HOLZMANN MASCHINEN GmbH
Marktplatz 4 · A-4170 Haslach
Tel. +43 7289 71 562-0
info@holzmann-maschinen.at

www.holzmann-maschinen.at

Originalfassung

DE BETRIEBSANLEITUNG **ABRICHT-DICKENHOBELMASCHINE**

Übersetzung / Translation

EN OPERATING MANUAL **COMBINED PLANER AND THICKNESSER**

FR MODE D'EMPLOI **MACHINE À RABOTER ET À DÉGAUCHIR**

HOB310ECOSMW2_230V
HOB310ECOSMW2_400V

CE

YOUR JOB. OUR TOOLS.

Edition: 18.06.2024 – Revision - 00 – RaR - DE/EN/FR

2 SICHERHEITSZEICHEN / SAFETY SIGNS / SYMBOLES DE SÉCURITÉ

DE	SICHERHEITSZEICHEN BEDEUTUNG DER SYMBOLE	**EN**	SAFETY SIGNS DEFINITION OF SYMBOLS	**FR**	SYMBOLES DE SÉCURITÉ SIGNIFICATION DES SYMBOLES

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

EN **CE-Conformal!** - This product complies with the EC-directives.

FR **CONFORMITÉ CE !** - Ce produit répond aux directives CE.

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

FR **LIRE LE MODE D'EMPLOI !** Veuillez lire le manuel d'exploitation et de maintenance de votre machine avec assiduité en vous familiarisant bien avec les organes de commande de la machine pour l'utiliser correctement et prévenir ainsi des blessures corporelles et des dégâts sur la machine.

DE Maschine vor Wartung und Pausen ausschalten und Netzstecker ziehen!

EN Switch off the machine before maintenance and breaks and pull out the mains plug!

FR Éteindre la machine avant la maintenance et les pauses et débrancher la fiche secteur !

DE Persönliche Schutzausrüstung tragen!

EN Wear personal protektive equipment!

FR Porter un équipement de protection individuelle !

DE Warnung vor spitzem (scharfem) Werkzeug!

EN Warning of pointed (sharp) tool!

FR Avertissement contre les outils pointus (tranchants) !

DE Immer ausreichend Abstand zur Hobelwelle halten. Während des Betriebs ausreichend Abstand zu angetriebenen Bauteilen halten.

EN Always keep your hands well clear of the planer shaft. Keep sufficient distance to driven components when operating this machine.

FR Toujours garder une distance suffisante par rapport à l'arbre de rabotage. Pendant le fonctionnement, se tenir à une distance suffisante des éléments entraînés.

DE Benutzen von Handschuhen verboten!

EN Do not use wearing gloves!

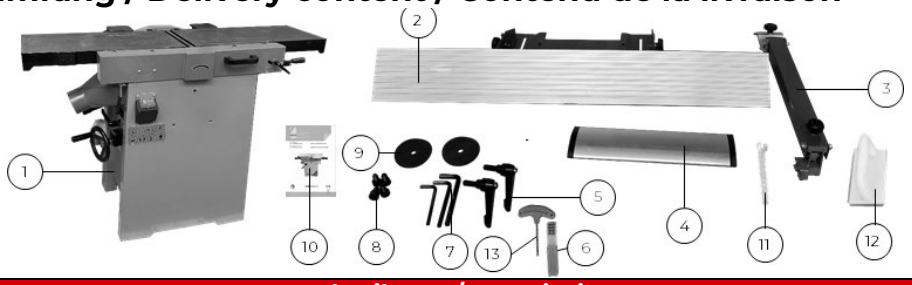
FR Défense utilisait des gants !

DE **Warnschilder und/oder Aufkleber an der Maschine, die unleserlich sind oder die entfernt wurden, sind umgehend zu erneuern!**

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

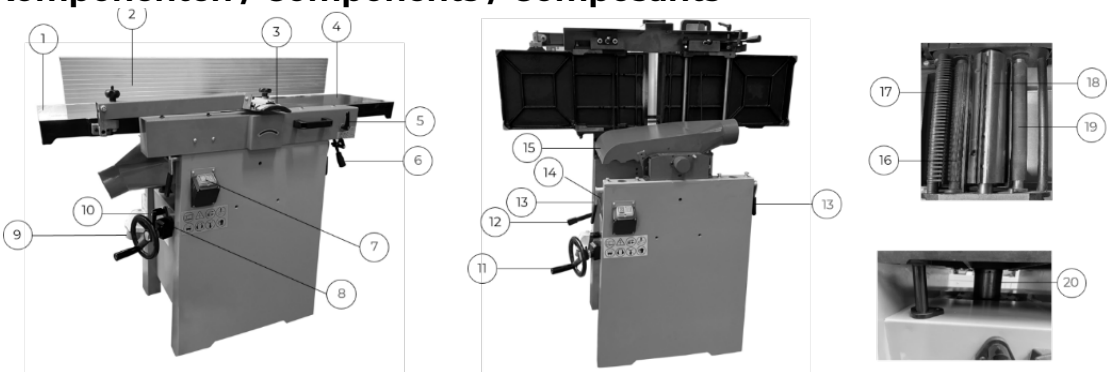
3 TECHNIK / TECHNICS / TECHNIQUE

3.1 Lieferumfang / Delivery content / Contenu de la livraison



#	Beschreibung / Description	Qty.
1	Maschine / machine / Machine	1
2	Abrichtanschlag / planer fence / Butée de dégauchissage	1
3	Arm Brückenschutzabdeckung / arm planer knife cover / Bras du cache de protection de portique	1
4	Brückenschutzabdeckung / planer knife cover / Cache de protection de portique	1
5	Klemmhebel / clamping levers / Levier de blocage	2
6	Ersatz HM-Wendeschneidplatten + Schrauben / spare carbide cutter insert + screws / Jeu de plaquettes de rechange HM de rechange	5
7	Werkzeug / tools / Outil	1
8	Schrauben / screws / Vis	4
9	Unterlegscheiben / washers / Rondelles	2
10	Betriebsanleitung / user manual / Mode d'emploi	1
11	Gabelschlüssel für Hobelmesserschrauben / wrench for planer knife screws / Clé à fourche pour vis de lames de rabot	1
12	Schiebeholz / sliding wood / Cale coulissante	1
13	Schlüssel für Wendeschneidplatten / key for cutter inserts / Clé de plaquettes de rechange T20	2

3.2 Komponenten / Components / Composants



#	Beschreibung / Description
1	Abnahmetisch / exit planer table / Table de sortie
2	Abrichtanschlag / planer fence / Butée de dégauchissage
3	Brückenschutzabdeckung / blade guard / Cache de protection de portique
4	Aufgabetisch / entry planer table / Table de chargement
5	Klemmhebel Abrichthobeldicke / clamping lever planer cutting depth / Levier de blocage d'épaisseur de la dégauchisseuse
6	Einstellhebel Abrichthobeldicke / adjustment lever planer cutting depth / Levier de réglage de l'épaisseur de la dégauchisseuse
7	EIN-AUS-Schalter / ON-OFF-switch / Interrupteur MARCHE-ARRÊT
8	Anzeige Höhenverstellung / indicator for height adjustment / Affichage du réglage en hauteur
9	Anschlussdose 400V / input box 400V / Boîte de raccordement 400 V
10	Klemmhebel Höhenverstellung Dickenhobel / clamping lever height-adjustment thicknesser / Levier de blocage de réglage en hauteur du rabot d'usinage en épaisseur
11	Handrad Höhenverstellung Dickenhobel / handwheel height adjustment thicknesser / Volant à main de réglage en hauteur du rabot d'usinage en épaisseur
12	Hebel für Dickenhobelvorschub / handle for thicknesser feeder / Levier d'avance du rabot d'usinage en épaisseur
13	Klemmhebel Abrichttische / fixation handle planer tables / Levier de blocage de la table de dégauchissage
14	Dickenhobeltisch / thicknesser table / Table de la raboteuse
15	Absaughaube umklappbar / dust collector hood / Hotte d'aspiration rabattable
16	Einzugswalze / feed roller / Rouleau d'alimentation
17	Rückschlaggreifer / anti-kick-back device / Pinces de dispositif anti retour

18	Hobelwelle / planer shaft / Arbre du rabot
19	Auszugswalze / pull-out roller / Rouleau d'extraction
20	Höhenverstelleinheit Dickenhobeltisch / height adjustment unit thicknesser / Unité de réglage de la hauteur du rabot d'usinage en épaisseur

