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## **HOLZMANN CTF45P500W Spindle Upgrade Set**



## SAFETY SIGNS



EC-CONFORM: This product complies with the EC-directives.



**READ THE USER MANUAL!** Read the user and maintenance manual carefully and get familiar with the controls in order to use the machine correctly and to avoid injuries and machine defects.



**ATTENTION!** Ignoring the safety signs and warnings applied on the machine as well as ignoring the security and operating instructions can cause serious injuries and even lead to death.

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

Delivery content



#	Description	Qt	#	Description	Qty.
1	connection cable	1	6	spindle bracket	1
2	flat head screw	6	7	connection plate	1
3	SHCS M5x60	6	8	spindle motor 500W	1
4	allen key	2	9	power supply	1
5	power cable	1			

## Technical data

Specification	
power adapter input voltage	100-240 V / 50-60 Hz
power adapter output voltage	48 V DC
spindle power motor	500 W
peak torque	0,6 N.m
spindle speed	0-12000 min-1
spindle radial runout	0,01-0,03 mm
collet holder type	ER11

packaging dimensions (LxWxH)	265x260x95 mm
weight gross	3 kg
weight net	2,8 kg
weight spindle	1,4 kg

## **PREFACE**

### **Dear Customer!**

This manual contains information and important notes for safe commissioning and handling of the spindle upgrade set-CTF45P500W, hereinafter referred to as “machine” in this document.

This manual is part of the machine and must not be removed. Save it for later reference and if you let other people use the machine, add this manual to the machine.

- Please pay special attention to the chapter safety!
- Before first use read this manual carefully. It eases the correct use of the machine and prevents misunderstanding and damages of machine.
- Due to constant advancements in product design, construction, illustrations and contents may deviate slightly. If you notice any errors, please inform us.
- We reserve the right to make technical changes!
- Check the goods immediately after receipt and note any complaints on the consignment note when taking over the goods from the deliverer!
- Transport damage must be reported to us separately to us within 24 hours.
- HOLZMANN MASCHINEN GmbH cannot accept any liability for transport damage that has not been reported.

### **Customer service contact**

H OLZMANN MASCHINEN GmbH 4170 Haslach, Marktplatz 4 AUSTRIA

- Tel +43 7289 71562 – 0 [info@holzmann-maschinen.at](mailto:info@holzmann-maschinen.at)
- [www.holzmann-maschinen.at](http://www.holzmann-maschinen.at)

## **SAFETY**

This section contains information and important notes on the safe commissioning and handling of the machine.

For your safety, read this manual carefully before commissioning. This will enable you to handle the machine safely and thus prevent misunderstandings as well as personal injury and damage to property. Pay special attention to the symbols and pictograms used on the machine as well as the safety information and danger warnings!

### **Intended use of the machine**

- The machine is designed exclusively for the following activities:
- For engraving and milling aluminium, wood, acrylic, PVC, PVB and other soft materials  
This machine only be used together with HOLZMANN table router-CTF45P\_230V, within the prescribed technical limits for this table router.

### **NOTE**

HOLZMANN MASCHINEN GmbH assumes no responsibility or warranty for any other use or use beyond this and for any resulting damage to property or injury.

### **Technical restrictions**

The machine is designed for the work under the following conditions:

- Relative humidity 20 – 60 %
- Temperature (operation) 0 °C to +40 °C
- Temperature (storage, transport) -25 °C to +55 °C

### **Prohibited applications / Dangerous misuse**

- Operating the machine outdoors.
- Operating the machine without adequate physical and mental fitness.
- Operating the machine without knowledge of the manual.
- Modifying the machine design.
- Operating the machine in a potentially explosive environment.
- Operating the machine outside the technical limits specified in this manual.

- Removing of the safety markings attached to the machine.
- Modifying, circumventing or disabling the safety devices of the machine.
- Machining of materials with dimensions outside the limits specified in this manual.
- Cleaning the machine with water, neither with the power switched on nor with the power switched off.
- Cleaning the machine with compressed air, or with your mouth.
- Wearing cotton gloves while operating the machine.

### **Usage of cooling lubricants.**

The non-intended use or the disregard of the explanations and instructions described in this manual will result in the expiration of all warranty claims and compensation claims for damages against HOLZMANN MASCHINEN GmbH.

### **User requirements**

The machine is designed to be operated by one person. The prerequisites for operating the machine are physical and mental fitness as well as knowledge and understanding of the operating instructions. Persons who, due to their physical, sensory or mental capabilities, inexperience or lack of knowledge, are unable to operate the machine safely must not use the machine without supervision or instruction by a responsible person.

