



ZIPPER MASCHINEN GmbH

Gewerbepark 8
4707 Schlüsslberg | AUSTRIA
+43 (0) 7248 61116-700 | FAX 7248 61116-720
info@zipper-maschinen.at | www.zipper-maschinen.at

Originalfassung

DE BETRIEBSANLEITUNG

Ständerbohrmaschine

Übersetzung / Translation

EN USER MANUAL

Drill Press

SL NAVODILO ZA UPORABO

Vrtalni stroj na stojalu

SK NÁVOD NA OBSLUHU

Stojanová vrtačka

FR MODE D'EMPLOI

Perceuse verticale

HR UPUTA ZA UPORABU

Stupna bušilica



ZI-STB16T

EAN: 9120039233567





10 PREFACE (EN)

Dear Customer!

This manual contains important information and advice for the correct and safe use and maintenance of the drill press ZI-STB16T.

Following the usual commercial name of the device (see cover) is substituted in this manual with the name "machine".

The manual is part of the machine and may not be stored separately. Read it profoundly before first use of the machine and keep it for later reference. When the machine is handed to other persons always put the manual to the machine.

Please follow the security instructions!

Please read the entire manual, to prevent misunderstandings, machine damage or even injuries!



Due to continuous development of our products illustrations, pictures might differ slightly.

If you however find errors in this manual, please inform us.

Technical changes excepted!

Copyright law

© 2018

This manual is protected by copyright law – all rights reserved. Especially the reprinting as well as the translation and depiction of pictures will be prosecuted by law. Court of jurisdiction is the Landesgericht Linz or the competent court for 4707 Schlüsslberg, AUSTRIA.

Customer Support

ZIPPER MASCHINEN GmbH

Gewerbepark 8, 4707 Schlüsslberg
AUSTRIA

Tel.: +43 7248 61116-700

Fax: +43 7248 61116-720

Mail: info@zipper-maschinen.at



11 SAFETY

11.1 Intended Use

The machine must only be used for its intended purpose! Any other use is deemed to be a case of misuse. To use the machine properly you must also observe and follow all safety regulations, the assembly instructions, operating and maintenance instructions lay down in this manual.

All people who use and service the machine have to be acquainted with this manual and must be informed about the machine's potential hazards. It is also imperative to observe the accident prevention regulations in force in your area. The same applies for the general rules of occupational health and safety.

The machine is used for:

Drilling in wood, plastic and metal with chuck B16/1.5-16mm.

Work the materials only with suitable drills.

This machine is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the machine by a person responsible for their safety. Never allow children or people unfamiliar with these instructions to use the machine. Supervise children. This will ensure that children do not play with the unit.

Any manipulation of the machine or its parts is a misuse, in this case ZIPPER-Maschinen and its sales partners cannot be made liable for ANY direct or indirect damage.



WARNING

- **Use only drills allowable for this machine!**
- **Never use a damaged drill!**
- **Never use the machine with defective or without mounted guards!**
- **The removal or modification of the safety components may result in damage to equipment and serious injury!**

HIGHEST RISK OF INJURY!

Ambient conditions

The machine may be operated:

humidity max. 70%

temperature +5°C to +40°C (+41°F to +104°F)

The machine shall not be operated outdoors or in wet or damp areas.

The machine shall not be operated in areas exposed to increased fire or explosion hazard.

Prohibited use

- The operation of the machine outside the stated technical limits described in this manual is forbidden.
- The operation of the machine without provided protective devices is prohibited.
- The use of the machine not according with the required dimensions is forbidden.
- The use of the machine not being suitable for the use of the machine and not being certified is forbidden.
- Any manipulation of the machine and parts is forbidden.
- The use of the machine for any purposes other than described in this user-manual is forbidden.
- The unattended operation on the machine during the working process is forbidden!
- It is not allowed to leave the immediate work area during the work is being performed.

11.2 Safety instructions

Missing or non-readable security stickers have to be replaced immediately!