3.3 Technische Daten / Technical Data / Données techniques

Allgemein / general	HOB310ECOSMW2_230V	HOB310ECOSMW2_400V
Spannung / Voltage / Tension	230 V/50 Hz	400 V/50 Hz
Motorleistung / Motor power / Puissance moteur S1 (100 %)	2,2 kW	
Hobelwelle / planer shaft / Arbre du rabot	Ø 70 x 310 mm	
Anzahl Rillen / amount of grooves / Nombre de rainures	2	
Hobelwellendrehzahl / blade shaft speed / Vitesse de l'arbre de rabotage	5500 min^{-1}	
Wendeschneidplatten / cutter inserts / Plaquettes de rechange	15 x 15 x 2,5 mm (30°)	
Anzahl Wendeschneidplatten / quantity cutter inserts / Nombre de plaquettes de rechange	30	
Absauganschluss / dust collector plug / Raccord d'aspiration	Ø 100 mm	
notwendiger Luftvolumenstrom Absauganlage / necessary air volume / Débit d'air nécessaire de l'installation d'aspiration	min. 1000 m^3/h	
notwendiger Unterdruck Absauganlage / vacuum dust collector / Dépression nécessaire de l'installation d'aspiration	800 Pa	
Maschinenmaße (LxBxH) / machine dimensions (LxWxH) / Dimensions de la machine (LxlxH)	1285 x 750 x 1000 mm	
Verpackungsmaße (LxBxH) / packaging dimensions (LxWxH) / Dimensions d'emballage (LxlxH)	1320 x 565 x 960 mm	
Gewicht Brutto / weight gross / Poids brute	206 kg	
Gewicht Netto / weight net / Poids net	179,5 kg	
Schallleistungspegel / sound power level / Niveau de puissance acoustique L_{WA} (ISO 3746)	103 dB(A)	k: 4 dB(A)
Schalldruckpegel / sound pressure level / Niveau de pression acoustique L_{PA} (ISO 11202)	89,5 dB(A)	k: 4 dB(A)
Abrichthobel / planer / Dégauchisseuse		
Tischgröße / planer table size / Dimension de table	1285 x 310 mm	
Tischhöhe / table height / Hauteur de table	852 mm	
max. Abrichtbreite / max planing width / Largeur max. de dégauchissage	310 mm	
Schwenkbereich Anschlag / angle range of angle stop / Plage de pivotement de la butée	0° - 45°	
max. Spanabnahme / max depth of cut / Profondeur max. de rabotage	3 mm	
Abrichtanschlag Dimension / planer fence dimension / Dimensions de la butée de dégauchissage	1100 x 150 mm	
Dickenhobel / thicknesser / Rabot d'usinage en épaisseur		
Tischgröße / table size / Dimension de table	545 x 308 mm	
max. Hobelbreite / max. thicknessing width / Largeur max. du rabot	308 mm	
min. Werkstückdicke / min. thickness of workpiece / Épaisseur min. de la pièce à usiner	5mm	
max. Werkstückdicke / max. thickness of workpiece / Épaisseur max. de la pièce à usiner	225 mm	
max. Spanabnahme / max. depth of cut / Profondeur max. de rabotage	4 mm	
Vorschubgewschwindigkeit / feed speed / Vitesse d'avance	5,5 m/min	

(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.
(FR) Avis Données sur le bruit : Les valeurs indiquées sont des valeurs d'émission et ne représentent donc pas nécessairement des valeurs de sécurité sur le lieu de travail. Bien qu'il existe une corrélation entre les niveaux d'émission et d'immission, il est impossible de déduire de manière fiable si des mesures de précaution supplémentaires sont nécessaires ou non. Les facteurs influençant le niveau d'immission réellement présent sur le lieu de travail comprennent les caractéristiques de la salle de travail et d'autres sources de bruit, c'est-à-dire le nombre de machines et d'autres processus de travail adjacents. Les valeurs autorisées sur le lieu de travail peuvent également varier d'un pays à l'autre. Toutefois, ces informations devraient permettre à l'utilisateur de mieux évaluer le danger et le risque.

12 PREFACE (EN)

Dear Customer!

This manual contains information and important notes for safe commissioning and handling of the combined planer and thicknesser HOB310ECOSMW2_230V and HOB310ECOSMW2_400V, 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 read and note the safety instructions!

Before first use read this manual carefully. It eases the correct use of the machine and prevents misunderstanding and damages of machine.

Due to constant advancements in product design, construction, illustrations and contents may deviate slightly. If you notice any errors, please inform us.

We reserve the right to make technical changes!

Check the goods immediately after receipt and note any complaints on the consignment note when taking over the goods from the deliverer!

Transport damage must be reported to us separately to us within 24 hours.

HOLZMANN MASCHINEN GmbH cannot accept any liability for transport damage that has not been reported.

Copyright

Customer service contact

HOLZMANN MASCHINEN GmbH

4170 Haslach, Marktplatz 4
AUSTRIA

Tel +43 7289 71562 – 0
info@holzmann-maschinen.at

13 SAFETY

This section contains information and important notices for safe commissioning and handling of machine.

For your own safety, read these operating instructions carefully before putting the machine into operation. This will enable you to handle the machine safely and prevent misunderstandings as well as possible damage to property and persons. Also observe the symbols and pictograms used as well as the safety instructions and hazard warnings!

13.1 Intended use of the machine

The machine is intended exclusively for the following activities:
The planing (wide and narrow side as well as chamfering of the edges of a workpiece) and thickness planing of sawn timber within the specified machine limits.

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.

13.1.1 Technical Restrictions

The machine is intended for use under the following ambient conditions:

Relative humidity:	max. 65 %
Temperature (for operation)	+5° C to +40° C
Temperature (for storage and/or transport)	-20° C to +55° C

13.1.2 Prohibited Use / Forseeable Misuse

- Operation of the machine without adequate physical and mental aptitude
- Operating the machine without knowledge of the operating instructions
- Changes in the design of the machine
- Operating the machine under explosive conditions
- Operating the machine outside the specified power range
- Remove the safety markings attached to the machine.
- Modify, circumvent or disable the safety devices of the machine.
- Machining of materials with dimensions outside the limits specified in this manual.
- Use of tools that do not meet the safety requirements of the standard for woodworking machine tools (EN847-1).
- Removal of the blade guard during planning.
- Synchronous planning
- Application work (workpiece only machined over a partial length)
- Planing of strongly curved workpieces

The prohibited/hazardous use or disregard of the information and instructions presented in this manual will result in the voiding of all warranty and damage claims against Holzmann Maschinen GmbH.

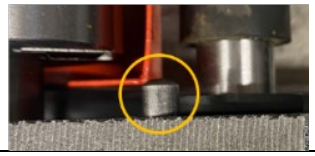
13.2 User requirements

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 woodworking 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.

13.3 Safety devices

The machine is equipped with following safety devices:

Blade guard (covering blade shaft)	• Separating protective device (fixed)
V-Belt / chain-drive guard	• Separating protective device (fixed)
Separating protective device behind planer stop (fixed)	• Separating protective device (fixed) To be remove before changing to thicknesser mode
Thicknesser  	• Moveable guard with safety switch for monitoring
Anti-kick-back device	• The anti-kickback device prevent the workpiece from kicking back
Drill chuck guard	• Separating protective device

13.4 General safety instructions

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

- Before connecting the machine to the main power supply, make sure all the safety items are in the working position and check their working conditions, if necessary, to remove the door or protective cover, cut off the main switch and lock it and cut off the power supply.
- Choose a level, vibration-free, non-slip surface for the installation location.
- Ensure sufficient space around the machine!
- Ensure sufficient lighting conditions at the workplace to avoid stroboscopic effects!
- Ensure a clean working environment!
- Only use perfect tools that are free of cracks and other defects (e.g. deformations).
- Remove adjustment tools from the machine before switching it on.
- Keep the area around the machine free of obstacles (e.g. dust, chips, cut workpiece parts etc.).
- Check the strength of the machine connections before each use.
- Never leave the running machine unattended. The machine must be stopped if it is unattended.
- The machine may only be operated, maintained or repaired by persons who are familiar with it and who have been informed of the dangers arising in the course of this work.
- Ensure that unauthorised persons maintain a safe distance from the machine and keep children away from the machine.
- Wear suitable protective equipment (eye protection, dust mask, respiratory protection, ear protection, gloves when handling tools) as well as close-fitting work protective clothing - never loose clothing, ties, jewellery, etc. - danger of being drawn in!
- Hide long hair under hair protection.
- Do not remove any sections or other parts of the workpiece from the cutting area while the machine is running!
- Always work with care and the necessary caution and never use excessive force.
- Do not overload the machine!
- Do not work on the machine if it is tired, not concentrated or under the influence of medication, alcohol or drugs!
- Do not use the machine in areas where vapours from paints, solvents or flammable liquids represent a potential danger (danger of fire or explosion!).
- Do not smoke in the immediate vicinity of the machine (fire hazard)!
- Make sure that the main switch is in the "O" position before connecting the machine to the power source.
- Ensure that the machine is earthed.

- Only use suitable extension cords.
- Always shut down the machine before carrying out any conversion, adjustment, measuring, cleaning, maintenance or repair work and always disconnect it from the power supply for maintenance or repair work. 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 restarting.

13.5 Electrical safety

- Make sure that the machine is earthed.
- Only use suitable extension cords.
- 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 sockets reduce the risk of electric shock.
- Water that enters the machine increases the risk of electric shock. Do not expose the machine to rain or moisture.
- The machine may only be used in humid environments if the supply is protected by a residual current circuit breaker.
- Do not use the machine if it cannot be turned on and off with the ON/OFF switch.

13.6 Special safety instructions for that machine

- Work with gloves on rotating parts is not permitted!
- Wood dust is generated when the machine is in operation. Therefore, connect the machine to a suitable extraction system for dust and chips during installation!
- Always switch on the dust extraction device before you start machining the workpiece!
- Never remove chips or other parts of the workpiece from the cutting area while the machine is running.
- When using milling tools with a diameter of ≥ 16 mm and circular saw blades, these must comply with EN 847-1:2013 and EN 847-2:2013; tool carriers must comply with EN 847-3:2013;
- Excessive noise can cause hearing damage and temporary or permanent hearing loss. Wear hearing protection certified to health and safety regulations to limit noise exposure.
- Only use blades that are suitable for that machine.
- For handling short and narrow workpieces use sliding wood.

13.7 Hazard warnings

Despite its intended use, certain residual risks remain:

- Risk of injury to fingers and hands from the rotating blades if the workpiece is guided improperly.
- Injuries caused by the workpiece being thrown away by improper mounting or guidance, such as working without a stop.
- Danger to health from wood dust or chips. It is essential to wear personal protective equipment such as eye protection and a dust mask. Use a dust collection system!
- Injuries due to defective blades. Check the saw blade regularly for damage.
- Risk of injury from tools, especially when changing tools.
- Risk of injury due to kick back of the workpiece.
- Risk of electric shock if incorrect electrical connections are used.

