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Originalfassung

**DE**

**BETRIEBSANLEITUNG**

**CNC TISCHFRÄSE**

Übersetzung / Translation

**EN**

**USER MANUAL**

**CNC TABLE ROUTER**

**ES**

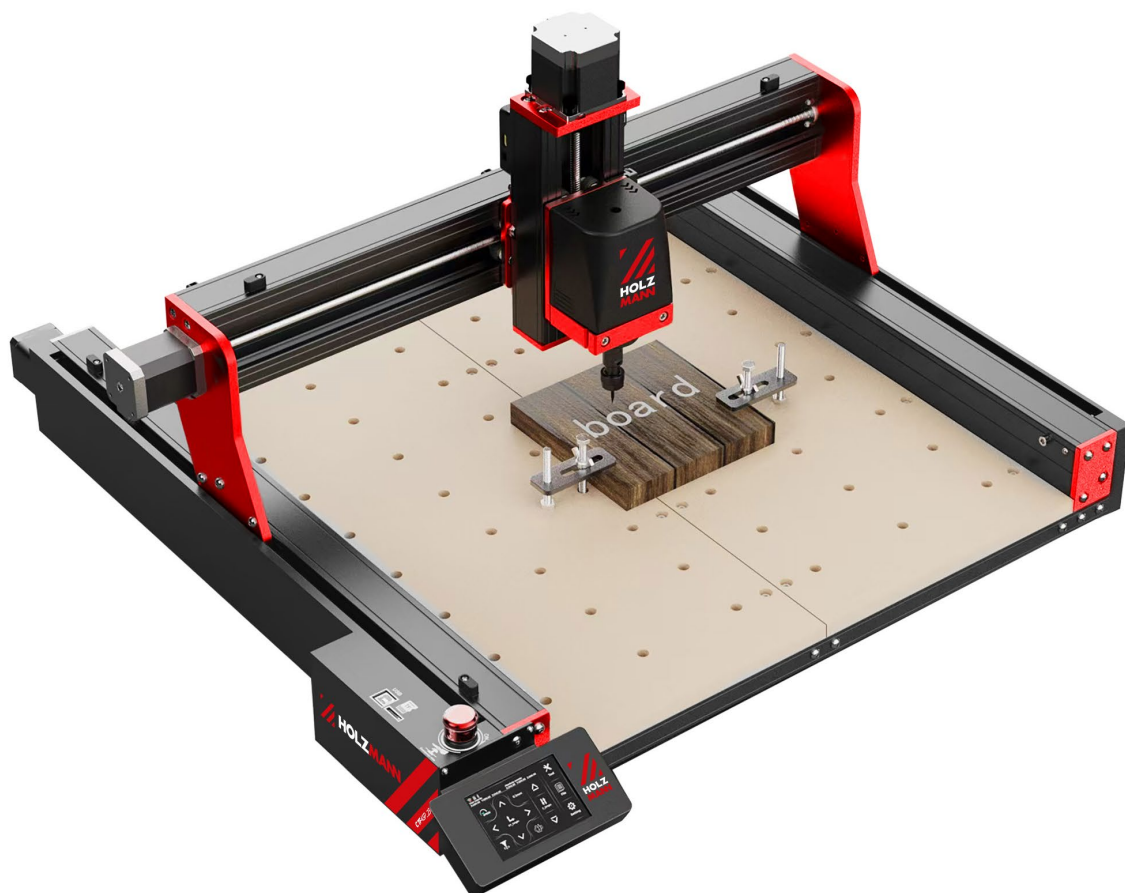
**INSTRUCCIONES DE SERVICIO**

**FRESADORA DE MESA CNC**

**CZ**

**NÁVOD K POUŽITÍ**

**CNC STOLNÍ FRÉZKA**



**CTF45P\_230V**



**YOUR  
JOB.  
OUR  
TOOLS.**



## 2 SICHERHEITSZEICHEN / SAFETY SIGNS / SEÑALES DE SEGURIDAD / BEZPEČNOSTNÍ ZNAČKY

|    |                                                     |    |                                       |
|----|-----------------------------------------------------|----|---------------------------------------|
| DE | SICHERHEITSZEICHEN<br>BEDEUTUNG DER SYMBOLE         | EN | SAFETY SIGNS<br>DEFINITION OF SYMBOLS |
| ES | SEÑALES DE SEGURIDAD<br>SIGNIFICADO DE LOS SÍMBOLOS | CZ | BEZPEČNOSTNÍ ZNAČKY<br>VÝZNAM SYMBOLŮ |



DE **CE-KONFORM:** Dieses Produkt entspricht den EU-Richtlinien.

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

ES **CONFORMIDAD CE:** Este producto cumple con las directivas de la UE.

CZ **CE SHODA:** Tento výrobek vyhovuje směrnici EU.



**BETRIEBSANLEITUNG LESEN!** Lesen Sie die Betriebs- und Wartungsanleitung Ihrer Maschine aufmerksam durch und machen Sie sich mit den Bedienelementen der Maschine gut vertraut, um die Maschine ordnungsgemäß zu bedienen und so Schäden an Mensch und Maschine vorzubeugen.

EN **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.

ES **¡LEER LAS INSTRUCCIONES DE SERVICIO!** Lea atentamente las instrucciones de servicio y de mantenimiento de su máquina y familiarícese con los elementos de mando de la misma para manejarla correctamente y, de este modo, evitar que se produzcan daños personales y en la máquina.

CZ **PŘEČTĚTE SI NÁVOD K PROVOZU!** Přečtěte si pozorně návod k použití a údržbě stroje a dobře se seznámte s jeho ovládacími prvky, abyste mohli stroj správně ovládat, čímž zabráníte škodám na zdraví osob i poškození stroje.

DE **WARNUNG!** Beachten Sie die Sicherheitssymbole! Die Nichtbeachtung der Vorschriften und Hinweise zum Einsatz der Maschine kann zu schweren Personenschäden führen und tödliche Gefahren mit sich bringen.



EN **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.

ES **¡ADVERTENCIA!** ¡Observe los símbolos de seguridad! El incumplimiento de las normas e instrucciones para el uso de la máquina puede llevar a lesiones graves y suponer riesgos mortales.

CZ **VAROVÁNÍ!** Respektujte bezpečnostní symboly! Nedodržení předpisů a pokynů pro použití stroje může vést k vážným zraněním a smrtelným nebezpečím.



DE Nicht auf die Maschine aufsteigen!

EN Don't climb on the machine!

ES ¡No subirse a la máquina!

CZ Nevstupujte na stroj!

DE Schutzausrüstung tragen!



EN Wear protective equipment!

ES ¡Use el equipo de protección!

CZ Používejte ochranné prostředky!



- DE** Maschine vor Wartung und Pausen ausschalten und Netzstecker ziehen!
- EN** Stop and pull out the power plug before any break and engine maintenance!
- ES** ¡Pare la máquina y desconéctela de la red eléctrica antes de llevar a cabo trabajos de mantenimiento y antes de las pausas!
- CZ** Před údržbou a přestávkami vypněte stroj a vytáhněte síťovou zástrčku!



- DE** Warnung vor Schnittverletzungen!
- EN** Warning of cut injuries!
- ES** ¡Advertencia de sufrir lesiones producidas por cortes!
- CZ** Varování před řeznými zraněními!



- DE** Warnung vor gefährlicher elektrischer Spannung!
- EN** Beware of dangerous electrical voltage!
- ES** ¡Advertencia de tensiones eléctricas peligrosas!
- CZ** Varování před nebezpečným elektrickým napětím!



- DE** Vor Nässe schützen!
- EN** Protect from moisture!
- ES** ¡Proteger de la humedad!
- CZ** Chraňte před vlhkem!



- DE** Bedienen mit Handschuhen verboten!
- EN** Operation with gloves forbidden!
- ES** ¡Prohibido el manejo con guantes!
- CZ** Ovládání v rukavicích je zakázáno!



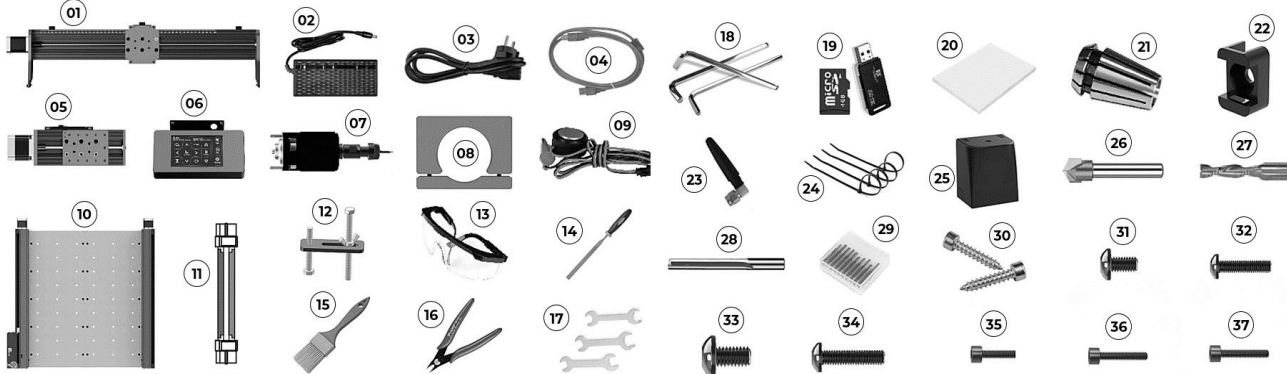
- DE** Keine offene Flamme! Feuer, offene Zündquelle und Rauchen verboten!
- EN** No open flame! Fire, open source of ignition and smoking prohibited!
- ES** ¡Ninguna llama viva! ¡No se permiten fuego, fuentes de ignición abiertas ni fumar!
- CZ** Žádný otevřený oheň! Zákaz ohně, otevřených zápalných zdrojů a kouření!

