Operation, Maintenance, Safety

Operating instructions for the edge sanding machine

UNICO

Lägler

WORLD LEADERS IN FLOOR
SANDING TECHNOLOGY

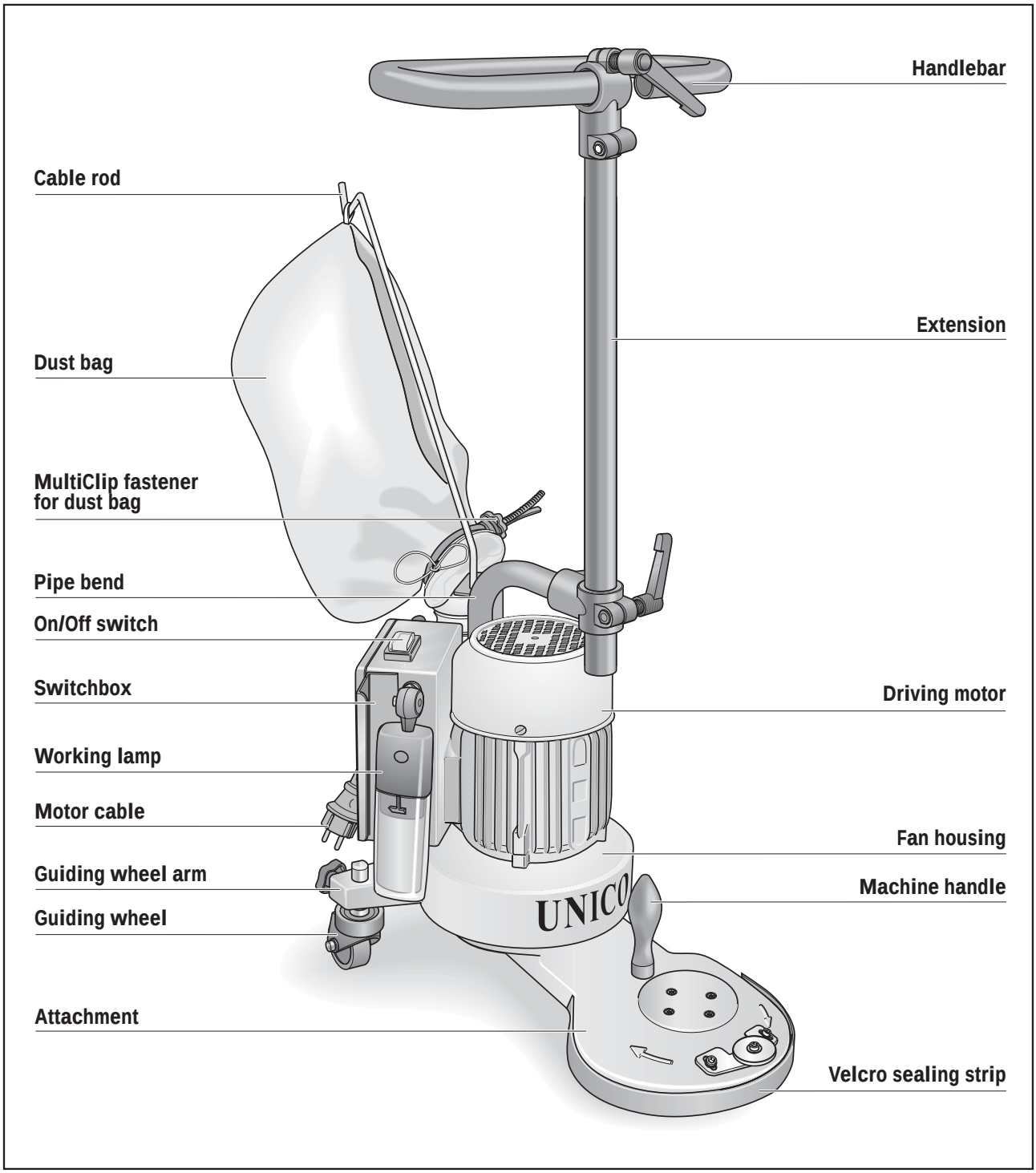

Fig. 1: Components of the edge sanding machine UNICO

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Introduction

You have decided to purchase a high-quality product from LÄGLER. We wish the best of success with your new UNICO sanding machine. This machine was designed and manufactured according to state-of-the-art technology. All LÄGLER products undergo thorough inspection before leaving our factory.

Please read this manual of operating instructions completely before you start working with the UNICO. These operating instructions include important information on work safety and will answer many questions you may have so that you can work safely and easily with this machine. If you do not find a certain subject in this manual, please have a look in your sanding manual or contact our service department or your local dealer. These people are extremely familiar with the UNICO and are also highly qualified due to proper training. They will be glad to help you with their advice and support.

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 guiding wheels, 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 switchbox are attached to the motor. An On/Off switch including no-volt release as well as the rotating and swivelling working lamp is fitted to the upper side of the switchbox.

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.

ATTENTION!
The edge sanding machine UNICO is only allowed to be used for dry sanding. Never use the UNICO to perform wet sanding operations (life-threatening risk)!

1.4 DANGER INFORMATION

Read this danger information carefully and also instruct your employees and colleagues accordingly. Otherwise, they could endanger themselves or sustain serious injuries.

To prevent injuries and any form of damage, the machine is not allowed to be switched on when the sanding disc wheel is resting on the floor.

Use tools, accessories and spare parts that have been made by LÄGLER exclusively for the UNICO. A warranty for outside company parts does not exist! Otherwise, this could result in damage to the machine or in damage to the object to be sanded or in dangers for the user.

Make sure that the dust bag is properly attached in order to prevent unnecessary, health-threatening exposure to dust for the user and for the environment. Use only original UNICO dust bags made by LÄGLER.

Improper transport will result in machine damage.

To prevent any form of damage caused by fires and explosions, the dust bag must always be removed from the machine following each sanding operation and then be emptied in a non-flammable container! Close this container and then store it and the dust bag outdoors!

Make sure that you and the machine stay away from any sources of fire.
Never smoke in dusty environments (e.g. when working or when emptying the dust) ⟶ risk of dust explosions.

The power supply cable must be kept out of the working zone in order to prevent any form of mechanical or electrical damage.

ATTENTION!

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

With the machine switched on, acceptable risks that must be taken into account continue to exist despite all the protective devices. Therefore, never grab into any rotating tools and machine parts!

To exclude the possibility of starting the machine unintentionally, the power supply must be interrupted by pulling the power supply plug out of the socket with the machine switched off!

For proper protection against residual currents, you should use a residual-current safety plug (article no. in *Section 11, Spare parts*).

In case of proper operation of the machine, the specified dust limit values will not be exceeded. When emptying the dust bag, it is advisable to wear a protective mask (P3) (article no. in *Section 11, Spare parts*).

1.5 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

Technical data

Manufacturer	Eugen LÄGLER GmbH
Machine type	edge sanding machine
Serial number	see nameplate
Year of manufacture	see nameplate
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	B
Protection class	IP 54
Safety devices	no-volt release, temperature switch as overload protection in motor
Capacitor	
110 - 120 V	110 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	57 mm (2 ¼”)
Attachment length – model 350	350 mm (13 ¾”)
Attachment length – model 230	230 mm (9”)
Attachment length – model 105	105 mm (4 1/8”)
Overall height	670 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	340 mm (13 3/8”)
Machine weight	21 / 20 / 19 kg (46 / 44 / 42 lbs)
Dust exposure at workplace	< 2 mg/m^3 (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 80	77 dB(A)
Measurement uncertainty constant	4 dB(A)
Abrasive	commercially available abrasives with Ø 178 mm / 180 mm (7” - 7 1/8”) (sandpaper, sanding grid, Scotch-Brite pad)

Information on noise emission:
The values mentioned here are emission values and must not necessarily also represent safe workplace values. Although there is a correlation between emission and immission levels, this cannot be used to determine reliably whether or not additional precautionary measures are required. Factors that could have an influence on the present immission levels existing at the workplace include the duration of the effects, the specific kind of working area, other source of noise, e.g. the number of machines and other kinds of operations being carried out nearby. The permissible workplace values can also vary from one country to another. Nevertheless, this information is supposed to help the user make a better assessment of the dangers and risks involved.

Note:
The above-mentioned motor data refers to machines being used in the Federal Republic of Germany or in the USA. Exported machines can also possess other data, which is provided on the motor nameplate.

Intended use
Dry edge-sanding of wooden and cork floors.

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

Basic equipment
Machine including dust bag, multi-clip fastener for dust bag, Velcro strip for attachment, cable rod, 10-m extension cable 3 x 1.5 mm², O-ring as strain relief device, Allen key size 4 mm, Allen key size 5 mm, Allen key size 6 mm, protective mask (P3), and manual of operating instructions.

Special accessories
Ear muffs “Pocket”, residual-current safety plug.

The respective article numbers for the special accessories and for the wearing parts are included in *Section 11, Spare parts*.

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 multi-clip 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.

Putting the machine into service

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.

Before you begin to work with the machine for the first time, you must be properly instructed first.

3.1 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).

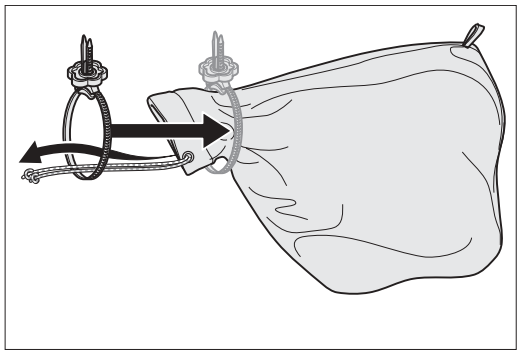


Fig. 2: Slide the MultiClip fastener over the opening of the dust bag.

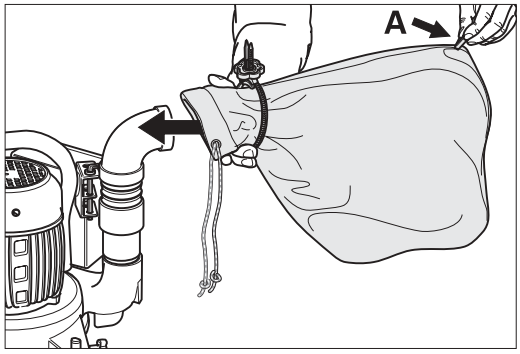


Fig. 3: Pull the dust bag over the suction pipe stub. The sling A must be on top.

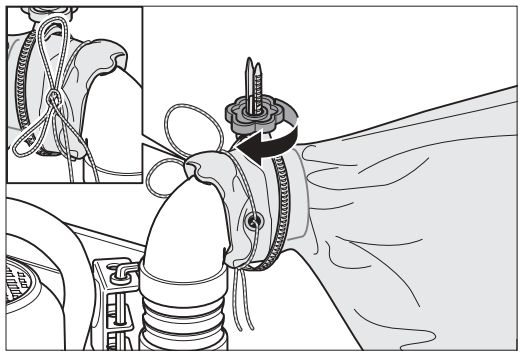


Fig. 4: Tighten the MultiClip firmly by hand and tie up the dust bag.

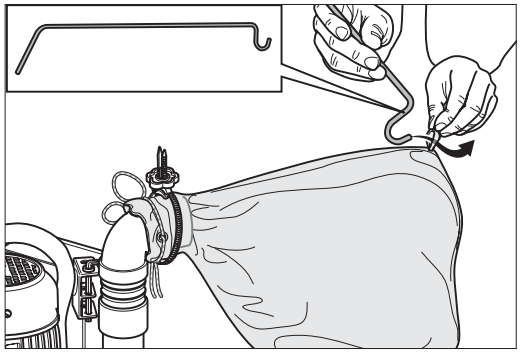


Fig. 5: Hook the cable rod into the sling on the dust bag.

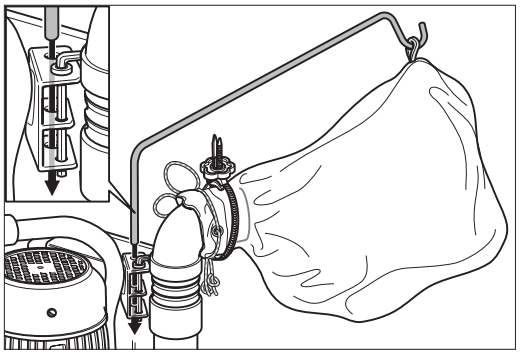


Fig. 6: Inserting the cable rod into the proper bracket.

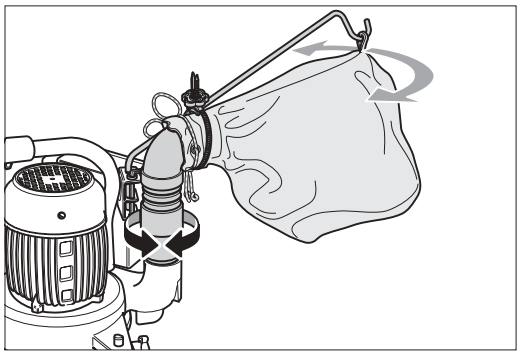


Fig. 7: The pressure hose can also be rotated at the lower plastic pipe stub.

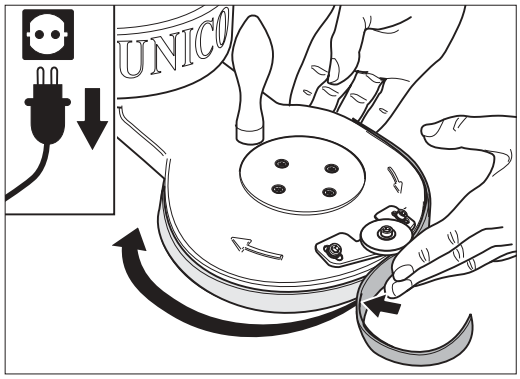


Fig. 8: Install the Velcro strip carefully to ensure properly sealing.