Residual risks can be minimized if the "Safety instructions" and the "Intended use" as well as the operating instructions are observed.
Due to the design and construction of the machine, hazardous situations may occur when handling the machines, which are identified as follows in this operating instruction:

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
Such a safety instruction indicates a potentially hazardous situation which, if not avoided, may result in serious injury or even death.

CAUTION

A safety instruction designed in this way indicates a potentially 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.

Irrespective of all safety regulations, their sound common sense and corresponding technical suitability/training are and remain the most important safety factor in the error-free operation of the machine. Safe working depends first and foremost on you!

14 TRANSPORT

WARNING

Damaged or not sufficiently viable hoists and lifting devices can cause serious injury or even death. Always check hoists and load lifting devices for adequate load-bearing capacity and perfect condition, carefully fasten the loads and never keep them under suspended loads.

To ensure proper transport, also observe the instructions and information on the transport packaging regarding centre of gravity, attachment points, weight, means of transport to be used and the prescribed transport position, etc. Lifting and transporting the machine may only be carried out by qualified personnel with appropriate training for the lifting equipment used.

Transport the machine in its packaging to the installation site. To manoeuvre the machine in the packaging, a pallet truck or a forklift with appropriate lifting power can be used.

NOTE: To transport the machine, you need a forklift truck with the appropriate load capacity and a fork of at least 1200 mm length. The fork of the truck should be positioned under the machine.
NOTE: Do not transport the machine at the work tables, these are not designed to withstand the tensile load of the machine weight.

15 ASSEMBLY

15.1 Check scope of delivery

Always note visible transport damages on the delivery note and check the machine immediately after unpacking for transport damage or missing or damaged parts. Report any damage to the machine or missing parts immediately to your retailer or freight forwarder.

15.2 Requirements for the place of installation

Choose a suitable place for the machine. Pay attention to the safety requirements and the dimensions of the machine. The selected location must ensure a suitable connection to the power supply as well as the possibility of connection to an extraction system. Make sure that the floor can support the load of the machine. The machine must be levelled simultaneously at all support points. It is also necessary to guarantee a distance of at least 0.8 m around the machine. In front of and behind the machine, the necessary distance must be provided for the feeding of long workpieces.

15.3 Preparation of the surface

NOTE

The use of paint thinners, gasoline, corrosive chemicals or abrasive cleaners will result in damage to the surface! Therefore use only mild cleaning agents.

Before you install and commission the machine at the intended location, carefully remove the anti-corrosion protection and grease residues. This can be done with the usual solvents. Under no circumstances should you use nitro thinner or other cleaning agents that could attack the machine's paint.

15.4 Assembling the machine

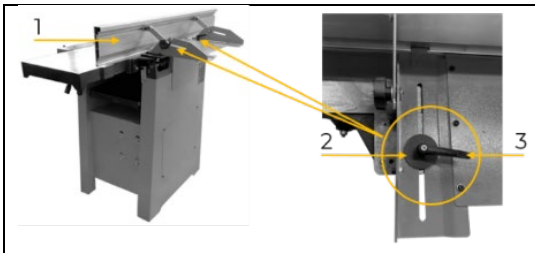
The machine is pre-assembled. The parts that have been disassembled for transport must be assembled before use. Follow the instructions below:

NOTE

The machine and machine components are heavy!
2 persons are required to assemble the machine.

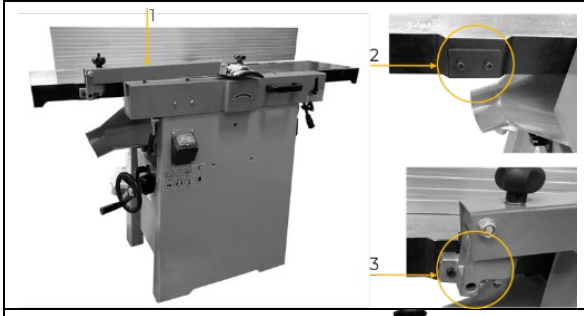
WARNING

Handling the machine with the power supply intact can result in serious injury or death. Therefore, do not connect the machine to the power supply before completing the assembly.



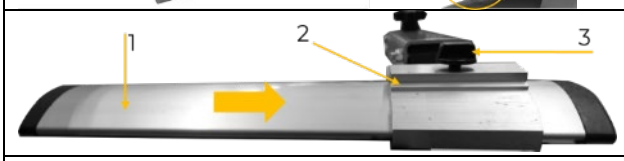
1. Assembly planer fence

- Fix the planer fence (1) with washers (2) and clamping levers (3) on the machine



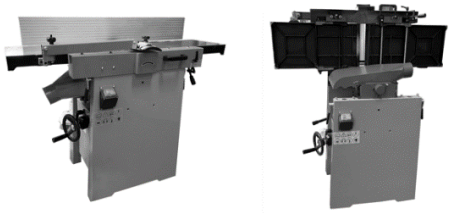
2. Assembly arm planer knife cover

- Unscrew the screws (2) on the mounting position
- Place the arm planer knife cover (1) on the mounting position and fix it with the screws (3) on the machine.



3. Assembly planer knife cover

- Insert planer knife cover (1) into the holder (2) and fix it in desired position with the fixing knop (3)



15.5 Electrical connection

WARNING

Dangerous electrical voltage!

→ The machine may only be connected to the power supply and the associated checks carried out 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.

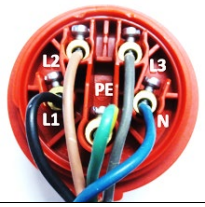
NOTE

Deviation of the supply voltage and frequency!
A deviation from the value of the supply voltage of ±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 device 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.

15.5.1 Setting up a 400 V machine

- The grounding conductor is yellow-green.
- Connect the supply cable to the corresponding terminals in the input box (L1, L2, L3, N and PE), see the figure below. If a CEE plug is available, the connection to the mains is made through an appropriately powered CEE coupling (L1, L2, L3, N and PE).

Plug connection 400V:	5-wire: **with** N-conductor 	4-wire: **without** N-conductor 

- After the electrical connection, check the correct running direction. If the machine runs in the wrong direction, swap two conductive phases, egg. L1 and L2, at the connection plug.

NOTE

- Operation is only permitted with residual current device (RCD) with maximum residual current of 30 mA.

15.6 Connecting to a dust collection system

The machine must be connected to a dust collection system for dust and chips. The dust collection system must start up at the same time as the machine's engine. The air speed at the suction connection and in the exhaust air lines must be at least 20 m/s for materials with a moisture <12 % (at least 28 m/s for moist chips with a moisture >12 %). The hoses used must be flame-retardant (DIN4102 B1) and permanently antistatic (or earthed on both sides) and comply with the relevant safety regulations. For information on air volume flow, negative pressure and suction connection, please refer to the technical specifications.

16 OPERATION

16.1 Operating instructions

WARNING

Danger due to electrical voltage!
Handling the machine with connected power supply may result in serious injury or death.
→ Always disconnect the machine from the power supply before carrying out any modification and secure it against unintentional reconnection.

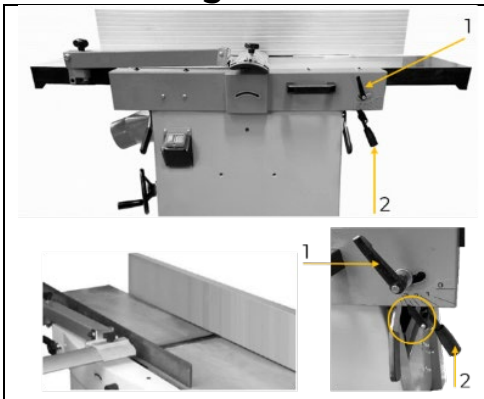
CAUTION

- Never start the machine with a workpiece pressed down!
- Long workpieces must be supported
- Property damage and injury by bouncing up the workpiece or tilting of the machine possible!

16.2 Initial check before start

- Check that all guards are installed.
- Check whether suitable planing knives have been correctly assembled.
- Check whether the connection to a dust collection system is available.
- Check that the planer shafts rotate in the correct direction.

16.3 Settings



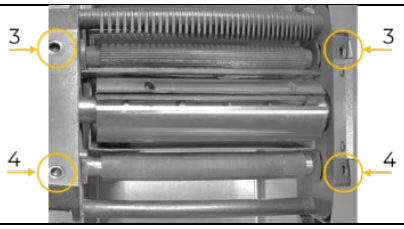
1. Height adjustment of the planing tables

Entry planer table

The cutting depth is set with the adjustment lever planer cutting depth (2)

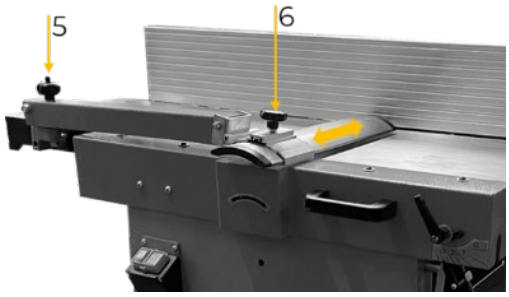
- Loosen the clamping lever (1)
- Set the cutting depth
- Lock the clamping lever again

Check scale knife entry planer table = 0
If necessary, adjust the arrow of the scale



2. Setting infeed / oufeed roller

The pressure force of the spring-mounted infeed and outfeed roller is factory-set.
If it is necessary to change the pressure force, it can be adjusted with the screws (3 and 4).



3. Setting arm and planer knife cover

Height

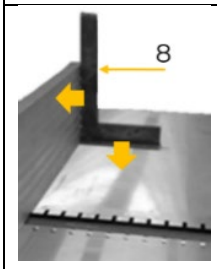
- Set the desired height with adjusting screw (5)

Planer knife cover

- Loosen the clamping screw (6)
- The planer knife cover can be moved and adapted to the size of the workpiece
- Relock the clamping screw (6) when the desired position is reached.