- DE** **Warnschilder und/oder Aufkleber an der Maschine, die unleserlich sind oder entfernt wurden, sind umgehend zu erneuern.**
- EN** **Missing or non-readable security stickers have to be replaced immediately.**
- ES** **¡Deben sustituirse inmediatamente los letreros de advertencia y/o las etiquetas que haya en la máquina, que se hayan vuelto ilegibles o se hayan retirado!**
- CZ** **Výstražné štítky a/nebo nálepky na stroji, které jsou nečitelné či byly odstraněny, je nutné ihned obnovit!**



### 3 TECHNIK / TECHNICS / TÉCNICA / TECHNICKÁ ČÁST

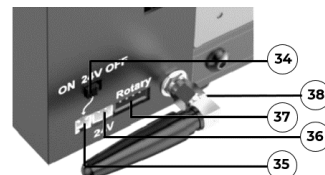
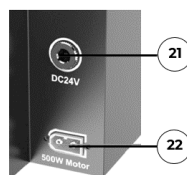
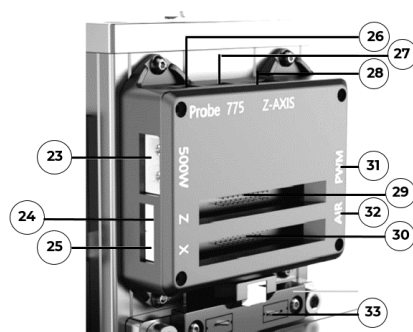
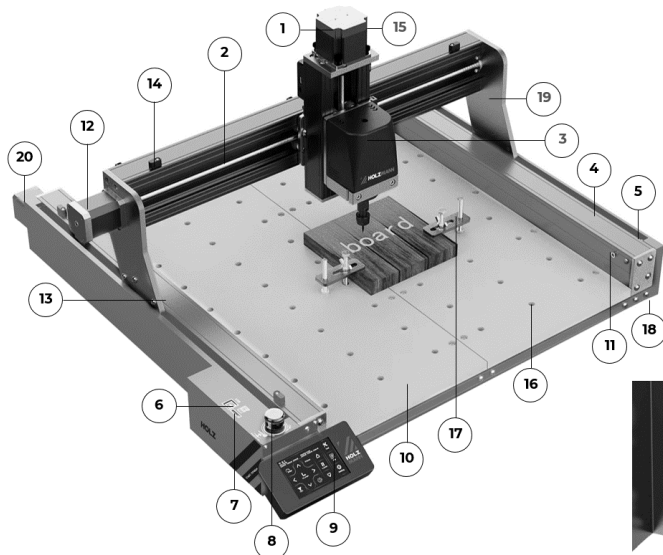
#### 3.1 Lieferumfang / Delivery content / Volumen de suministro / Rozsah dodávky



| #  | Beschreibung / Description                                                                                                                     | Qty | #  | Beschreibung / Description                                                                                                              | Qty |
|----|------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|-----------------------------------------------------------------------------------------------------------------------------------------|-----|
| 1  | X-Achse Baugruppe / X-axis assembly / Conjunto del eje X / X-osa sestava                                                                       | 1   | 20 | PP Probeplatte / PP test plate / Placa de prueba PP / PP zkušební deska                                                                 | 1   |
| 2  | AC-Adapter Netzteil / power supply adapter / Fuente de alimentación del adaptador de CA / AC-Adapter napájecí zdroj                            | 1   | 21 | ER11-6mm Spannzange / ER-11 6mm collet / Pinza de sujeción ER11-6mm / ER11-6mm upínací kleština                                         | 1   |
| 3  | Netzkabel / power cable / Cable de alimentación / Síťový kabel                                                                                 | 1   | 22 | Kabel Befestigung / cable tie mount / Fijación del cable / Kabel upevnění                                                               | 2   |
| 4  | USB-Datenkabel / USB data cable / Cable de datos USB / USB-datový kabel                                                                        | 1   | 23 | Wlan Antenne / Wifi antenna / Antena Wlan / Wlan anténa                                                                                 | 1   |
| 5  | Z-Achse-Baugruppe / Z-axis assembly / Conjunto del eje Z / Z-osa sestava                                                                       | 1   | 24 | Kabelbinder / nylon tie / Sujetacables / Vázací pásek                                                                                   | 14  |
| 6  | Bedienpult / control panel / Pupitre de mando / Ovládací pult                                                                                  | 1   | 25 | Motor Schutzabdeckung + Kabel / motor protection cover + cable / Cubierta de protección del motor + cable / Motor ochranný kryt + kabel | 1   |
| 7  | Spindelmotor 80W (mit ER11-1/4") / spindle motor 80W (with ER11-1/4") / Motor de husillo 80W (con ER11-1/4") / Vřeteno motor 80W (s ER11-1/4") | 1   | 26 | V Bit / V bit / V Bit / V Bit                                                                                                           | 1   |
| 8  | Motorhalterung / motor bracket / Soporte del motor / Motorová držák                                                                            | 1   | 27 | Fräser / milling cutter / Fresa / Fréza                                                                                                 | 1   |
| 9  | Sonde / probe / Sonda / Sonda                                                                                                                  | 1   | 28 | Fräser „gerader Schnitt“ / cutter „straight cut“ / Fresa de corte recto / Fréza „rovný strih“                                           | 1   |
| 10 | Maschinen Basis / machine base / Base de la máquina / Stroj základna                                                                           | 1   | 29 | 30 Grad Schnitzfräser / 30 degree carving cutter / Fresa de tallado de 30 grados / 30 stupňů rezbářská fréza                            | 10  |
| 11 | Adapterkabel / adapter cable / Cable adaptador / Adaptér kabel                                                                                 | 3   | 30 | M5x50 Selbstschrauber / M5x50 self tapping screw / Tornillo autorroscante M5x50 / M5x50 samořezný šroub                                 | 8   |
| 12 | Werkstück Klammer / workpiece clamp / Pinza de pieza de trabajo / Obrobek svorka                                                               | 6   | 31 | M3x5 Schraube / M3x5 screw / Tornillo M3x5 / M3x5 šroub                                                                                 | 2   |
| 13 | Schutzbrille / protective glasses / Gafas de protección / Ochranné brýle                                                                       | 1   | 32 | M3x16 Schraube / M3x16 screw / Tornillo M3x16 / M3x16 šroub                                                                             | 2   |
| 14 | Handfeile / hand file / Lima de mano / Ruční pilník                                                                                            | 1   | 33 | M5x8 Schraube / M5x8 screw / Tornillo M5x8 / M5x8 šroub                                                                                 | 10  |
| 15 | Pinsel / brush / Pincel / Štětec                                                                                                               | 1   | 34 | M5x12 Schraube / M5x12 screw / Tornillo M5x12 / M5x12 šroub                                                                             | 2   |
| 16 | Kneifzange / pliers / Alicates de corte / Kleště                                                                                               | 1   | 35 | Zylinderkopfschraube M5x12 / SHCS M5x12 / Tornillo de cabeza cilíndrica M5x12 / Válcová šroub M5x12                                     | 2   |
| 17 | Gabelschlüssel / open-end wrench / Llave fija / Vidlicový klíč                                                                                 | 3   | 36 | Zylinderkopfschraube M5x20 / SHCS M5x20 / Tornillo de cabeza cilíndrica M5x20 / Válcová šroub M5x20                                     | 4   |
| 18 | Inbusschlüssel / hexagonal wrench / Llave allen / Inbusový klíč                                                                                | 5   | 37 | Zylinderkopfschraube M5x50 / SHCS M5x50 / Tornillo de cabeza cilíndrica M5x50 / Válcová šroub M5x50                                     | 2   |
| 19 | SD Karte + Kartenleser / SD card + Card reader / Tarjeta SD + lector de tarjetas / SD karta + čtečka karet                                     | 1   |    |                                                                                                                                         |     |

**3.1.1 Fräserübersicht / Milling cutter overview / Resumen de fresas / Frézovací přehled**

| Fräser /<br>milling cutter / Fresa /<br>Fréza                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Schaft - Ø /<br>shaft - Ø / Vástago - Ø<br>/ Dřík - Ø | Schnittlänge /<br>cutting length /<br>Longitud de corte /<br>Rezná délka | Gesamtlänge /<br>overall length /<br>Longitud total /<br>Celková délka | Schneidenanzahl /<br>cutter quantity /<br>Número de cuchillas<br>/ Počet břitů |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 6mm                                                   | 11mm                                                                     | 50mm                                                                   | 2                                                                              |
| V-Bit Werkzeuge zum Gravieren von Buchstaben im V-Stil und um den Hintergrund zu entfernen und Bereiche auf der Materialoberfläche flach zu lassen. /<br>V-Bit tools are used for engraving V-style letters. Also can be used to remove the background and leave areas flat on the material surface. / Herramientas V-Bit para grabar letras en estilo V y remover el fondo, dejando áreas planas en la superficie del material. / V-Bit nástroj pro gravírování písmen ve V-stylu a pro odstranění pozadí pro ponechání plochých oblastí na povrchu materiálu                                                                                                                                     |                                                       |                                                                          |                                                                        |                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0,125" / 3,175mm                                      | 20mm                                                                     | 38mm                                                                   | 2                                                                              |
| Gerader Schnitt wird verwendet für Schruppen, Freiräumen, Ausschnitte, Intarsien und Profilierung. /<br>Straight cut can be used for roughing, area clearance, cutouts, inlays and profiling. / El corte recto se utiliza para desbaste, desalajo, recortes, taraceas y perfilado. / Rovný řez se používá pro hrubování, uvolnění prostoru, výstřihy, intarzie a profilování.                                                                                                                                                                                                                                                                                                                      |                                                       |                                                                          |                                                                        |                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0,125" / 3,175mm                                      | 12mm                                                                     | 36mm                                                                   | 2                                                                              |
| Für das Fräsen, wenn eine Spanabfuhr nach oben erwünscht ist. Ebenso wenn eine hohe Werkzeugsteifigkeit, lange Lebensdauer und eine hochwertige Oberflächenbearbeitung erwünscht ist. /<br>Milling cutter is designed for routing, where upward chip removal, tool rigidity, long life and high quality finish is desired. / Para el fresado, cuando se desea una evacuación de viruta hacia arriba. También cuando se desea una alta rigidez de herramienta, larga vida útil y un acabado superficial de alta calidad. / Pro frézování, když je požadován odvod třísek směrem nahoru. Stejně tak, když je požadována vysoká tuhost nástroje, dlouhá životnost a vysoce kvalitní povrchová úprava. |                                                       |                                                                          |                                                                        |                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0,125" / 3,175mm                                      | 15mm                                                                     | 27mm                                                                   | 1                                                                              |
| 30° Schnitzschneider wird für feine Detailgravuren verwendet. (Spitzen-Ø = 0,1mm) /<br>30° carving cutter is used for fine detail engraving. (tip-Ø = 0,1mm) / El cortador de 30° se utiliza para grabados de detalles finos. (Diámetro de punta = 0,1mm) / 30° řezbářský nástroj se používá pro jemné detaily gravírování. (Špička-Ø = 0,1 mm)                                                                                                                                                                                                                                                                                                                                                    |                                                       |                                                                          |                                                                        |                                                                                |