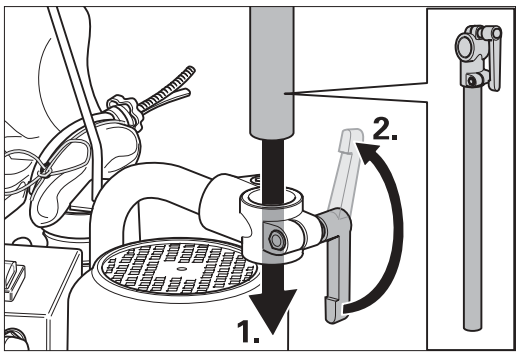


Fig. 9: Inserting the extension into the clamping piece of the pipe bend.

3.2 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.

1 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.

3.3 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.

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 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.

3.4 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).

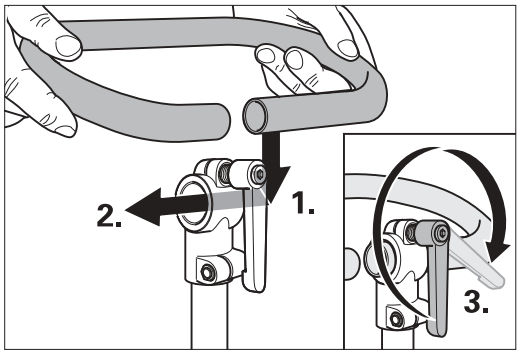


Fig. 10: Inserting the handlebar into the clamping piece of the extension and tightening the clamping lever.

3.5 ADJUSTING THE EXTENSION AND THE HANDLEBAR

3.5.1 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.

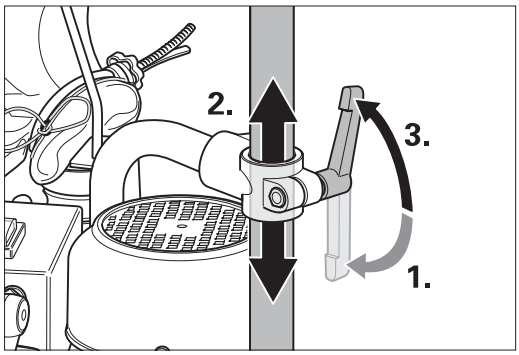


Fig. 11: Undoing the clamping lever (1.), sliding the extension to suit your height (2.) and tightening the clamping lever (3.).

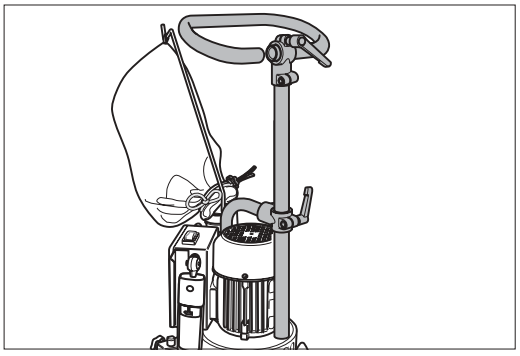


Fig. 12: The extension can also be pushed all the way down to the fan housing.

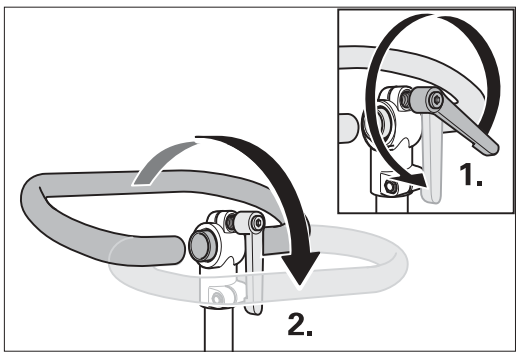


Fig. 13: Undoing the clamping lever on the extension and tilting the handlebar over into the desired position.

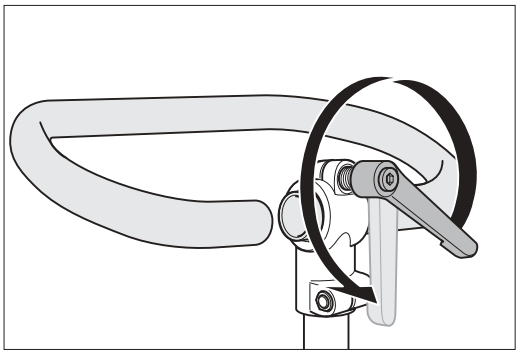


Fig. 14: Undoing the clamping lever on the extension.

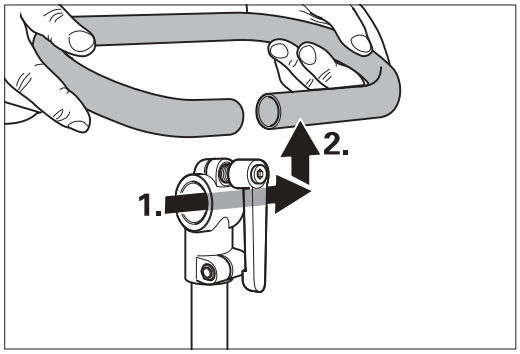


Fig. 15: Removing the handlebar.

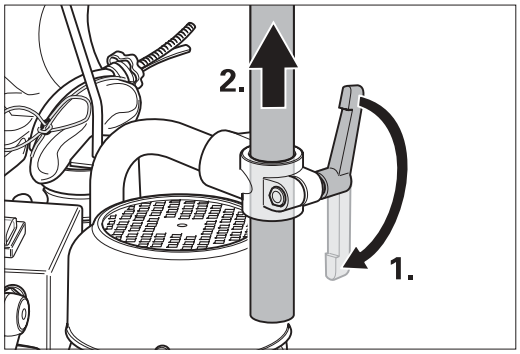


Fig. 16: Undoing the clamping lever at the pipe bend and removing the extension.

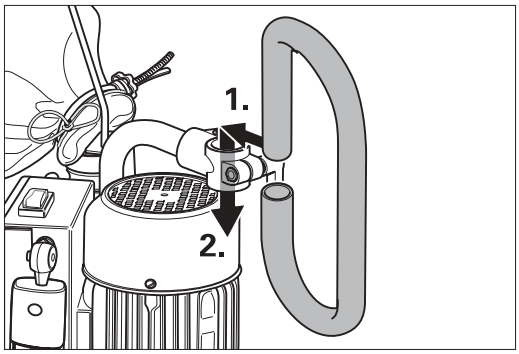


Fig. 17: Installing the handlebar on the pipe bend.

3.5.2 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 Undo the clamping lever at the upper end of the extension (Fig. 14).

2 Pull the handlebar out of the clamping piece and remove it upward (Fig. 15). Put the handlebar aside.

3 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.

3.5.3 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 3.5.2*.

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.

3.6 ADJUSTING THE GUIDING WHEELS

The position of the guiding wheels 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 guiding wheels 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 guiding wheels must be readjusted. Whenever too much material is sanded off on too little surface area, the setting angle is too large and the guiding wheels must then be moved further inside the guiding wheel arms of the fan housing. Whenever the sanding capacity is insufficient and the surface being sanded is too large, you must then move the guiding wheels further out of the guiding wheel 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 guiding wheel is further inside the guiding wheel arm of the fan housing than the left-hand guiding wheel (Fig. 21).
However, if the machine is sanding too far to the left-hand side (Fig. 22), the left-hand guiding wheel is further inside the guiding wheel arm of the fan housing than the right-hand guiding wheel (Fig. 23).

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

UNICO 105: X = 5 mm
UNICO 230: X = 7 mm
UNICO 350: X = 9 mm

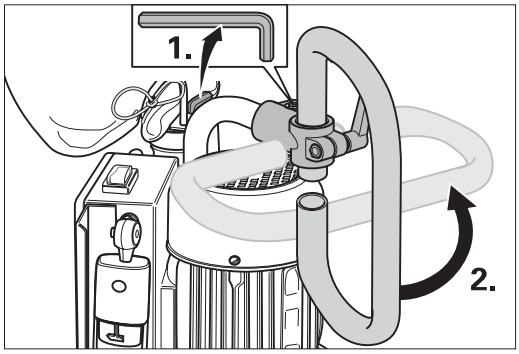


Fig. 18: Undo the screw on the angle clamping connector and rotate the angle clamping connector by 90°.

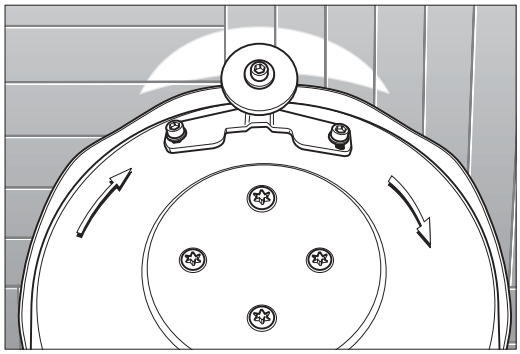


Fig. 19: Correctly adjusted guiding wheels. The machine is sanding in mid-position.

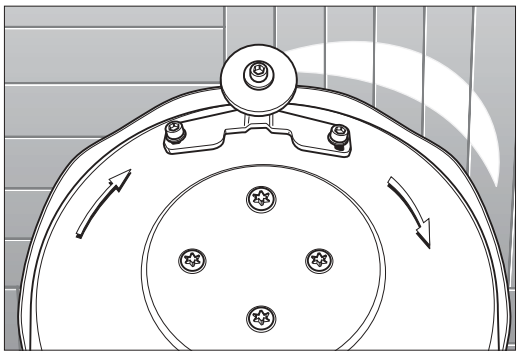


Fig. 20: The sanding zone is too far to the **right-hand** side means that …

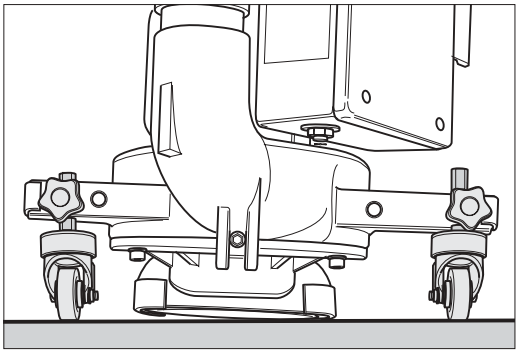


Fig. 21: … the **right-hand** guiding wheel is further inside the guiding wheel arm of the fan housing than the left-hand guiding wheel.

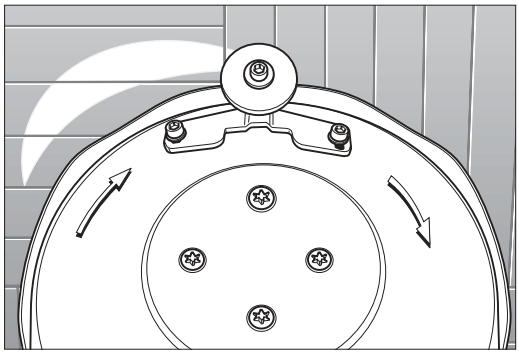


Fig. 22: The sanding zone is too far to the **left-hand** side means that …

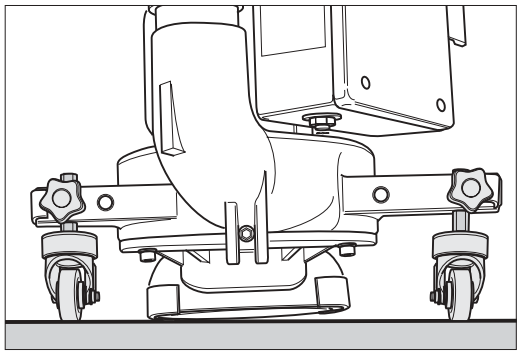


Fig. 23: … the **left-hand** guiding wheel is further inside the guiding wheel arm of the fan housing than the right-hand guiding wheel.

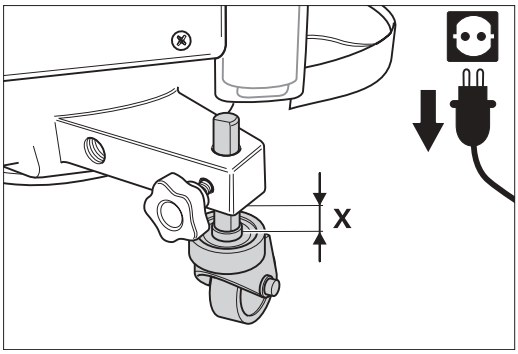


Fig. 24: Measure the distance between the guiding wheel arm of the fan housing and the wheel fork.

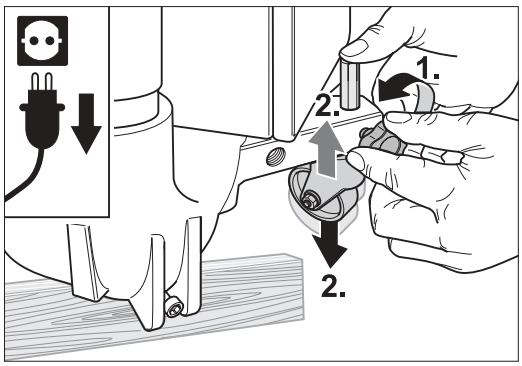


Fig. 25: Undo the star grip screw carefully and then adjust the guiding wheel.

To adjust the guiding wheels, 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 Use a piece of wood or your foot to support the UNICO from underneath to prevent the machine from falling onto the guiding wheel.

