## Wadkin BURGGREEN

## Wadkin Bursgreen WB T530 Thicknesser



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Always follow the instructions provided with the manual. Always wear safety glasses when using woodworking equipment. Always disconnect the power before adjusting any equipment. Failure to observe proper safety procedures and guidelines can result in serious injury.
WARNING: Do not allow familiarity (gained from frequent use of your machine and accessories) to become commonplace. Always remember that a careless fraction of a second is sufficient to inflict severe injury.


Always wear safety glasses when using woodworking equipment.


Always read the instructions provided before using woodworking equipment.

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## 1. GENERAL INFORMATION

### 1.1 FOREWORD

The present manual is designed for those who will operate the machine. You will find in it the necessary data for commissioning, maintenance and safety operation of the machine. The experience of the company manufacturer and its experts in considered in the preparation of this manual.

We recommend you to consider with responsibility our recommendations concerning the safety of work. The operations requiring disassembly of machine and electrical components should be performed by authorized and qualified personnel only. Repairs and settings not described in the present manual should not be performed. This manual is prepared by the manufacturer and is an integral part of the machine's delivery. The information contained herein is intended for specialists and is compulsory.

The manual defines the machine's field of application and contains all the information necessary for its proper and safety operation. The permanent and exact observation of the instructions contained in this manual ensure safety of personnel and machine, profitable work as well as long life of the machine itself. For better clarity this manual is divided in separate parts in which are contained the more important subjects.

The contents will allow you to find fast the specific subjects. The important text is printed in bold and is marked by the following symbols:


WARNING
Indicates imminent risks which may cause serious injury to the operator or other persons. Be careful and scrupulously follow the instructions.

A statement advising of the need to take care lest serious consequences result in harm to material items such as the asset or the product.

### 1.2 MACHINE IDENTIFICATION

There is a identification plate fixed to the machine, containing the manufacturer's data, year of construction, serial number and technical specifications.

### 1.3 CUSTOMER SERVICE RECOMMENDATIONS

Apply the machine to skilled and authorized technical staff to carry out any operation dealing with parts disassembly. Keep to the instructions contained in this manual for the correct use of the machine.

CAUTION Only skilled and authorized staff shall use and service the machine after reading this manual. Respect the accident prevention regulations and the general safety and industrial medicine rules.

## 2. SAFETY PRECAUTIONS

### 2.1 SAFETY REGULATIONS

## 1 WARNING

- Woodworking machine is high speed and high-risk equipment, so operator who is been suitably trained can use the machine for safety production.
-The manufacturer disclaims all responsibilities for damages to persons or things, which might be caused by any failure to comply with the safety regulations.
-The manufacturer disclaims all responsibilities for damages to persons or things, which might be caused by any failure of electrical installation or nonstandard assembly.
- The manufacturer is not responsible for any damage deriving from arbitrary modifications made to the machine.
- It is prohibited to use the machine when under the influence of alcohol, drugs or medication.
- All the operators must be suitably trained for use, adjustment and operation of the machine.
- The operators must carefully read the manual paying particular attention to the warning and safety notes. Furthermore, they must be informed on the dangers associated with use of the machine and the precautions to be taken, and must be instructed to periodically inspect the guards and safety devices.
- Before changing the blade, debugging the trouble, carrying out adjustment, or cleaning work, disconnect the machine from the electric power by setting the main switch to stop to make sure the machine will not being operated wrongly.
- After an initial bedding-in period or many hours of operation, the driving belts may slacken; this causes an increase in the tool stopping time. Immediately tighten them.
- The working area around the machine must be kept always clean and clear, in order to have an immediate and easy access to the switchboard.
- Never insert materials which are different from those which are prescribed for the machine utilization. The material to be machined must not contain any metal parts.
- Never machine pieces which may be too small or too wide ithrespect to the machine capacity.
- Do not work wood which has evident defects (cracks, knots, metal parts, etc.)
- Never place hands among the moving parts and/or materials.
- Keep the tools tidy and far away from those not authorized persons.
- Never employ cracked nor uckled, neither not correctly reground tools. Nonstandard or blunt tools are forbidden, either. Blade with broken edge or out of shape should not be used.
- Never use the tools beyond the speed limit recommended by the producers.
- Carefully clean the rest surfaces of tools and make sure that they find perfectly horizontally positioned, and with no dents at all.
- Always wear gauntlets when handling the tools.
- Mount the tools in the right machining direction.
- Never start the machine before having correctly installed all the protections. The protection device should be installed before starting the machine. The protection device should not be removed.
- Connect the dust suction hoods to an adequate suction system; suction must always be activated when the machine is switched on.
- Never open doors or protections when the machine or the system is operating.
- Please check if the blade lock well and the cutter shaft has the right direction. The rotating should get up to the stable condition before working.
- Many unpleasant experiences have shown that anybody may wear objects which could cause serious accidents.