**3.2 Komponenten / Components / Componentes / Komponenty**

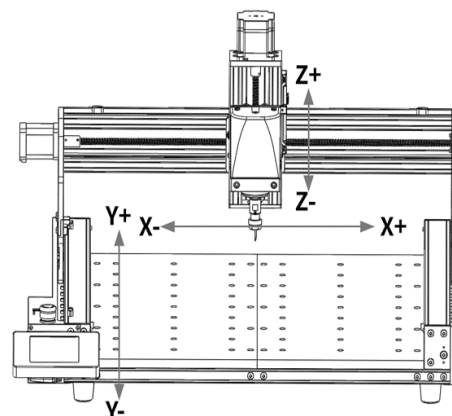
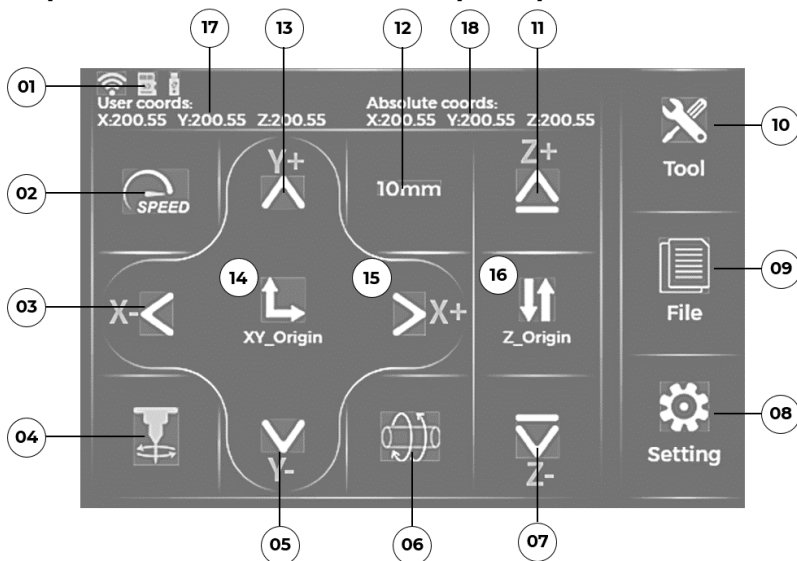
|   | Beschreibung / description                                                                   |    | Beschreibung / description                                                                                                         |
|---|----------------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Z-Achse Motor / Z-axis motor / Motor del eje Z / Z-osa motor                                 | 20 | Y-Achse Motor / Y-axis motor / Motor del eje Y / Y-osa motor                                                                       |
| 2 | Leitspindel X-Achse / leadscrew x-axis / Husillo guía del eje X / Vodící šroub X-osa         | 21 | DC Netzteilanschluss / DC power interface / Conexión de alimentación de DC / DC napájecí konektor                                  |
| 3 | Spindelkopf / spindle head / Cabeza de husillo / Vřeteno hlava                               | 22 | 500W Spindel Eingang / 500W spindle input / Entrada de husillo de 500W / 500W vřeteno vstup                                        |
| 4 | Seitenprofil / side profil / Perfil lateral / Boční profil                                   | 23 | 500W Spindel Ausgang / 500W spindle output / Salida de husillo de 500W / 500W vřeteno výstup                                       |
| 5 | Seitenpfanne / sheet metal side panel / Bandeja lateral / Boční miska                        | 24 | Z-Achse Endschalter Eingang / Z-axis limit signal input / Entrada del interruptor de límite del eje Z / Z-osa koncový spínač vstup |
| 6 | USB-Schnittstelle für PC / USB interface for PC / Interfaz USB para PC / USB rozhraní pro PC | 25 | X-Achse Endschalter Eingang / X-axis limit signal input / Entrada del interruptor de límite del eje X / X-osa koncový spínač vstup |
| 7 | SD-Karten Steckplatz / TF card slot / Ranura para tarjeta SD / SD-karta slot                 | 26 | Sondensignal Eingang / Probe signal input / Entrada de señal de sonda / Sonda signál vstup                                         |



|    |                                                                                                                                            |    |                                                                                                                  |
|----|--------------------------------------------------------------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------------------------------|
| 8  | Not Aus Schalter / emergency stop switch / Interruptor de desconexión de emergencia / Nouzový vypínač                                      | 27 | 775 Spindelmotor Ausgang / 775 spindle motor output / Salida de motor de husillo 775 / 775 vřeteno výstup        |
| 9  | Bedienpult / control panel / Pupitre de mando / Ovládací pult                                                                              | 28 | Z-Achse Motor Ausgang / Z-axis motor output / Salida de motor del eje Z / Z-osa motor výstup                     |
| 10 | Arbeitsplatte / countertop / Superficie de trabajo / Pracovní deska                                                                        | 29 | Strom Eingang (M) / power input port (M) / Entrada de corriente (M) / Napájení vstup (M)                         |
| 11 | M5 Kalibrierschraube / M5 calibration screw / Tornillo de calibración M5 / M5 kalibrační šroub                                             | 30 | Signal Ausgang (S) / signal output port (S) / Salida de señal (S) / Signál výstup (S)                            |
| 12 | X-Achse Motor / X-axis motor / Motor del eje X / X-osa motor                                                                               | 31 | Laser Ausgang (PWM) / laser output (PWM) / Salida de láser (PWM) / Laser výstup (PWM)                            |
| 13 | Y-Achse Endschalter / Y-axis limit switch / Interruptor de límite del eje Y / Y-osa koncový spínač                                         | 32 | Luftpumpen Ausgang / air pump output / Salida de bomba de aire / Výstup vzduchového čerpadla                     |
| 14 | X-Achse Endschalter Auslöser / X-axis limit switch trigger / Activador del interruptor de límite del eje X / X-osa koncový spínač spouštěč | 33 | X-Achse Endschalter / X-axis limit switch / Interruptor de límite del eje X / X-osa koncový spínač               |
| 15 | Z-Achse Endschalter / Z-axis limit switch / Interruptor de límite del eje Z / Z-osa koncový spínač                                         | 34 | 24V ON/OFF Schalter / 24V On/Off switch / Interruptor de encendido/apagado de 24V / 24V zapínání/vypínání spínač |
| 16 | M6 Befestigungsgewinde / M6 fixing hole / Rosca de fijación M6 / M6 upevňovací závit                                                       | 35 | 24V Ausgang / 24V output / Salida de 24V / 24V výstup                                                            |
| 17 | Werkstück Klammer / workpiece clamp / Pinza de pieza de trabajo / Obrobek svorka                                                           | 36 | 24V Auslösungssignal / 24V Triggering signal / Señal de disparo de 24V / 24V spouštěcí signál                    |
| 18 | Gummifüße / rubber feet / Pies de goma / Pryžové patky                                                                                     | 37 | A-Achse / A-axis / Eje A / A-osa                                                                                 |
| 19 | X-Achse Seitenstütze / X-axis support plate / Soporte lateral del eje X / X-osa boční podpěra                                              | 38 | Wlan Antenne / wifi antenna / Antena Wlan / Wlan anténa                                                          |

### 3.2.1 Bedienpult / control panel / Pupitre de mando / Ovládací pult

#### Hauptmenü / main menu / Menú principal / Hlavní menu



|    | Beschreibung / description                                                                                                                                                                              |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Anzeige des Verbindungsstatus (Wlan,SD,USB) / connection status display (Wifi,SD,USB) / Visualización del estado de conexión (Wlan,SD,USB) / Zobrazení stavu připojení (Wlan, SD, USB)                  |
| 2  | Verfahrsgeschwindigkeitseinstellung/ travel speed regulation / Configuración de velocidad de desplazamiento / Nastavení posuvové rychlosti                                                              |
| 3  | Spindelkopf nach links bewegen / move spindle head to the left / Mover el cabeza del husillo hacia la izquierda / Pohyb vřetena doleva                                                                  |
| 4  | Ein-Ausschalter Spindel + Laser / on- off button spindle + laser / Interruptor de encendido/apagado husillo + láser / Zapínání/Vypínání vřetena + laseru                                                |
| 5  | Spindelkopf nach vorne bewegen / move spindle head forward / Mover el cabeza del husillo hacia adelante / Pohyb vřetena dopředu                                                                         |
| 6  | Aktivierung 4 Achsen set / Activation/Deactivation of 4 axis set / Activación del conjunto de 4 ejes / Aktivace 4 osová sada                                                                            |
| 7  | Spindelkopf nach unten bewegen / move spindle head downward / Mover el cabeza del husillo hacia abajo / Pohyb vřetena dolů                                                                              |
| 8  | Menü Einstellung / menu setting / Menú Configuración / Menu nastavení                                                                                                                                   |
| 9  | Menü Datei / menu file / Menú Archivo / Menu Soubor                                                                                                                                                     |
| 10 | Menü Werkzeug / menu tool / Menú Herramientas / Menu Nástroj                                                                                                                                            |
| 11 | Spindelkopf nach oben bewegen / move spindle head to top / Mover el cabeza del husillo hacia arriba / Pohyb vřetena nahoru                                                                              |
| 12 | Verfahrweg Größe in mm pro Klick für XYZ Achse / travel distance in mm per click for XYZ axis / Tamaño del recorrido en mm por clic para el eje XYZ / Velikost pojezdové dráhy v mm na klik pro XYZ osu |
| 13 | Spindelkopf nach hinten bewegen / move spindle head backward / Mover el cabeza del husillo hacia atrás / Pohyb vřetena dozadu                                                                           |
| 14 | XY-Koordinaten Nullpunkt setzen/ set XY coordinates origin / Establecer punto cero de coordenadas XY / Nastavit počátek pro XY souřadnice                                                               |



|    |                                                                                                                                         |
|----|-----------------------------------------------------------------------------------------------------------------------------------------|
| 15 | Spindelkopf nach rechts bewegen / move spindle head to the right / Mover el cabeza del husillo hacia la derecha / Pohyb vřetena doprava |
| 16 | Z-Koordinaten Nullpunkt setzen / set Z-coordinates origin / Establecer punto cero de coordenadas Z / Nastavit počátek pro Z souřadnice  |
| 17 | Anwender Koordinaten X/Y/Z / user coordinates X/Y/Z / Coordenadas del usuario X/Y/Z / Uživatelské souřadnice X/Y/Z                      |
| 18 | Absolut Koordinaten X/Y/Z / absolut coordinates X/Y/Z / Coordenadas absolutas X/Y/Z / Absolutní souřadnice X/Y/Z                        |