4 Undo the star grip screw on the guiding wheel arm of the fan housing carefully (Fig. 25).

5 Lift up the machine by grabbing it by the guiding wheel arm and, at the same time, use your thumb to press down on the upper end of the guiding wheel shaft. Adjust the guiding wheel with respect to the guiding wheel arm to the desired position and tighten the star grip screw firmly. Put the UNICO down again.

6 Carry out a trial sanding operation. If the machine does provide the desired mid-position sanded section, repeat the above-mentioned steps.

3.7 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 wall-protecting 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 wall-protecting 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 wall-protecting 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 wall-protecting 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).

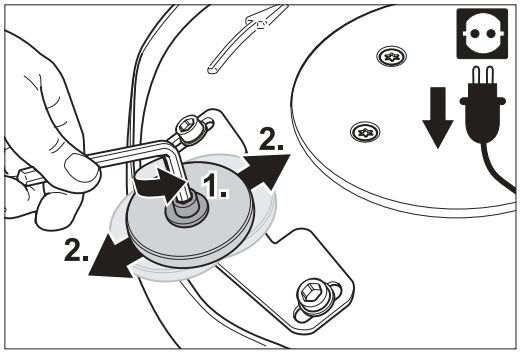


Fig. 26: Undo the screw in the centre of the wall-protecting wheel and then position the wheel.

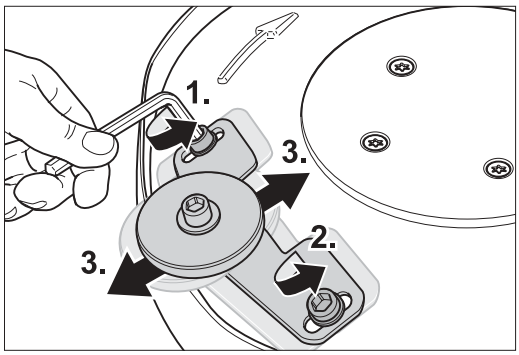


Fig. 27: Undo the screws on the wall-protecting wheel bracket.

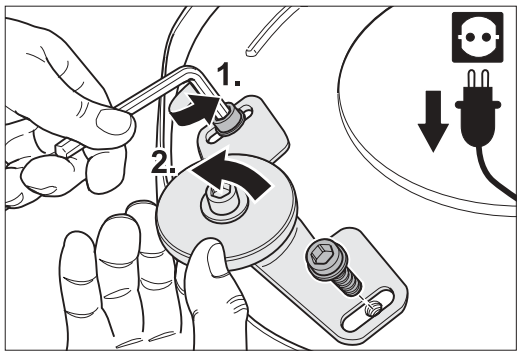


Fig. 28: Remove the screws on the wall-protecting wheel bracket and then remove the complete wall-protecting wheel.

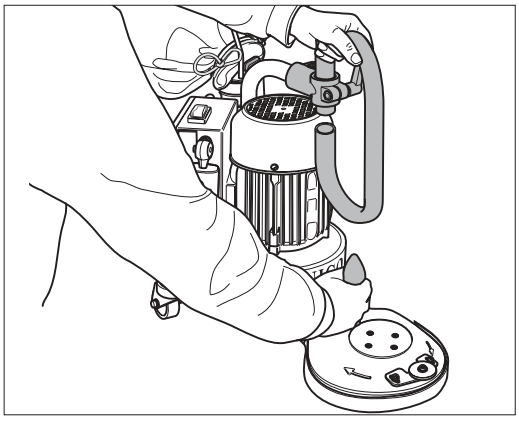


Fig. 29: The machine handle is used in the kneeling position to guide the attachment.

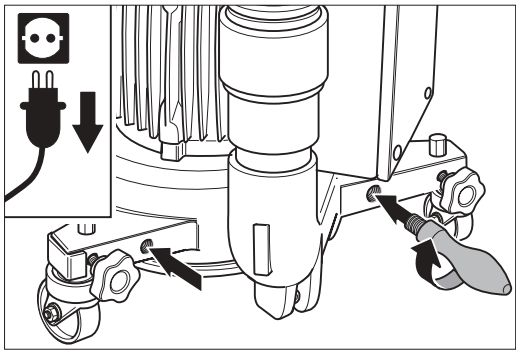


Fig. 30: The machine handle can also be screwed into the fan housing.

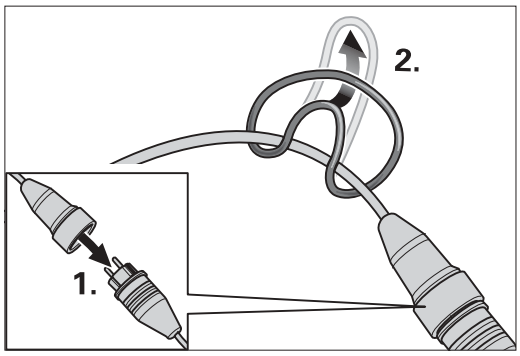


Fig. 31: Connect the motor cable including the extension cable to the extension cable and then fasten the strain relief ring to the extension cable.

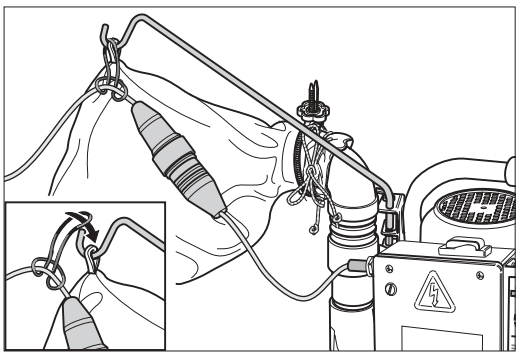


Fig. 32: Run the extension cable past the right-hand side of the dust bag and then hook the strain relief ring into the cable rod.

3.8 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.

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 Unscrew the machine handle out of the attachment.

4 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).

3.9 CONNECTING THE POWER SUPPLY CABLE

1 Insert the plug of the motor cable into the coupling of the extension cable (Fig. 31, 1.).

2 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.

3 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 residual-current safety plug (article no. in *Section 11, Spare parts*).

3.10 ADJUSTING THE WORKING LAMP

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

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

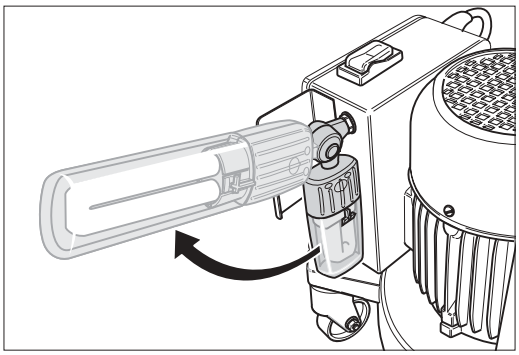


Fig. 33: The working lamp can be swivelled upward.

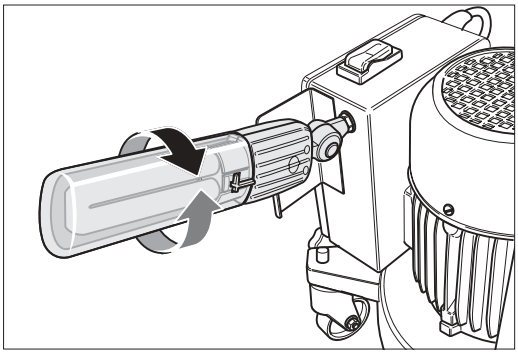


Fig. 34: The working lamp can be rotated about its own axis.

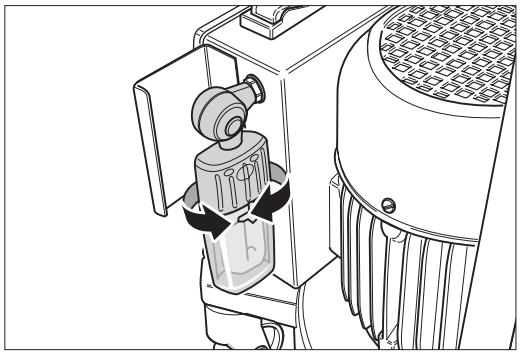


Fig. 35: In the transport position, the close range is illuminated better.

ATTENTION!
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!

Before any kind of work is carried out on the machine, the power supply plug must be pulled out of the socket first!

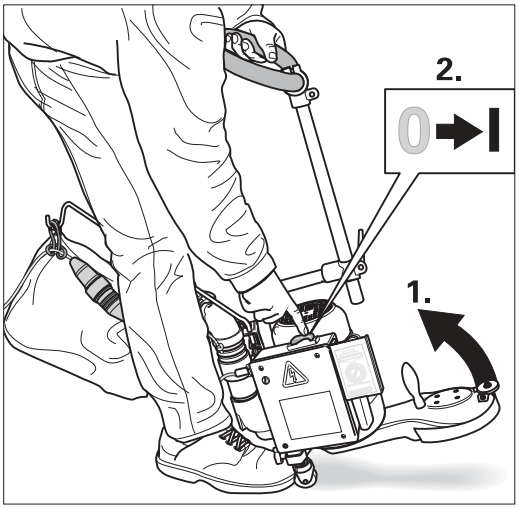


Fig. 36: To switch on the machine, tilt the UNICO slightly backward, use one hand to hold it by the handlebar and use your other hand to press the rocker switch.

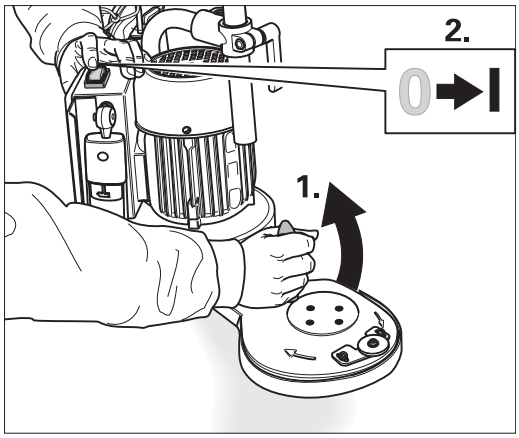


Fig. 37: To switch on the machine, tilt the UNICO slightly backward, use one hand to hold it by the machine handle and use your other hand to press the rocker switch.

3.11 SWITCHING ON THE MACHINE

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.

ATTENTION!
Never let the machine run unattended since otherwise this could cause damage or injuries!

3.12 SWITCHING OFF THE MACHINE

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.

ATTENTION!
Always pull the power supply plug of the socket as soon as you have switched off the machine.

Working with the UNICO

4.1 GENERAL APPLICATION TIPS

ATTENTION!
The machine is never allowed to be used for wet sanding operations!

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 4.2.3, 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.

For further important and interesting application tips, please refer to the LÄGLER application technology brochure “Sanding of wooden floors”!

Further information is available
free of charge: within Germany
- phone: 0800 / 52 34 537
- fax: 0800 / 48 66 353
within USA
- phone: 800-848-6635
or
- phone: +49 - 7135 - 98 90 - 0
- fax: +49 - 7135 - 98 90 – 98
- e-mail: info@laegler.com
- internet: http://www.laegler.com

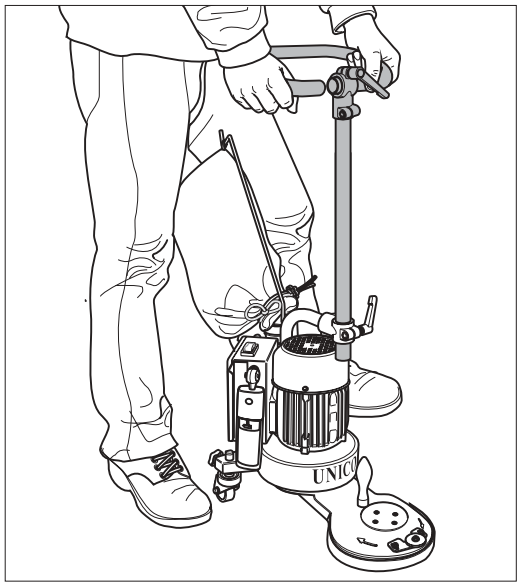


Fig. 38: Working in standing position with the UNICO.

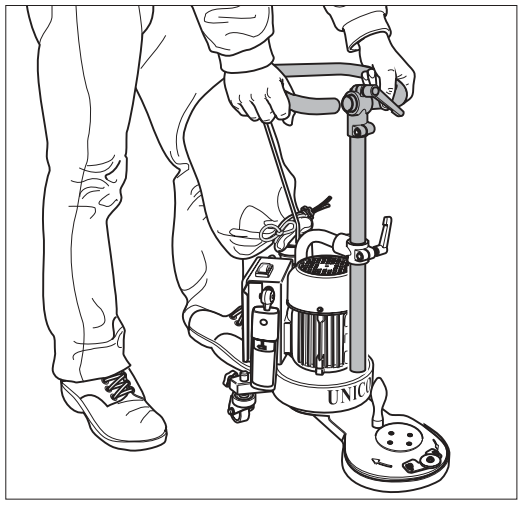


Fig. 39: Working in stooped position with the UNICO including the extension.

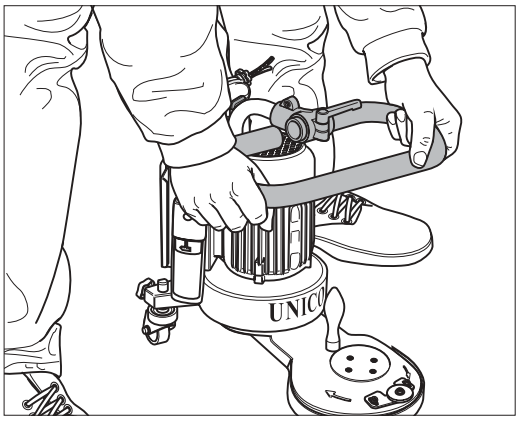


Fig. 40: Working in stooped position with the UNICO without the extension.

