the second nut back to the counter nut (Fig. 38).
- 9 Push the tooth belt tensioner back so that the tooth belt can be removed (Fig. 39).
- 10 Suck off dust and dirt using a vacuum cleaner.

To re-insert the tooth belt after cleaning or replacement, proceed as follows:

- 1 Push the tooth belt tensioner all the way back to the casing wall.
- 2 Insert the tooth belt with the geared side facing and engaging the pinion gearing with the flat side of the belt skirting the gear bearings (Fig. 40).

**It is important to insert the tooth belt correctly, as otherwise the machine may suffer damage.** When the tooth belt tensioner is at the **bottom**, the belt loop has to be placed around the drive pinion from the **left** (Fig. 41).

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 MAINTENANCE WORK AND REPLACEMENT OF WEARING PARTS
 

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- 3 Now tighten the spring using the nuts, whereby the spring must be tightened to the following length:

Tightened length **X** of the spring (Fig. 42)

- **Orange** spring: 55 mm (approx. 2 1/8")

- **Blue** spring: 52 mm (approx. 2").

Carefully fasten the counter nuts.

- 4 Replace the cover and fix it in place using the eight screws.
- 5 Mount the gear of your choice by placing one of the three locking bolts into the rubber jig and then fitting the other two bolts into their respective jigs. Then press gear onto the bearing as far as it will go.
- 6 Tilt the machine back into the vertical position and adjust the handle height to your convenience.

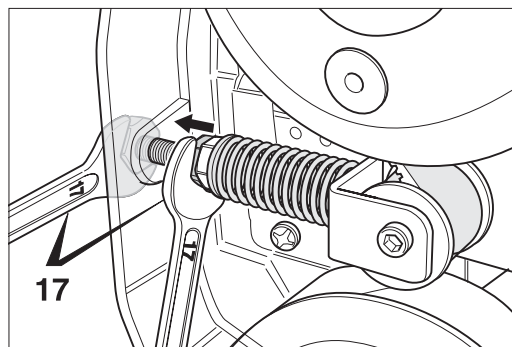


Fig. 37 Turn the counter nut back to the casing wall.

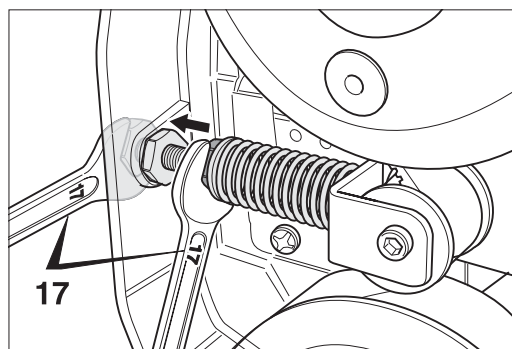


Fig. 38 Turn the clamping nut back to the counter nut.

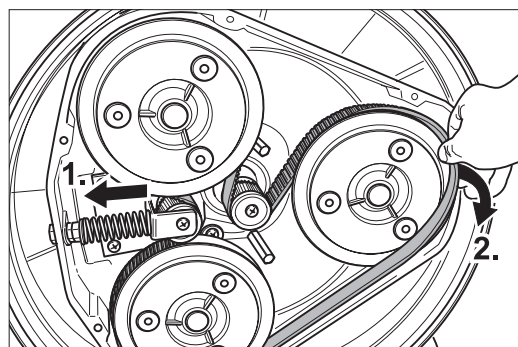


Fig. 39 Push the tooth belt tensioner back and remove the tooth belt.

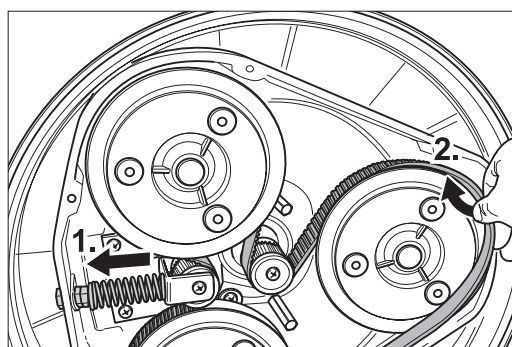


Fig. 40 With the tensioner pulled back, insert the tooth belt with the geared side facing and engaging the pinion gearing with the flat side of belt skirting the gear bearings.

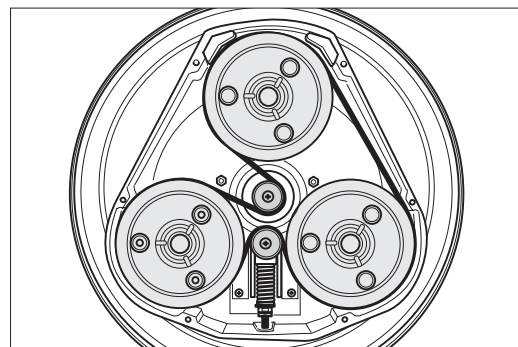


Fig. 41 When the tooth belt tensioner is at the bottom, place the belt loop around the pinion from the left.

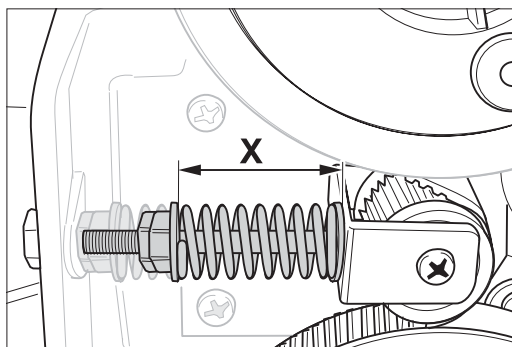


Fig. 42 The length **X** of the tightened spring is:  
 - **Orange** spring: 55 mm (approx. 2 1/8")  
 - **Blue** spring: 52 mm (approx. 2").

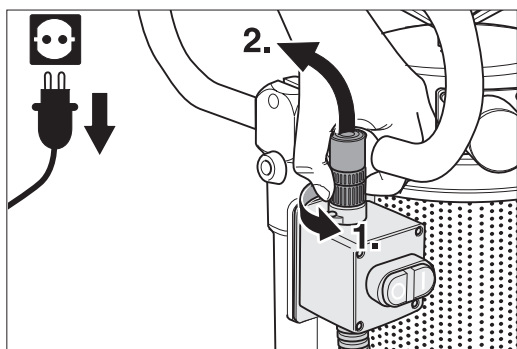


Fig. 43 Loosen the ring nut and remove the cable plug.

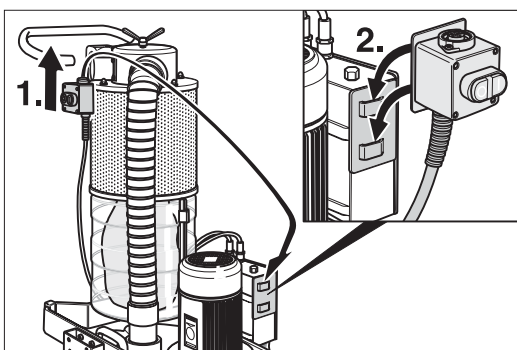


Fig. 44 Hook the on/off switch into the transport holder on the switchbox.

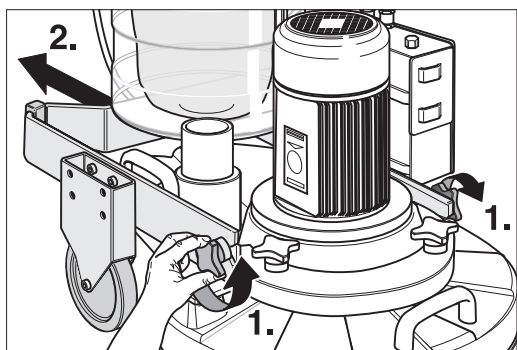


Fig. 45 The chassis can be moved backwards once the crossnut fasteners have been loosened.

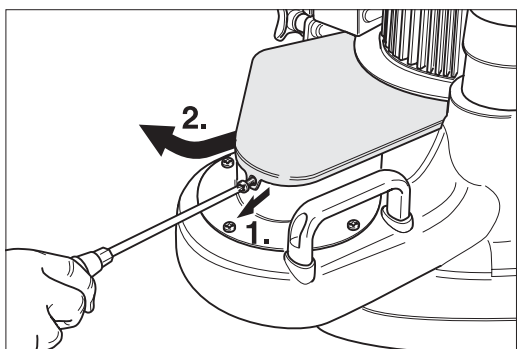


Fig. 46 Remove the V-belt guard fixing screw and remove the V-belt guard.

## 6.5 CHANGING THE V-BELT

Always only use original LÄGLER V-belts (order no. in *Section 11, Spare parts*).

If the V-belt shows signs of wear and tear it needs to be replaced. To do this proceed as follows:

- 1 Switch off the machine.
- 2 **Disconnect power supply before commencing any work on the machine; this will prevent inadvertent motor action!**
- 3 Remove tooth belt as described in *Section 6.4, Changing the tooth belt*.
- 4 Bring the machine back into a vertical position.
- 5 Remove the sensor cable plug on the on/off switch by turning the ring nut and pull the cable plug off (Fig. 43).
- 6 Unhook the on/off switch from the chassis and hook it into transport support on motor switchbox (Fig. 44).
- 7 Pull the dust suction hose from the neck of the dust separator or the casing.
- 8 Now loosen the two crossnut fasteners at the side by which chassis is attached to gear casing and move the chassis backwards, keeping it in an upright position (Fig. 45).
- 9 Remove the screw which fixes the V-belt guard to the flange of the fan insert (Fig. 46).
- 10 Pull V-belt guard from its slot in the flange and put it aside (Fig. 46).
- 11 Release the tension of the V-belt by carefully moving the V-belt tensioner using cranked closed-mouth wrench. The V-belt can now be disengaged from the pulleys and the belt tensioner (Fig. 47).
- 12 Loosen the four screws which fix the motor to machine casing and lift the motor off, keeping it in a vertical position. The V-belt can now be removed (Fig. 48).



To insert new V-belt proceed as follows:

- 1 Loop the new V-belt around the motor pulley.