4. Setting planer fence

- Loosen clamping screws (7)
- Set planer fence to the desired angle position
- Relock the clamping screws (10) when the desired position is reached
- Loosen the clamping levers (9)
- Adapt the planer fence to the workpiece width
- Relock the clamping levers



The alignment of the planer fence at right angles should be checked again before initial operation and readjusted if necessary to achieve an exact planing result.

- The angle is measured with a protractor (8). This is placed on the planer table and applied to the planer fence.
- If it is not possible to place the protractor completely against the planer fence, the planer fence is not set exactly at right angles and an adjustment of the scale (10) is necessary.

16.4 Handling

16.4.1 Switch the machine on and off

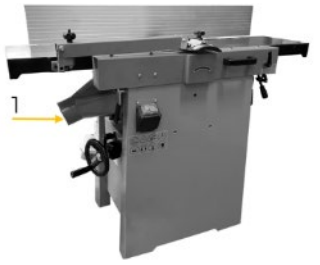
Switch on
Push green ON-button (I)
Switch off
Push red OFF-button (0)

16.4.2 Activating/Deactivating the thicknesser feed rate

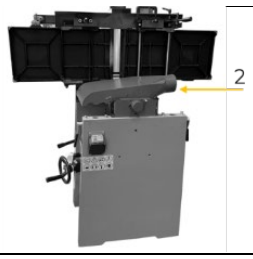
Activate feed:
Swivel the lever for thicknesser feeder (1) upwards. Feed is activated

Deactivated feed:
Swivel the lever for thicknesser feeder (1) downwards. Feed is deactivated.

16.5 Dust collection plug



Planer:
The extraction connection (1) is under the planer tables (exit planer table)



Thicknesser:
After the conversion to thicknessing, fold down the dust colletor hood (2).

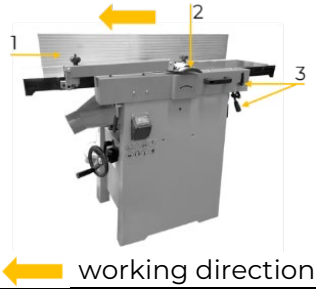
Do not operate the machine without the dust collection system connected to it and switched on. The dimensions of the dust collection plug can be found in the technical data.

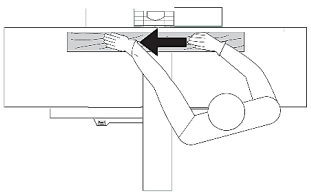
16.6 Planing

WARNING

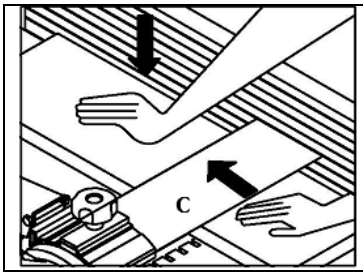
The unused part of the planing shaft for machining the workpiece must be covered by the covers (planer knife cover, cover on planer fence). Never touch the edges of the workpiece with your fingers, but always leave both hands on the workpiece with your fingers when planing. If the workpiece is short and narrow, use the sliding wood.

Only plane workpieces that rest firmly on the machine and that can be guided safely!



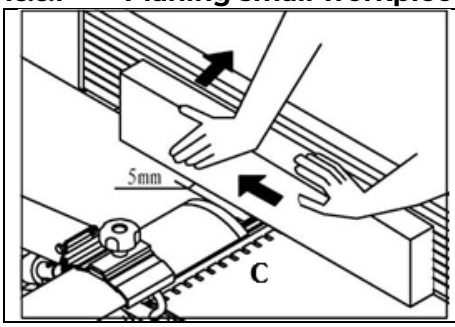


- Fix the planer fence (1) in the desired working position.
- Set the desired planing thickness on the adjusting lever (3).
- Adjust the planer knife cover (2) so that the distance between the cover and the workpiece is approx. 5mm.
- Start machine



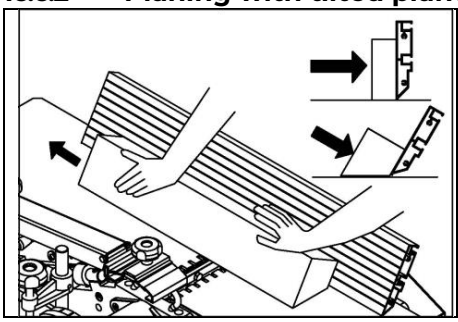
- Press the workpiece against the planer table with one hand.
- Push the workpiece slowly and evenly over the shaft with the second hand.
- After finishing the operation switch off the machine.
- Wait until the shaft has come to a standstill before proceeding with any further work!

16.6.1 Planing small workpieces



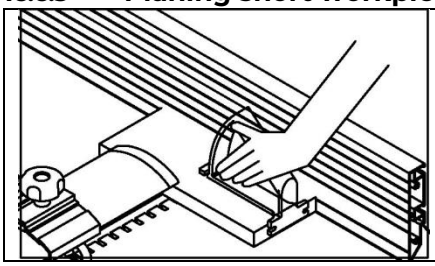
- Lower the planer knife cover (C) so that the planing shaft is covered.
- Move the planer knife cover to the workpiece and fix it with a distance of approx. 5mm.
- When planing, place the workpiece with the small side on the planer table and press with one hand against the planer fence and planer table.
- Push the workpiece slowly and evenly over the shaft with the second hand.

16.6.2 Planing with tilted planer fence



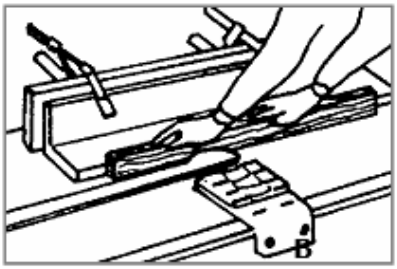
- Lower the planer knife cover so that the planing shaft is covered.
- Move the planer knife cover to the workpiece and fix it with a distance of approx. 5mm.
- When planing, place the workpiece with the small side on the planer table and press with one hand against the planer fence and planer table.
- Push the workpiece slowly and evenly over the shaft with the second hand.

16.6.3 Planing short workpieces



- When planing short workpieces, a sliding wood or similar device should be used!
- Adjust planer fence and blade guard to the size of the sliding wood.
- Place the workpiece on top and push it slowly and evenly over the shaft using the sliding wood.
- After use, the sliding wood must be reattached on his place on the side of the machine.

16.6.4 Planing the workpiece with small cross section



- When planing workpieces with a small cross-section, an additional wood angle must be mounted!
- Fasten the wood angle to the planer fence as shown using lever clamps.
- When planing, place the workpiece on the planer table and press it against the additional wood angle and planer table.
- Place the workpiece on top and push it slowly and evenly over the shaft using the sliding wood.

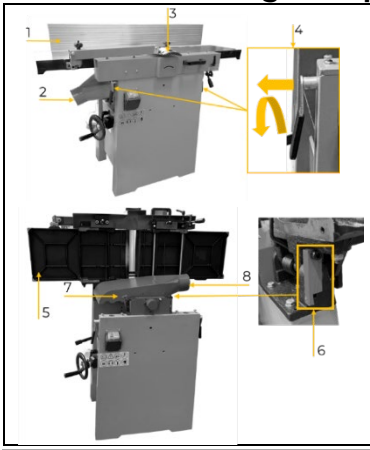
16.7 Thicknessing

NOTE

It is necessary to modify/adjust the machine before using as a thicknesser.

- Long, protruding workpieces must be sufficiently supported! Use suitable aids such as roller blocks etc. for this purpose. If you do not follow these instructions, there is a danger of the workpiece being raised up quickly and/or the machine being tilted!
- Use the thicknessing function only to reduce the thickness of a workpiece with an already surface planed facing!
- For workpieces with a difference in thickness, the chip removal must be measured at the maximum thickness and the workpiece machined with this side first.
- Make sure that the workpiece to be machined is free of foreign objects and/or knots in order to avoid dangerous fractures.
- Only plane workpieces that rest firmly on the machine and can be guided safely!
- If several workpieces are to be processed in series, all pieces of the same thickness should be run through in succession without changing the setting.
- Perform the machining process from the beginning until the desired thickness is achieved.

16.7.1 Converting from planer to thicknessing



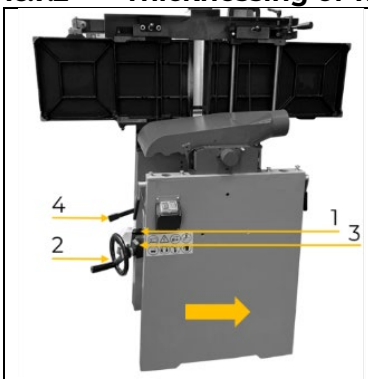
- Slide the planer fence (1) and the planer knife cover (3) all the way to the back.
- Disassemble the hose of the dust collector plug (2).
- Unlock the fixation handles planer tables (4) of the planer tables. Therefore pull out and turn the handle
- Unfold the planer tables (5) completely and ensure that the lock (6) engages completely
- Turn down the dust collector hood (7).
- Mount hose to the dust collector plug (8).

Proceed in reverse order to readjust to the planer mode.

NOTE

For readjusting to planer mode please lower the thicknesser table at least to lowest position to avoid any damages.

16.7.2 Thicknessing of workpieces

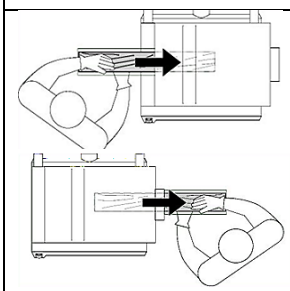


working direction

- Unlock the locking lever height adjustment thicknesser (1) and set the required height of the thicknessing table with the handwheel (2).
- The height will be shown on the indicator (3).
- Set the thicknessing table height to the workpiece height minus the requested cutting depth.
- Maximum cutting depth refer to the technical data!

