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HOLZMANN CTF45PLASER20W 20W Laser Modul



SAFETY SIGNS

SAFETY SIGNS

DEFINITION OF SYMBOLS

 **CE** 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.

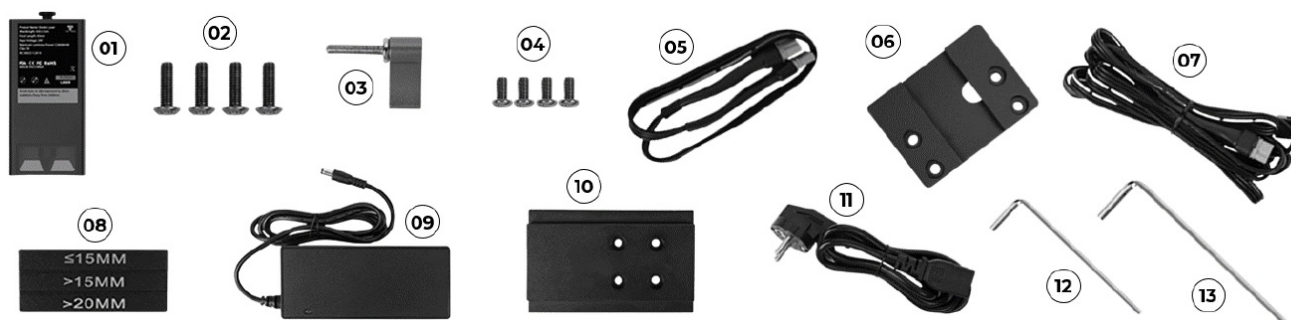


Warning of laser beam.

In accordance with EN 60825-1, the machine is classified as high-power class 4. This machine emits invisible laser radiation at a wavelength of 450 nm and 20W laser voltage. Direct or indirect exposure to high levels of laser radiation can cause eye or skin damage. Although the radiation is invisible, the beam can cause irreversible damage to the retina and cornea. Suitable and approved laser safety equipment must be worn at all times when operating the machine.

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

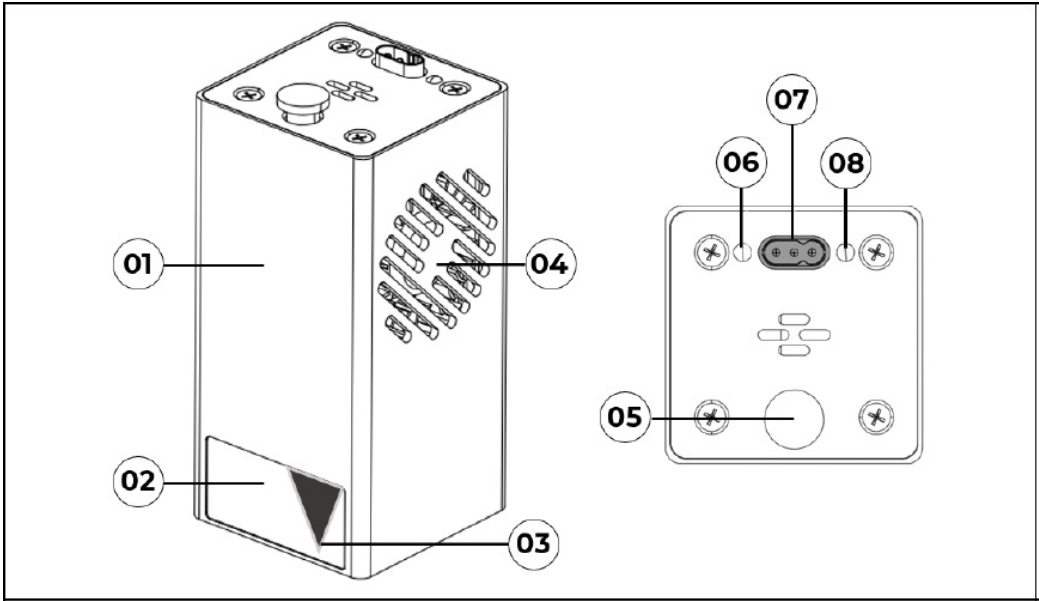
Delivery content



#	Description	Qty	#	Description	Qty
1	laser 20W	1	8	laser focus adjusting block	1
2	half head screw M5x15	4	9	adapter 24V	1
3	handle	1	10	laser connection plate B	1
4	half head screw M3x6	1	11	power cord	1