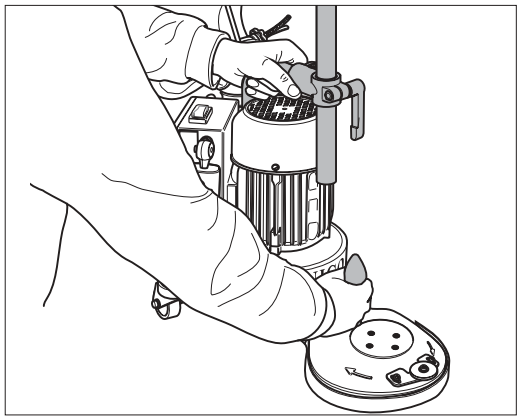


Fig. 41: Working in kneeling position with the UNICO.

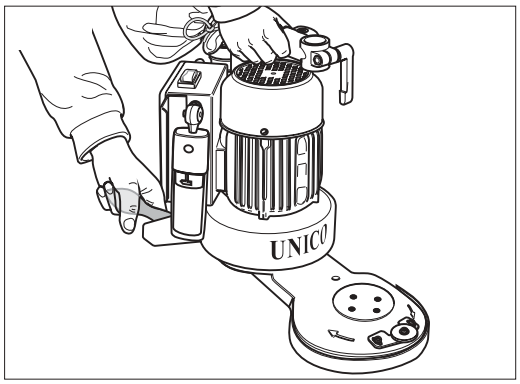


Fig. 42: Working in kneeling position with the UNICO.

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 3.5*.

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).

4.2 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:

4.2.1 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.

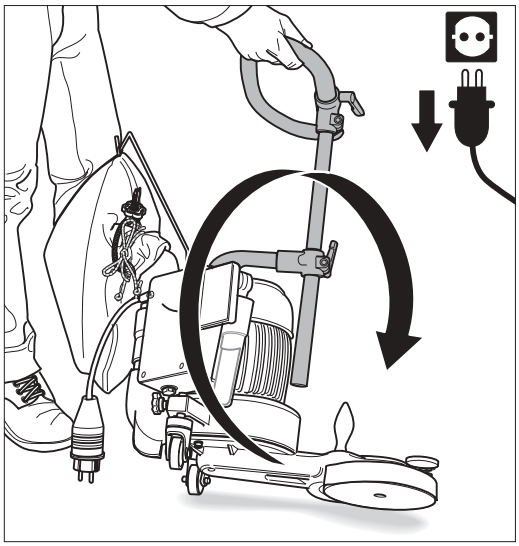


Fig. 43: Tilt the UNICO over to the **left-hand** side and set it down carefully.

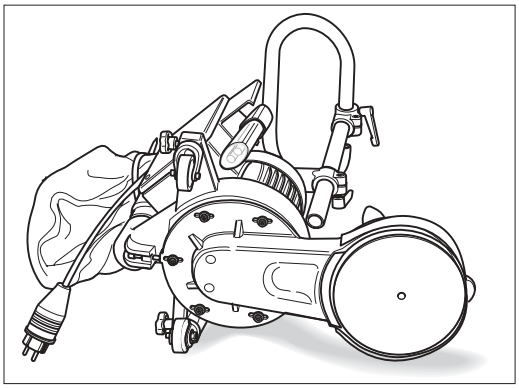


Fig. 44: Place the UNICO down on the **left-hand** side only.

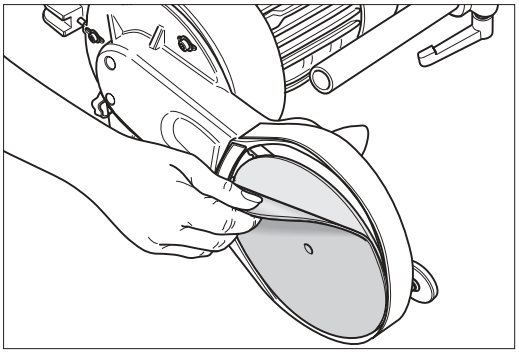


Fig. 45: Simply pull off the worn-out Velcro sanding disc.

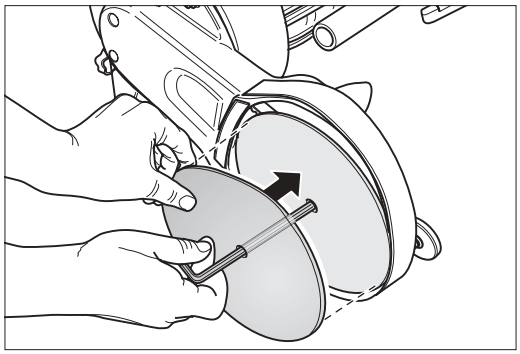


Fig. 46: To centre the sanding disc, insert the Allen key into the hole of the sanding disc and then into the hexagon socket of the sandpaper tensioning screw.

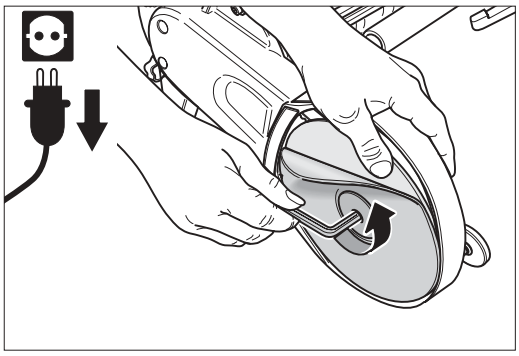


Fig. 47: Undo the sandpaper tensioning screw. To hold the sanding disc wheel, use your thumb to grab behind the sanding disc.

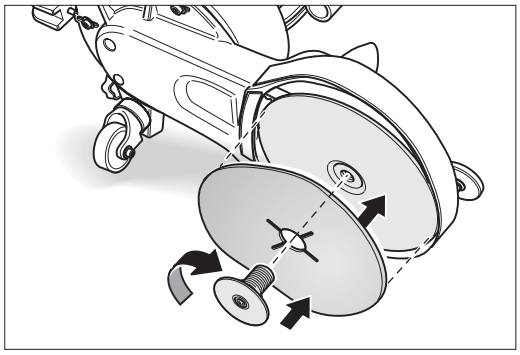


Fig. 48: Install the new sanding disc and then tighten the sandpaper tensioning screw firmly by hand.

6 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.

7 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.

4.2.2 REPLACING CONVENTIONAL 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 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).

5 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.

6 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.

4.2.3 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 (article no. 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 4.2.1 or 4.2.2*.

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.

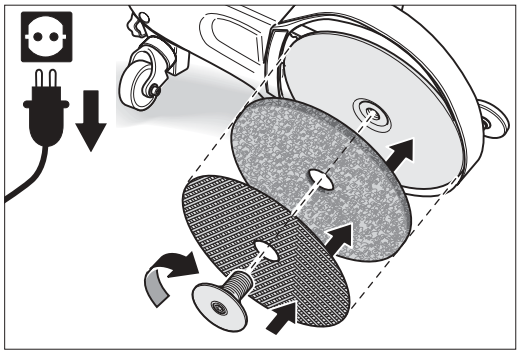


Fig. 49: Place the edge sanding pad on the sanding disc wheel first and then the sanding grid, and afterwards, tighten the sandpaper tensioning screw firmly by hand.

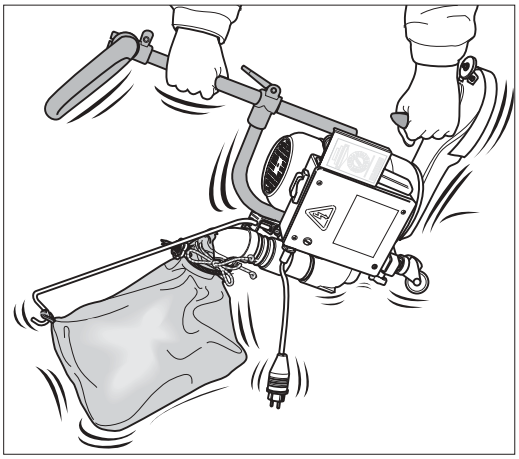


Fig. 50: Shake the machine so that the dust falls from the suction pipe stub into the dust bag.

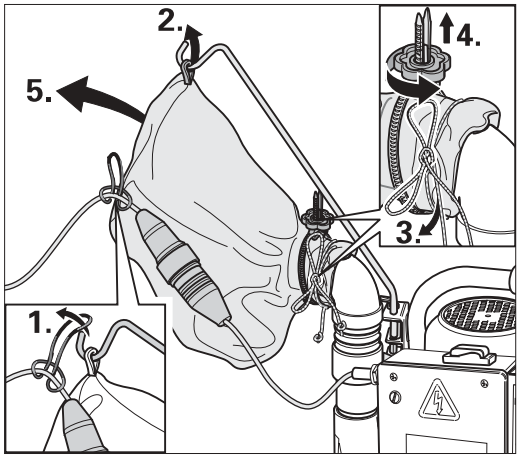


Fig. 51: Removing the dust bag.

4.3 REMOVING AND EMPTYING THE DUST BAG

ATTENTION!
To prevent any form of damage caused by fires and explosions, the dust bag must always be removed from the machine following the sanding operation and then be emptied in a non-flammable container! Close this container and store it and the dust bag outdoors!

The dust bag must be emptied at the latest when a filling level of one-third is reached. This will prevent a deterioration of the extraction capacity by the missing filtering area. Do not work with an overfilled dust bag. Otherwise, the dust values in the air will increase and the regulations for dust exposure at the workplace will no longer be fulfilled.

Use only original LÄGLER dust bags for the UNICO (article no. in *Section 11, Spare parts*).

When emptying the dust bag, you must use a protective mask (P3).

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 protective mask (P3).

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.).

6 Undo the multi-clip fastener by unscrewing the nut (Fig. 51, 4.).

7 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 multi-clip fastener.

8 **Empty the dust bag in a suitable, non-flammable container. Whirl up as little dust as possible. Close the container and store it outdoors (fire hazard!).**

9 Install the dust bag again as described in *Section 3.1, Attaching the dust bag*. Wear also the protective mask (P3).

5

Transport and storage

5.1 MACHINE TRANSPORT

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

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 guiding wheels 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.

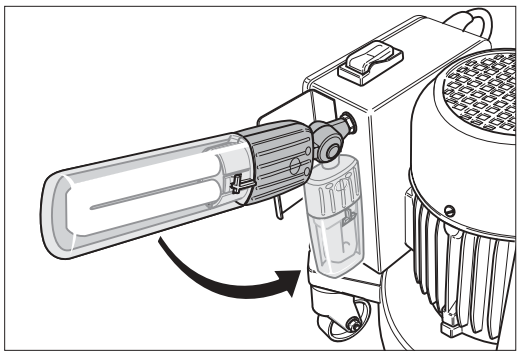


Fig. 52: To transport the machine, swivel the working lamp downward.

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

5.2 MACHINE STORAGE

ATTENTION!
Always store the machine without a dust bag or only with a new dust bag, but never with dust inside the dust bag (fire hazard!).

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

ATTENTION!

Extensive maintenance work, especially on the electrical equipment, must be carried out by experts for safety reasons!

All maintenance work on the machine is only allowed to be carried out with the machine switched off and the power supply plug pulled out of the socket. Otherwise, life-threatening risks exist!

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.

Use only original spare parts made by LÄGLER. A warranty for outside-company parts does not exist! Otherwise, this could result in damage on the machine, on the object being sanded or for the operator.

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.

Never perform the maintenance work and the replacement of the wearing parts on the newly sanded wooden floor. You could cause scratches or other forms of damage on the floor.

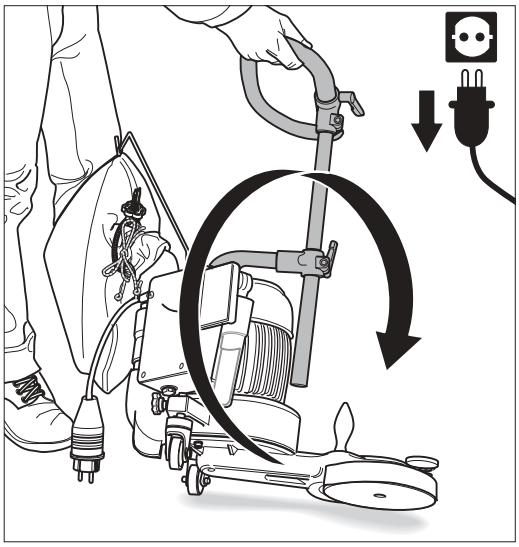


Fig. 54: Tilt the UNICO over to the **left-hand** side and set it down carefully.

6.1 GENERAL CLEANING AND CARE

Never use any cleaning agents that 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).

6.2 CLEANING THE V-BELT DRIVE UNIT

Never use any cleaning agents that 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 6.4*, 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 protective mask (P3) should be worn.

6.3 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!

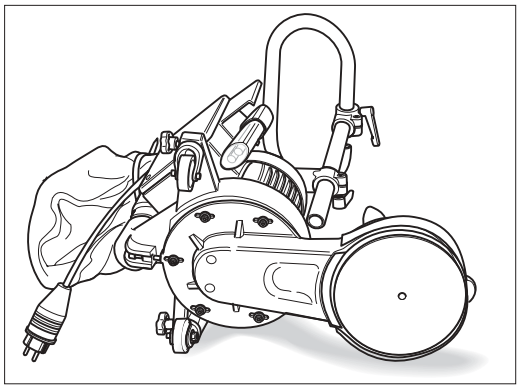


Fig. 55: Place the UNICO down on the **left-hand** side only.