NOTE: At the beginning of the thicknessing process, the workpieces may still have very different thicknesses - this must be taken into account in the set cutting depth in order not to overload the machine.

- Fix the thicknessing table height with the locking lever height adjustment.
- Switch on the machine.
- Put the lever for thicknesser feeder (4) to the upper position to start the feed.



- Insert workpiece so that the surface to be machined facing upwards and push forward
- The workpiece is pulled through of the automatic feed
- As soon as the half of the workpiece has been processed change to the opposite operator side of the machine and take on the finished workpiece.
- After operation switch off the machine.
- Before further activities wait until blade shaft is at a standstill!

NOTE

- In the case of resin residues on the wood, it may be advisable to apply a thin layer of a special lubricant to the machine table in order to ensure that the workpiece slides evenly through the thickness planer.
- If the workpiece is no longer moved by the automatic feed, pull out the workpiece manually.
- After operation switch off the machine and set the lever for thicknesser feeder to position "OFF".
- Before further activities wait until blade shaft is at a standstill!

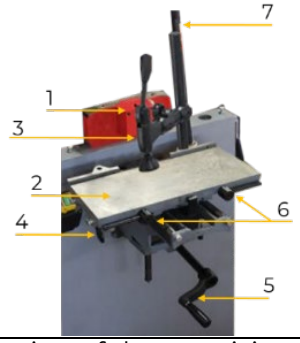
16.8 After working process

NOTE

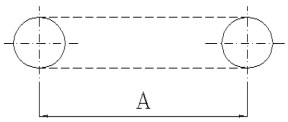
After the working process the planer and thicknesser must be turned off:

- Switch off the machine and disconnect the machine from the power supply.
- After operation set the lever for thicknesser feeder to position "OFF".
- Adjust the planer knife cover so that the planer shaft is completely covered

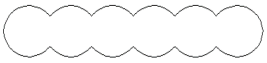
17 OPERATION MORTISING UNIT (OPTIONAL)



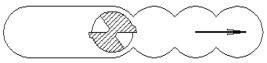
Step 1:



Step 2:



Step 3:



NOTE: Operation of the mortising unit only after converting to thicknessing mode

- Assembly see HOB310ECOLL
- Clamp the milling tool required for drill chuck (1) of the planning shaft
- Lay up the workpiece on the mortising table (2)
- Tilt the downholder (3) to the middle of the workpiece
- Push the clamping lever of the downholder to clamp the workpiece
- Loosen the locking lever (4) and adjust the table height with the crank handle (5) to the requested height of the milling tool
- Adjust the horizontal travel of the table with both longitudinal stops (6)
- Start the machine (see operation planer and thicknesser)
- Move the table with the operating lever (7) in left direction to the limiter
- Press down the workpiece carefully on the milling tool and up to penetration depth of milling (depending the depth stop)
- Move the operating lever carefully to the right direction to the stop
- Repeat this process until the requested milling result has been reached
- Move the lever backwards to release the milling tool out of the workpiece
- After the working process switch of the machine (see operation planer and thicknesser)
- Before further activities wait until planning shaft is at a standstill!

17.1 After working process

NOTE

After the working process the planer and thicknesser must be turned off:

- Switch off the machine and disconnect the machine from the power supply.
- Dismount the milling tool.

18 CLEANING, MAINTENANCE, STORAGE, DISPOSAL

WARNING

Danger due to electrical voltage!
Handling the machine with connected power supply may result in serious injury or death.

→ Always disconnect the machine from the power supply before maintenance or repair work and secure it against unintentional reconnection.

18.1 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.
- Prepare the surfaces and lubricate the bare machine parts with an acid-free lubricating oil (e.g. WD40 rust inhibitor).

18.2 Maintenance

The machine is low maintenance and only a few parts require maintenance. Malfunctions or defects that are likely to impair your safety must be rectified immediately!

- Check that the safety devices are in good condition before each operation.
- Check the connections at least once a week for a tight fit.
- Check the correct and readable status of the Machine's warning and safety labels on a regular basis.

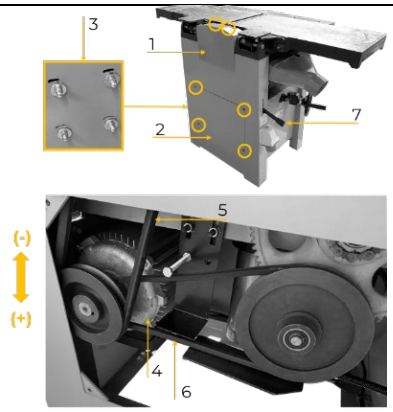
18.2.1 Maintenanceplan

Wear of machine depends strongly on operation condition. The following intervals are valid when using the machine within the operation limits

Interval	Componente	Activity
Before every usage	Anti-kick-back device	At least once per work-shift by inspection to verify that they are in good working condition, eg have no impact damages to the surface and that the anti-kick back device fall back freely due to its own weight after lifting.
	Machine	Cleaning (from dust and chips)
monthly	V-Belt	Check retighten or replace if necessary.
	Feed/Pull-out roller	Check and clean thoroughly
	Height adjustment	Control, lubrication
Half yearly	Chain-drive (feed)	Check for damage/wear, lubricate, replace if necessary
	Gear (feed)	Check for damage/wear and replace if necessary.

18.3 Checking/adjusting/replacing the V-Belt

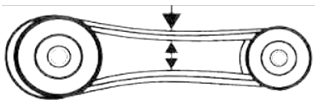
The belt tension is set correctly for new machines ex factory. By stretching the belts over the running time, retensioning of the belt is necessary.
To check/adjust or replace the belt, remove the planer fence and the belt/chain covers (1, 2). Loosen the screws and remove the covers.



NOTE

Do not over-tension the V-belt! Tension the V-belt only until sufficient power transmission is ensured.

max. 2-5mm



Increase drive-belt tension:
Loosen nuts (3) and unscrew slightly. The motor (4) can now be shifted in the direction (+) of more belt tension.
When correct tension is reached. Tighten the nuts (3) firmly again.

Decrease drive-belttension:
Loosen nuts (3) and unscrew slightly. The motor (4) can now be shifted in the direction (-) of less belt tension.
When correct tension is reached. Tighten the nuts (4) firmly again.

For changing the drive-belt, completely de-tension the belt (5), pull it over and insert new belt. Then establish correct belt tension again.
For changing the feed-belt, pull over the drive-belt, completely de-tension the belt (6) (deactivate the feeding with handle for thicknesser feeder (7)) pull it over and insert new belt.

After completion, remount the planer fence and the covers and fix it with the screws.

18.4 Lubricate height adjustment (thicknesser)

Remove chips and dust from the machine.
Remove the belt/chain cover (loosen the screws and remove the cover).
Set the thickness table all to the top.
Clean spindle/height adjustment unit and then grease with machine grease.
Move the thickness planing table 1x up and down to distribute the grease.
Mount the cover again (hang in the cover and tighten the screws).

18.5 Check/clean anti-kick-back device

Check: Lift up Anti-kick back device, it must fall back on your own.
Cleaning: Remove dust and chips or resin residues.

18.6 Check/lubricate chain-drive (feed)

Check the chain for any damage (cracks, break-outs). The chain can be moved by turning the friction wheel to view all parts. Lubricate chains with normal machine grease.

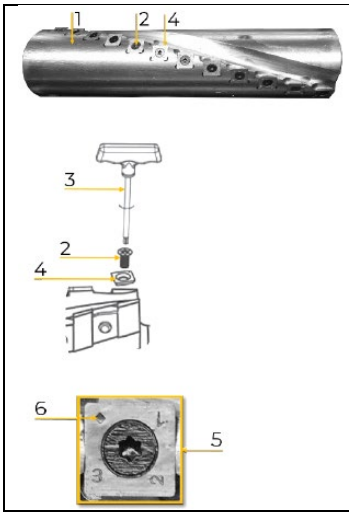
18.7 Replacing/turning the cutter inserts

NOTE

The spiral cutter head is suitable for cutter inserts.
If the planing surface is bad, only the damaged or blunt cutter insert needs to be replaced/turned. The appropriate dimensions can be found in the technical data .

WARNING

Danger from cutting edges! Always wear protective gloves when working on the planing shaft! Injuries to hands due to sharp cutting edges



1. Adjust the machine to thickness planing mode
2. The dust collection hood must be open in order to have access to the spiral cutter head (1)
3. Remove wood chips and dust from the heads of the screws for cutter inserts (2)
4. Unscrew the screw for cutter inserts with the key for inserts (3)
5. Remove the cutter insert (4)
6. Thoroughly clean the place of the cutter insert on the spiral cutter head
7. If the cutter insert will be turned, clean it thoroughly as well
NOTE: A cutter insert can be turned 3 times (refer to numbers (5) for help)
8. Now renew the cutter insert, or turn it over to the next number
NOTE: As an aid, it is advisable to always insert a new cutter insert with the starting point (6) at the same position
9. Fix the cutter insert with the screw for cutter inserts. (Recommended minimum tightening torque 4Nm)

18.8 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.
Prepare the surfaces and lubricate the bare machine parts with an acid-free lubricating oil (e.g. WD40 rust inhibitor).

NOTE

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

18.9 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.