5	connection cable 1 (same plug)	4	1 2	allen key 3mm	1
6	laser connection plate A	1	1 3	allen key 2mm	1
7	connection cable 2	1	1 4		1

Components



	description
1	laser outer shell
2	privacy protection window
3	laser head
4	fan cooling
5	plug for external air pump
6	green control light
7	laser terminal

8	red control light
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Technical data

Specification	
power adapter supply input	100-240 V / 50-60 Hz
power adapter output and machine power supply	24 V 5A
laser modul optical power	20 W
laser local lenght	45 mm
wave length	450 ± 5 nM
engraving precision	0,08 mm
CAM Software / support CAM software	LightBurn, Laser GRBL
file recognition format	NC, DXF, BMP, JPG, PNG, GC ODE
max. cutting depth plywood/pine	15 mm
laser dimensions (LxWxH)	50x50x102 mm
packaging dimensions (LxWxH)	251x193x86,5 mm
weight gross	1,4 kg
weight net	1,2 kg

PREFACE

Dear Customer!

This manual contains information and important notes for safe commissioning and handling of laser 20W-CTF45PLASER20W, 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.

Copyright

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This documentation is protected by copyright. All rights reserved! In particular, the reprint, translation and extraction of photos and illustrations will be prosecuted.

The place of jurisdiction is the regional court Linz or the court responsible for 4170 Haslach is valid.

Customer service contact

H OLZMANN MASCHINEN GmbH

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- AUSTRIA
- Tel +43 7289 71562 – 0
- info@holzmann-maschinen.at
- 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 cutting wood, plastic, paper, leather, bamboo, sponge paper, stainless steel, stone and acrylic. 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.
- Operating materials that produce toxic fumes when processed with laser beams.

- Operating of highly reflective materials such as aluminum, chrome, precious metals, metal foils, stainless steel, brass, copper, titanium, etc.
- Cleaning the machine with water, neither with the power switched on nor with the power switched off.

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.

Special safety instructions

- Keep a fire extinguisher or other extinguishing equipment in the immediate vicinity of the machine, as the laser beam can ignite flammable material.
- Never touch the laser beam, do not reach into any part of the laser beam with any part of your body during operation and never try to look directly into the laser beam.
- Only operate the machine with an inserted lens. An unfocussed laser beam can be

reflected out of the housing.

- Do not process any materials that produce toxic vapours when processed with laser beams. Observe the relevant material safety data sheet (MSDS).

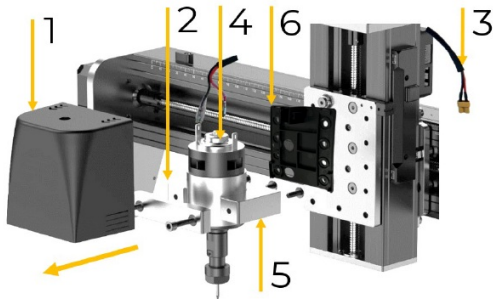
ASSEMBLY

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.

Dismantling spindle motor

CAUTION: Before starting work, ensure that the CTF45P_230V table router is switched off!



