

# Operation, Maintenance, Safety

Translation of original operating instructions for the edge sanding machine







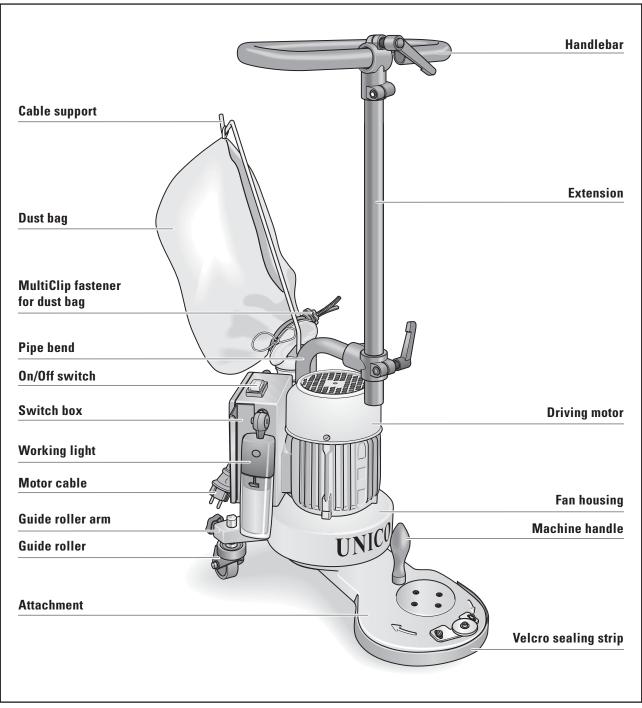


Fig. 1 Components of the edge sanding machine UNICO



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WARNING!	<b>Death, severe physical injury</b> or <b>significant property damage</b> can occur if the cor- responding cautionary measures are not taken!
	Moderate to light physical injury or property damage can occur if the corresponding cautionary measures are not taken!
ATTENTION!	An <b>undesired event</b> can occur if the corresponding instructions are not followed!



#### - INTRODUCTION -

# Introduction

You have purchased a high-quality product from LÄGLER<sup>®</sup>. We wish you a great deal of success with your UNICO. All LÄGLER<sup>®</sup> products are subjected to a thorough inspection before leaving the factory.

Please read these operating instructions completely before you begin working with your UNICO. These operating instructions include important information on occupational safety and will provide you with answers to many questions so that you can work with the machine safely and without any problems. If you cannot find a specific subject in these operating instructions, please read the LÄGLER® application technique guidelines "Sanding of wooden floors" (http://www.laegler.com) or contact our service department, your retailer or your importer.

#### 1.1 CHARACTERISTIC FEATURES OF THE MACHINE

In *Figure 1* (page 2), we have provided the UNICO with the designations of the most important components. Please take a little time to become with the machine.

#### 1.2 DESCRIPTION OF THE MACHINE

The edge sanding machine UNICO works with a sanding disc wheel, which is installed in an attachment. Three attachments in various lengths can be supplied. The housing of the attachment covers the actual working zone. A machine handle, which is used to guide the machine when you are working on your knees, can be installed depending on the length of the respective attachment. Velcro sealing tape is used to seal off the working zone from the discharge of dust. The resulting increased flow speed of the air upon entering the working zone from outside guarantees constant good suction of the sanding dust. Inside the attachment, there is a running V-belt, which is driven via the V-belt pulley of the motor installed vertically on the fan housing. The two guide rollers, which support the rear of the machine, are also installed on the fan housing. In front, the machine rests on the sanding abrasive (three-point support). The fan housing is provided with two additional drilled holes into which the machine handle can be screwed if and when required. On the rear side of the fan housing, a rotating pipe bend fitted to a pipe union conveys the sanding dust into the dust bag. The dust bag is fastened to the pipe bend by means of a quick fastener.

The dust bag is suspended from the cable rod by means of a textile loop. This textile loop keeps the connection cable away from the working zone and is inserted in the holder on the pipe bend of the machine guiding system. This holder also includes the Allen key, which is required to replace conventional sanding discs. The pipe bend can be used to guide the machine when you are working on your knees. An extension including a handlebar is installed at the front end of the pipe end and can be used to guide the machine when you are working in a stooped position or in an upright position. The extension and the handlebar can be adjusted as soon as the clamping lever has been opened.

The machine guiding system and the switch box are attached to the motor. An On/Off switch including no-volt release as well as the rotating and swivelling working light is fitted to the upper side of the switch box.



#### 1.3 PROPER USE AS INTENDED

The edge sanding machine UNICO is suitable for the dry sanding of parquet floors, deal floors, and cork floors in dry environment.

Any other form of use is not permitted without the consent of the manufacturer.

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**RISK OF DEATH from electrical shock:** 

The machine may <u>never</u> be used for wet processing operations of any kind!

#### 1.4 PROTECTIVE DEVICES

The following parts of the machine are protective devices and must therefore be in perfect condition at all times:

Velcro sealing strip	=	dust protection
attachment	=	protection against tools
dust bag	=	dust protection



# Hazard warnings and safety instructions



RISK OF DEATH, RISK OF INJURY, RISK OF FIRE:

- <u>Be certain</u> to read the hazard warnings and safety instructions before using the machine!
- Instruct your co-workers and colleagues accordingly! Otherwise, these persons could be exposed to danger or injured!

#### ATTENTION!

- Keep these hazard warnings and safety instructions in a safe place!
- Note the valid regulations and legal conditions in your country!

#### 2.1 HAZARD WARNINGS



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#### **RISK OF DEATH from suffocation and RISK OF INJURY:**

 <u>Never</u> wrap the power cable around your neck or other parts of the body!

#### **RISK OF DEATH from electrical shock:**

- The machine may <u>never</u> be used for wet processing operations of any kind!
- Do not expose the machine to rain! Do not use the machine in moist or wet environments!
- To protect yourself and the machine against faults in the mains supply use a safety switch (for German mains supply  $\rightarrow$  part number in *Section 11, Spare parts*)!

Note the valid regulations and legal conditions in your country!

- The machine <u>must</u> be switched off and the power plug must be removed from the socket during all maintenance work and work on the electrical equipment!
- Avoid body contact with grounded parts, e.g. pipes, radiators, ovens, refrigerators!
- The quality of the motor cable and the power cables must match the quality of the original LÄGLER® cable!
- The power cables must be protected from mechanical and/ or electrical damages in the workplace!
- Do not carry or pull by the machine by the cable! Do not pull on the cable to remove the plug from the socket! Protect the cable against heat, oil and sharp edges!



#### HAZARD WARNINGS AND SAFETY INSTRUCTIONS -



### **RISK OF EXPLOSION** due to sparks while sanding or a high dust concentration in the air:

- Do not use the machine near
  - sources of fires,
  - flammable liquids or gases,
  - potentially explosive areas!
- Do not smoke in a dusty environment, e.g. while sanding or emptying the dust bag!

### **RISK OF FIRE from spontaneous combustion or from sparks while** sanding:

- There is a high risk of fire when sanding woods with a large amount of resin, oiled or waxed floors or metal! Therefore, the machine must <u>always</u> be cleaned carefully directly after sanding! <u>Be certain</u> to note the warning notices of the paint, oil and wax manufacturers!
- Cloths, pads, et cetera which have been immersed in oil or wax can spontaneously combust! <u>Be certain</u> to note the warning notices of the paint, oil and wax manufacturers!
- The dust bag must <u>always</u> be removed from the machine after sanding and emptied into a <u>non-combustible</u> container <u>outdoors</u>! Cover this container with a <u>non-combustible</u> cover and <u>be certain</u> to store it and the dust bag outdoors
   (→ Section 5.3, Removing and emptying the dust bag)!

#### **RISK OF FIRE** from the overheating of the cables:

• Only use motor cables and power cables with three wires and wire cross-sections of at least 1.5 mm<sup>2</sup>

#### HEALTH RISK caused by dust:

- Make sure that the dust bag is properly fastened to the machine!
- If the machine is operated <u>correctly</u>, the mandatory dust emission values will not be exceeded! <u>When emptying the</u> <u>dust bag outdoors</u>, a respiratory protective mask (at least filter class P2) must be worn!
- A respiratory protective mask (at least filter class P2) must be worn when conducting other work that creates dust, e.g. cleaning of the machine!



#### HAZARD WARNINGS AND SAFETY INSTRUCTIONS -



#### **RISK OF INJURY and RISK OF PROPERTY DAMAGE from rotating** tools and parts of the machine:

- Before switching on the machine, make sure that all tools and adjustment tools have been removed from the machine!
- The machine <u>may not be started</u> if the sanding plate is on the floor! Therefore, tip the machine backwards slightly to start the machine (-> Section 4.11, Switching on the machine)!
- Do not reach into rotating tools or parts of the machine!
- Do not let children or other persons touch the machine or cable and keep them out of the work area!
- Do not wear any long articles of clothing or jewellery! These could be caught by moving parts!

#### **RISK OF INJURY and RISK OF PROPERTY DAMAGE from uninten**tional starting of the machine:

- The power plug <u>must</u> be removed from the socket when the machine is switched off!
- Make sure that ON/OFF switch is not set to ON when connecting the machine to the mains supply!

#### **RISK OF INJURY and RISK OF PROPERTY DAMAGE from the rolling** away, tipping or falling of the machine:

 The machine must be secured against rolling away, tipping or falling when not in use! Always ensure that the machine is standing securely!

### **RISK OF INJURY and RISK OF PROPERTY DAMAGE from unsuitable** parts:

 Only use tools, accessories and spare parts from LÄGLER<sup>®</sup> for the UNICO ( Section 11, Spare parts)! There is no guarantee for external parts or liability for damage caused by them!

#### **HEALTH RISK caused by noise:**

 Use hearing protection when conducting work that produces noise!





#### **RISK OF PROPERTY DAMAGE:**

- Do not store the unused machine with sanding media on the sanding plate! The sanding media can cause scratches on the ground!
- Improper transport will result in damage to the machine!

#### 2.2 GENERAL SAFETY INSTRUCTIONS

- **Provide good illumination in the workplace!** Well lit construction sites reduce the risk of injury and allow you to better evaluate the quality of your work.
- Keep your work area clean! Untidy work area create a risk of accidents.
- **Use the proper machines!** Do not use low-performance machines or additional devices for heavy jobs. Do not use the machine for purposes and work that it is not intended for.
- **Do not overload the machines!** It works better and more safely in the power range noted.
- **Do not bend too far over the machines!** Avoid unnatural postures. Make sure that you stay in a stable position and keep your balance at all times.
- Be attentive!

Pay attention to your work. Work carefully and do not use the machines if you are not concentrating.

• Maintain your machines with care!

Keep your machines clean so that you can work better and more safely. Follow the maintenance guidelines and the instructions for replacing tools. Regularly inspect the cable and have it replaced by a qualified electrician if it is damaged. Inspect the extension cable regularly and replace it if it is damaged. Keep the handles dry and free of oil and grease.



#### HAZARD WARNINGS AND SAFETY INSTRUCTIONS -

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#### Check your machines for damage!

Before using the machines, you must inspect the safety devices or damaged parts carefully to ensure that they are working perfectly and as intended. Check whether the moving parts are working properly, that they are not sticking, that no parts are broken, whether all parts are in perfect condition and installed properly and whether all other conditions which could influence the operation of the machine are in order. Damaged safety devices and parts must be properly repaired or replaced by an authorized service shop insofar as nothing to the contrary is indicated in the operating instructions. Damaged switches must be replaced by a qualified electrician. Do not use the machine if it cannot be started or switched off by using its switch.

#### • Store your machines safely!

Store your unused machines in a dry, closed location out of the reach of children!