19 TROUBLESHOOTING

WARNING

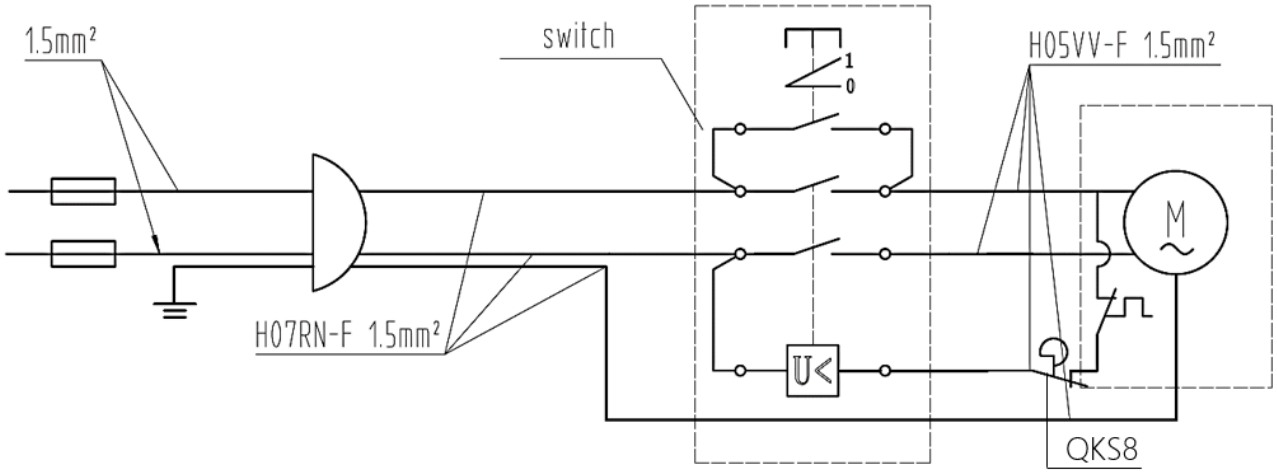
Danger due to electrical voltage!
Handling the machine with connected power supply may result in serious injury or death.
➔ Always disconnect the machine from the power supply before maintenance or repair work and secure it against unintentional reconnection.

Many possible sources of error can be excluded in advance if the machine is properly connected to the Disconnect the machine from the power supply. If you are unable to carry out necessary repairs properly and/or do not have the required training, always consult a specialist to correct the problem.

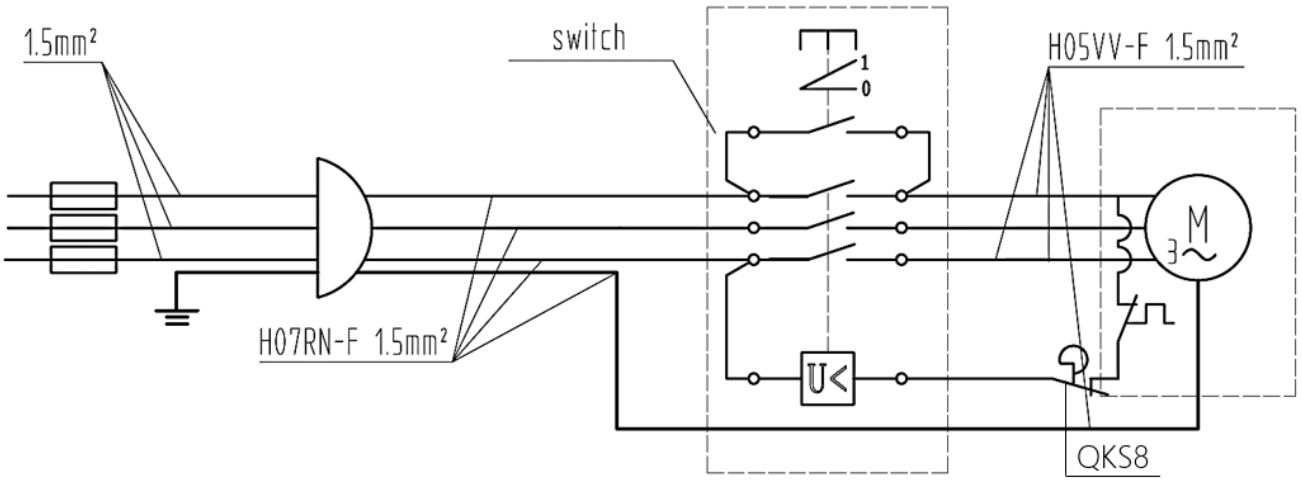
Problem	Possible cause	Solution
Machine does not start or shuts down automatically during idling	▪ Power supply outage ▪ Damaged or incorrect connected extension cable ▪ Damaged switch or motor	▪ Check fuse of the power supply ▪ Check plug or extension cable ▪ Contact customer support
Machine stops during operation	▪ Blunt cutter inserts ▪ Feeding speed to high ▪ Motor protection triggered	▪ Check cutter inserts ▪ Work with lower feeding speed ▪ Let the motor cool down
Machine vibrates during operation	▪ Wrong mounted/loosen cutter inserts ▪ Ground not flat or base feet wrong adjusted	▪ Check and refix cutter inserts ▪ Set the base feet correct
Workpiece clamps during thicknessing	▪ Cutting depth to high ▪ Dirty thicknessing table	▪ Set the correct cutting depth and operate in more steps ▪ Clean and apply the table surface with lubricant
Bad surface condition after operating	▪ Blunt cutter inserts ▪ Uneven feed of the workpiece	▪ Check cutter inserts ▪ Feed workpiece evenly and with constant pressure
Rough surface after operating	▪ Workpiece too moist	▪ Use drier workpiece
Cracked surface after operating	▪ Workpiece was processed against the direction of growth ▪ Cutting depth to high	▪ Proceed the workpiece in opposite direction ▪ Set the correct cutting depth and operate in more steps

28 ELEKTRISCHER SCHALTPLAN / WIRING DIAGRAM/ SCHÉMA ÉLECTRIQUE

HOB310ECOSMW2_230V:



HOB310ECOSMW2_400V:



29 ERSATZTEILE / SPARE PARTS / PIECES DE RECHANGE

29.1 Ersatzteilbestellung / spare parts order / Commande de pièces détachées

(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.

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.

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.

(FR) Les pièces de rechange HOLZMANN sont conçues pour correspondre idéalement. La précision d'ajustage optimale des pièces réduisent les temps de pose et augmente la durée de vie.

AVIS

Le montage de pièces autres que les pièces de rechange d'origine entraîne la perte de la garantie ! Par conséquent, la règle est la suivante : Utiliser uniquement des pièces de rechange recommandées par le fabricant pour le remplacement des composants/pièces.

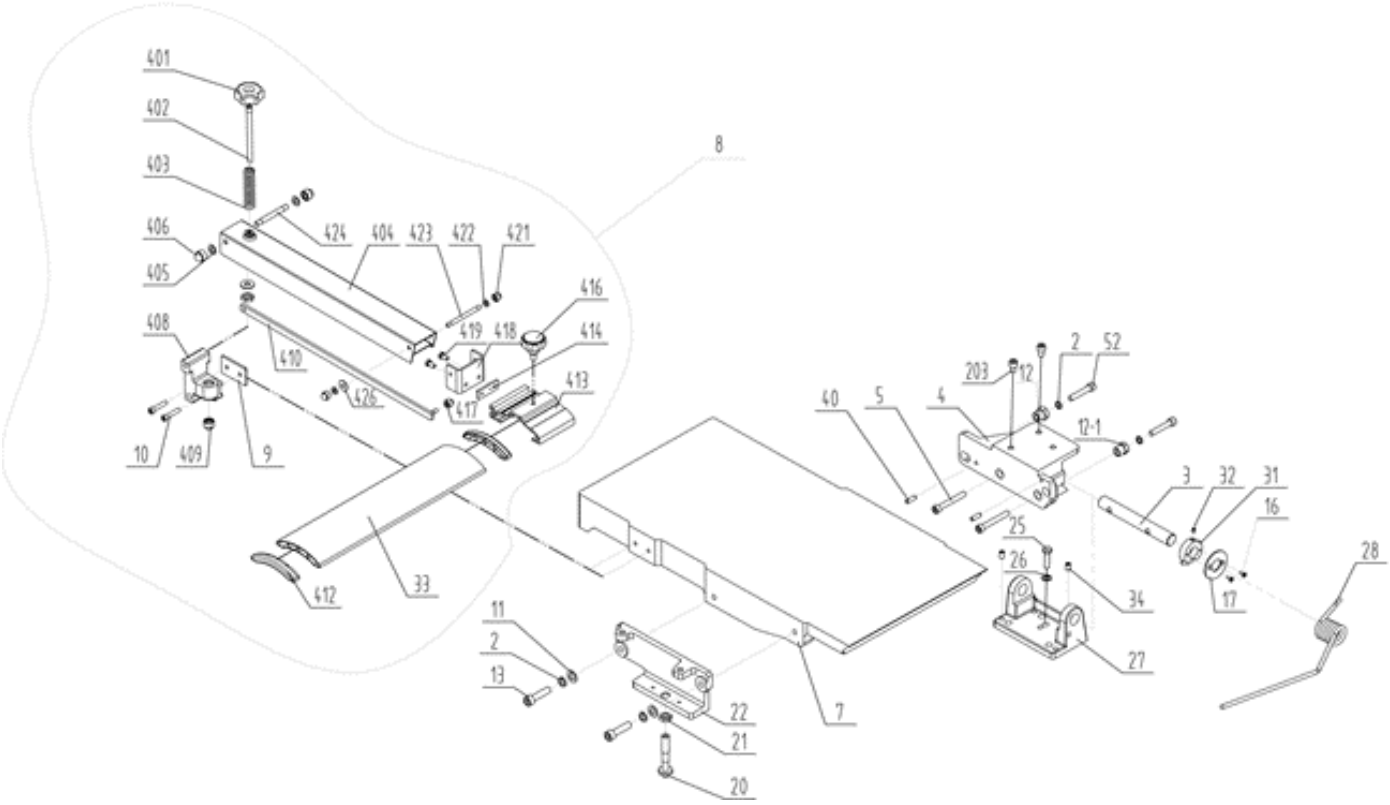
Commandez les pièces de rechange directement sur notre page d'accueil – catégorie PIÈCES DE RECHANGE.
ou contactez notre service client

- via notre page d'accueil – Catégorie SERVICE – DEMANDE DE PIECES DE RECHANGE,
- par e-mail à l'adresse service@holzmann-maschinen.at.