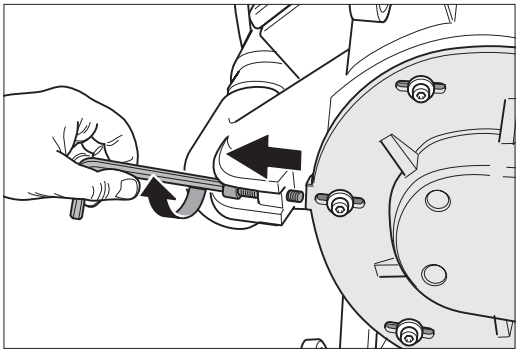


Fig. 56: Unscrew the belt-tensioning screw all the way back.

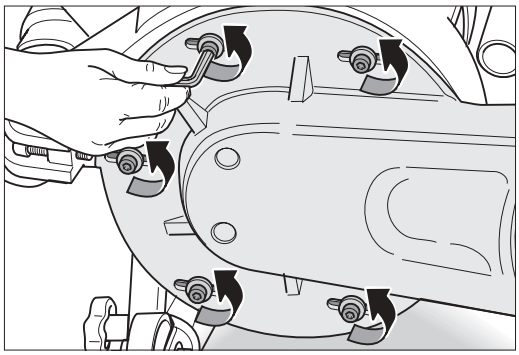


Fig. 57: Undoing the five fastening screws of the attachment. Do not unscrew the screws all the way out!

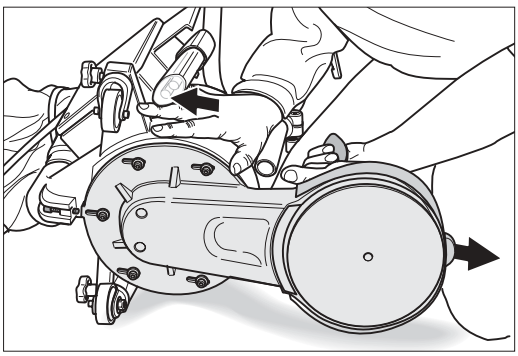


Fig. 58: Use the handle to pull the attachment forward until you feel the belt resistance.

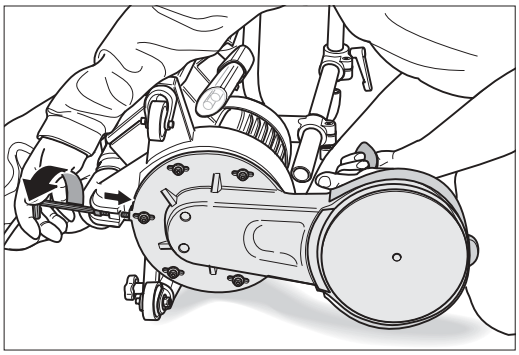


Fig. 59: Screw the belt-tensioning screw all the way in until it rests against the attachment.

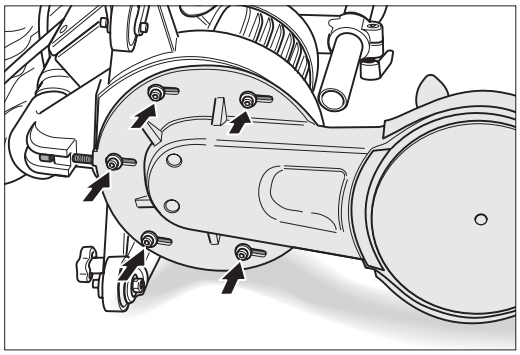


Fig. 60: The fastening screws are up against the slits in the attachment.

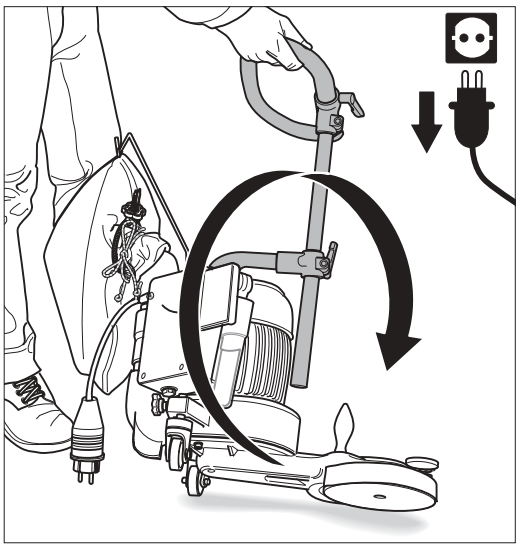


Fig. 61: Tilt the UNICO over to the **left-hand** side and set it down carefully.

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!

7 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.

8 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).

9 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 6.4, Replacing the V-belt)*.

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

6.4 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 V-belts (article no. 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!**

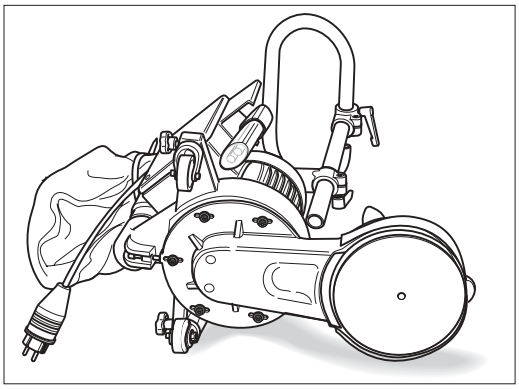


Fig. 62: Place the UNICO down on the **left-hand** side only.

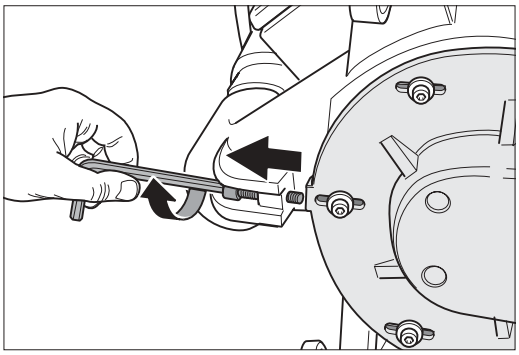


Fig. 63: Unscrew the belt-tensioning screw all the way out.

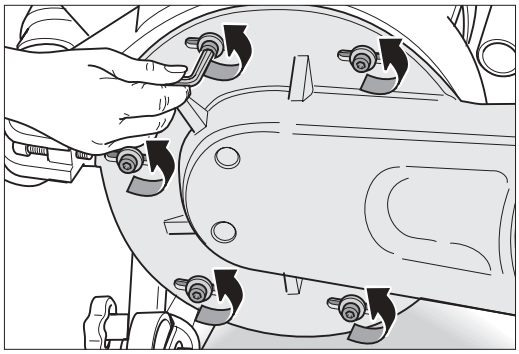


Fig. 64: Undoing the five fastening screws of the attachment.

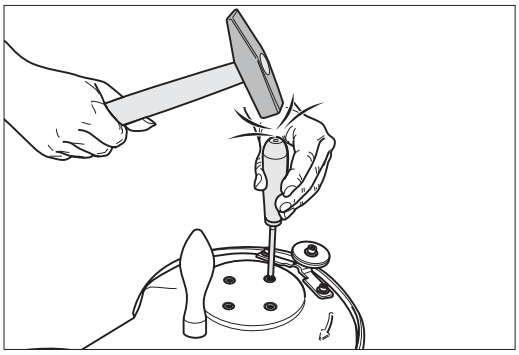


Fig. 65: Using a suitable screwdriver **with a continuous blade** and using a few light taps of your hammer, loosen the screws of the bearing unit of the sanding disc wheel.

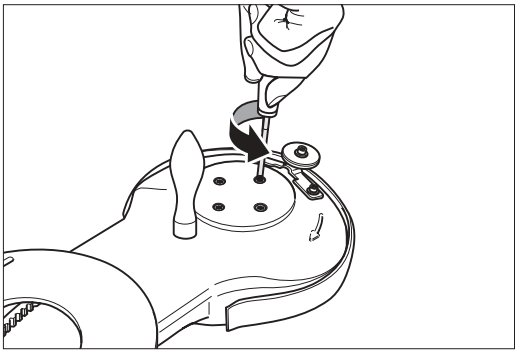


Fig. 66: Unscrewing the screws.

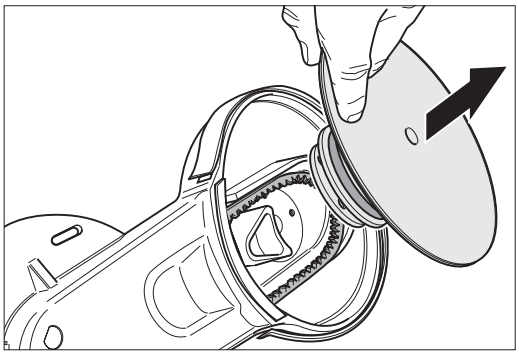


Fig. 67: Removing the complete sanding bearing unit.

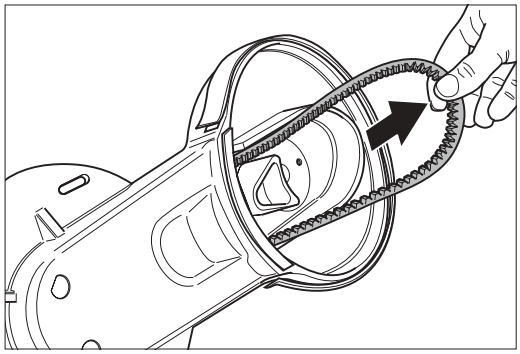


Fig. 68: Pulling the V-belt out of the attachment.

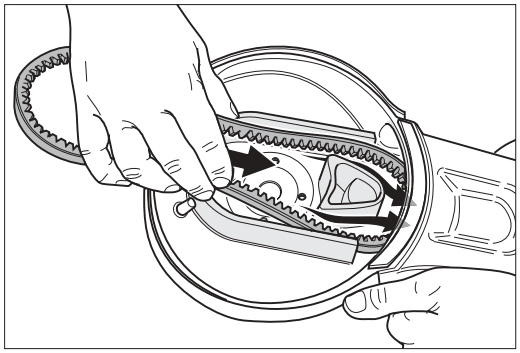


Fig. 69: Inserting a new V-belt and pulling it all the way back on the motor side.

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!

9 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.

10 Pull the worn-out V-belt out of the attachment (Fig. 68). Clean the two belt pulleys and the attachment. Wear a protective mask (P3) whenever appropriate.

11 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).

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 6.3*, 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.

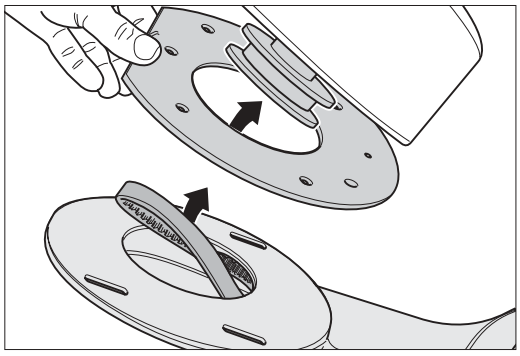


Fig. 70: During the assembly of the fan housing, pay attention to the correct position of the intermediate sheet-metal plate!

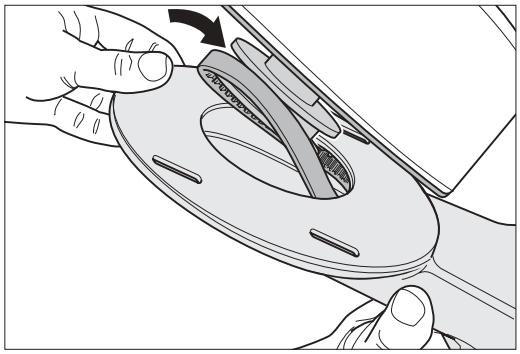


Fig. 71: Pull the V-belt slightly of the attachment and place it in the motor belt pulley.

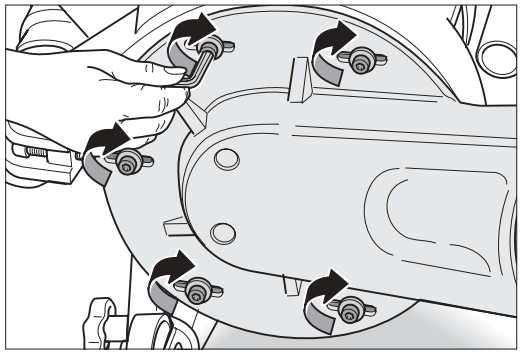


Fig. 72: Install the five screw including washers for fastening the attachment to the fan housing. Do not tighten the screws firmly!

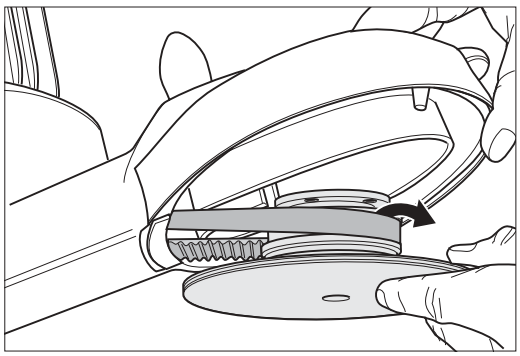


Fig. 73: Inserting the belt disc into the V-belt.

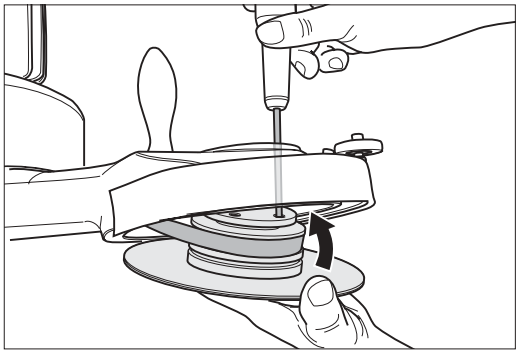


Fig. 74: For simplified assembly, insert a screwdriver from above through a hole in the attachment into a hole in the bearing unit of the sanding disc wheel.