#### TECHNICAL DATA -

# Technical data

overload protection in motor

Manufacturer	Eugen Lägler GmbH
Machine type	edge sanding machine
Serial number	see type plate
Year of manufacture	see type plate
Motor design type	single-phase AC motor
Voltage	220 - 230 V or 110 - 120 V
Frequency	50 or 60 Hz (cps)
Power	1.1 kW
Protection by fuses	10 A
Insulation class	В
Protection class	IP 54
Safety devices	no-volt release,
	temperature switch as

Capacitor

Capacitor				
110 - 120 V 130 μF				
220 - 230 V 30 μF				
Sanding disc diameter 178-180 mm (7 - 7 1/8")				
Sanding disc speed				
with 50-Hz motor approx. 2800 1/min (rpm)				
with 60-Hz motor approx. 3360 1/min (rpm)				
Attachment height				
Attachment length – model 350 350 mm (13 ¾")				
Attachment length – model 230				
Attachment length – model 105 105 mm (4 1/8")				
Overall height670 mm - 915 mm (26 3/8" - 36")				
Overall height – model 350 700 mm (27 ½")				
Overall height – model 230 570 mm (22 ½")				
Overall height – model 105 450 mm (17 ¾")				
Overall width				
Machine weight				
Dust exposure at workplace< < 2 mg/m <sup>3</sup> (0.024 gr./cu. yd.)				
Workplace-specific noise emission values				
(measuring point at operator's ear; 1.5 m above floor)				
Sanding of beechwood parquet using				
sandpaper grain size 8077 dB(A)				
Measurement uncertainty constant4 dB(A)				
Abrasive commercially available abrasives with				
Ø 178 mm / 180 mm (7" - 7 1/8")				
(sandpaper, sanding grid, Scotch-Brite pad)				
Vibration total value $a_{_{h\nu}}$				
(measured at the handle)				

NOTE on noise emission:

The values indicated are emission values and must not represent safe workplace values as well.

Although a correlation exists between emission levels and immission levels, it is not always possible to determine whether additional precautionary measures are required.

Factors that can have an effect on the immission level existing at the workplace include the duration of the effects, the characteristics of the work area and other sources of noise, e.g. the number of machines and processing operations in the vicinity. The permissible workplace values may also vary from country to country.

This information, however, is intended to enable the user to better estimate the dangers and risks.

#### NOTE:

The motor data indicated here refers to machines used in Germany or USA. Exported machines may have other data that can be seen on the motor type plate.



#### TECHNICAL DATA -



#### WARNING!

**RISK OF DEATH from electrical shock:** 

The machine may never be used for wet processing operations of any kind!

#### NOTE:

You will find the corresponding part numbers for the optional equipment and wearing parts in Section 11, Spare parts.

#### Intended use

Dry edge-sanding of wooden and cork floors.

#### **Basic equipment**

Machine including dust bag, MultiClip fastener for dust bag, Velcro strip for attachment, cable rod, 10 m extension cable 3 x 1.5 mm<sup>2</sup>, O-ring as strain relief device, Allen key size 4 mm, Allen key size 5 mm, Allen key size 6 mm, respiratory protective mask (P3), and manual of operating instructions.

#### **Special accessories**

Ear muffs "Pocket", safety switch for fault current PRCD-S (for German mains supply).

#### Wearing parts or safety-relevant parts

Please check the condition of the parts mentioned below at regular intervals in order to be able to work safely and to achieve the best possible results at all times:

- Renew extension cable after being damaged.
- Renew motor cable after being damaged.
- Renew switch after being damaged.
- Renew Velcro sealing tape or sealing set for attachments after being damaged.
- Renew MultiClip fastener after being damaged.
- · Renew V-belt after being worn out.
- Renew Velcro disc after being damaged.
- Renew sandpaper tensioning screw after being damaged.
- Renew dust bag after being damaged.



#### COMMISSIONING -

# Commissioning

The section describes how to put the UNICO into service on site. To exclude any form of damage or malfunctions, you must proceed in the order of steps mentioned below.



#### **RISK OF INJURY and RISK OF PROPERTY DAMAGE:**

Before working with the machine for the first time, operating staff must be adequately instructed!

#### 4.1 ATTACHING THE DUST BAG

1 Unpack the machine carefully. Make sure that the packaging materials that are no longer required are disposed of properly in accordance with environmental protection regulations.

### The packaging should be used as a transport container in order to ensure safe machine shipment without any risks.

- 2 Slide the MultiClip fastener over the opening of the dust bag (Fig. 2).
- 3 Pull the opening of the dust bag over the suction pipe stub of the machine. Make sure that the sling on the dust bag is on top (Fig. 3).
- 4 Slide the MultiClip fastener approximately 1 to 2 cm (½ to 1") over the pipe stub.
- 5 Tighten the MultiClip fastener firmly by hand and make sure that the dust bag is not folded underneath the MultiClip fastener. In addition, then use the string to tie up the dust bag (Fig. 4).
- 6 Pick up the cable rod and hook it into the sling on the top end of the dust bag (Fig. 5).
- 7 Insert the cable rod into the proper bracket on the pipe bend (rear side of the machine) next to the Allen key (Fig. 6).

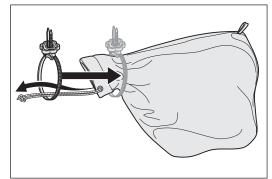


Fig. 2 Slide the MultiClip fastener over the opening of the dust bag.

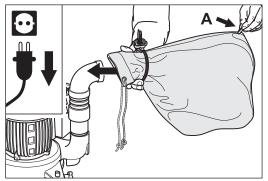


Fig. 3 Pull the dust bag over the suction pipe stub. The sling A must be on top.

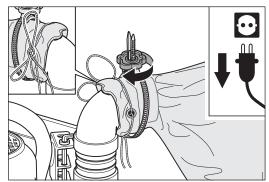


Fig. 4 Tighten the MultiClip firmly by hand and tie up the dust bag.

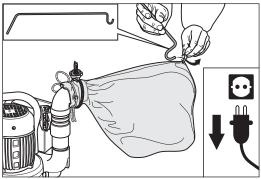


Fig. 5 Hook the cable rod into the sling on the dust bag.



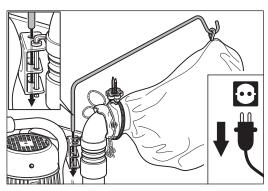


Fig. 6 Inserting the cable rod into the proper bracket.

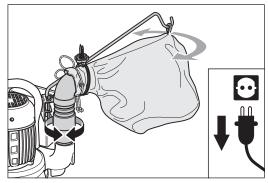


Fig. 7 The pressure hose can also be rotated at the lower plastic pipe stub.

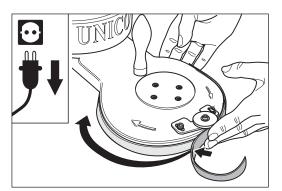


Fig. 8 Install the Velcro strip carefully to ensure properly sealing.

#### 4.2 SWIVELLING THE PRESSURE HOSE

For your sanding work, the pressure hose can be rotated toward the left or right depending whether you standing on the right-hand side or on the left-hand side of the machine or whether you are kneeling or bending down. This ensures a constant volumetric flow of the air being sucked into the machine.

- On the pressure hose, grab the black plastic pipe stub below the hose piece and rotate it toward the desired side. The dust bag will swivel with the black plastic pipe stub (Fig. 7). Do not use the upper curved pipe piece to rotate the pressure hose.
- 2 Whenever appropriate, make sure that the dust bag is properly positioned without any folds.

#### 4.3 INSTALLING THE VELCRO STRIP

Depending on the thickness of the abrasive in each case, the Velcro sealing strip on the attachment must be repositioned in order to improve the airflow conditions at the front end of the attachment and to seal off the sanding zone from the surrounding area.

Switch off the machine.

1

2

- For safety reasons, always pull the power supply plug out of the socket to prevent the machine from being started up unintentionally!
- **3** Fasten the Velcro strip by one end of the adhesive strip to the attachment and then place it all the way around the attachment (Fig. 8).
- 4 On the front side of the machine, the Velcro strip should be about 1 mm away from the floor in order to be able to provide an air inlet. At all other locations, the strip is supposed to be resting on the floor.
- 5 The Velcro strip must be renewed whenever it is worn-out. However, you can, of course, also use the upper edge of the Velcro strip after turning it over.



### 4.4 INSTALLING THE EXTENSION AND THE HANDLEBAR

- 1 Insert the extension into the clamping piece of the pipe bend and tighten the clamping lever firmly (Fig. 9).
- 2 Insert the long straight end of the handlebar into the clamping piece and tighten the clamping lever firmly. (Fig. 10).

### 4.5 ADJUSTING THE EXTENSION AND THE HANDLEBAR

#### 4.5.1 ADJUSTING THE EXTENSION

The extension of the UNICO can be adjusted to suit the height and body position of any person performing the sanding work:

- 1 Switch off the machine.
- 2 For safety reasons, always pull the power supply plug out of the socket to prevent the machine from being started up unintentionally!
- **3** To adjust the handle height, undo the clamping lever at the front end of the pipe bend (Fig. 11, 1.).
- 4 Slide the extension upward or downward (Fig. 11, 2.). At the bottom, it is also allowed to rest on the fan housing (Fig. 12).
- **5** Tighten the clamping lever firmly again (Fig. 11, 3.).
- **6** To adjust the handlebar, undo the clamping lever at the upper end of the extension (Fig. 13, 1.).
- 7 Tilt the handlebar over into the desired position (Fig. 13, 2.) and then tighten the clamping lever firmly again.

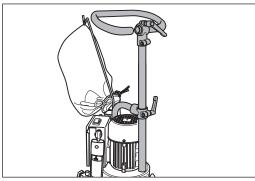


Fig. 12 The extension can also be pushed all the way down to the fan housing.

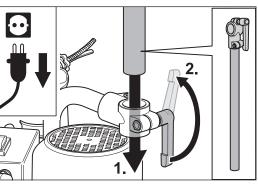


Fig. 9 Inserting the extension into the clamping piece of the pipe bend.

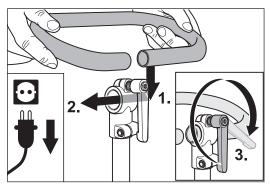


Fig. 10 Inserting the handlebar into the clamping piece of the extension and tightening the clamping lever.

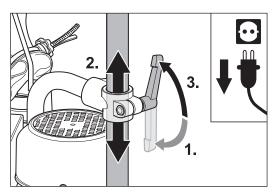


Fig. 11 Undoing the clamping lever (1.), sliding the extension to suit your height (2.) and tightening the clamping lever (3.).

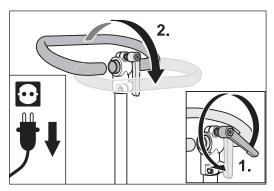


Fig. 13 Undoing the clamping lever on the extension and tilting the handlebar over into the desired position.



#### - COMMISSIONING —

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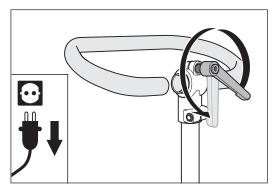


Fig. 14 Undoing the clamping lever on the extension.

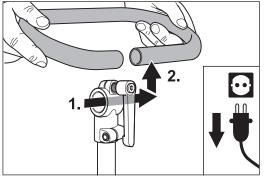


Fig. 15 Removing the handlebar.

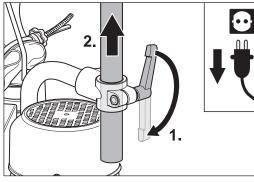


Fig. 16 Undoing the clamping lever at the pipe bend and removing the extension.

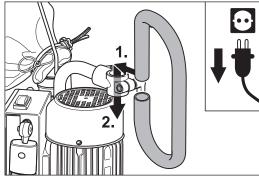


Fig. 17 Installing the handlebar on the pipe bend.

#### 4.5.2 REMOVING THE EXTENSION

Whenever you want to work in a stooped or kneeling position, you can also remove the extension and fasten the handlebar directly to the pipe bend:

- **1** Switch off the machine.
- 2 For safety reasons, always pull the power supply plug out of the socket to prevent the machine from being started up unintentionally!
  - Undo the clamping lever at the upper end of the extension (Fig. 14).
    - Pull the handlebar out of the clamping piece and remove it upward (Fig. 15). Put the handlebar aside.
  - Undo the clamping lever at the front end of the pipe bend and pull the extension upward out of the bracket (Fig. 16). Put the extension aside.

#### 4.5.3 INSTALLING THE HANDLEBAR

The handlebar can be installed on the pipe bend in vertical position as well as in horizontal position.

#### Handlebar in vertical position:

- 1 Remove the extension first, as described in the preceding *Section 4.5.2.*
- 2 Install the handlebar directly in the bracket on the front end of the pipe bend (Fig. 17). Tighten the clamping lever again.

#### Handlebar in horizontal position:

- 3 Use the enclosed Allen key to undo the screw on the angle clamping connector of the pipe bend and then rotate the angle clamping connector by 90° (Fig. 18).
- 4 Use the Allen key to tighten the screw of the angle clamping connector again.



#### - COMMISSIONING -

#### 4.6 ADJUSTING THE GUIDE ROLLERS

The position of the guide rollers has a direct effect on the sanding results and on the aggressiveness of the machine. For rough sanding operations, a larger setting angle is selected and a flatter setting angle for fine-sanding operations.