Basic knowledge of metalworking especially the correlation of material, tool, feed and speeds. Please note that locally applicable laws and regulations determine the minimum age of the operator and may restrict the use of this machine!

Work on electrical components or equipment may only be carried out by a qualified electrician or under the guidance and supervision of a qualified electrician. Put on your personal protective equipment before working on the machine.

### **General safety instructions**

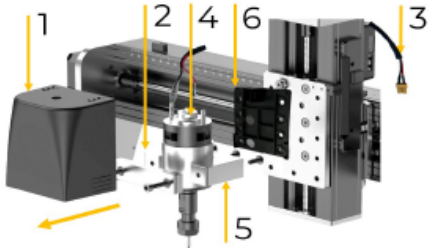

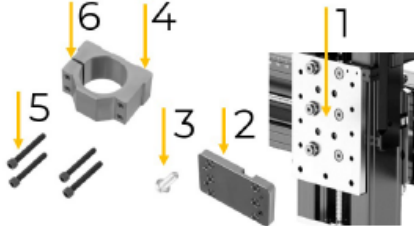
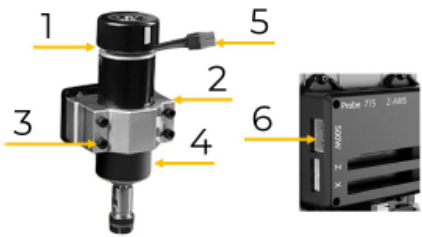
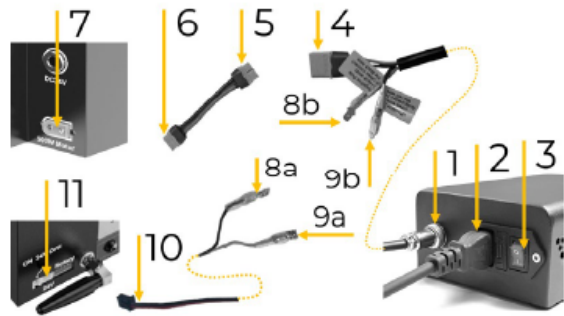
To avoid malfunctions, damage and health impairments when working with the machine must be observed in addition to the general rules and also regarding the safety instructions in the manual from CNC table router CTF45P\_230V.for safe working.

## **ASSEMBLY**

## Check delivery content

Check the delivery immediately for transport damage and missing parts. Report any damage or missing parts to your dealer or the shipping company immediately. Visible transport damage must also be noted immediately on the delivery note in accordance with the provisions of the warranty, otherwise the goods are deemed to have been properly accepted.

## Assemble spindle motor

<b>CAUTION:</b> Before starting work, ensure that the CTF45P_230V table router is switched off.	
	<b>Dismount Spindle motor 80W</b> <ul style="list-style-type: none"> <li>Remove the motor protection (1)</li> <li>Unscrew the lath for motor bracket (2)</li> <li>Unplug motor cable (3) on the Z-axis</li> <li>Remove the spindle motor (4) from the motor bracket</li> <li>Remove the motor bracket (5) and base plate (6)</li> </ul>
	<b>Connection cable to table router CTF45P_230V</b> <ul style="list-style-type: none"> <li>Take out the required cable from the accessories box of the CTF45P_230V table router</li> <li>2-pin data cable (1) (red + red/black cable)</li> <li>Power adapter cable (2) (identical plugs)</li> </ul>
	<b>Mount the motor bracket</b> <ul style="list-style-type: none"> <li>Fasten the connection plate (2) with 6 flat head screws (3) to the Z-axis (1)</li> <li>Screw on easily the motor bracket (4) with 4 SHCS (5) to the connection plate (1)</li> <li>Do not fasten the 2 screws on the slotted side from the bracket</li> </ul>
	<b>Mount the spindle motor 500W</b> <ul style="list-style-type: none"> <li>Guide the spindle motor (1) into motor bracket (2)</li> <li>Fasten the motor with the still loose SHCS (3) on the slotted side of the motor bracket</li> <li>The spindle motor should protrude approx. 30mm from the bottom (4) of the motor bracket</li> <li>Connect the motor cable (5) to slot (6) "500W"</li> </ul>
 <p><u>Cable explanation:</u>        8a = red cable → 8b = green cable        9a = red/black cable → 9b = yellow/green cable</p>	<b>Connection with table router</b> <ul style="list-style-type: none"> <li>Screw the connecting cable (1) onto the power supply unit</li> <li>Connect the power cable (2) to the power supply</li> <li>Set the on/off switch to "0".</li> <li>Connect the connection cable (4) to one end of the adapter cable (5)</li> <li>Insert the other end (6) into the table milling machine (7)</li> <li>Connect the 2-pin data cable to the connection cable (8a→8b, 9a→9b)</li> <li>Plug in the 2-pin black plug (10) into the table milling machine (11) "24V"</li> <li>Set switch 24V to "ON"</li> </ul>