**Menü “Einstellung” / menu “setting” / Menú “Configuración” / Menu „Nastavení”**

|                            | <table border="1"> <thead> <tr> <th colspan="2">Beschreibung / description</th> </tr> </thead> <tbody> <tr> <td>1</td><td>Sprachenauswahl / select language / Selección de idioma / Výběr jazyka</td></tr> <tr> <td>2</td><td>Über / About / Acerca de / O programu</td></tr> <tr> <td>3</td><td>Tastentöne ein-ausschalten / switch key tones ON-OFF / Activar/desactivar sonidos de tecla / Zapnout/vypnout zvuky tlačítek</td></tr> <tr> <td>4</td><td>Auswahl CNC / Lasermodus / selection CNC/ Laser mode / Selección de modo CNC/Láser / Výběr CNC</td></tr> <tr> <td>5</td><td>Zurück zum vorherigen Menü / back to previous menu / Volver al menú anterior / Zpět do předchozího menu</td></tr> <tr> <td>6</td><td>Zum Menü „Datei“ / to menu „file“ / Ir al menú “Archivo” / Do menu „Soubor“</td></tr> <tr> <td>7</td><td>Zum Menü Werkzeug / to menu „tool“ / Ir al menú “Herramientas” / Do menu Nástroj</td></tr> <tr> <td>8</td><td>Kontakt / Contact / Contacto / Kontakt</td></tr> <tr> <td>9</td><td>Hilfe / Help / Ayuda / Návod</td></tr> <tr> <td>10</td><td>Wifi auswählen / select Wifi / Seleccionar Wifi / Výběr Wifi</td></tr> </tbody> </table> | Beschreibung / description |  | 1 | Sprachenauswahl / select language / Selección de idioma / Výběr jazyka | 2 | Über / About / Acerca de / O programu | 3 | Tastentöne ein-ausschalten / switch key tones ON-OFF / Activar/desactivar sonidos de tecla / Zapnout/vypnout zvuky tlačítek | 4 | Auswahl CNC / Lasermodus / selection CNC/ Laser mode / Selección de modo CNC/Láser / Výběr CNC | 5 | Zurück zum vorherigen Menü / back to previous menu / Volver al menú anterior / Zpět do předchozího menu | 6 | Zum Menü „Datei“ / to menu „file“ / Ir al menú “Archivo” / Do menu „Soubor“ | 7 | Zum Menü Werkzeug / to menu „tool“ / Ir al menú “Herramientas” / Do menu Nástroj | 8 | Kontakt / Contact / Contacto / Kontakt | 9 | Hilfe / Help / Ayuda / Návod | 10 | Wifi auswählen / select Wifi / Seleccionar Wifi / Výběr Wifi |
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| 1                          | Sprachenauswahl / select language / Selección de idioma / Výběr jazyka                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                            |  |   |                                                                        |   |                                       |   |                                                                                                                             |   |                                                                                                |   |                                                                                                         |   |                                                                             |   |                                                                                  |   |                                        |   |                              |    |                                                              |
| 2                          | Über / About / Acerca de / O programu                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                            |  |   |                                                                        |   |                                       |   |                                                                                                                             |   |                                                                                                |   |                                                                                                         |   |                                                                             |   |                                                                                  |   |                                        |   |                              |    |                                                              |
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| 5                          | Zurück zum vorherigen Menü / back to previous menu / Volver al menú anterior / Zpět do předchozího menu                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |  |   |                                                                        |   |                                       |   |                                                                                                                             |   |                                                                                                |   |                                                                                                         |   |                                                                             |   |                                                                                  |   |                                        |   |                              |    |                                                              |
| 6                          | Zum Menü „Datei“ / to menu „file“ / Ir al menú “Archivo” / Do menu „Soubor“                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                            |  |   |                                                                        |   |                                       |   |                                                                                                                             |   |                                                                                                |   |                                                                                                         |   |                                                                             |   |                                                                                  |   |                                        |   |                              |    |                                                              |
| 7                          | Zum Menü Werkzeug / to menu „tool“ / Ir al menú “Herramientas” / Do menu Nástroj                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                            |  |   |                                                                        |   |                                       |   |                                                                                                                             |   |                                                                                                |   |                                                                                                         |   |                                                                             |   |                                                                                  |   |                                        |   |                              |    |                                                              |
| 8                          | Kontakt / Contact / Contacto / Kontakt                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                            |  |   |                                                                        |   |                                       |   |                                                                                                                             |   |                                                                                                |   |                                                                                                         |   |                                                                             |   |                                                                                  |   |                                        |   |                              |    |                                                              |
| 9                          | Hilfe / Help / Ayuda / Návod                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                            |  |   |                                                                        |   |                                       |   |                                                                                                                             |   |                                                                                                |   |                                                                                                         |   |                                                                             |   |                                                                                  |   |                                        |   |                              |    |                                                              |
| 10                         | Wifi auswählen / select Wifi / Seleccionar Wifi / Výběr Wifi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                            |  |   |                                                                        |   |                                       |   |                                                                                                                             |   |                                                                                                |   |                                                                                                         |   |                                                                             |   |                                                                                  |   |                                        |   |                              |    |                                                              |

**Menü “Datei” / menu “file” / Menú “Archivo” / Menu „Soubor”**

|                            | <table border="1"> <thead> <tr> <th colspan="2">Beschreibung / description</th> </tr> </thead> <tbody> <tr> <td>1</td><td>NC Dateien auf Speichermedium / NC data on storage medium / Archivos NC en medio de almacenamiento / NC soubory na úložné médium</td></tr> <tr> <td>2</td><td>Im Menü nach oben/unten scrollen / scroll up in the menu / Desplazarse hacia arriba/abajo en el menú / Posun v menu nahoru/dolů</td></tr> <tr> <td>3</td><td>Zurück zum vorherigen Menü / back to previous menu / Volver al menú anterior / Zpět do předchozího menu</td></tr> <tr> <td>4</td><td>Im Menü nach unten scrollen / scroll down in the menu / Desplazarse hacia abajo en el menú / Posun v menu dolů</td></tr> </tbody> </table> | Beschreibung / description |  | 1 | NC Dateien auf Speichermedium / NC data on storage medium / Archivos NC en medio de almacenamiento / NC soubory na úložné médium | 2 | Im Menü nach oben/unten scrollen / scroll up in the menu / Desplazarse hacia arriba/abajo en el menú / Posun v menu nahoru/dolů | 3 | Zurück zum vorherigen Menü / back to previous menu / Volver al menú anterior / Zpět do předchozího menu | 4 | Im Menü nach unten scrollen / scroll down in the menu / Desplazarse hacia abajo en el menú / Posun v menu dolů |
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| 2                          | Im Menü nach oben/unten scrollen / scroll up in the menu / Desplazarse hacia arriba/abajo en el menú / Posun v menu nahoru/dolů                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            |  |   |                                                                                                                                  |   |                                                                                                                                 |   |                                                                                                         |   |                                                                                                                |
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**Menü „Sprachen“ / menu „language“ / Menú “Idiomas” / Menu „Jazyky“**