Therefore, before starting working, take any bracelet, watch or ring off.

- Button the working garment sleeve well around the wrists.
- Take any garment off which, by hanging out, may get tangled in the MOVING UNITS.
-Always wear strong working footwear, as prescribed by the accident-prevention regulations of all countries. Use protection glasses. Use appropriate hearing protection systems (headsets, earplugs, etc.) and dust protection masks.
- Never let unauthorized people repair, service or operate the machine.
- The manufacturer is not responsible for any damage deriving from arbitrary modifications made to the machine.
- Any transport, assembly and dismantling is to be made only by trained staff, who shall have specific skill for the specified operation.
- The operator must never leave the machine unattended during operation.
- During any working cycle break, switch the machine off.
- In case of long working cycle breaks, disconnect the general power supply.
- The operating method to be followed in the event of accident or breakdown, the machine should be turned off immediately and unplug from main power and ask for assistance for the authorized people. If a blockage is likely to occur, the workpiece should be move back a little and enable the equipment to be safely unblocked.
- Please remove unnecessary sweeping, chips, in case of accidents.
- Woodworking machine will produce sparks when using with serious fire risks, so please keep the machine surrounding area clean without inflammables and explosives.


### 2.2 RESIDUAL RISKS

Despite observance of all the safety regulations, and use according to the rules described in this manual, residual risks may still be present, among which the most recurring are:

- contact with tool
- contact with moving parts (belts, pulleys, etc..)
- recoil of the piece or part of it
- accidents due to wood splinters or fragments
- tool insert ejection
- electrocution from contact with live parts
- danger due to incorrect tool installation
- inverse tool rotation due to incorrect electrical connection
- danger due to dust inhalation in case of working without vacuum cleaner.


### 2.3 SAFETY AND INFORMATION SIGNALS

This signals may be applied on the machine; in some cases they indicate possible danger conditions, in others they serve as indication.
Always take the utmost care.

## SAFETY SIGNALS:



Risk of eye injury. Wear eye protection.

Wear hearing protection systems.


Danger of electric shock. Do not access the area when the machine is powered.

Carefully read and understand the manual before using the machine.

## INFORMATION SIGNALS:

Indicate the technical characteristics, direction of rotation and inclination, block and release, etc.
Carefully following the directions to simply the use and adjustment of the machine.
The signals are graphically described and do not require further explanation.

## 3. SPECIFICATIONS

### 3.1 MAIN COMPONENTS



## 1 - Frame

2 - Thicknessing table
3 - Cutterhead assembly
4 - Dust cover

5 - Large shield
6 - Lift control panel
7 - Main control panel

### 3.2 TECHNICAL SPECIFICATION

| Items | Parameters |
| :--- | :---: |
| Cutting motor output | 5 kW S 1 |
| Feeding motor output | 0.55 kW |
| Lifting motor output | 0.25 kW |
| Cutter block diameter | 115 mm |
| Cutter block speed | 5000 rpm |
| Variable feed speed | $4-16 \mathrm{~m} / \mathrm{min}$ |
| Max width of cut | 530 mm |
| Mini length of cut | 280 mm |
| Max highth of cut | 300 mm |
| Minimium highth of cut | 5 mm |
| Max depth of cut | 8 mm |
| Qty of cutter knives | 4 pcs |

### 3.3 NOISE LEVEL

|  | No load | Load |
| :--- | :--- | :--- |
| Sound Pressure Level | $<80 \mathrm{~dB}(A)$ | $<90 \mathrm{~dB}(A)$ |
| Sound Power Level | $<90 \mathrm{~dB}(A)$ | $<100 \mathrm{~dB}(A)$ |

The noise levels measured are emission levels and not necessarily the safe working level. Although there is a correlation between the emission levels and the exposure levels, this cannot be used reliably to determine whether or not further precautions are required. The factors which affect the actual level of operator exposure include the duration of exposure, the ambient characteristics and other sources of emission, for example, the number of machines and other adjacent machining. The permitted exposure values may also vary from country to country. Nevertheless, this information allows the user of the machine to better evaluate the dangers and risks.

