

MANUAL DE INSTRUCCIONES
OPERATING INSTRUCTIONS
MODE D'EMPLOI
GEBRAUCHSANWEISUNG
MANUALE D'ISTRUZIONI
MANUAL DE INSTRUÇÕES
ИНСТРУКЦИЯ ПО ЭКСПЛУАТАЦИИ
INSTRUKCJA OBSŁUGI

Virutex[®]

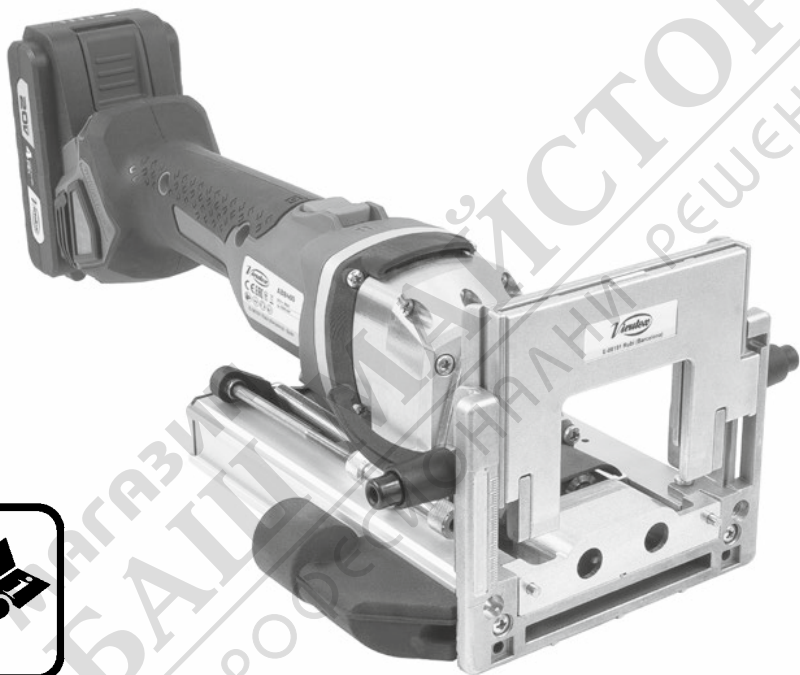


ABB400 **CE**

Espigadora TWOO a batería
Cordless Dowelling Jointer TWOO

Tourillonneuse TWOO à batterie

AKKU - Twin-Dübelbohrmaschine TWOO

Sistema di spinatura TWOO a batteria

Fresadora de Cavilhas TWOO a bateria

Аккумуляторный присадочный фрезер TWOO

Akumulatorowa Frezarka do połączeń kotkowych TWOO



donde adquirieron el producto, o con las autoridades locales pertinentes, para informarse sobre cómo y dónde pueden llevarlo para que sea sometido a un reciclaje ecológico y seguro.

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ENGLISH

ABB400 CORDLESS DOWELLING JOINTER TWO

1. SAFETY INSTRUCTIONS

1.1 GENERAL SAFETY INSTRUCTIONS



Read these OPERATING INSTRUCTIONS. Make sure you have understood them before operating the machine for the first time.

Save all warnings and instructions for future reference. The term "power tool" in the warnings refers to the power tool run off the electrical network (with a power cord) or to a battery run power tool (cordless).



Read all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term "power tool" in all of the warnings listed below refers to your mains operated (corded) power tool or battery operated (cordless) power tool.

1) Work area

- Keep work area clean and well lit. Cluttered and dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.
- Never leave the power tool unattended. Leave the machine only when the tool is completely in neutral.

2) Electrical safety

- Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.

There is an increased risk of electric shock if your body is earthed or grounded.

- Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
- If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.

3) Personal safety

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
 - Use safety equipment. Always wear eye protection. Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
 - Avoid accidental starting. Ensure the switch is in the off position before plugging in. Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.
 - Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
 - Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
 - Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
 - If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of these devices can reduce dust related hazards.
 - Do not allow the familiarity with the frequent use of tools to become complacent and ignore the principles of tool safety. Negligence can cause serious injury in a split second.
- ##### 4) Power tool use and care
- Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
 - Do not use the power tool if the switch does not turn

it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

c) Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.

d) Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.

e) Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.

f) Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

g) Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation.

h) Keep the handles dry, clean and free of oil and grease. The sliding handles do not allow safe handling and control of the tool in unexpected situations. Power tools with the switch on invite these situations.

5) Service

a) Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

b) Use only original parts for repair and maintenance. The use of incompatible accessories and parts can cause electric shock and other injuries.

1.2 SAFETY INSTRUCTIONS FOR THE JOINTING MACHINE USE



Carefully read the GENERAL SAFETY INSTRUCTION LEAFLET enclosed with the machine documents.

1. Supply voltage must be the same as that indicated on the specifications plate.

2. DANGER: KEEP HANDS AWAY FROM THE CUTTING ZONE. Never put hands near the cutting blade. Do not hold the underside of the machine when it is operating.

3. Ensure that the safety mechanism (retraction) functions freely without any danger of being held back. Do not block the mechanism with the blade in the exposed position.

Always use the protective mechanism: The protective

mechanism safeguards the user against fragments of broken bits and from accidental contact with the bit.

4. WHEN REPLACING THE BLADE, USE ONLY ORIGINAL VIRUTEX BLADES. Never use blades which do not comply with the properties specified in this manual. Do not use malformed or broken blades. Do not use high-speed steel.

The assigned speed of the blade must be at least equal to that marked on the machine: Blades that work at a faster speed than the assigned speed may be partially thrown out, causing injury.

5. AVOID CUTTING NAILS AND KNOTS. Inspect the wood and remove nails before cutting. Try not to cut through knots.

6. Hold the machine by the insulated gripping surfaces, as the blade may touch the machine's power cable: Cutting an electrified cable may also electrify the accessible metal parts of the machine and cause electric shock to the user.



Unplug the machine from the battery outlet before any maintenance operations.

1.3 SAFETY INSTRUCTIONS FOR USE AND MAINTENANCE OF THE BATTERY AND CHARGER



Do not store the tool and battery cartridge in locations where the temperature may reach or exceed 45° C.



Do not incinerate the battery cartridge.



Do not expose battery cartridge to water or rain.

• Only recharge with the manufacturer's specified charger. Only recharge with the manufacturer's specified charger. A charger which is suitable for one type of battery cartridge can cause a fire risk on another type of battery cartridge.


• Only use this power tool with the battery cartridge specifically designed for this model. The use of other types of battery cartridges may cause injury to the operator and a fire risk.

• When the battery cartridge is not in use, keep it away from metal objects, such as paper clips, coins, keys, nails, screws or other small metal objects that can establish contact from one terminal to the other. Shorting the battery terminals may cause burns or a fire.

• Battery fluid may be spilled under extreme conditions;

avoid contact with this liquid. In case of accidental contact, rinse thoroughly with water. If the liquid comes into contact with your eyes, seek medical attention. Battery fluid may cause irritation or burns.

- Do not use damaged or modified batteries. Damaged or modified batteries can behave in an unpredictable way and may cause injury to the operator and a fire risk.
- Avoid switching the device on accidentally. Make sure the on/off switch is in the off position before inserting the battery. Carrying the power tool with your finger on the on/off switch or inserting the battery with the switch in the on position can cause accidents.
- Do not open the batteries. You could damage the circuits.
- Fumes may be aired if there is battery damage and improper use. In this case, go to a well-ventilated location and seek medical assistance, if necessary. Fumes cause respiratory irritation.
- When the battery is defective, the liquid may leak and come into contact with adjacent components. Check the corresponding parts. Clean or replace them, if necessary.
- Protect the battery from heat, continued solar radiation and fire. There is an explosion hazard.




Read all instructions and safety warnings.

- Protect the battery charger from rain and moisture. Water entering the charger increases the risk of electric shock.
- Do not charge other batteries. The battery charger is only suitable for charging lithium-ion batteries within the indicated voltage range. Otherwise, there is a fire and explosion hazard.
- Keep the battery charger clean. Dirt can cause a risk of electric shock.
- Always check the battery charger, its cable and plug before using them. Do not use the charger if you see it is damaged. Do not open the charger on your own. Have it repaired by a qualified person who uses original spare parts. Damaged chargers, cables and plugs increase the risk of electric shocks.
- Do not use the battery charger on highly flammable surfaces. For example, paper, textiles, etc., or in combustible environments. A fire hazard exists from the charger heating during the charging cycle.