## OPERATION

Only operate the machine when it is in a perfect condition. Before each operation, a visual inspection of the machine must be carried out. Safety devices and operating elements must be checked carefully. Check screw connections for damage and tight fit.

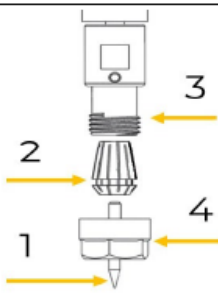
## Operating instructions

- This machine can only be used together with CFT45P\_230V.
- Before operation, all components must be checked for tightness.
- During the engraving and milling process, always pay attention to the travel path of the milling cutter and milling cutter head so that they do not collide with objects on and around the work table. You should also pay attention to the connection cables between the machine and the spindle motor.
- In dangerous situations you should always be able to activate the emergency stop switch immediately.

## Handling


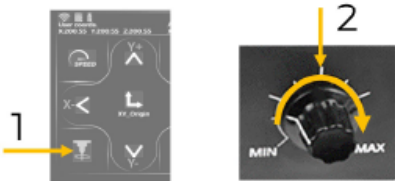
### Mount the milling cutter

**NOTE:** The diameter of the milling cutter and the collet chuck must be identical!

<b>NOTE:</b> The diameter of the milling cutter and the collet chuck must be identical!	
	<ul style="list-style-type: none"><li>• Always switch off the machine before working on the spindle!</li><li>• Insert the collet chuck (2) into the lock nut (4), this will snap into place</li><li>• Insert the desired tool (1) into the collet chuck (2)</li><li>• Insert them together into the collet holder (3) of the spindle</li><li>• Tighten the lock nut with the open-end wrenches (size 14 + size 17) (→min. 16Nm, max. 25Nm)</li><li>• For milling cutter selection, see chapter „milling cutter“</li></ul>
<b>CAUTION:</b> Milling cutter clamping length in the collet chuck should be minimum one third of the total length of the cutter!	

### Start the motor



	<p><b>Establish power supply</b></p> <ul style="list-style-type: none"> <li>• Plug the power cable (1) of the power supply into a suitable power socket</li> <li>• Turn the potentiometer (2) to MIN</li> <li>• Shift the switch (3) on the power supply to "I"</li> </ul>
	<p><b>Spindle motor test</b></p> <ul style="list-style-type: none"> <li>• Turn the machine CTF45P_230V on</li> <li>• Press "Spindle" (1) on the control panel and turn the potentiometer (2) to the desired speed so that the spindle motor starts</li> <li>• Press "Spindle" (1) again to stop the spindle motor</li> </ul>
<p><b>NOTE:</b> If the function test does not work, check the wiring from the motor and repeat the test.</p>	

NOTE: If the function test does not work, check the wiring from the motor and repeat the test.

## Start milling process

The spindle motor has an automatic start-stop system and starts automatically after selecting the milling program and stops automatically at the end of the program.

## NOTE

Further information on operation can be found in the user manual table router CTF45P\_230V!

## CLEANING, MAINTENANCE, STORAGE, DISPOSAL

## WARNING

Handling the machine with connected power supply may result in serious injury or death. Always disconnect the machine from the power supply before cleaning, maintenance or repair work and secure it against unintentional reconnection.

## Cleaning

Regular cleaning guarantees the long service life of your machine and is a prerequisite for its safe operation.

## NOTE

Incorrect cleaning products can attack the finish of the machine. Dont use any solvents, nitro thinners or other cleaning products that could damage the machine's finish. Observe the specifications and instructions of the cleaning agent manufacturer.

- Remove chips and dirt particles from the machine after each use with a proper tool.
- Do not use compressed air or your mouth to remove the chips from the machine. To do this, use a brush.

## Maintenance

The machine is low-maintenance and only a few parts need to be serviced. Malfunctions or defects that could affect your safety must be repaired immediately!