**Before placing the motor make sure that the tooth belt tensioner has not fallen out its guides. The tooth belt tensioner cannot be installed with the motor in place.**

- 2 With V-belt in place, lower motor vertically onto the gear casing. Make sure the V-belt does not slide off the motor pulley and get jammed between the motor and the casing. The belt must be passed through the two recesses on the casing (Fig. 49).

- 3 Fix the motor to the casing by homing in the four fixing screws.

- 4 Use the closed mouth wrench to push the tensioner back against the spring and place the V-belt into the pulleys of the ventilator and tensioner. When the V-belt has been inserted you can release the tensioner into its regular position (Fig. 50).

- 5 Insert the V-belt guard into its slot and ease it in towards the motor.

- 6 Insert fixing screw for the V-belt guard and tighten it again.

- 7 Roll chassis into attachment position so that the two crossnut fasteners can be homed in on the casing.

- 8 Tilt the machine backwards into a horizontal position and re-mount the tooth belt as described in *Section 6.4, Changing the tooth belt*.

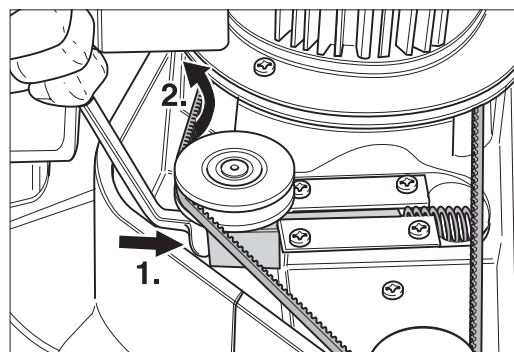


Fig. 47 Release the tension of the V-belt by carefully applying the cranked closed-mount wrench and moving the belt tensioner as shown.

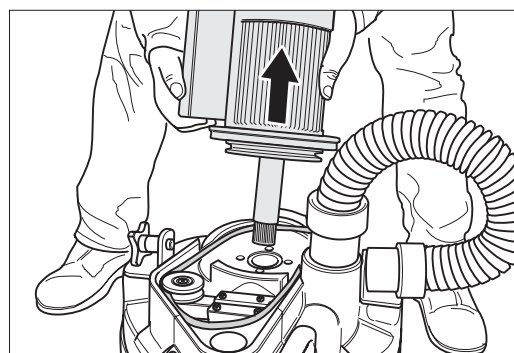


Fig. 48 Lift the motor off the machine casing vertically and remove the V-belt.

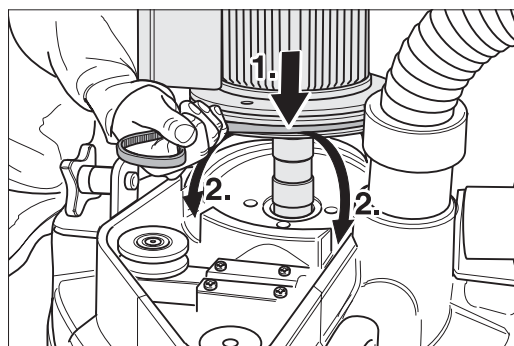


Fig. 49 Loop the new V-belt around the motor pulley (1.) and insert the motor. Make sure the belt is passed through the two recesses on the casing (2.).

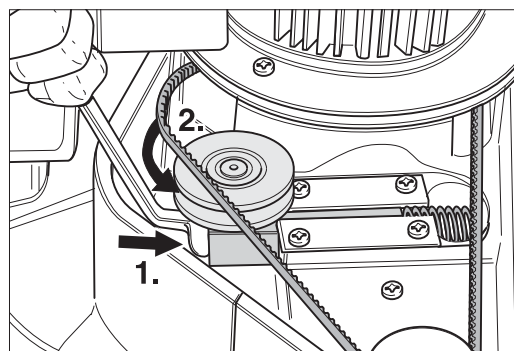


Fig. 50 Insert the closed mouth wrench below the clamping roll, move the belt tensioner and insert the V-belt into the pulleys.

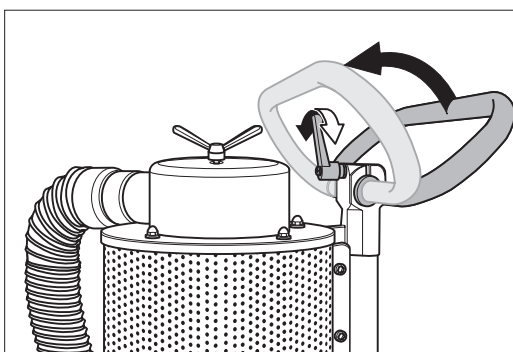


Fig. 51 To tilt the machine, release the clamping lever of the handle first and press the handle forward.

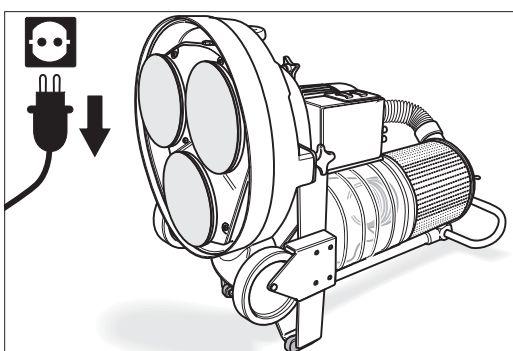


Fig. 52 Carefully tilt the machine backwards to be able to access the gears. **Make sure the machine is in a safe position!**

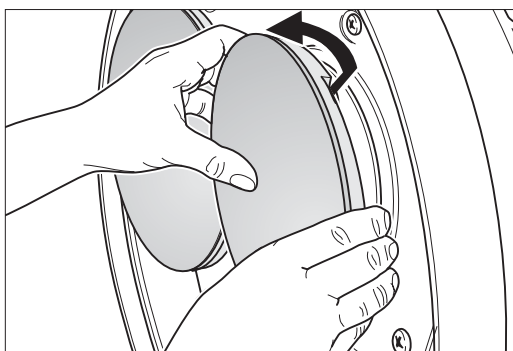


Fig. 53 Grasp the gear edges with your fingers and pull it out of the rubber jigs.

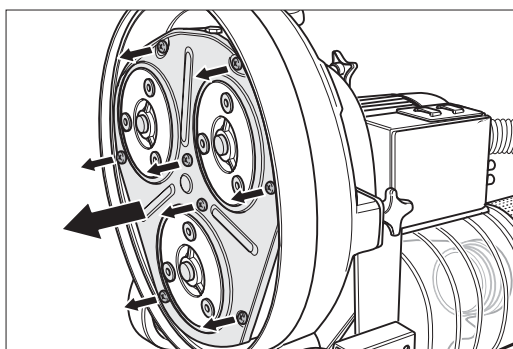


Fig. 54 Then remove the eight screws and pull off the cover.

## 6.6 CHANGING THE SEALING FELT ON THE COVER OF THE SANDING DISC GEAR

Only use original LÄGLER sealing felts (order no. in *Section 11, Spare parts*).

If the sealing felt on the cover of the sanding disc gear shows signs of wear and tear, it must be replaced. This can be recognized by visual inspection, e.g. while changing sanding discs. Too much wear in the area of the sanding disc gears allows dust to drift into your drive unit, increasing the abrasion of the tooth belt.

Please proceed as follows:

- 1 Switch off the machine.
- 2 **Disconnect power supply before commencing any work on the machine; this will prevent inadvertent motor action!**
- 3 Release the clamping lever of the handle, press handle forward and pull the clamping lever back into its prior position (Fig. 51).
- 4 While holding on to the handle, carefully tilt the machine backwards into a horizontal position. Make sure that the machine gets to rest safely on the guide tube and the two protective cushions (Fig. 52). **Make sure the machine is in a safe position!**
- 5 Remove the sanding discs or brushes. To do this, grasp the gear edges with your fingers and pull the gear out of the rubber jig (Fig. 53).
- 6 Loosen all eight cover screws and take the cover off (Fig. 54).
- 7 Pull the worn sealing felt off the inside of the cover and remove all residue adhesive.
- 8 Pull part of the protection paper off the new sealing felt, about a hand wide and position the seal exactly. Use the fixing holes in the cover for alignment (Fig. 55).

- 9 Press the free part of the sealing felt to the cover, pull off the rest of the protective paper and position the felt carefully. Make sure the positions of the holes in the felt correspond with the fixing holes in the cover.
- 10 Press the sealing felt carefully onto the cover everywhere, especially at the edges and around the cutaways for the sanding disc gears (Fig. 56).
- 11 Put the cover back on in the proper position. The seal must be positioned evenly around the sanding gears. Use two screws to hold it in place initially before replacing the other screws.
- 12 Tighten all eight screws equally tight.
- 13 Remount the sanding discs.

**ATTENTION!**

**Make sure the gear is in place correctly. It must slide in place with a perceptible click. Always use three gears of the same type!**

- 14 Tilt the machine forward into working position and adjust handle. Connect power again.

The machine is now ready to use.

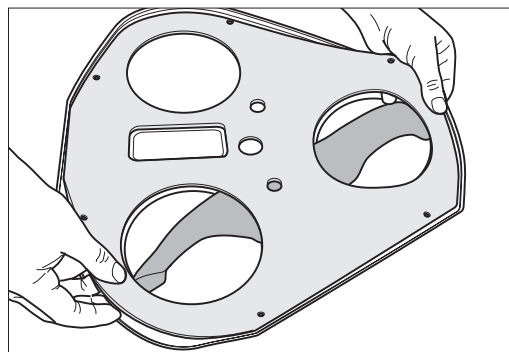


Fig. 55 Position the new sealing felt at one side first before fixing it completely in place.

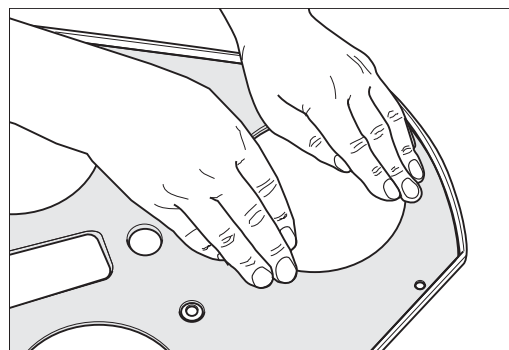


Fig. 56 Press the sealing felt carefully all over, especially at the edges and around the cutaways for the sanding disc gears.