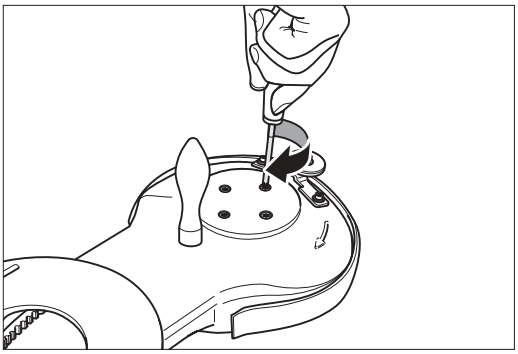


Fig. 75: Using the countersunk screws to tighten the bearing unit of the sanding disc wheel.

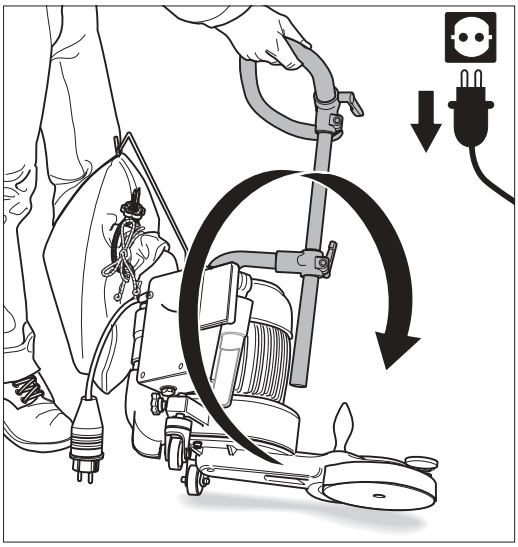


Fig. 76: Tilt the UNICO over to the **left-hand** side and set it down carefully.

6.5 REPLACING THE GUIDING WHEELS

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

Use only original LÄGLER guiding wheels (article no. 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. 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.

4 Undo the star grip screws on the guiding wheel arms of the fan housing and pull the guiding wheels out of the fan housing (Fig. 78).

5 Install the new guiding wheels and then adjust them as described in *Section 3.6, Adjusting the guiding wheels*.

6.6 REPLACING THE WALL-PROTECTING WHEEL

Use only original LÄGLER wall-protecting wheels (article no. 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 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.

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.

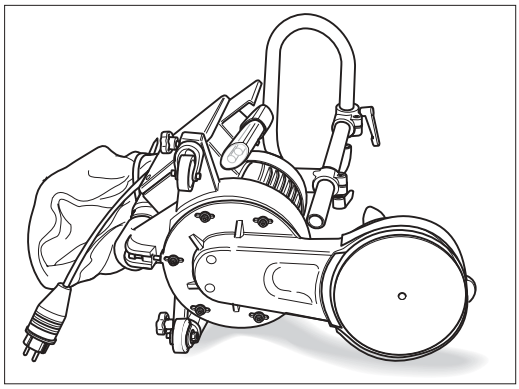


Fig. 77: Place the UNICO down on the **left-hand** side only.

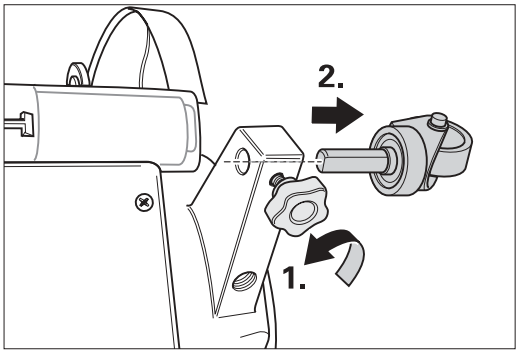


Fig. 78: Undoing the star grip screw and removing the guiding wheels from the fan housing.

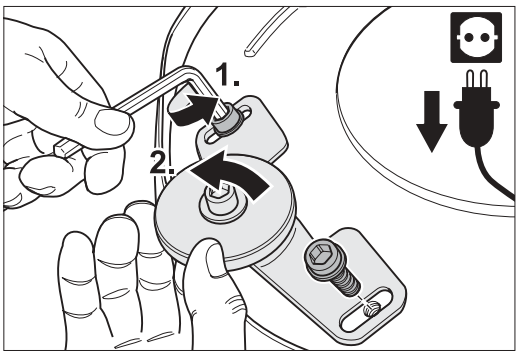


Fig. 79: Remove the screws on the wall-protecting wheel bracket and then remove the complete wall-protecting wheel.

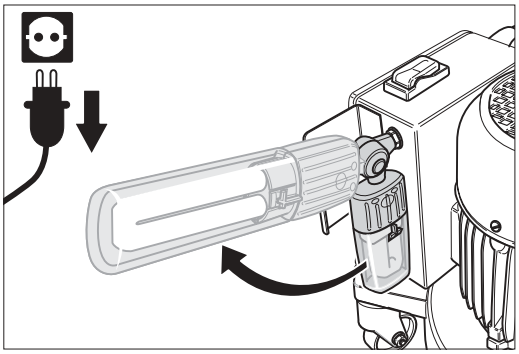


Fig. 80: Swivel the working lamp upward.

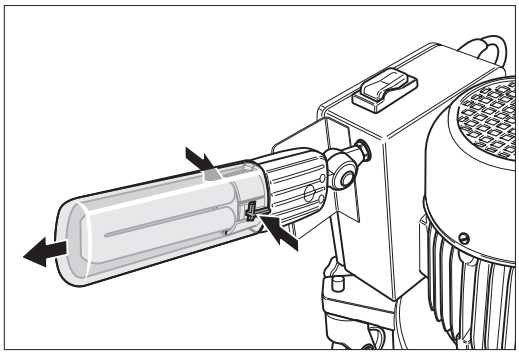


Fig. 81: Press the two clips on the fixture housing together and then remove the fluorescent tube **carefully**.

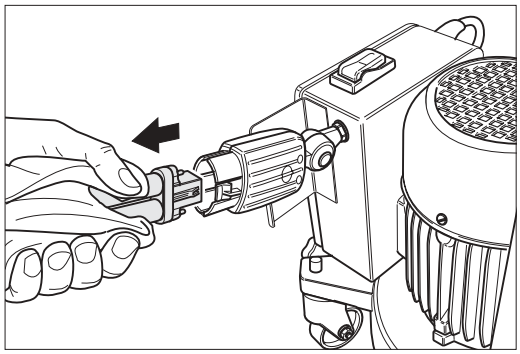


Fig. 82: Pull the defective fluorescent tube out of the fixture **carefully**.

6.7 REPLACING THE FLUORESCENT TUBE

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

Use only original LÄGLER fluorescent tubes (article no. in *Section 11, Spare parts*)

Let the lamp 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 lamp upward (Fig. 80).

4 On the plastic fixture housing of the working lamp, 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 lamp tube again. Make sure the two clips snap into place properly. Adjust the working lamp according to your requirements (*Section 3.10, Adjusting the working lamp*).

Regular inspection and maintenance work in compliance with accident prevention regulations and VDE regulations

At least once a year, the electrical operating equipment and machine parts must be inspected by an expert with respect to electrical and mechanical safety and then be repaired if necessary. Afterwards, the safety status must be certified by affixing an inspection stamp on the machine (Fig. 83).

The elements required for the extraction of dust must also be checked by an expert at least once a year and then be repaired if necessary. The functional efficiency must also be certified.

Make sure that only original LÄGLER spare parts are used for maintenance tasks. You should only allow the customer service work to be carried out by LÄGLER or by a workshop authorised by LÄGLER.

The service passport on the back cover of this manual of operating instructions *(Section 12)* documents when and where your machined was serviced.
On the reverse side of this manual of operating instructions, please enter the serial number and the year of manufacture of your machine (see nameplate). Otherwise, the service passport will not be valid.

Make sure that the maintenance tasks are certified in the service passport by having the corresponding fields filled in with the date, stamp and signature.

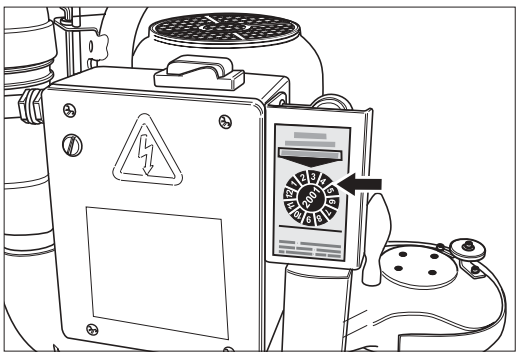


Fig. 83: The inspection stamp on the switchbox of the motor certifies the safety status and indicates the next due inspection date.

Troubleshooting

This section shows you how to eliminate possible malfunctions. If the measures included here do not provide successful results, please contact our service department or your local dealer. These people are extremely familiar with the UNICO and are also highly qualified due to proper training. They will be glad to help you with their advice and support.

ATTENTION!

Any kind of work on the electrical system must be carried out expert personnel only. Make sure that original LÄGLER spare parts are used.

You will find the circuit diagram that applies to your machine in switchbox of the motor.

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 mm²) and excessively long supply cables must be avoided; if appropriate, use a transformer (article no. 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 mm²) and excessively long supply cables must be avoided; if appropriate, use a transformer (article no. 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 setting angle of the sanding disc is too flat → readjust the guiding wheels *(Section 3.6, Adjusting the guiding wheels)*.

- An incorrect or blunt abrasive is being used → correct this mistake.

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 condition → renew the V-belt, if appropriate.
- Check the V-belt pulleys for deposits → clean, if appropriate.
- Check the machine for clogged-up parts and 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 filled more than one-third → empty the dust bag.
- The dust bag is defective → renew the dust bag.
- The dust bag is incorrectly installed → correct this mistake.
- The Velcro sealing strip on the attachment is not correctly 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 guiding wheels.

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 guiding wheels are not correctly adjusted for the respective attachment → readjust the guiding wheels *(Section 3.6, Adjusting the guiding wheels)*.
- 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.

General safety instructions

ATTENTION!
When using machines with electrical equipment, the following basic safety measures must always be strictly observed to ensure proper protection against electrical shocks, risk of injuries and risk of fires. Read and observe these safety instructions before using the machine. Keep these safety instructions in a safe place!

Do not leave the filled dust bag unattended at the machine.
To prevent any form of damage caused by fires and explosions, the dust bag must always be removed from the machine following each sanding operation and then be emptied in a non-flammable container! Close this container and then store it and the dust bag outdoors!

Keep your working area in a tidy state.
Disorder in the working area will result in risk of accidents.

Take environmental influences into account
Do not expose the machine to rain. Do not use the machine in moist or wet environments. Provide good illumination.
Do not use the machine in the vicinity of fire sources, combustible liquids or gases.
Keep away from any sources of fire.
Do not smoke in dusty environments (e.g. when working or when emptying the dust) → risk of dust explosions.

Protect yourself against electrical shocks
Prevent your body from coming into contact with earthed parts, e.g. pipes, radiators, stoves, and refrigerators. Use the residual-current safety plug (article no. in *Section 11, Spare parts*).

Keep children and other persons away
Do not let children or other persons touch the machine or the cable. Keep them away from your working area.

Store your machines in a safe place
Machines that are not being used should be stored in dry, locked locations and be out of the reach of children.

Do not overload your machines
Your machines will work better and more safely within the specified performance range.

Use the right machine
Do not use any low-powered machines or attachment equipment

for heavy loads. Do not use the machines for purposes or tasks for which they were not intended to be used.

Wear suitable working clothes
Do not wear loosely fitting cloths or jewellery. They get caught in moving parts.

Use the protective devices
Use protective masks of the filter class P3 when performing any kind of dust-producing work.

No cable misuse
Do not use the cable to carry or pull the machine and do not use the cable to pull the plug out of the socket. Protect the cable against heat, oil, and sharp edges.

Do not bend too far over the machine
Avoid abnormal positions of your body. Make sure that you stand firmly on the ground and maintain your balance at all times.

Take proper care of your machines
Keep your machines clean to be able to work better and more safely. Observe the maintenance instructions and the information on tool changes. Check the cable at regular intervals and, in case of damage, have it renewed by an officially recognised expert. Check the extension cables at regular intervals and replace these extension cables in case they have been damaged. Keep the handgrips dry and free of oil and grease.

Pull the power supply plug out of the socket
When the machine is not being used, including periods of maintenance work and tool changes, the power supply plug **must be** pulled out of the socket first.

Do let leave any tool keys inserted anywhere
Before switching on the machine, make sure that the tool keys and adjusting tools have been removed.

Prevent unintentional start-up
When connecting the machine to the power supply system, make sure that the On/Off switch has not been pressed.

Be alert at all times
Pay attention to your work. Proceed sensibly and do not use the machine whenever you cannot concentrate on what you are doing.

ATTENTION!
For your own safety, use only the accessories and additional equipment that is specified in the operating instructions or offered in the respective catalogue. The use of other service tools or accessories than the ones recommended in the operating instructions can constitute a risk of personal injury for you.