The locally applicable laws and regulations may specify the minimum age of the operator and limit the use of this machine!

To avoid malfunction, machine defects and injuries, read the following security instructions!



NOTICE

In this machine following protective equipment is in effect:

- Emergency button on the control panel
- Shutdown when opening the belt cover or spindle guard



- **Keep your work area dry and tidy! An untidy work area may cause accidents. Avoid slippery floor.**
- **Make sure the work area is lighted sufficiently**
- **Work only in a well ventilated area**
- **Do not overload the machine**
- **Provide good stability and keep balance all times**
- **Avoid abnormal working postures! Make sure you stand squarely and keep balance at all times.**
- **Keep away from the running drill!**
- **Always stay focused when working. Reduce distortion sources in your working environment. The operation of the machine when being tired, as well as under the influence of alcohol, drugs or concentration influencing medicaments is forbidden.**
- **Do not climb onto the machine!**
- **Attach the machine to the underground.**
- **Only one person shall operate the machine.**
- **The machine must be operated only by trained persons (knowledge and understanding of this manual), which have no limitations of motor skills compared with conventional workers.**
- **Do not allow other people, particularly children, to touch the machine or the cable. Keep them away from your work area.**
- **Make your workshop childproof.**
- **Make sure there is nobody present in the dangerous area. The minimum safety distance is 2 m**
- **Wear suitable work clothes! Do not wear loose clothing or jewelry as they might be caught and cause severe accidents!**
- **Wear a hair net if you have long hair.**
- **Loose objects can become entangled and cause serious injuries!**
- **Use personal protective equipment. Always wear eye protection. Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries. Operation with gloves forbidden**
- **Never leave the machine running unattended! Before leaving the working area switch the machine off and wait until the machine stops.**
- **Always disconnect the machine prior to any actions performed at the machine.**
- **Avoid unintentional starting**
- **Do not use the machine with damaged switch**
- **The plug of an electrical tool must strictly correspond to the socket. Do not use any adapters together with earthed electric tools**
- **Each time you work with an electrically operated machine, caution is advised! There is a risk of electric shock, fire, cutting injury;**
- **Protect the machine from dampness (causing a short circuit)**
- **Use power tools and machines never in the vicinity of flammable liquids and gases (danger of explosion)**
- **Check the cable regularly for damage**
- **When working with the machine outdoors, use extension cables suitable for outdoor use**
- **Do not use the cable to carry the machine or to fix the work piece**
- **Protect the cable from heat, oil and sharp edges**
- **Avoid body contact with earthed components**
- **Before starting the machine remove any adjusting wrenches and screwdrivers**
- **Use a clip or clamping jaws to secure the workpiece**
- **Do not fix the workpiece with your hands**
- **Rotating parts can cause severe cut injuries**
- **Keep the drills sharp and clean, so they get stuck less often and are easier to guide**
- **Keep any machine that is not being used out of reach of children**
- **Any repairs must only be carried out by the authorized service agent.**



11.3 Remaining risk factors



WARNING

It is important to ensure that each machine has remaining risks. In the execution of all work (even the simplest) greatest attention is required. A safe working depends on you!

Even if the machine is used as required it is still impossible to eliminate certain residual risk factors totally. The following hazards may arise in connection with the machine's construction and design:

- Risk of injury to the hands / fingers by the rotating tool during operation.
- Risk of injury due to sharp edges of the workpiece, especially in non-fixed with a suitable tool / device workpiece.
- Risk of injury: hair and loose clothing, etc. can be captured and wound up! Safety regulations must be observed with regard to clothing.
- Risk of injury due to contacting with live electrical components.
- Risk of injury due to dust emissions, treated with harmful agents workpieces
- Risk of injury to the eye by flying debris, even with safety goggles.
- Risk of injury to the hearing by prolonged working without hearing protection.

These risk factors can be minimized through obeying all security and operation instructions, proper machine maintenance, proficient and appropriate operation by persons with technical knowledge and experience.