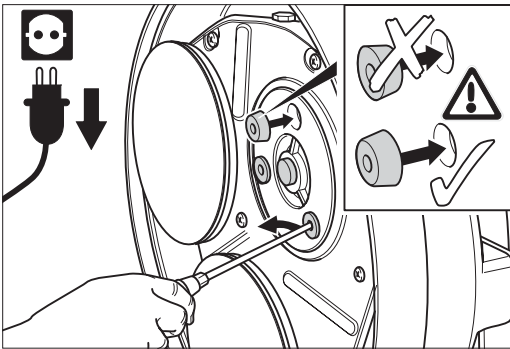


Fig. 57 Replacing the rubber bearings. Make sure of the correct insertion position!

## 6.7 CHANGING THE RUBBER BEARINGS OF THE SANDING DISC GEAR

Only use original LÄGLER rubber bearings (order no. in *Section 11, Spare parts*).

- 1 Switch off the machine.
- 2 **Disconnect power supply before commencing any work on the machine; this will prevent inadvertent motor action!**
- 3 Release the clamping lever of the handle, press handle forward and pull the clamping lever back into its prior position (Fig. 51).
- 4 While holding on to the handle, carefully tilt the machine backwards into a horizontal position. Make sure that the machine gets to rest safely on the guide tube and the two protective cushions (Fig. 52). **Make sure the machine is in a safe position!**
- 5 Remove the sanding discs or brushes. To do this, grasp the gear edges with your fingers and pull the gear out of the rubber jig (Fig. 53).
- 6 Use a screwdriver to prize the rubber bearings out of the sanding disc gear (Fig. 57).
- 7 Insert the new rubber bearings. Make sure you have the correct insertion position! The larger diameter of the bearings must be inserted in the hole first (Fig. 57)!

### ATTENTION!

**Make sure the gear is in place correctly. It must slide in place with a perceptible click. Always use three gears of the same type!**

- 8 Tilt the machine forward into working position and adjust handle. Connect power again.

The machine is now ready to use.

# Regular check-up and maintenance work according to accident prevention regulations and VDE

All electrical machinery has to be checked at least once a year by a specialist for electrical and mechanical safety and repaired if necessary. The safety must be documented by the application of a seal of approval on the machine (Fig. 58).

All the parts necessary for dust suction have to be tested by an expert at least once a year and repaired if necessary. The functionality of the suction unit must also be documented.

Make sure only LÄGLER spare parts are used for maintenance work on your machine. Servicing work should only be done by LÄGLER or an authorized repair shop.

Make sure your service pass (*Section 12*) in the back flap of this operating manual documents where and when maintenance work has been carried out.

**Note the serial number and the model year of your machine on the back of this operating manual (see type plate). Otherwise the service pass will not be valid.**

Make sure the maintenance work is confirmed in the service pass by filling out a box accordingly with date, stamp and signature.

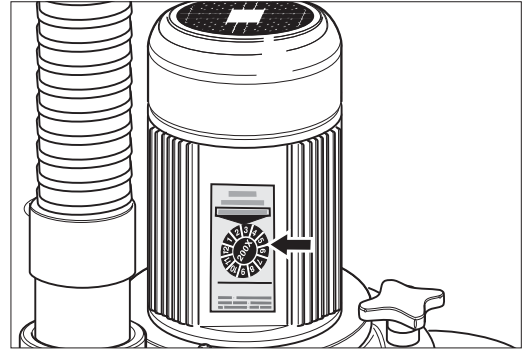


Fig. 58 The seal of approval on the motor indicates when the next maintenance check is due.

# Troubleshooting

This section will show how you can deal with possible problems. If the measures listed here do not lead to success, please do not hesitate to contact our service department or your dealer. They have completed a highly qualified training course and are thus thoroughly acquainted with all aspects of TRIO. They will be more than happy to give you all the help and advice you need.

Work on the electrical parts should only be done by qualified personnel. Make sure original LÄGLER spare parts are used.

You will find the circuit diagram valid for your machine in the motor switchbox.

## THE MACHINE DOESN'T WORK

### The machine doesn't start

- Check the power supply and connect up if necessary (Is the plug of the extension cable in the socket? Has the connection between the motor cable and the extension cable become loose?).
- Check the fuses.
- The sensor plug is not inserted.
- Have a specialist check the electrical equipment (e.g. capacitor, fuse inside the switchbox, universal contactor, cable and switch).
- The machine has switched off automatically via the temperature sensor and has to cool down.

### The machine tries to start but can't

- Tilt the machine back slightly while starting.
- At low temperatures: too cold, allow the machine to warm up to room temperature in a warm room.
- Voltage too low: check quality and length of the cable. Avoid cable cross-sections which are too small (wire cross-sections smaller than 2.5 mm<sup>2</sup>) and cables which are too long. Use a booster if necessary (order no. 708.00.00.100 for 230 V).
- Check the tension of the tooth belt and V-belt and correct if necessary.
- Check that the drive unit is running freely.

## THE MACHINE RUNS BADLY

### The machine runs but no or too little sanding efficiency

- At low temperatures: too cold, allow the machine to warm up to room temperature in a warm room.
- Check the fit and quality of the sanding devices.

- Voltage too low: check quality and length of the cable. Avoid cable cross-sections which are too small (wire cross-sections smaller than 2.5 mm<sup>2</sup>) and cables which are too long. Use a booster if necessary (order no. 708.00.00.100 for 230 V).
- Check the tension of the tooth belt and V-belt and correct if necessary.
- Check that the drive unit is running freely.
- An incorrect or blunt sanding agent is being used.

#### **Machine vibrates strongly and is works loudly**

- Check that all three sanding gears are fitted absolutely identically.
- Check for correct sanding gear fit.
- Check the sanding agents for damage.
- Check whether the sanding agents are fastened in the center of the sanding disc.
- Check the flexible base between the sanding disc and the sanding agent for damage.
- Check tension on V-belt and tooth belt, replace the belts if necessary.
- Check the machine for clogging and deposits of dust or debris, clean if necessary.
- Check the crossnut fasteners, tighten if necessary.

#### **THE MACHINE IS RUNNING BUT THERE IS NO DUST PICKUP**

##### **LED on the pressure control sensor is lit**

- Clean filter.
- Disposable dust bag is full and must be replaced.

##### **LED on the pressure control sensor is still lit**

- Check whether dust system is blocked, clean.
- Have the filter checked, replace it if necessary.
- Have the sensor checked. Use a soft brush for cleaning (**never compressed air!**).
- Check the sealing felt on the sanding gear cover, replace if necessary.

**LED on the pressure control sensor is not lit although the machine is not picking up dust**

- Clean the filter and have the pressure control sensor checked.
- The disposable dust bag is full, replace it.
- The disposable dust bag is damaged, replace it.
- The disposable dust bag has not been inserted properly, correct it.
- Check the Velcro seal, correct or replace it.
- The suction hose has not been fitted properly, correct it; replace if damaged.
- The dust separator is leaking, check the complete system for damage and repair as necessary.
- The filter cartridge is damaged, have it replaced.
- Check the suction system for blockages or faults.

## General safety precautions

**ATTENTION!**

The following basic safety precautions must be observed at all times while working with electrical tools, for protection against electric shock and any risks of injury and fire. Please read these recommendations carefully before working with your tool. Keep copies of these safety precautions at your workplace!

**Never leave the dust bag unsupervised**

In order to preclude any damages by fire or explosion, the dust bag must be removed, sealed and deposited in a non-combustible container outdoors after each work period!

**Keep your workplace environment tidy and orderly**

Disorder at the workplace increases the risk of accidents.

**Always be aware of effects on the environment**

Never expose the machine to rain. Do not use the machine in a damp or wet environment. Make sure your working area is brightly lit. Do not use the machine near sources of fire, inflammable liquids or gases.

**Keep away from sources of fire. Do not smoke when in a dusty environment (e.g. during work or when emptying the dust bag) → danger of dust explosion.**



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## GENERAL SAFETY PRECAUTIONS

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**Protect yourself from electric shock**

Avoid physical contact with grounded metal parts such as pipes, radiators, kitchen ranges, refrigerators etc.. Use the DI safety plug (order no. in *Section 11, Spare parts*).

**Keep children and other people away**

Do not permit children or any other persons to touch the machine or the power cable. Keep them away from your working area.

**Store your machine safely**

While not in use your tools and machines ought to be stowed away in dry, locked spaces and kept out of the reach of children.

**Do not overburden your machine**

It is better and safer to work within the machine's prescribed capacity range.

**Always use the correct machine**

Do not use low-capacity machines, tools or attachment parts for heavy-duty tasks. Never use a tool or machine for a purpose for which it has not been designed.

**Always wear adequate work attire**

Do not wear loose clothing or jewelry, as this could become trapped in moving parts.

**Use protective devices**

When doing dust-generating work always use a breathing mask of the filter class P3.

**Never use power cable for improper purposes**

Do not lift or carry your tool or machine by the power cable, do not pull the cable in order to disconnect plug from the socket. Protect cable from heat, oil and sharp edges.

**Do not bend too far over the machine**

Avoid unnatural or postures. Make sure you always stand on solid ground and in a balanced position.

**Keep your machines in good shape**

Keep your machines clean for a better and safer performance. Observe the maintenance instructions and the instructions about replacing tools. Check the power cables regularly and, if you detect any defects, have the defective elements replaced by a certified specialist. Also check the extension cable regularly and replace it in case of damage. Keep the handles dry and free of oil and grease.

**ATTENTION!**

For your own safety, we advise that you only use such accessories and attachments as are recommended in this manual or offered in the respective LÄGLER parts catalog. The use of any parts, attachments or tools other than the ones recommended in this manual may result in a risk of personal injury to yourself.

Keep these instructions in a safe place.

Observe any pertinent regulations and recommendations issued by the supervisory trade authorities.

**Disconnect power plug**

Always unplug the power cable when the machine is not in use, during carrying out maintenance work and or a gear change.

**No loose tools and attachments on machine**

Before switching the machine on, make sure that all wrenches or adjustment fixtures have been removed from machine.