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| 1                          | Verfügbare Sprachen / available language / Idiomas disponibles / Dostupné jazyky                                                                                                                                                                                                                                                                                                                                                                                                                                     |                            |  |   |                                                                                  |   |                                                                                                             |   |                                                                                                         |
| 2                          | Im Menü nach oben/unten scrollen / scroll up and down / Desplazarse hacia arriba / Posun v menu nahoru/dolů                                                                                                                                                                                                                                                                                                                                                                                                          |                            |  |   |                                                                                  |   |                                                                                                             |   |                                                                                                         |
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| Menü „Wlan“ / menu „Wifi“ / Menú „Wlan“ / Menu „Wlan“                                    |                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
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| 6                                                                                        | Anzeige Wlan Signalstärke / display Wifi signal strength / Mostrar intensidad de señal Wlan / Zobrazení síly signálu Wlan                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
| Menü „Werkzeug“ / menu „tool“ / Menú „Herramientas“ / Menu „Nástroj“                     |                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
|                                                                                          |                                                                                                                                                                                                              | <table><tr><th></th><th>Beschreibung / description</th></tr><tr><td>1</td><td>X/Y/Z Maschinenreferenzfahrt / X/Y/Z machine tool origin / Referencia de máquina X/Y/Z / X/Y/Z Strojní referenční jízda</td></tr><tr><td>2</td><td>Werkzeugsursprung mit Sonde ermitteln / Setting the tool origin with the probe / Determinar origen de herramienta con sonda / Určit počátek nástroje pomocí sondy</td></tr><tr><td>3</td><td>Anpassung der Arbeitsleistung der Spindel oder des Lasers / Adjustment of spindle or laser working power / Ajuste de la potencia de trabajo del husillo o láser / Úprava pracovní výkonu vřetena nebo laseru</td></tr><tr><td>4</td><td>Einschalten Luftpumpe (optional) / Turn on air pump (optional) / Encender bomba de aire (opcional) / Zapnout vzduchové čerpadlo (volitelné)</td></tr><tr><td>5</td><td>Werkzeugkoordinaten X/Y/Z auf 0 stellen / Setting tool coordinates X/Y/Z to 0 / Establecer coordenadas de herramienta X/Y/Z a 0 / Nastavit nástrojové souřadnice X/Y/Z na 0</td></tr><tr><td>6</td><td>Motor entriegeln / Unlock motor / Liberar motor / Odemknout motor</td></tr><tr><td>7</td><td>Zum Menü „Einstellung“ / to menu „Setting“ / Ir al menú „Configuración“ / Do menu „Nastavení“</td></tr><tr><td>8</td><td>Zum Menü „Datei“ / to menu „File“ / Ir al menú „Archivo“ / Do menu „Soubor“</td></tr><tr><td>9</td><td>Zurück zum vorherigen Menü / back to previous menu / Volver al menú anterior / Zpět do předchozího menu</td></tr><tr><td>10</td><td>Benutzer Nullpunkt 4 Achsen Set / user coord 4 axis set / Punto cero del usuario para conjunto de 4 ejes / Uživatelský počátek pro 4 osou sadu</td></tr><tr><td>11</td><td>Benutzer Nullpunkt Z-Achse / user coord Z-axis / Punto cero del usuario para el eje Z / Uživatelský počátek Z-osy</td></tr><tr><td>12</td><td>Benutzer Nullpunkt X/Y-Achse / user coord Y-axis / Punto cero del usuario para el eje X/Y / Uživatelský počátek X/Y-osy</td></tr></table> |  |  | Beschreibung / description | 1 | X/Y/Z Maschinenreferenzfahrt / X/Y/Z machine tool origin / Referencia de máquina X/Y/Z / X/Y/Z Strojní referenční jízda | 2 | Werkzeugsursprung mit Sonde ermitteln / Setting the tool origin with the probe / Determinar origen de herramienta con sonda / Určit počátek nástroje pomocí sondy | 3 | Anpassung der Arbeitsleistung der Spindel oder des Lasers / Adjustment of spindle or laser working power / Ajuste de la potencia de trabajo del husillo o láser / Úprava pracovní výkonu vřetena nebo laseru | 4 | Einschalten Luftpumpe (optional) / Turn on air pump (optional) / Encender bomba de aire (opcional) / Zapnout vzduchové čerpadlo (volitelné) | 5 | Werkzeugkoordinaten X/Y/Z auf 0 stellen / Setting tool coordinates X/Y/Z to 0 / Establecer coordenadas de herramienta X/Y/Z a 0 / Nastavit nástrojové souřadnice X/Y/Z na 0 | 6 | Motor entriegeln / Unlock motor / Liberar motor / Odemknout motor                                                         | 7 | Zum Menü „Einstellung“ / to menu „Setting“ / Ir al menú „Configuración“ / Do menu „Nastavení“ | 8 | Zum Menü „Datei“ / to menu „File“ / Ir al menú „Archivo“ / Do menu „Soubor“ | 9 | Zurück zum vorherigen Menü / back to previous menu / Volver al menú anterior / Zpět do předchozího menu | 10 | Benutzer Nullpunkt 4 Achsen Set / user coord 4 axis set / Punto cero del usuario para conjunto de 4 ejes / Uživatelský počátek pro 4 osou sadu | 11 | Benutzer Nullpunkt Z-Achse / user coord Z-axis / Punto cero del usuario para el eje Z / Uživatelský počátek Z-osy | 12 | Benutzer Nullpunkt X/Y-Achse / user coord Y-axis / Punto cero del usuario para el eje X/Y / Uživatelský počátek X/Y-osy |
|                                                                                          | Beschreibung / description                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
| 1                                                                                        | X/Y/Z Maschinenreferenzfahrt / X/Y/Z machine tool origin / Referencia de máquina X/Y/Z / X/Y/Z Strojní referenční jízda                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
| 2                                                                                        | Werkzeugsursprung mit Sonde ermitteln / Setting the tool origin with the probe / Determinar origen de herramienta con sonda / Určit počátek nástroje pomocí sondy                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
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| 4                                                                                        | Einschalten Luftpumpe (optional) / Turn on air pump (optional) / Encender bomba de aire (opcional) / Zapnout vzduchové čerpadlo (volitelné)                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
| 5                                                                                        | Werkzeugkoordinaten X/Y/Z auf 0 stellen / Setting tool coordinates X/Y/Z to 0 / Establecer coordenadas de herramienta X/Y/Z a 0 / Nastavit nástrojové souřadnice X/Y/Z na 0                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
| 6                                                                                        | Motor entriegeln / Unlock motor / Liberar motor / Odemknout motor                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
| 7                                                                                        | Zum Menü „Einstellung“ / to menu „Setting“ / Ir al menú „Configuración“ / Do menu „Nastavení“                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
| 8                                                                                        | Zum Menü „Datei“ / to menu „File“ / Ir al menú „Archivo“ / Do menu „Soubor“                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
| 9                                                                                        | Zurück zum vorherigen Menü / back to previous menu / Volver al menú anterior / Zpět do předchozího menu                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
| 10                                                                                       | Benutzer Nullpunkt 4 Achsen Set / user coord 4 axis set / Punto cero del usuario para conjunto de 4 ejes / Uživatelský počátek pro 4 osou sadu                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
| 11                                                                                       | Benutzer Nullpunkt Z-Achse / user coord Z-axis / Punto cero del usuario para el eje Z / Uživatelský počátek Z-osy                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
| 12                                                                                       | Benutzer Nullpunkt X/Y-Achse / user coord Y-axis / Punto cero del usuario para el eje X/Y / Uživatelský počátek X/Y-osy                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
| „Hilfe“ / „Help“ / „Ayuda“ / „Nápověda“                                                  |                                                                                                                                                                                                              | „Kontakt“ / „Contact“ / „Contacto“ / „Kontakt“                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
| QR Code für Anleitung / QR-code for tutorial / Código QR para manual / QR kód pro manuál |                                                                                                                                                                                                              | Kontaktadresse / contact address / Dirección de contacto / Kontaktní adresa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
|                                                                                          |                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
| „Über“ / „About“ / „Acerca de“ / „O programu“                                            |                                                                                                                                                                                                              | Maschineninformation / machine informations / Información de la máquina / Informace o stroji                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |
|                                                                                          |                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                            |   |                                                                                                                         |   |                                                                                                                                                                   |   |                                                                                                                                                                                                              |   |                                                                                                                                             |   |                                                                                                                                                                             |   |                                                                                                                           |   |                                                                                               |   |                                                                             |   |                                                                                                         |    |                                                                                                                                                |    |                                                                                                                   |    |                                                                                                                         |

**3.3 Technische Daten / Technical data / Datos técnicos / Technické údaje**

| <b>Spezifikation / specification</b>                                                                                                                                                                              |                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Netzteil Eingangsspannung / power adapter input voltage / Voltaje de entrada de la fuente de alimentación / Vstupní napětí napájecího zdroje                                                                      | 100 -240 V / 50 -60 Hz         |
| Netzteil Ausgang – Machinenspannungsversorgung / power adapter output and machine power supply / Salida de la fuente de alimentación - Fuente de alimentación de la máquina / Výstupní napájení – Napájení stroje | 24 V   3 A                     |
| Spindel-Motorleistung / spindle motor power / Potencia del motor del husillo / Vřeteno výkon motoru                                                                                                               | 80 W                           |
| Spindelmotor Geschwindigkeit / spindle motor speed / Velocidad del motor del husillo / Rychlost vřetena                                                                                                           | 8000 min <sup>-1</sup>         |
| XY Achsen Position Genauigkeit / XY axis positioning accuracy / Precisión de posición de ejes XY / XY přesnost polohování os                                                                                      | 0,05 mm                        |
| Gravierungsgenauigkeit / engraving precision / Precisión de grabado / Přesnost gravírování                                                                                                                        | 100 ± 0,05 mm                  |
| Max. Vorschubgeschwindigkeit / max. feed speed / Velocidad máx. de avance / Max. rychlost posuvu                                                                                                                  | 800 mm/min                     |
| Max. Bearbeitungsbereich (LxBxH) / max. work area (LxBxH) / Máx. área de trabajo (LxAxH) / Max. pracovní rozsah (DxŠxV)                                                                                           | 460 x 460 x 80 mm              |
| Max. Fräserdurchmesser / max. milling cutter diameter / Diámetro máx. de fresa / Max. průměr frézy                                                                                                                | 10 mm                          |
| Datei Erkennungsformate / file recognition format / Formatos de archivo reconocidos / Formáty souborů pro rozpoznání                                                                                              | NC, DXF, BMP, JPG, PNG, GCODE  |
| kontinuierliche Arbeitszeiten / continuous working hours / Tiempos de trabajo continuos / Nepřetržitá pracovní doba                                                                                               | ≤ 6 h                          |
| Betriebssystem / operating system / Sistema operativo Operační systém                                                                                                                                             | Windows, MAC                   |
| unterstützte CAM Software / support CAM software / Software CAM soportado / Podporovaný CAM software                                                                                                              | Candle, Carveco, Artcam, Easel |
| Verbindungsmöglichkeiten / connection possibilities / Opciones de conexión / Možnosti připojení                                                                                                                   | USB, SD-card, Wifi 2.4 GHz     |
| Verfügbare Sprachen / available languages / Idiomas disponibles / Dostupné jazyky                                                                                                                                 | CN, EN, FR, DE, RU, PT, ES, JA |
| Maschinenmaße (LxBxH) / machine dimensions (LxWxH) / Dimensiones de la máquina (LxAxH) / Rozměry stroje (dxšxv)                                                                                                   | 742 x 689 x 413 mm             |
| Verpackungsmaße (LxBxH) / packaging dimensions (LxWxH) / Dimensiones del embalaje (LxAxH) / Rozměry obalu (dxšxv)                                                                                                 | 760 x 740 x 213 mm             |
| Gewicht Brutto / weight gross / Peso bruto / Hmotnost brutto                                                                                                                                                      | 20,6 kg                        |
| Gewicht Netto / weight net / Peso neto / Hmotnost netto                                                                                                                                                           | 15,8 kg                        |
| Schallleistungspegel L <sub>WA</sub> / sound power level L <sub>WA</sub> / Nivel de potencia sonora L <sub>WA</sub> / Hladina akustického výkonu L <sub>WA</sub>                                                  | 105 dB(A).....k: 3 dB(A)       |
| Schalldruckpegel L <sub>PA</sub> / sound pressure level L <sub>PA</sub> / Nivel de presión sonora L <sub>PA</sub> / Hladina akustického tlaku L <sub>PA</sub>                                                     | 85 dB(A).....k: 3 dB(A)        |

**(DE)** Hinweis Geräuschangaben: Die angegebenen Werte sind Emissionswerte und müssen damit nicht zugleich auch sichere Arbeitsplatzwerte darstellen. Obwohl es eine Korrelation zwischen Emissions- und Immissionspegeln gibt, kann daraus nicht zuverlässig abgeleitet werden, ob zusätzliche Vorsichtsmaßnahmen notwendig sind oder nicht. Faktoren, welche den am Arbeitsplatz tatsächlich vorhandenen Immissionspegel beeinflussen, beinhalten die Eigenart des Arbeitsraumes und andere Geräuschquellen, d. h. die Zahl der Maschinen und anderer benachbarter Arbeitsvorgänge. Die zulässigen Arbeitsplatzwerte können ebenso von Land zu Land variieren. Diese Information soll jedoch den Anwender befähigen, eine bessere Abschätzung von Gefährdung und Risiko vorzunehmen.