In spite of all safety is and remains her healthy common sense and their corresponding technical qualification / training for use of the machines most important safety factor!

12 ASSEMBLY

Please check the product contents immediately after receipt for any eventual transport damage or missing parts. Claims from transport damage or missing parts must be placed immediately after initial machine receipt and unpacking before putting the machine into operation. Please understand that later claims cannot be accepted anymore.

12.1 Preparatory activities

12.1.1 Workplace requirements

The workplace has to fulfill the requirements.

The ground has to be even, in level and hard. It must be suitable at least to weight it with double weight per square meter than the machines net weight.

The chosen workplace must have access to a suitable electric supply net that complies with the machines requirements.

12.1.2 Transport

The machine can be transported in package with a forklift.

The machine is very heavy. The machine shall be lifted from crate with a suitable lifting device only that is certified to be able to carry the machines load.



WARNING

The lifting and transportation of the machine must only be carried out by qualified staff and must be carried out with appropriate equipment.

Note that lifting equipment used (crane, forklift, sling, etc.) must be in perfect condition. To maneuver the machine in the packaging can also a pallet jack or a forklift be used.



12.1.3 Preparation of the surface

Uncoated metal machine parts have been insulated with a greasy layer to inhibit corrosion. This layer has to be removed. You can use standard solvents that do not damage the machine surface.



NOTICE

Do not use solvents based on nitrite, aggressive solvents like break cleaners or scrubbing agents!

These damage the machine surface.

12.2 Power supply



ATTENTION

When working with non-grounded machines:

Severe injury or even death may arise though electrocution!

Therefore: The machine must be operated at a grounded power socket

The connection of the machine to the electric power supply and the following checks have to be carried out by a respectively trained electrician only.

1. The electronic connection of the machine is designated for operation with a grounded power socket!
2. The mains supply must be secured with 16A:
3. If the connector plug doesn't fit or if it is defect, only qualified electricians may modify or renew it!
4. The grounding wire should be held in green-yellow.
5. Check, whether the feeding voltage and the Hz comply to the required values of the machine. A deviation of feeding voltage of $\pm 5\%$ is allowed
6. After connecting, check the right running direction (400V)!
7. Make sure that a possible extension cord is in good condition and suitable for the transmission of power. An undersized cord reduces the transmission of power and heats up.
8. A damaged cable must be replaced immediately



NOTICE

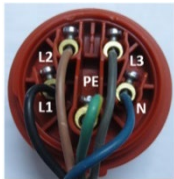
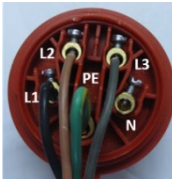
Operation is only allowed with safety switch against stray current (RCD max. stray current of 30mA)