**Avoid inadvertent machine start**

Before plugging the machine in, make sure it is switched off.

**Always try to be concentrated**

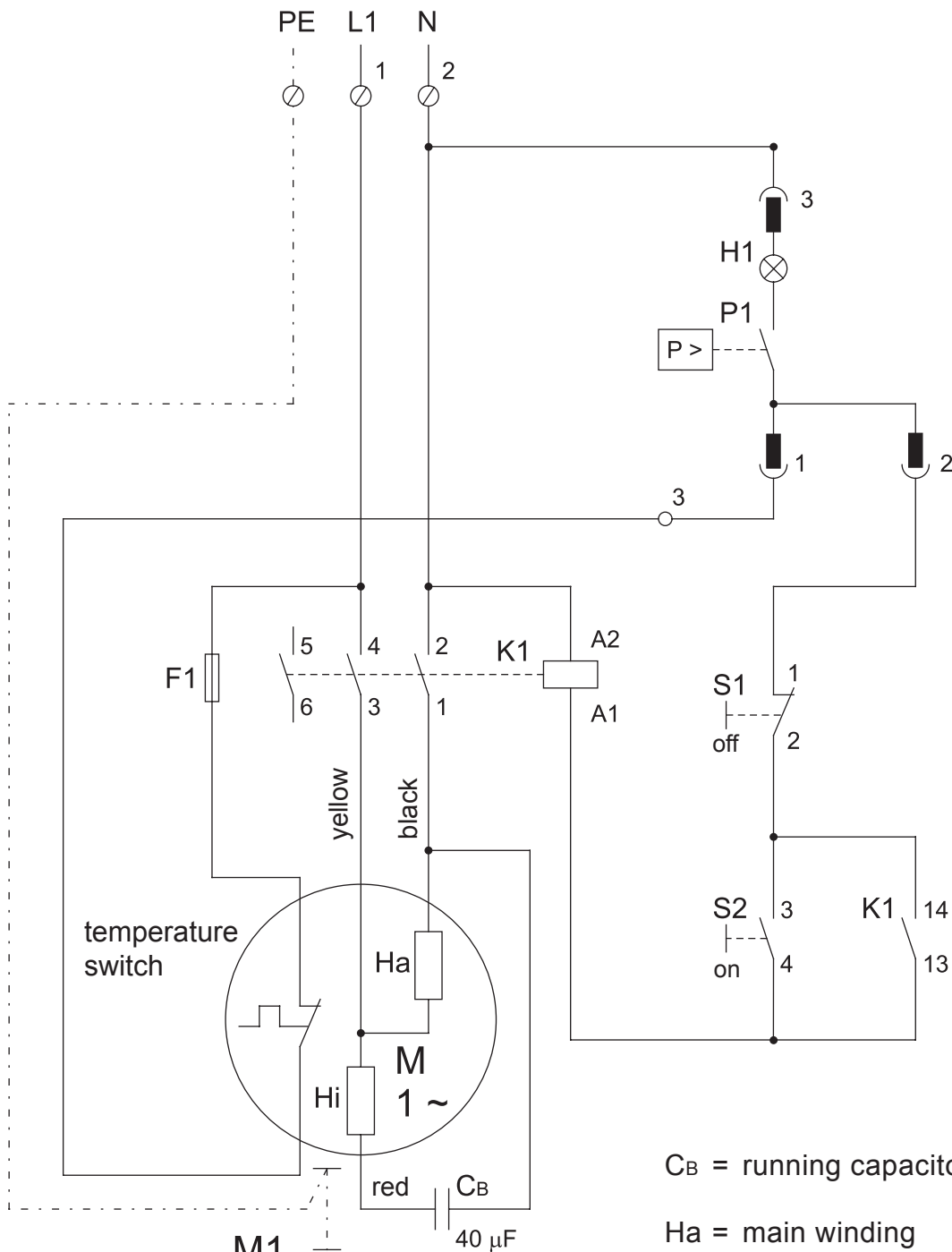
Watch what you're doing while at work. Be sensible, if you feel unable to concentrate, refrain from using your machine.

**Check your machine for visible and hidden defects**

Before starting a job check your machine carefully; in particular, check its protective devices and its wearing components and make sure they are in perfect working order and being used for their proper purpose. Check moving components to make sure that their mobility is not impaired, that no parts are broken or fissured, that all parts are in their proper place and securely fastened; in short, make sure that all requirements for a proper functioning of the machine are fulfilled.

Defective protective devices and parts must be repaired or replaced by an authorized service shop, unless otherwise recommended in this manual. Defective switches must be replaced by authorized service personnel. Never use any machine that cannot be switched on and off using the power button.

CIRCUIT DIAGRAM



**M1**  
 motor 1.8 kW  
 230 V / 50 CPS  
 220 + 230 V / 60 CPS

CB = running capacitor  
 Ha = main winding  
 Hi = auxiliary winding

10.06.1996

**TRIO: single-phase AC motor**

1.8 kW / 230 V / 50 CPS  
 1.8 kW / 220 + 230 V / 60 CPS

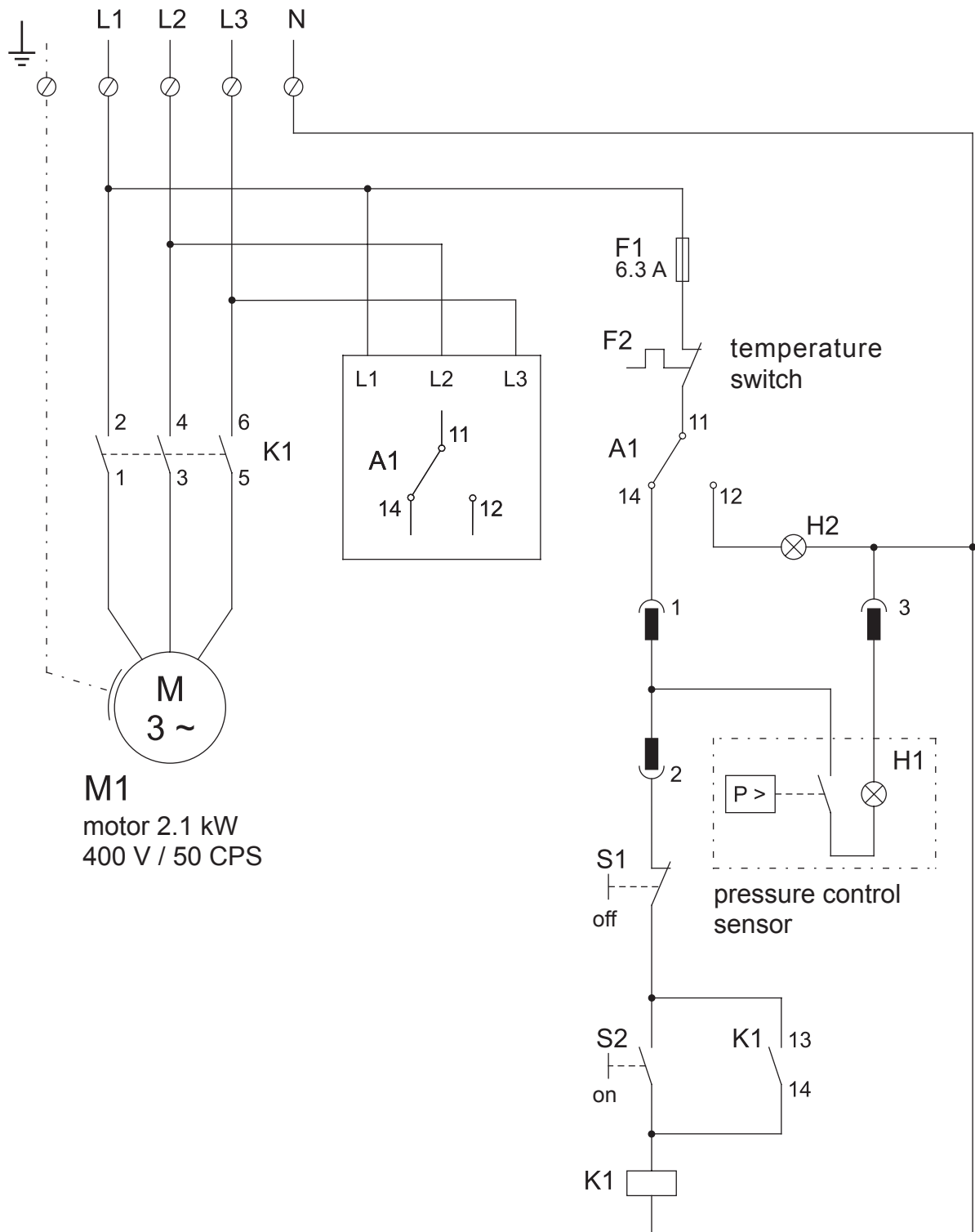
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Phone: +49 - 7135 - 98 90 - 0  
 Fax: +49 - 7135 - 98 90 - 98

E-Mail: info@laegler.com  
 Internet: http://www.laegler.com

You will find the circuit diagram valid for your machine in the motor switchbox.