**(EN)** Notice noise emission: The values given are emission values and therefore do not have to represent safe workplace values at the same time. Although there is a correlation between emission and immission levels, it cannot be reliably deduced whether additional precautions are necessary or not. Factors influencing the actual immission level at the workplace include the nature of the workspace and other noise sources, i.e. the number of machines and other adjacent operations. The permissible workplace values may also vary from country to country. However, this information should enable the user to make a better assessment of hazard and risk.

**(ES)** Aviso sobre los valores de ruido: Los valores indicados son valores de emisión y, por lo tanto, no representan necesariamente al mismo tiempo valores seguros en el lugar de trabajo. Aunque hay una correlación entre los niveles de emisión y los de imisión, no se puede deducir con certeza si es necesario adoptar medidas de precaución adicionales o no. Entre los factores que influyen en el nivel de imisión real en el lugar de trabajo, se encuentran la naturaleza del espacio de trabajo y otras fuentes de ruido, es decir, el número de máquinas y otros procesos de trabajo adyacentes. Asimismo, los valores admisibles en el lugar de trabajo pueden variar de un país a otro. No obstante, esta información debe capacitar al usuario a evaluar mejor los peligros y los riesgos.

**(CZ)** Označení - údaje o hlukosti: Uvedené hodnoty jsou emisní hodnoty, a proto nemusejí současně představovat i bezpečné hodnoty na pracovišti. Přestože existuje korelace mezi hladinami emisí a imisí, nelze z ní spolehlivě odvodit, zda jsou nutná další preventivní opatření, či nikoli. Mezi faktory, které ovlivňují skutečnou hladinu imisí na pracovišti, patří charakter pracovního prostoru a další zdroje hluku, tj. počet strojů a dalších sousedních pracovních procesů. Přípustné hodnoty na pracovišti se rovněž mohou v jednotlivých zemích lišit. Tato informace však má uživateli umožnit lépe posoudit ohrožení a riziko.



## 11 PREFACE (EN)

### Dear Customer!

This manual contains information and important notes for safe commissioning and handling of the CNC table router-CTF45P\_230V, 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.**

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

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## 12 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!

### 12.1 Intended use of the machine

The machine is designed exclusively for the following activities:

For engraving and milling wood, acrylic, PVC, PVB and other soft materials, within the prescribed technical limits.

With the appropriate accessories to this machine the following additional activities can be carried out:

- **4 axis set-CTF45P4X** can be used for machining three-dimensional cylinders, curved tubes, and circles and can be used for carving spirals, scars, bamboo joints, etc.
- **Spindle upgrade set-CTF45P500W** can be used for engraving and milling aluminium, wood, acrylic, PVC, PVB, plastic and other soft materials.
- **Laser 20W-CTF45PLASER20W** can be used for engraving and cutting wood, plastic, paper, leather, bamboo, foam rubber, stainless steel and acrylic.
- **Vacuum cleaner-CTF45PCLEAN** can be used to extract chips and dust by direct mounting on the spindle motors, or by using the flat nozzle to extract dust around the 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.

#### 12.1.1 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 |

#### 12.1.2 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 or with the power switched off.
- Cleaning the machine with compressed air, or with your mouth.
- Wearing cotton gloves while operating the machine.
- Using 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.

### 12.2 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.

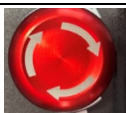
**Please note that locally applicable laws and regulations determine the minimum age of the operator and may restrict the use of this machine!**

**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.

### 12.3 Safety devices

The machine is equipped with the following safety devices:



A self-locking Emergency Stop button to stop dangerous movements at any time.



## 12.4 General safety instructions

To avoid malfunctions, damage and health impairments when working with the machine, the following points must be observed in addition to the general rules for safe working:

- Check the machine for completeness and function before starting. Only use the machine if the separating and other non-separating protective devices required for machining have are fitted.
- Make sure that the guards are in good working order and properly maintained.
- Select a level, vibration-free surface as the installation area.
- Ensure sufficient space around the machine.
- Ensure sufficient lighting conditions at the workplace to avoid stroboscopic effects.
- Ensure a clean working environment.
- Keep the area around the machine free of obstacles (e.g. dust, chips, cut-off workpiece parts, etc.).
- Only use tools that are in perfect condition and free of cracks and other defects (e.g. deformations).
- Remove tool keys and other setting tools before switching on the machine.
- Check the machine's connections for strength before each use.
- Never leave the running machine unattended. Switch off the machine before leaving the working area and secure it against unintentional or unauthorized restarting.
- The machine may only be operated, maintained or repaired by persons who are familiar and who have been informed about the dangers arising from this work.
- Ensure that unauthorized persons keep a safety distance from the machine and keep children away from the machine.
- Always work with care and the necessary caution and never use excessive force.
- Do not overload the machine.
- Hide long hair under hair protection.
- Wear close fitting protective work clothing and suitable protective equipment (eye protection, dust mask, ear protection, safety-shoes, and work gloves only when handling tools).
- Never wear loose jewellery, loose clothing or accessories (e.g. tie, scarf).
- Do not work on the machine if you are tired, not concentrated or under the influence of medication, alcohol or drugs!
- Do not use the machine in areas where vapours of paints, solvents or flammable liquids represent a potential danger (danger of fire or explosion!).
- Shut down the machine and disconnect it from the power supply, before adjustment, changeover, cleaning, maintenance or repair work, etc. Before starting work on the machine, wait until all tools or machine parts have come to a complete standstill and secure the machine against unintentional restart.
- Make sure the workpiece is securely held on the control surface before you start machining

## 12.5 Electrical safety

- Make sure that the machine is grounded.
- Only use suitable extension cables.
- A damaged or tangled cable increases the risk of electric shock. Handle the cable with care. Never use the cable to carry, pull or disconnect the machine. Keep the cable away from heat, oil, sharp edges or moving parts.
- Proper plugs and outlets reduce the risk of electric shock.
- Water entry into the machine increases the risk of electric shock. Do not expose the machine to rain or moisture.
- The machine may only be used if the power supply is protected by a residual current circuit breaker.
- Before connecting the machine always make sure that the main switch is switched off.
- Use the machine only when the ON-OFF switch is in good working order.

## 12.6 Special safety instructions for this machine

- Work only in well-ventilated rooms!
- Keep the machine away from potential ignition sources such as open flames – risk of fire and explosion!
- 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.
- Always choose a milling cutter that is suitable for the material to be processed and for the milling process.
- Adjust the spindle speed to the milling cutter used and ensure that the maximum permissible speed of the milling cutter is not exceeded.
- When programming the NC-file please also note the travel path of the axes and spindle head that possible machine collisions can be completely ruled out.
- Keep sufficient distance from rotating objects.
- Only use tools that correspond to the specifications, dimensions and types of the machine.



## 12.7 Hazard warnings

### 12.7.1 Residual risks

Despite intended use, certain residual risk factors remain.

- Danger of cutting hands/fingers or other parts due to sharp blades.
- Danger of cutting hands/fingers or other parts due to tool change
- Risk of injury to hands/fingers due to crushing between moving and fixed parts (X/Y/Z-axis, spindle,...)
- Risk of injury from the workpiece falling down of the machine.
- Danger of cutting hands/fingers on cut edges of the workpiece.
- Risk of injury if the machine tips over.
- Risk of injury due to improper maintenance work.

### 12.7.2 Hazardous situations

Due to the structure and construction of the machine, hazardous situations may occur which are identified in this manual as follows:

#### DANGER



A safety instruction designed in this way indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

#### WARNING



A safety instruction designed in this way indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

#### CAUTION



A safety instruction designed in this way indicates a possibly hazardous situation which, if not avoided, may result in minor or moderate injury.

#### NOTE



A safety notice designed in this way indicates a potentially hazardous situation which, if not avoided, may result in property damage.

Regardless of all safety regulations, your common sense and your appropriate technical aptitude/training are and remain the most important safety factors in the error-free operation of the machine. **Safe working depends on you!**

## 13 TRANSPORT

Transport the machine in its packaging to the place of installation. To manoeuvre the machine in the packaging, a pallet truck or forklift truck with the appropriate lifting force can be used, for example. The specifications can be found in the chapter Technical data. For proper transport, also observe the instructions and information on the transport packaging regarding centre of gravity, lifting points, weight, means of transport to be used as well as the prescribed transport position etc. Ensure that the selected lifting equipment (crane, forklift, pallet truck, load sling, etc.) is in perfect condition. Ensure the correct body posture when lifting, carrying and setting down the load.

### Lifting / Setting down

- When lifting/setting down, ensure that you are standing firmly (legs hip-width apart).
- Lift/set down load with knees bent and back straight.
- Do not lift/set down load with a jerk.

### Carrying

- Carry load with both hands as close to body as possible.
- Carry load with straight back.
- When transporting the assembled machine, ensure to lift it only by the machine body and not by the attachments.

If you transport the machine with a vehicle, ensure that the load is secured appropriately!