Other factors which reduce exposure to noise are:

- correct tool choice
- tool and machine maintenance
- use of hearing protection systems (e.g. headsets, earplugs,...)


WARNING Please always use the hearing protection systems.

### 3.4 DUST EXTRACTION

The chip and dust aspiration device must ensure a minimal rate of air delivery of $1800 \mathrm{~m} 3 / \mathrm{h}$ at a speed of $25-30 \mathrm{~m} / \mathrm{sec}$.
The machine is equipped with a shavings collector, which has an end sleeve for connection to the aspirator for the sawdust and the shavings.
Connect the shavings collector with a tubing of $\varnothing 160 \mathrm{~mm}$ to the aspirator for saw-dust and shavings.

WARNING The dust and chips collection device must be switched on simultaneously with the motor of the machine.

## 4. INSTALLATION



CAUTION Assembly need to be done by an experienced and trained person.

### 4.1 CONTENTS OF PACKAGE

- The machine is supplied partly assembled. Prior to use, further assembly is required.
- When unpacking the machine, please check if the following components are included for the initial assembly. - If any parts are missing, do not attempt to assemble the machine; plug in the power cord, or turn the switch on until the missing parts are obtained and properly installed.

Total one carton:
A-Main machine
B-Dust collector
C-Blades presetter
-Screwdriver (For Helical cutterhead model)
-Screws (For Helical cutterhead model)
-Cutter tips (For Helical cutterhead model)
D-List of loose parts
-8X10 double ended spanners
-3 mm allen wrench
-4 mm allen wrench


FIG.4.1

### 4.2 LIFTING AND UNLONADING <br> 今 <br> WARNING

Lifting and handing should only be carried out by skilled personnel specially trained to execute this kind of operations. During loading and unloading, avoid knocks to prevent damages to persons and things. Make sure no one is standing under the overhung load and/or within the bridge crane working range during machine lifting and handing.

Lifting may be carried out by bridge crane or self-propelled lift truck. Before starting the maneuvers, free the machine of all the parts used for transport or Packaging that have remained on the machine. Check that the capacity of the lifting equipment is adequate for the gross weight of the machine indicated Fig.4.2.

If hoisting is carried out with a lift truck, proceed as follows:

- adjust the width of the forks to 530 mm
-As Fig.4.2. Indicated: Insert forks into the bottom of the frame assembly ensuring that these are wedged against the back of the rear feet.


### 4.3 INSTALLATION ENVIRONMENT REQUIREMENTS

## I warning

It is prohibited to install the machine in explosive environments.

Choose a suitable place for the machine taking in mind the possibility to mount extension boards for the smoothing thicknesser. The place chosen for positioning of the machine should provide for convenient connection to the electric mains and the device for aspiration of the dust and ships.
Provide for suitable lighting (500 lux) that would not blind and avoid the stroboscopic effect.
Check the load capacity of the floor and bear in mind that the machine must be leveled simultaneously on its four supporting points.
Provide for a distance of at least 0.8 m around the machine.

## Fixing to the floor

The machine must be fixed to the floor.

- Use boit/nut A to level the feet to ensure machine is well located.
- Put expansion boles $D$ into ground, use washer/lock washer $C$ and hex nut $B$ to fasten the bolts.


### 4.4 INSTALL SPARE PARTS

Tools Required for Assembly:(see fig.4.4)
-L Wrench 6mm
-Install dust collector B to Frame assembly A with bolt C.