NOTICE

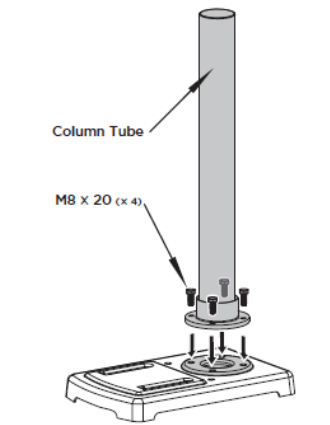
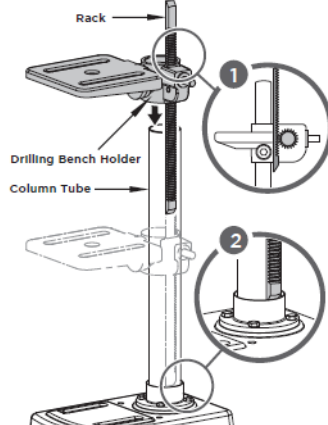
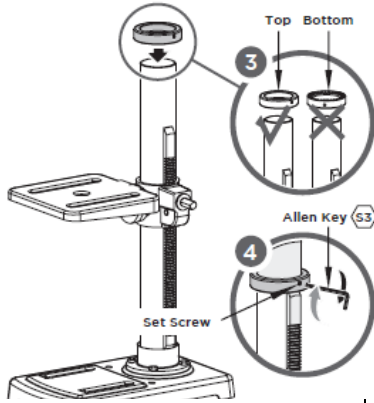
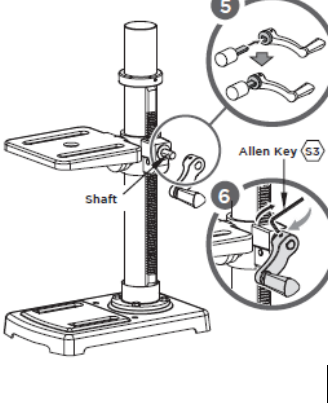
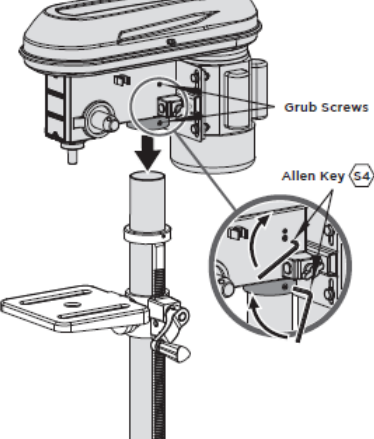
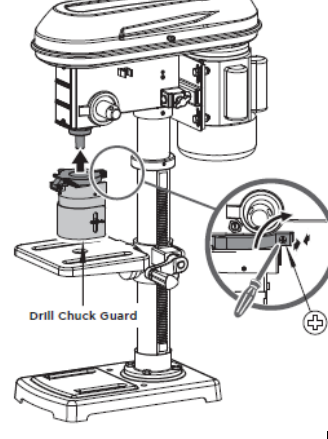
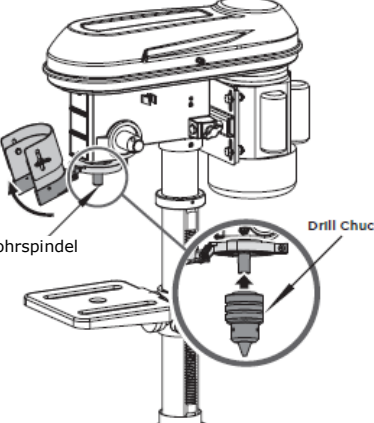
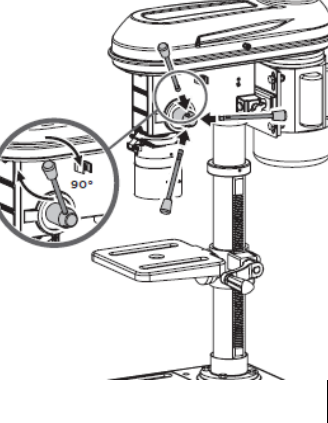
Use only permitted extension cable with cross-section the one in the following table declared.



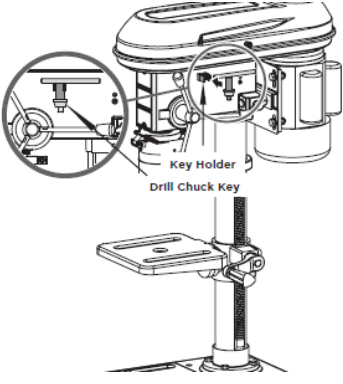
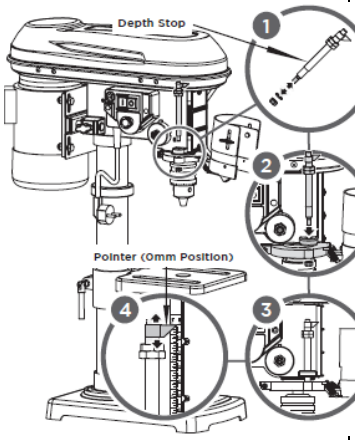
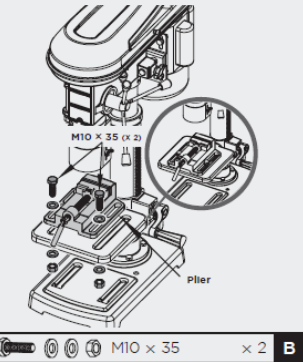
| Voltage | Extension | Cross-section |
|------------------------------|------------------------------------------|---------------------------------------------------------------------------------------|
| 220 V-240 V 50 Hz | <27 m | 1,5 mm ² |
| | <44 m | 2,5 mm ² |
| | <70 m | 4,0 mm ² |
| | <105 m | 6,0 mm ² |
| Plug 400V: | 5-wire: with N-conductor |  |
| | 4-wire: without N-conductor |  |