Normally, the UNICO is supposed to sand the floor precisely at the front side of the attachment (Fig. 19). If this is not the case, the machine will be sanding on one side (Fig. 20 and 22). The height of one of the guide rollers must then be readjusted (Fig. 21 and 23) because the quality of the sanded section is not the best and also because this has a negative effect on the suction system.

In case the setting angle of the sanding disc is too large or too small, both guide rollers must be readjusted. Whenever too much material is sanded off on too little surface area, the setting angle is too large and the guide rollers must then be moved further inside the guide roller arms of the fan housing. Whenever the sanding capacity is insufficient and the surface being sanded is too large, you must then move the guide rollers further out of the guide roller arms of the fan housing.

With a correctly adjusted setting, the sanding zone is located at the front edge of the attachment (Fig. 19).

If the machine is sanding too far to the right-hand side (Fig. 20), the right-hand guide roller is further inside the guide roller arm of the fan housing than the left-hand guide roller (Fig. 21).

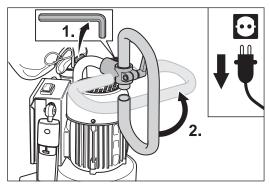


Fig. 18 Undo the screw on the angle clamping connector and rotate the angle clamping connector by 90°.

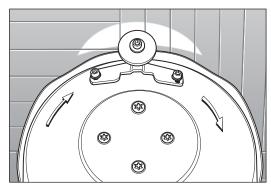


Fig. 19 Correctly adjusted guide rollers. The machine is sanding in mid-position.

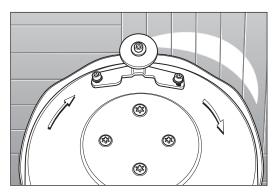


Fig. 20 The sanding zone is too far to the **right-hand** side means that ...

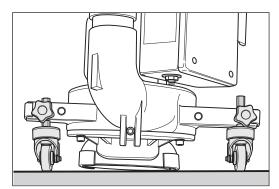


Fig. 21 ... the **right-hand** guide roller is further inside the guide roller arm of the fan housing than the left-hand guide roller.



#### COMMISSIONING -

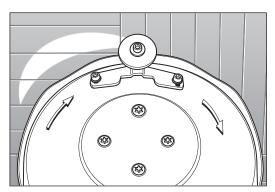


Fig. 22 The sanding zone is too far to the **left-hand** side means that ...

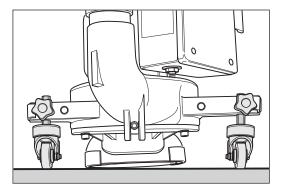


Fig. 23 ... the **left-hand** guide roller is further inside the guide roller arm of the fan housing than the right-hand guide roller.

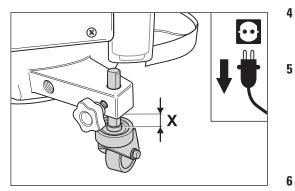


Fig. 24 Measure the distance between the guide roller arm of the fan housing and the wheel fork.

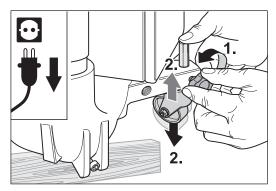


Fig. 25 Undo the star grip screw carefully and then adjust the guide roller.

However, if the machine is sanding too far to the left-hand side (Fig. 22), the left-hand guide roller is further inside the guide roller arm of the fan housing than the right-hand guide roller (Fig. 23).

Depending on the model in each case, you can make the correct settings using the distances between the guide roller arms of the fan housing and the wheel forks (Fig. 24):

UNICO 105: X = 7 mm UNICO 230: X = 9 mm UNICO 350: X = 11 mm

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To adjust the guide rollers, proceed as follows:

Switch off the machine.

#### For safety reasons, always pull the power supply plug out of the socket to prevent the machine from being started up unintentionally!

- Use a piece of wood or your foot to support the UNICO from underneath to prevent the machine from falling onto the guide roller.
- Undo the star grip screw on the guide roller arm of the fan housing carefully (Fig. 25).
- Lift up the machine by grabbing it by the guide roller arm and, at the same time, use your thumb to press down on the upper end of the guide roller shaft. Adjust the guide roller with respect to the guide roller arm to the desired position and tighten the star grip screw firmly. Put the UNICO down again.
- Carry out a trial sanding operation. If the machine does provide the desired mid-position sanded section, repeat the above-mentioned steps.



#### 4.7 ADJUSTING THE WALL-PROTECTING WHEEL

In case of walls or baseboards with different shapes, sanding into these walls or baseboards can be prevented by adjusting the wallprotecting wheel.

- 1 Switch off the machine.
- 2 For safety reasons, always pull the power supply plug out of the socket to prevent the machine from being started up unintentionally!
- 3 Use an Allen key to undo the screw in the centre of the wallprotecting wheel and then move the wall-protecting wheel into the desired position (Fig. 26). Tighten the screw again. You can also increase the adjustment distance of the wallprotecting wheel by undoing the two screws with which the wall-protecting wheel bracket is fastened to the attachment (Fig. 27, 1. + 2.).
- 4 Move the wall-protecting wheel bracket into your desired position (Fig. 27, 3.) and then tighten the screws again.
- 5 To check your adjustments, place the switched-off UNICO against the wall so that the wall-protecting wheel rests against the wall. However, the sanding disc wheel is not allowed to touch the wall or the baseboard. Otherwise, readjust the wall-protecting wheel.

In the case of applications in which you deliberately want to sand right up to the wall, you can then move the wall-protecting wheel completely out of the working zone.

In the case of applications in which you want to sand underneath very low radiators or cabinets, you can then remove the wallprotecting wheel completely:

- 1 Switch off the machine.
- 2 For safety reasons, always pull the power supply plug out of the socket to prevent the machine from being started up unintentionally!
- 3 Remove the two screws with which the wall-protecting wheel bracket is fastened to the attachment and then remove the complete wall-protecting wheel (Fig. 28).

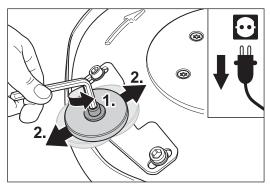


Fig. 26 Undo the screw in the centre of the wall-protecting wheel and then position the wheel.

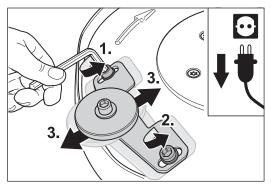


Fig. 27 Undo the screws on the wall-protecting wheel bracket.

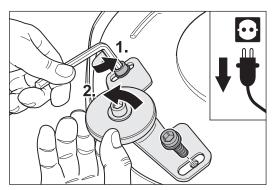


Fig. 28 Remove the screws on the wall-protecting wheel bracket and then remove the complete wall-protecting wheel.



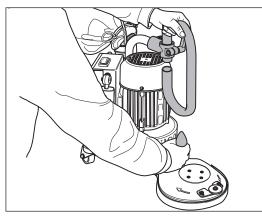


Fig. 29 The machine handle is used in the kneeling position to guide the attachment.

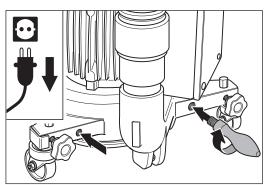


Fig. 30 The machine handle can also be screwed into the fan housing.

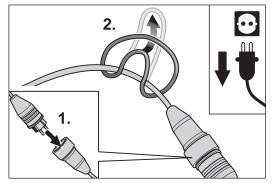


Fig. 31 Connect the motor cable including the extension cable to the extension cable and then fasten the strain relief ring to the extension cable.

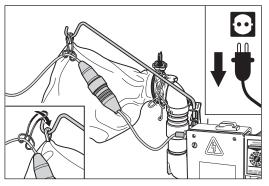


Fig. 32 Run the extension cable past the right-hand side of the dust bag and then hook the strain relief ring into the cable rod.

#### 4.8 THE MACHINE HANDLE ON THE ATTACHMENT

The machine handle is installed on the front end of the long attachment (type 350) and of the medium-sized attachment (type 230). The machine handle is used in the kneeling position to guide the attachment (Fig. 29). The machine handle can be unscrewed and then installed on the right-hand side or on the left-hand side of the rear side of the fan housing. When you are kneeling, you can then use the handle guide the machine in inaccessible locations. In the case of the UNICO equipped with the short attachment (type 105), the machine handle is installed on the fan housing as a standard equipment feature.

Switch off the machine.

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- 2 For safety reasons, always pull the power supply plug out of the socket to prevent the machine from being started up unintentionally!
  - Unscrew the machine handle out of the attachment.
  - Screw the machine handle into the right-hand side or into the left-hand side of the fan housing and then tighten the handle firmly by hand (Fig. 30).

#### 4.9 CONNECTING THE POWER SUPPLY CABLE

- Insert the plug of the motor cable into the coupling of the extension cable (Fig. 31, 1.).
- Fasten the strain relief ring to the extension cable (Fig. 31, 2.). Run the extension cable past the right-hand side of the dust bag and then hook the ring into the cable rod (Fig. 32).

Make sure that the cable can slide back and forth easily and does not pinch off the dust bag at any place. This will guarantee that there are no negative effects on the suction function.

Insert the cable plug of the extension cable into a sufficiently fuse-protected power supply socket equipped with earthing contacts. For increased safety, we recommend the use of a safety switch for fault current (for German mains supply: part number in *Section 11, Spare parts*).



#### 4.10 ADJUSTING THE WORKING LIGHT

As soon as the connected extension cable has been inserted, the working light installed on the UNICO will light up. If this is not the case, check the power supply.

For more light from above, the working light can be swivelled upward (Fig. 33) and rotated about its own axis (Fig. 34). In the transport position, the light is well protected and illuminates the close range more intensively during the sanding work (Fig. 35).

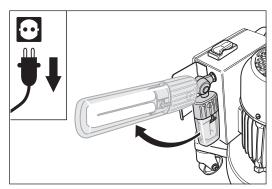


Fig. 33 The working light can be swivelled upward.

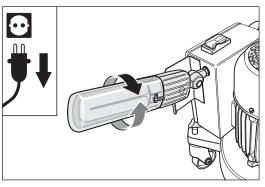


Fig. 34 The working light can be rotated about its own axis.

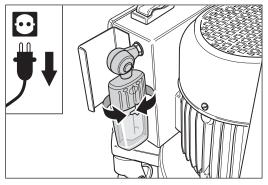


Fig. 35 In the transport position, the close range is illuminated better.



#### – COMMISSIONING —



#### **RISK OF DEATH from electrical shock:**

Do not use extension cables that are too long including any electrical installations that are too weak, not fuse-protected or otherwise dangerous. Use sockets with earthing contacts only!

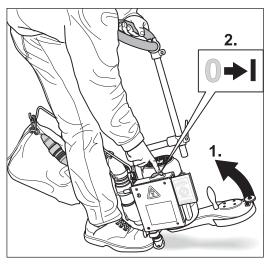


Fig. 36 To switch on the machine, tilt the UNICO slightly backward, use one hand to hold it by the handlebar and use your other hand to press the rocker switch.

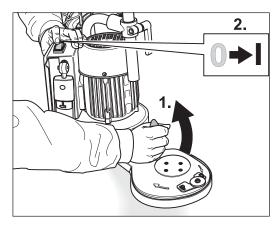


Fig. 37 To switch on the machine, tilt the UNICO slightly backward, use one hand to hold it by the machine handle and use your other hand to press the rocker switch.

#### 4.11 SWITCHING ON THE MACHINE



**RISK OF INJURY and RISK OF PROPERTY DAMAGE from rotating** parts of the machine:

- <u>Always</u> tip the machine backwards slightly before switching on the machine (Fig. 36, Fig. 37) so that the sanding disc is raised off the floor!
- <u>Never</u> allow the machine to run unattended!

The UNICO is now ready to be started. When the machine is being switched on, the sanding disc wheel must be relieved of pressure slightly. Tilt the machine slightly backward. Depending on your working position, you will be using one hand to hold the handlebar on the extension (Fig. 36) or the machine handle on the attachment (Fig. 37). Now you can start the machine by pressing the rocker switch.

#### 4.12 SWITCHING OFF THE MACHINE



**RISK OF INJURY and RISK OF PROPERTY DAMAGE from rotating** parts of the machine:

<u>Always</u> tip the machine backwards slightly before switching off the machine so that the sanding disc is raised off the floor!