Dismantling spindle motor

- Remove the motor protection cover (1)
- Remove the lath for motor bracket (2)
- Remove the motor plug (3) from the Z-axis
- Remove the spindle motor (4) from the motor bracket
- Remove the motor bracket (5)
- Remove the motor protection base plate (6)

Assembly Laser 20W

	<ul style="list-style-type: none"> • Mount connection plate-A (1) on the back of the laser (2) with 4 screw M3x6 (3) • Mount connection plate-B (4) on Z-axis (5) with 4 screws M5x15 (6) • Screw the handle (7) into the connection plate B (4) • Do not turn the handle too far at first!
	<ul style="list-style-type: none"> • Install the laser (1) with beam direction downwards into the dovetail guide from connection plate-B (2) and • Fasten it with the handle (3) in suitable position. • Connect the laser (4) and the Z-axis "PWM" (5) with the connection cable 1

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 be only used together with CTF45P_230V.
- The laser may only be used if it has been properly secured in a vertical position with the beam pointing downwards and all safety devices have been observed. Accidental changes in position and beam direction are prohibited.
- Accidental changes in position and beam direction are prohibited.
- Only start the laser after the laser focus has been successfully adjusted.
- Avoid processing highly reflective materials. Reflective or very shiny objects should also be kept as far away as possible from the area around the laser beam.

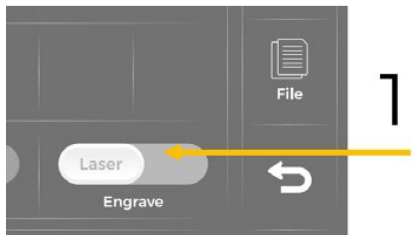
- Immediately before switching on the laser, everyone present in the laser area must be informed so that everyone has the opportunity to take the necessary protective measures in good time, in particular putting on laser safety glasses.
- Suitable and approved laser safety equipment must be worn at all times when operating the machine.
- Suitable and approved laser safety equipment (class 4 laser safety glasses) must be worn at all times while the machine is in operation.
- Use appropriate ventilation systems to remove fumes and particles produced during the engraving and cutting process that may be harmful if inhaled.
- Choose environmentally friendly engraving materials such as PP, acrylic, wood and other degradable and recycable materials to avoid harmful fumes being released during the milling process.
- Before each operation, check whether the laser privacy protection window is in perfect condition. Otherwise the machine may not be operated!

NOTE

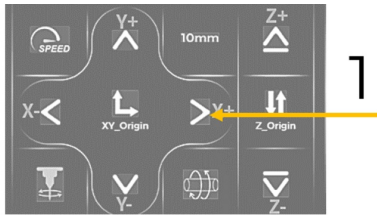
Before each laser engraving process and laser cutting process you should place a suitable wooden plate or aluminium plate under the workpiece to avoid possible burns or cuts on the machine's work table!

Handling

Switch to laser mode

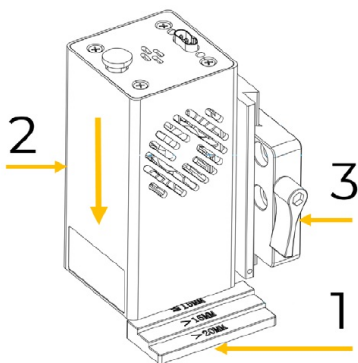
	<ul style="list-style-type: none"> • After the machine is switched on, switch in the menu "Setting" to laser mode (1) on the control panel. • The air cooling on the laser starts automatically.
<p>NOTE: After all steps are completed, first perform a motion test using the control buttons on the control panel of the CTF45P_230V machine!</p>	

Adjust laser focus



- Now move the laser module over the starting point of the engraving/cutting process of your workpiece using the control buttons $X\pm/Y\pm/Z\pm$.

NOTE: When moving the axes and the laser, make sure that possible collisions of the machine and all components can be completely ruled out!



- Place the laser focus adjustment block (1) between the laser outer shell and the workpiece.
- Now adjust the height of the laser (2) using the Z- control button on the control panel till 10mm over the workpiece
- Fine adjustment should be done by handle (3) so that there is no longer a gap between the workpiece, adjustment block and laser and tighten the handle.

Adjustment block explanation:


$\leq 15 \text{ mm}$ à Engraving or cutting for workpiece thickness less than or equal to 15mm.>

$> 15 \text{ mm}$ à Cutting for workpiece thickness greater than 15mm.