Toujours indiquer le type de machine, le numéro de pièce de rechange et la désignation. Afin d'éviter tout malentendu, nous vous recommandons de joindre une copie du plan des pièces détachées à la commande de pièces détachées, sur laquelle les pièces détachées requises sont clairement indiquées, si vous ne faites pas la demande via le catalogue de pièces de rechange en ligne.

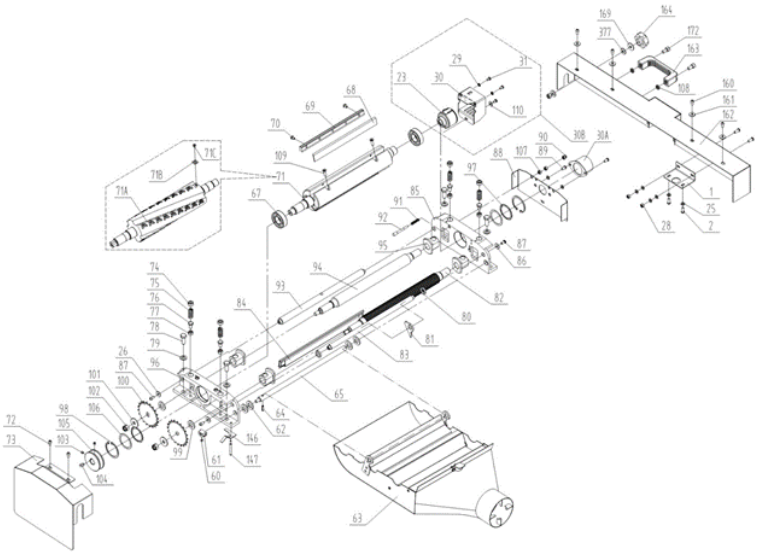
29.2 Explosionszeichnung / Exploded view / Vue éclatée

Cutter Block Guard and Outfeed Assembly:



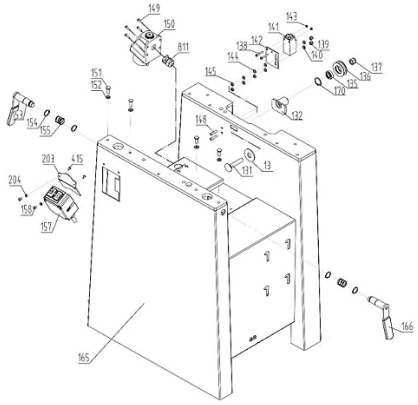
No.	Description	Qty	No.	Description	Qty
2	Spring washer Ø10	2	**40**	Pin 6X20	4
3	Outfeed Table Bracket Shaft	1	**52**	Hex. Socket Screw M8X45	2
4	Outfeed Table Bracket Right	1	**203**	Hex. Socket Screw M8X10	2
5	Hex. Socket Cap Screw M8X60	2	**401**	Lock Knob	1
7	Outfeed Table	1	**402**	Lead Screw	1
8	Cutterblock Guard Assembly	1	**403**	Spring	1
9	Plate	1	**404**	Bracket for Guard	1
10	Hex. Socket Cap Screw M6X30	2	**405**	Washer Ø8	3
11	Washer Ø10	2	**406**	Lock Nut M8	2
12	Hex. bush	1	**408**	Locking Support	1
12-1	Hex. bush	1	**409**	Hex. Lock Nut M8	1
13	Hex. Socket Cap Screw M10X40	2	**410**	Long Shaft	1
16	Screw M4X10	2	**412**	Fixed Press Paw	2
17	Large washer	1	**413**	Guard Plate Cover	1
20	Table Locking Shaft	1	**414**	Lock Plate	1
21	Hex. Nut M12	1	**416**	Nylon knob	1
22	Outfeed Table Bracket Left	1	**417**	Lock Nut M6	1
25	Hex. Bolt M8X30	3	**418**	Bracket	1
26	Washer Ø10	5	**419**	Hex. Bolt M6X10	2
27	Outfeed Table Support	1	**421**	Lock Nut M6	2
28	Spring	1	**422**	Nylon Washer 6	2
31	Big Cam Wheel for Safty Switch	1	**423**	Shaft (M6)	1
32	Hex. Socket Set Screw M6X6	1	**424**	Shaft (M8)	1
33	Cutterblock Guard Profile W/Cap	1	**426**	Washer Ø6	2
34	Hex. Socket Set Screw M8X12	5			

Cutter Block Assembly:



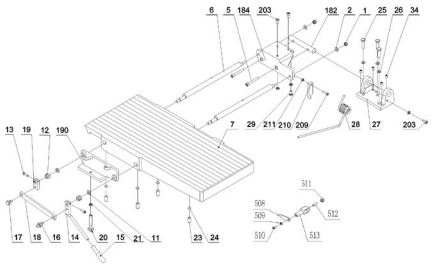
No.	Description	Qty	No.	Description	Qty
1	Cover link plate	1	**86**	Large Washer Ø6	2
2	Pan Head Screw M6X16	4	**87**	Hex. Socket Cap Screw M6X12	2
23	Mortising head	1	**88**	Cutterblock Bracket Cover	1
25	Washer Ø6	6	**89**	Pan Head Screw M6X12	2
26	Large Washer Ø6	2	**90**	Cap Nut M6	1
28	Hex. Nut M6	2	**91**	Spring	1
29	Retained washer Ø5	2	**92**	Pin Stop for Dust Collector	1
30	Cover of mortising head	1	**93**	Support Rod	1
31	Pan head screw M5X8	3	**94**	Outfeed Roller (Rubber)	1
30A	Cover of cutterblock head	1	**95**	Tube (Powder Metal Bushing)	4
60	Hex. Socket Set Screw M6X6	1	**96**	Cutterblock Bracket-Right	1
61	Small cam wheel	1	**97**	Wave Washer D52	2
62	Washer Ø14	4	**98**	Retaining Ring CLP52	2
63	Dust Collector Assembly	1	**99**	Washer(black) Ø14	2
64	Pin Roll 5X18	1	**100**	Drive Chain Sprocket	2
65	Shaft	1	**101**	Large Washer Ø10	2
67	Bearing 6205-2Z	2	**102**	Lock Nut M10	2
71A	Spiral cutter block	3	**103**	Hex. Socket Set Screw M6X6	2
71B	Cutter-inserts	3	**104**	Key 6X16	2
71C	Cutter insert screws	15	**105**	Spindle Pulley	1
		1	**106**	Washer D52	2
72	Pan Head Screw M6X12	2	**107**	Hex. Nut M6	2
73	Belt Cover	1	**108**	Hex. Thin Nut M8	2
74	Screw	4			6
75	Spring	4	**110**	Large Washer Ø5	1
76	Hex. Bolt M8X14	4	**146**	Safety Switch Rocker	1
77	Hex. Thin Nut M8	4	**147**	Safety Switch Rocker Shaft	1
78	Hex. Bolt M10X25	4	**160**	Pan Head Screw M6X12	4
79	Ø10	4	**161**	Large washer Ø6	4
80	Space Washer	48	**162**	Front Cover	1
81	Anti-Kickback Finger	38	**163**	Handle	1
82	Infeed Roller	1	**164**	Lock knob	1
83	Anti-Kickback Shaft	1	**169**	Large Washer Ø8	1
84	Cutterblock Cover	1	**172**	Hex. Socket screw M8X16	2
85	Cutterblock Bracket-Left	1	**377**	Nylon Washer Ø8	2

Base Assembly:



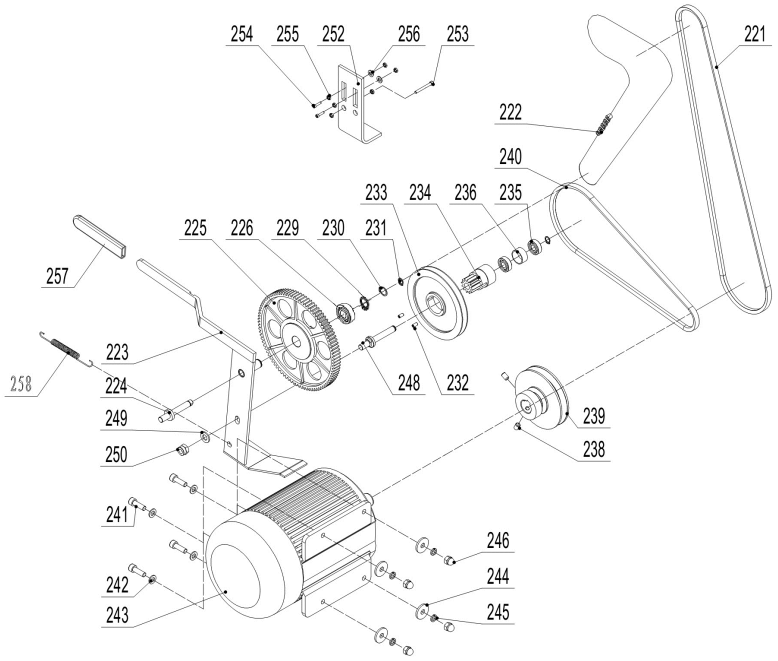
No.	Description	Qty	No.	Description	Qty
13	Large Washer	1	**149**	Pan Head Screw M4X16	4
131	Carriage Bolt M12X65	1	**150**	Plug 230/50/1 (400/50/3)	1
132	Tube	1	**151**	Special Bolt	4
135	Bearing 6001-2Z	1	**152**	Hex. Thin Nut M8	4
136	Chain Tension Wheel	1	**153**	Lock Handle For Outfeed Table	1
137	Lock Nut M12	1	**154**	Retaining Ring CLP20	4
138	Pan Head Screw M4X30	2	**155**	Spring	2
139	Lock Nut M6	2	**157**	Switch 230/50/1 (400/50/3)	1
140	Washer Ø6	2	**158**	Pan Screw M5X8	2
141	Safety Switch	1	**165**	Cabinet	1
142	Safety Switch Bracket	1	**166**	Lock Handle For Infeed Table	1
143	Hex. Nut M4	2	**170**	Retaining Ring CLP28	1
144	Washer Ø6	6	**203**	Switch plate	1
145	Hex. Nut M6	2	**204**	Washer Ø5	2
148	Hex. Socket Cap Screw M6X25	2	**415**	Pan Screw M4X10	2