To switch off the machine, tilt the machine slightly backward and then press the rocker switch on the side marked with "0". Wait until the sanding disc wheel comes to a standstill before you place the machine on the sanding disc wheel again.



#### **RISK OF INJURY and RISK OF PROPERTY DAMAGE:**

<u>Always</u> remove the power plug from the socket after you have switched off the machine!



#### · WORKING WITH THE UNICO –

# Working with the UNICO

#### 5.1 GENERAL APPLICATION TIPS



#### **RISK OF DEATH from electrical shock:**

The machine may <u>never</u> be used for wet processing operations of any kind!

The UNICO is used for the fine-sanding of transitions, borders, edges, and corners.

Generally, a Velcro coating is used on the sanding disc wheel. This Velcro coating provides a good dampening effect and also a cooler sanded section, which results in a higher sanding performance rate. In addition to modern Velcro sanding discs, traditional paper-type sanding discs can also be used.

Velcro sanding discs are slightly more expensive than paper-type sanding discs. However, the price difference is not an important factor when the higher quality of the abrasive and the considerably shorter disc-replacing time is included in the calculation of costs.

#### NOTE:

To achieve a very smooth surface in the edge areas of the floors and to carry out the sanding operation for the intermediate lacquer coat, you can install a sanding grid including an edge sanding pad as a base on the sanding disc wheel of the UNICO (Section 5.2.3, Changing over from sanding discs to sanding grids with pad base).

Prevent sanding marks caused by previously used grain sizes by complying with the recommended grain size order and by not skipping more than one grain size at a time.

Following each sanding operation, vacuum-clean the floor thoroughly. Keep the running wheels of the machine clean at all times.

You will also find important and interesting application tips in the LÄGLER® application technique guidelines "Sanding of wooden floors" (http://www.laegler.com)!

NOTE:

or

For more information free of charge, please contact: within Germany - Telephone: 0800 / 52 34 537

- Fax: 0800 / 48 66 353 within the USA
- Telephone: 800-848-6635
- Telephone. 000-040-003
- Telephone: 0049 7135 98 90 0
- Fax: 0049 7135 98 90 98
- E-mail: info@laegler.com
- Internet: http://www.laegler.com



Fig. 38 Working in standing position with the UNICO.



Fig. 39 Working in stooped position with the UNICO including the extension.

UNICO 01.02.2013 English / Englisch



#### $\cdot$ WORKING WITH THE UNICO -

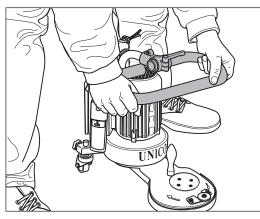


Fig. 40 Working in stooped position with the UNICO without the extension.

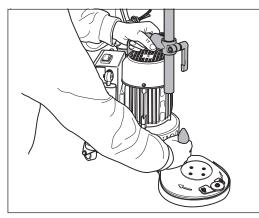


Fig. 41 Working in kneeling position with the UNICO.

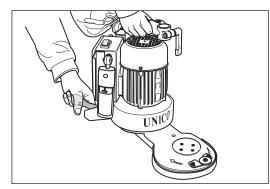


Fig. 42 Working in kneeling position with the UNICO.

You can work in various positions of your body with the machine. To prevent the dust bag from disturbing you during your sanding work, you can either swivel the pipe bend to the side or position the dust bag between your legs. In any case, you should always make sure that the dust bag is not constricted in order to be able to achieve good extraction of the sanding dust.

The various adjustment possibilities for the extension and the handlebar are described in *Section 4.5*.

#### standing working position:

The height of the extension is adjusted according to your height (Fig. 38).

#### stooped working position:

The extension is pushed all the way down (Fig. 39) or the handlebar is installed directly on the pipe bend (Fig. 40).

#### kneeling working position:

You can use the machine handle or the pipe bend to guide the machine (Fig. 41). You do not need to remove the extension. In case you want to sand underneath a radiator, for example, you can remove the machine handle from the attachment and install it on the fan housing (Fig. 42).

#### - WORKING WITH THE UNICO -

#### 5.2 REPLACING THE ABRASIVES

#### Use the following abrasives only:

- Velcro sanding discs
- paper or fabric discs with 4 slits and a hole in the centre with a diameter of 22 mm (7/8")
- sanding grid and pad with a hole in the centre with a diameter of 22 mm (7/8")

The abrasive must have an external diameter of 178 - 180 mm (7 - 7 1/8'').

Always install only one sanding disc since otherwise the sanding results will be unsatisfactory and the dust extraction system will not be fully operative.

Each time you replace the abrasive, make sure that the Velcro sealing strip on the attachment is correctly seated.

You will use various grain sizes of the abrasive depending on the sanding work in each case. To replace the abrasive, proceed as follows:

#### 5.2.1 REPLACING VELCRO SANDING DISCS

- **1** Switch off the machine.
- 2 For safety reasons, always pull the power supply plug out of the socket to prevent the machine from being started up unintentionally!
- 3 Place the UNICO on its side by grabbing the machine by the handlebar on the right-hand side and then tilt the machine over to the **left-hand** side (Fig. 43) and set it down carefully.

**Always** set the UNICO down on the **left-hand** side (Fig. 44)! This will prevent damage to the floor.

- 4 Pull off the worn-out Velcro sanding disc from the sanding disc wheel (Fig. 45).
- **5** Use the proper Allen key or other suitable tool and insert it through the small hole of the new Velcro sanding disc.

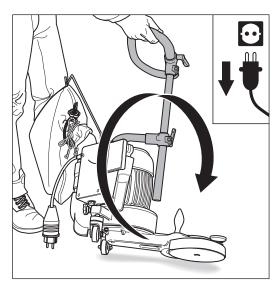


Fig. 43 Tilt the UNICO over to the **left-hand** side and set it down carefully.

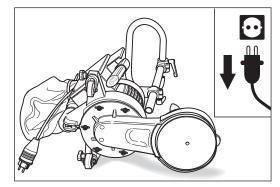


Fig. 44 Place the UNICO down on the **left-hand** side only.

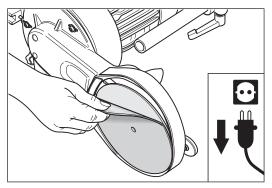


Fig. 45 Simply pull off the worn-out Velcro sanding disc.



#### WORKING WITH THE UNICO -

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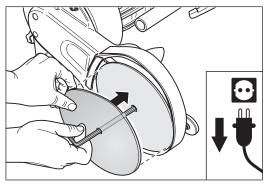


Fig. 46 To centre the sanding disc, insert the Allen key into the hole of the sanding disc and then into the hexagon socket of the sandpaper tensioning screw.

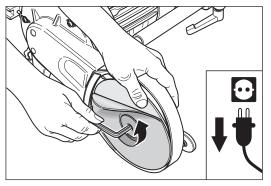


Fig. 47 Undo the sandpaper tensioning screw. To hold the sanding disc wheel, use your thumb to grab behind the sanding disc.

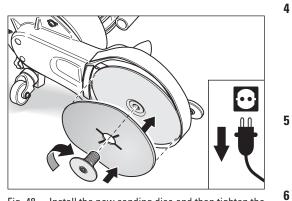


Fig. 48 Install the new sanding disc and then tighten the sandpaper tensioning screw firmly by hand.

- Set the Velcro sanding disc in place by inserting the Allen key in the hole of the sanding disc first and then into the hexagon socket of the sandpaper tensioning screw (Fig. 46). Then move the sanding disc up to the sanding disc wheel so that it rests precisely in centred position on the sanding disc wheel.
- Remove the Allen key or the centring tool you have used and press the disc evenly onto the Velcro disc wheel. Store the centring tool in a safe place.

#### 5.2.2 REPLACING CONVENTIONAL SANDING DISCS

Switch off the machine.

#### For safety reasons, always pull the power supply plug out of the socket to prevent the machine from being started up unintentionally!

Place the UNICO on its side by grabbing the machine by the handlebar on the right-hand side and then tilt the machine over to the **left-hand** side (Fig. 43) and set it down carefully.

**Always** set the UNICO down on the **left-hand** side (Fig. 44)! This will prevent damage to the floor.

- Use the proper Allen key and undo the sandpaper tensioning screw (normal right-hand thread). At the same time, use your other hand to hold the sanding disc wheel. If you use your thumb to grab behind the sanding disc, you will reduce the wear on the sandpaper tensioning screw (Fig. 47).
- Unscrew the sandpaper tensioning screw all the way out of the hole. Remove the screw and the sanding disc from the sanding disc wheel and put them aside.
- Place a new sanding disc on the sanding disc wheel and insert the sandpaper tensioning screw into the sanding disc wheel. Make sure that the sanding disc is fastened in the best possible centred position on the sanding disc wheel (Fig. 48).
- 7 Use the Allen key to screw the sandpaper tensioning screw into the sanding disc wheel. Tighten the sandpaper tensioning screw firmly by hand.



#### 5.2.3 CHANGING OVER FROM SANDING DISCS TO SANDING GRIDS WITH PAD BASE

To achieve a very smooth surface in the edge areas of the floors and to carry out the sanding operation for the intermediate lacquer coat, you can install a sanding grid including an edge sanding pad as a base on the sanding disc wheel of the UNICO. Always use an edge sanding pad as a base (part number in *Section 11, Spare parts*).

- **1** Switch off the machine.
- 2 For safety reasons, always pull the power supply plug out of the socket to prevent the machine from being started up unintentionally!
- 3 Place the UNICO on its side by grabbing the machine by the handlebar on the right-hand side and then tilt the machine over to the **left-hand** side (Fig. 43) and set it down carefully.

**Always** set the UNICO down on the **left-hand** side (Fig. 44)! This will prevent damage to the floor.

- 4 Remove the sanding disc as described in *Sections 5.2.1 or 5.2.2*.
- 5 Place an edge sanding pad and then a sanding grid on the sanding disc wheel. Insert the sandpaper tensioning screw into the sanding disc wheel. Make sure that the pad and the grid are fastened in the best possible centred position on the sanding disc wheel (Fig. 49).
- **6** Use the Allen key to screw the sandpaper tensioning screw into the sanding disc wheel. Tighten the sandpaper tensioning screw firmly by hand.

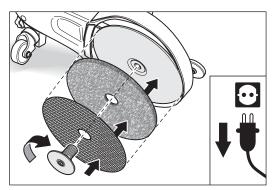


Fig. 49 Place the edge sanding pad on the sanding disc wheel first and then the sanding grid, and afterwards, tighten the sandpaper tensioning screw firmly by hand.



#### 5.3 REMOVING AND EMPTYING THE DUST BAG



#### **RISK OF FIRE** from the formation of sparks while sanding:

- The dust bag must <u>always</u> be removed from the machine after sanding and emptied into a <u>non-combustible</u> container outdoors!
- Cover this container with a <u>non-combustible</u> cover and <u>be</u> certain to store it and the dust bag outdoors!

#### **HEALTH RISK caused by dust:**

In order to ensure that the dust values in the air do not exceed the prescribed threshold levels, please note:

- The dust bag must be emptied when it is one-third full <u>at</u> <u>the very latest</u> in order to prevent a deterioration of the suction performance due to the lack of filtering surface area!
- Do not work with an overfilled dust bag!
- The dust bag must be emptied outdoors!
- When emptying the dust bag, wear a respiratory protective mask (at least filter class P2)!
- Do not wash, patch or repair the dust bag in any other manner!
- Damaged dust bags must be replaced with new ones!

Use only original LÄGLER<sup>®</sup> dust bags for the UNICO (part number in *Section 11, Spare parts*).

When emptying the dust bag, you must use a respiratory protective mask (at least filter class P2).

- **1** Switch off the machine.
- 2 For safety reasons, always pull the power supply plug out of the socket to prevent the machine from being started up unintentionally!
- **3** Put on the enclosed respiratory protective mask (at least filter class P2).



#### WORKING WITH THE UNICO -

- 4 Hold the UNICO firmly by the extension and by the machine handle. Shake the machine so that the dust falls from the suction pipe stub into the dust bag (Fig. 50). Set the machine down on the floor again.
- 5 Remove the strain relief ring together with the extension cable from the cable rod (Fig. 51, 1.).
- 6 Unhook the sling on the dust bag from the cable rod (Fig. 51, 2.).
- 7 Open the loop of the string on the dust bag (Fig. 51, 3.).
- 8 Undo the MultiClip fastener by unscrewing the nut (Fig. 51, 4.).
- **9** Pull off the dust bag from the pipe stub carefully (Fig. 51, 5.) and then use the string to close the dust bag so that no dust can escape on the way to the emptying location. Remove the MultiClip fastener.
- 10 Empty the dust bag into a <u>non-combustible</u> container <u>out-doors</u>! Whirl up as little dust as possible! Close this container with a <u>non-combustible</u> cover and store it <u>outdoors</u> (RISK OF FIRE)!
- **11** Install the dust bag again as described in *Section 4.1, Attaching the dust bag.* Wear also the respiratory protective mask.