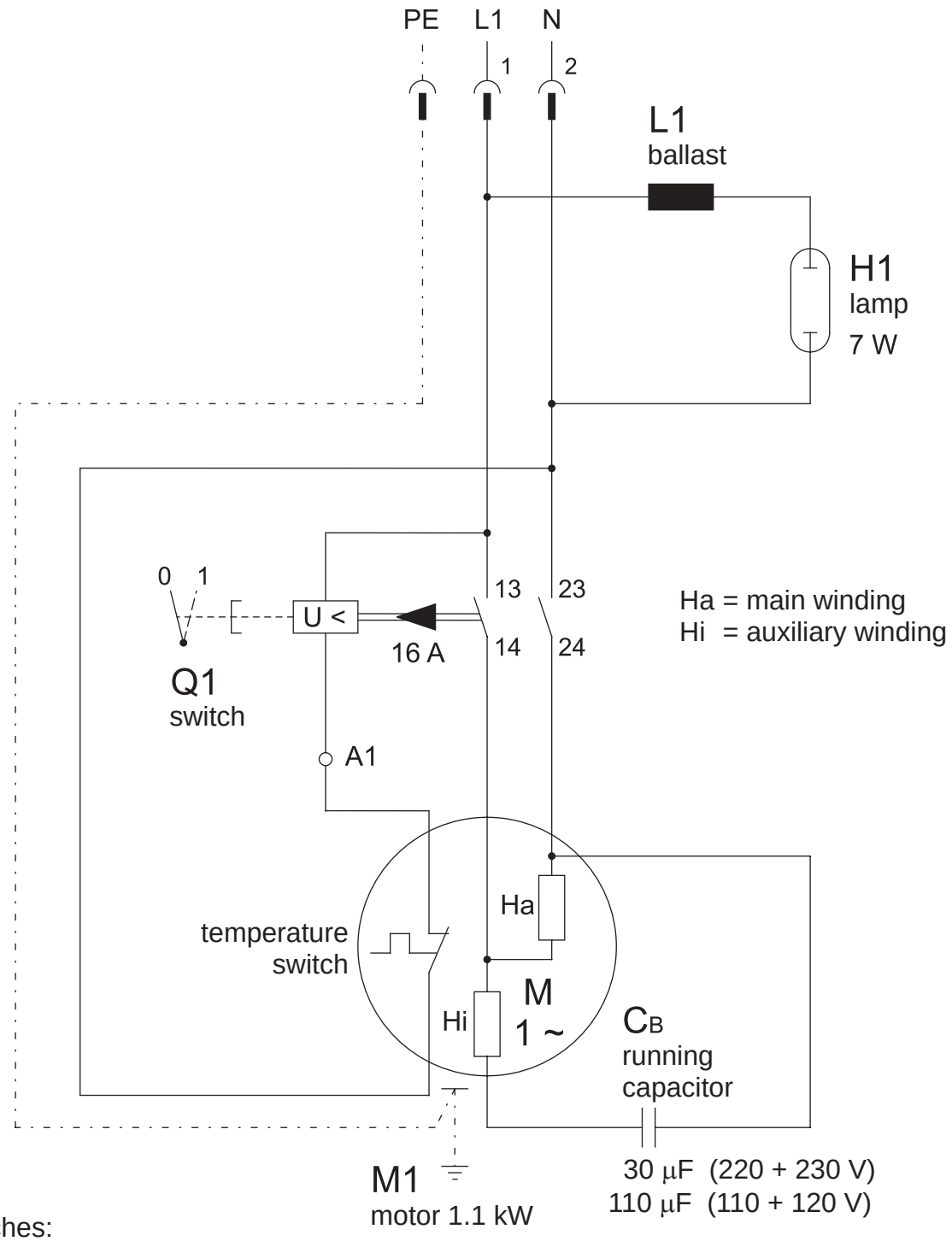
Store these safety instructions in safe place.

Observe the relevant regulations of your professional association.

Check your machine for signs of damage
Prior to further machine use, you must check the safety equipment or damaged parts carefully to determine whether they are functioning properly as intended. Check whether the functions of moving parts is in order, whether they are not jammed, whether no parts are broken, whether all other parts have been perfectly and correctly installed and whether all other conditions that could otherwise affect the proper operation of the machine have been correctly fulfilled.

Damaged protective devices and parts must be properly repaired or replaced by a customer service workshop, unless mentioned otherwise in the operating instructions. Damaged switches must be replaced at a customer service workshop. Do not use any machines in which the switches cannot be switched on or off.

CIRCUIT DIAGRAM



Switches:
000.65.60.256 (220 + 230 V)
000.65.60.156 (110 + 120 V)

13.05.2003

UNICO: single-phase AC motor	1.1 kW / 230 V / 50 CPS 1.1 kW / 120 V / 50 CPS 1.1 kW / 220 + 230 V / 60 CPS 1.1 kW / 110 + 120 V / 60 CPS

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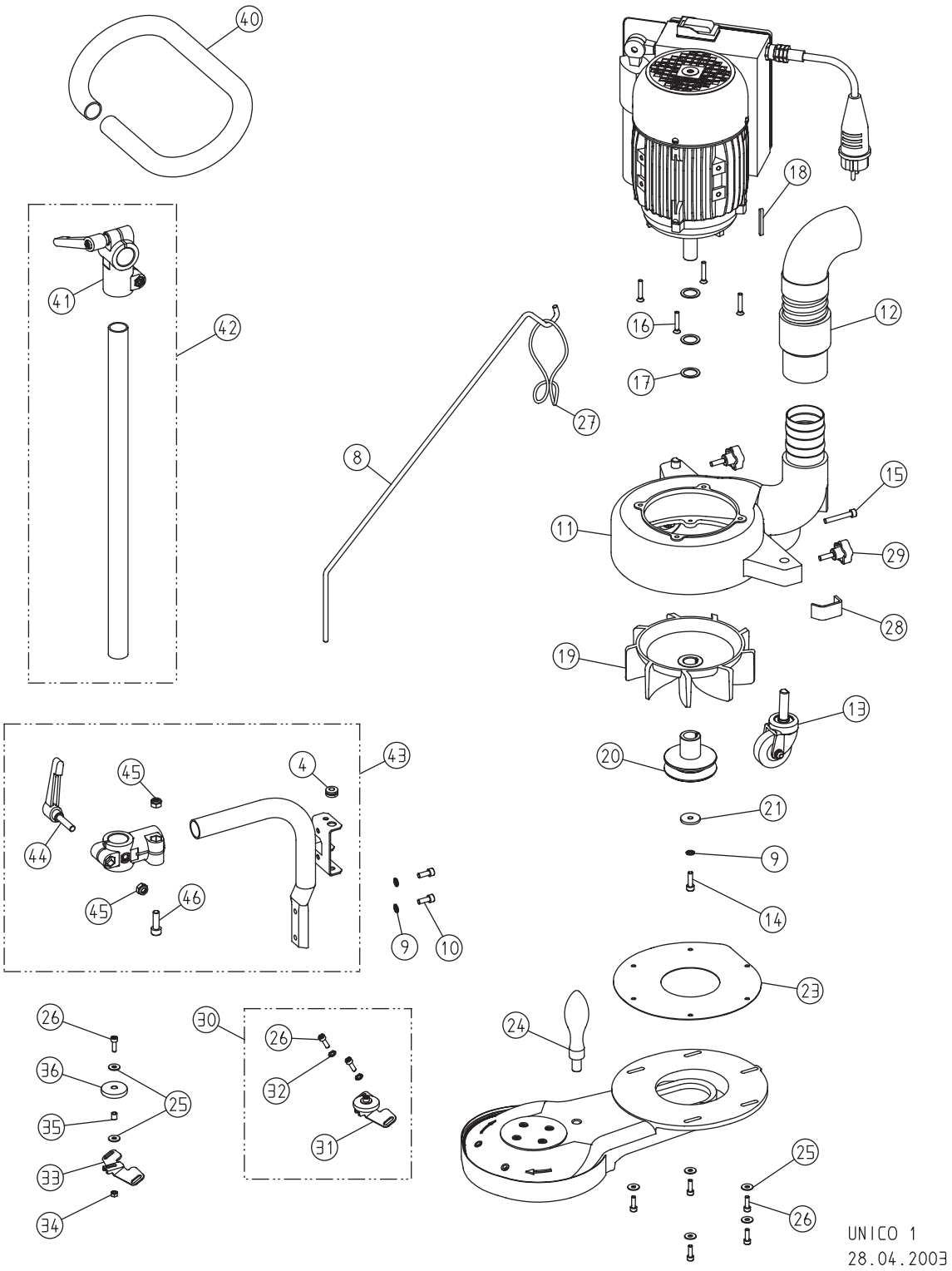
E-Mail: info@laegler.com
Internet: http://www.laegler.com

You will find the circuit diagram that applies to your machine in the switchbox of the motor.

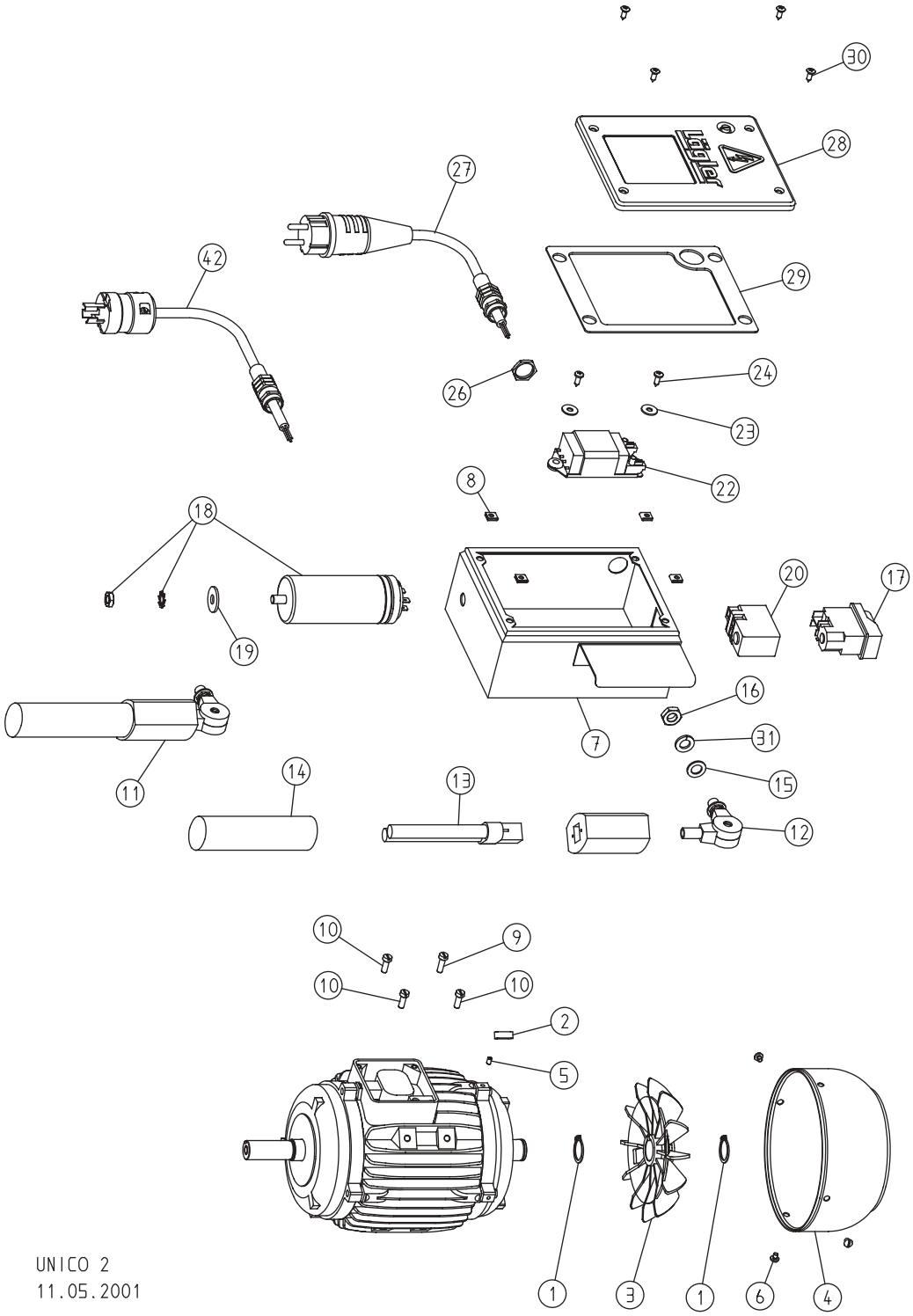
SPARE PARTS



Lägler

Item	Article no.	Description
4	000.63.12.071	Grommet LA7
8	465.20.26.100	Cable support, complete
9	6797.1006.000	Toothed lock washer
10	0912.1006.016	Hexagon socket screw
11	465.08.00.100	Fan housing incl. pipe
12	465.14.00.105	Pressure hose
13	465.05.00.200	Guiding wheel, complete
14	0912.1006.020	Hexagon socket screw
15	0912.1006.940	Hexagon socket screw
16	0965.1005.030	Countersunk screw
17	0988.0018.010	Shim
18	6885.0404.040	Key
19	465.08.02.100	Fan wheel
20	465.65.06.100	Motor belt pulley
21	000.10.10.061	Lock washer
23	465.08.10.105	Intermediate sheet-metal plate
24	000.20.30.121	Machine handle
25	9021.1005.000	Washer
26	0912.1005.016	Hexagon socket screw
27	000.01.40.011	Strain relief ring
28	465.08.21.105	Protective felt
29	000.20.25.065	Star grip
30	465.60.00.100	Wall-protecting wheel incl. bracket, complete
31	465.60.10.100	Wall-protecting wheel incl. bracket
32	0125.1005.000	Washer
33	465.60.01.100	Bracket for wall-protecting wheel
34	0934.1005.000	Hexagon nut
35	000.43.15.052	Bushing
36	465.60.02.100	Wall-protecting wheel
40	465.20.08.200	Handlebar
41	465.20.04.100	Angle-clamping connector
42	465.20.31.200	Extension long, complete
	465.20.30.200	Extension long, incl. handlebar
43	465.20.10.200	Pipe bend, complete
44	000.20.40.084	Clamping lever
45	0980.1008.000	All-metal nut
46	0912.1008.025	Hexagon socket screw