CIRCUIT DIAGRAM



M1  
motor 2.1 kW  
400 V / 50 CPS

10.06.1996

TRIO: three-phase AC motor

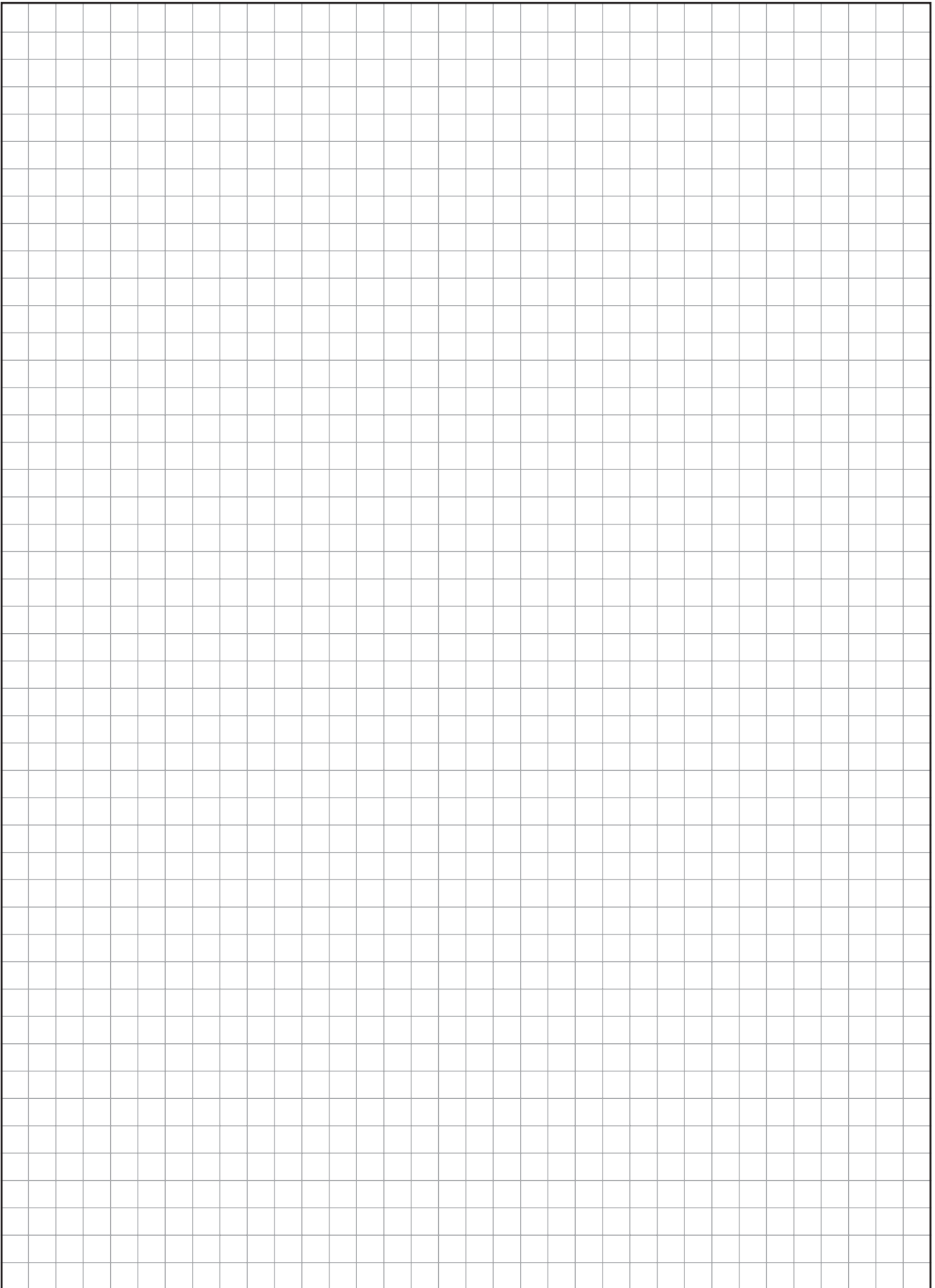
2.1 kW / 400 V / 50 CPS

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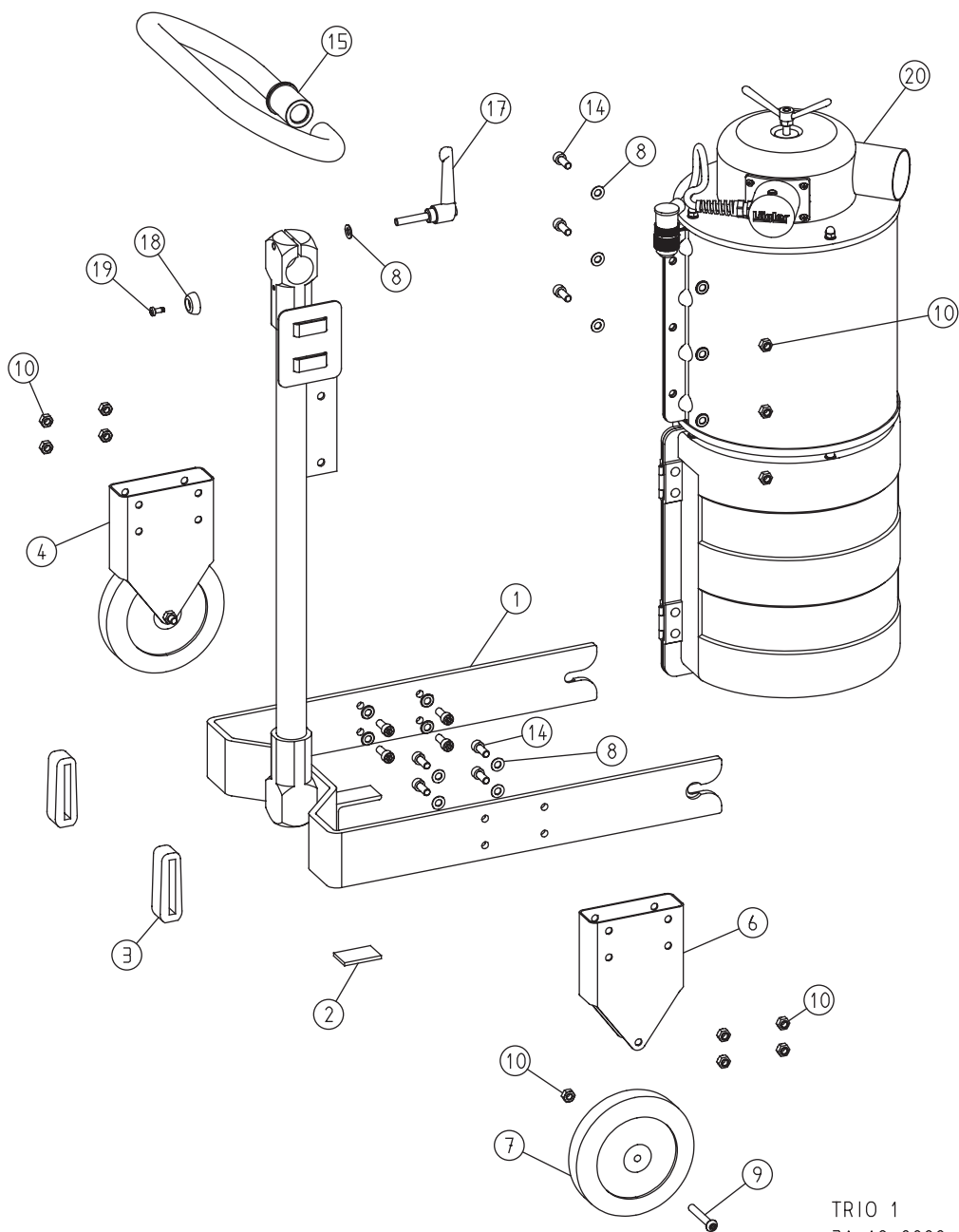
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E-Mail: info@laegler.com  
Internet: http://www.laegler.com

You will find the circuit diagram valid for your machine in the motor switchbox.



SPARE PARTS

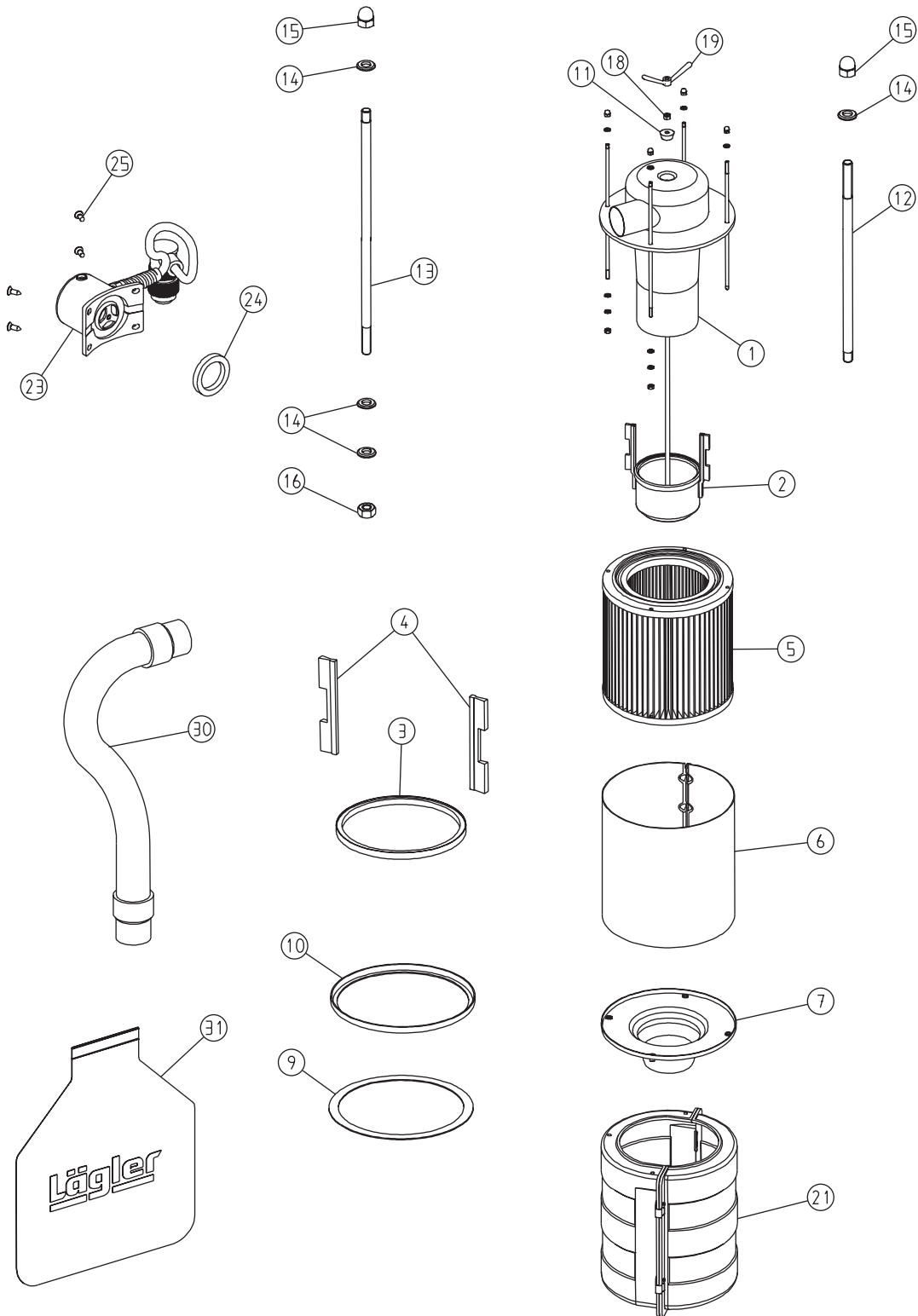


TRIO 1  
31.10.2002

## SPARE PARTS

Item	Part no.	Description
	900.70.00.100	Chassis, complete
1	900.70.05.100	Frame, complete
2	900.70.25.105	Bumper felt
3	900.70.80.105	Safety rubber
4	900.70.36.100	Wheel, complete
6	900.70.34.100	Wheel holder
7	900.70.32.105	Wheel
8	0125.1008.000	Washer
9	7380.1008.055	Lens head screw
10	0980.1008.000	Steel nut
14	0912.1008.020	Hexagonal socket head screw
15	900.70.70.200	Handle
17	000.20.40.081	Clamping device
18	900.70.52.105	Rubber buffer
19	7500.1005.012	Lens head screw
20	900.00.16.100	Separator, complete