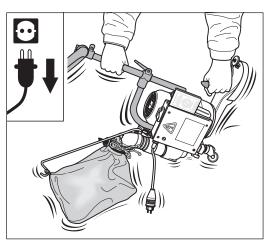


Fig. 50 Shake the machine so that the dust falls from the suction pipe stub into the dust bag.

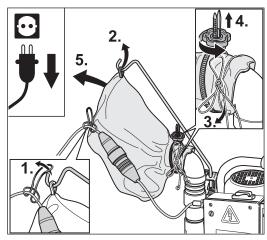


Fig. 51 Removing the dust bag.

# Transport and storage

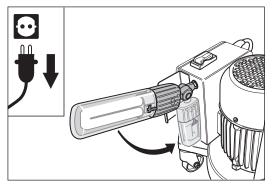


Fig. 52 To transport the machine, swivel the working light downward.

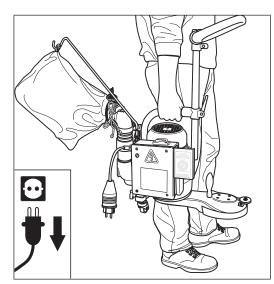


Fig. 53 The UNICO can be easily carried by being picked up by the pipe bend.



**RISK OF FIRE** from spontaneous combustion or the formation of sparks while sanding:

- Oil or wax can lead to <u>spontaneous combustion</u>! Therefore, the machine must <u>always</u> be cleaned carefully before transport or storage!
- Always transport and store the machine without the dust bag! Store the used dust bag in a closed non-combustible container!

#### 6.1 MACHINE TRANSPORT



#### **RISK OF INJURY and RISK OF PROPERTY DAMAGE:**

In the event of transport in an automobile or similar machine, all parts must be secured against sliding!

Before transporting the UNICO, swivel the working light downward (Fig. 52) The working light is protected against damage by the angle plate on the switch box.

The machine can be easily carried by being picked up by the pipe bend into the front end of which the extension is attached (Fig. 53). Especially when transporting the machine over roads, paths, concrete surfaces or pavement surfaces, you should carry the UNICO to prevent the guide rollers from becoming soiled and having an negative effect on the sanding results. During transport in a lorry or similar vehicle, all parts must be sufficiently secured to prevent them from sliding away.



#### 6.2 MACHINE STORAGE



<u>RISK OF FIRE from spontaneous combustion or the formation of</u> sparks while sanding:

Always transport and store the <u>cleaned</u> machine <u>without</u> the dust bag! Store the used dust bag in a closed <u>non-combustible</u> container!

Whenever the machine is to be stored for a longer period of time, provide a dry, frost-free storage location without excessive temperature variations.

# Maintenance work and replacement of wearing parts

### WARNING!

**RISK OF DEATH from electrical shock and RISK OF INJURY from** rotating parts of the machine:

- All extensive maintenance work, especially on the electrical equipment, <u>must</u> be conducted by a qualified expert for safety reasons!
- All maintenance work <u>must</u> be conducted with the machine switched off and with the power plug removed from the socket!

From time to time, but never any later than the time when damage is detected, you must carry out various maintenance tasks. Work at a clean, well illuminated location and proceed according to these instructions. In the tool bag you will find the necessary tools in order to be able to carry out the tasks described below.

#### ATTENTION!

- <u>Only use</u> original spare parts from LÄGLER<sup>®</sup>! This is the only way to ensure that your machine continues to perform! Warranty claims for thirdparty parts will not be honoured!
- <u>Never</u> conduct the maintenance work and replacement of wearing parts on the newly sanded wooden floor! You could cause scratches or other damage to the floor!
- <u>Never</u> use any cleaning products which contain solvents!





An inspection of the machine must be carried out with a minimum amount of time spent and rules out later complaints that could arise from any minor damage on the machine. These measures contribute considerably to preserving the value of the machine and, ultimately, to your own safety as well.

#### 7.1 GENERAL CLEANING AND CARE

#### Never use any cleaning products which contain solvents!

Before beginning the sanding work, you should carry out the following machine care measures to ensure proper operation of the machine and to guarantee first-class sanding results:

- Check the Velcro coating of the sanding disc wheel for signs of damage or soiling.
- Clean the running wheels of the machine.
- Check the suction system and the dust bag for any signs of leakage or damage.
- Carry out a visual inspection of the electrical equipment (extension cable, plug, and couplings).

#### 7.2 CLEANING THE V-BELT DRIVE UNIT

#### Never use any cleaning products which contain solvents!

Following the floor restoration work, there is the possibility that residue from adhesives, waxes, sealing lacquers or similar substances may have accumulated on the belt pulleys, on the V-belt or inside the attachment housing. This can have a negative effect on the running characteristics of the machine and reduce the suction capacity. The conspicuous signs of this kind of soiling include irregular running, difficult start-up, reduced working speed, and increased noise development. The suction capacity also decreases. In the case, as described in *Section 7.4*, the V-belt must be dismantled and cleaned, and the attachment as well as the flanks of the belt pulleys must be cleaned. Check also the fan wheel and the fan housing for any signs of deposits. If and when required, a respiratory protective mask (at least filter class P2) should be worn.





#### 7.3 TENSIONING THE V-BELT

The V-belt must be re-tensioned from time to time. Proceed as follows:

- **1** Switch off the machine.
- 2 For safety reasons, always pull the power supply plug out of the socket to prevent the machine from being started up unintentionally!
- 3 Place the UNICO on its side by grabbing the machine by the handlebar on the right-hand side and then tilt the machine over to the **left-hand** side (Fig. 54) and set it down carefully.

**Always** set the UNICO down on the **left-hand** side (Fig. 55)! This will prevent damage to the floor, and the shape of the fan housing also stops any dust falling back out of the dust bag from getting into the fan housing.

- 4 To relieve the V-belt tension, use the proper Allen key to unscrew the belt-tensioning screw all the way out until this screw disappears on the front side in the threaded hole of the fan housing (Fig. 56).
- 5 Use the proper Allen key to undo all five screws with which the attachment is installed on the fan housing (Fig. 57). Do not unscrew this screw all the way out!
- 6 Push the attachment all the way back. Use the machine handle to pull the attachment forward again until you feel the resistance caused by the V-belt (Fig. 58). To prevent damage to the floor, make sure that the attachment does not touch the floor!

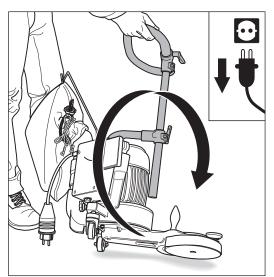


Fig. 54 Tilt the UNICO over to the **left-hand** side and set it down carefully.

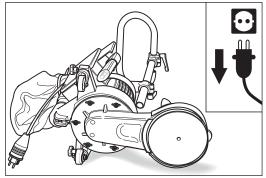


Fig. 55 Place the UNICO down on the **left-hand** side only.

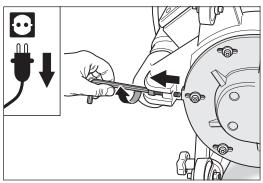


Fig. 56 Unscrew the belt-tensioning screw all the way back.

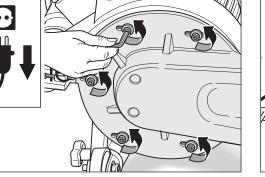


Fig. 57 Undoing the five fastening screws of the attachment. Do not unscrew the screws all the way out!

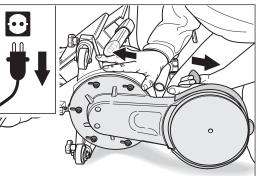


Fig. 58 Use the handle to pull the attachment forward until you feel the belt resistance.





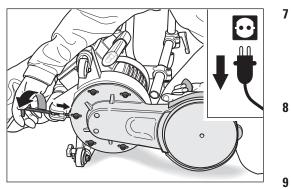


Fig. 59 Screw the belt-tensioning screw all the way in until it rests against the attachment.

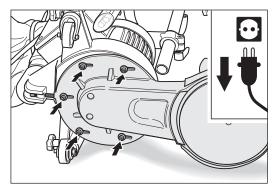


Fig. 60 The fastening screws are up against the slits in the attachment.

Use the Allen key to screw the five attachment-fastening screws only so far into the drilled holes as required to ensure that the attachment can no longer slide away; do not tighten the screws.

Set the attachment down again use the proper Allen key to screw the belt-tensioning screw all the way forward until it rests against the attachment (Fig. 59).

With 3 to 4 additional rotations of the belt-tensioning screw, you will then tighten the belt exactly as required.

#### Do not tighten the V-belt too tightly since this will increase the degree of wear and tear on the belt pulleys and V-belts unnecessarily!

Whenever the V-belt can no longer be retightened because the fastening screws are up against the slits in the attachment (Fig. 60), the wear limit of the V-belt has been reached and the V-belt must be replaced *(Section 7.4, Replacing the V-belt)*.

**10** Tighten the five screws with which the attachment is fastened to the fan housing carefully.

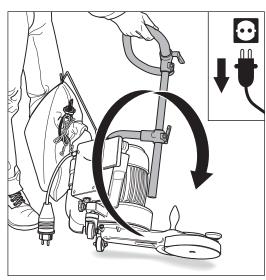


Fig. 61 Tilt the UNICO over to the **left-hand** side and set it down carefully.

#### 7.4 REPLACING THE V-BELT

Whenever the V-belt can no longer be retightened because the fastening screws are up against the slits in the attachment (Fig. 60), the wear limit of the V-belt has been reached and the V-belt must be replaced.

Use only original LÄGLER<sup>®</sup> V-belts (part number in *Section 11, Spare parts*).

Proceed as described below, whereby a sufficiently illuminated workplace and good tools are recommended:

- 1 Switch off the machine.
- 2 For safety reasons, always pull the power supply plug out of the socket to prevent the machine from being started up unintentionally!
- 3 Place the UNICO on its side by grabbing the machine by the handlebar on the right-hand side and then tilt the machine over to the **left-hand** side (Fig. 61) and set it down carefully.





**Always** set the UNICO down on the **left-hand** side (Fig. 62)! This will prevent damage to the floor, and the shape of the fan housing also stops any dust falling back out of the dust bag from getting into the fan housing.

- 4 To relieve the V-belt tension, use the proper Allen key to unscrew the belt-tensioning screw all the way out until this screw disappears on the front side in the threaded hole of the fan housing (Fig. 63).
- 5 Use the proper Allen key to undo all five screws with which the attachment is installed on the fan housing (Fig. 64).
- 6 Push the attachment all the way back and remove the five screws with which the attachment is installed on the fan housing. Please note that the fan housing including the motor could tip over!
- 7 Remove the attachment and place it including the belt pulley facing downward in flat position on a suitable working surface. Do not place the attachment down on the wooden floor! You could damage the floor!
- 8 Set a suitable screwdriver with a continuous blade on the screws of the bearing unit of the sanding disc wheel. Use a few light taps of your hammer on the screwdriver to loosen these screws (Fig. 65)!
   ATTENTION: risk of injury!

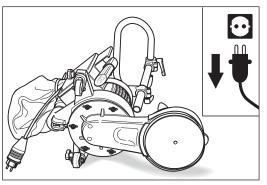


Fig. 62 Place the UNICO down on the left-hand side only.

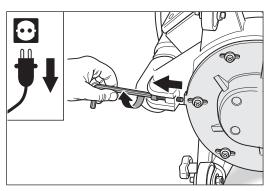


Fig. 63 Unscrew the belt-tensioning screw all the way out.

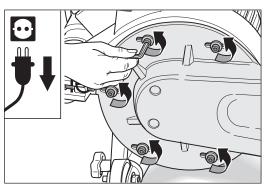


Fig. 64 Undoing the five fastening screws of the attachment.

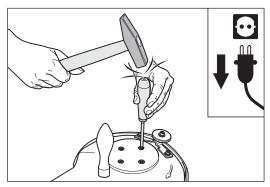


Fig. 65 Using a suitable screwdriver with a continuous blade and using a few light taps of your hammer, loosen the screws of the bearing unit of the sanding disc wheel.