12.3 Assembly

| | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Place the column tube on the baseplate. Bolt the column tube to the baseplate with the four screws M8×20 supplied. Tighten the screws moderately tight with an open end wrench SW 13 (not scope of delivery) so that the threads in the baseplate do not strip.</p> |  <p>Column Tube M8 x 20 (x 4)</p> | <p>Place the drilling bench holder over the rack. The teeth of track must mesh with the teeth of gear. (see figure 1). Slide the drilling bench on the column tube. Make sure the bottom bevel of rack insert into the bottom disc of the column tube. (see fig. 2)</p> |  <p>Rack Drilling Bench Holder Column Tube</p> <p>1 2</p> |
| <p>Slide the collar over the column tube with beveled edge facing down until it presses against the top of the rack. (see fig. 3) Tight the set screw, but do not overtighten it. (see fig. 4)</p> |  <p>Top Bottom 3 4 Allen Key (53) Set Screw</p> | <p>Slide the height crank over the shaft on the side of drilling bench. (see fig. 5) Secure the height crank to the shaft using allen key 3mm. (see fig. 6)</p> |  <p>5 6 Allen Key (53) Shaft</p> |
| <p>Place the machine head on the column tube and secure the machine head with the two grub screws to the side with the allen key 4mm.</p> |  <p>Grub Screws Allen Key (54)</p> | <p>Put the drill chuck guard on the upper part of the drill spindle. Secure the drill chuck guard with a screwdriver.</p> |  <p>Drill Chuck Guard</p> |
| <p>Fold the drill chuck guard upwards. Insert the drill chuck on the taper of the drill spindle. Push the drill chuck onto the drill spindle with a few light taps. Use a plastic hammer for this purpose.</p> |  <p>Bohrspindel Drill Chuki</p> | <p>Bolt the three drill lifting arms into the hand spindle guide and fix them.</p> |  <p>90°</p> |



| | | | |
|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <p>Attach the drill chuck key into the key holder</p> |  | <ol style="list-style-type: none"> 1. Remove the washer and nut from the depth stop. (see fig. 1) 2. Insert the depth stop through the hole in the fence. (see fig. 2) 3. Screw the depth stop with washer and nut that just had been removed from step 1. Centrally align the depth stop into the bore of the fence (see fig. 3) 4. The home position of pointer should be 0mm. (see fig. 4) |  |
| <p>The plier is optional, with bolts, flat washers and nuts mounted on the drilling bench or the baseplate.</p> |  | | |

13 OPERATION

Device to be operated in a perfect state only. Inspect the device visually every time it is to be used. Check in particular the safety equipment, electrical controls, electric cables and screwed connection for damage and if tightened properly. Replace any damaged parts before operating the device.

13.1 Operation instructions



WARNING

Perform all machine settings with the machine being disconnected from the power supply!



ATTENTION

- Do not attempt to drill material with the surface other than flat unless a suitable support is available!
- Never switch the machine on while pressing the drill bit against the material!