## 14 ASSEMBLY

### 14.1 Preparation

#### 14.1.1 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.

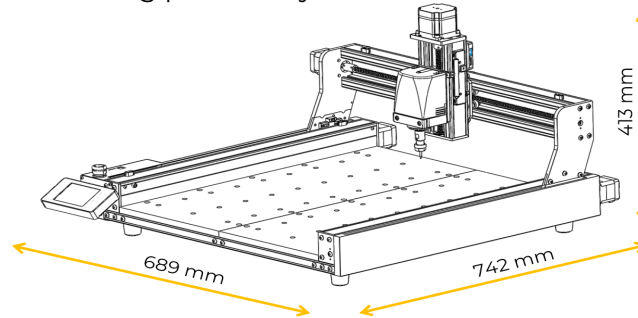


### 14.1.2 Requirements for the installation site

The selected installation site must ensure a suitable connection to the power supply, as well as (e.g.) connection to a dust collection system. Observe the safety requirements and the dimensions of the machine.

Place the machine on a level, solid surface that can support the weight of the machine. The chosen installation site of the machine must comply with the local safety regulations as well as the ergonomic requirements for a workplace with sufficient lighting conditions.

When dimensioning the required space, take into account that the operation, maintenance and repair of the machine must be possible without restrictions at all times. In the case of long workpieces, no crushing or shearing points may occur in the extension area (=danger area).



## 14.2 Assemble

The machine has been disassembled for transport and must be reassembled before use. Follow the instructions below:

The machine comes pre-assembled, it is necessary to assemble the components dismantled for transport according to the following instructions and to make the electrical connection.

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>Install X-axis</b></p> <ul style="list-style-type: none"> <li>Place the base (1) of the machine on a flat and stable surface.</li> <li>Then insert the X-axis assembly (2) into the base</li> <li>Lock it with 6 pieces M5x8 screws (3)</li> </ul>                                                                                                                                                                       |
|  | <p><b>Install Z-axis + Wifi antenna</b></p> <ul style="list-style-type: none"> <li>Mount the Z-axis assembly (1) with 4 screws M5x20 (2) to the Z-axis assembly.</li> <li>Mount the cable tie (3) on the X-axis with 2 screws M3x16</li> <li>Afterall install the Wifi antenna (6) to the front of the machine.</li> </ul>                                                                                                     |
|  | <p><b>Connect display</b></p> <ul style="list-style-type: none"> <li>Connect the control box row cables (1) with the touch screen.</li> <li>Then mount the display (2) with 2 screws M3x5 (3) to the machine base.</li> </ul>                                                                                                                                                                                                  |
|  | <p><b>Connect all needed cables:</b></p> <ul style="list-style-type: none"> <li>Y-axis limit switch (1),</li> <li>X-axis motor (2),</li> <li>9 pin power input (3)</li> <li>10 pin signal output port-S (4)</li> <li>Secure connection cable with cable tie (5)</li> <li>z-axis motor output (6)</li> <li>z-axis limit signal input (7)</li> <li>x-axis limit signal input (8) connect with x-axis limit switch (9)</li> </ul> |



### 14.3 Electrical connection

#### WARNING

**Dangerous electrical voltage!**

Risk of injury due to dangerous electrical voltage!

→ Checks from the power supply carried out only by a qualified electrician or under the instruction and supervision of a qualified electrician!

- Check, whether the neutral connection (if existing) and the protective grounding function properly.
- Check, whether the supply voltage and the frequency correspond to the specifications of the machine.

#### NOTE

**Deviation of the supply voltage and frequency!**

A deviation from the value of the supply voltage of  $\pm 5\%$  is permissible.

A short-circuit fuse must be provided in the power supply system of the machine!

- Use a supply cable that fulfils the electrical requirements (e.g. H07RN, H05RN) and take the required cross-section of the supply cable from a current carrying capacity table. Pay attention to the measures for protection against mechanical damage.
- Make sure that the power supply is protected by a residual current circuit breaker.
- Connect the machine only to a properly grounded outlet.
- When using an extension cable, make sure that the dimension matches the connected load of the machine. The connection power can be found in the technical data, the correlation of cable cross-section and cable lengths can be found in the technical literature or obtain information from a specialist electrician.
- A damaged cable must be replaced immediately.

|  |                                                                                                                                                                                                                                                          |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Power supply</b> <ul style="list-style-type: none"><li>• Connect the power cable (1) with delivered power adapter (2).</li><li>• 24V plug (3) into the socket of the machine (4).</li><li>• Supply the machine with power supply cable (5).</li></ul> |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 15 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.

### 15.1 Operating instructions

- Fix the workpiece properly on the machine work table.
- The clamping length of the tool in the collet chuck must be at least one third of the total length of the tool.
- Tightening torque of the ER11 collet nut is a maximum of 25Nm.
- When using holding clamps for the workpiece, always ensure that the cutter and the cutter head do not collide with the holder clamps during the travel path.
- There must be no measuring tools or other objects on the work table during the engraving and milling process!
- Before each work process, all components and connections must be checked of tightness.
- Never leave the machine when starting a new program. As soon as there is a danger to people or machines, immediately activate the emergency stop switch.

### 15.2 Handling

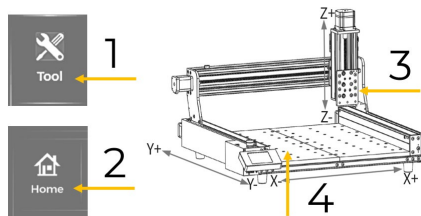
#### 15.2.1 Switch machine On/Off

|                                                                                                                                                    |                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                    | <b>Switch on:</b><br>The machine is ready for operation by unlocking the emergency stop switch (1)<br><b>Switch off in dangerous situations:</b><br>Press the emergency stop switch (1) and the machine will be disconnected from the power and switched off. |
| <b>WARNING:</b> Unlocking the emergency stop switch after emergency situations can only be done after the emergency situation has been eliminated! |                                                                                                                                                                                                                                                               |
|                                                                                                                                                    | After the machine is supplied with power and the start screen lights up on the display, the machine is ready. If this is not the case, unplug the machine, change the positions of the row cables under the control panel and try the process again.          |



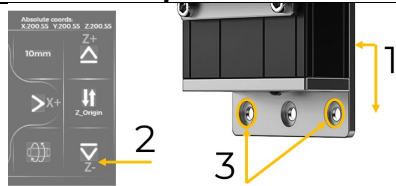
### 15.2.2 Movement test before

**NOTE:** A movement test of the machine must be carried out before initial commissioning! If the test is completed successfully, you can proceed further.  
During the reference run, ensure that no connecting cables are clamped or disconnected. In an emergency, use the emergency stop button!



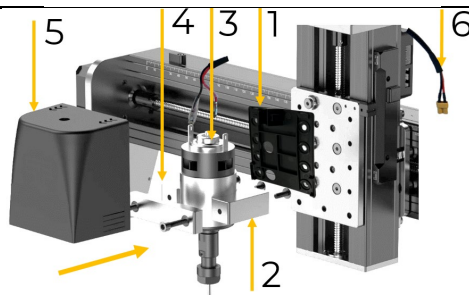
- Switch the machine on
- In the "Tool" main menu (1), press the "Home" button (2) so that a reference run is carried out and the spindle head (3) moves to the left front corner (4) (next to the control panel) of the machine and automatically moves to the end positions of the axis X-, Y-, Z+
- All end positions are monitored with limit switches. After one of these has been triggered, it must be unlocked again using the button on the control panel.

### 15.2.3 Mount spindle motor



#### Position Z-axis

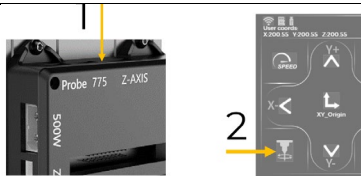
- Switch the machine on
- Move the Z axis (1) downwards by pressing the "Z-" button on the control panel
- Continue the travel path until the drill holes (3) for the motor mount are accessible
- Switch off the machine



- Fasten the motor protection bracket (1) to the Z axis with 4 pan head screws M5x8
- Fasten the motor mount (2) with 2 screws M5x12
- Place the spindle motor (3) into the motor holder and fix it with the lath (5) and two M5x12 screws
- Put on the motor protection
- Plug the connection cable (6) to the Z-axis "775"

### 15.2.4 Spindle motor test

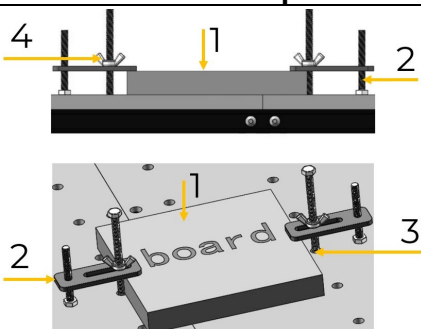
**CAUTION:** Before carrying out the spindle motor test, you must ensure that all loose components are tight and that there are no objects near the spindle! Always keep enough distance from all rotating components!



- Make sure that motor connection cable is connected to Z-axis "775" (1)
- Switch machine on
- Activate the spindle by pressing the button "Spindle" (2)
- Deactivate the spindle by pressing it again
- Switch machine off

**NOTE:** If the function test does not work, check the wiring from the motor to the Z-axis and repeat the test.

### 15.2.5 Mount the workpiece



- Place the workpiece (1) on the operating surface and clamp it by using the clamps (2) to the operating surface.
- Align the workpiece so that you can screw the screws of the clamp (3) into the threads of the operating surface.
- Finally, tighten the wing nut (4) of the brackets to clamp the workpiece.