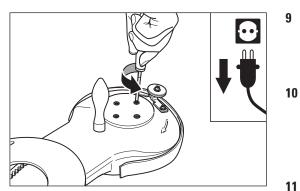


Fig. 66 Unscrewing the screws.

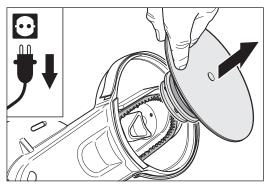


Fig. 67 Removing the complete sanding bearing unit.

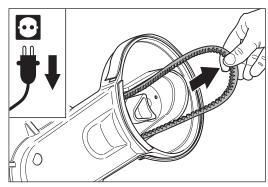


Fig. 68 Pulling the V-belt out of the attachment.

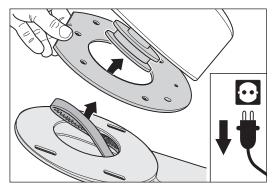


Fig. 70 During the assembly of the fan housing, pay attention to the correct position of the intermediate sheet-metal plate!

Unscrew the screws all the way out (Fig. 66) and remove the complete bearing unit of the sanding disc wheel (Fig. 67). The sanding disc can remain on the sanding disc wheel.

Pull the worn-out V-belt out of the attachment (Fig. 68). Clean the two belt pulleys and the attachment. Wear a respiratory protective mask (at least filter class P2) whenever appropriate.

Insert a new V-belt (Fig. 69). Pay attention to the correct installation position of the belt and pull the belt all the way back on the motor side.

- 12 During the assembly of the attachment, pay attention to the correct position of the intermediate sheet-metal plate between the fan housing and the attachment (Fig. 70)!
- **13** On the motor side, pull the V-belt slightly out of the attachment and then place it in the motor belt pulley (Fig. 71).

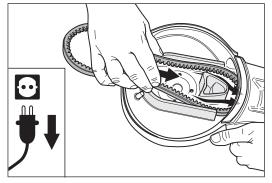


Fig. 69 Inserting a new V-belt and pulling it all the way back on the motor side.

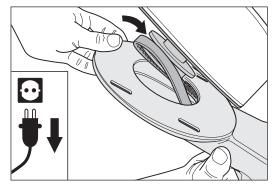


Fig. 71 Pull the V-belt slightly of the attachment and place it in the motor belt pulley.





#### MAINTENANCE WORK AND REPLACEMENT OF WEARING PARTS -

- 14 Pull the V-belt forward on the sanding disc wheel side. Make sure that the V-belt is in the V-belt groove of the motor belt pulley. The attachment can then no longer fall off the fan housing.
- **15** To fasten the attachment to the fan housing, install the five hexagon socket screws including the respective washers (Fig. 72). Do not tighten the screws!
- **16** Push the attachment all the way back.
- 17 At the front of the attachment, insert the belt pulley of the bearing unit of the sanding disc wheel into the V-belt (Fig. 73).
- 18 To make sure that the hole pattern of the attachment and the fixture of the sanding disc wheel line up properly, insert a screwdriver from above through a hole in the attachment into a hole in the fixture of the sanding disc wheel (Fig. 74).
- **19** Insert the bearing unit of the sanding disc wheel into the attachment.
- 20 Screw the countersunk screws on the attachment into the bearing unit of the sanding disc wheel (Fig. 75). Make sure that the bearing unit is correctly seated in the attachment. Then tighten the countersunk screws firmly.
- **21** Tighten the V-belt, as described in detail in *Section 7.3*, by pulling the attachment all the way forward until you feel a slight resistance.
- 22 With 3 to 4 additional rotations of the belt-tensioning screw, you will then tighten the belt exactly as required.

Do not tighten the V-belt too tightly since this will increase the degree of wear and tear on the belt pulleys and V-belts unnecessarily!

- **23** Tighten the five screws with which the attachment is fastened to the fan housing carefully.
- 24 Place the UNICO down on its wheels again. Use a suitable screwdriver to tighten the retaining screws of the bear unit of the sanding disc wheel once more.

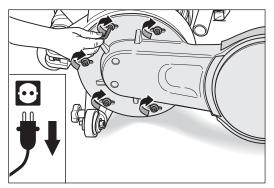


Fig. 72 Install the five screw including washers for fastening the attachment to the fan housing. Do not tighten the screws firmly!

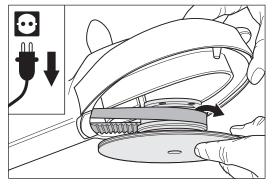


Fig. 73 Inserting the belt disc into the V-belt.

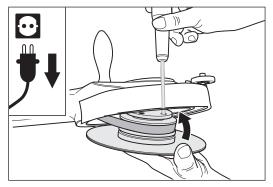


Fig. 74 For simplified assembly, insert a screwdriver from above through a hole in the attachment into a hole in the bearing unit of the sanding disc wheel.

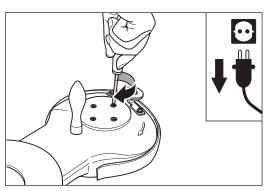


Fig. 75 Using the countersunk screws to tighten the bearing unit of the sanding disc wheel.





#### MAINTENANCE WORK AND REPLACEMENT OF WEARING PARTS -

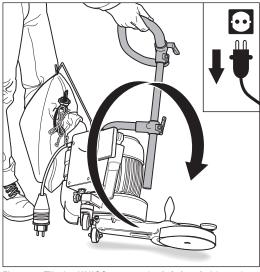


Fig. 76 Tilt the UNICO over to the **left-hand** side and set it down carefully.

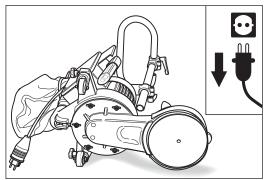


Fig. 77 Place the UNICO down on the **left-hand** side only.

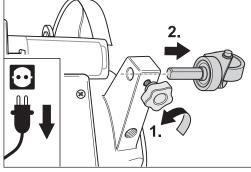


Fig. 78 Undoing the star grip screw and removing the guide rollers from the fan housing.

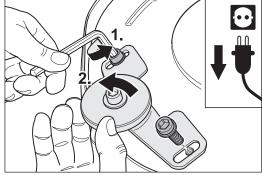


Fig. 79 Remove the screws on the wall-protecting wheel bracket and then remove the complete wallprotecting wheel.

#### 7.5 REPLACING THE GUIDE ROLLERS

The best way to achieve the usual good sanding results is by replacing the guide rollers in pairs.

Use only original LÄGLER<sup>®</sup> guide rollers (part number in *Section 11, Spare parts*).

1 Switch off the machine.

3

4

5

2

3

- 2 For safety reasons, always pull the power supply plug out of the socket to prevent the machine from being started up unintentionally!
  - Place the UNICO on its side by grabbing the machine by the handlebar on the right-hand side and then tilt the machine over to the **left-hand** side (Fig. 76) and set it down carefully.

**Always** set the UNICO down on the **left-hand** side (Fig. 77)! This will prevent damage to the floor.

- Undo the star grip screws on the guide roller arms of the fan housing and pull the guide rollers out of the fan housing (Fig. 78).
- Install the new guide rollers and then adjust them as described in *Section 4.6, Adjusting the guide rollers*.

#### 7.6 REPLACING THE WALL-PROTECTING WHEEL

Use only original LÄGLER<sup>®</sup> wall-protecting wheels (part number in *Section 11, Spare parts*).

1 Switch off the machine.

# For safety reasons, always pull the power supply plug out of the socket to prevent the machine from being started up unintentionally!

- Remove the two screws with which the wall-protecting wheel is fastened to the attachment and then remove the complete wall-protecting wheel (Fig. 79).
- 4 Use an Allen key to remove the screw in the centre of the wall-protecting wheel.





#### MAINTENANCE WORK AND REPLACEMENT OF WEARING PARTS -

- 5 Remove the old wall-protecting wheel.
- 6 Insert the bushing into the new wall-protecting wheel and then place this wheel with one washer on each side onto the wall-protecting wheel bracket. Make sure that the centre of the wheel is situated over the nut in the bracket.
- 7 Rotate the screw through the hole of the bushing into the nut.

#### 7.7 REPLACING THE FLUORESCENT TUBE

Whenever the fluorescent tube is defective, it must be replaced.

Use only original LÄGLER<sup>®</sup> fluorescent tubes (part number in *Section 11, Spare parts*)

Let the light cool off before you proceed as follows:

- 1 Switch off the machine.
- 2 Always pull the power supply plug out of the socket before performing any work on the electrical equipment!
- **3** Swivel the working light upward (Fig. 80).
- 4 On the plastic fixture housing of the working light, press the two clips together that hold the fluorescent tube and then remove the fluorescent tube carefully (Fig. 81).
- 5 Wrap a cloth or similar item around the fluorescent tube and then pull the fluorescent tube of the fixture. If appropriate, move the fluorescent tube back and forth carefully. **Do not break the fluorescent tube.** You could become injured by broken pieces of glass or you could also damage the floor (Fig. 82).
- **6** Insert a new fluorescent tube. You must feel the fluorescent tube snap into place.
- 7 Insert the fluorescent tube again. Make sure the two clips snap into place properly. Adjust the working light according to your requirements (*Section 4.10, Adjusting the working light*).

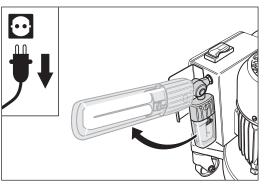


Fig. 80 Swivel the working light upward.

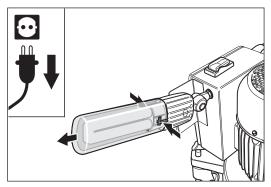


Fig. 81 Press the two clips on the fixture housing together and then remove the fluorescent tube **carefully**.

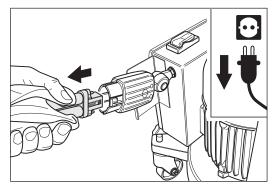


Fig. 82 Pull the defective fluorescent tube out of the fixture carefully.



## Regular maintenance and testing in accordance with accident prevention regulations

### 

Tests and testing intervals must comply with and be performed in accordance with the applicable regulations and legal requirements in your country!

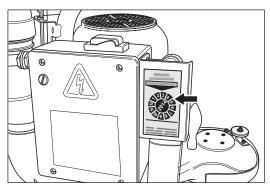


Fig. 83 The inspection label on the switch box of the motor confirms the electrical an mechanical safety of the machine and indicates the next due inspection date.

The electrical operating equipment and machine parts must be inspected at least once a year by a qualified electrician with respect to electrical and mechanical safety, then be repaired as required. Afterwards, the operational safety must be confirmed by the attachment of an inspection label on the machine (Fig. 83).

The elements required for the dust suction system must be checked at least once per year by a qualified expert and repaired as required. The functional efficiency must also be confirmed.

Ensure that only original LÄGLER<sup>®</sup> spare parts are used for maintenance work! You should only allow the customer service work to be conducted by LÄGLER<sup>®</sup> or an authorized LÄGLER<sup>®</sup> service centre!

The service passport in these operating instructions (*Section 12*) documents when and where your machine was serviced.

Enter the serial number and the year of manufacture of your machine on the back cover of these operating instructions (please see the type plate)! If you do not do this, your service passport is invalid!

Make sure that the maintenance tasks in the service passport are confirmed by filling in a corresponding field with the date, stamp and signature.



In order to ensure the safety of the machines and equipment (= working equipment), the German Ordinance on Industrial Safety and Health (BetrSichV) <u>must be complied with</u> in Germany!

#### **REGULATIONS VALID IN GERMANY**

The German Ordinance on Industrial Safety and Health (BetrSichV) requires every employer to define the testing intervals on the work equipment they provide according to a risk analysis and to document all of this.



#### **EXCERPT FROM THE BGV A3**

#### § 5 Inspections

- (1) The employer must ensure that the proper condition of the electrical systems and equipment is inspected
  - before using the equipment for the first time and after an alteration or repair before being used again by an electrician or under the supervision of an electrician and
  - 2. at regular intervals.

The intervals are to be calculated in such a manner that defects which must be handled are detected in a timely manner.

- (2) The electrical engineering regulations relevant to the inspection are to be followed.
- (3) Upon request by the professional association, an inspection log with specific entries is to be maintained.
- (4) The inspection before the first commissioning as per paragraph 1 is not required if the employer receives confirmation from the manufacturer or installer that the electrical systems and equipment have been correspondingly procured in accordance with these accident prevention guidelines.