- Before each operation, check the perfect condition of the safety devices.
- Regularly check the perfect and legible condition of the warning and safety labels of the machine.
- Use only proper and suitable tools.
- Use only original spare parts recommended by the manufacturer.

## Maintenance plan

The type and degree of machine wear depends to a large extent on the operating conditions. The following intervals apply when the machine is used within the technical limits:

Interval	Components	Action
<b>before usage</b>	• components	• clean
	• screw connection	• check
<b>once a week</b>	• cables	• check
<b>if required</b>	• milling cutter	• check, replace à if needed

## Storage

Store the machine in a dry, frost-proof and lockable place when not in use. Disconnect

the machine from the power supply. Make sure that unauthorised persons and especially children do not have access to the machine.

**NOTE**

Improper storage can damage and destroy important components. Only store packed or already unpacked parts under the intended ambient conditions!



**Disposal**

Observe the national waste disposal regulations. Never dispose of the machine, machine components or operating equipment in the residual waste. If necessary, contact your local authorities for information regarding available disposal options. If you purchase a new machine or equivalent equipment from your specialist dealer, he is obliged in certain countries to dispose of your old machine properly.

**TROUBLESHOOTING**

**WARNING**

Danger due to electrical voltage!

- Handling the machine with connected power supply may result in serious injury or death.
- Disconnect the machine from the power supply before starting work to eliminate defects!

Many possible sources of error can be eliminated in advance if the machine is properly connected to the power supply.

If you are unable to carry out the necessary repairs properly and/or do not have the required training, always consult a specialist to solve the problem.

Trouble	Possible cause	Solution
---------	----------------	----------

<b>motor does not run</b>	<ul style="list-style-type: none"> <li>wiring incorrect</li> </ul>	<ul style="list-style-type: none"> <li>control the wiring to the motherboard</li> </ul>
<b>Insufficient surface quality</b>	<ul style="list-style-type: none"> <li>feed per revolution too high</li> </ul>	<ul style="list-style-type: none"> <li>adjust spindle speed and feed</li> </ul>
<b>Vibrations during the milling process</b>	<ul style="list-style-type: none"> <li>weak clamping</li> </ul>	<ul style="list-style-type: none"> <li>check clamping</li> </ul>
	<ul style="list-style-type: none"> <li>cutting data</li> </ul>	<ul style="list-style-type: none"> <li>adjust spindle speed and feed</li> </ul>

## CE-CERTIFICATE OF CONFORMITY

HOLZMANN MASCHINEN® GmbH 4170 Haslach, Marktplatz 4, AUSTRIA Tel.: +43 7289 71562-0 <a href="mailto:info@holzmann-maschinen.at">info@holzmann-maschinen.at</a> <a href="http://www.holzmann-maschinen.at">www.holzmann-maschinen.at</a>
<b>name</b>
<b>spindle upgrade set</b>
<b>model</b>
<b>CTF45P500W</b>
<b>EC-directives</b>
2011/65/EC 2014/30/EC 2014/35/EC
<b>applicable Standards</b>

EN 55032:2015+A1:2020; EN 55035:2017+A11:2020;  
EN 61000-3-3:2013+A2:2021+AC:2022-01; EN IEC 61000-3-2: 2019 + A1:2021; EN I  
EC 61000-3-2: 2019+A2:2024; EN IEC 62368-1:2020+A11:2020

Technische Dokumentation HOLZMANN MASCHINEN GmbH 4170 Haslach, Marktplatz  
4

Haslach, 27.10.2024 Ort / Datum place/date

**HOLZMANN MASCHINEN**  
GmbH  
Marktplatz 4, 4170 Haslach  
weiterer Standort:  
Gewerbepark 8, 4707 Schüttensberg  
[www.holzmann-maschinen.at](http://www.holzmann-maschinen.at)  
DI (FH) Daniel Schörgenhuber  
Geschäftsführer / Director

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## FAQ

- **Q: What are the technical specifications of the spindle upgrade set?**

A: Refer to section 3.2 for detailed technical data of the product.

- **Q: How do I start the motor?**

A: Instructions for starting the motor can be found in section 7.2 of the user manual.

## Documents / Resources



## [HOLZMANN CTF45P500W Spindle Upgrade Set \[pdf\]](#) User Manual

CTF45P500W, CTF45P500W Spindle Upgrade Set, CTF45P500W, Spindle Upgrade Set, Upgrade Set

## References

- [User Manual](#)

CTF45P500W, CTF45P500W Spindle Upgrade Set, HOLZMANN, Spindle Upgrade Set, Upgrade

HOLZMANN Set

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