SPARE PARTS



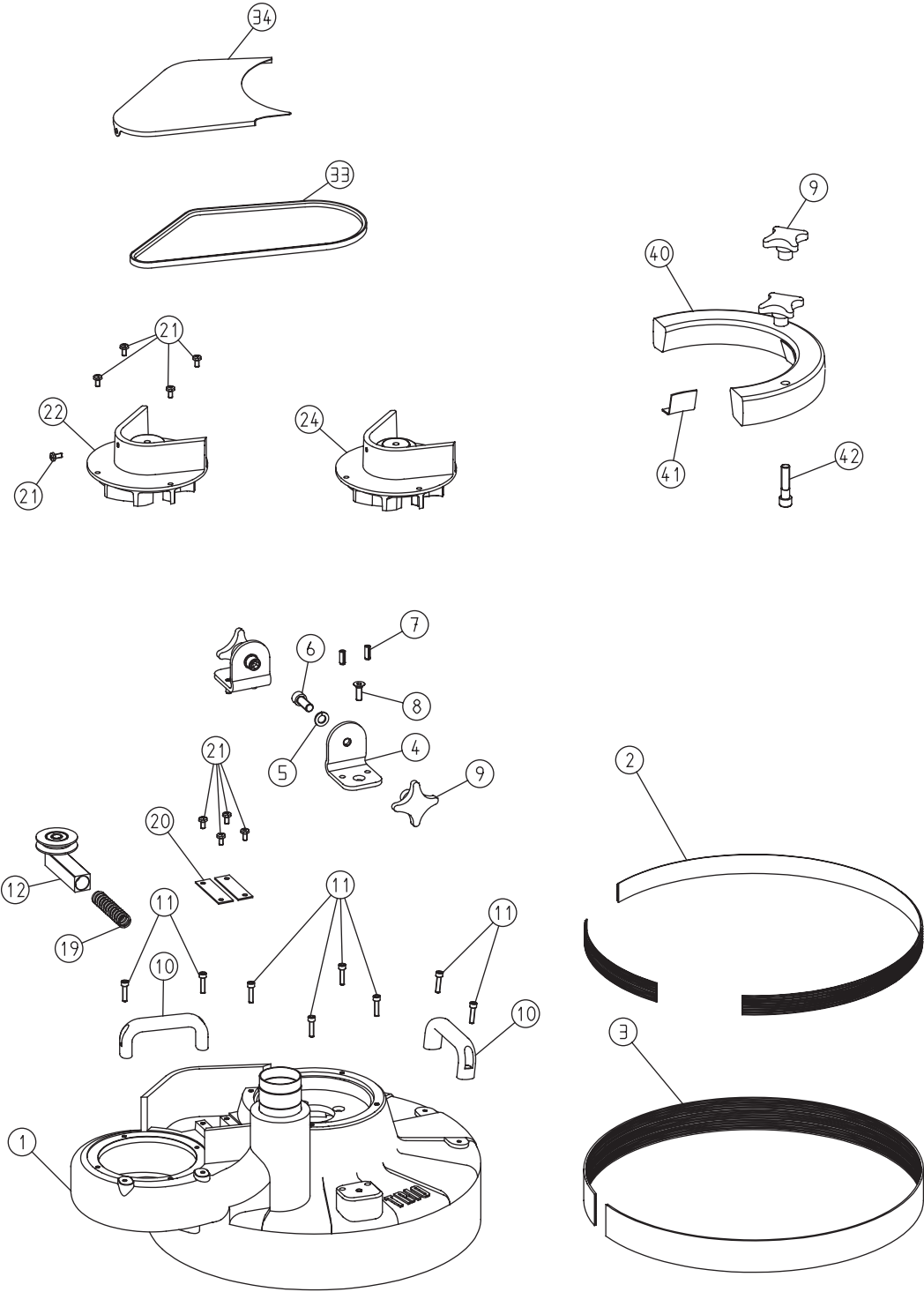
TRIO 2  
14.02.2001



## SPARE PARTS

Item	Part no.	Description
1	900.16.10.100	Separator upper part
2	900.16.21.100	Opener, complete
3	900.16.23.100	Sealing brush
4	900.16.45.105	Filter brush
5	900.16.18.105	Filter
6	900.16.19.100	Protective cover
7	900.16.17.100	Cover lower separator, complete
9	900.16.25.105	Sealing
10	900.16.22.100	Ring
11	900.03.30.105	Rubber plug
12	900.16.27.105	Screw, short
13	900.16.26.105	Screw, long
14	0125.1006.000	Washer
15	1587.1006.000	Cap nut
16	0980.1006.000	Steel nut
18	0934.1008.000	Nut
19	000.20.45.083	Wing nut
21	900.17.00.100	Dust bag box, complete
23	900.15.00.100	Pressure control sensor, complete
24	900.15.40.100	Sealing washer
25	7983.1042.013	Tapping screw
30	900.14.00.105	Suction hose
31	900.00.80.105	Disposable dust bags (25 pcs per carton)

SPARE PARTS

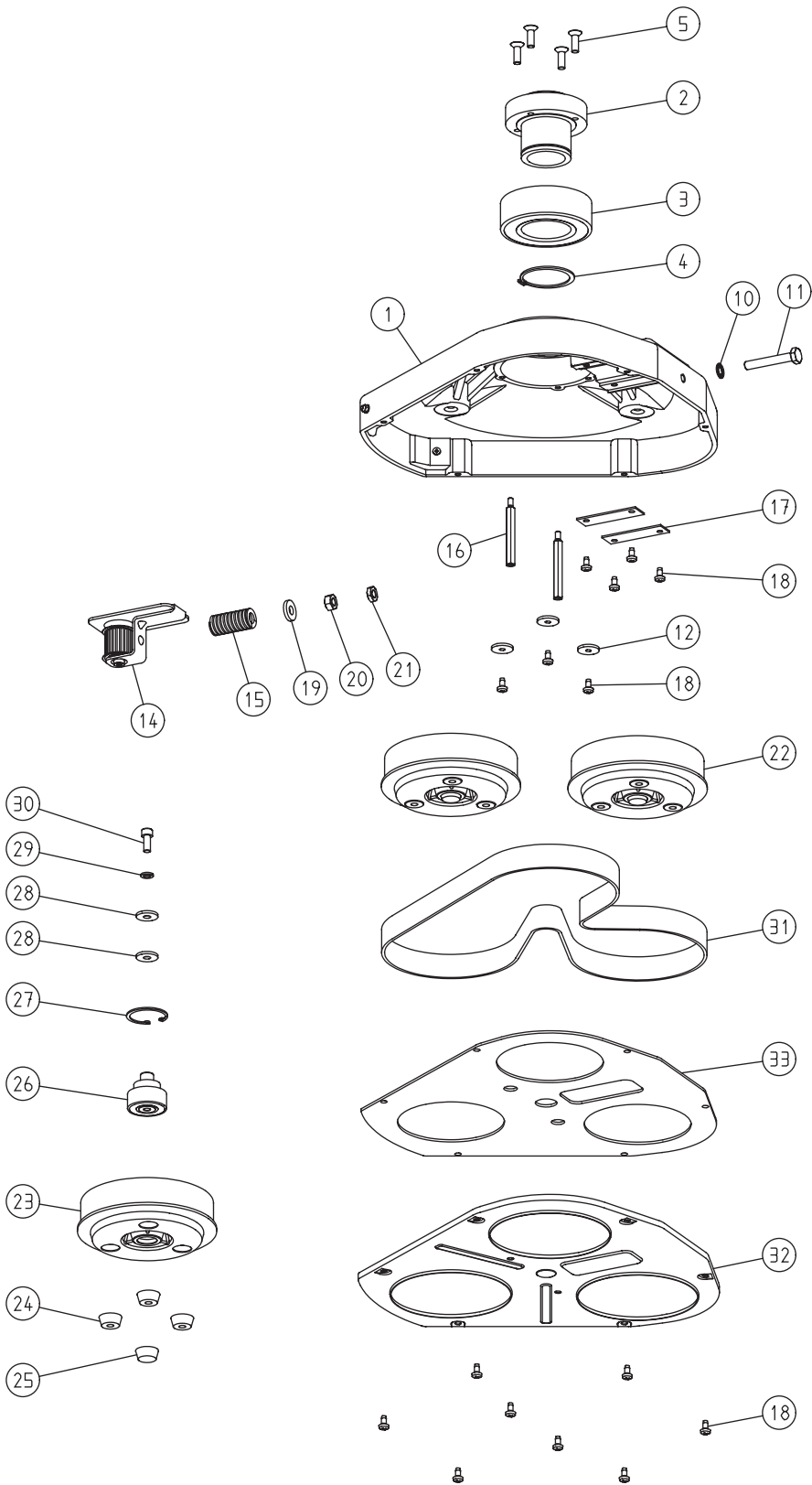


TRIO 3  
31.10.2002

## SPARE PARTS

Item	Part no.	Description
1	900.01.10.200	Housing
2	900.01.42.100	Self-adhesive Velcro negative
3	900.01.50.100	Velcro seal
	900.01.50.105	Velcro seal TRIO by the roll (50 m)
4	900.01.60.100	Angle
5	0127.1012.000	Spring washer
6	0912.1012.030	Hexagonal socket head screw
7	1481.0008.020	Spring type straight pin
8	7991.1008.025	Countersunk screw
9	000.20.20.121	Cross grip
10	000.20.10.121	Handle
11	0912.1006.025	Hexagonal socket head screw
12	900.58.00.200	Belt tensioner, complete
19	000.31.20.091	Compression spring
20	900.01.20.200	Guide plate
21	7500.1006.012	Lens head screw
22	900.10.00.200	Fan insert complete, European version
24	902.10.00.200	Fan insert complete, American version
33	000.71.51.085	V-belt 10 x 850
34	900.50.10.100	Belt cover
40	900.80.00.100	Additional weight, complete
41	900.80.21.105	Felt
42	0912.1012.050	Hexagonal socket head screw