#### Table 1B: Recurring inspections of portable electrical equipment:

#### Systems/equipment (which are to be inspected)

- portable electrical equipment (insofar as is used)
- extension and device connection cables with plugs
- connection cables with plugs
- movable cables with plugs and fixed connections

#### **Inspection interval**

### Every 6 months as a reference value, **3 months on construction** sites\*).

If an error rate of less than 2% is reached during the inspection, the inspection interval can be extended to a maximum of 1 year (valid for machines on construction sites, in production facilities and workshops).

\*) See the BG information "Selection and Operation of Electrical Systems and Equipment on Construction Sites" (BGI 608) for more details.

#### Type of inspection

The proper condition of the machines and equipment must be inspected.

#### Inspector

Electricians or persons trained in electrical engineering when using suitable measurement and inspection devices.

#### NOTE:

- All LÄGLER<sup>®</sup> machines and electrical equipment are subjected to an electrical inspection as well as a thorough visual and functional test before they leave the factory.
- A recurring inspection of the machines and electrical equipment must be conducted in Germany at certain intervals.
- LÄGLER<sup>®</sup> recommends using the guidelines of BGV A3 for inspections and inspection intervals.
- You can, of course, arrange for repairs and recurring inspections of LÄGLER<sup>®</sup> machines to be conducted by the LÄGLER<sup>®</sup> service department.



## Troubleshooting



#### **RISK OF DEATH from electrical shock:**

Work on the electrical equipment is to be conducted <u>exclusively</u> by a qualified electrician! The machine <u>must</u> be switched off and the power plug removed from the socket during this work!

The circuit diagram valid for your machine is located in the motor switch box!

RISK OF INJURY due to unsuitable parts:

Make sure that only original LÄGLER® spare parts and original LÄGLER® accessories are used! This section shows you how to remedy possible malfunctions. If none of the measures listed here are successful, please contact our service department, your retailer or your importer.

#### THE MACHINE IS NOT RUNNING

#### The machine does not start up

- Check the power supply and provide if necessary (Is the plug of the extension cable in the socket? Is the coupling between the motor cable and the extension cable detached? Cable breakage?).
- Check the protection by fuses.
- Have the electrical equipment checked by an expert electrician (e.g. capacitor, self-locking, cables and switches).
- The machine has been switched off via temperature sensors and must cool off.

#### The machine attempts to start up but is being restrained

- At low temperatures: Heat up the machine in a warm room to room temperature.
- Undervoltage: Check the cable quality and cable length; excessively small cable cross-sections (stranded conductor cross-sections smaller than 1.5 mm<sup>2</sup>) and excessively long supply cables must be avoided; if appropriate, use a transformer (part number 708.00.00.100 for 230 Volts).
- Check the V-belt tension 🔶 adjust, if appropriate.
- Check the machine for clogged-up parts and deposits -->
   clean, if appropriate.
- Check the driving elements for easy movement.



#### THE MACHINE IS RUNNING BADLY

### The machine is running but has no sanding capacity or only very little sanding capacity

- At low temperatures: Heat up the machine in a warm room to room temperature.
- Undervoltage: Check the cable quality and cable length; excessively small cable cross-sections (stranded conductor cross-sections smaller than 1.5 mm<sup>2</sup>) and excessively long supply cables must be avoided; if appropriate, use a transformer (part number 708.00.00.100 for 230 Volts).
- Check the V-belt tension adjust, if appropriate.
- Check the driving elements for easy movement.
- The setting angle of the sanding disc is too flat → readjust the guide rollers (Section 4.6, Adjusting the guide rollers).

#### The machine is vibrating extremely and is working loudly

- Check the abrasive for signs of damage.
- Check whether the abrasive is fastened in centred position on the sanding disc wheel 
   → adjust, if appropriate.
- Check the V-belt tension adjust, if appropriate.
- Check the V-belt pulleys for deposits --> clean, if appropriate.

#### THE MACHINE IS RUNNING WELL BUT IS GIVING OFF DUST

#### The sanding capacity and the sanding results are correct

- The dust bag is defective -> renew the dust bag.
- The dust bag is incorrectly installed -- correct this mistake.
- The Velcro sealing strip is defective 
  renew the Velcro strip.
- More than one sanding disc are installed → correct this mistake and readjust the guide rollers.

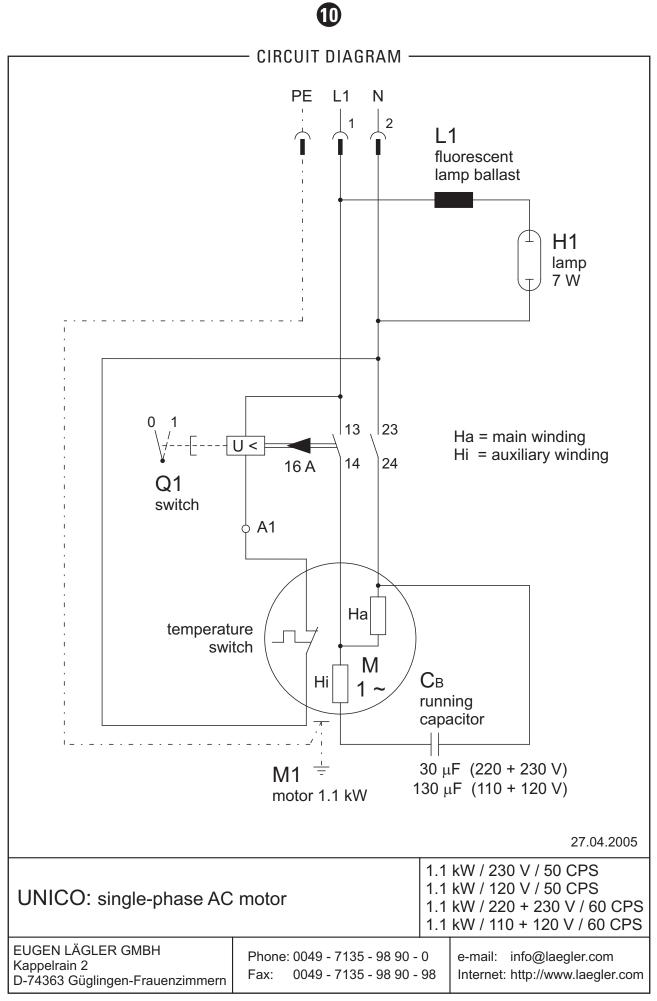


#### The sanding capacity is not correct

- Check the V-belt tension adjust, if appropriate.
- Check the V-belt condition renew the belt, if appropriate.
- Check the machine for clogged-up parts and deposits -->
  clean, if appropriate.

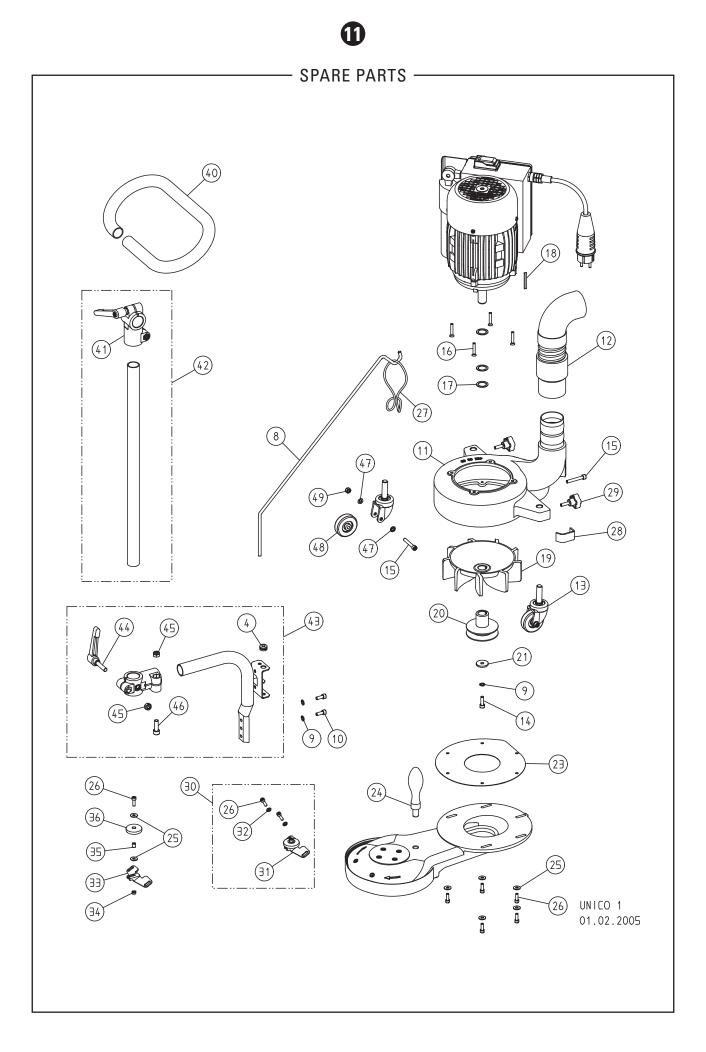
#### The sanding results are not correct

- The guide rollers are not correctly adjusted for the respective attachment -> readjust the guide rollers (Section 4.6, Adjusting the guide rollers).
- The machine guiding speed is too slow.
- Circular movements are not being carried with the machine.
- Excessive pressure is being applied to the sanding disc.
- Check the abrasive for signs of damage.
- Check whether the abrasive is fastened in centred position on the sanding disc wheel → adjust, if appropriate.



The circuit diagram valid for your machine is located in the motor switch box.



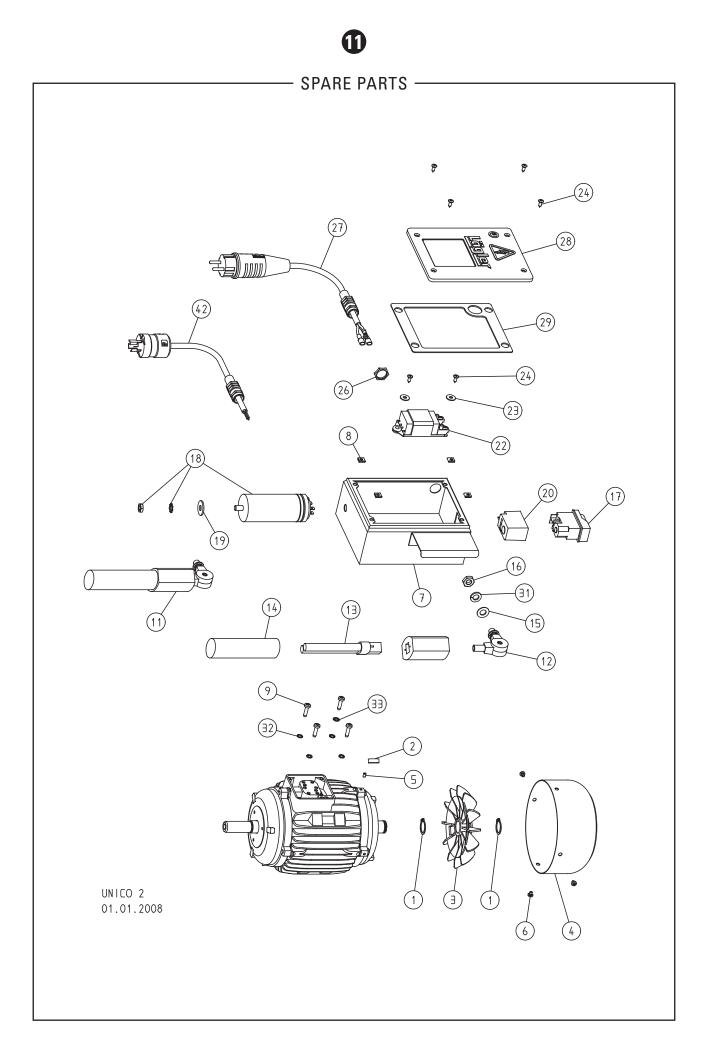


#### – SPARE PARTS –

A

ltem	Part number	Description
4	000.63.12.071	Rubber tube
8	465.20.26.100	Cable support, complete
9	6797.1006.900	Washer
10	0912.1006.016	Screw
11	465.08.00.100	Fan housing, complete
12	465.14.00.105	Hose
13	465.05.00.200	Guide roller, complete
14	0912.1006.020	Screw
15	0912.1006.940	Screw
16	7500.1005.830	Screw
17	0988.0018.010	Washer
18	6885.0404.040	Parallel key
19	465.08.02.100	Fan wheel
20	465.65.06.100	Motor pulley
21	000.10.10.061	Washer
23	465.08.10.105	Sheet cover
24	000.20.30.121	Handle
25	9021.1005.000	Washer
26	0912.1005.016	Screw
27	00.000.41.002	Strain relief ring
28	465.08.21.105	Bumper felt
29	000.20.25.065	Cross grip
30	465.60.00.100	Wall-protecting roller with bracket, complete
31	465.60.10.100	Wall-protecting roller with bracket
32	0125.1005.000	Washer
33	465.60.01.100	Holder for wall-protecting roller
34	0934.1005.000	Nut
35	000.43.15.052	Bush
36	465.60.02.100	Wall-protecting roller
40	465.20.08.200	Handle
41	465.20.04.100	Pipe clamp
42	465.20.31.200	Guide tube
	465.20.30.200	Guide tube with handle
43	465.20.10.200	Pipe bend, complete
44	000.20.40.084	Clamping device
45	0980.1008.000	Nut
46	0912.1008.025	Screw
47	0125.1006.000	Washer
48	465.05.09.105	Wheel
49	0980.1006.000	Nut