Infeed Table Assembly:



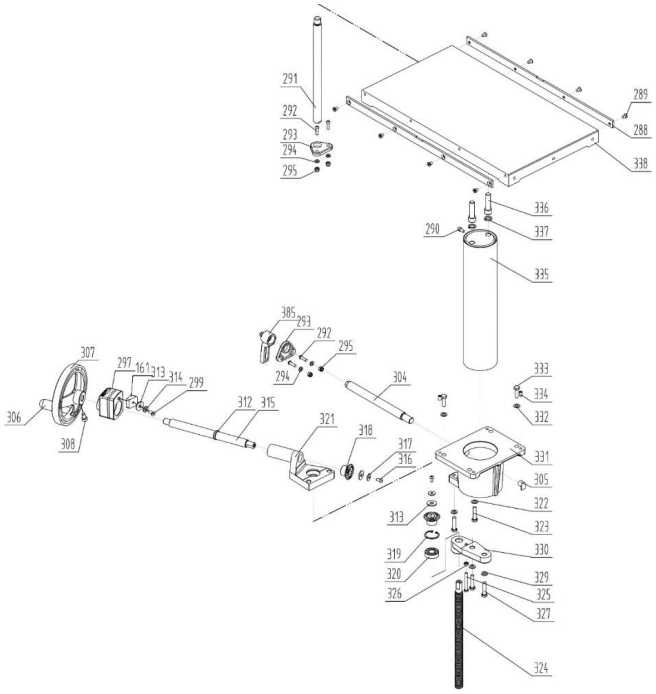
No.	Description	Qty	No.	Description	Qty
1	Lock Nut M8	2	**26**	Washer Ø8	3
2	Thick Washer	2	**27**	Table Support	1
5	Hex. Socket Cap Screw M8X60	2	**28**	Spring	1
6	Eccentric shaft	2	**29**	Socket Cap Screw M8X16	1
7	Front Table	1	**34**	Socket Set Screw M8X12	5
11	Washer Ø12	2	**182**	Outfeed Table Bracket Shaft	1
12	Hex. Lock Nut M12	2	**184**	Infeed Table Bracket Right	1
13	Socket Cap Screw M6X20	2	**190**	Infeed Table Bracket Left	1
14	Adjusting handle	1	**203**	Hex. Socket Cap Screw M8X10	2
15	Knob	1	**209**	Hex. Socket Cap Screw M8X35	1
16	Bracket Screw	1	**210**	Table Stopper	1
17	Bracket Screw	1	**211**	Hex.Thin Nut M8	1
18	Eccentric Shaft Bracket	1	**508**	Pointer	1
19	Eccentric Shaft Clamp	1	**509**	Spring washer H4	1
20	Table Locking shaft	1	**510**	Screw M4X8	1
21	Hex. Thin Nut M12	1	**511**	Hex. Nut M6	1
23	Socket Set Screw M8X10	4	**512**	Set Screw M6X16	1
24	Cap	4	**513**	Support pole	1
25	Hex.Bolt M8X30	3			

Drive and Motor Assembly:



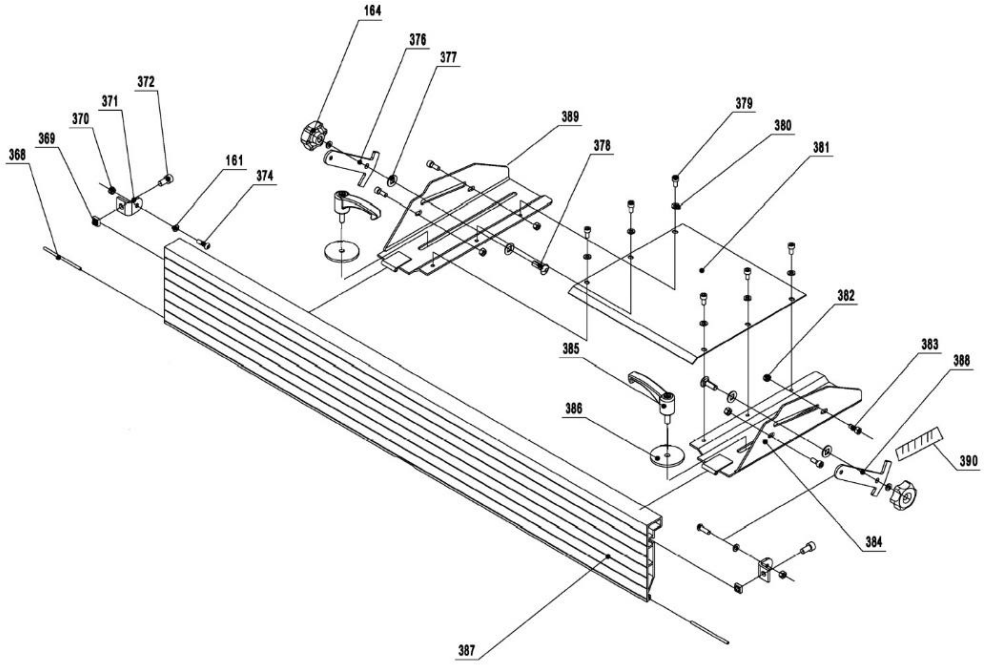
No.	Description	Qty	No.	Description	Qty
221	V-Belt for Cutterblock A1194	1	**240**	V-Belt for Feed Roller O-770E	1
222	Drive Chain 081-86	1	**241**	Hex. Bolt M8X25	4
223	Cam Wheel Bracket	1	**243**	Motor 230/50/1 (400/50/3)	1
224	Cam Wheel Shaft	1	**244**	Large Washer Ø8	4
225	Plastic Gear Wheel Assembly	1	**245**	Spring Washer Ø8	4
226	Bearing 61902	2	**246**	Cap Hex. Nut M8	4
229	Retaining Ring Ø28	2	**248**	Shaft	1
230	Retaining Ring CLP15	1	**249**	Washer Ø10	1
231	Retaining Ring CLP10	2	**250**	Hex. Lock Nut M10	1
232	Hex. Socket Set Screw M5X10	2	**252**	Plate	1
233	V-Belt Pulley for Feed Roller	1	**253**	Hex Bolt M6x60	1
234	Gear Wheel	1	**254**	Socket Cap Screw M6x20	2
235	Bearing 6000-2Z	2	**255**	Hex Nut M6	6
236	Spacer Bearing	1	**257**	Rubber Handle	1
238	Hex. Socket Set Screw M6X12	2	**258**	Tension Spring	1
239	Motor Pulley	1			

Thickness Table Assembly:



No.	Description	Qty	No.	Description	Qty
161	Indicator Seat	1	**318**	Bevel Gear	2
288	Long Bar	2	**319**	Retaining Ring Clp35	2
289	Screw M6x10	8	**320**	Bearing 6202-2Z	2
290	Hex. Socket Set Screw M6x12	1	**321**	Bevel Gear Bracket	1
291	Thickness Table Guide Bar	1	**322**	Washer Ø8	2
292	Hex. Socket Cap Screw M6x20	4	**323**	Hex. Bolt M8x35	2
293	Guide Bar Bracket	2	**324**	Thread Rod	1
294	Washer Ø6	4	**325**	Hex. Bolt M6x50	1
295	Hex. Lock Nut M6	4	**326**	Hex. Nut M6	1
297	Position Indicator	1	**327**	Hex. Bolt M8x35	2
299	Screw M6x16	1	**329**	Washer Ø8	2
304	Locking Bar	1	**330**	Thread Rob Bracket	1
305	Locking Shoe	1	**331**	Column Support	1
307	Crank Handwheel 160	1	**332**	Washer Ø8	4
308	Hex. Socket Cap Screw M8x16	1	**333**	Hex.bolt M8X25	4
312	Retaining Ring Clp20	1	**334**	Hex. Socket Set Screw M8x12	4
313	Large Washer Ø8	2	**335**	Column	1
314	Washer Ø6	2	**336**	Hex. Socket Screw M12X45	2
315	Crank Bar	1	**337**	Spring Washer Ø12	2
316	Pan Head Screw M6x12	2	**338**	Thickness Table	1
317	Large Washer Ø6	2	**385**	Lock handle	1

Planer Fence Assembly:



No.	Description	Qty	No.	Description	Qty
161	Large Washer Ø6	2	**380**	Washer Ø6	6
164	Lock knob	2	**381**	Cutterblock Cover	1
368	Pin for Hinge	2	**382**	Hex.Nut M6	4
369	Square Nut M8	2	**383**	Hex. Socket Cap Screw M6X10	4
370	Nut M6	2	**384**	Fence Bracket-Left	1
371	Fence Mounting Bracket	2	**385**	Lock Handle	2
372	Hex. Socket Screw M8X16	2	**386**	Special Washer	2
374	Hex. Socket Cap Screw M6X16	2	**387**	Fence	1
376	Fence Support-Right	1	**388**	Fence Support-Left	1
377	Nylon Washer	4	**389**	Fence Bracket-Right	1
378	Carriage Bolt M8X25	2	**390**	Fence Scale	1
379	Pan Head Sscrew M6X12	6			