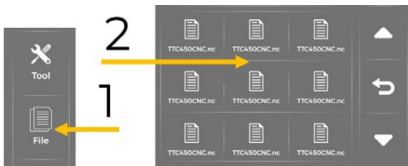
$> 20 \text{ mm}$ à Cutting for workpiece thickness greater than 20mm.

NOTE: If the Z-axis limit switch is activated during the laser focus adjustment, you must unlock this limit switch on the display, then switch off the machine, readjust the laser module using the handle and tighten it again. Then try the setting again.

NOTE: The adjusting block must not be clamped and must be removed again after successful adjustment!



- After laser focus adjustment, press “Position” (1) on the control panel
- The user coordinates (2) are now set to X0, Y0, Z0
- This means your starting point for the engraving/cutting process is defined.



Choose file

- Click on „File“ (1) in main menu to select the desired file (2).

NOTE: Start with a sample first. If the parameters set for the engraving job are incorrect, you should be able to stop it at any time, then correct the settings and start again.

NOTE

Further information on operation can be found in the operating instructions 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. Don't 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
before usage	<ul style="list-style-type: none">• components	<ul style="list-style-type: none">• clean
once a week	<ul style="list-style-type: none">• cables	<ul style="list-style-type: none">• check
if required	<ul style="list-style-type: none">• screw connection	<ul style="list-style-type: none">• check

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
Laser does not work	<ul style="list-style-type: none">• cable connection	<ul style="list-style-type: none">• check

Bad engraving/cutting result	<ul style="list-style-type: none"> • wrong parameter setting 	<ul style="list-style-type: none"> • reset parameters
	<ul style="list-style-type: none"> • wrong material selection 	<ul style="list-style-type: none"> • select new material
	<ul style="list-style-type: none"> • laserfocus incorrect 	<ul style="list-style-type: none"> • set laser focus new

SPARE PARTS

Spare parts order

With original HOLZMANN spare parts you use parts that are attuned to each other shorten the installation time and elongate your products lifespan.

NOTE

The installation of parts other than original spare parts leads to the loss of the guarantee! Therefore: When replacing components/parts, only use spare parts recommended by the manufacturer.

Order the spare parts directly on our homepage—category SPARE PARTS or contact our customer service

- via our Homepage—category SERVICE—SPARE PARTS REQUEST,
- by e-mail to service@holzmann-maschinen.at .

Always state the machine type, spare part number and designation. To prevent misunderstandings, we recommend that you add a copy of the spare parts drawing with the spare parts order, on which the required spare parts are clearly marked, especially when not using the online-spare-part catalogue.

CE-CERTIFICATE OF CONFORMITY

- HOLZMANN MASCHINEN® GmbH

- 4170 Haslach, Marktplatz 4, AUSTRIA
- Tel.: +43 7289 71562-0
- info@holzmann-maschinen.at
- www.holzmann-maschinen.at
- name
Lasermodule 20W / laser 20W
- Typ / model
CTF45PLASER20W
- EU-Richtlinien / EC-directives
2011/65/EC
2014/30/EC
2014/35/EC
- applicable Standards
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 IEC 61000-3-2: 2019+A2:2024; EN IEC 62368-1:2020+A11:2020

Hereby we declare that the above mentioned machines meet the essential safety and health requirements of the above stated EC directives. Any manipulation or change of the machine not being explicitly authorized by us in advance renders this document null and void.

GUARANTEE TERMS

Warranty

For mechanical and electrical components Company HOLZMANN MASCHINEN GmbH grants a warranty period of 2 years for DIY use and a warranty period of 1 year for professional/industrial use – starting with the purchase of the final consumer (invoice date).

In case of defects during this period which are not excluded by paragraph 3, Holzmann will repair or replace the machine at its own discretion.

Report

In order to check the legitimacy of warranty claims, the final consumer must contact his dealer. The dealer has to report in written form the occurred defect to HOLZMANN

MASCHINEN GmbH. If the warranty claim is legitimate, HOLZMANN MASCHINEN GmbH will pick up the defective machine from the dealer. Return shipments by dealers which have not been coordinated with HOLZMANN MASCHINEN GmbH will not be accepted. A RMA number is an absolute must-have for us – we won't accept returned goods without an RMA number!