**CAUTION:** Do not start machining while the workpiece is still loose and has not been properly secured!

### 15.2.6 Mount the milling cutter

**NOTE:** The diameter of the milling cutter shaft 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> |
| <p><b>CAUTION:</b> Milling cutter clamping length in the collet chuck should be minimum one third of the total length of the cutter!</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

### 15.2.7 Connection to machine

|  |                                                                                                                                                                                                                                                                                                                                                                 |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>Transfer via SD card</b></p> <ul style="list-style-type: none"> <li>• Save the file on a data carrier (1) and insert it into the slot (2) on the machine.</li> <li>• With the USB/SD adapter you can easily transfer the data from your PC to the card reader</li> </ul>                                                                                  |
|  | <p><b>Connect/Transfer via USB port</b></p> <ul style="list-style-type: none"> <li>• Connect the USB cable (1) to the PC and with the USB cable (2) to the slot on the machine (3)</li> <li>• With this connection, direct control of the machine with the program on your PC is possible</li> </ul>                                                            |
|  | <p><b>Connect/Transfer via Wifi</b></p> <ul style="list-style-type: none"> <li>• Press “Settings” (1) in the main menu</li> <li>• Press Wifi (2) and select the desired WLAN (3)</li> <li>• Enter the password for the selected WiFi using the keypad (4) and then confirm (5)</li> <li>• This allows you to access the machine in the web interface</li> </ul> |

### 15.2.8 Set user coordinate origin

|                                                                                                              |                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>NOTE:</b> With this function you can set a zero point that the machine should approach as desired.</p> |                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                              | <ul style="list-style-type: none"> <li>• By pressing “XY origin” (1) you set the zero point of the user coordinates X/Y (3) to 0.</li> <li>• By pressing “Z origin” (2) you set the zero point of the user coordinates Z (4) to 0.</li> <li>• By pressing “Position” (5) you set the zero point of the user coordinates X/Y/Z (6) to 0.</li> </ul> |
|                                                                                                              | <ul style="list-style-type: none"> <li>• Use now the X±/Y±/Z± control buttons to move the spindle away from the zero point.</li> <li>• By pressing “X/Y” (1) the predefined coordinates “X/Y Origin” are approached</li> <li>• By pressing “Z0” (2) the predefined coordinates “Z origin” are approached</li> </ul>                                |



### 15.2.9 Set workpiece coordinate origin

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>Connect the probe connector (2) to the Z axis at "Probe" (1), place the probe (2) on the surface of the workpiece to be machined and center it below the center of the cutter (4).</li> <li>Clamp the alligator clip (3) to the cutter (4).</li> <li>In the main menu, click "Tool" (5) and "Probe" (6).</li> <li>Wait until the machine has moved to the tool origin.<br/>→ the workpiece tool origin is now set</li> <li>Then remove the alligator clip (3) from the cutter again, remove the probe plug (1) and remove the probe (2) from the work surface</li> </ul> |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### 15.2.10 Start milling process

|                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                           | <p><b>CNC Modus</b></p> <ul style="list-style-type: none"> <li>If not already selected, switch to CNC mode in the "Settings" menu on the control panel (1)</li> </ul>                                                                                                                                                                                                                                                                                |
|                                                                                                                                                           | <p><b>Select file</b></p> <ul style="list-style-type: none"> <li>Click on „File“ (1) to select the desired file(2) the milling program starts automatically</li> </ul>                                                                                                                                                                                                                                                                               |
|                                                                                                                                                           | <p><b>Adjust speed</b></p> <ul style="list-style-type: none"> <li>Press "Adjust" (1) to be able to adjust the speeds of the milling program</li> <li>The speeds (2) of the spindle, feed and rapid traverse are given in percent</li> <li>Choose a speed</li> <li>Pressing the minus button (3) reduces the value</li> <li>Pressing the Plus button (4) increases the value</li> <li>Confirm value with button (5)</li> <li>Exit menu (6)</li> </ul> |
| <p><b>NOTE:</b> Choose appropriate speeds based on the hardness and nature of the workpiece and depending on the diameter of the milling cutter used!</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                           | <p><b>Start/Suspend/Stop</b></p> <ul style="list-style-type: none"> <li>You can start and suspend/resume or the milling process using the "Resume" button (1)</li> <li>Use the "Stop" button (2) to end the milling process and the selected program.</li> </ul>                                                                                                                                                                                     |
| <p><b>NOTE:</b> Finally, switch off the machine, remove chips and dust from the worktop and remove the finished workpiece from the worktop.</p>           |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## 16 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.

### 16.1 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. Do not 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 the delivered brush.

## 16.2 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!

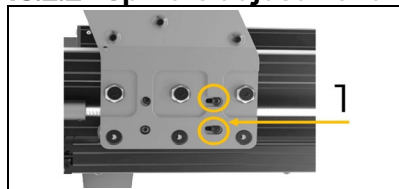
- Before each operation, check the perfect condition of the safety devices.
- Regularly check the perfect and legible condition of the warning and safety labels of the machine.
- Use only proper and suitable tools.
- Use only original spare parts recommended by the manufacturer.

### 16.2.1 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 | working table | clean        |
| once a week  | cables, lines | check        |
| if required  | guide rails   | check, clean |
|              | spindle       | check, clean |

### 16.2.2 Spindle adjustment



After long term use, the screw travel of the spindle may be abnormal. So you have to remove the side cover of the machine, loosen both fixing screws (1) (→ the spring returns to its original position) and then tighten the screws again and remount the side cover.

## 16.3 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!

## 16.4 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.

## 17 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                                                |
|----------------------------|----------------------|---------------------------------------------------------|
| motor does not run         | wiring incorrect     | control the wiring to the motherboard                   |
|                            | no power supply      | check power supply                                      |
| limit switch does not work | wiring incorrect     | control the wiring to the motherboard                   |
| display does not work      | cable loose          | control the cable and reconnect                         |
|                            | wiring incorrect     | change the row line sequence                            |
| SD card cannot be read     | SD card incompatible | format the card on the computer and save the file again |
|                            | SD card dirty        | clean contact surface carefully and try again           |



## 32 ERSATZTEILE / SPARE PARTS / PIEZAS DE RECAMBIO / NÁHRADNÍ DÍLY

### 32.1 Ersatzteilbestellung / Spare parts order / Pedido de piezas / Objednání náhradních dílů

**(DE)** Mit HOLZMANN-Ersatzteilen verwenden Sie Ersatzteile, die ideal aufeinander abgestimmt sind. Die optimale Passgenauigkeit der Teile verkürzen die Einbauzeiten und erhöhen die Lebensdauer.

#### HINWEIS



Der Einbau von anderen als Originalersatzteilen führt zum Verlust der Garantie! Daher gilt: Beim Tausch von Komponenten/Teile nur vom Hersteller empfohlene Ersatzteile verwenden.

Bestellen Sie die Ersatzteile direkt auf unserer Homepage-Kategorie ERSATZTEILE.

oder kontaktieren Sie unseren Kundendienst

über unsere Homepage-Kategorie SERVICE-ERSATZTEILANFORDERUNG,

per Mail an [service@holzmann-maschinen.at](mailto:service@holzmann-maschinen.at).

Geben Sie stets Maschinentype, Ersatzteilnummer sowie Bezeichnung an. Um Missverständnissen vorzubeugen, empfehlen wir, mit der Ersatzteilbestellung eine Kopie der Ersatzteilzeichnung beizulegen, auf der die benötigten Ersatzteile eindeutig markiert sind, falls Sie nicht über den Online-Ersatzteilkatalog anfragen.

**(EN)** 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](mailto: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.

**(ES)** Con las piezas de recambio de HOLZMANN, utiliza piezas de recambio que se ajustan perfectamente entre sí. El ajuste óptimo de los componentes acorta el tiempo de instalación y aumenta la vida útil.

#### AVISO



¡La instalación de piezas de recambio no originales lleva a la pérdida de garantía! Por lo tanto: Al llevar a cabo la sustitución de componentes/piezas, utilice únicamente piezas de recambio recomendadas por el fabricante.

Pida las piezas de recambio directamente en nuestra página web: Categoría PIEZAS DE RECAMBIO,

o póngase en contacto con nuestro servicio de atención al cliente

en nuestra página web, en la categoría SERVICIO-PEDIDO DE PIEZAS DE RECAMBIO,

por correo electrónico a [service@holzmann-maschinen.at](mailto:service@holzmann-maschinen.at).

Indique siempre el tipo de máquina, la referencia de la pieza de recambio y la denominación. Para evitar malentendidos, se recomienda adjuntar al pedido una copia del esquema de piezas de recambio en el que se marque claramente las piezas de recambio necesarias, cuando no se solicitan con el catálogo en línea de piezas de recambio.

**(CZ)** V podobě náhradních dílů HOLZMANN používáte náhradní díly, které jsou vzájemně zkoordinovány. Optimální přesnost lícování dílů zkracuje dobu montáže a prodlužuje životnost.

#### OZNAMENÍ



Montáž jiných než originálních náhradních dílů způsobí ztrátu záruky! Proto platí: Při výměně komponent/dílů používejte jen výrobcem doporučené náhradní díly.

Náhradní díly objednávejte přímo na naší domovské stránce – kategorie NÁHRADNÍ DÍLY, nebo kontaktujte náš zákaznický servis

- prostřednictvím kategorie naší domovské stránky POŽADAVEK NÁHRADNÍCH DÍLŮ-SERVIS,

- e-mailem na [service@holzmann-maschinen.at](mailto:service@holzmann-maschinen.at).

Vždy uveďte typ stroje, číslo náhradního dílu a označení. Abychom předešli nedorozumění, doporučujeme přiložit k objednávce náhradních dílů kopii výkresu náhradních dílů, na které jsou potřebné náhradní díly jasně označeny, pokud neprovádíte poptávku pomocí internetového katalogu náhradních dílů.

### 33 ZUBEHÖR / ACCESSORIES / ACCESORIOS / PŘÍSLUŠENSTVÍ

**(DE)** Optionales Zubehör finden Sie online auf der Produktseite, Kategorie EMPFOHLENES ZUBEHÖR ZUM PRODUKT.

**(EN)** Optional accessories can be found online on the product page, category RECOMMENDED PRODUCT ACCESSORIES.

**(ES)** Los accesorios opcionales se encuentran en la página del producto en internet, en la categoría

ACCESORIOS RECOMENDADOS PARA EL PRODUCTO.

**(CZ)** Volitelné příslušenství najdete na internetu na stránce výrobku, kategorie

DOPORUČENÉ PŘÍSLUŠENSTVÍ K VÝROBKU.

| CTF45P500W                                                                                              | CTF45PLASER20W                                                                      | CTF45P4X                                                                             | CTF45PCLEAN                                                                           |
|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Spindelupgrade Set / spindle upgrade set / Conjunto de actualización del husillo / Vřeteno upgrade sada | Lasermodul 20W / laser 20W / Módulo láser de 20W / Laser modul 20W                  | 4 Achsen Set / 4 axis set / Conjunto de 4 ejes / 4 osy sada                          | Absaugung / vacuum cleaner / Aspiradora / Odsávání                                    |
|                      |  |  |  |