SPARE PARTS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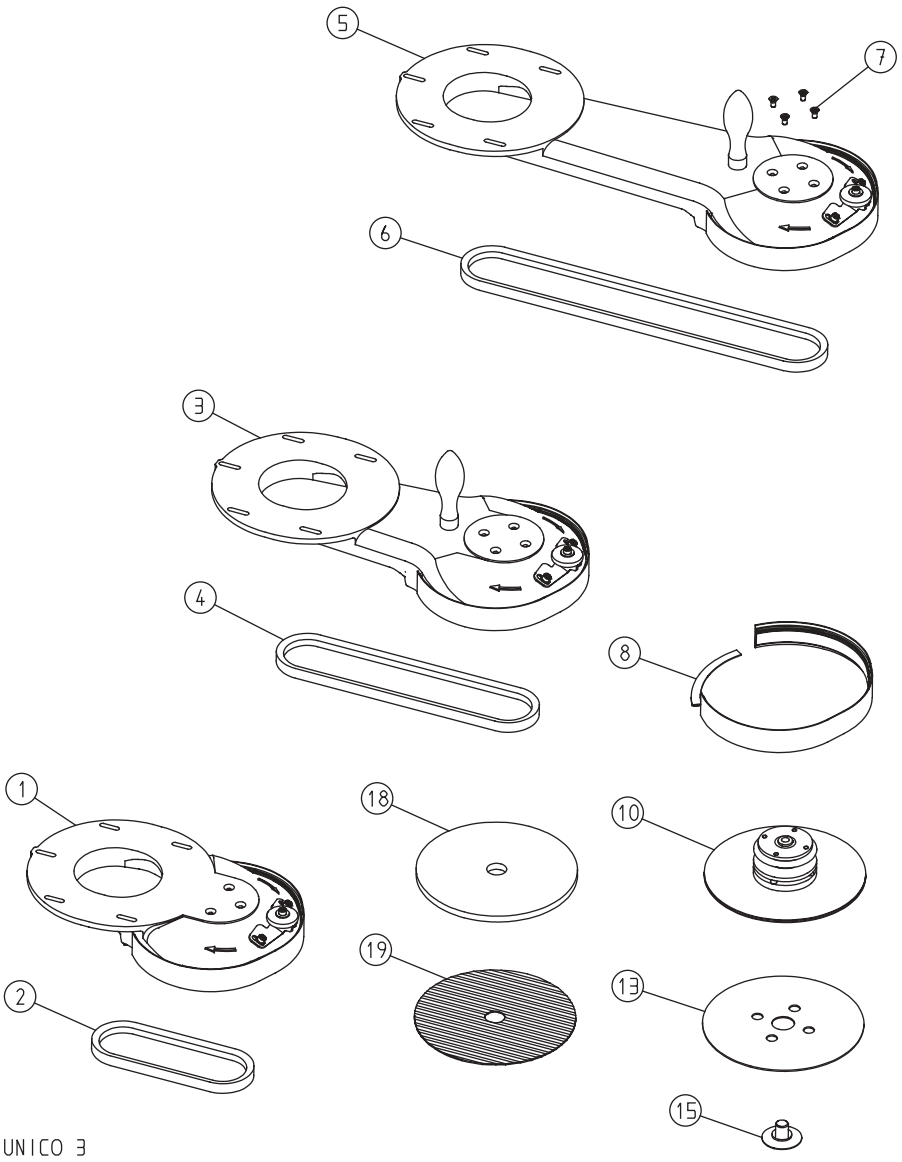
UNICO 2
11.05.2001

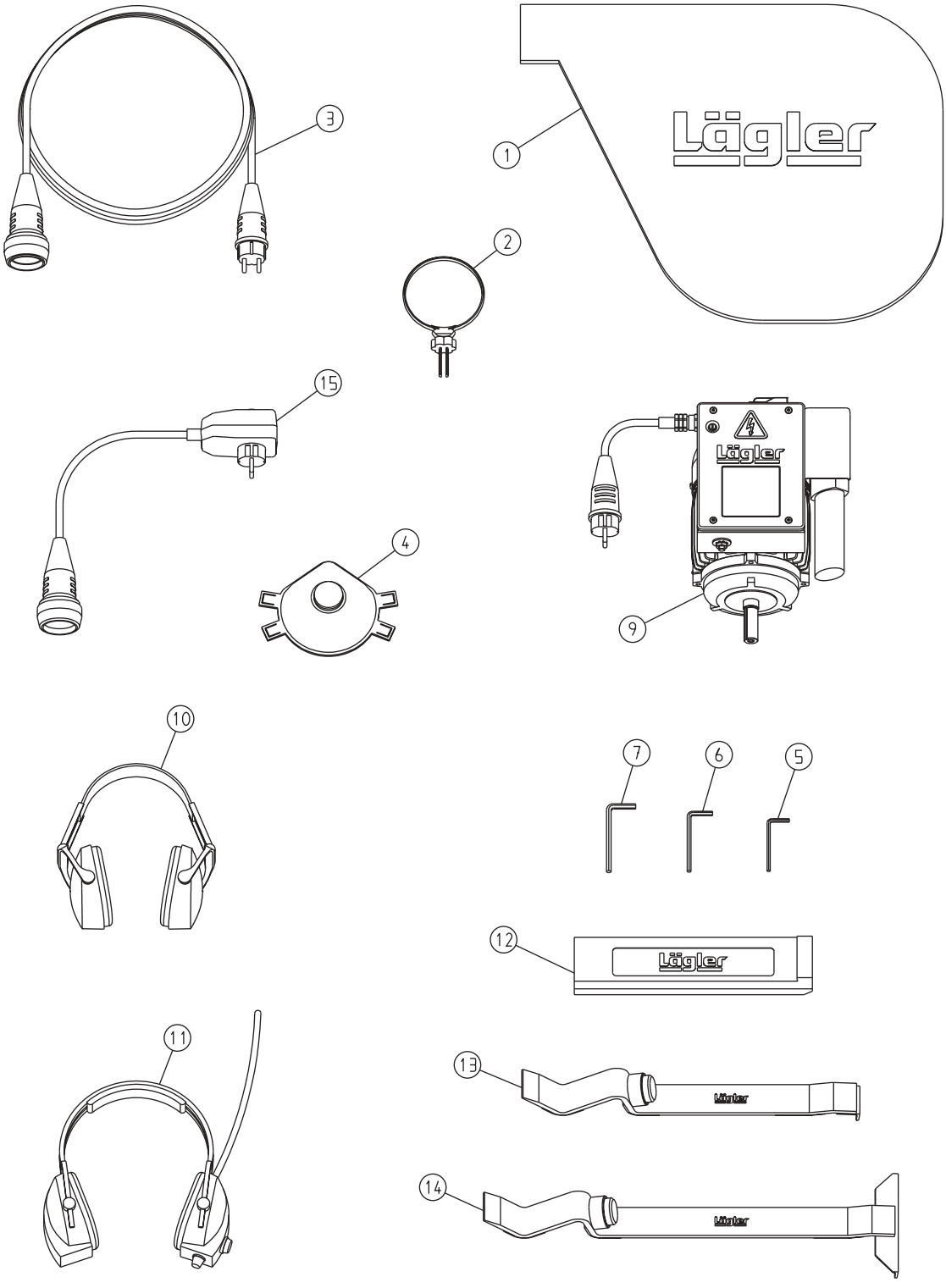
Item	Article no.	Description
1	0471.0020.000	Circlip
2	6885.0606.018	Key
3	900.65.08.100	Fan blade
4	900.65.09.100	Fan cover
5	0913.0004.006	Grub screw
6	0085.1004.005	Pan-head screw
7	465.65.40.100	Switchbox incl. snap-on nuts
8	000.50.10.109	Snap-on nut
9	0084.1005.016	Cheese-head screw
10	0084.1005.014	Cheese-head screw
11	465.63.01.105	Working lamp, complete
12	465.63.20.105	Joint
13	465.63.11.105	Fluorescent tube
14	465.63.12.105	Fluorescent lamp tube
15	0433.1010.000	Washer
16	0439.1010.010	Hexagon nut
17	000.65.60.256	Rocker switch 230 V / 50 + 60 Hz
	000.65.60.156	Rocker switch 115 V / 50 + 60 Hz
18	000.65.10.031	Capacitor
	000.65.10.111	Capacitor, USA
19	9021.1008.000	Washer
20	000.65.62.150	Dust cap for rocker switch
22	465.63.52.105	Ballast, 230 V / 50 Hz
	465.63.62.105	Ballast, 220 + 230 V / 60 Hz
	465.63.51.105	Ballast, 110 V / 50 Hz
	465.63.61.105	Ballast, 110 + 120 V / 60 Hz
23	9021.1005.000	Washer
24	7983.1042.013	Sheet metal screw
26	000.68.60.111	Lock nut
27	000.65.43.151	Motor cable 3 x 1.5 mm^2
28	900.65.47.100	Cover incl. seal
29	465.65.48.105	Cover seal
30	7983.1042.013	Sheet metal screw
31	0127.1010.000	Spring washer
42	000.65.43.153	Motor cable 3 x 1.5 mm^2, USA



UNICO 3
28.04.2003

Item	Article no.	Description
1	425.01.01.200	Attachment 105 mm
2	000.71.25.041	V-belt 13 x 407
	425.01.00.200	Attachment 105 mm, complete
3	445.01.01.200	Attachment 230 mm
4	000.71.25.065	V-belt 13 x 650
	445.01.00.200	Attachment 230 mm, complete
5	465.01.01.200	Attachment 350 mm
6	000.71.25.090	V-belt 13 x 900
	465.01.00.200	Attachment 350 mm, complete
7	0965.1005.810	Countersunk screw
8	465.01.52.100	Sealing set for attachments
	465.01.51.105	Velcro sealing tape (50-m roll)
10	465.01.91.200	Steel sanding disc wheel, complete
13	465.02.12.205	Velcro disc 177 mm
	465.02.06.105	Felt disc 178 / 3 mm, self-adhesive
15	465.02.05.100	Sandpaper tensioning screw
18	9.612.183.020	Edge-sanding pad UNICO as sanding grid base pad or polishing pad
19	9.412.183.100	Sanding grid pad UNICO grain size 100

SPARE PARTS



UNICO 4
02.03.1999

Item	Article no.	Description
1	465.00.80.105	Dust bag UNICO
2	000.01.40.110	MultiClip
3	000.65.53.151	Extension cable 3 x1.5 mm², 10 m long
4	000.01.20.010	Protective mask P3
5	000.93.11.041	Allen key 4 mm
6	000.93.11.051	Allen key 5 mm
7	000.93.11.061	Allen key 6 mm
9	465.65.00.100	Motor new, 230 V / 50 Hz
	466.65.00.100	Motor new, 230 V / 60 Hz
	464.65.00.100	Motor new, 120 V / 50 Hz
	468.65.00.100	Motor new, 120 V / 60 Hz
	467.65.00.100	Motor new, 220 V / 60 Hz, USA
	469.65.00.100	Motor new, 110 V / 60 Hz, USA
10	000.01.10.021	Ear muffs POCKET incl. bag
11	000.01.10.011	Ear muffs MUSIMUFF incl. radio
12	701.10.00.100	Polyamide impact block IFR
13	702.00.00.100	Parquet laying tool ZUGEISEN 43
14	703.00.00.100	Parquet laying tool ZUGEISEN 55
15	000.01.65.010	Residual-current safety plug

SERVICE PASSPORT

Please enter the serial number and the year of manufacture of your machine on the rear side of this manual of operating instructions (see nameplate). Otherwise, the service passport will not be valid.

This service passport is a document. Please have all inspection and maintenance work confirmed here by your dealer's company.

Date of test and service: ____ ____ **Signature and stamp**	**Date of test and service:** ____ ____ **Signature and stamp**	**Date of test and service:** ____ ____ **Signature and stamp**
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Declaration of conformity according to EC regulations

98/37/EC dated 22.06.1998
Low voltage (73/23/EEC, last changed by 93/68/EEC dated 22.06.1993)
Electromagnetic compatibility (89/336/EEC, last changed by 93/68/EEC dated 22.06.1993)

This model of the edge sanding machine **LÄGLER UNICO**, serial number see nameplate, has been developed, designed and manufactured in compliance with the above-mentioned regulations.

The following harmonised standards have been applied:
DIN EN 292 Part 1 and Part 2, Safety of machines, equipment and systems
DIN EN 60 204.1, Electrical equipment for industrial machines
EN 55014-1, Electromagnetic compatibility: emitted interference – product family standard
EN 55014-2, Electromagnetic compatibility: interference immunity – product family standard
EN 61000-3-2, Electromagnetic compatibility: limit values for harmonic currents
EN 61000-3-3, Electromagnetic compatibility: limit values for voltage fluctuations and flicker in low-voltage networks for equipment with an input current ≤ 16 A per conductor.

The following documents are available:
- Overall plan of the machine including control circuit diagrams
- Detailed and complete plans for verifying the machine's compliance with basic safety and health requirements
- A list of basic requirements from EC regulations, standards and specifications that were taken into account for the design of the machine
- A description of solutions for preventing dangers arising from the machine
- A copy of the manual of operating instructions for the machine

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Volker Wörner

Dipl.-Ing. (FH) Volker Wörner, Construction
Eugen Lägler GmbH, Maschinenbau
Güglingen-Frauenzimmern,
dated 01.06.2003

UNICO

Serial No.: _____

Year of manufacture: _____

AUS CAN GB IRL NZ USA

Lägler
WORLD LEADERS IN FLOOR SANDING TECHNOLOGY