NOTICE

- Before switching the machine on, make sure that the table-clamping lever is firmly tightened
- Make sure that the bit is firmly clamped in the chuck
- Due to the height of its own weight is the fixation of the drill press to the ground requirement for less-vibration work.
- Use a clip or clamping jaws to secure the piece to be drilled on the table
- Set the drill to speed answering a specific job
- Check the V-belts and tighten if necessary
- Overtightening the belts can cause the motor to bind and not start. It can also damage motor bearings!
- In advanced wear of, replace V-belt
- V-belts and pulleys may not come into contact with grease, oil or other lubricants
- Loosen the V-belt for a long break
- After drilling guide the spindle back to the top position by hand.



13.2 Operation

Switching ON:

- Belt cover and spindle guard must be closed!
- Release the EMERGENCY-switch (a) by turning clockwise.
- Push the ON-button (b).



Switching OFF:

- Push OFF-button (c).
- In emergency the machine can be stopped by pushing the EMERGENCY-switch (a).

Drehzahl und Riemenspannung einstellen:

1. Release the locking screw on the gear cover with the allen key 5 mm.
2. Pull the locking screw and open the gear cover.
3. Loosen the motor tension knob on each side of the headstock.
4. Slide the motor forward a little to release the load on the V-belts. See below illustration 2.
5. Remove the V-belt between idle pulley and motor pulley first, then slide idle pulley towards the spindle pulley to release the load on the V-belt between idle pulley and spindle pulley. Remove the second V-belt. See 2 & 3.
6. Place the two V-belts on the desired assembly to reach the specified speed. (see table)
7. Slide the motor back to tension the V-belts again. The V-belts are correctly tensioned when it gives way slightly when pressed. Deflection distance of belt is 5-10mm.
8. Lock this position with the two motor tension knobs.
9. Close the gear cover. Fasten the locking screw on the gear cover with the allen key 5 mm.

| | Connection | Min ⁻¹ |
|--|-------------|-------------------|
| | E-5 / 3-I | 2700 |
| | E-5 / 4-II | 2200 |
| | D-4 / 3-I | 1980 |
| | C-3 / 4-II | 1400 |
| | B-2 / 3-I | 1220 |
| | D-4 / 5-III | 1100 |
| | B-2 / 4-II | 1000 |
| | C-3 / 5-III | 900 |
| | A-1 / 3-I | 770 |
| | B-2 / 5-III | 680 |
| | A-1 / 4-II | 600 |
| | A-1 / 5-III | 420 |

As smaller the hole, as higher the rotation speed.

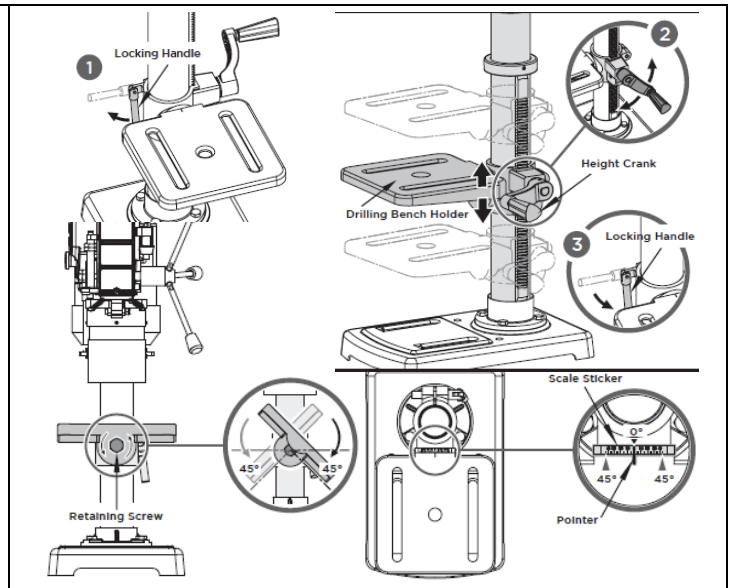
To achieve a good result is also:

- Soft material => high rotation speed
- Hard material => low rotation speed



Adjusting the Drilling Bench (Height, tilt angle)

1. Release the locking handle
2. Rotate the height crank clockwise or counter clockwise to desired height.
3. Pivot the drilling bench to the desired position
4. Fasten the drilling bench again with the locking handle.
5. You can also adjust the tilt angle of the drilling bench. To do this, release the retaining screw under the drilling bench with an open end wrench SW19 (not scope of delivery). Tilt the drilling bench as described to the right or left up to a max. of 45° and secure the drilling bench again with the retaining screw.