SPARE PARTS

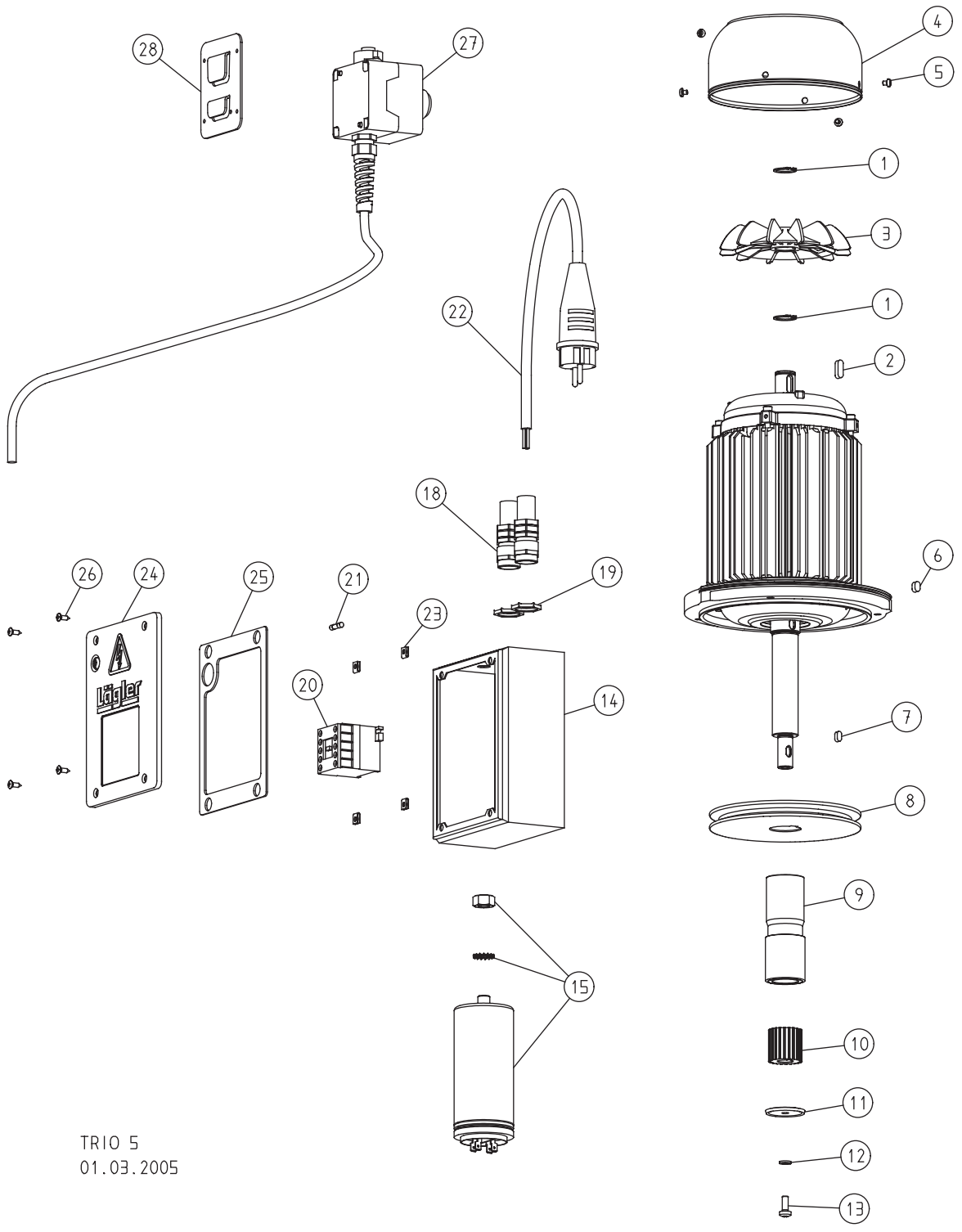


TRIO 4  
01.03.2005

## SPARE PARTS

Item	Part no.	Description
	900.07.00.100	Inner housing, complete
1	900.07.10.200	Inner housing
2	900.07.20.100	Pick up
3	3212.0060.202	Ball bearing
4	0471.0060.000	Circlip
5	7991.1008.025	Countersunk screw
10	6797.1010.000	Toothed lock washer
11	0933.1010.065	Hexagonal head screw
12	000.10.10.061	Lock washer
14	900.67.00.200	Tooth belt tensioner, complete
15	000.31.25.061	Spring
16	900.07.42.205	Bolt
17	900.01.20.200	Guide plate
18	7500.1006.012	Lens head screw
19	7349.1010.000	Washer
20	0934.1010.000	Nut
21	0439.1010.000	Nut
22	900.03.00.100	Pulley, complete
23	900.03.20.200	Pulley
24	900.03.30.105	Rubber plug
25	900.03.35.105	Rubber plug
26	900.03.10.100	Axle pulley, complete
27	0472.0047.000	Circlip
28	000.10.10.081	Washer
29	0127.1008.000	Spring washer
30	0912.1008.020	Hexagonal socket head screw
31	000.75.28.150	Tooth belt
32	900.07.32.100	Cover complete
33	900.07.31.105	Sealing felt