Regulations

- Warranty claims will only be accepted when a copy of the original invoice or cash voucher from the trading partner of HOLZMANN MASCHINEN GmbH is enclosed to the machine. The warranty claim expires if the accessories belonging to the machine are missing.
- The warranty does not include free checking, maintenance, inspection or service works on the machine. Defects due to incorrect usage through the final consumer or his dealer will not be accepted as warranty claims either.
- Excluded are defects on wearing parts such as carbon brushes, fangers, knives, rollers, cutting plates, cutting devices, guides, couplings, seals, impellers, blades, hydraulic oils, oil filters, sliding jaws, switches, belts, etc.
- Also excluded are damages on the machine caused by incorrect or inappropriate usage, if it was used for a purpose which the machine is not supposed to, ignoring the user manual, force majeure, repairs or technical manipulations by not authorized workshops or by the customer himself, usage of non-original Holzmann spare parts or accessories.
- After inspection by our qualified staff, resulted costs (like freight charges) and expenses for not legitimated warranty claims will be charged to the final customer or dealer.
- In case of defective machines outside the warranty period, we will only repair after advance payment or dealer's invoice according to the cost estimate (incl. freight costs) of HOLZMANN MASCHINEN GmbH.
- Warranty claims can only be granted for customers of an authorized HOLZMANN MASCHINEN GmbH dealer who directly purchased the machine from HOLZMANN MASCHINEN GmbH. These claims are not transferable in case of multiple sales of the machine.

Claims for compensation and other liabilities

The liability of company HOLZMANN MASCHINEN GmbH is limited to the value of goods in all cases.

Claims for compensation because of poor performance, lacks, damages or loss of earnings due to defects during the warranty period will not be accepted.

HOLZMANN MASCHINEN GmbH insists on its right to subsequent improvement of the machine.

SERVICE

After Guarantee and warranty expiration specialist repair shops can perform maintenance and repair jobs. But we are still at your service as well with spare parts and/or product service. Place your spare part/repair service cost inquiry by

- mail to service@holzmann-maschinen.at ,
- or use the online complaint order formula provided on our homepage—category service.

PRODUCT MONITORING

We monitor the quality of our delivered products in the frame of a Quality Management policy.

Your opinion is essential for further product development and product choice. Please let us know about your:

- Impressions and suggestions for improvement.
- Experiences that may be useful for other users and for product design
- Experiences with malfunctions that occur in specific operation modes

We would like to ask you to note down your experiences and observations and send them to us via e-mail or by post:

My experiences:

- name :
- product:

- purchase date :
- purchased from :
- e – mail:

Thank you for your kind cooperation!

- CONTACT: HOLZMANN Maschinen GmbH 4170 Haslach, Marktplatz 4 AUSTRIA
- Tel : +43 7289 71562 0
- info@holzmann-maschinen.at
- HOLZMANN MASCHINEN GmbH www.holzmann-maschinen.at

FAQ


- **Q: How often should I clean the laser module?**

A: It is recommended to clean the laser module after every extended use or as per the maintenance schedule provided in the manual.

- **Q: Can I operate the laser module without adjusting the focus?**

A: Proper focus adjustment is crucial for achieving accurate engraving or cutting results. Always ensure the focus is set correctly before starting any operation.

Documents / Resources

	<p>HOLZMANN CTF45PLASER20W 20W Laser Modul [pdf] User Manual</p> <p>CTF45PLASER20W, CTF45PLASER20W 20W Laser Modul, CTF45PLASER20W, 20W Laser Modul, Laser Modul, Modul</p>
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References

- [User Manual](#)

📁 HOLZMANN

💎 20W Laser Modul, CTF45PLASER20W, CTF45PLASER20W 20W Laser Modul, HOLZMANN, Laser Modul, Modul

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