FIG.4.2


FIG.4.3


FIG.4.4

## 5. FITTING AND OPERATING OF MACHINE

### 5.1 OPERATING OF MACHINE

### 5.1.1 Dimensions of the workpieces

- The maximum size of the work pieces which can be processed by the thickness machine is $530 \times 300 \mathrm{~mm}$.
- The minimium size of the work pieces which can be processed by the thickness machine is $530 \times 5 \mathrm{~mm}$.
- The shortest size of the work pieces is 280 mm .
- When processing longer workpiece use roller supports to keep the workpiece steady and normally fed into the
5.1.2 Disassembly and adjustment of knives


Before starting assembly, disassembly or adjusting of the knives make sure that the machine can not be operated.

- Switch off the machine from the electric mains.
- Put the main switch in position " 0 " ;

When disassembling and assembling the knives always use, whenever possible, protection gloves.


FIG. 5.1.2.1


FIG.5.1.2.2

### 5.1.3 Control panel

The thicknesser control panel consist of the below buttons:
A - Emergency stop switch
B - Main motor switch
C - Phase sequence indicator light
D - Main power supply control switch
E - Emergency stop switch
F - Lift control panel
G - Main power indicator
H - Lift control knob
I - Feed motor switch
J - Feed speed adjustment knob
5.1.4 Cutting Height Operating Instruction

- Working table quick lifting: Long press the button + or will descend or rise the working table automatically at the high speed.
- Working table jog lifting : press + or - button one time to achieve descend or rise the working table with 0.1 mm .
- Automatic Height operating : Press button $\frac{1}{s{ }^{2}}$ and input the figure you want to use, then press button $\circlearrowleft$, the working table will run to set point; during lifting, if the button "STOP" is pressed the working table will stop running immediately.
- Operating instruction for correcting dimension : if the thickness of workpiece after cutting is different with the digital readout, please long press button sitr until the display start to flash, then input correct figures and long press button $\underset{\substack{d}}{d}$ again for save the setting until the figures stop flashing.
- Dimension unit selecting : press button $\underset{\text { UNT }}{ }$ to change the
dimension unit.
1 WARNING
- During above operations, it is prohibited to put the wood workpiece on the table.


### 5.1.5 FEED OPERATION

- To feed the workpiece into the machine, assume proper operating position, Stand offset to one side of the feed opening to avoid any kick-back, damage to human body. Do not push the lumber once the infeed roller has been engaged. Let the infeed roller move the workpiece into the planer at its own rate.
- To outfeed the workpiece from the machine, position yourself offset to one side of the outfeed opening. Do not pull the lumber as it exits the machine. Let the out-feed roller move the workpiece out of the planer at its own rate,but support the lumber as it moving past the extension rollers, if needed.


## ell CAUTION

-If workpiece have different thickness at the two ends, please let the thicker end pass the infeed and outfeed rollers firstly, to avoid jamming.
-If cut depth is 8 mm or above, the workpiece cannot pass the feed rollers.
-The thicknesser table should be cleaned regularly. -The remaining resin on the machine should be cleaned timely.
-Do not smear oil on the table, otherwise the oil will immerse into the wood workpiece.
-Do not cut workpiece with hard knot, nail. Do not cut the cracked wookpiece.

- Do not process any workpiece with a length less than 280 mm , because it cannot be feed by the rollers.


FIG.5.1.3


FIG.5.1.4


FIG.5.1.5.1

### 5.2 STARTING

## 1 warning

Before starting the machine, check all protective devices in normal conditions. Follow the below sequence to start the machine.(FIG.5.2)


FIG.5.1.5.2

1. Turn the main power supply control switch $D$ to "ON" position, then the main power light $G$ will light, the lift control panel $F$ is activated.
2. Use the lift control panel F or the lift control knob H to lift or drop the table to proper position.
3. Push the green button of the main motor switch $B$, to start the main motor.
4. Turn the feed motor switch I to ON position, to start the infeed motor.
5. Adjust the feed speed adjustment knob J to " + " or "-" , to adjust the infeed speed.

## A warning

If the phase sequence lamp (Red) is lighted after power on and turn on the main power switch, the machine will fail to start because of the phase sequence protection. Now please exchange any two phase sequence and then restart the machine. If the main power indicator (White) is lighted and the phase sequence lamp (Red) is off, now the machine is under the normal condition for operation.

### 5.3 STOPPING

## $\triangle$ WARNNING

Stopping machine must be after the main motor finished Y- $\Delta$.
Normal stop
Directly press the red button of main motor switch $B$, to stop the machine.
Emergency stop
Press the emergency stop switch A, or press the emergency stop switch $E$ which near the dust collector port on the machine back side, then emergency stop the machine.