SPARE PARTS

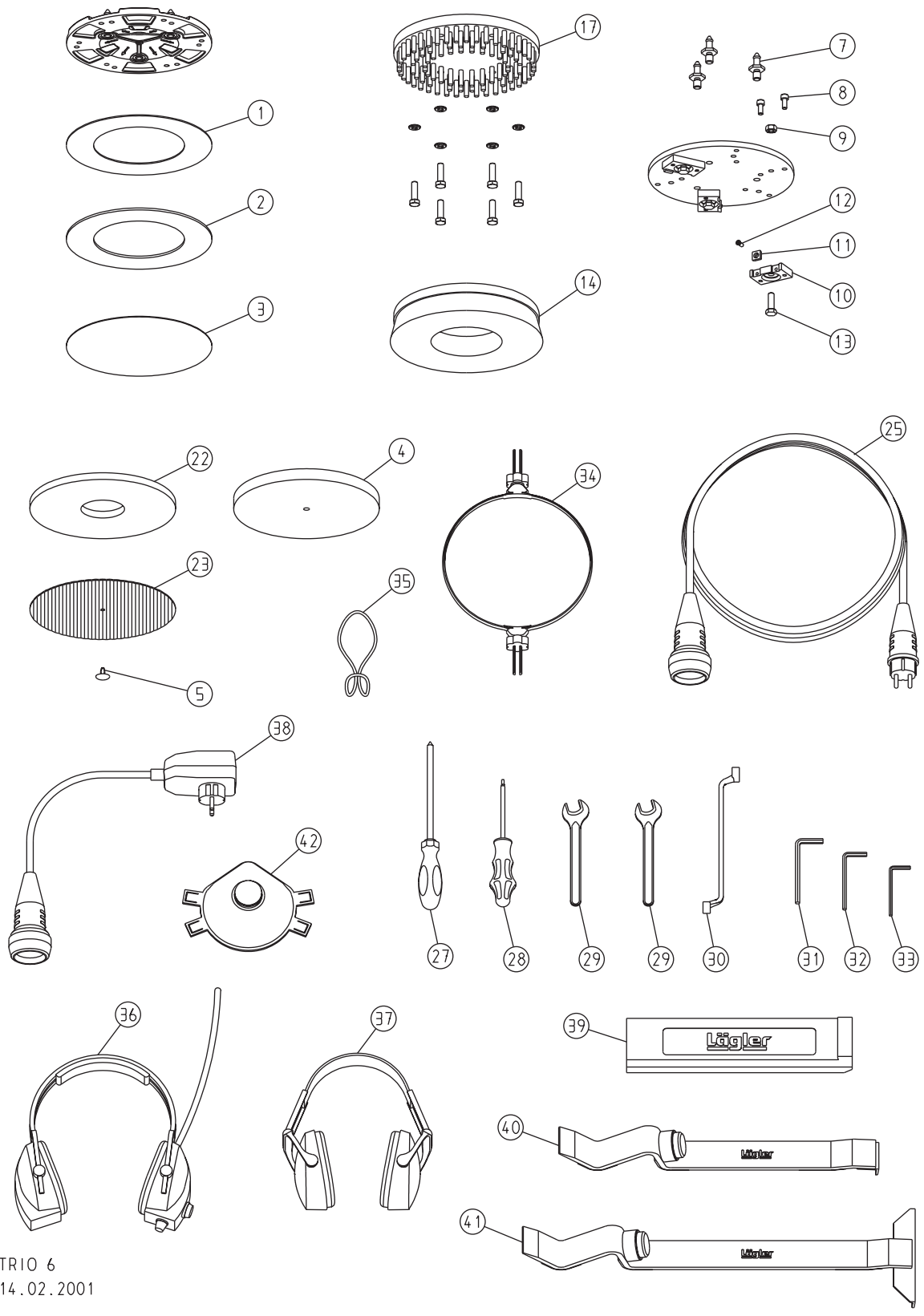


TRIO 5  
01.03.2005

## SPARE PARTS

Item	Part no.	Description
	900.65.00.100	Motor new, 230 V / 50 CPS
	901.65.00.100	Motor new, 230 V / 60 CPS
	902.65.00.100	Motor new, 220 V / 60 CPS, USA
	905.65.00.100	Motor new, 400 V / 50 CPS, three phase
1	0471.0020.000	Circlip
2	6885.0606.018	Key
3	900.65.08.100	Fan blade
4	900.65.09.100	Fan cover
5	0085.1004.005	Pan head screw
6	6885.0606.010	Key
7	6885.0505.010	Key
8	900.65.06.100	Motor pulley
9	900.65.43.200	Spacer sleeve
10	900.65.41.105	Pinion
11	900.65.42.100	Lock washer
12	0127.1006.000	Spring washer
13	7985.1006.816	Lens head screw
14	900.65.40.100	Switch Box
15	000.65.10.041	Running capacitor
18	000.67.20.161	Strain relief unit
	000.67.20.163	Strain relief unit USA
19	000.68.60.163	Nut
20	000.65.20.010	Universal contactor
21	000.65.80.061	Fuse
22	000.65.43.251	Motor cable 3 x 2.5 mm <sup>2</sup>
	000.65.43.257	Motor cable 3 x 2.5 mm <sup>2</sup> , USA
	000.65.45.151	Motor cable 5 x 1.5 mm <sup>2</sup> , three phase
23	000.50.10.109	Clip nut
24	900.65.47.100	Cover switchbox with sealing
25	465.65.48.105	Sealing
26	7983.1042.013	Tapping screw
27	900.65.60.100	Switch, complete
28	900.65.55.200	Bracket

SPARE PARTS

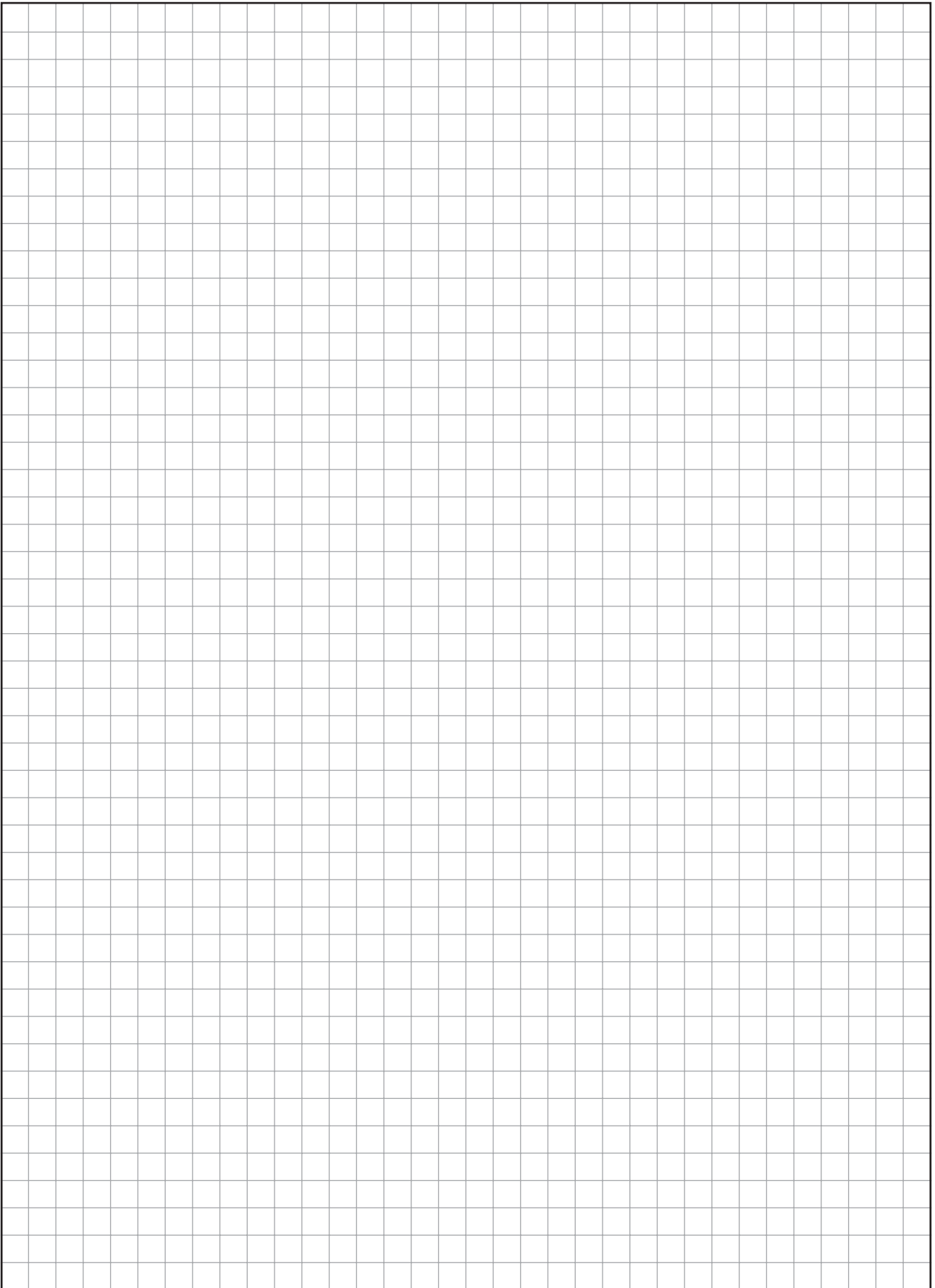


TRIO 6  
14.02.2001



## SPARE PARTS

Item	Part no.	Description
	900.02.10.200	Universal disc
1	900.02.12.305	Velcro ring 200 mm
2	900.02.13.205	Flexible ring with velcro 200/125 mm
3	9.162.200.060	Easy-grip polygon sanding disc 200 mm diameter grain 60
4	9.632.201.080	Polish pads, white, for TRIO
	9.632.201.030	Scrubbing pads, green, for TRIO
5	900.02.23.105	Plastic pin
	900.02.40.100	Milling disc, complete
7	900.02.42.105	Fastening bolt
8	0912.1006.014	Hexagonal socket head screw
9	0934.1008.000	Nut
10	900.02.43.100	Holder milling blade
11	900.02.45.105	Carbide tool (10 pcs. per box)
12	900.02.47.105	Screw for blade
13	900.02.49.105	Special screw
14	900.02.30.105	Brushing disc
	900.02.50.100	Brush with flat steel inserts, complete
17	900.02.52.100	Brush with flat steel inserts, add-on kit
22	9.612.205.040	Nylon pad, beige, for TRIO
23	9.412.201.060	Scotch-Mesh sanding screen, grain 60
25	000.65.53.251	Extension cable 3 x 2.5 mm <sup>2</sup> , 10 m long
	000.65.53.252	Extension cable 3 x 2.5 mm <sup>2</sup> , 20 m long
27	000.91.20.031	Phillips screwdriver
28	000.91.30.151	Torx screwdriver
29	000.95.11.171	Open mouth wrench
30	000.95.21.103	Closed mouth wrench
31	000.93.11.061	Hexagonal socket screw wrench 6 mm
32	000.93.11.051	Hexagonal socket screw wrench 5 mm
33	000.93.11.041	Hexagonal socket screw wrench 4 mm
34	000.01.40.112	Multiclip TRIO
35	000.01.40.011	Strain relief ring
36	000.01.10.011	Foldable earmuff type MUSIMAFF
37	000.01.10.021	Foldable earmuff type POCKET
38	000.01.65.010	DI-safety plug
39	701.10.00.100	Impact tool
40	702.00.00.100	Parquet layer tool, 43 cm
41	703.00.00.100	Parquet layer tool, 55 cm
42	000.01.20.010	Protective mask P3



SERVICE PASS

SERVICE PASS

**Note the serial number and the model year of your machine on the back of this operating manual (see type plate). Otherwise the service pass will not be valid.**

This service pass is a document. Make sure that all the tests and maintenance work carried out on the machine is confirmed by the servicing company here.

Date of test  
and service: \_\_\_\_\_

Signature and stamp

Date of test  
and service: \_\_\_\_\_

Signature and stamp

Date of test  
and service: \_\_\_\_\_

Signature and stamp

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and service: \_\_\_\_\_

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and service: \_\_\_\_\_

Signature and stamp

# Declaration of conformity according to EC regulations

98/37/EC dated 22.06.1998

Low voltage (73/23/EEC, last changed through 93/68/EEC from 22.06.1993)

Electromagnetic compatibility (89/336/EEC, last changed through 93/68/EEC from 22.06.1993)

The design of the three disk sanding machine **LÄGLER TRIO**, serial number see type plate, has been developed, constructed and built according to the above mentioned regulations.

**The following harmonized specifications are used:**

**DIN EN 292 Part 1 and Part 2**, Safety of machines, equipment and systems

**DIN EN 60 204.1**, Electrical equipment for industrial machinery

**EN 55014-1**, Electromagnetic compatibility: radiated interference, product family standard

**EN 55014-2**, Electromagnetic compatibility: interference immunity, product family standard

**EN 61000-3-2**, Electromagnetic compatibility: limiting values for harmonic currents

**EN 61000-3-3**, Electromagnetic compatibility: limiting values for fluctuations in voltage and flicker in low-voltage networks for devices with an input current  $\leq 16$  A per wire

**The following documents are available:**

- Master plan of the machine including electrical plans
- Complete specified plans to make sure the machine is in accordance with major health and safety rules
- List of basic regulations, specifications and EC guidelines used for the design of the machine
- Description of the solutions to avoid dangers that could be caused by the machine
- One copy of the operating manual

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*Volker Wörner*

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Eugen Lägler GmbH, Maschinenbau  
Güglingen-Frauenzimmern,  
01.03.2005

**TRIO**

**Serial number:** \_\_\_\_\_

**Model year:** \_\_\_\_\_



**Lägler**

WORLD LEADERS IN FLOOR  
SANDING TECHNOLOGY

Eugen Lägler GmbH · Maschinenbau

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