2. SPECIFICATIONS

Battery voltage.....	20 V
No-load speed.....	7,000 min ⁻¹
Battery type.....	Li-Ion
Time to charge battery.....	60 min
Battery capacity.....	2 or 4 A _n
Disc.....	D100xD22x4mm
Routing depth.....	20 mm

Weight.....	3 kg
Weighted equivalent continuous acoustic pressure level A.....	92 dBA
Acoustic power level A.....	103 dBA
Uncertainty.....	K: 3 dBA



Wear ear protection!

Vibration total values.....	a _v : 4,7 m/s ²
Uncertainty.....	K: 1,5 m/s ²

3. SPECIFICATIONS OF THE TOOL



Brushless motor

Power tool equipped with a brushless motor that provides the following advantages (compared to the power tool having a brush motor):


- High reliability due to the lack of wearing parts (carbon brushes, commutator).
- Increased operating time on a single charge.
- Compact design and light weight.

Temperature protection

The temperature protection system enables to automatically deactivate the power tool in case of excess load or when the temperature of the battery 7 (Fig. 1) is exceeding 70°C. The system guarantees protection of the power tool from damage in case of non-compliance with the operation conditions.

Overdischarge protection

The battery 7 (Fig. 1) is protected by the safety system against deep discharge. In case of complete discharge, the power tool is automatically switched off.



Do not try to switch on the power tool when the protection system is activated the battery 7 (Fig. 1) can be damaged.

Indicators of the state of battery charge

With the push of the button 6 the indicators 5 show the state of charge of the battery 7.

Overheating protection

Overheating protection system of the engine automatically switches off the power tool in case of overheating. In this situation, let the tool cool before turning the power tool on again.

Overload protection

Overload protection system of the engine automatically switches off the power tool when it is operated in a manner that causes it to draw an abnormally high current.

Soft start

Soft start enables smooth start of power tools - is

being run up gradually with no jerks and kickbacks; no jump-like load is imposed on the motor upon switching.

4. HOW TO CHARGE THE BATTERY



Battery charging time

Initial operating of the power tool

Before the first use, the battery 7 (Fig. 1) must be fully charged.

Charging process (Fig. 2)

- Press the battery lock 4 and remove the battery 7 (Fig. 1).
- Connect the charger 19 to the power supply.
- Insert battery 7 into charger 19 (Fig. 2).
- Disconnect the charger 19 from power supply after charging.
- Remove the battery 7 from the charger 19 and mount battery 7 in the power tool.

Charger indicators (Fig. 3)

Charger indicators 21 and 22 inform of the battery 7 (Fig. 1) charging process. Signals of the indicators 21 and 22 are shown on the label 20. (Fig. 3).

- Fig. 40.1 - (The green indicator 22 is on, the battery 7 is not inserted in the charger 19) - the charger 19 is connected to the power network (ready for charging).
- Fig. 40.2 - (The green indicator 22 is blinking, the battery 7 is inserted in the charger 19) - the battery 7 is being charged.
- Fig. 40.3 - (The green indicator 22 is on, the battery 7 is inserted in the charger 19) - the battery 7 is fully charged.
- Fig. 40.4 - (The red indicator 21 is on, the battery 7 is inserted in the charger 19) - the charging process of the battery 7 is terminated due to inappropriate temperature. When the temperature conditions are normal, the process of charging will resume.
- Fig. 40.5 - (The red indicator 21 is blinking, the battery 7 is inserted in the charger 19) - the charging process of the battery 7 is terminated because of its failure. Replace the faulty battery 7, its further use is prohibited.

In the process of charging the battery 7 and the charger 19 become hot, it is a normal process.

5. STARTING UP THE MACHINE

To start up the machine, push button forward to the on position.

To stop the machine, simply press the back of the switch and it will return to the off position.

6. NOISE LEVEL AND VIBRATIONS

The noise and vibration levels of this device have been measured in accordance with European stan-

dard EN 60745-2-19 and EN 60745-1 and serve as a basis for comparison with other machines with similar applications.

The indicated vibration level has been determined for the device's main applications and may be used as an initial value for evaluating the risk presented by exposure to vibrations. However, vibrations may reach levels that are quite different from the declared value under other application conditions, with other tools or with insufficient maintenance of the electrical device or its accessories, reaching a much higher value as a result of the work cycle or the manner in which the electrical device is used.

Therefore, it is necessary to establish safety measures to protect the user from the effects of vibrations, such as maintaining both the device and its tools in perfect condition and organising the duration of work cycles (such as operating times when the machine is subjected to loads, and operating times when working with no-load, in effect, not in use, as reducing the latter may have a considerable effect upon the overall exposure value).

7. WARRANTY

All VIRUTEX power tools are guaranteed for 12 months from the date of purchase, excluding any damage which is a result of incorrect use or of natural and tear on the machine. All repairs should be carried out by the official VIRUTEX technical assistance service.

8. RECYCLING ELECTRICAL EQUIPMENT

Never dispose of electrical equipment with domestic waste. Recycle equipment, accessories and packaging in ways that minimise any adverse effect on the environment. Comply with the current regulations in your country.

Applicable in the European Union and in European countries with selective waste collection systems:

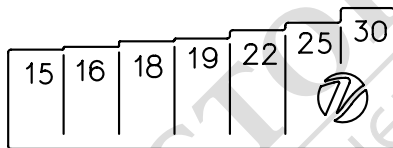
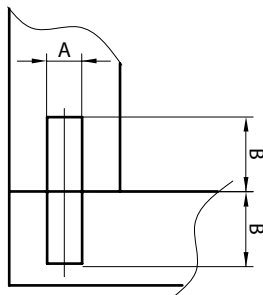
If this symbol appears on the product or in the accompanying information, at the end of the product's useful life it must not be disposed of with other domestic waste.

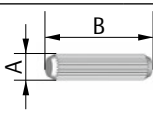
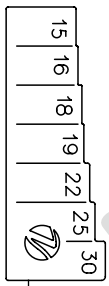


In accordance with European Directive 2002/96/EC, users may contact the establishment where they purchased the product or the relevant local authority to find out where and how they can take the product for environmentally friendly and safe recycling.

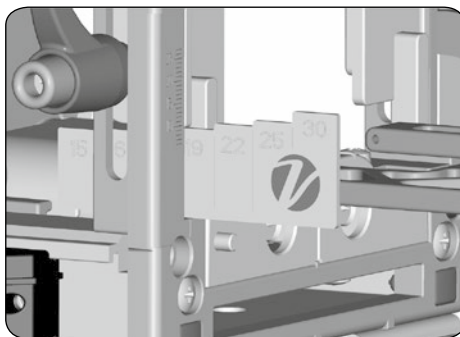
VIRUTEX reserves the right to modify its products without prior notice.

Fresado a 90° (Tabla)
 Drilling at 90° (Table)
 Fraisage à 90° (Tableau)
 Bohren im 90°-Winkel (Tabelle)
 Fresatura a 90° (Tabella)
 Fresagem 90° (Tabela)
 Сверление под углом 90° (Таблица)
 Wiercenie pod kątem 90° (Tabela)

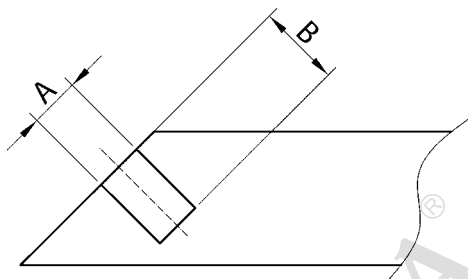


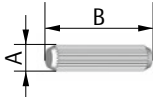
		6x20 mm	6x25 mm	6x30 mm	8x25 mm	8x30 mm	8x40 mm	10x40 mm	12x40 mm
	15 mm	•	•						
	16 mm	•	•						
	18 mm	•	•	•	•	•			
	19 mm	•	•	•	•	•			
	22 mm				•	•			
	25 mm				•	•	•	•	•
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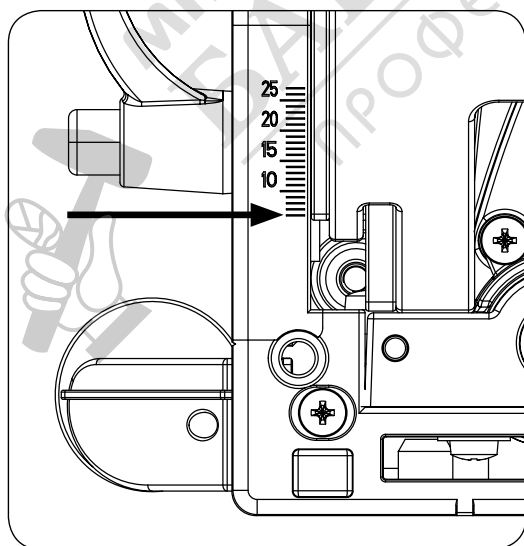
Galga de grosor del panel
 Panel thickness gauge
 Jauge d'épaisseur de panneau
 Plattendickenmessgerät
 Spessimetro per pannelli
 Medidor de espessura do painel
 Измеритель толщины панели
 Wskaźnik grubości panelu



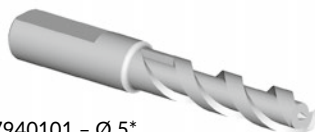
Fresado a 45° (Tabla)
 Drilling at 45° (Table)
 Fraisage à 45° (Tableau)
 Bohren im 45°-Winkel (Tabelle)
 Fresatura a 45° (Tabella)
 Fresagem 45° (Tabela)
 Сверление под углом 45° (Таблица)
 Wiercenie pod kątem 45° (Tabela)



		6x20	6x25	6x30	8x25	8x30	8x40	10x40	12x40
Grosor del panel · Panel thickness Épaisseur du panneau · Plattendicke Spessore del pannello Espessura do painel · Толщина панели Grubość panelu	15 mm	•							
	16 mm	•							
	18 mm	•	•		•				
	19 mm	•	•	•	•				
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	30 mm				•	•	•	•	•
	40 mm				•	•	•	•	•



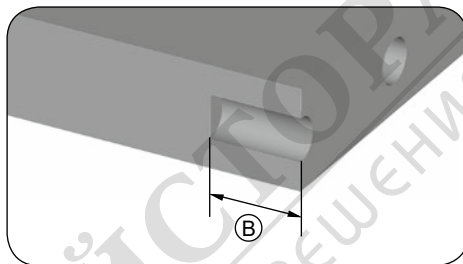
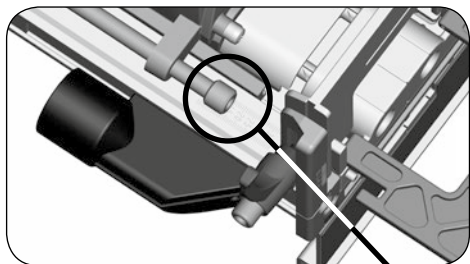
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 Frez z węglików spiekanych



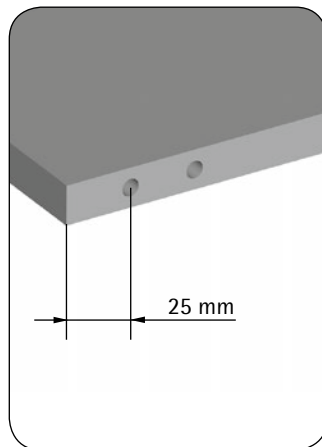
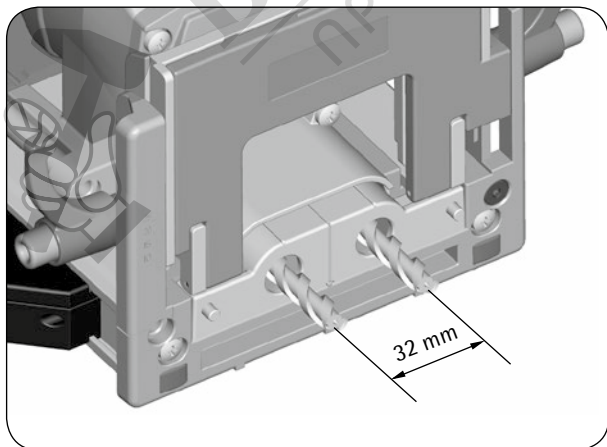
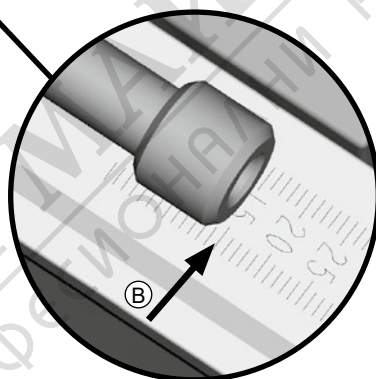
7940101 - Ø 5*
 7940103 - Ø 6
 7940105 - Ø 8
 7940107 - Ø 10
 7940109 - Ø 12

(*) Opcional | Optional
 En option | Опционально
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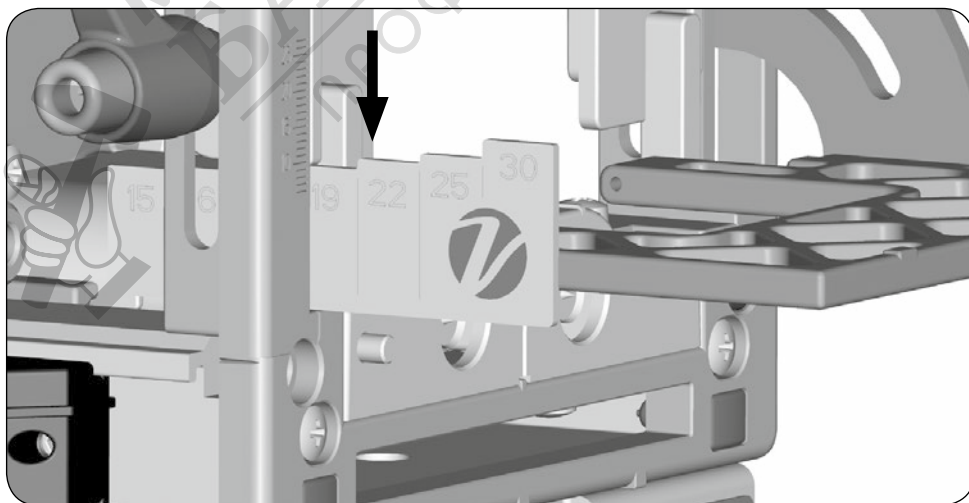
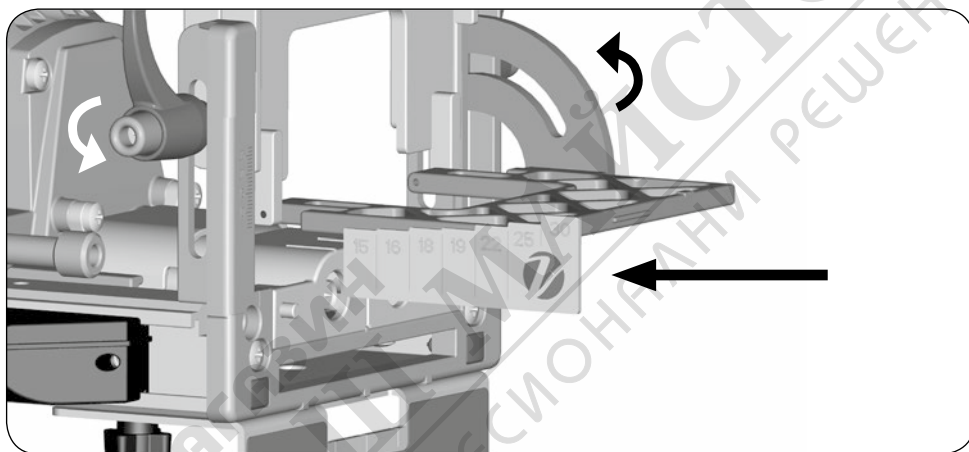
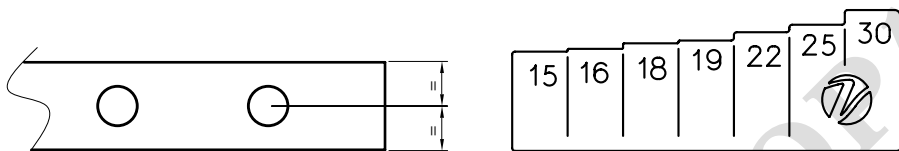
Fresado a 90°
Drilling at 90°
Fraisage à 90°
Bohren im 90°-Winkel
Fresatura a 90°
Fresagem 90°
Сверление под углом 90°
Wiercenie pod kątem 90°



Ajuste de la profundidad de fresado
Drilling depth adjustment
Réglage de la profondeur du fraisage
Einstellen der frästiefe
Regolazione della profondità di fresatura
Ajuste de profundidade de fresagem
Настройка глубины фрезерования
Regulacja głębokości frezowania



Regulación de la altura de fresado (con galga)
Drilling height adjustment (with gauge)
Réglage de la hauteur de fraisage (avec jauge)
Bohrtiefeinstellung (Fühllehre)
Regolazione dell'altezza di fresatura (con calibro)
Ajuste de altura de fresagem (com medidor)
Регулировка высоты фрезерования (с использованием шаблона)
Regulacja wysokości frezowania (z wykorzystaniem wzornika)



Posicionamiento de la máquina para el fresado
(sentido horizontal)

Positioning of the machine for drilling
(horizontal direction)

Positionnement de la machine pour le fraisage
(sens horizontal)

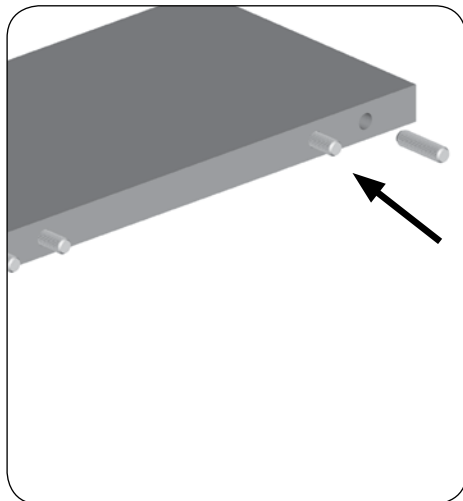
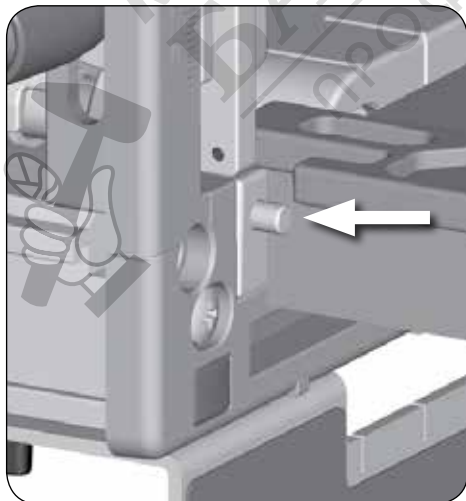
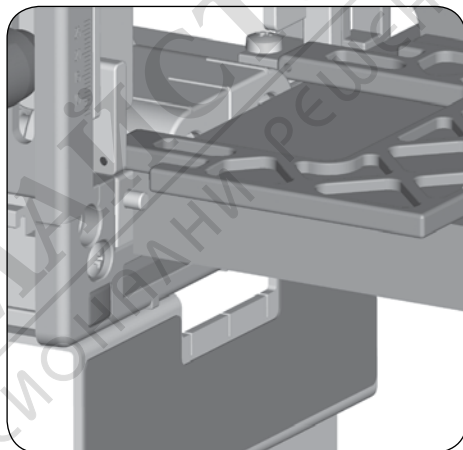
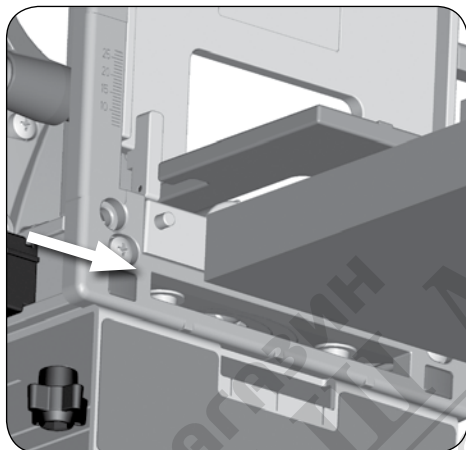
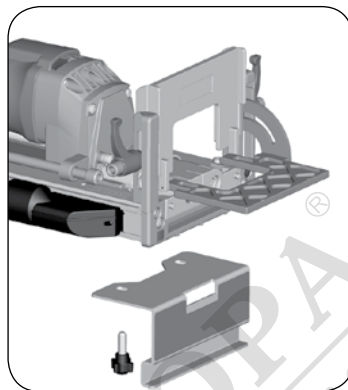
Positionieren der Maschine für horizontale Bo-
hrungen

Posizionamento della macchina per la fresatura
(direzione orizzontale)

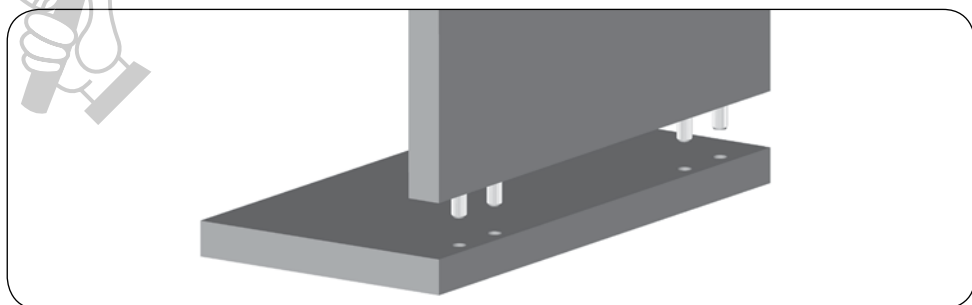
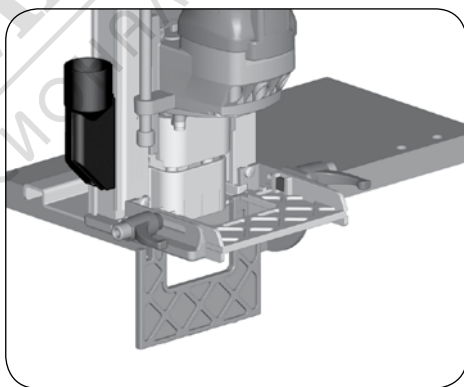
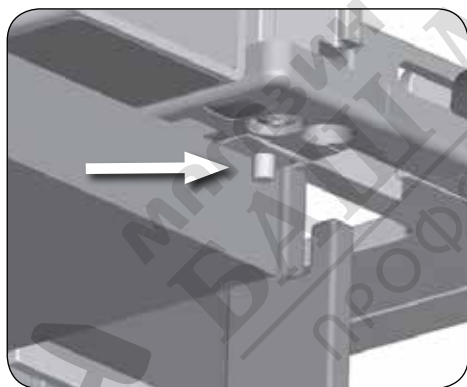
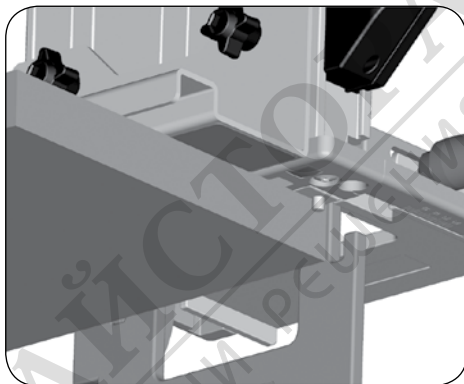
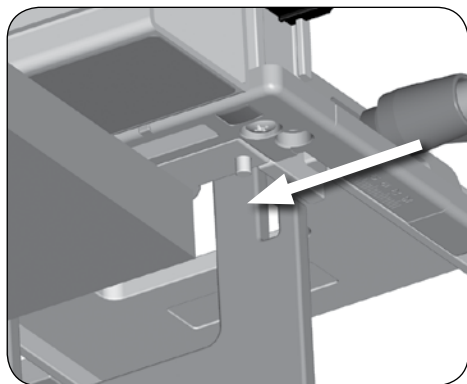
Posicionamento da máquina para fresagem (di-
reção horizontal)

Позиционирование присадочного шпинделя (в
горизонтальном направлении)

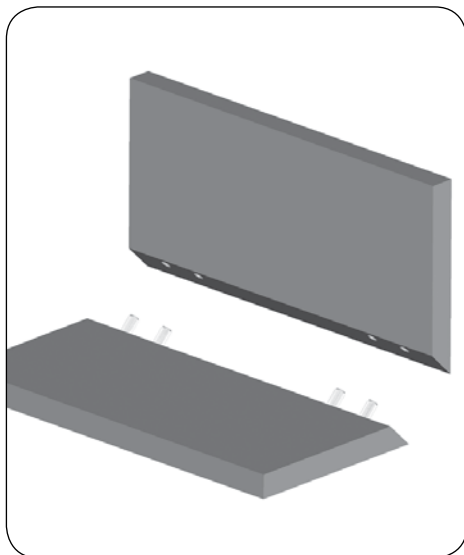
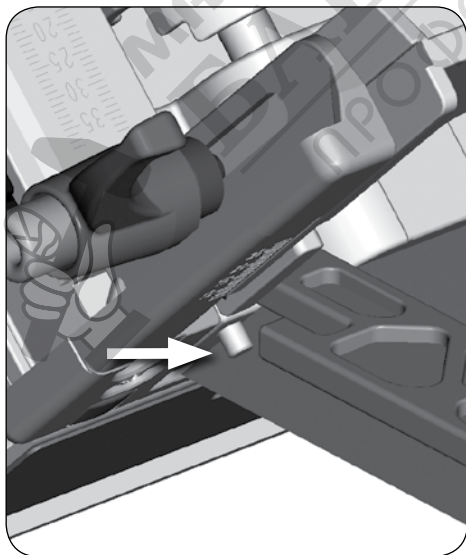
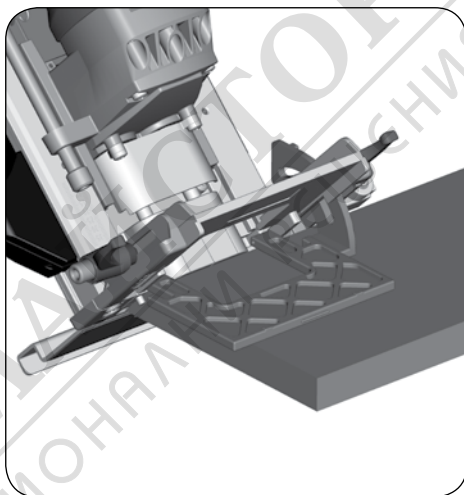
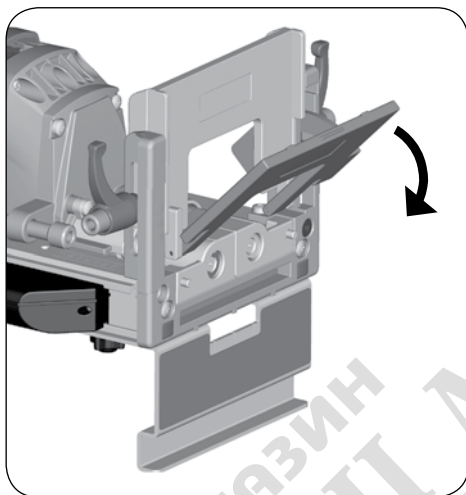
Pozycjonowanie maszyny do frezowania (kierunek
poziomy)



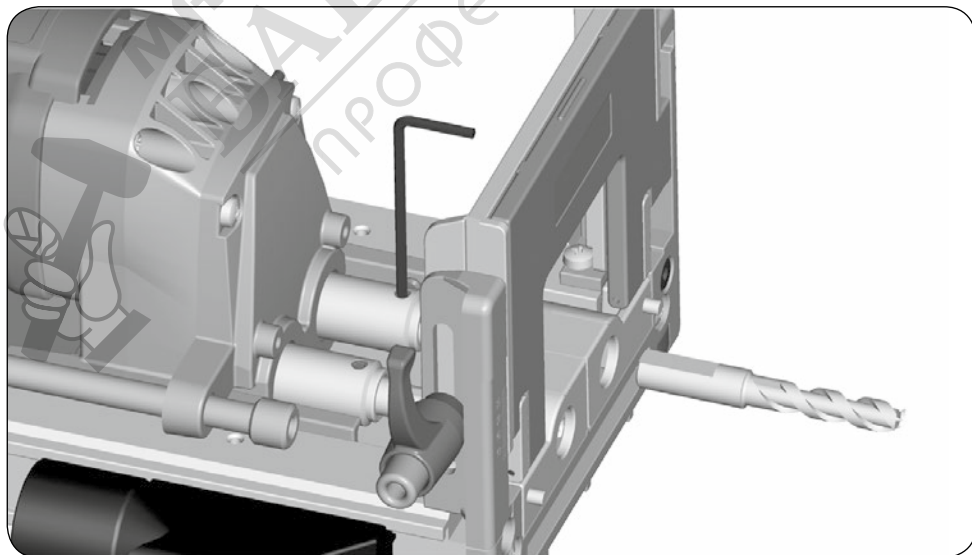
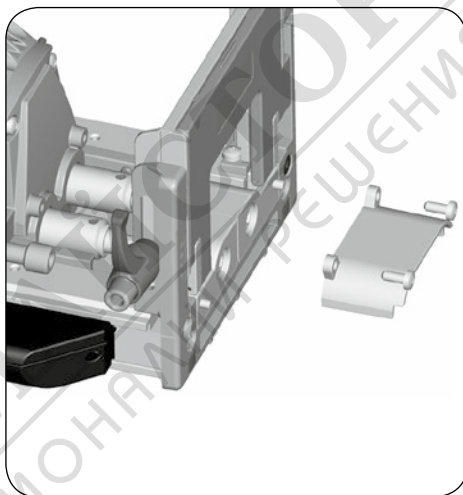
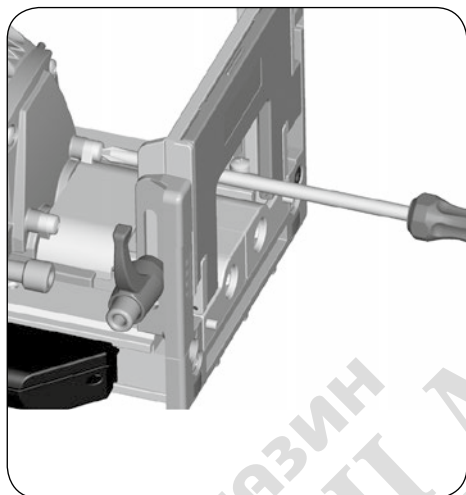
Posicionamiento de la máquina para el fresado (sentido vertical)
Positioning of the machine for drilling (vertical direction)
Positionnement de la machine pour le fraisage (sens verticale)
Positionieren der Maschine für vertikale Bohrungen
Posizionamento della macchina per la fresatura (direzione verticale)
Posicionamento da máquina para fresagem (direção vertical)
Позиционирование присадочного шпинделя (в вертикальном направлении)
Pozycjonowanie maszyny do frezowania (kierunek pionowy)



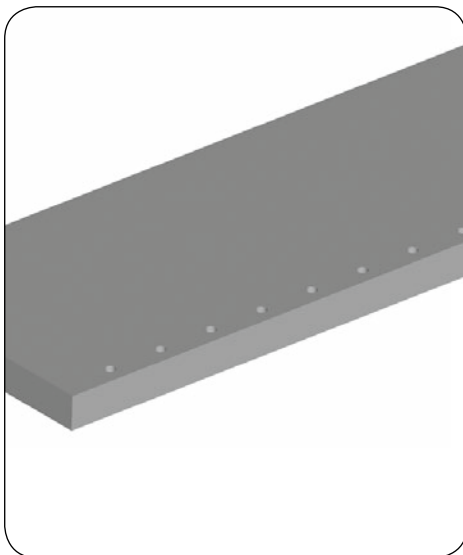
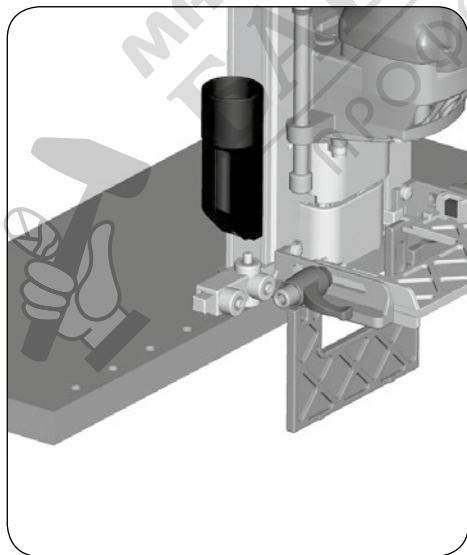
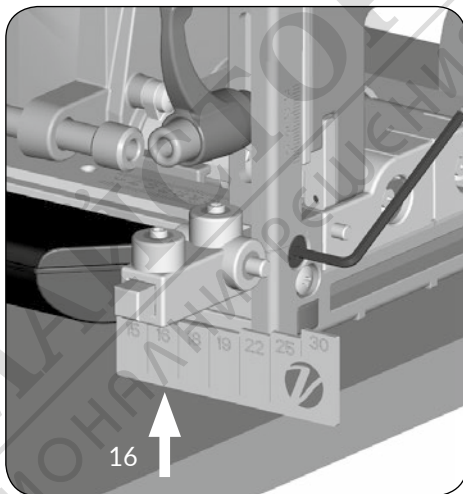
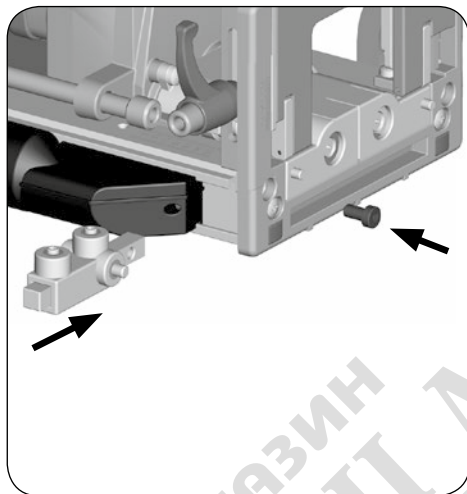
Fresado a 45°
Drilling at 45°
Fraisage à 45°
Bohren im 45°-Winkel
Fresatura a 45°
Fresagem 45°
Сверление под углом 45°
Wiercenie pod kątem 45°



Cambio de fresas
Changing the bits
Changement de les fraises
Auswechseln der fräsen
Cambio de fresi
Substituição de fresas
Замена режущего инструмента
Wymiana frezów



Fresado con accesorio multitaladro (lado izquierdo)
Drilling with multi-hole accessory (left side)
Fraisage avec accessoire multi-trous (côté gauche)
Bohren mit Mehrfachbohranschlag -Zubehör- (Linke Seite)
Fresatura con accessorio multiforo (lato sinistro)
Fresamento com acessório multifuros (lado esquerdo)
Сверление с приспособлением для сверления нескольких отверстий (с левой стороны)
Frezowanie z wielowiertłem (strona lewa)



Fresado con accesorio multitaladro (lado derecho)

Drilling with multi-hole accessory (right side)

Fraisage avec accessoire multi-trous (côté droit)

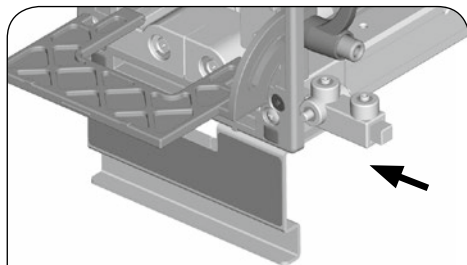
Bohren mit Mehrfachbohranschlag -Zubehör- (Rechte Seite)

Fresatura con accesorio multiforo (lato destro)

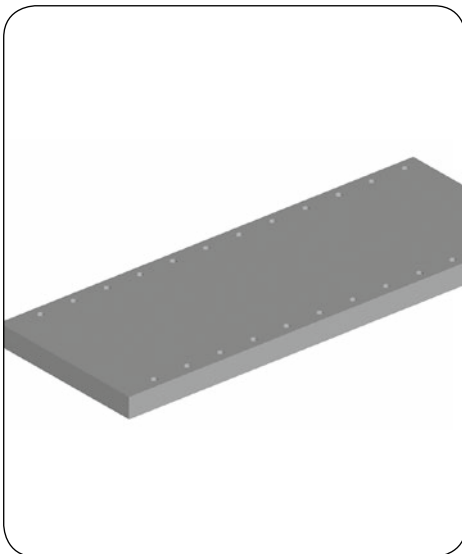
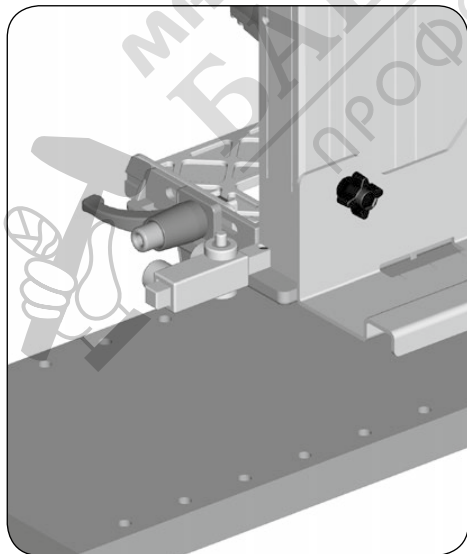
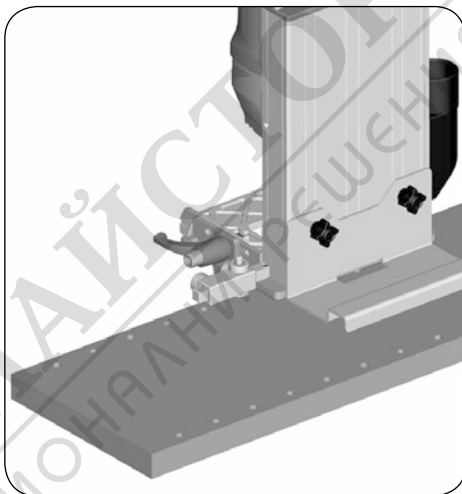
Fresamento com acessório multifuros (lado direito)

Сверление с приспособлением для сверления нескольких отверстий (с правой стороны)

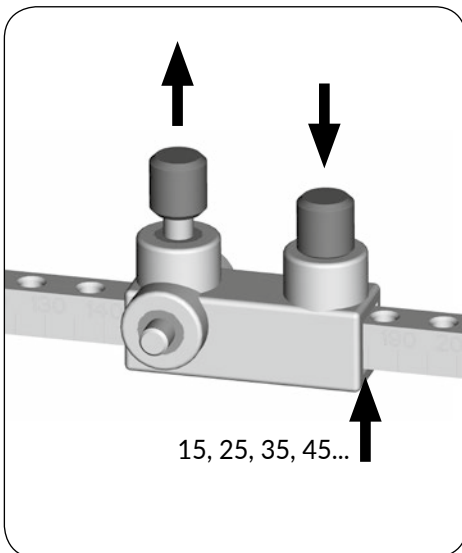
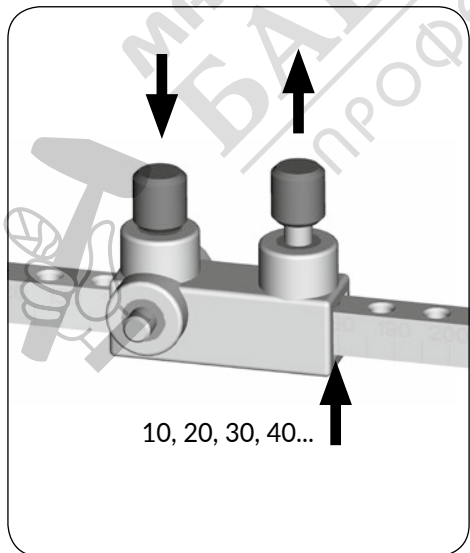
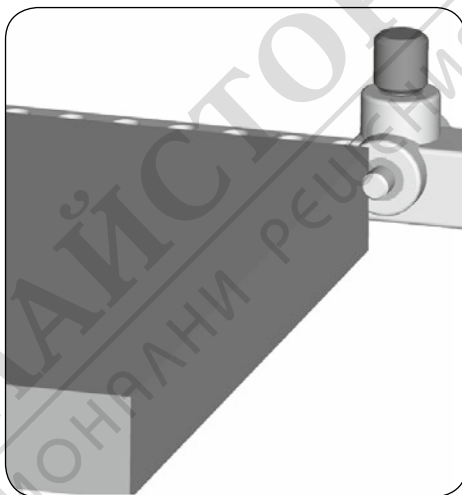
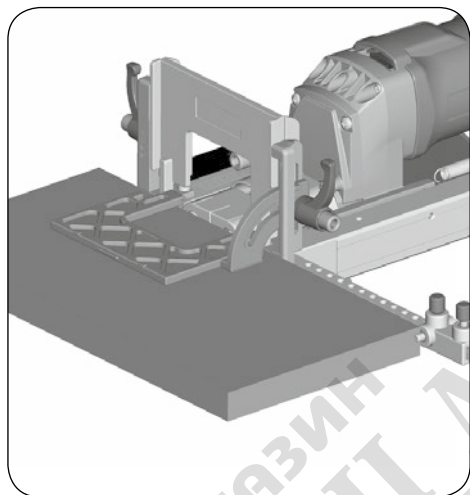
Frezowanie z wielowiertłem (strona prawa)

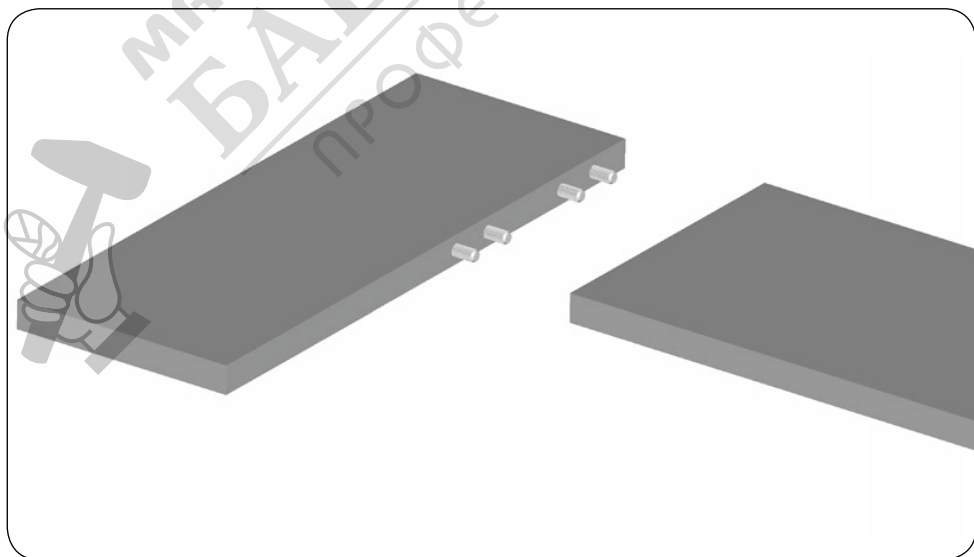
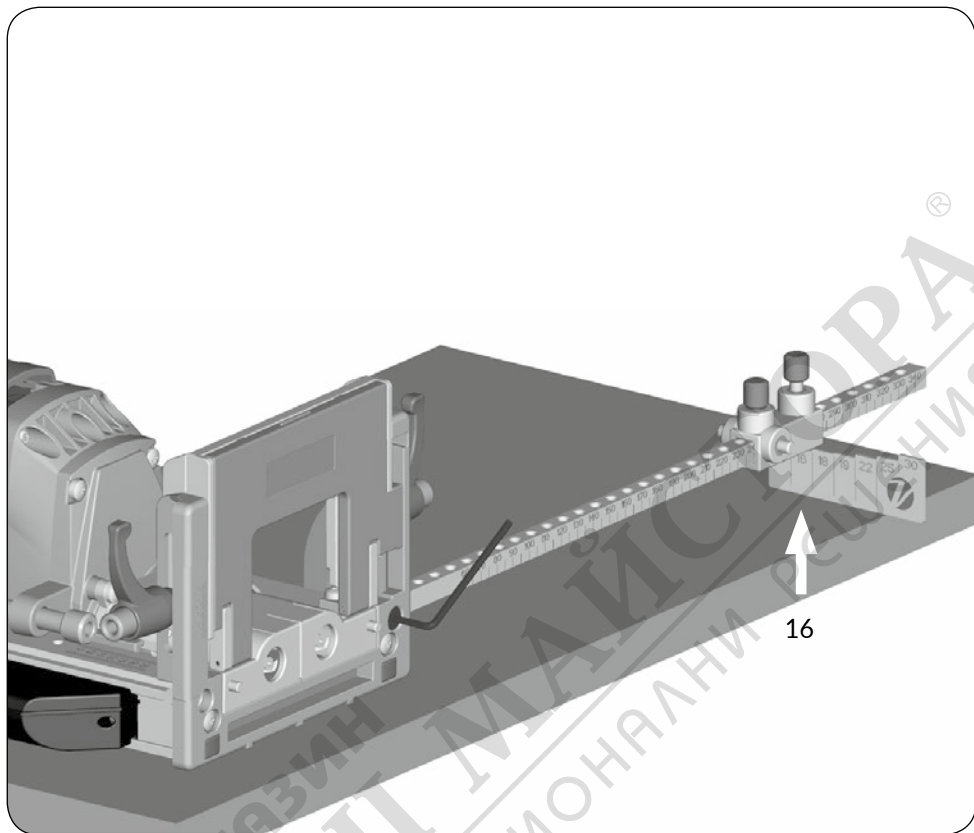


Invertir la posición del accesorio
Reverse accessory position
Inverser la position des accessoires
Umkehren der Bohrposition
Posizione inversa dell'accessorio
Posição invertida do acessório
Реверс вспомогательного шпинделя
Odwrócić pozycję akcesorium

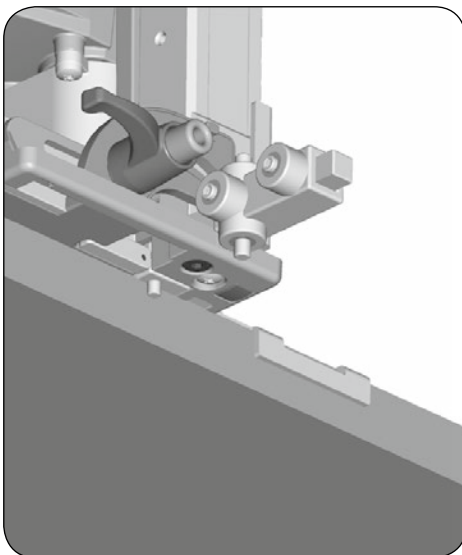
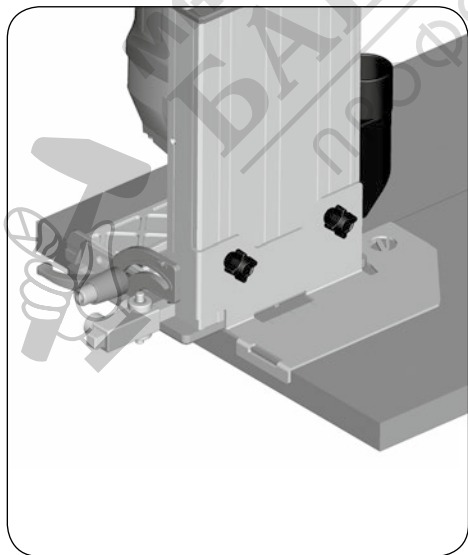
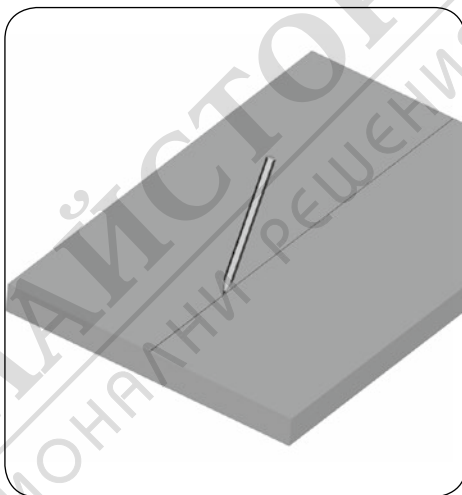
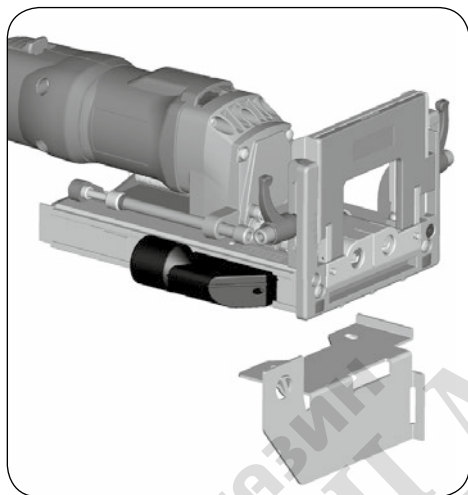


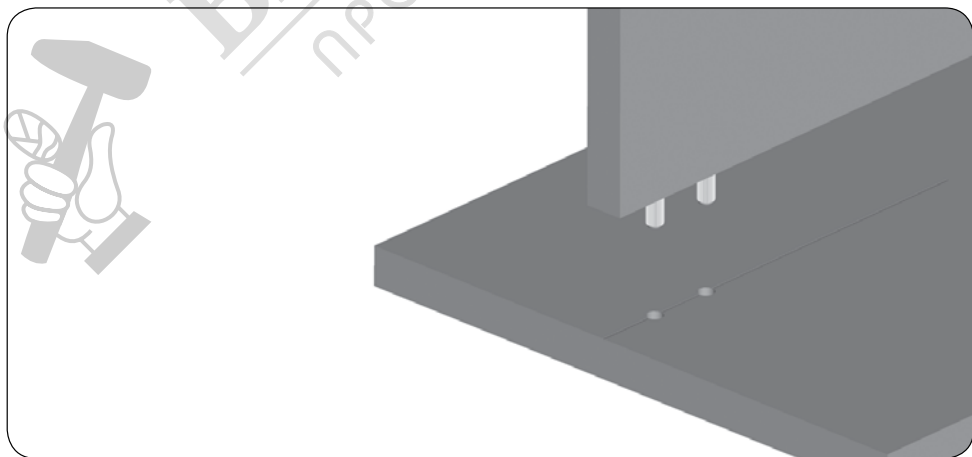
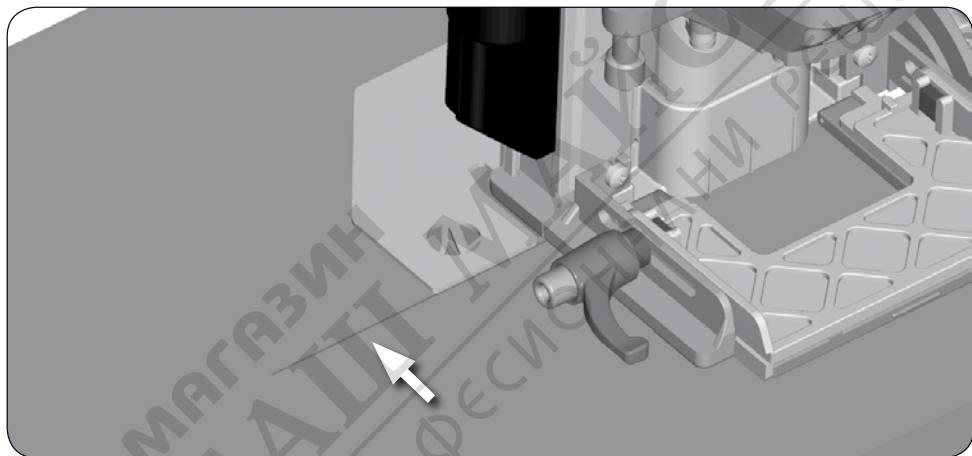
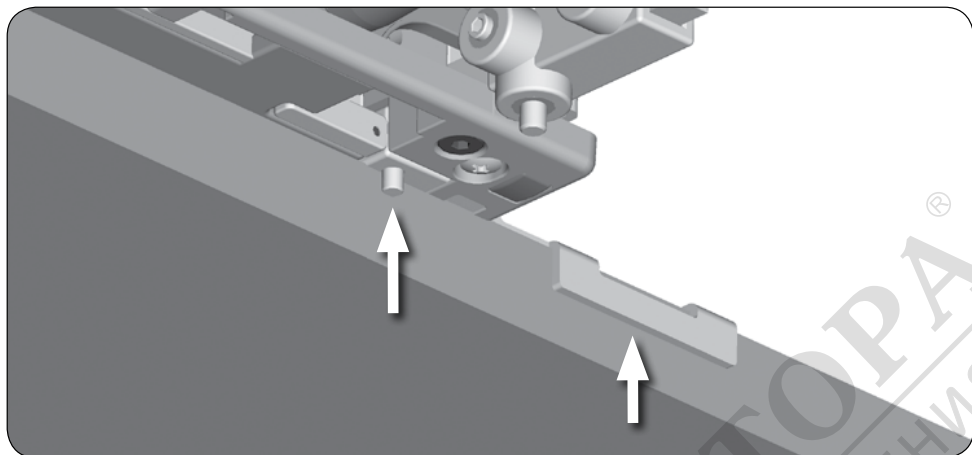
Fresado con tope longitudinal
Drilling with longitudinal stopper
Fraisage avec butée longitudinale
Bohren mit Längenanschlag
Fresatura con battuta longitudinale
Fresamento com batente longitudinal
Ограничитель глубины сверления
Wiercenie z zatrzymywaczem podłużnym



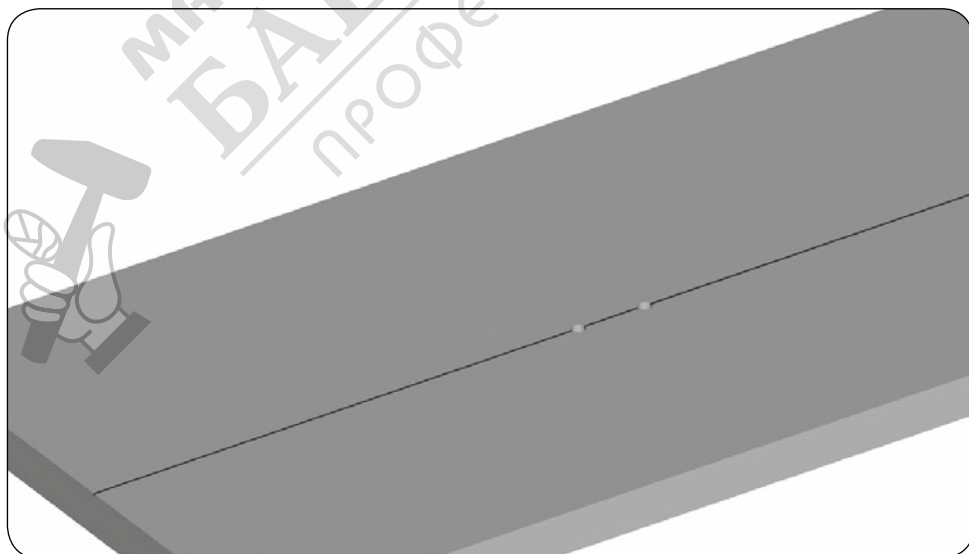
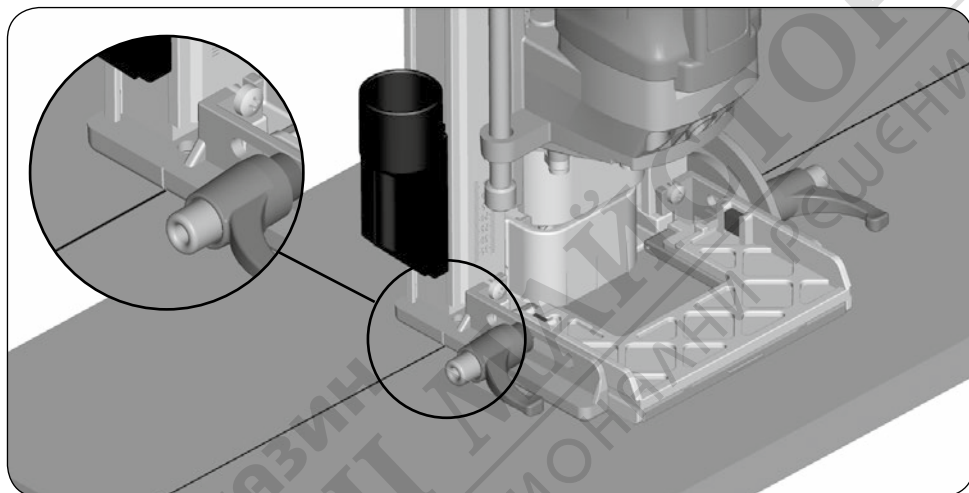


Fresado con accesorio para colocar baldas intermedias
Drilling with accessory to place intermediate shelves
Fraisage avec accessoire pour placer des étagères intermédiaires
Bohren mit Zubehör für Zwischenböden
Fresatura con accessorio per posizionamento ripiani intermedi
Fresagem com acessório para colocação de prateleiras intermediárias
Насадка для сверления под съемные полки
Wiercenie z akcesoriami do umieszczania półek pośrednich





Fresado en el centro del tablero
Drilling in the middle of the panel
Fraisage au centre du panneau
Bohren in der Mitte des Panels
Fresatura al centro del pannelo
Fresagem no centro do painel
Фрезерование в центре панели
Wiercenie w środku panelu





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