## 6. MAINTENANCE

### 6.1 CLEANING OF MACHINE

The complete cleaning will guarantee long life of the machine and helps to eliminate potential safety hazard.
A. warning

Before starting any cleaning, adjusting and maintenance, dismounting any other devices which connected to this machine, put a warning sign besides the machine.
-After daily processing operation finished, remove the dust and clean the components thoroughly.
-At least once every 6 months or every 500 operating hours remove the side covers in order to get full access for cleaning of the internal dust.

### 6.2 LUBRICATION OF MACHINE

- In order to remove the dust and chips, per every 500 hours, clean all belts by soft brush.
- Clean thoroughly the machine by strong jet of compressed air, after the cleaning, smear grease on the feeding sprocket 6.2.A and drive chain 6.2.B, inject lubricating grease into the grease cup 6.2.C of four lift columns 6.2.D.
- Pay attention not smear grease on belts or pulleys.


FIG.5.2


FIG.6.2

### 6.3 CHECKING THE CONDITION OF SOME UNITS AFTER OPERATION

- Power off before any maintenace.
- Never over tighten the belts, to avoid damage to bearings or over heating.
- Every month check the belts tension at least one time, do proper adjustment if needed.
- Over tightening the belts will shorten the belts life.
- The belts need avoid to contact any grease or paint.
- Cleaning the belts and pulley grooves by dry and soft brush only.
- Never use water or organic solvent for any cleaning.


### 6.4 CHANGING BELT

## - WARNING

Before changing belts or doing any adjustment to this machine, please make sure the machine is completely powered off.
Tools required:
-3 mm allen wrench
-5 mm allen wrench
-8 mm allen wrench
-18mm double ended spanner
-Open the belt cover A and door B .
-Loose the two nuts $C$ of main motor mount bracket,pull the main motor to proper height, or adjust nut $E$ to adjust the motor height.
-After belt D is loose, take off three belts one by one.

## CAUTION

During adjustment to the motor, please avoid to damage the motor cover and wiring box.
-Clean the pulley grooves thoroughly by soft brush. -Replace to three new belts, tighten the main motor to proper position by adjusting nut C . Pay attention to put


FIG.6.4

### 6.5 ELECTRICAL WIRING DIAGRAM

-The installation of electric components must be operated by trained professional worker.
-Use wiring box for the main power connections.
-Changing power supply cords must be operated by trained professional worker.
NARNING To avoid electric shock or fire, any repairing and maintence to the electric system must be operated by trained professional worker, and only use authorized original accessories.



## 7 TROUBLE SHOOTING

| Common problem | Cause | Solution |
| :---: | :---: | :---: |
| Machine stop running or not start | Motor is overload and in protection mode | Wait the motor cool down and restart |
|  | Fail to plug in | Plug in |
|  | The fuse is burnt or circuit breaker failure | Replace fuse or reset circuit breaker |
|  | Cable damaged | Replace cable |
|  | Phase sequence protection | Exchange any two phase sequence |
| Digital display is not accurate | Wrong program in Programmable Logic Controller | Readjust program |
| Cutting result is not ideal | Dull blade | Replace blade |
|  | Blade installed on opposite direction | Reinstall blade |
|  | The blade is not clean | Remove the blade and clean |
|  | Improper blade | Replace to proper blade |
|  | Table is not clean | Clean the table |
|  | Wrong infeed and outfeed rollers height | Readjust infeed and outfeed rollers height |
| Workpiece jammed between table and cutterhead | Table height not fit the cutting depth of workpiece | Readjust the table height, cut below the maximum cutting depth |
|  | Wood workpiece bending too much | Change to new wood workpiece |
| Cutterhead rotation speed is too low | Extension power cable is too long or too light | Replace to correct power cable |
|  | Low voltage | Contact local power supply company |
| Too much vibration | Uneven ground | Adjust position, put on even ground |
|  | Belts worn out too much | Replace to new original belts |
|  | Motor installation is too loose | Tighten the bolts of motor installation |
|  | Fasteners is too loose | Tighten the fasteners |
|  | Blade damage | Replace blade |


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