Setting drilling depth:

- Adjust the depth stop to desired depth.
- The depth is shown on the scale.

Changing the drill:

- Fold the drill chuck guard up.
- Release the retaining jaws of the drill chuck with the drill chuck key.
- Remove the bit.
- Insert a new bit.
- Tighten the retaining jaws of the drill chuck with the drill chuck key.
- Check that the bit is centred.
- Fold the drill chuck guard down again.
- Attach the drill chuck key back to the key holder.

Using a quick chuck:

- Open the keyless chuck by turning in against rotation direction A and holding ring B until the drill can be inserted.
- Insert the drill.
- Firmly tighten the collar of the keyless chuck by hand in rotation direction A and holding ring B.
- This automatically locks the drill chuck.

14 MAINTENANCE



ATTENTION

Perform all maintenance machine settings with the machine being disconnected from the power supply!

Serious injury due to unintentional or automatic activation of the machine!



The machine does not require extensive maintenance. If malfunctions and defects occur, let it be serviced by trained persons only.

Before first operation as well as later on every 100 operation hours you should lubricate all connecting parts (if required, remove beforehand with a brush all swarfs and dust).

Check regularly the condition of the security stickers. Replace them if required.

Check regularly the condition of the machine.

Store the machine in a closed, dry location.

**NOTICE**

Clean your machine regularly after every usage – it prolongs the machines lifespan and is a prerequisite for a safe working environment.

Repair jobs shall be performed by respectively trained professionals only!

14.1 Maintenance plan

After each workshift:

- Apply a thin layer of oil on the column and the table
- Remove drill cuttings and metal chips

After 50 hours of operation

- Apply some fat on the angle drift

14.2 Cleaning

After each workshift the machine has to be cleaned. Remove chips etc. with a suitable tool. Do not remove them by hand (cutting injury!). Remove dust as well.

**NOTICE**

The usage of certain solutions containing ingredients damaging metal surfaces as well as the use of scrubbing agents will damage the machine surface!

Clean the machine surface with a wet cloth soaked in a mild detergent

14.3 Disposal

Do not dispose the machine in residual waste. Contact your local authorities for information regarding the available disposal options. When you buy at your local dealer for a replacement unit, the latter is obliged to exchange your old.

**15 TROUBLE SHOOTING**

BEFORE YOU START WORKING FOR THE ELIMINATION OF DEFECTS, DISCONNECT THE MACHINE FROM THE POWER SUPPLY.

| Trouble | Possible cause | Solution |
|----------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------|
| Motor does not run | • Incorrect power supply | • Let it be checked by a trained person |
| | • Switch defect | • Change |
| | • Motor defect | • Change |
| | • Safety switch activated | • Check the belt cover or spindle guard (open?). |
| Loud noise when running | • Incorrect belt tension | • Adjust belt tension (1cm rule) |
| Drill runs erratically | • Drill chuck not assembled correctly to arbour or one of them is dirty | • Check and adjust. |
| | • Drill chuck jaws worn or damaged | • Change drill chucj |
| | • Spindle or boring is worn | • Check and replace if necessary |
| Drill is hot and smokes | • Too fast speed for material being drilled | • Reduce speed use lubricants |
| Motor runs but no rotation or weak drilling power | • Belt tension too low | • Tighten |
| | • Pulley belt dirty, slippery | • Clean |

MANY POTENTIAL SOURCES OF ERROR CAN BE CLEARED BY THE EXPERTLY CONNECTION TO THE ELECTRICITY GRID.

**NOTICE**

Should you in necessary repairs not able to properly to perform or you have not the prescribed training for it always attract a workshop to fix the problem.