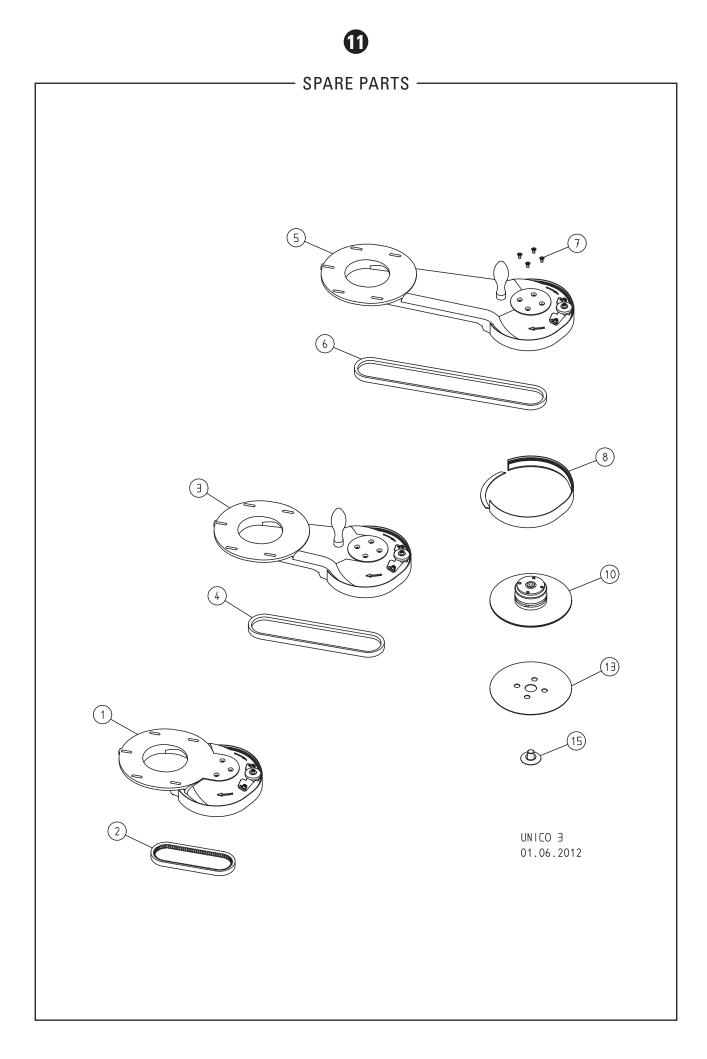


<u>Lägler</u>

#### – SPARE PARTS –

A

ltem	Part number	Description	
	465.65.00.100	Motor, 230 V / 50 CPS / 1.1 kW	
	466.65.00.100	Motor, 230 V / 60 CPS / 1.1 kW	
	468.65.00.100	Motor, 120 V / 60 CPS / 1.1 kW	
	467.65.00.100	Motor, 220 V / 60 CPS / 1.1 kW, USA	
	469.65.00.100	Motor, 110 V / 60 CPS / 1.1 kW, USA	
1	0471.0020.000	Circlip	
2	6885.0606.018	Parallel key	
3	900.65.08.100	Fan blade	
4	900.65.09.100	Fan cover	
5	0913.0004.006	Grub screw	
6	7985.1004.805	Screw	
7	465.65.40.100	Switch box with clip nut	
8	000.50.10.109	Clip nut	
9	7500.1005.020	Screw	
11	465.63.01.105	Working light, complete	
12	465.63.20.105	Joint	
13	465.63.11.105	Fluorescent tube	
14	465.63.12.105	Tube	
15	0125.1010.000	Washer	
16	0439.1010.010	Nut	
17	000.65.60.256	Switch, 230 V / 50 + 60 CPS	
	000.65.60.156	Switch, 110 + 120 V / 60 + 50 CPS	
	000.65.62.160	PVC cap with switch frame	
18	000.65.10.031	Capacitor 30 μF	
	000.65.10.131	Starting capacitor 130 μF, USA	
19	9021.1008.000	Washer	
20	000.65.62.150	Dust cover	
22	465.63.52.105	Fluorescent lamp ballast, 230 V / 50 CPS	
	465.63.62.105	Fluorescent lamp ballast, 220 + 230 V / 60 CPS	
	465.63.61.105	Fluorescent lamp ballast, 110 + 120 V / 60 CPS	
23	9021.1005.000	Washer	
24	7983.1042.013	Screw	
26	000.68.60.113	Nut	
27	000.65.43.151	Motor cable 3 x 1.5 mm <sup>2</sup>	
28	900.65.47.100	Cover with seal	
29	465.65.48.105	Cover seal	
31	0127.1010.000	Spring washer	
32	6797.1005.900	Washer	
33	0125.0105.000	Washer	
42	000.65.43.153	Motor cable 3 x 1.5 mm², USA	

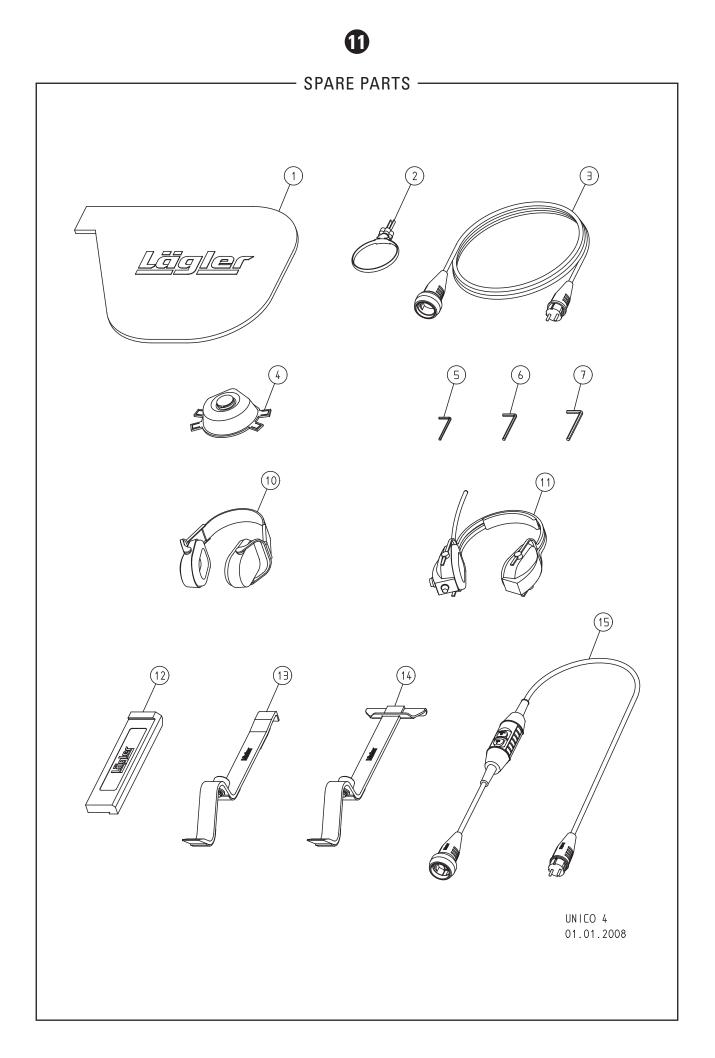


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П

ltem	Part number	Description
1	425.01.01.200	Attachment 105 mm
2	000.70.13.044	V-belt
	425.01.00.200	Attachment 105 mm, complete
3	445.01.01.200	Attachment 230 mm
4	000.70.13.067	V-belt
	445.01.00.200	Attachment 230 mm, complete
5	465.01.01.200	Attachment 350 mm
6	000.70.13.092	V-belt
	465.01.00.200	Attachment 350 mm, complete
7	0965.1005.810	Screw
8	465.01.52.100	Sealing set
	465.01.51.105	Velcro by the roll (50 m)
10	465.01.91.200	Sanding plate, complete
13	465.02.12.205	Velcro disc 177 mm
	465.02.06.105	Felt disc
15	465.02.05.100	Paper tensioning screw





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П

ltem	Part number	Description
1	465.00.80.105	Dust bag UNICO
2	000.01.40.110	MultiClip
3	000.65.53.151	Extension cable 3 x 1.5 mm², 10 m long
4	000.01.20.010	Respiratory protection mask P3
5	000.93.11.041	Hexagonal socket screw wrench 4 mm
6	000.93.11.051	Hexagonal socket screw wrench 5 mm
7	000.93.11.061	Hexagonal socket screw wrench 6 mm
10	000.01.10.021	Foldable earmuff type POCKET
11	000.01.10.011	Foldable earmuff type MUSIMUFF with FM radio
12	701.10.00.100	Impact tool
13	702.00.00.200	Parquet layer tool ZUGEISEN, small
14	703.00.00.200	Parquet layer tool ZUGEISEN, broad
15	000.01.65.020	Safety switch PRCD-S (for German mains supply)



\_\_\_\_\_ NOTES \_\_\_\_\_



### Service passport

Please enter the serial number and the year of manufacture of your machine on the rear side of these operating instructions (see type plate)! Otherwise the service passport will not be valid!

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

Date of test and	Date of test and	Date of test and
maintenance work:	maintenance work:	maintenance work:
Signature and company stamp	Signature and company stamp	Signature and company stamp
Date of test and	Date of test and	Date of test and
maintenance work:	maintenance work:	maintenance work:
Signature and company stamp	Signature and company stamp	Signature and company stamp
Date of test and	Date of test and	Date of test and
maintenance work:	maintenance work:	maintenance work:
Signature and company stamp	Signature and company stamp	Signature and company stamp
Date of test and	Date of test and	Date of test and
maintenance work:	maintenance work:	maintenance work:
Signature and company stamp	Signature and company stamp	Signature and company stamp
Date of test and	Date of test and	Date of test and
maintenance work:	maintenance work:	maintenance work:
Signature and company stamp	Signature and company stamp	Signature and company stamp



## EU Declaration of conformity for machines (EU Directive 2006/42/EC)

The manufacturer

Eugen Lägler GmbH, Kappelrain 2, D-74363 Güglingen-Frauenzimmern Tel.: 0049 - 7135 - 98 90-0 · Fax: 0049 - 7135 - 98 90-98 E-Mail: info@laegler.com · http://www.laegler.com

certified herewith, that the machine

he machine Generic denomination: Floor sanding machine Function: Dry sanding of wooden floors Model: UNICO Serial number: See type plate Commercial name: Edge sanding machine

fulfils all the relevant provisions of the specified above European Directive.

The machine also fulfils all the relevant provisions of the European Directive **Electromagnetic compatibility (2004/108/EG)**.

#### The following harmonized standards have been applied:

DIN EN ISO 12100: Safety of machinery - General principles for design - Risk assessment and risk reduction

DIN EN 60204-1: Safety of machinery - Electrical equipment of machines - Part 1

DIN EN 55014-1: Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1

DIN EN 55014-2: Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2

DIN EN 61000-3-2: Electromagnetic compatibility (EMC) - Part 3-2: Limits

DIN EN 61000-3-3: Electromagnetic compatibility (EMC) - Part 3-3: Limits

Güglingen-Frauenzimmern, February 1, 2013

lalker Uprner

Dipl.-Ing. (FH) Volker Wörner, Design Engineer Person Responsible for Documents Eugen Lägler GmbH, Kappelrain 2 D-74363 Güglingen-Frauenzimmern

UNICO

**Serial number:** 

Year of manufacture:

