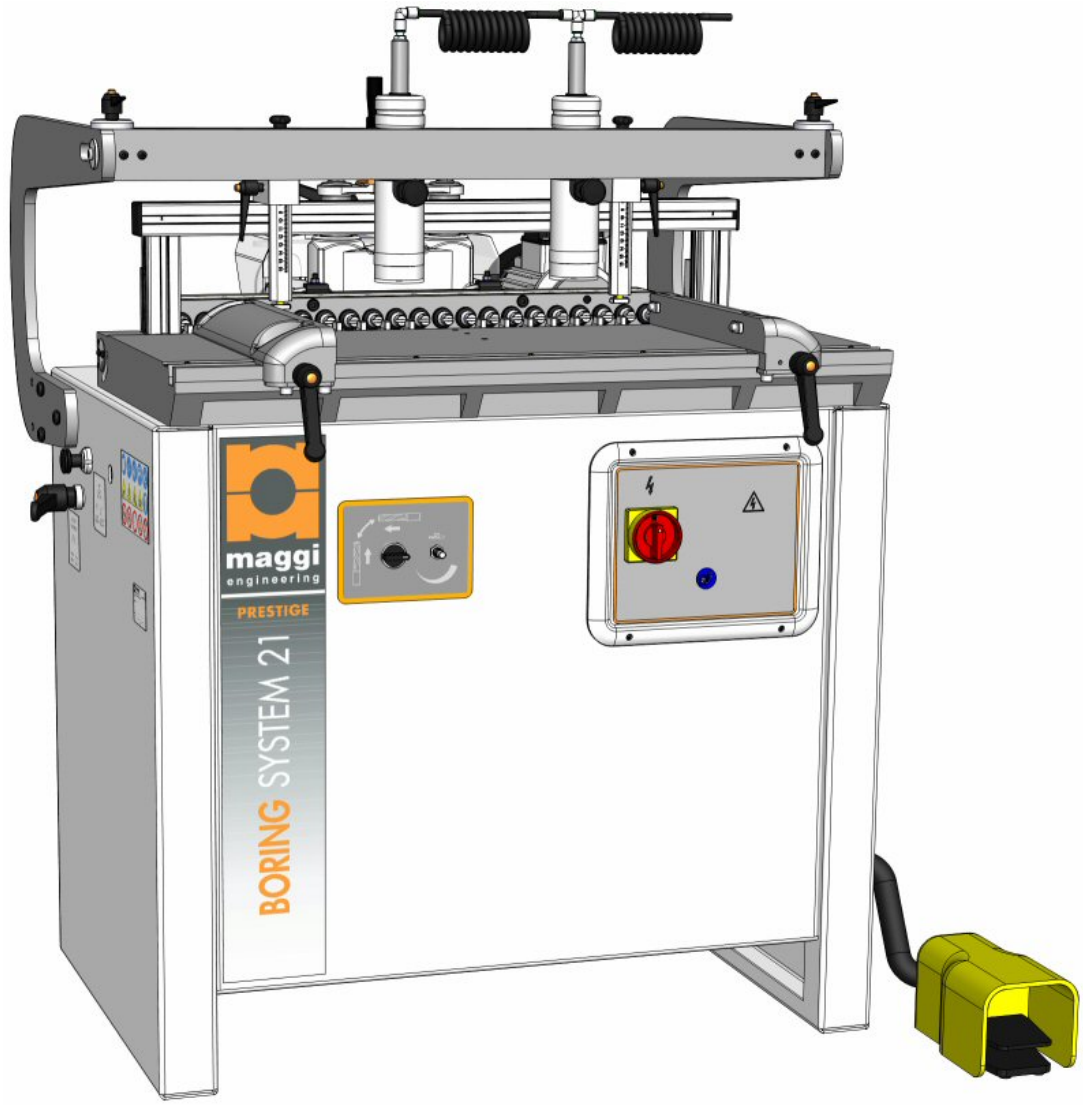
maggi engineering

WOODWORKING MACHINERY



MANUAL CODE NUM.00008049 EDITION 11/2008

UK

MACHINE CODE 16275100

Always keep this manual together with the machine

BORING SYSTEM 21

PRESTIGE

USE AND MAINTENANCE MANUAL

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EC Declaration of Conformity

The manufacturer

Maggi Engineering S.r.l.
Via delle Regioni, 299 - 50052 Certaldo (FI) ITALY

Declares that the machinery

The machinery	*BORING MACHINE*
Model	***BORING SYSTEM 21 PRESTIGE***

complies with all relevant provisions of the directive:

2006/42/EC (Machine)
2004/108/EC (EMC)

and compile the technical file of the above machinery.

Certaldo
The General Manager

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WE WISH TO THANK YOU FOR CHOOSING ONE OF OUR PRODUCTS

All the information, advices and important warnings for a correct use of the machine, have been inserted into this manual. This manual also contains the rules for a correct periodical maintenance to keep this machine in perfect efficiency. We suggest that all the chapters of this manual are thoroughly read before you use the machine for the very first time.

INTRODUCTION

Some information and illustrations in this manual may differ from the machine in your possession, since all the configurations inherent in the machine complete with all the OPTIONALS are described and illustrated. Therefore, refer only to that information strictly connected with the machine configuration you have purchased. The manufacturer in his pursuit of a policy of costant development and updating of the product may make any modifications without any prior notice.

This manual has been drawn up exclusively for our customers' use, guaranteeing that at the date of issue it constitutes the latest update of the documentation related to use of the product. Use of this manual is on full responsibility of the user. The manufacturer does not grant any further guarantee for any imperfections, incompleteness and/or operating difficulties, expressly excluding any responsibility for direct or indirect damage deriving from use of this documentation. MAGGI ENGINEERING reserves the right to make any modifications to the product described in this manual at any time without prior notice.

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NOTES

GENERAL INFORMATION ABOUT THE MANUFACTURER

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Web site: www.maggi-engineering.com

1. SAFETY RULES AND GENERAL INFORMATION

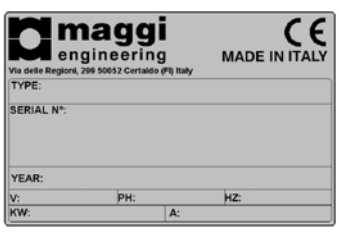
1.1 RECOMMENDATION FOR USE AND MAINTENANCE

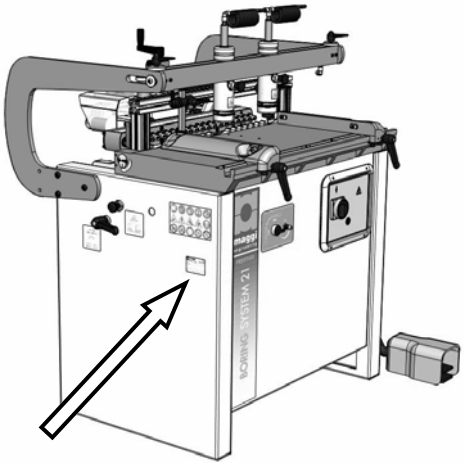
In this manual we put into evidence all the operations for a correct use and ordinary maintenance of the machine.
We strongly recommend not to make any other type of work repair or operation not suggested in this manual.
We suggest also to keep this manual in a place where the user can easily find and read it.

ANY ADULTERATION OR REMOVAL OF SAFETY PROTECTION DEVICES CAN CAUSE SEVERE DAMAGE. ANY REMOVAL, EXCLUSION OR MODIFICATION OF THESE DEVICES IS STRICTLY FORBIDDEN.
YOU MUST VERIFY AND GUARANTEE THE PERFECT RUNNING OF SAFETY DEVICES BY MEANS OF PERIODIC CHECKS. ANY DEFECT OR PROBABLE DRAWBACK MUST BE IMMEDIATELY RESOLVED.

1.2 MACHINE IDENTIFICATION

The data impressed in the plate placed on the left side of the machine (from the point of view of the operator) identify the machine itself.
When you eventually order spare parts or ask for any suggestions for use or maintenance, you have always to transmit the model type and identification number contained in the plate.
It is absolutely forbidden to remove the plate or modify the data it contains.
The following identification plate is placed on the boring system machine described into this manual:





2. OPERATIVE NOTES

WOODWORKING MACHINES CAN BE DANGEROUS

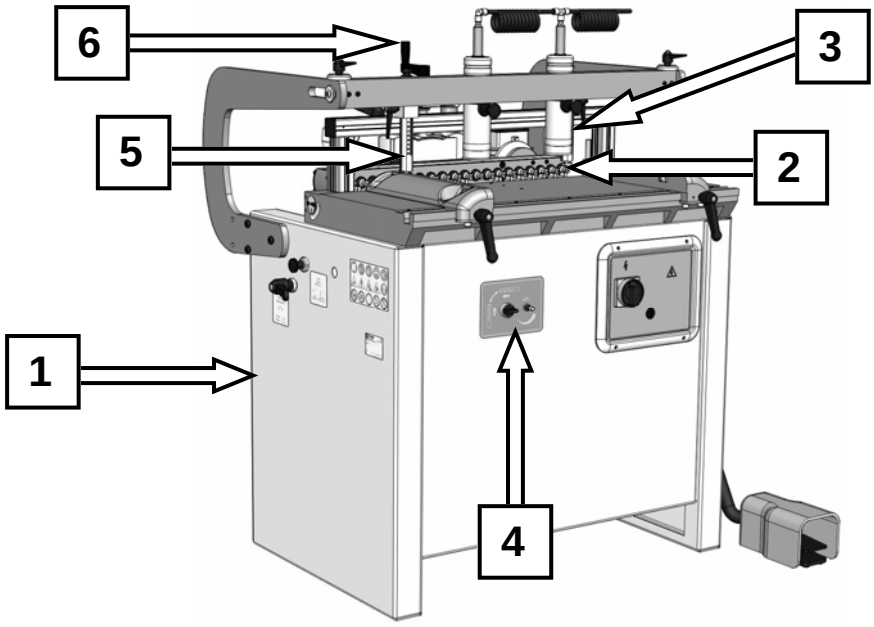
1) A safe and correct use can be obtained by carefully and scrupulously following all the instructions contained into this manual.
2) The machine must be used only by qualified users and personnel of age. The responsible for safety must be sure that users of the machine have read and understood all the information contained into this manual.
3) The personnel for both ordinary and extraordinary maintenance must be well prepared in mechanics and electricity.
4) Keep off any parts in movement of the machine. Never touch the spindles and/or their respective parts in movement of the machine.
5) Never put one working piece on top of another one. Correctly adjust the machine and then drill only one working piece at time.

ANY ADULTERATION OR REMOVAL OF SAFETY PROTECTION DEVICES CAN CAUSE SEVERE DAMAGE. ANY REMOVAL, EXCLUSION OR MODIFICATION OF THESE DEVICES IS STRICTLY FORBIDDEN. YOU MUST VERIFY AND GUARANTEE THE PERFECT RUNNING OF SAFETY DEVICES BY MEANS OF PERIODIC CHECKS. ANY DEFECT OR PROBABLE DRAWBACK MUST BE IMMEDIATELY RESOLVED.

3. MACHINE DESCRIPTION

Our boring machines have been manufactured to make holes on wood at a fixed distance of 32 mm (with maximum accuracy) between each centre.
The head has its fulcrum on the machine table and it can be tilted up to a 90-degree angle. The operator place the work piece on the working table, does some adjustments by using the pedal control, block the piece using the clamp units and then start drilling.
The machine consists of:

1. a steel frame structure
2. one head group equipped with its trasmission system
3. clamp group for vertical blocking of the work piece
4. pneumatic system for head positioning and head feed
5. reference stops to obtain the same drilling distance from vertical to horizontal position
6. leaflet for positioning the spindle height, a mechanical counter and the “Spiral System” device ti regulate the hole depth from 0 mm to 65 mm



3.1 USABLE TOOLS

Drills for quick change spindles, 10 mm O. D. and 20 mm length shank (Fig. A)
Drills up to 40 mm O. D. can be used (Fig. B)

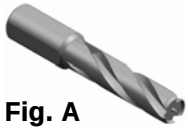


Fig. A

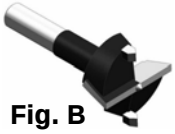


Fig. B

4. ACCESSORIES

CODE	DESCRIPTION	
36000061	BUSHES FOR QUICK CHANGE DRILL	See Fig. A
26001015	BLOCKS TO LIFT THE CLAMPS UP TO 140 MM FROM THE TABLE	Without Fig.
26200069	GAUGE FOR SYMMETRY OF SIDE FENCES	See Fig. B
29970302	FENCE EXTENSION (1000 mm)	See Fig. C
26050801	EXTRA STOP FOR ALUMINIUM FENCE	See Fig. D
26200070	REFERENCE FENCE FOR QUICK AND EXACT SETUP OF STOPS ON THE LONG FENCE FOR LNE BORING (640 mm)	See Fig. E
29900100	STOP REFERENCE PIN FOR LINE BORING	See Fig. F
26000069	SET OF REFERENCE FENCES FOR MOULDINGS AT 45° AND 90°	See Fig. G
26001071	REFERENCE STOP TO MATCH THE LONG PANEL DURING TRANSVERSE BORING	See Fig. H
26000061	REFERENCE FENCE FOR REAR FENCE PARALLELISM (500 mm)	See Fig. I
29971019	EXTRA CLAMPING PRESSER	See Fig. L

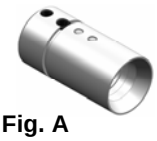


Fig. A

Fig. B

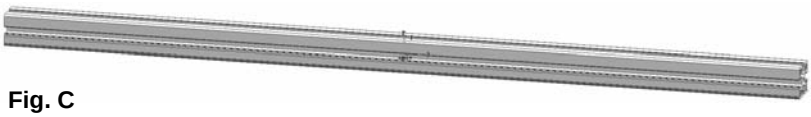


Fig. C

Fig. D

Fig. L

Fig. E

Fig. F

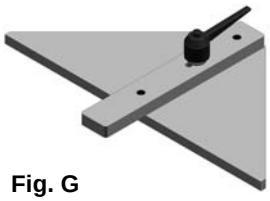


Fig. G

Fig. H

Fig. I

5. SAFETY PROTECTIONS DEVICES AND ADHESIVE WARNING

- The operator assigned to the machine must be well trained on its correct use, its safety protection devices and its accessories.
- The machine drilling devices must be correctly blocked and adjusted.
- The whole machine must undergo ordinary and extraordinary maintenance procedures, following the scheduled timing.
- Before you switch on the machine or start any work session, verify that the working table is free of the shaving left from the wood previously drilled.
- Before making any operation with the machine, verify that the entire working area is free of persons and of any obstacles which could be potentially source of danger.
- Verify that the connecting cable to the electrical power supply is safe, well stretched out and not rolled up.
- Do not enter the drilling zone before turning off the machine.
- Do not put any inflammable substances nearby the machine because of risk of explosion and/or fire due to possible sparks production.
- The operator must pay maximum attention using the pneumatic pedal to work with the machine.
- The operator must think carefully about possible consequences before approaching with his hands the most dangerous areas of the machine: the drilling zone and the working area of the clamp units.
- The machine must be turned off when not in use.

The main risk is due to moving drills. Our machine is equipped with following protection devices to reduce risks to the minimum:

A) Series of stickers and plates

They describe in details all the safety instructions, the correct working procedures and identify the main parts of the machine. One plate shows the identification and serial number of the machine.

B) Safety clamp (patented)

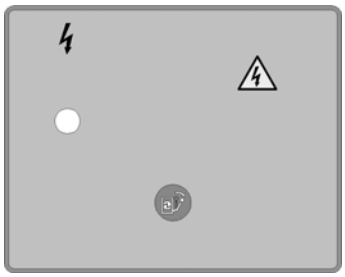
They are on the surface of the working table or of the already positioned working piece, so that the operator can not put unintentionally his hands below.

C) Safety protection device

No-way-back coil preserve against accidental start. No-way-back coil preserve against accidental start

CEE, ISO, UNI WARNING SYMBOLS

Code 36054016



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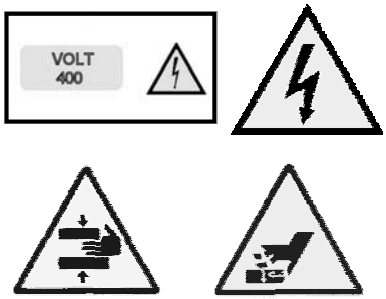

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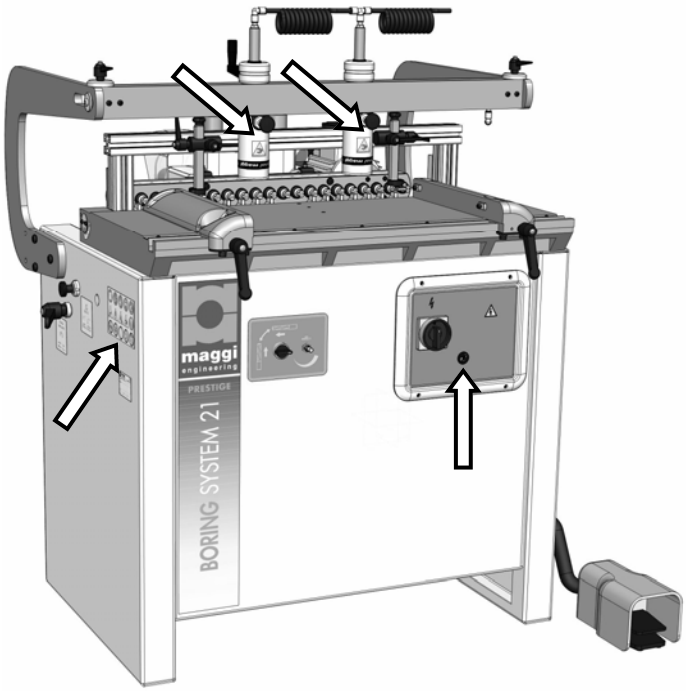
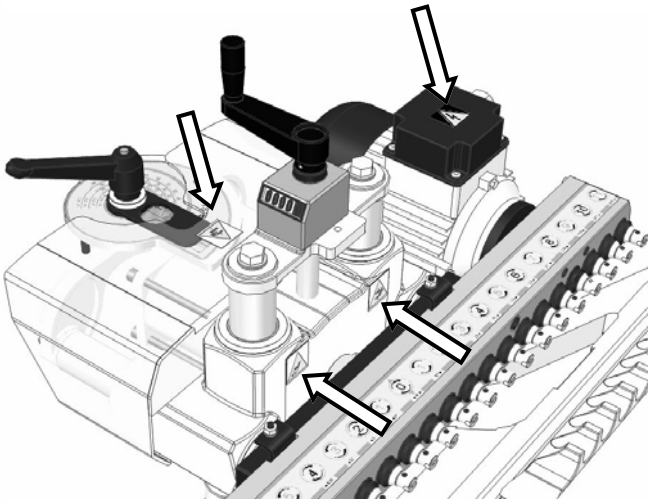
Code 36054019

WARNING SYMBOL: ALL THE OPERATIONS HIGHLIGHTED WITH THIS SYMBOL ARE DANGEROUS TO THE OPERATOR; PLEASE BE VERY CAREFUL IN DOING THESE OPERATIONS.





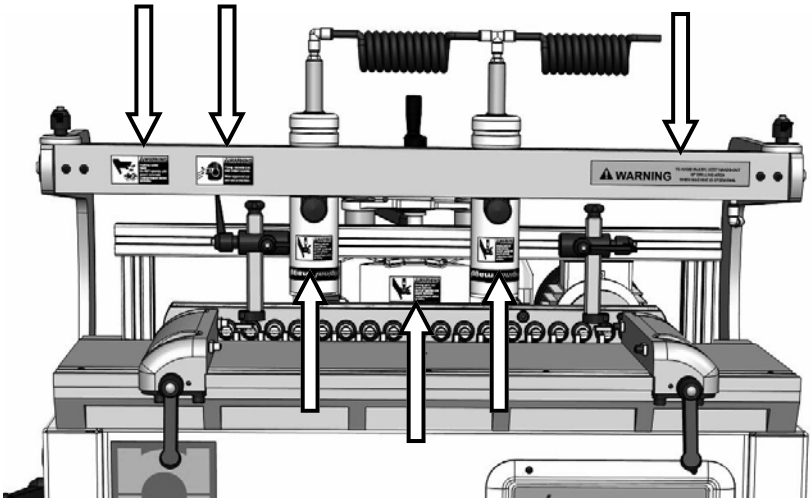
U.S.A. WARNING SYMBOLS

WARNING SYMBOL: ALL THE OPERATIONS HIGHLIGHTED WITH THIS SYMBOL ARE DANGEROUS TO THE OPERATOR; PLEASE BE VERY CAREFUL IN DOING THESE OPERATIONS.

Code 36050506

Code 36050507
Code 36050508

Code 36050509



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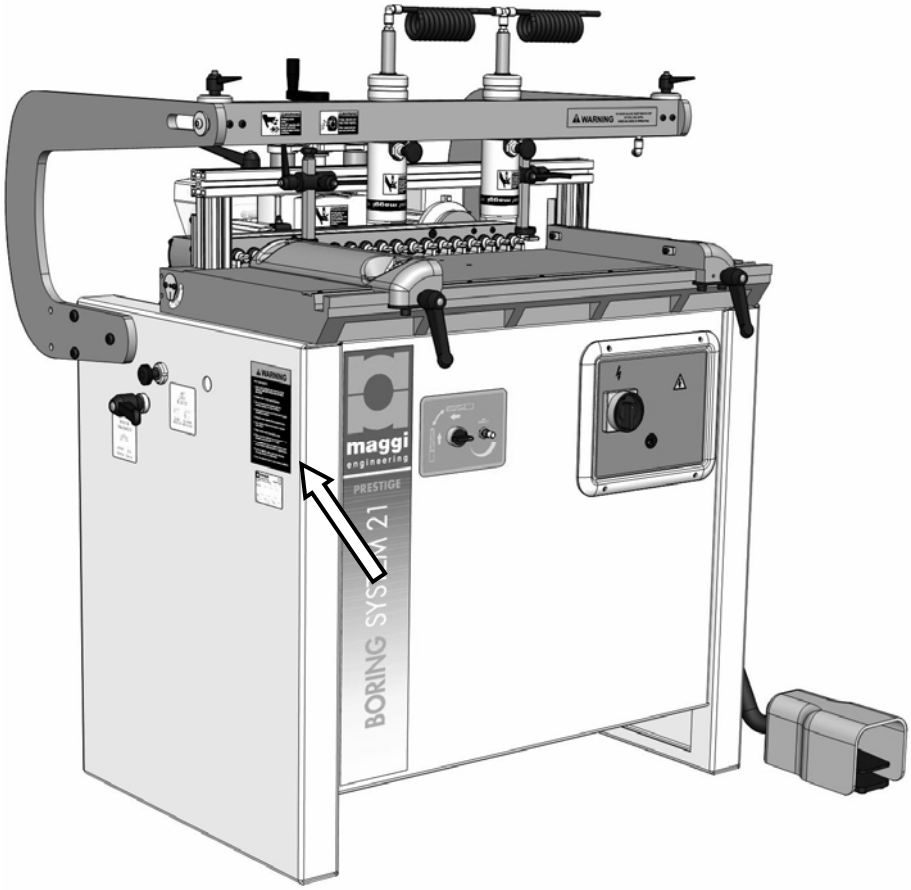
Code 36050005



6. INDIVIDUAL PROTECTION DEVICES AND RESIDUAL RISKS

Despite all adopted safety protection devices, following situations may be dangerous:
- fall or throw of wood sliver during working operation
- entangling parts of clothes in moving parts of the machine
- danger of fire
- danger of electrocution
- danger of damage due to noise emission
- danger of damage due to dust emission

To prevent risks during placing, installation, adjustment, use, ordinary and extraordinary maintenance, we strictly recommend to use the following individual protection devices:
- gloves (for example during machine parts handling)
- anti-crushing and anti-sliding shoes
- glasses or face-shields against chip or wood sliver during working or cleaning operation of the machine
- anti-dust masks

Moreover, the clothes must be suited to avoid danger of:
- catching
- dragging
- crushing
- sliding
- abrasion
- contact lenses are prohibited

For further information and recommendation please refer to chapter. OPERATIVE NOTES.

Never leave the machine unattended when connected to the electrical power supply

7. TECHNICAL DATA

Technical feature	BS 21 Prestige
N°. OF SPINDLES	21
INTERAXIS BETWEEN SPINDLES	32 mm
INTERAXIS BETWEEN FIRST AND LAST SPINDLES	640 mm
MAX. BORING DEPTH	65 mm
MAX DIMENSION OF THE WORKING PIECE	915 x 3000 mm
HEIGHT OF THE WORKING TABLE	860 mm
N° OF CLAMPS	2
STANDARD PNEUMATIC PRESSURE	6 - 8 Bar
STANDARD AIR CONSUMPTION FOR WORKING CYCLE	10 L / Ciclo
N° OF MOTORS	1
MOTOR POWER	2 (1,5) HP(KW)
MOTOR r.p.m.	2800 RPM
MACHINE DIMENSIONS (B x L x H)	1030x1030x1285 mm
NET WEIGHT	300 Kg

8. INTENDED USE

8.1 MATERIALS

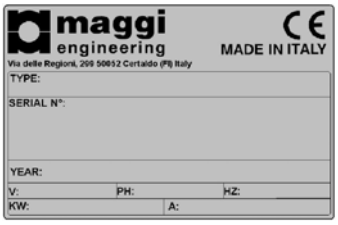
The boring system machine has been designed and built to drill the following materials:
- solid wood
- m.d.f.
- panels of shaving wood, laminated wood, ennobled wood, etc.

The maximum panel thickness is 65 mm and its maximum dimensions are those described in chapter 7
- Other materials, different from the ones described above, can be machined only after the written approval of the manufacturer. In particular it is not allowed to machine materials having toxic or dangerous substances for operator's health and safety, metals or other materials that can modify the correct working of the machine or cause fire or explosion..
- Any modification is forbidden without the written authorization of the manufacturer.
- It is not allowed to tamper with the safety protection devices.

8.2 IMPROPER USE

Any operation that does not comply with the instructions given herein is to be regarded as improper use.
Moreover:
WE ADVISE YOU NOT TO lay tools against or on the machine for any reason whatsoever during machine installation, use or maintenance.
WE ADVISE YOU NOT TO get on the machine or on any of its parts.

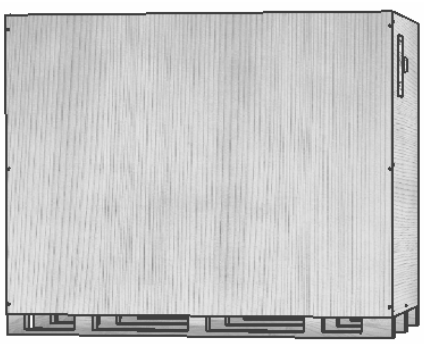
The manufacturer cannot be considered liable for any damage caused to people, animals or property resulting from improper use of the machine.



9. TRANSPORT

The boring machine is packed in a wooden box and/or in cardboard and nylon. It is possible to move it by means of:
- Forklift
- crane
- transpallet

Weight data are written in chapter 7. Before moving the machine verify that the entire surrounding area is free of obstacles. In case of stocking, the machine must be kept in dry places, away from rain, snow or humidity. During all moving operations we recommend to be extremely careful to avoid danger of damage for persons, things and the machine itself.



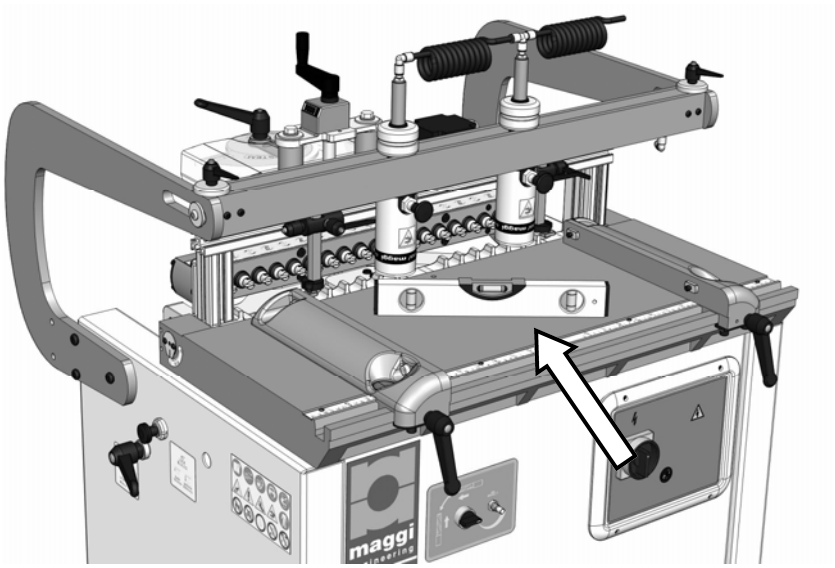
10. INSTALLATION

10.1 PLACING THE MACHINE

The machine must be placed on a stable plain surface, capable to support the weight of the machine itself; any possible difference in height must be in conformity with building rules. When the machine has to be placed on raised plain surface (higher floor) the load-bearing slab must be adequate to the weight of the machine.
Put the machine in the right place, as requested operative requirements, where it is easy to connect it to electrical and pneumatic power supply.
Put the machine in a place where there is enough lighting to see every part of the machine itself.
We suggest also to arrange an exhaust fan nearby the machine to clean it periodically.

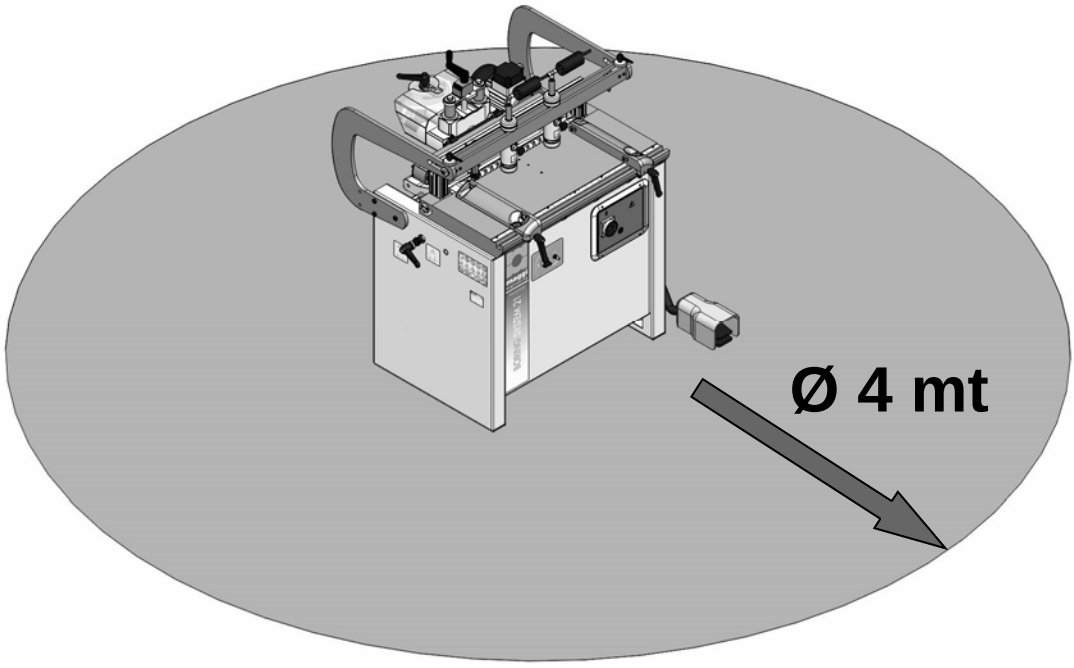
10.2 LEVELLING

Adjust the levelling feet so that the machine is perfectly leaned on the floor, then align the working table of the machine by using a spirit level.
Before going on with levelling, tighten the alignment pins into the threaded holes of the bed frame, remove the protective oil film from planes and every not painted surface, by using petroleum or kerosene only.
Do not use any solvent as gasoline and diesel oil, because they can damage the paint, making it dull, or oxidize other parts.



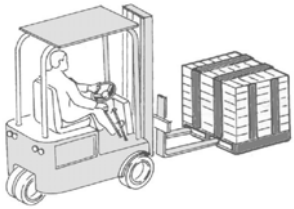
11. WORKING AREA

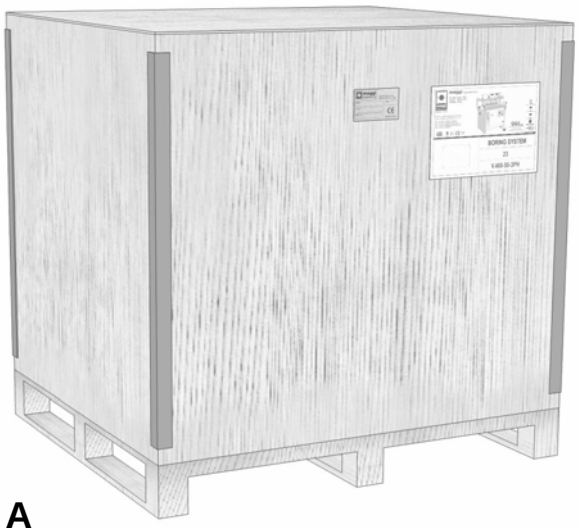
For a correct use of the machine, the following zones must be kept clear.



12. ASSEMBLING AND CHECKING PROCEDURE

The boring machine is packed in a large wooden box or kit superimposition.We strongly suggest to apply a careful and correct procedure to transport the box to the area where the boring machine will be installed.





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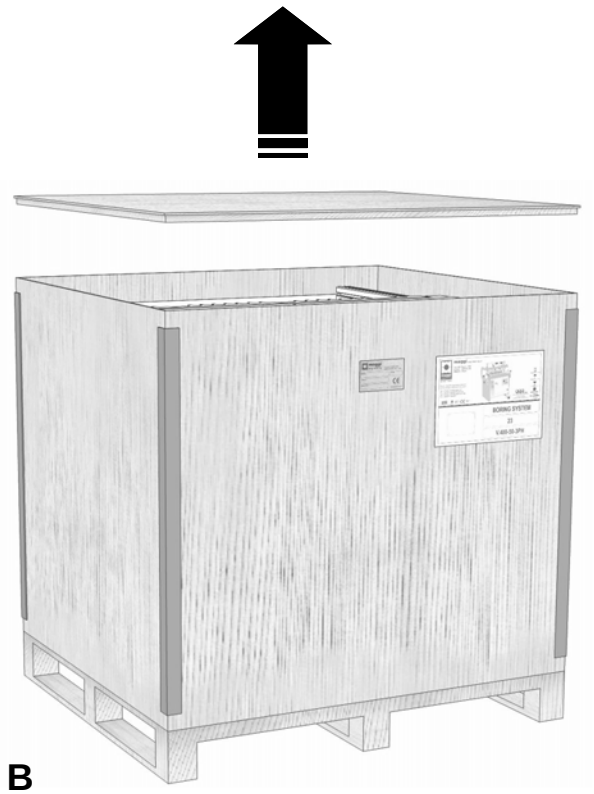

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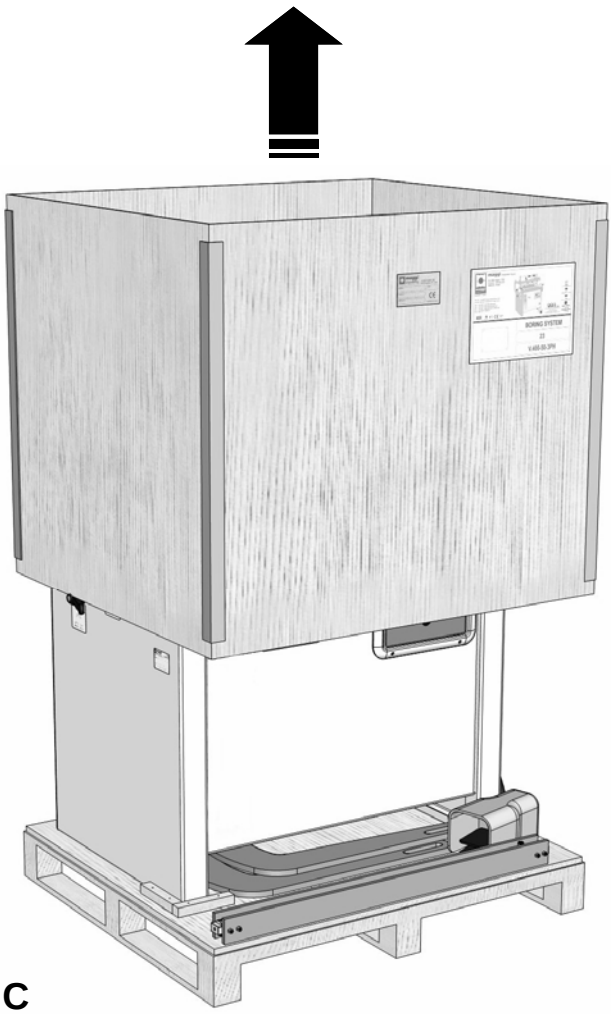

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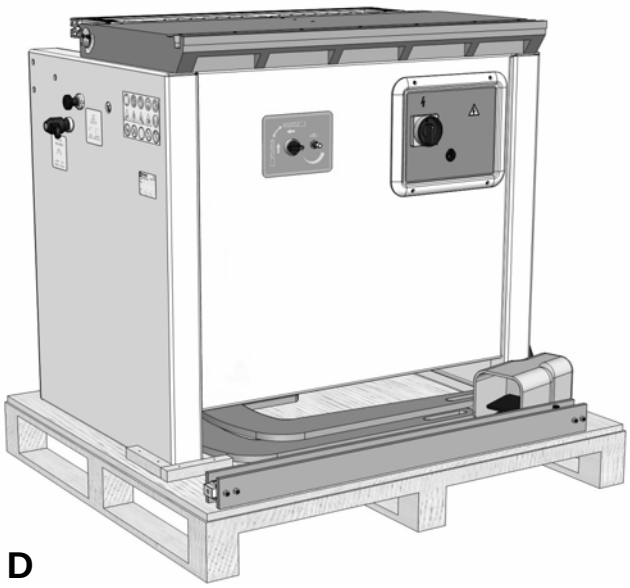

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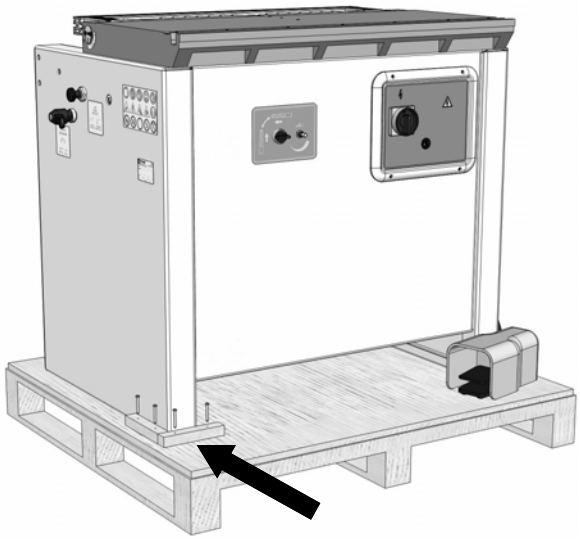
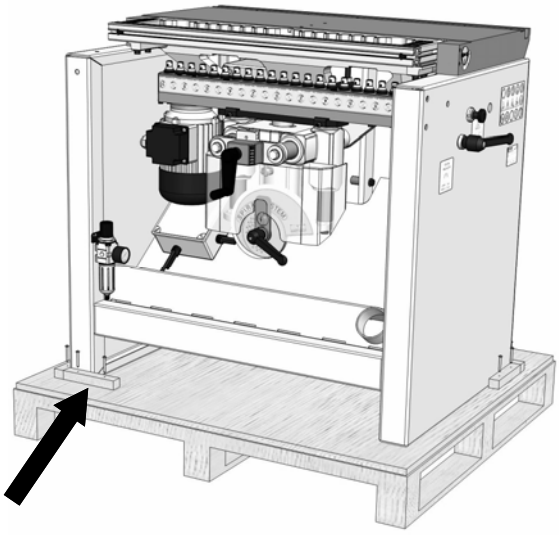
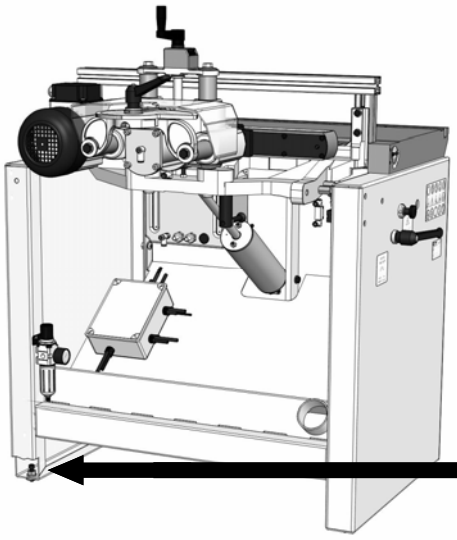
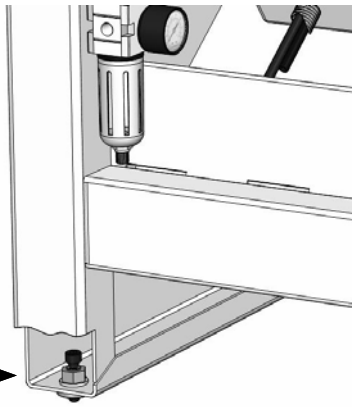




Remove the two fixing devices, which lock the machine to the pallet, placed on the lower part of the machine frame by unscrewing the screws, as shown in figure. Now it is possible to separate completely the machine from the packaging.

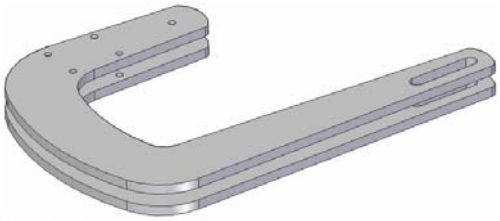


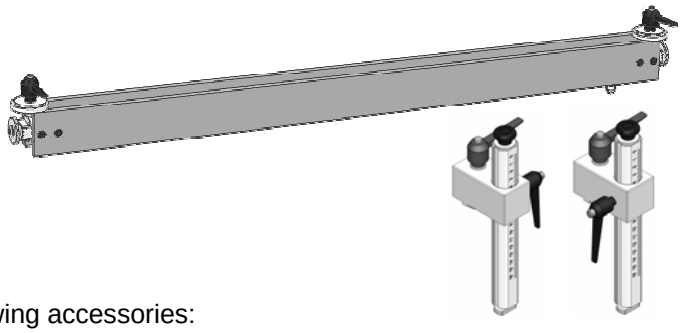
Level the machine loosening / tightening the screws placed on the lower part of the machine frame (see figure on the right).



Transport and put the machine in the place selected for working. Please be careful in doing this procedure and follow the instructions described in chapter 11-12

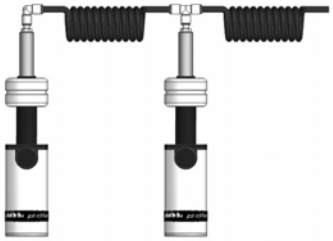
The packaging contains also the shoulders, clamping unit, back stop unit and a cardboard box with some other accessories inside, as shownin the figure below.

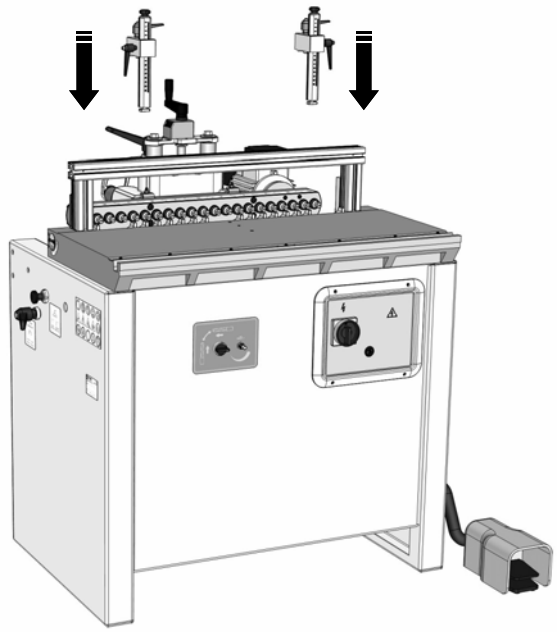




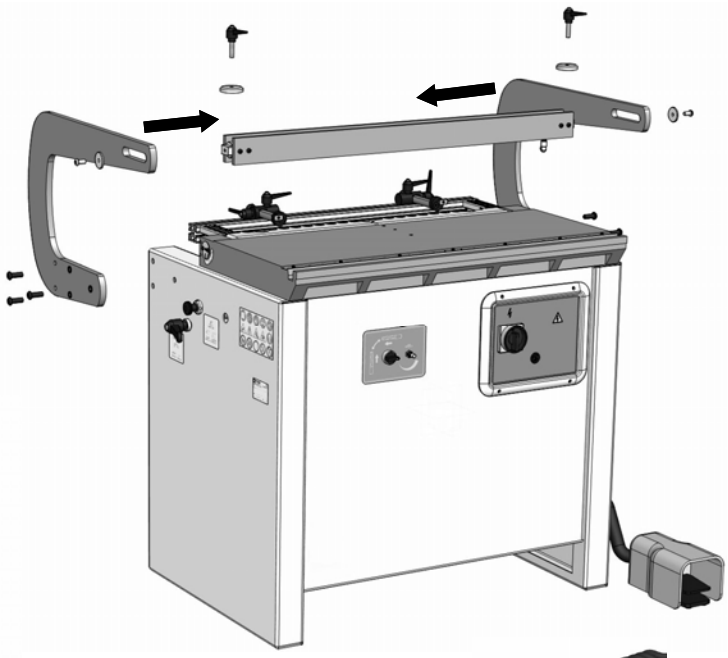
The box contains the following accessories:

- Boring System user and maintenance manual
- Wrenches Kit
- n°2 clamps
- Lh square unit
- Rh square unit

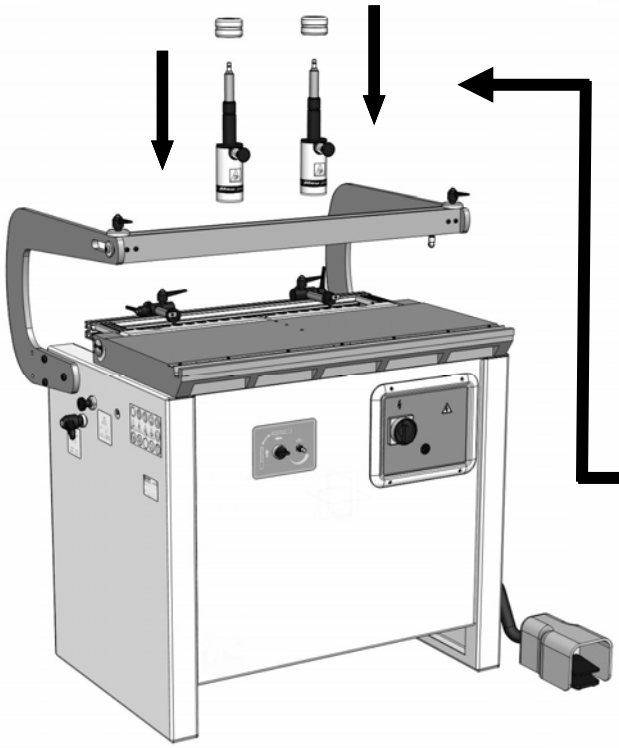




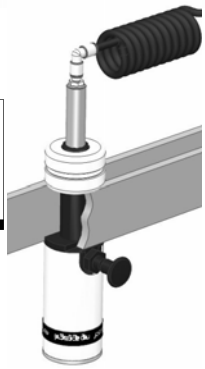
Assemble the back reference stop as depicted in figure

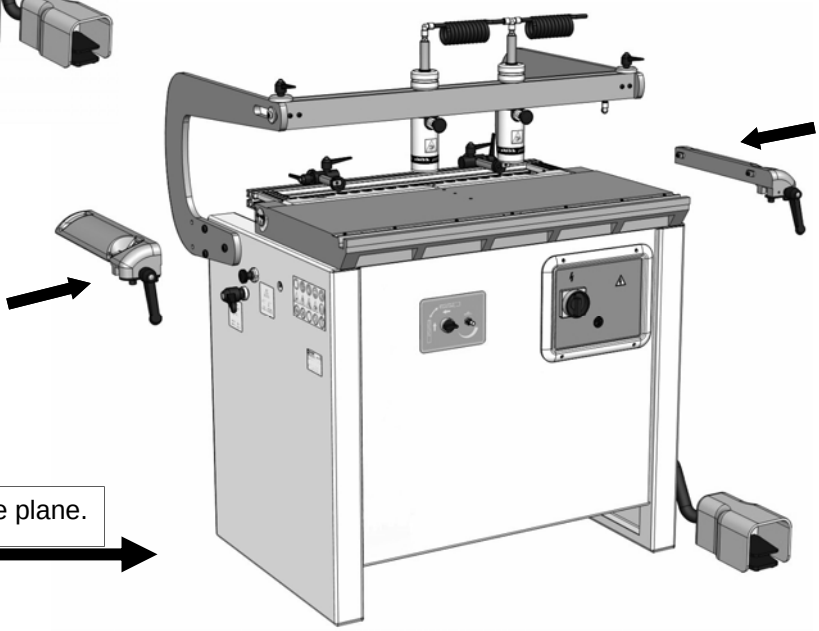


Then assemble the clamp goup

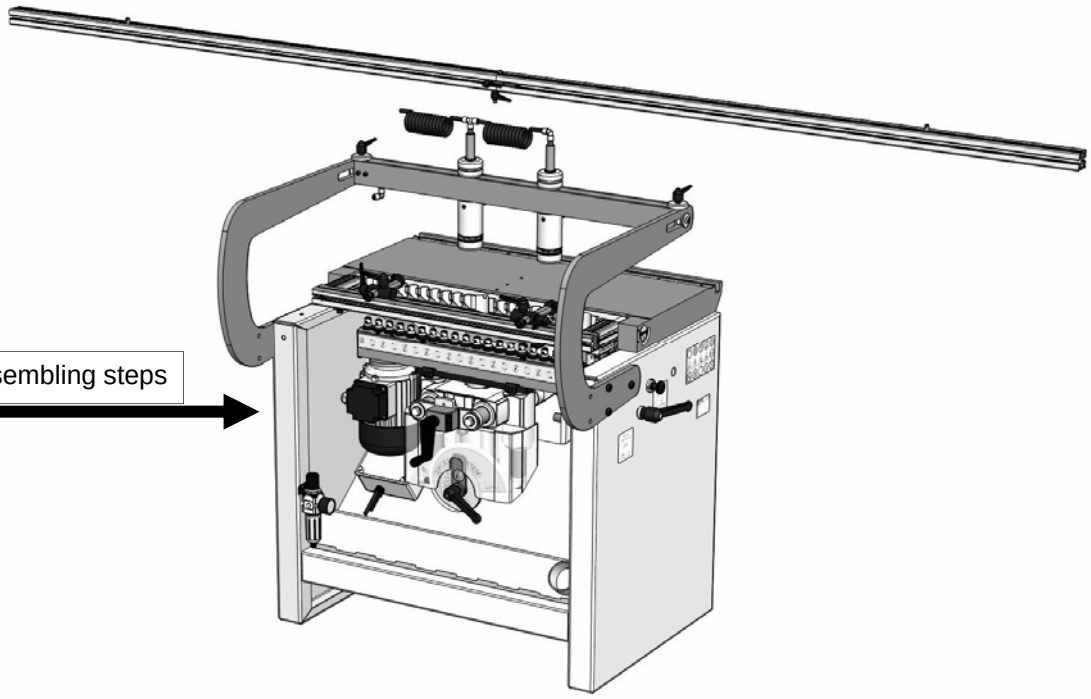


Insert the clamp unit; assemble the clamp group as depicted in the figure on the left

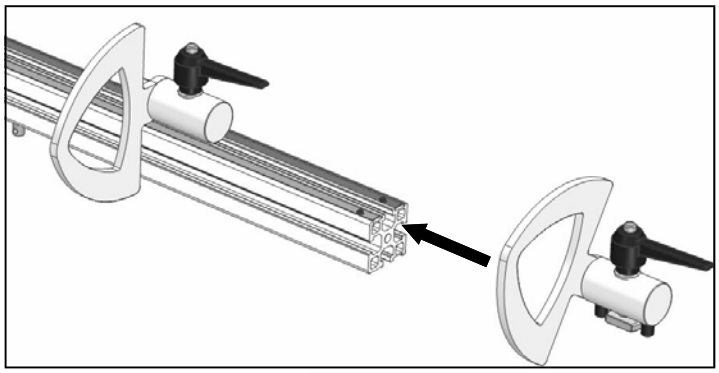




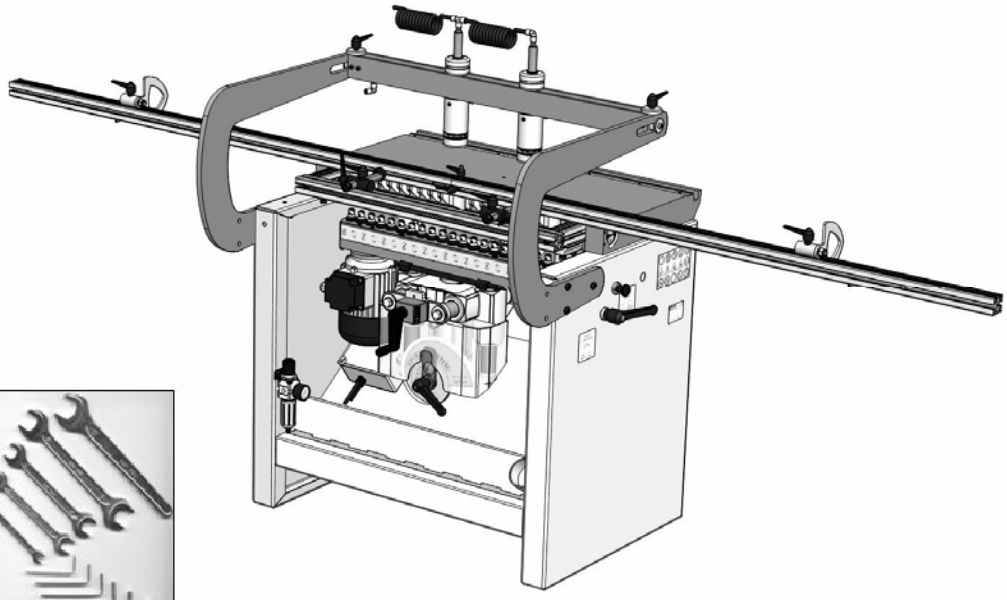
Assemble the squares of the bench on the plane.

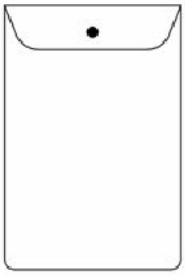


Long fence assembling steps



Insert the movable stop group in the fence as depicted in the figure on the left



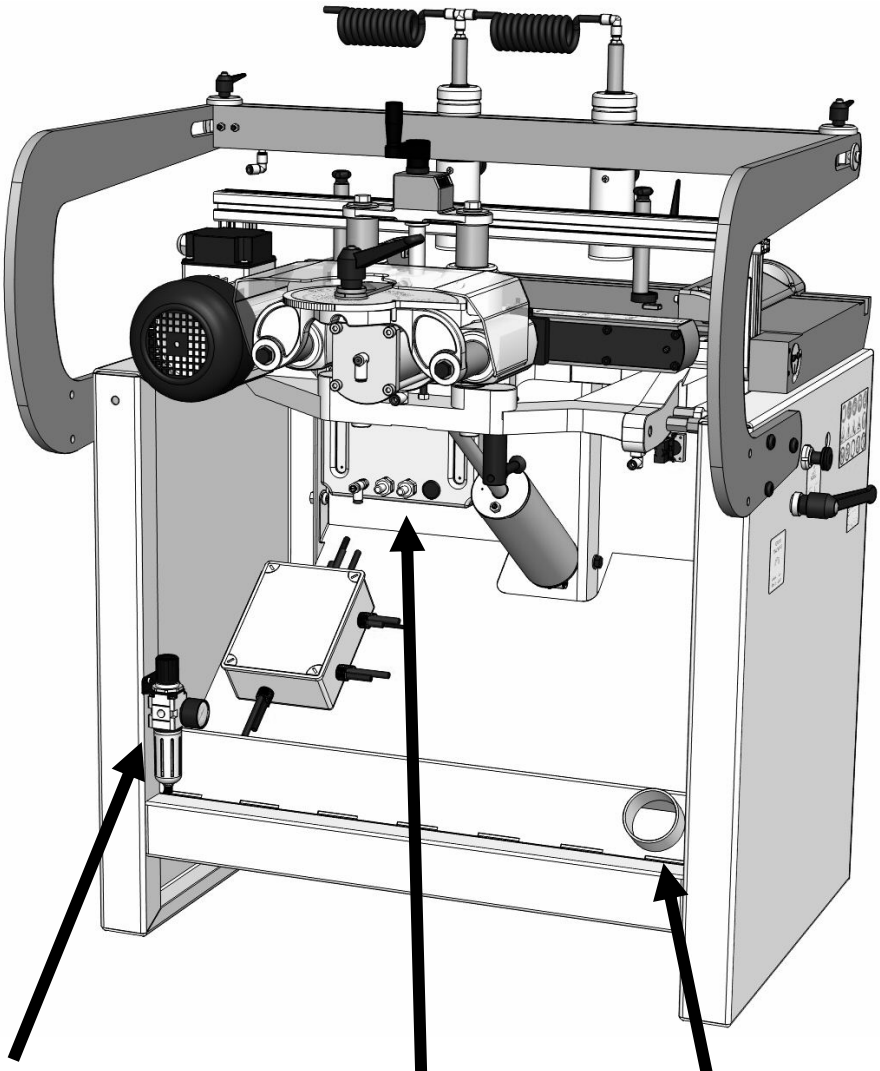


All the assembling operations described above can be performed using the tools purchased together with the machine

The next step consists of machine connection to:

- Electric power supply (see chapter 14.1)
- Pneumatic power supply (see chapter 14.2)
- Dust suction system

(attention, we strongly suggest to carefully follow the procedures described on chapter 14)



Pneumatic power supply connection point (1/4” 6 Bar)

Electric power supply connection point

Dust suction system connection point (Ø 76 mm)

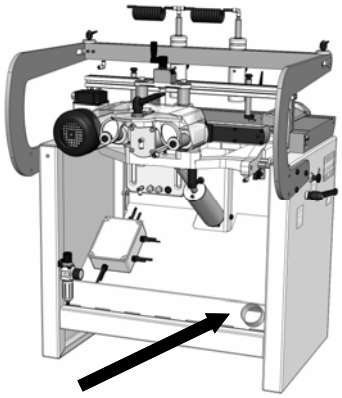
Drilling set-up procedure *please carefully follow the instructions described in chapter 15*

13. ASSEMBLY AND PRELIMINARY PREPARATION FOR SET UP

The machine is delivered partially assembled, so it is necessary to mount all those parts left not assembled for packaging reasons.
The buyer must verify that all the machine parts are safe and not damaged after transportation, before going on with assembling.
In particular we suggest to verify the most delicate parts, as electrical or mechanical components, pneumatic tubing or the safety protection devices of the machine itself.
After assembling, it is necessary to clean all surfaces from protective oil so that the working pieces remain clean during working operations.

SAWDUST REMOVAL

The removal of sawdust and wood scrap, has to be effected in accordance to the current rules of the country where the machine is installed.
We suggest to ask the qualified body of the country where the machine is installed for the rules concerning this removal to know exactly how to behave properly.



ATTENTION: THE MACHINE IS DELIVERED WITHOUT EXHAUST SYSTEM. THE USER HAS TO INSTALL A PROPER EXHAUST FAN DEPENDING ON THE TYPE OF USE, THE MATERIAL AND THE TIMING OF USE OF THE MACHINE. THIS SYSTEM HAS TO KEEP THE DUST CONCENTRACTION BELOW THE VALUE ALLOWED BY THE LAW OF THE COUNTRY WHERE THE MACHINE IS INSTALLED.

14. MACHINE CONNECTION TO EXTERNAL POWER SUPPLY

After machine assembling and installation, connect it with:

- Electrical power supply
- Pneumatic power supply
- Dust suction system

14.1 CONNECTION TO ELECTRICAL POWER SUPPLY

To gain access to the machine electric system, open the main board door by loosening the screws on the front of it. We recommend not to connect the machine to the electrical power supply until it is not correctly placed in the right place. Before connecting the machine to the electrical power supply, it is necessary to verify that the electrical system corresponds to the following necessary power and safety requirements:

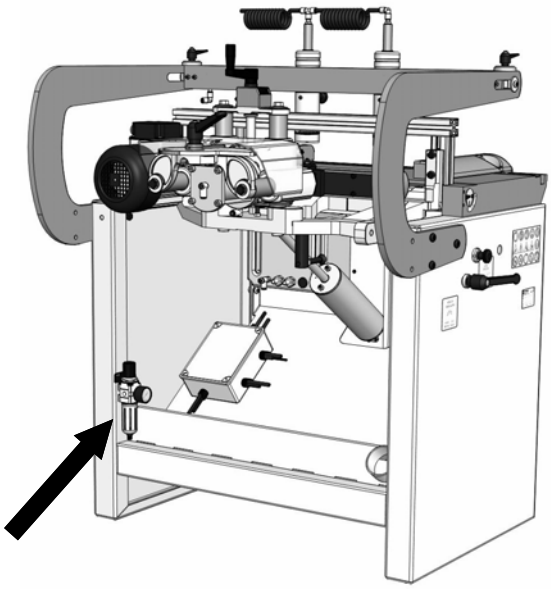
- Grounded equipotential electrical system
- Presence of fuses or protection switches against short circuits on every conducing cable R-S-T, except the grounded one
- The electrical power system must be in conformity with CEI 64.8 (CENELEC HD 384, IEC364-4-41) rules
- Voltage and frequency for the motors are specified on the plates placed on them
- Connect the power supply cable to R-S-T terminals
- Automatic protection devices installed upstream respect to the machine; they have to be coordinated to guarantee the automatic break according to above mentioned rules.

The electrical connection is done by three-phase plug (or single-phase plug, depending on the panel).
The cable for ground connection is yellow-green.
The tolerance of admissible voltage is +/-10%
When voltage is applied to the electrical power supply, check that the spindles rotation direction is the one written in the plate placed on the head (Black=Right; Red=Left).
If the rotation direction does not match the one impressed in the plate, please invert the connection cables to three phase power supply. For any information please see the electrical diagrams included in this manual.

Attention: we strongly recommend that the connection to the electrical power supply is done by technical qualified personnel only.

14.2 PNEUMATIC CONNECTION

Connect the Filter regulator unit with the air line through a rubber or nylon hose with a minimum inside diameter of 8 mm.
If the pipe length exceeds 5/6 metres it is advisable to increase the inside diameter to 10 mm, you are also recommended to install a supply shut-off valve on the machine with manual control complete with air relief.
The Filter purifies the air from dust and humidity protecting the valves or seals in the pneumatic cylinders.



14.3 MACHINE STARTING

The work station and control panel are on the machine electric panel. The operator places the pieces on the work table after adjusting the stops.

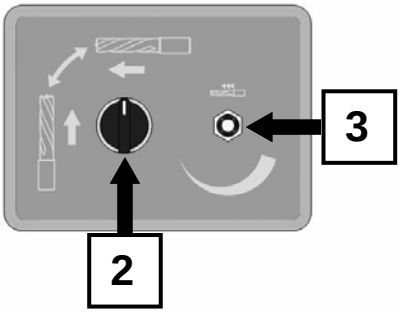
14.4 WORKING CYCLE

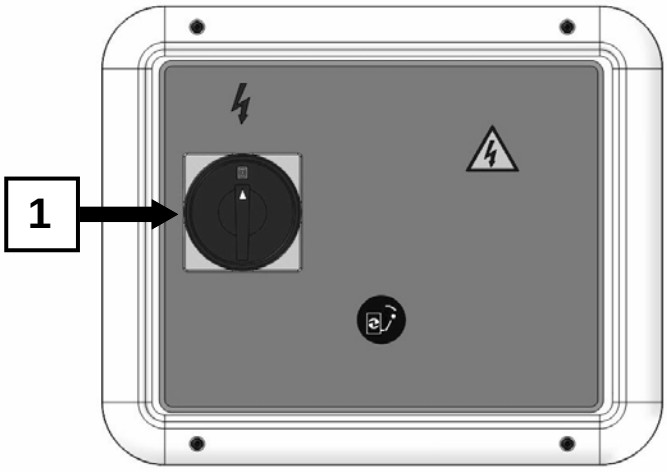
After setting the machine, follow the operations described below to start the working cycle:

1) Turn the main switch (1) to ON. The machine is ready to start the working cycle.
2) Operating the pneumatic pedal, the spindles turn and the head starts the working cycle, while the clamps lock the piece in place.
3) If the pedal is released, the head returns to the rest position and the spindles stop.
4) The clamps release the piece when the head returns to the starting position.

Should it be necessary to interrupt the work cycle for any reason, turn the main switch on OFF (1).

14.5 CONTROL PANEL





1) MAIN SWITCH, ENGINE ENABLE BUTTON

Operating this ensures the presence of electrical energy; it enables the engine for switch on, hence for turning the spindles during the work cycle.

2) HEAD POSITIONING AT 0—90°

Pneumatic selector for operating the spindle head rotation mechanism by 0—90°.

3) FEED SPEED ADJUSTMENT

Controls the drill boring feed speed

4) PRESSURE REGULATOR

This is for regulating the compressed air operating pressure keeping it within the above-mentioned limits *(see paragraph 14.2)*

15. CHECK UP AND ADJUSTMENTS

IT IS RECOMMENDED TO DISCONNECT THE ELECTRICAL AND PNEUMATIC POWER SUPPLY BEFORE TAKING ANY INTERVENTION ON THE MACHINE FOR MAINTENANCE OR FOR REPLACING DAMAGED OR WORN PARTS. FOLLOW ALL THE PROCEDURES DESCRIBED BELOW AND THE ADVICE WRITTEN IN CHAPTER 6 OF THIS MANUAL.

15.1 ELECTRICAL INSULATION PROCEDURE

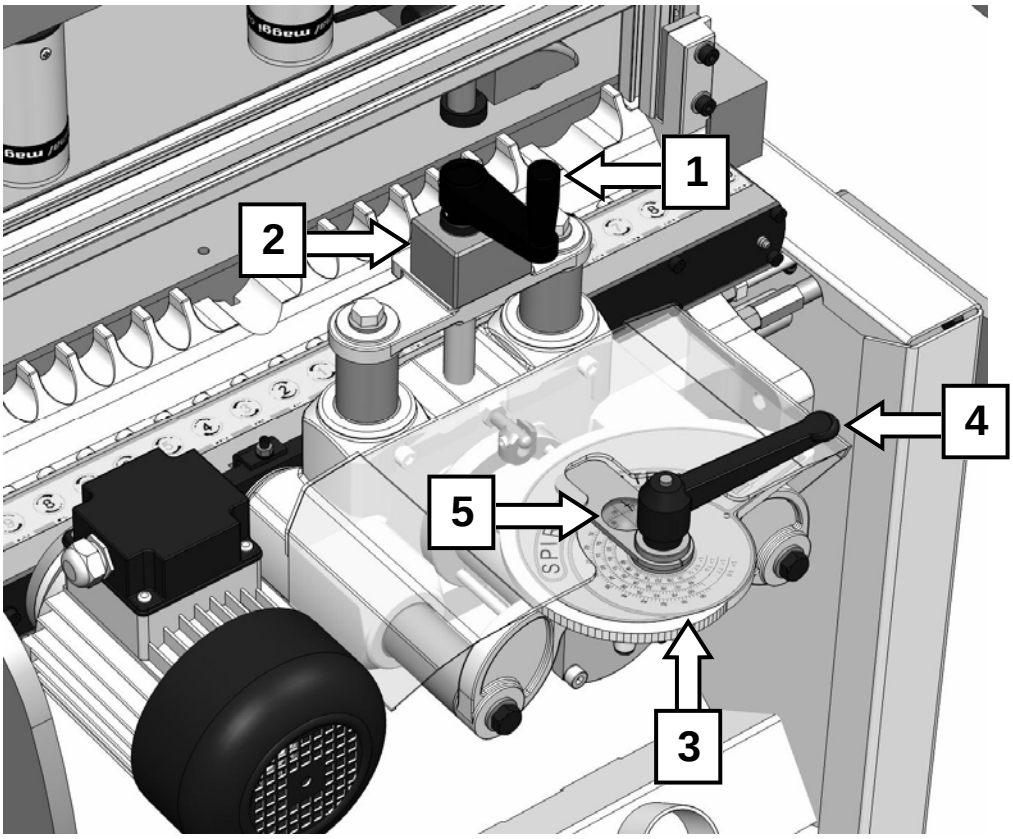
Before starting with any maintenance operation on the machine please follow the following procedure:
1. verify that the machine is in the arranged position for the requested operation. Insulate electric and pneumatic system only after having blocked mechanically the machine in this position.
2. be sure that no any other power source is present, and that no residual power source is able to act.
It is extremely important that this procedure is performed by only one operator and he/she has to notify the machine state by putting on it a well visible tag.

15.2 PRELIMINARY CHECK UP

Check that the working area all around the machine is in order and without any residuals of machined material, as sawdust or wood pieces.
Check that all the safety protection devices are positioned correctly and ready to use.

15.3 DRILLING DEPTH AND SPINDLE HEAD ADJUSTMENT

To carry out boring operations, proceed as described below:
1) Insert the suitable drills in the required position on the spindle head
2) Turn the handle (1) to set the required height of the drills from the work table, with the head turned at 90°. The drill height is shown on the digital counter (2) in millimetres. Turn the handle so that the screw is stretched when the required height is reached. The choice of the tool depends on the thickness of the piece to be bored, the position of the hole and the hole diameter.
3) Proceed as follows to adjust the boring depth: once you have found on the depth selection screw (3) the scale referring to the total length of the drill being used, it is possible to set (with no need for calculation) the actual boring depth. Releasing the handle (4) and turning the depth selection screw to the required point, the pointer (5) which also acts as a magnifier, will show the chosen depth. Firmly tighten the handle (4) before starting boring operations.
4) Usually use a scrap piece of wood to test the machine settings before boring a good piece of wood.



WARNING !!!

THE " BACKSTOP SPIRAL " ALLOWS THE DRILLING DEPTH ADJUSTEMENT .
IN CASE OF HORIZONTAL DRILLING (Fig. A), THE ACTUAL WORKING DEPTH CAN BE IMMEDIATLY SET BY REFERRING TO THE READING SCALE.
IN CASE OF VERTICAL DRILLING (Fig. B) ADD 10 mm TO THE READING SCALE OF THE USED DRILL TO OBTAIN THE ACTUAL WORKING DEPTH.
THIS IS CAUSED BY THE PRESENCE OF AN AUTOMATIC DEPTH DIFFERENTIAL.
THIS DIFFERENCE IS USED FOR PANELS AND RACK PINS COMBINING, THE CORRECT VERTICAL DEPTH IS OBTAINED AUTOMATICALLY BY ADJUSTING THE HORIZONTAL MEASURE (Fig. D)

Fig. A HORIZONTAL DRILLING POSITION 0°

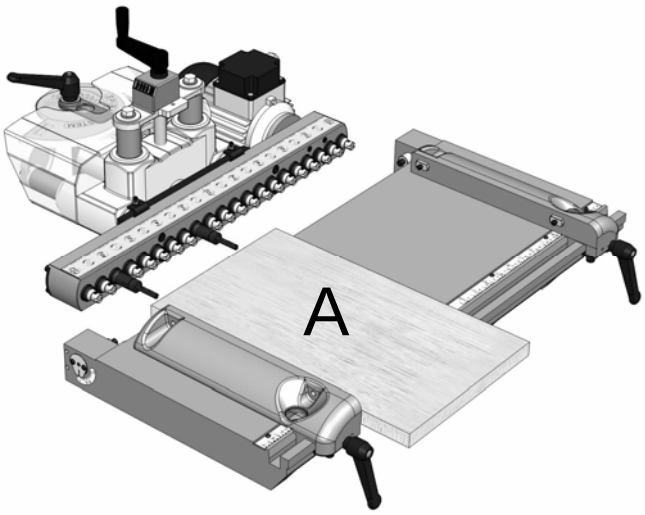
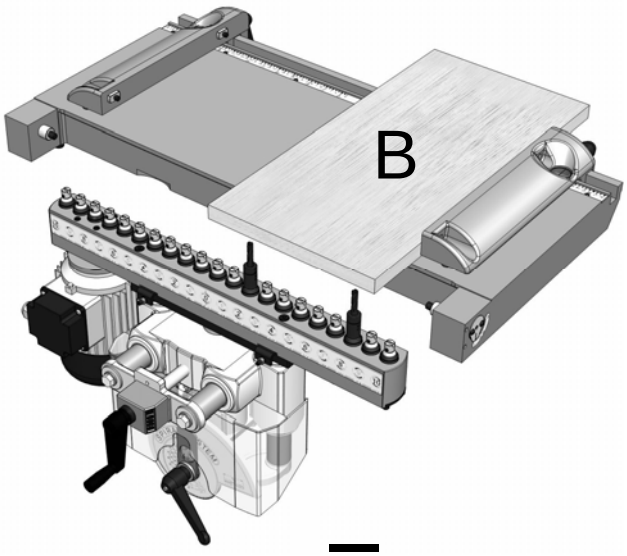
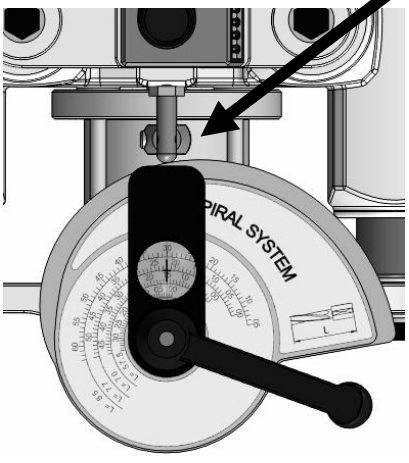
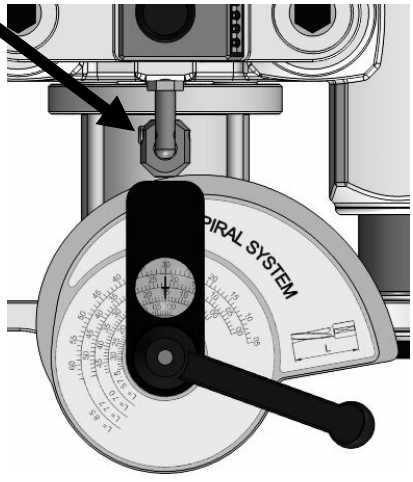


Fig: B VERTICAL DRILLING POSITION 90°



AUTOMATIC DEPTH DIFFERENTIAL





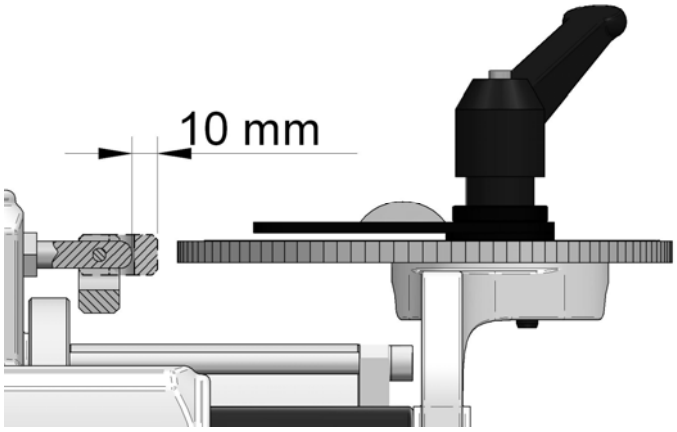
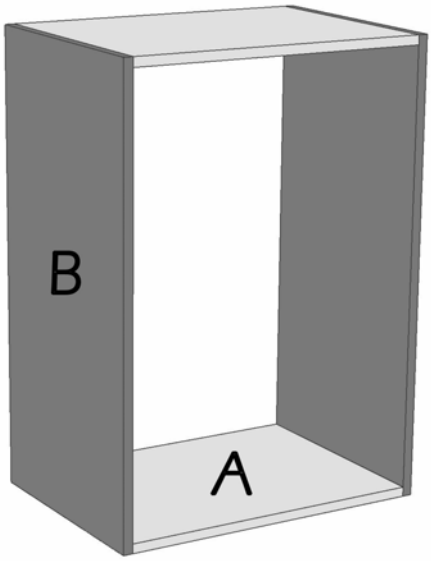
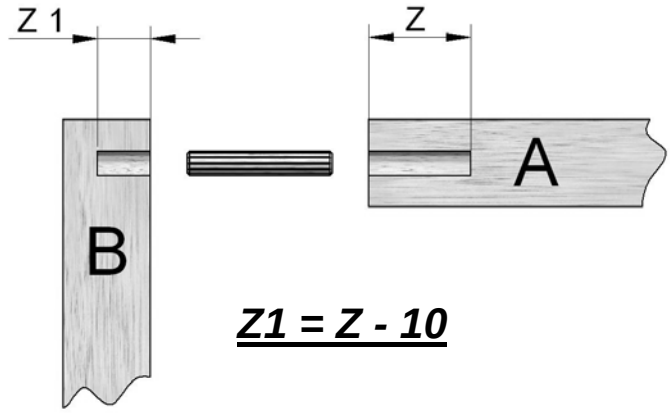


Fig. C



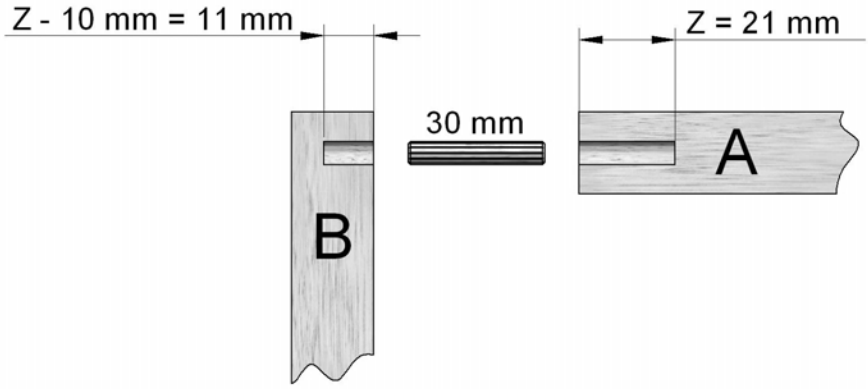
Reference assembling

Fig. D



Z1 = Z - 10

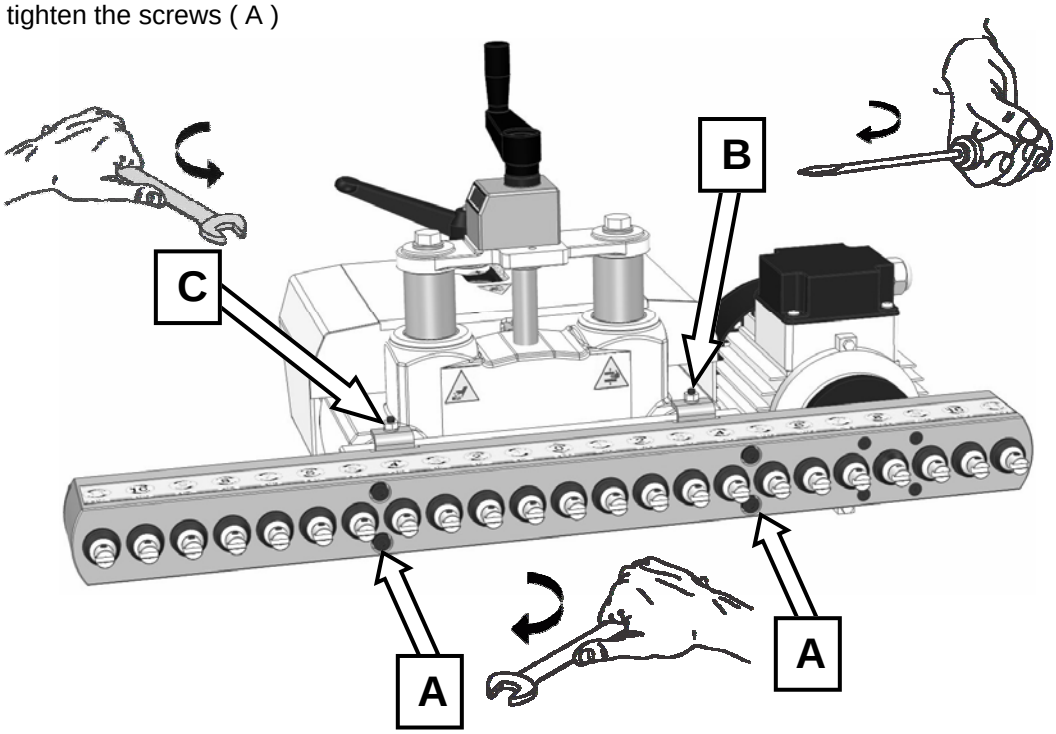
Example	**DRILLING DEPTH (mm)**	
PIN LENGTH (mm)	**HOLE Z**	**HOLE Z1**
30	21	11



ADVANTGES
The horizontal / vertical depth change is not necessary, furthermore it eliminates the panel breaking risk during the vertical drilling.

HEAD PARALLELISM ADJUSTMENT

- Partially loosen the screws (A) and work alternately on the screws (B) and nuts (C)
- Set the drills parallel to the work table
- Firmly tighten the screws (A)



15.4 SPINDLE HEAD HORIZONTAL AND VERTICAL POSITIONING

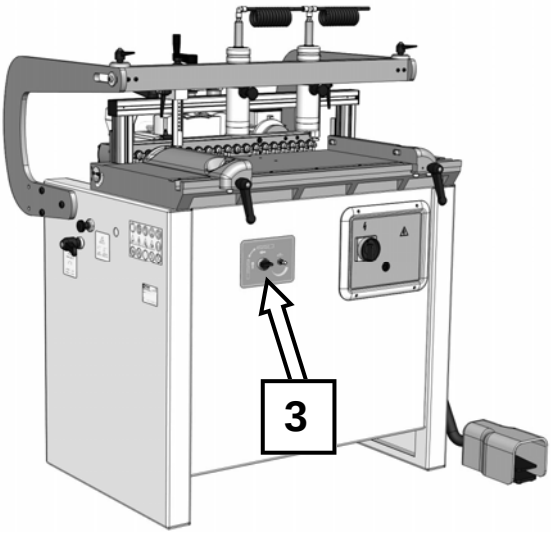
Carefully follow the whole procedures described below.

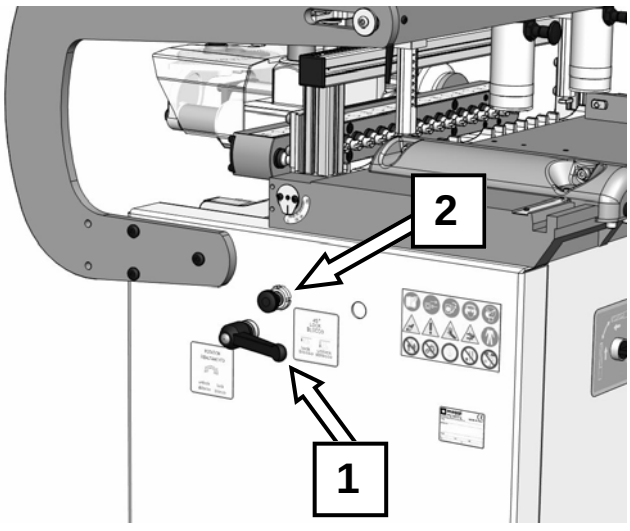
POINT 1 To position the spindle head at 90° starting from 0° as shown in the figure, proceed as follows:

- Release the handle (1) on the left-hand side of the machine and check that the 45° reference pin (2) is in the right position to allow the drilling group to pass through
- Use the selector (3) on the machine front and turn it to the horizontal position
- Clamp the handle (1) again.

POINT 2 To position the spindle head at 0° starting from 90° proceed as follows:

- Check that the control lever (3) on the front is also positioned at 90°
- Release the handle (1) on the left-hand side of the machine
- Use the control lever (3) to overturn the head unit taking it to the bottom position
- Clamp the handle (1) again.





SPINDLE HEAD POSITIONING AT AN INTERMEDIATE ANGLE OF 45°

- Take or if already set keep the head unit at 0° as starting position.
- Take the 45° stop pin (2) to the position for clamping the boring unit at the intermediate angle.
- Release the handle (1)
- Use the selector (3) on the machine front and turn it to the horizontal position
- When the boring unit is stopped with the pin (2) clamp the handle (1) again.

15.5 USE OF THE REFERENCE STOP FOR STANDARD 0°-90° MACHINING

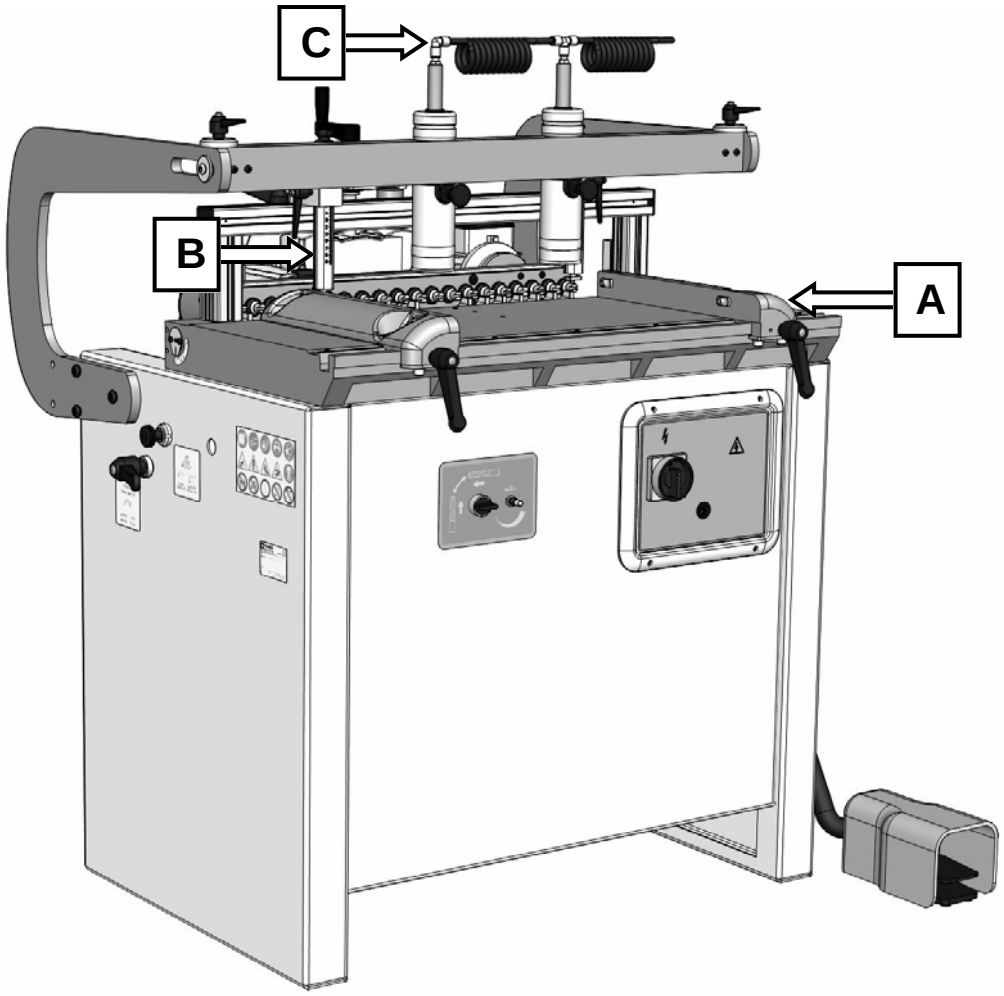
STEP 1 - The side squares (A) and back stops (B) are used to position the piece to be machined in the standard working cycle.
With the spindle head at 90° and the spindle holder unit clamped in place:

- Position and lock the side squares at an appropriate distance from the drills to be used
- Position the clamp cylinder (or cylinders) (C) in the area where the piece will be worked
- Place the piece to be bored against the side squares using them as guides to position the piece under the clamps and against the rack.
- Position the stoppers (B) above the work piece, lower the stopper reference block onto the piece and clamp the stopper itself with the corresponding handles.
- The piece is in the right position and it is now possible to start the working cycle pressing the pneumatic pedal to start drill feed with the engine switched on (make sure that the engine button is on). At the same time the clamps will lock the work piece into position.

STEP 2 - When the first step is over, release the pneumatic pedal to release the piece and take the bored piece out of the machine. Release the spindle head unit, operating the overturning lever to re-position the spindle head at 90°. Re-position the head and lock it in place, than you can start the second step:

- position the piece, that has to be joined to the one that has just been machined, against the side square under the clamp (or clamps) (C) and against the back stop block.
- Once you are sure the piece has been positioned correctly, press the pedal to lock the clamp, to turn and feed the drills.
- The piece will be released once the pedal is freed, ending the working cycle.

THE TWO PIECES THAT HAVE BEEN OBTAINED ARE NOW READY TO BE JOINED (0°-90°).



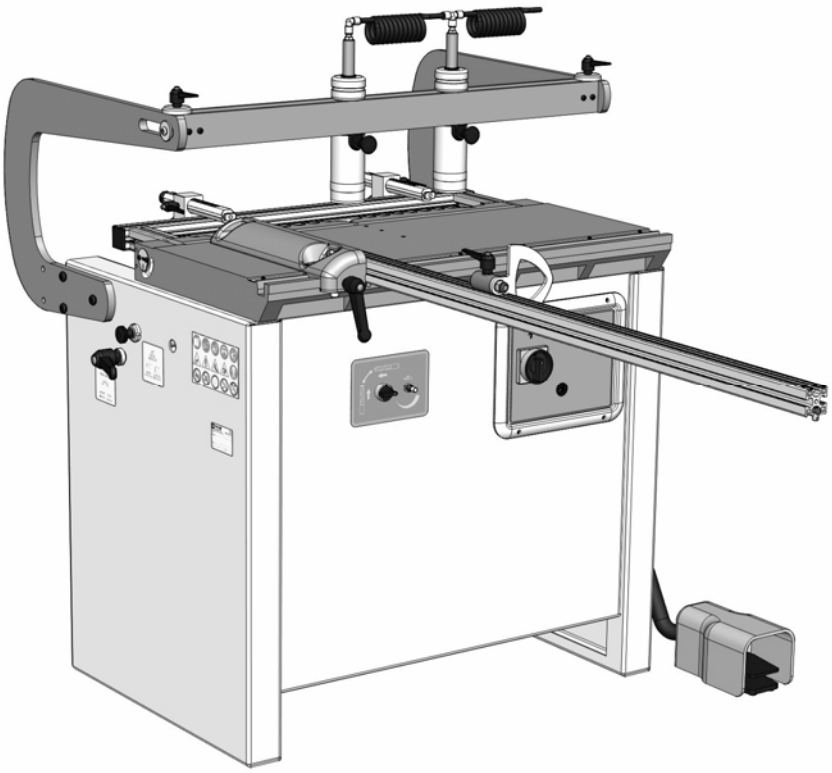
15.6 USE OF THE 1,5 + 1,5 MT EXTENSION FENCE

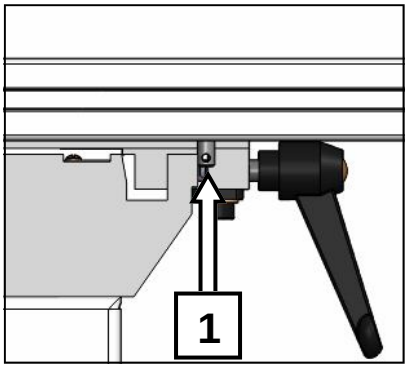
The extension fence is used to make a series of larger holes than the machine can make or to bore large-sized pieces. Use of the extension generally implies complete or partial exclusion of the side squares and positioning the spindle head at 90°. For longitudinal use of the extension, we advise you to exclude the side squares completely, as it is possible to use mobile reference stoppers on the extension itself (the extension is provided with 4 mobile stoppers with positioning screws, stop screw and extension clamping device) for combined positioning of the work piece.

TRANSVERSAL POSITION OF EXTENSION FENCE

To use the extension fence transversally you need to fasten it to the side square using the screws provided.
Follow the procedure described below:

- Position the extension on the inner side of the side square, locking it in place with the help of the reference pin (1) on the extension itself.
- Clamp the two screws on the side square.
- Once the extension fence has been positioned, it is possible to exclude the other side square if necessary.
- It is now possible to use the mobile stops to co-ordinate the relative positions of the sections to be bored on long pieces.
- Add a suitable support (i.e. a stand) for the fence and for the panel to be bored.





LONGITUDINAL POSITION OF THE EXTENSION FENCE

- Unlock the handles and release the side fences from the working table.
- Once the work table has been cleared, position the extension against the back stops and fasten it with the special screws.
- Position the extension fence longitudinally with the reference pin (1). Move forward the back stop unit in order to introduce the reference pin into the seat on the rack (Fig. A and B).
- Then use the back stops to find the parallel of the boring line and, with the drill height handle, find the distance between the extension fence and the drill line.
- The extension fence can now be locked in this position and it is possible to bore sections or repeat sets of holes for long pieces by using the mobile stops
- Add a suitable support (i.e. a stand) for the fence and for the panel to be bored.

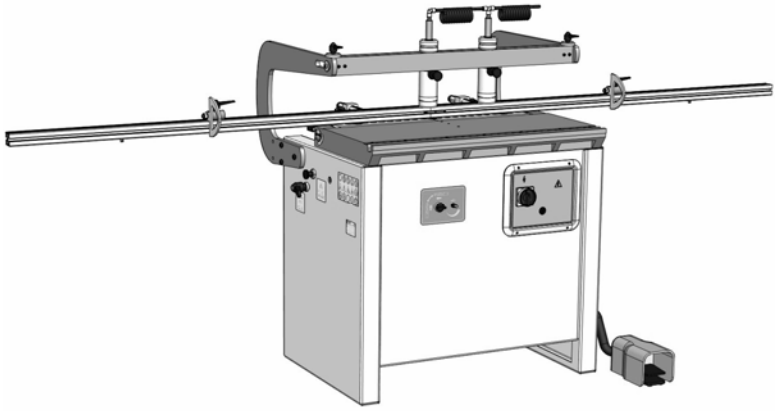


Fig. B

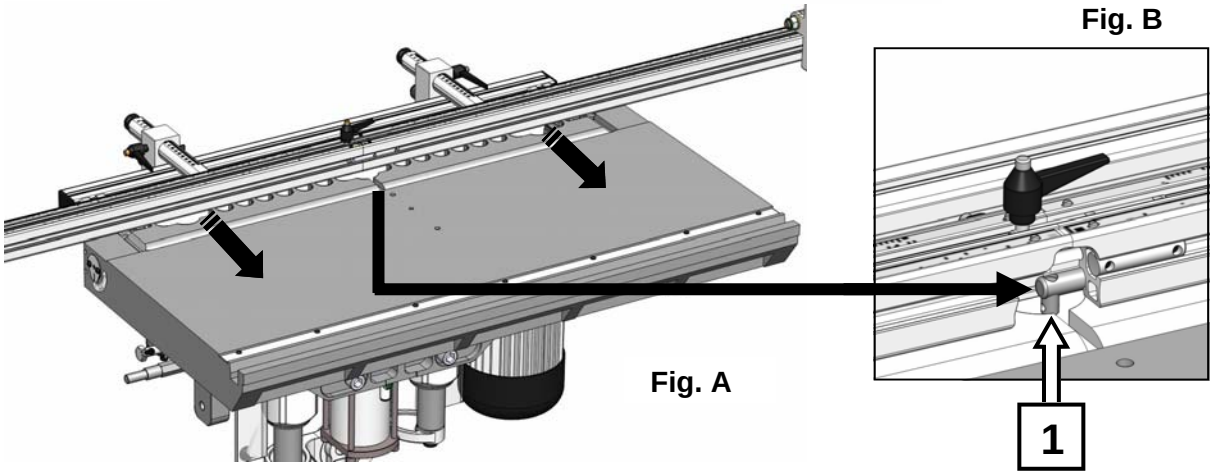
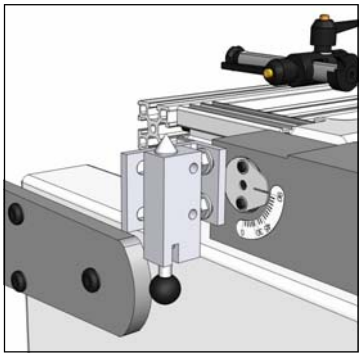


Fig. A

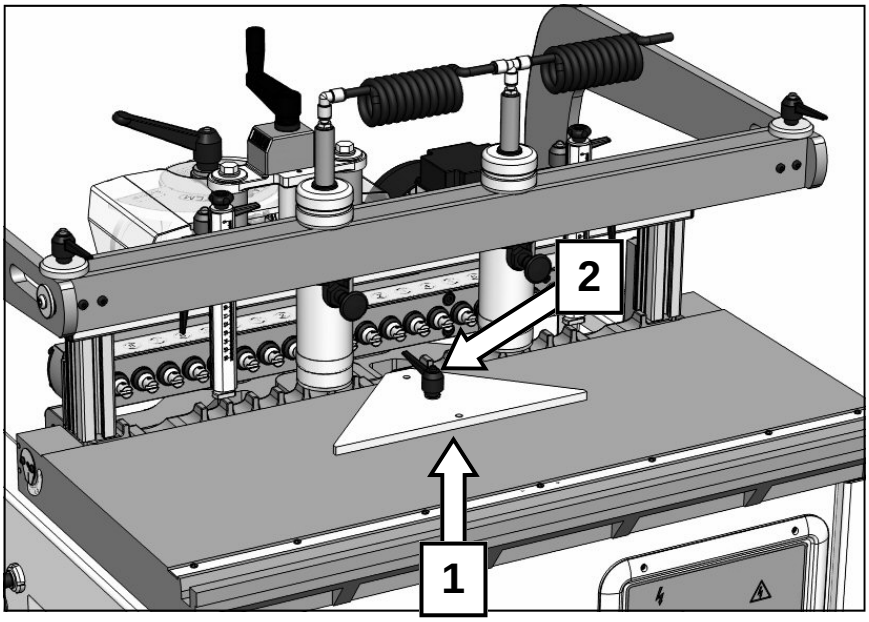
15.7 USE OF THE REFERENCE PIN FOR SETS OF HOLES ON LARGE-SIZED PIECES *(OPTIONAL)*

The use of the extension fence for large-sized pieces can be complicated. Our machines are provided with a reference pin that can be used for the repetition of a set of holes on a large-sized piece, in which the axial distance between the first drill and the last is higher than those obtainable with the boring machine used. The reference pin is aligned with the axis of the drills and it fits into a slot under the machine table when the first set of holes has been bored. To go on boring, the reference pin can be used again by turning the knob to release the spring that allows the reference pin to come out. The reference pin must be inserted in one of the holes that have just been bored to allow repetition of the set of holes.



15.8 USE OF THE TRIANGLE FOR 45° FRAMES *(OPTIONAL)*

The 45° triangle is particularly useful for 45°-45° jointing, mainly used for quickly manufacturing frames. Fasten the triangle (1) on the table in the reference holes and clamp it in the centre hole using the lever (2). This way it is possible to rest the pieces cut at 45° to be bored and coupled with the wooden “dowel” peg. The machine spindle head must be set at 0°. When the position is correct, the clamp is over the piece to be worked; proceed as in a standard working cycle, pressing the pneumatic pedal to start machining and releasing it at the end of the work. Repeat the procedure on both sides of the triangle to obtain two mirrored frame pieces ready to be joined.

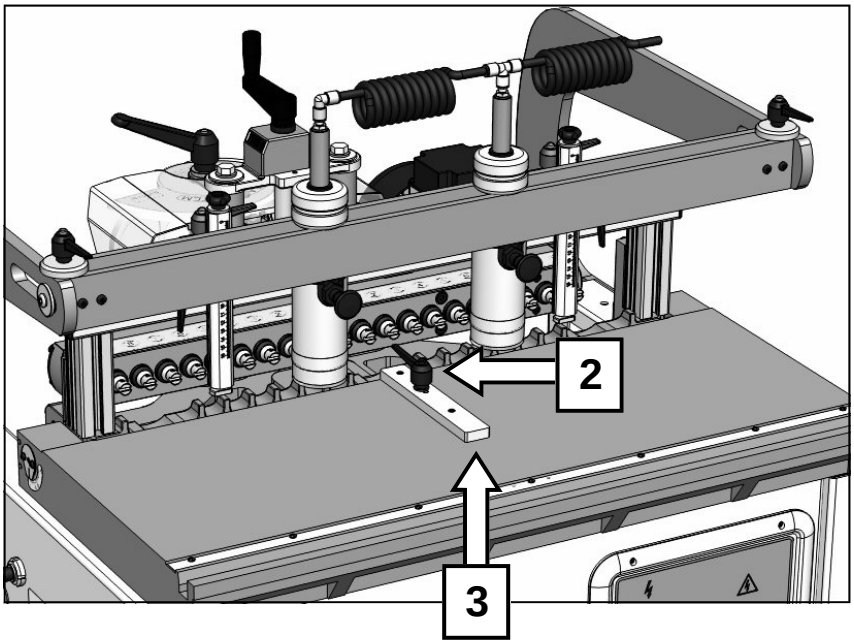


15.9 USE OF THE CENTRAL BAR FOR STRAIGHT 90° FRAMES *(OPTIONAL)*

The central bar is used to join two pieces with sides at a right angle (mainly used for quickly manufacturing straight frames).

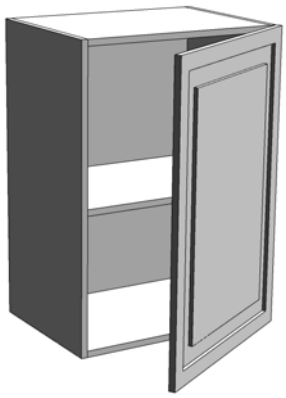
- Fasten the central bar (3) in the special reference holes on the work table and clamp it with the lever (2).
- position the pieces to be worked along the central bar. It is now possible to start boring operations to join frames with wooden “dowel” pegs.

The position is correct when the spindle head is at 0° and the clamp is over the piece to be bored. Proceed as in a standard working cycle, pressing the pneumatic pedal to start machining and releasing it at the end of the work. Repeat the procedure on both sides of the triangle to obtain two mirrored frame pieces ready to be joined.

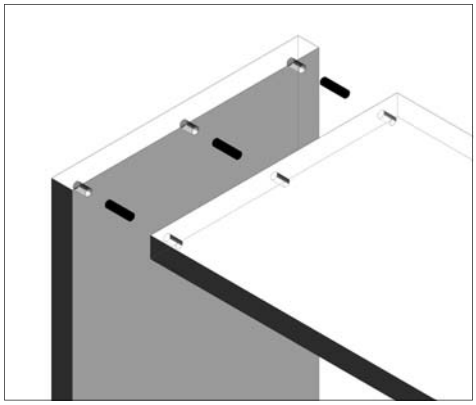


16. WORKING EXAMPLES

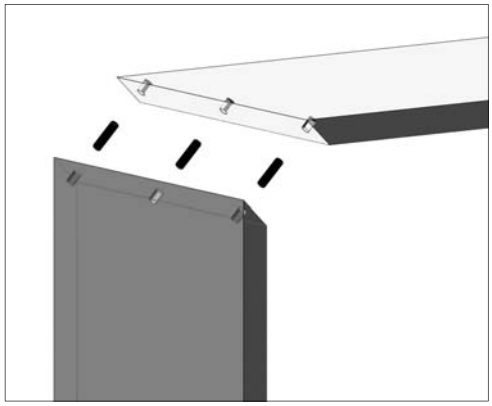
PANEL MATING EXAMPLES



Assembling parts

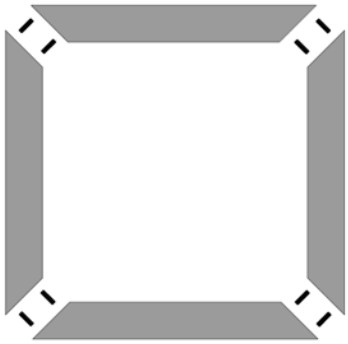


Mating parts (at 0°)



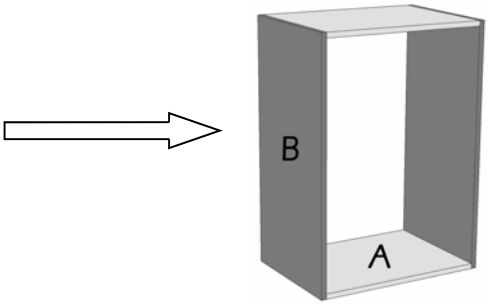
Mating parts (between 0° and 90°)

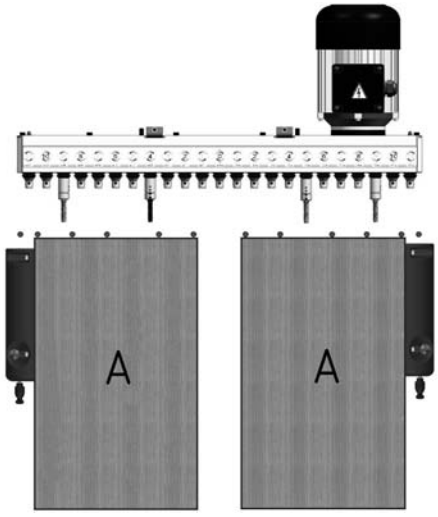
FRAME MATING EXAMPLE AT 0° AND AT 45°



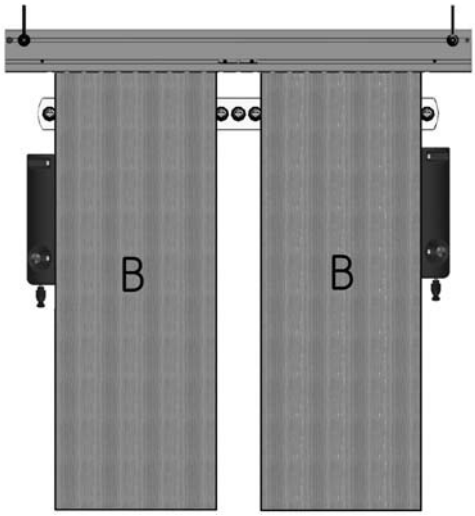
SIMULTANEOUS MIRROR DRILLING EXAMPLES

Reference assembling





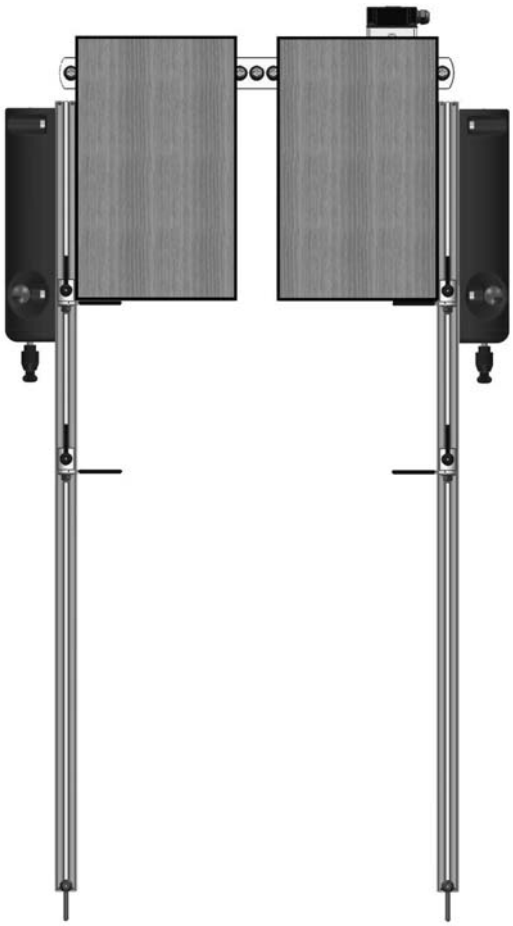
Simultaneous mirror drilling of two panels (drilling head at 0°)



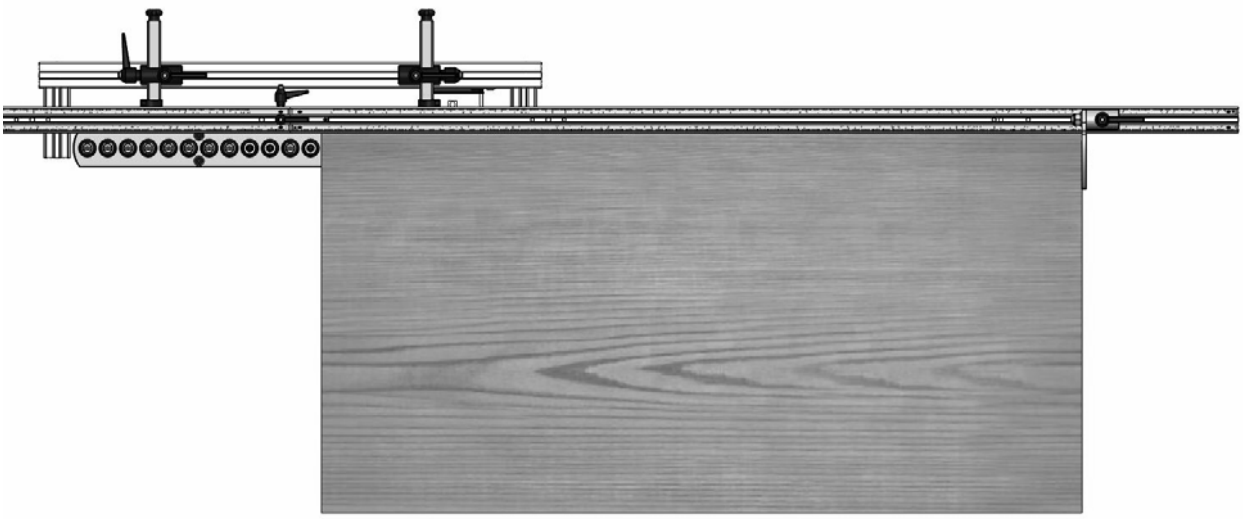
Simultaneous drilling of two side panels (drilling head at 90°)

DRILLING EXAMPLES WITH REFERENCE FENCES

Transverse positioning of the fence, equipped with reference stops, to drill transverse holes on side panels for the insertion of support panels

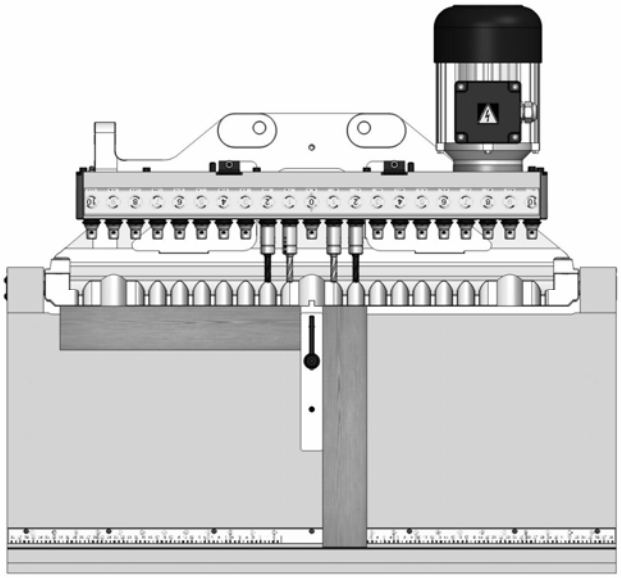


Transverse positioning of two fences, equipped with reference stops, to drill simultaneously transverse holes on side panels for the insertion of support panels

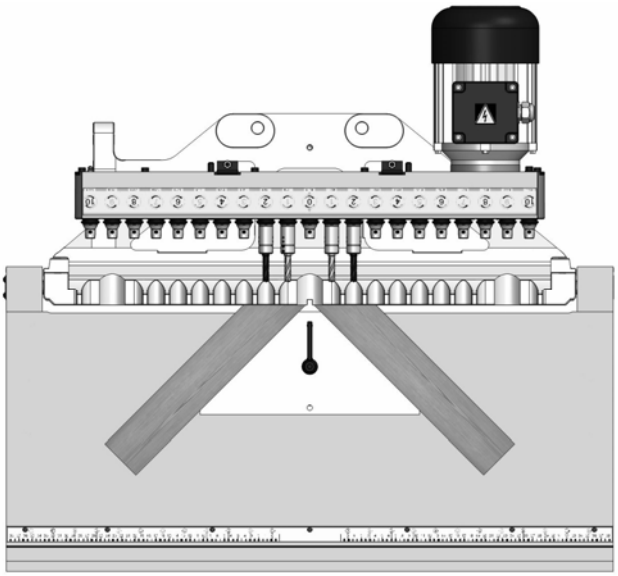


Longitudinal positioning of the 1500mm fence, equipped with two reference stops, to drill line holes on large panels. The long fence can be used both on left and right side with high accuracy. The 3000mm long fence, equipped with four reference stops, is particularly suitable to drill line holes on very large panels: thanks to its dimension, it ensures a fast and complete positioning.

DRILLING EXAMPLES USING FRAME FENCE

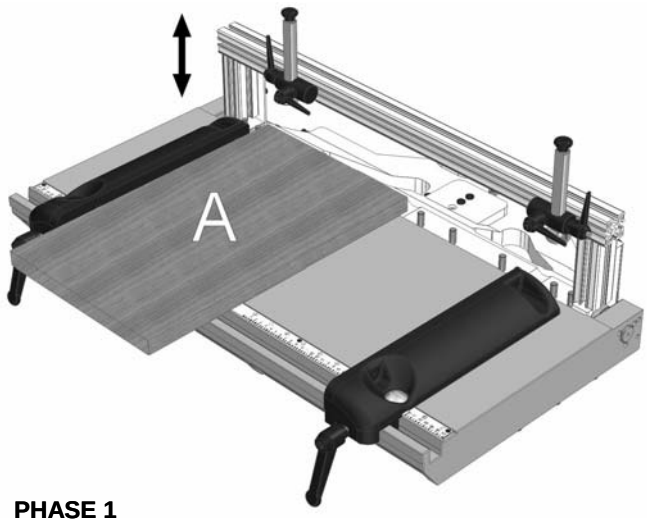


Example of the use of the standard dimension fence to drill simultaneously two frames at 0° - 90°

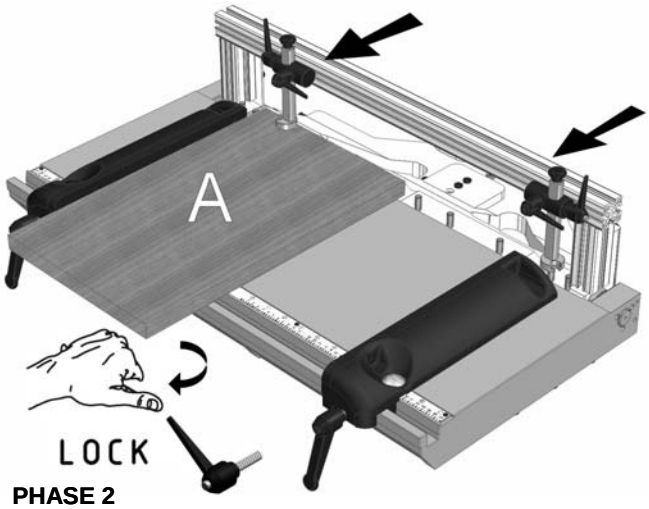


Example of the use of the triangular fence to drill simultaneously two frames to be joined at 45° - 45°

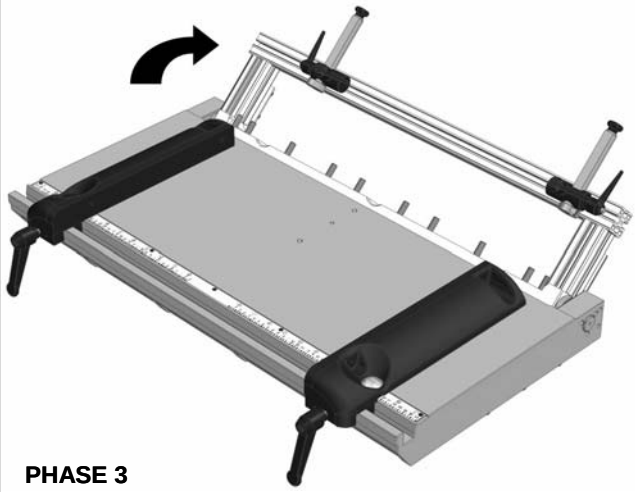
EXAMPLES OF AUTOMATIC MATING OF VERTICALLY AND HORIZONTALLY DRILLED PANELS



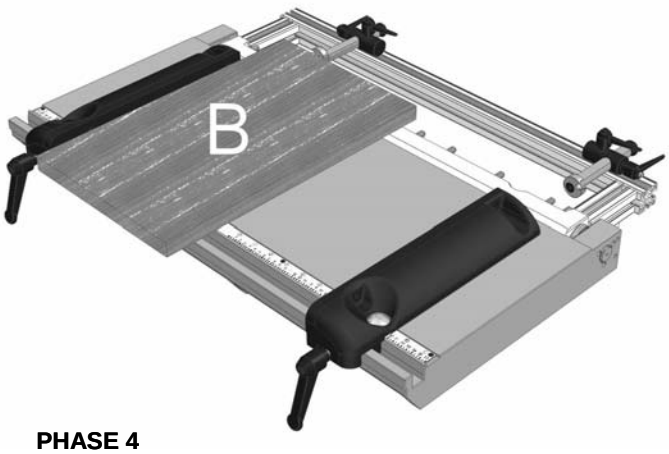
PHASE 1



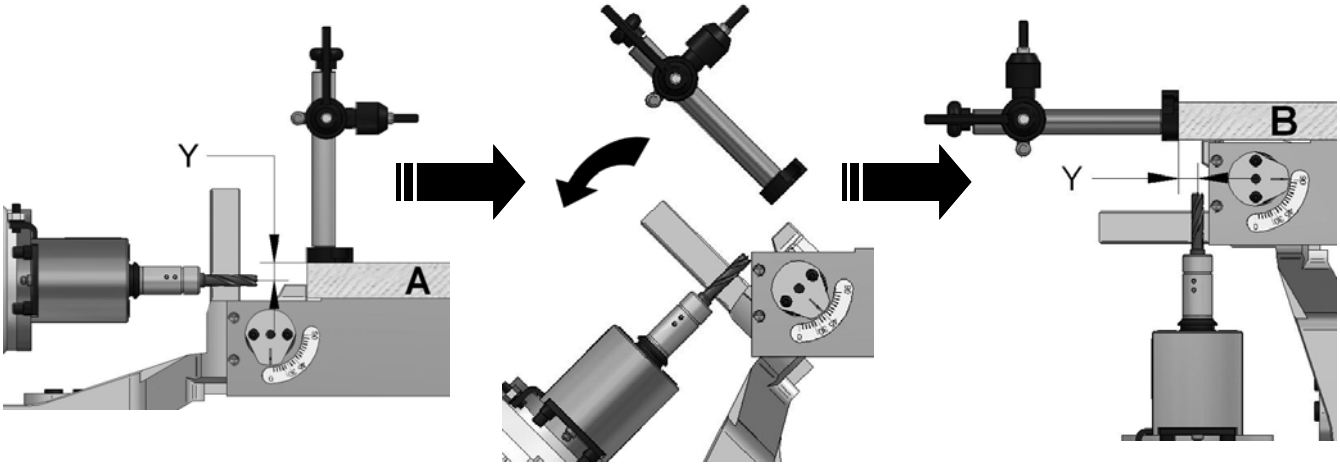
PHASE 2

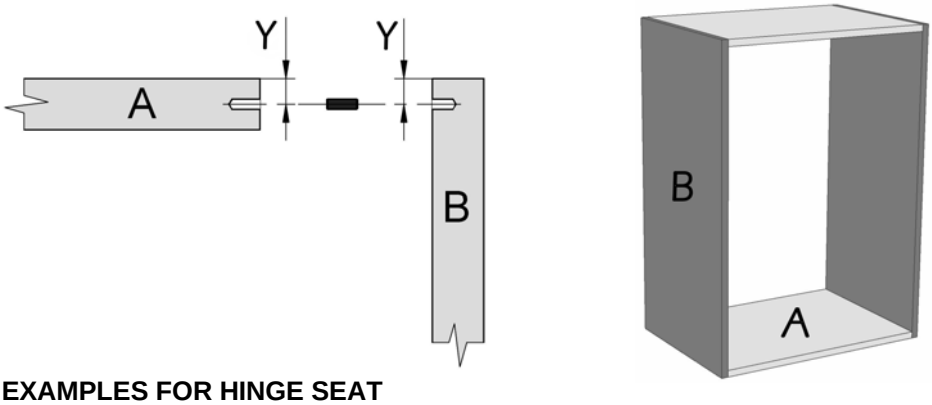


PHASE 3



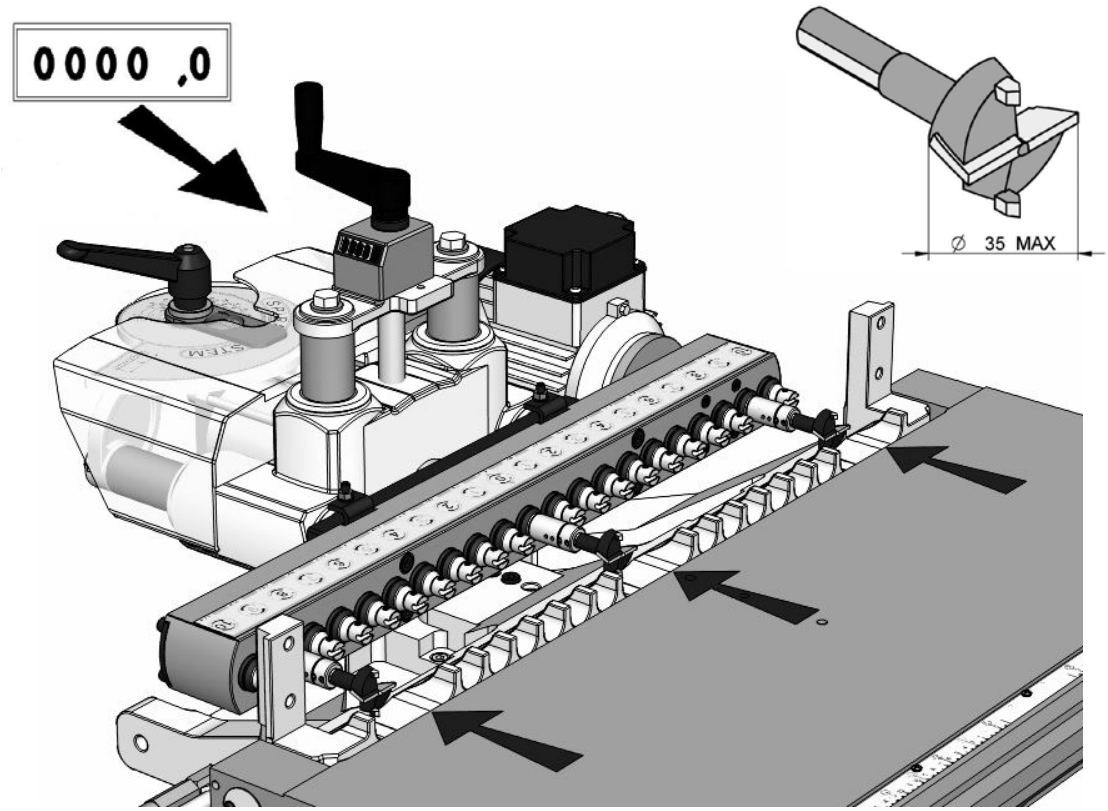
PHASE 4





DRILLING EXAMPLES FOR HINGE SEAT

It is possible to drill holes using 35mm O.D. tools max. *(if you want to use a 40mm O.D. tool you must follow carefully the procedure described below)*
ATTENTION !!! The 35mm O.D. tool has to be mounted only on the spindles corresponding to three right positions of the rack (see the three arrows on the right side of the figure below), besides the head group has to be positioned in the “0 0 0 0,0” vertical position, as depicted in the figure below.



It is possibile to drill holes larger than 40mm O.D. if you position the head from the rack at a distance of the tool O.D. + 10mm. At this distance you can use large tools in any spindle of the head.
ATTENTION !!! You must verify that the tool is above the rack.

17. MAINTENANCE

17.1 ORDINARY MAINTENANCE

AN ADEQUATE MAINTENANCE IS A CRUCIAL FACTOR FOR A LONGER LIFE OF THE MACHINE, AND TO OBTAIN OPTIMAL WORKING CONDITION OF THE MACHINE ITSELF. ALL THE MAINTENANCE OPERATIONS MUST BE DONE WITH THE MACHINE TURNED OFF. WEAR ALWAYS PROTECTIVE GLOVES AND FACE-SHIELD

WARNING - DANGER OF SLIDING!
During cleaning of working area, be careful to working residuals and liquids left over the floor all around the machine: they can be dangerous for sliding of the operator.

17.2 CLEANING OF THE MACHINE (DAILY)

The machine and working area must be kept clean from working scraps and anything that could hamper the working cycle or access to the machine itself. The machine must be cleaned every day. Make sure that no material not needed by the machine can gather on it preventing safe operation and causing danger to the operator during the normal working cycle .

17.3 CLEANING OF THE GUIDES (WEEKLY)

Sliding guides and bars must be kept clean from working residuals: they can obstacle correct machine movements and damage machine efficiency. Do not use detergents or lubricants.

ELECTRICAL CABLES CHECK
Check the condition of the electric cables. Make sure there are no signs of wear, scrapes, etc.

17.4 EXTRAORDINARY MAINTENANCE

MAINTENANCE

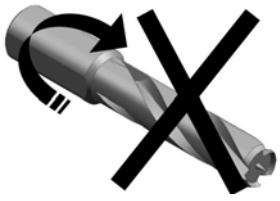
- Check electric system safety
- Check the clamping of the various mechanical components.
- Check the lubricant oil level in the filter unit and top up if necessary.
- Make sure the machine is lubricated regularly.
- Check air pressure value: the pneumatic power supply must give air at a pressure value of 6 bar
- Check sludge: sludge and air impurity deposit into the transparent cup of air treatment group

18. COMMON FAILURES: REASONS AND REMEDIES

Some failure causes can be eliminated directly by the operator, other by qualified personnel only.

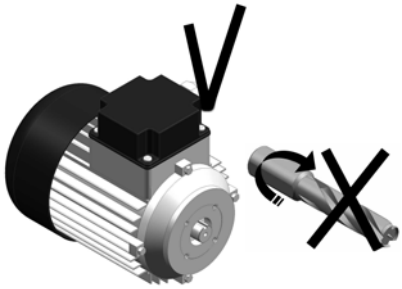
ATTENTION:
BEFORE MAKING ANY INTERVENTION IT IS OBLIGATORY TO FOLLOW CAREFULLY THE INSULATION PROCEDURE

18.1 DRILLS DO NOT WORK



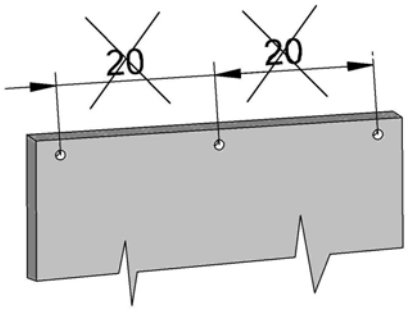
PROBABLE REASON	ACTION
A - the motor does not work B - the motor is out of service	- push the motor start push button - release the emergency push button and/or check fuse - check air pressure value (to turn on the pressure sensor) - replace the motor

18.2 THE MOTOR WORKS BUT THE DRILLS DOES NOT



PROBABLE REASON	ACTION
A - possible failure of: - gears and/ or keys - drive joint	- replace them or call technical service

18.3 THE HOLE IS NOT ACCURATE



PROBABLE REASON
A - unproper drill locking
B - drill wear
C - working piece unproperly blocked

ACTION
- check locking. Call Service if the locking is good
- replace or call Service
- check clamp units, their seals and working air pressure value

19. ANOMALIES DURING ORDINARY WORKING PHASES

19.1 BURN-TRACES DUE TO DRILLS
This problem might appear when the piece is positioned incorrectly or owing to drill wear or if the drills turn in the opposite direction.

19.2 DRILLED PIECES ARE NOT PARALLEL TO THE REFERENCE BAR
This might be due to incorrect parallelism of the drills in relation to the reference stop. Check the heads in relation to the stop and the parallelism of the line of drills of head 1 with head 2.

19.3 DIFFICOLTY IN TURNING THE HEAD
If the boring unit fails to reach or finds it difficult to reach other positions, check the hinge and rod of the overturning piston

19.4 THE WORKING PIECE IS NOT BLOCKED BY THE SAFETY CLAMP
If the clamps are not clamping properly, check the air pressure and connection pipes.
To solve these problems we suggest you contact Maggi Engineering Post-Sale Service, or your local dealer.

20. NOISE EMISSION

Noise emission according to correct working of machine and balancing and grinding of tools, is variable and depends on working material, drill diameter and depth drill. The operator permanence expected time is variable during 8 hours a day. Some other factors may determinate the exposure level; the surroundings and other noise sources, and other close machines.
We suggest to inform the operators about risks caused by a prolonged exposure to noise, providing them with suitable individual protection devices. The acoustic pressure level, collected in the operator place through class 1 integrative noise meter, is 76.1 dB(A).
This measure was done according to ISO3745 rules with usual working values of speed and air pressure, drilling a shaving wood PVC covered panel. The measure was executed at 1.5 m from ground, in front of the machine, in the operator position.
Moreover the following reference measures were collected with the same procedure:
Acoustic pressure level in Atm. dB(A): 78.3
Acoustic pressure power dB(A): 93.3

21. DUST EMISSION

The following results are obtained from the determination of dust emission in 1 hour of continuous work, drilling a fir PVC covered panel 20 mm thick. Dust emission turned out 13,9 mg/N cu.m at 1,5 m from ground in front of the machine in the operator position.

22. PUTTING THE MACHINE OUT OF SERVICE

When machine has to be put out of service, please carefully follow our instructions in order to safeguard the safety of people and of environment. Firstly execute the insulation procedure, then dismantle the drills and put them into a suitable packaging box. Dismantle electric, hydraulic and pneumatic components so that you can re-use them after a check or a revision. Empty out completely from oil the hydraulic power unit, avoiding scrupulously to disperse the oil in the environment. Dismantle metal components grouping them for materials. Call a specialized company to rescue and eliminate solid and liquid materials.

23. TERMS OF GUARANTEE

The guarantee provided with this certificate is valid for the period of one year from the date of purchase. Consequently, during such guarantee period, the manufacturer undertakes to replace any parts found to be faulty because of manufacturing defects. Only carriage expenses will be on the customer's account. The guarantee is void if the machine has been used improperly or damaged during transport.

24. GUARANTEE CERTIFICATE

The machine has been built according to technological and safety criteria and has been checked in our factory before being forwarded.

MAGGI ENGINEERING guarantees machine working and quality in agreement with law rules, for a period of 12 months. Improper use and incorrect maintenance, not following the rules contained in this manual, as well as adjustments or modifications not approved by the manufacturer, cancel all the terms of guarantee. The conditions of guarantee about the correct working of the machine are strictly connected to the respect of all the indications described in the

USE AND MAINTENANCE MANUAL

The free replacement of any parts found to be faulty is done only after having checked that the machine had been properly used.

Claims and guarantee interventions request are accepted only against presentation of the machine number engraved into the identification plate.

Upon receipt of the machine carefully check that packaging is safe and not damaged. Except for different agreement, the manufacturer is not responsible for any damages done during transport.

In case of evident damages on packaging, we suggest to contact immediately the carriers. Our firm will be available to give the necessary support.

COUPON TO BE FORWARDED TO THE MANUFACTURER

GUARANTEE AND LOOK-OVER COUPON

Model..……..Serial number……...

Name……..

Address……..

ZIP Code……...City…….

Date of purchase…… Dealer……...

Owner's signature

……..

The purchaser states to accept all the terms of guarantee and to have checked the machine to work well

NOTES

Send to:

Sales and technical Assistance

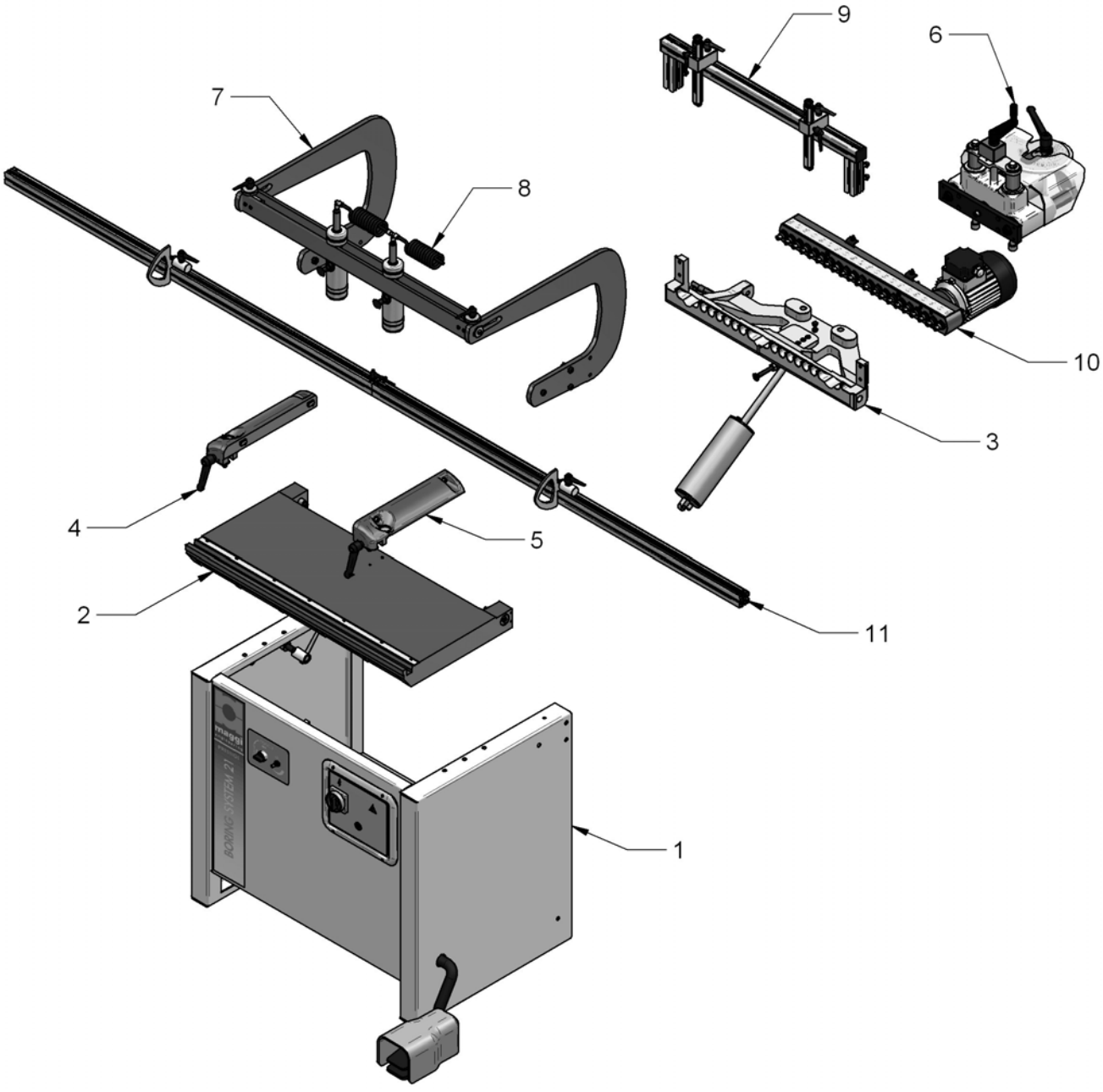
Via delle Regioni n°299

50052 CERTALDO (Fi)

ITALY

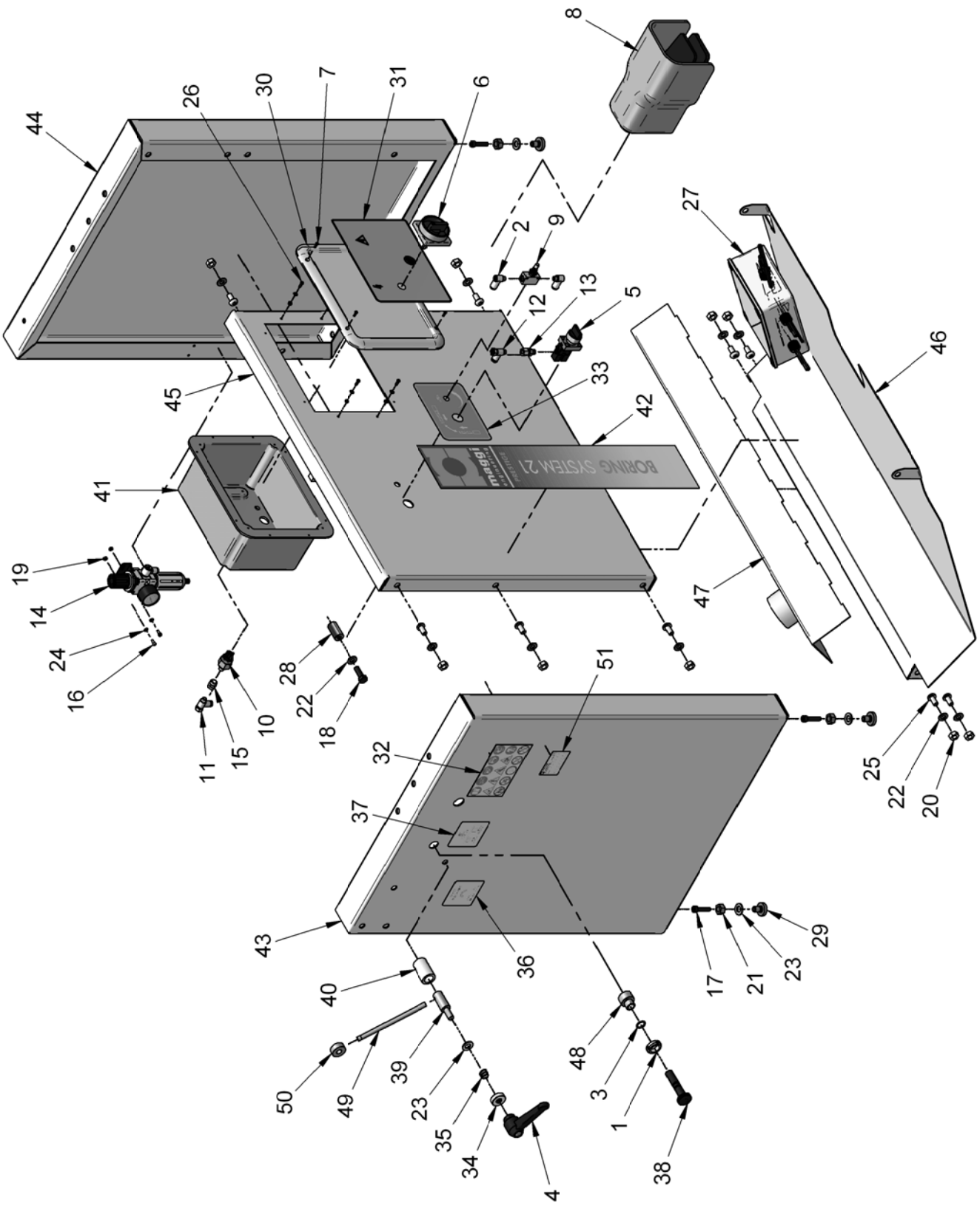
25. SPARE PARTS CATALOGUE

POS.	CODE	DENOMINATION GROUP	REFERENCE SHEET
1	26275000	FRAME UNIT	SHEET. 1
2	26282101	TABLE UNIT	SHEET. 2
3	26282201	RACK UNIT	SHEET. 3
4	26282306	LH SQUARE UNIT	SHEET. 4
5	26282305	RH SQUARE UNIT	SHEET. 5
6	26155401	SPINDLE HEAD UNIT	SHEET. 6
7	26275500	CLAMPING UNIT	SHEET. 7
8	26054502	CLAMP UNIT *(CLAMPING SUBGROUP)*	SHEET. 8
9	26275600	BACK STOP UNIT	SHEET. 9
10	26275700	HEAD UNIT	SHEET. 10
11	26286801	1,5 +1,5 Mt EXTENSION FENCE + N° 2 ROTARY STOPS UNIT	SHEET. 11
#	#	PNEUMATIC SYSTEM	SHEET. 12-13
#	#	ELECTRIC SYSTEM	SHEET. 14-15



26275000 FRAME UNIT

SHEET 1

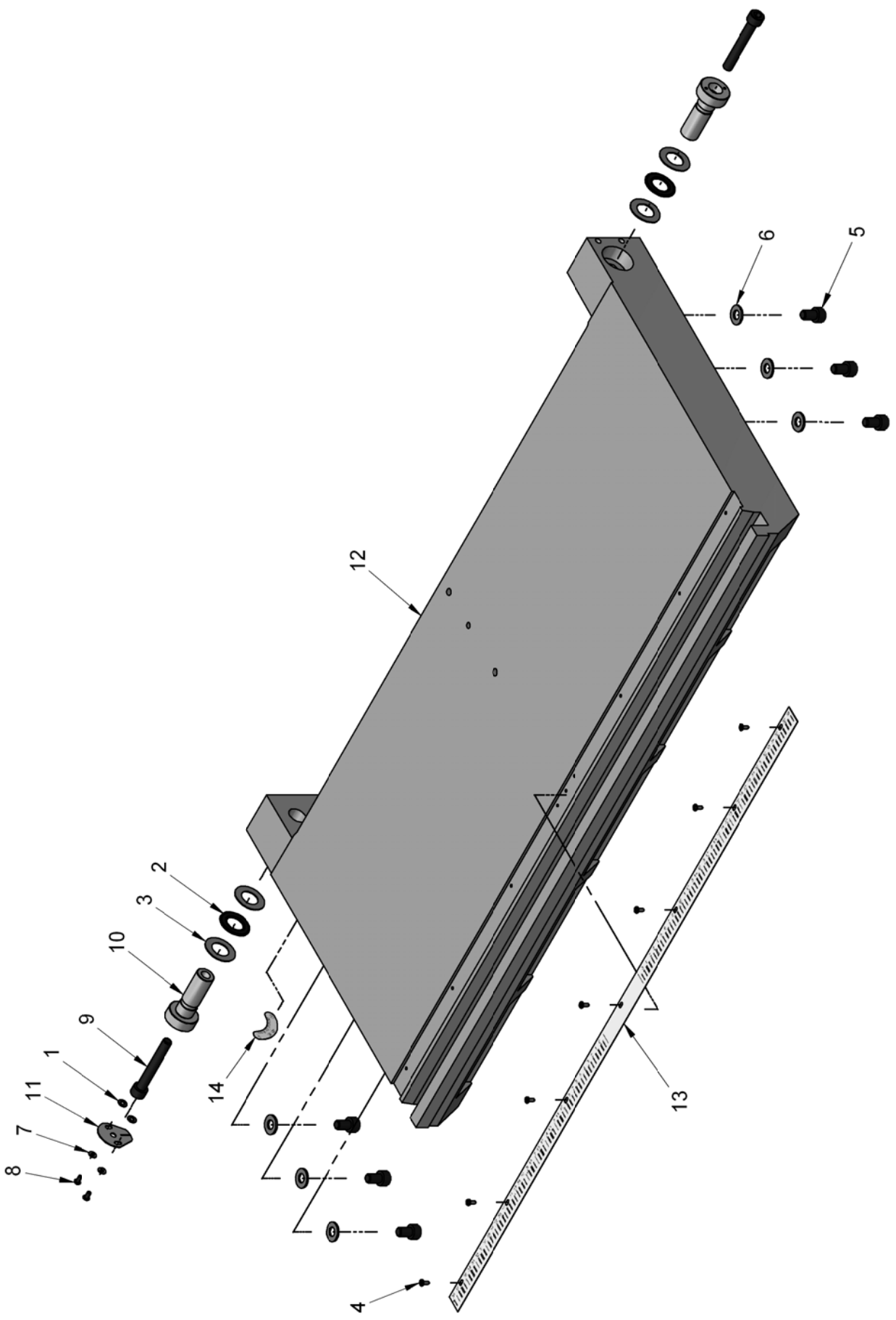


26275000 FRAME UNIT

POS.	CODE	PART NAME	QUANTITY
1	00000175	SELF-LOCKING LOCKRING M20x1	1
2	00001105	PNMX FITTING ART.015-8-1_8	2
3	00003530	O-RING 119	1
4	00003905	SNAP LEVER KRP-100 M12	1
5	00004013	PNMX SELECTOR 104 32 6 30 LC	1
6	00005091	MAIN SWITCH	1
7	00005104	SCREW AUT. TC. Dia.3,9x13	4
8	00015220	PNEUMATIC PEDAL ART-228-52-10-2-1	1
9	00015229	PNMX FLOW CONTROL G1 8-COD-6-01-18-NE	1
10	00015237	PRESSURE SWITCH 250V	1
11	00015805	PNMX FLOW CONTROL T290818"C"	1
12	00015814	PNMX FLOW CONTROL 30 300418	1
13	00015816	PNMX WALL UNION 25 250418	1
14	00015825	REDUCTION FILTER WITH PRESSURE GAUGE	1
15	00015900	PNMX SLEEVE ART. 103 10318	1
16	00018300	SCREW TCEI M4X10 UNI-5931	2
17	00018327	SCREW TCEI M8X35 UNI-5931	4
18	00018408	SCREW TE M10X30 UNI-5739	1
19	00018499	NUT M4 UNI-5588 6S	6
20	00018503	NUT M10 UNI-5588 6S	10
21	00018507	NUT M12 UNI-5588 6S	4
22	00018522	WASHER Ø10 UNI-6592	11
23	00018523	WASHER Ø13 UNI-6592	5
24	00018531	WASHER Ø4 UNI-6592	6
25	00018601	SCREW TBCEI M10X20 ISO-7380	10
26	00018619	SCREW VTBEI M4 x 12 ISO 7380	4
27	26054900	PNEUMATIC BOX	1
28	36050015	CYLINDER LOCKING BLOCK	1
29	36050032	FOOT	4
30	36052002	COVER	1
31	36053006	CONTROL PANEL PLATE 23	1
32	36054016	WARNING PLATE 150x90	1
33	36055031	BORING MACHINE PANEL PLATE	1
34	36090008	WASHER FOR LEVER	1
35	36090009	SPRING FOR WASHER	1
36	36222116	TURN OVER PLATE MOD.G	1
37	36222118	LOCK-UNLOCK PLATE MOD.G	1
38	36250001	STOP PIN 45°	1
39	36250002	LOCKING CYLINDER	1
40	36250003	CYLINDER BUSCH	1
41	36251005	ELECTRIC BOARD GFE	1
42	36275023	BS21 PRESTIGE PLATE	1
43	36282004	LH SIDE PANEL 21	1
44	36282005	RH SIDE PANEL 21	1
45	36282008	FRONT PANEL 21	1
46	36282013	TANK 21	1
47	36282015	SUCTION DUCT 21	1
48	37000006	THREADED BUSH	1
49	37000010	LOCKING FENCE	1
50	37000011	FENCE DISK	1
51	40000030	3M PLATE 68x46 3690-906	1

26282101 TABLE UNIT

SHEET 2

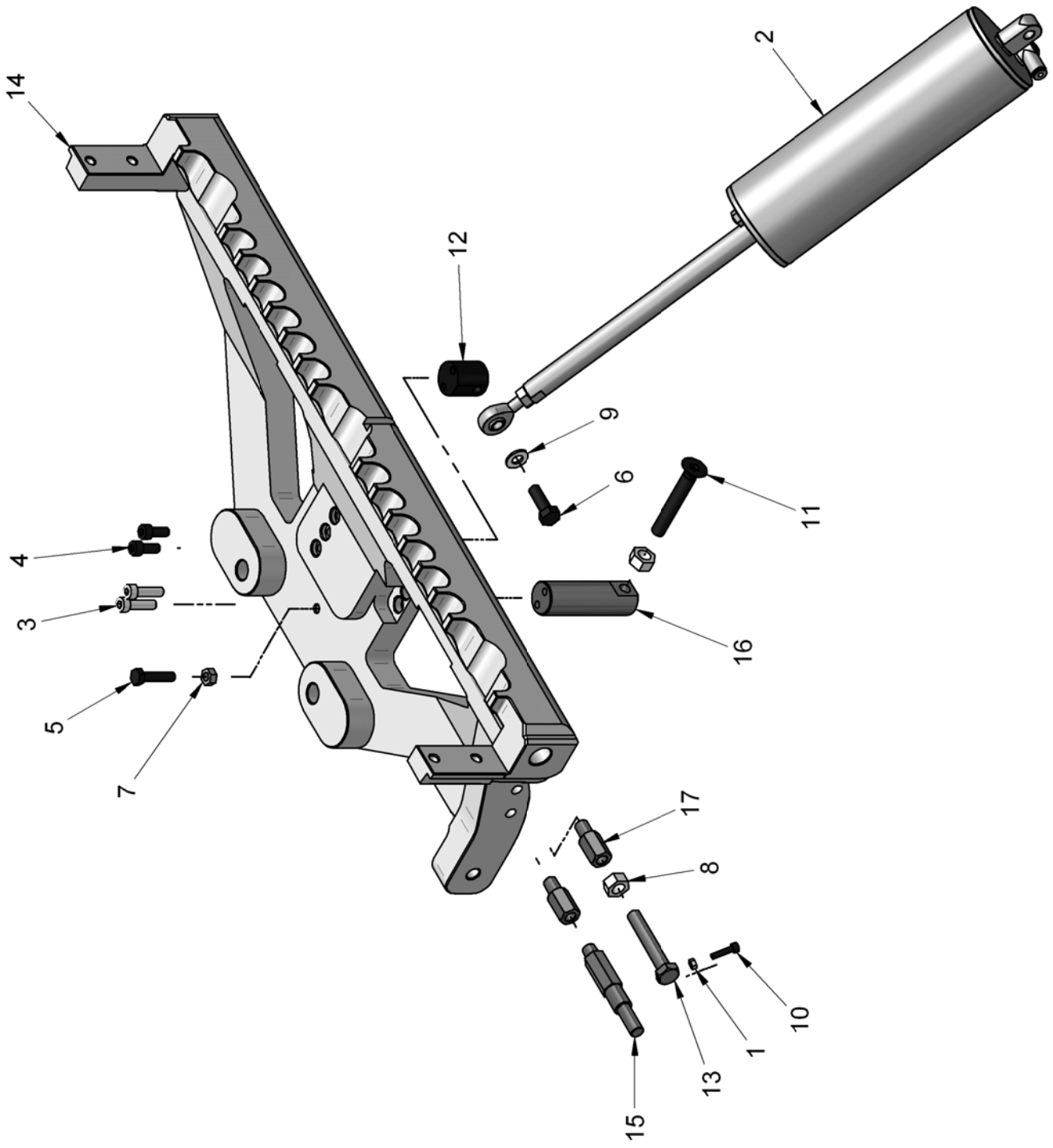


26282101 TABLE UNIT

POS.	CODE	PART NAME	QUANTITY
1	00000140	WASHER Ø5 UNI-6592	2
2	00003462	INA BEARING AXK 2035	2
3	00003463	INA RING AS 2035	4
4	00005105	SCREW 3,5x9,5 DIN968	7
5	00018364	SCREW TCEI M10X16 UNI-5931	6
6	00018522	WASHER Ø10 UNI-6592	6
7	00018531	WASHER Ø4 UNI-6592	2
8	00018620	SCREW VTBEI M4 x 8 ISO 7380	2
9	00061009	SCREW TCEI M10x70 UNI-5931	2
10	36054105	ROTATION PIN	2
11	36222126	TABLE INDEX DISK	1
12	36282101	CAST IRON TABLE	1
13	36282310	MILLIMETRED RULE	1
14	45400052	DEGREE PLATE	1

26282201 RACK UNIT

SHEET 3

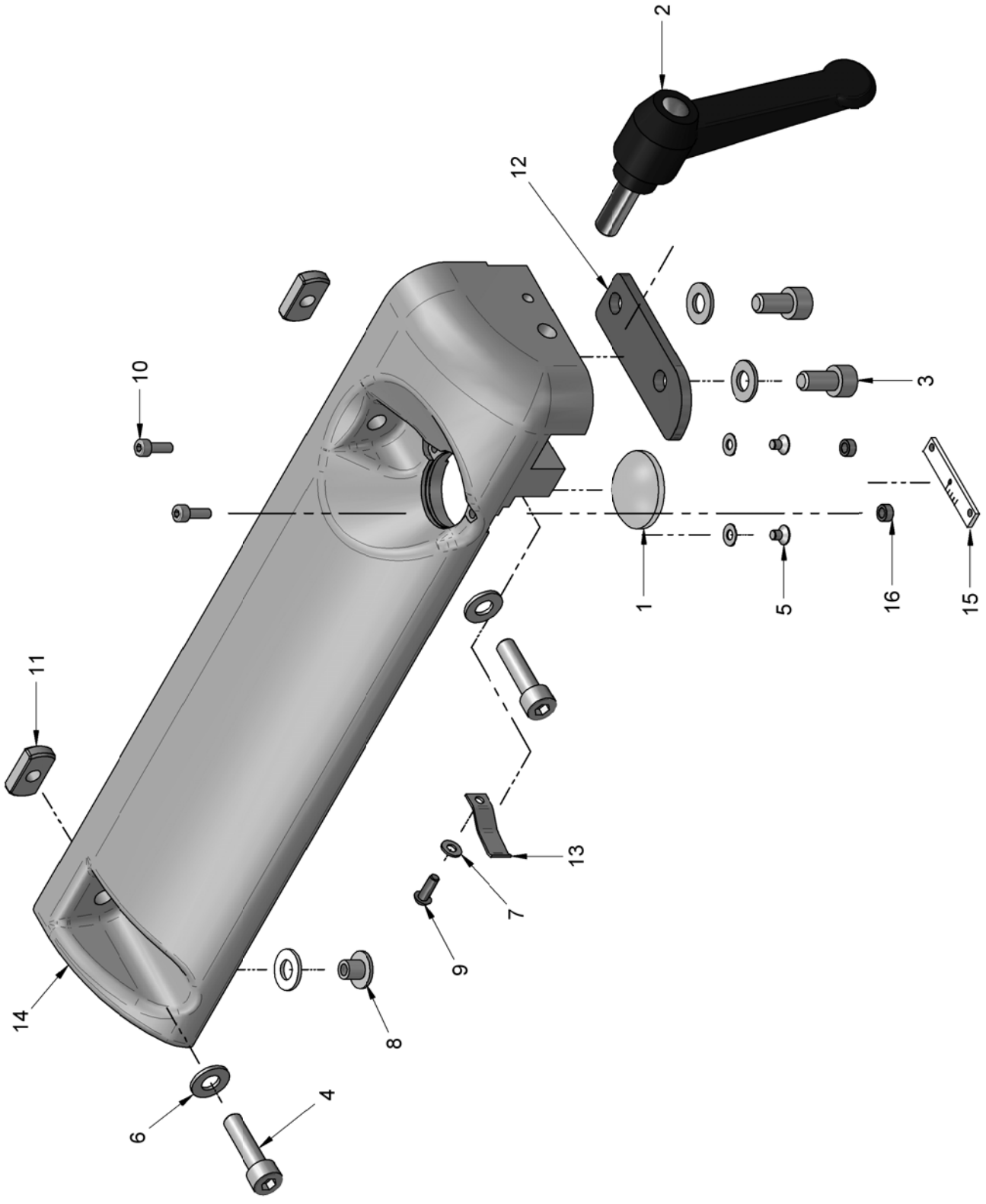


26282201 RACK UNIT

POS.	CODE	PART NAME	QUANTITY
1	00000139	NUT M5 UNI-5588 6S	1
2	00015400	OVERTURNING CYLINDER	1
3	00018308	SCREW VTCEI M8X30 UNI-5931	2
4	00018322	VITE TCEI M8X20 UNI-5931 ZINC.	2
5	00018404	SCREW VTE M8x35 UNI-5739	1
6	00018408	SCREW TE M10X30 UNI-5739	1
7	00018501	NUT M8 UNI-5588 6S	1
8	00018507	NUT M12 UNI-5588 6S	2
9	00018522	WASHER Ø10 UNI-6592 Z	1
10	00040512	SCREW TCEI M5 X 20 UNI-5931	1
11	00550900	SCREW TSPEI M12X80 UNI-5933	1
12	36050206	OVERTURNING CYLINDER CATCH	1
13	36204207	STOP EXAGON M12X70	1
14	36215201	CAST IRON RACK	1
15	36250202	STOP SUPPORT	1
16	36250203	90° STOP	1
17	36282202	STOP SUPPORT EXTENSION	2

26282306 LH SQUARE UNIT

SHEET 4

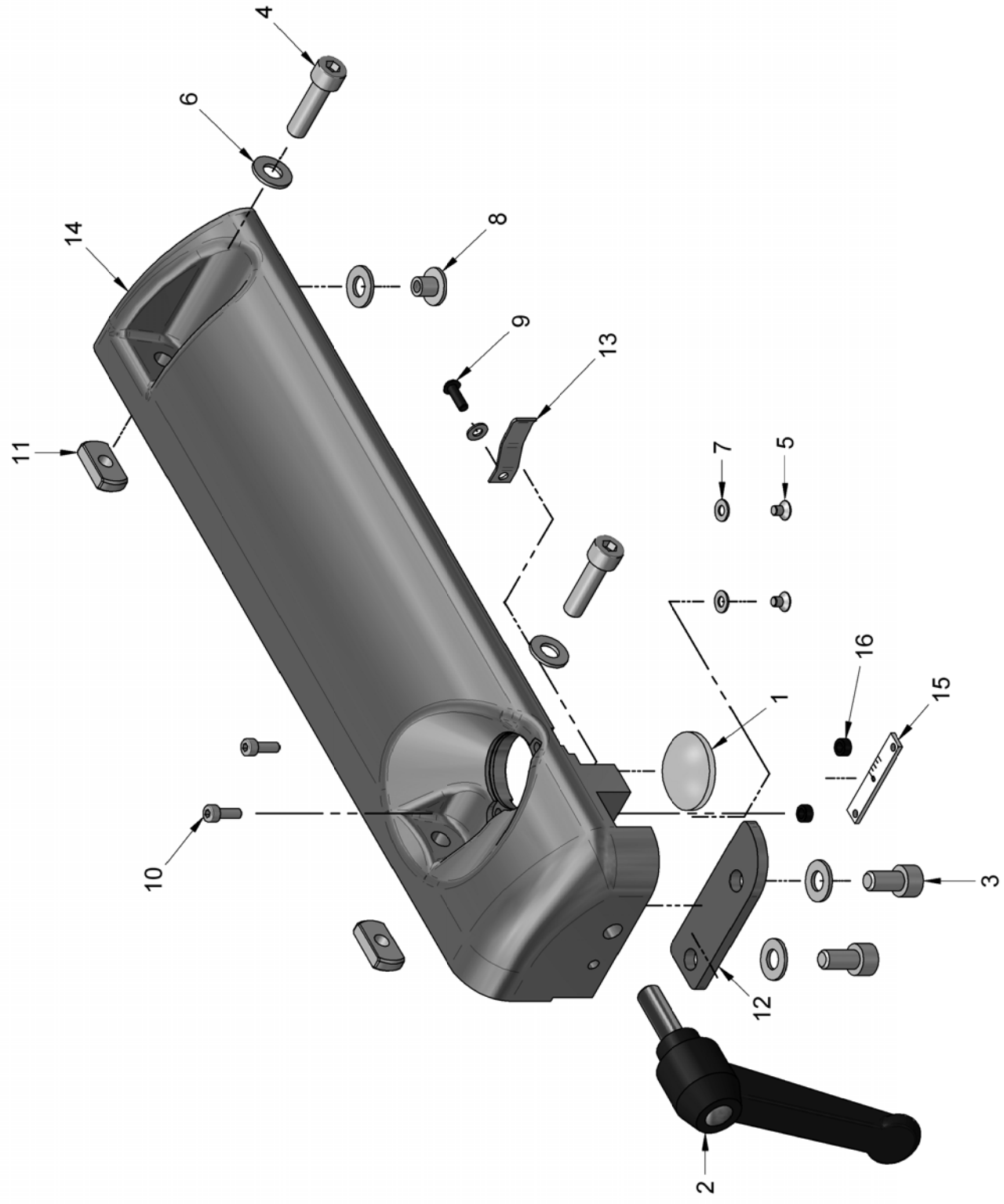


26282306 LH SQUARE UNIT

POS.	CODE	PART NAME	QUANTITY
1	00004322	LOBRE LENS Ø32 R20 F38	1
2	00005117	SNAP LEVER KRP-80 M10x30	1
3	00018307	SCREW TCEI M8X16 UNI-5931	2
4	00018308	SCREW TCEI M8X30 UNI-5931	2
5	00018439	SCREW TSPEI M4x8 UNI-5933	2
6	00018521	WASHER Ø8 UNI-6592	5
7	00018531	WASHER Ø4 UNI-6592	3
8	00018552	NYLON CAP	1
9	00018619	SCREW VTBEI M4 x 12 ISO 7380	1
10	00020404	SCREW TCEI M4 x 12 UNI-5931	2
11	36050801	DOWEL	2
12	36206307	LOCKIN PLATE	1
13	36250302	SPRING SQUARE	1
14	36253304	LH SQUARE	1
15	36282308	LH NONIUS	1
16	36282320	NONIUS SPACER	2

26282305 RH SQUARE UNIT

SHEET 5

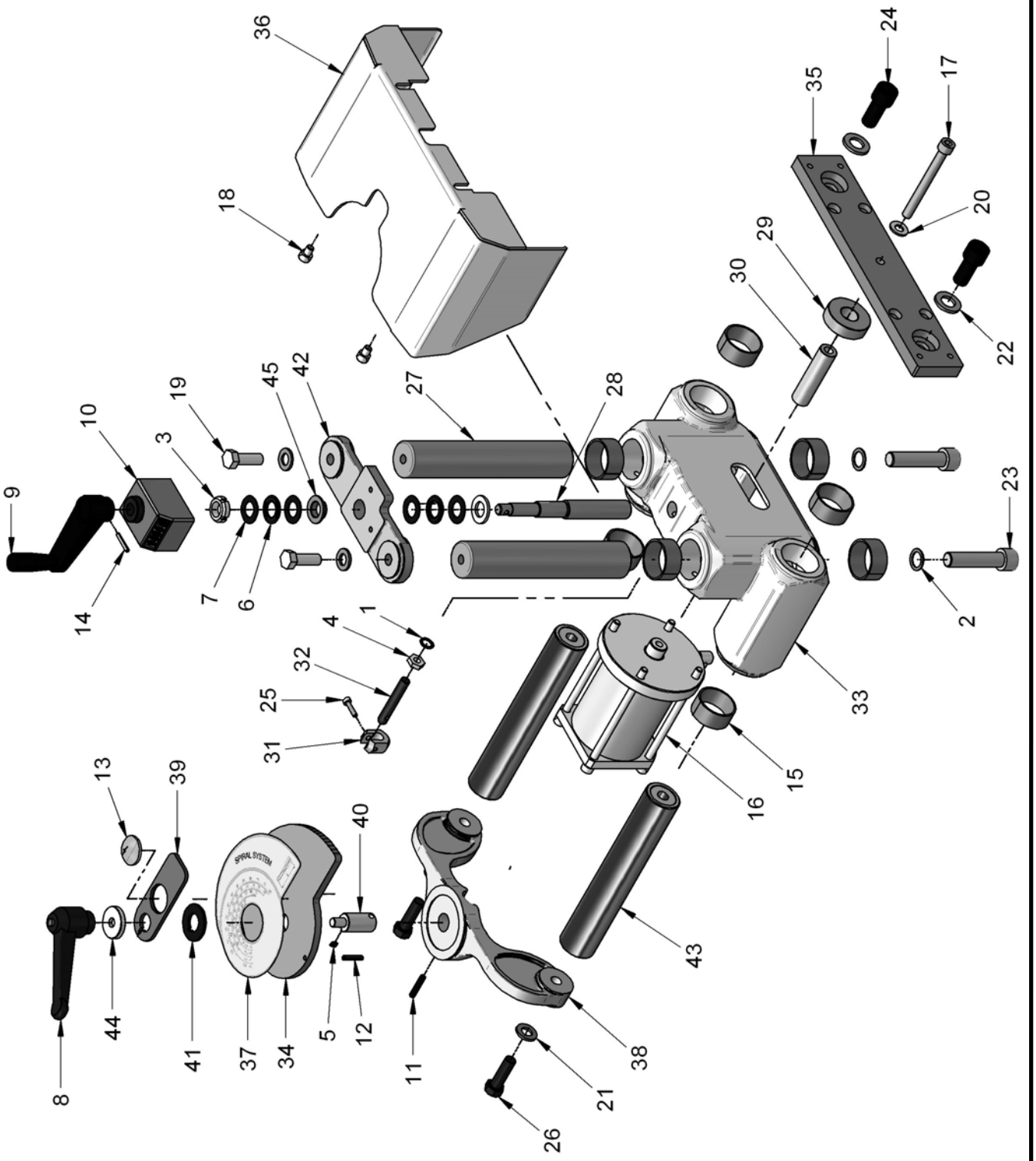


26282305 RH SQUARE UNIT

POS.	CODE	PART NAME	QUANTITY
1	00004322	LOBRE LENS Ø32 R20 F38	1
2	00005117	SNAP LEVER KRP-80 M10x30	1
3	00018307	SCREW TCEI M8X16 UNI-5931	2
4	00018308	SCREW TCEI M8X30 UNI-5931	2
5	00018439	SCREW TSPEI M4x8 UNI-5933	2
6	00018521	WASHER Ø8 UNI-6592	5
7	00018531	WASHER Ø4 UNI-6592	3
8	00018552	NYLON CAP	1
9	00018619	SCREW VTBEI M4 x 12 ISO 7380	1
10	00020404	SCREW TCEI M4 x 12 UNI-5931	2
11	36050801	DOWEL	2
12	36206307	LOCKIN PLATE	1
13	36250302	SPRING SQUARE	1
14	36253306	RH SQUARE	1
15	36282307	RH NONIUS	1
16	36282320	NONIUS SPACER	2

26155401 SPINDLE HEAD UNIT

SHEET 6

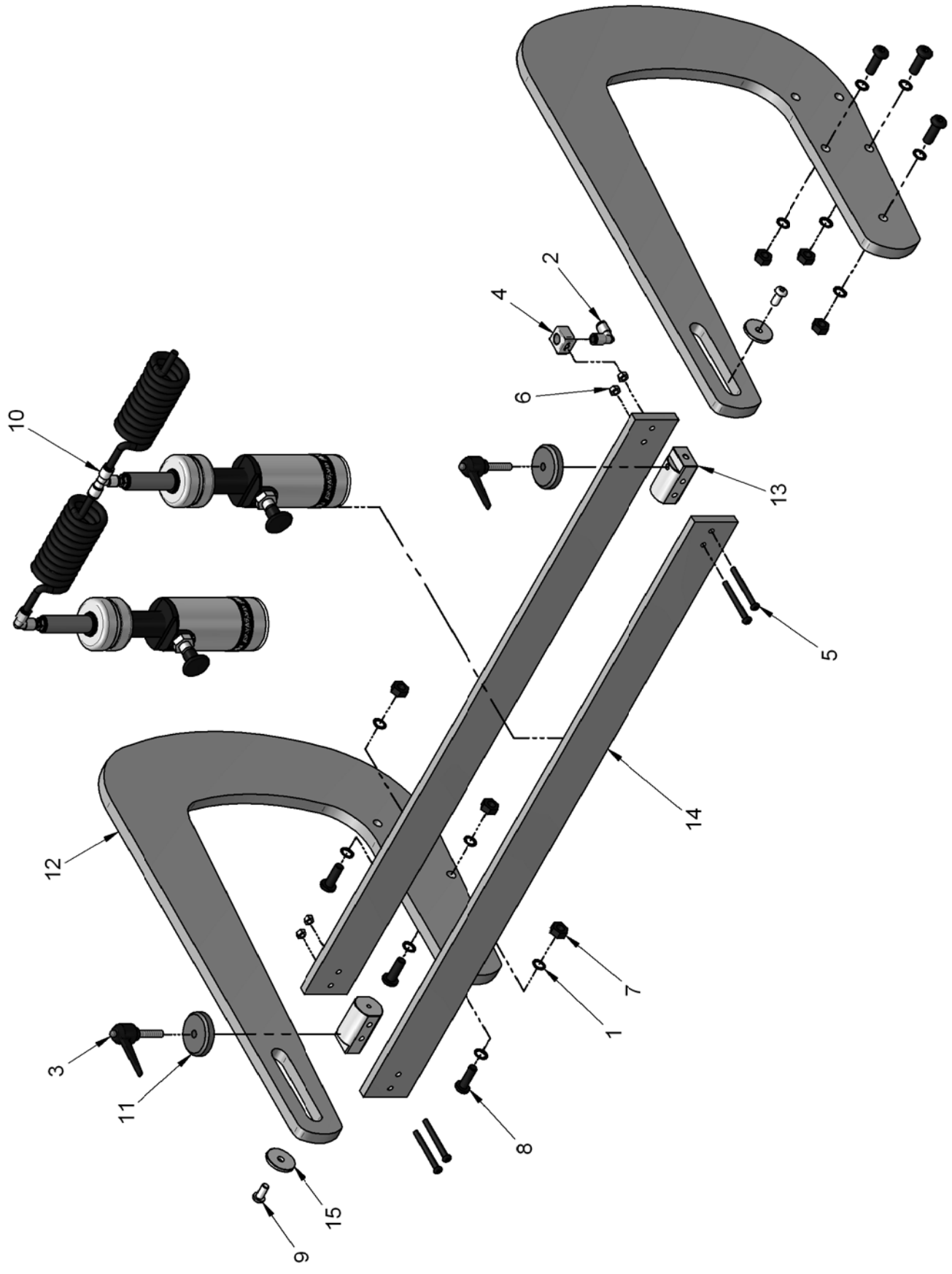


26155401 SPINDLE HEAD UNIT

POS.	CODE	PART NAME	QUANTITY
1	00000051	SCHNORR WASHER Ø10	1
2	00000053	SCHNORR WASHER Ø16	2
3	00000168	SELF LOCKING NUT M17x1	1
4	00000180	NUT M10 UNI-5589 6S	1
5	00000236	PARALLEL KEY 4x4x8 UNI 6604 A	1
6	00003455	INA BEARING AXK1730	2
7	00003456	INA RING AS 1730	4
8	00003934	BOTECO HANDLE 522-104 M10	1
9	00003942	BOTECOPLAST HANDLE 216-80	1
10	00003960	COUNTER	1
11	00004212	CYLINDRICAL PIN Ø6x30	1
12	00004308	FLEXIBLE PIN Ø8X28	1
13	00004321	LOBRE LENS Ø32 R20 F38	1
14	00004380	FLEXIBLE PIN Ø4x26	1
15	00005047	BEARING PAP 4020P10	8
16	00015415	FEED CYLINDER	1
17	00018337	SCREW TCEI M10x100 UNI5931	1
18	00018350	SCREW TCEI M8x10 UNI 5933	2
19	00018403	SCREW TE M12X35 UNI-5739	2
20	00018522	WASHER Ø10 UNI-6592	1
21	00018523	WASHER Ø13 UNI-6592	4
22	00018524	WASHER Ø17 UNI-6592	3
23	00018758	SCREW TCEI M16x70 UNI5931.	2
24	00018759	SCREW TCEI M16x35 UNI5931	2
25	00040512	SCREW TCEI M5 X 20 UNI-5931	1
26	00361020	SCREW TE M12X40 UNI-5739	2
27	36000048	VERTICAL SLIDING FENCE	2
28	36000050	LIFTING SCREW	1
29	36000053	RUBBER STRIKER	1
30	36000111	CYLINDER SHANK EXTENSION	1
31	36000163	OVERTURNED STRIKER	1
32	36000164	INTERNAL OVERTURNED STRIKER	1
33	36002009	HEAD SUPPORT	1
34	36054046	SPIRAL	1
35	36054402	HEAD HOLDER PLATE	1
36	36054408	SPIRAL	1
37	36057403	SPIRAL LABEL	1
38	36090401	SPIRAL SUPPORT	1
39	36090402	LENS HOLDER Ø32	1
40	36090405	SPIRAL HOLDER	1
41	36090406	WASHER	1
42	36090407	LIFTING SCREW CROSSPIECE	1
43	36250407	HORIZONTAL SLIDING FENCE	2
44	36251403	SPIRAL WASHER	1
45	41600004	SINTERED BUSHING	1

26275500 CLAMPING UNIT

SHEET 7

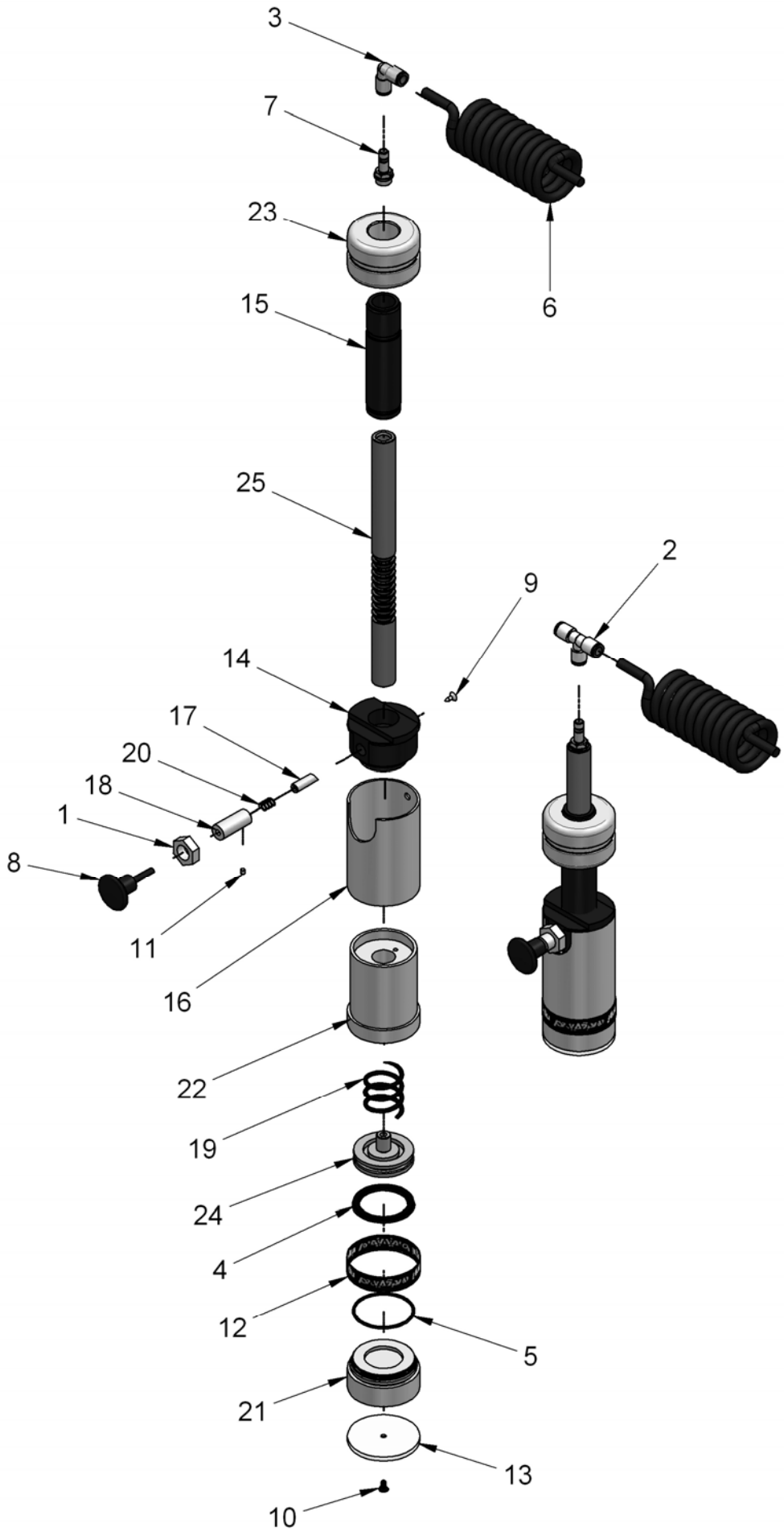


26275500 CLAMPING UNIT

POS.	CODE	PART NAME	QUANTITY
1	00000051	SCHNOR WASHER Ø10	12
2	00001110	PNMX FITTING L-ART-04-8	1
3	00004042	SNAP LEVER KFP M8x35	2
4	00005041	FISCHER SCH12-16GR Art.1213	1
5	00009083	SCREW TBCEI M6X60 ISO-7380	4
6	00018500	NUT M6 UNI-5588 6S	4
7	00018503	NUT M10 UNI-5588 6S	6
8	00018602	SCREW VTBCEI M10X30 ISO-7380	6
9	00018608	SCREW VTBEI M8x18 ISO-7380	2
10	26054502	CLAMP UNIT	1
11	35400539	WASHER	2
12	36051501	CLAMP SHOULDER	2
13	36051502	SPACER BLOCK	2
14	36250522	CROSSPIECE	2
15	49900051	WASHER	2

26054502 CLAMP UNIT *(CLAMPING SUBGROUP)*

SHEET 8

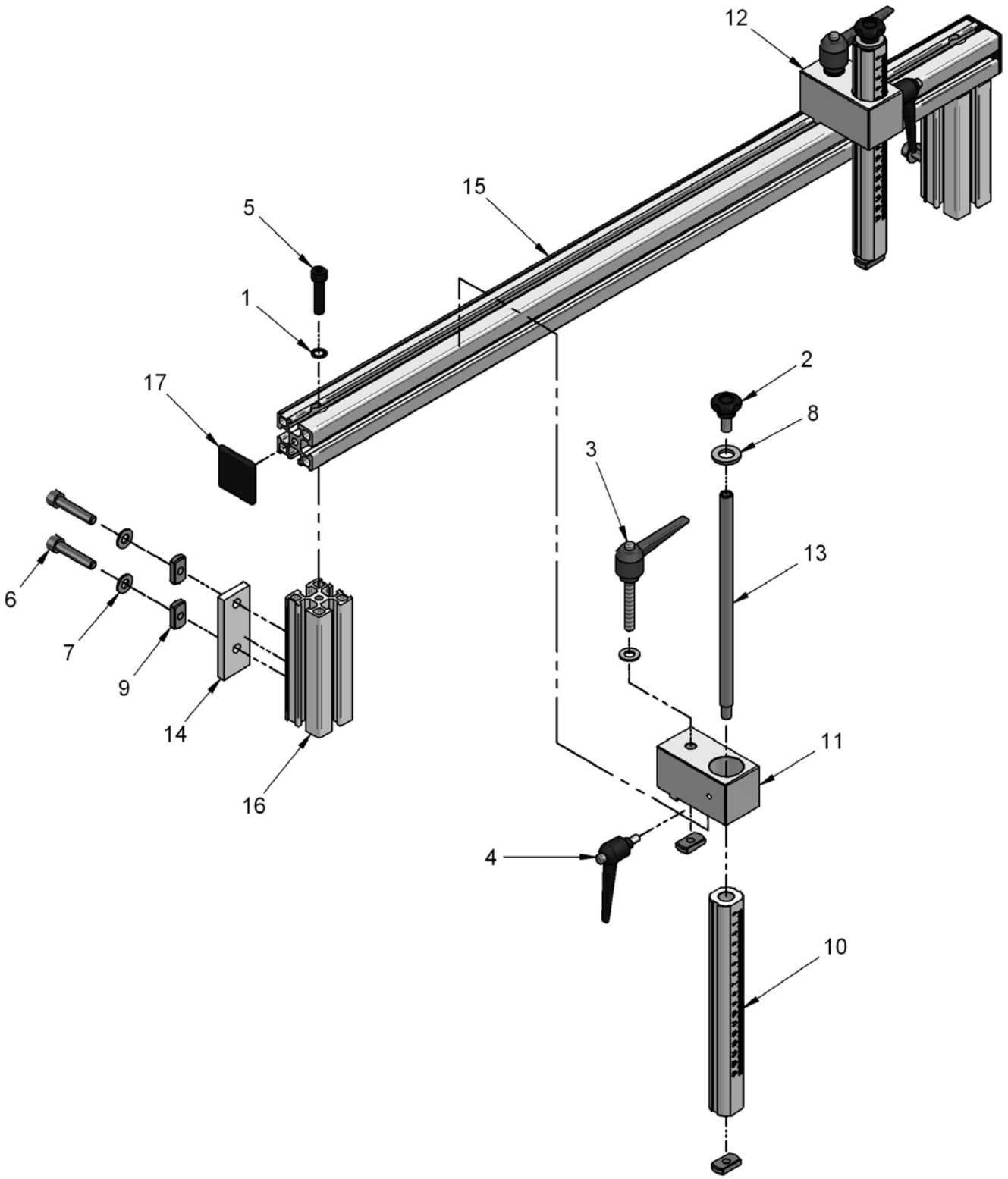


26054502 CLAMP UNIT *(CLAMPING SUBGROUP)*

POS.	CODE	PART NAME	QUANTITY
1	00000118	NUT M14 UNI-5589 6S	2
2	00001102	PNMX FITTING R5_8_T	1
3	00001110	PNMX FITTING L-ART-04-8	1
4	00001120	PISTON SEAL	2
5	00001121	PNMX OR COD R-1502.50.5	2
6	00001128	BLACK SPIRAL	2
7	00001250	PNMX FITTING 06 8 1-4	2
8	00003120	BOTECO 119-32 M6	2
9	00005103	SCREW Ø 3.9x9.5 6955	2
10	00018439	SCREW VTSPEI M4x8 UNI-5933	2
11	00120404	SCREW VSTEI M4X4 UNI-5923	2
12	32700000	PISTON ADHESIVE	2
13	49900095	NYLON BUFFER	2
14	49901088	SLIDING HEAD	2
15	49901089	HEAD PIPE	2
16	49970042	PISTON CYLINDER COVER	2
17	49970047	WEDGE PISTON	2
18	49970048	THREADED CYLINDER	2
19	49970053	SPRING TO PISTON	2
20	49970146	SPRING	2
21	49971051	BOTTOM HEAD	2
22	49972040	PISTON CYLINDER	2
23	49972045	LOCKNUT	2
24	49972052	CLAMP PISTON	2
25	49981043	PISTON STEM	2

26275600 BACK STOP UNIT

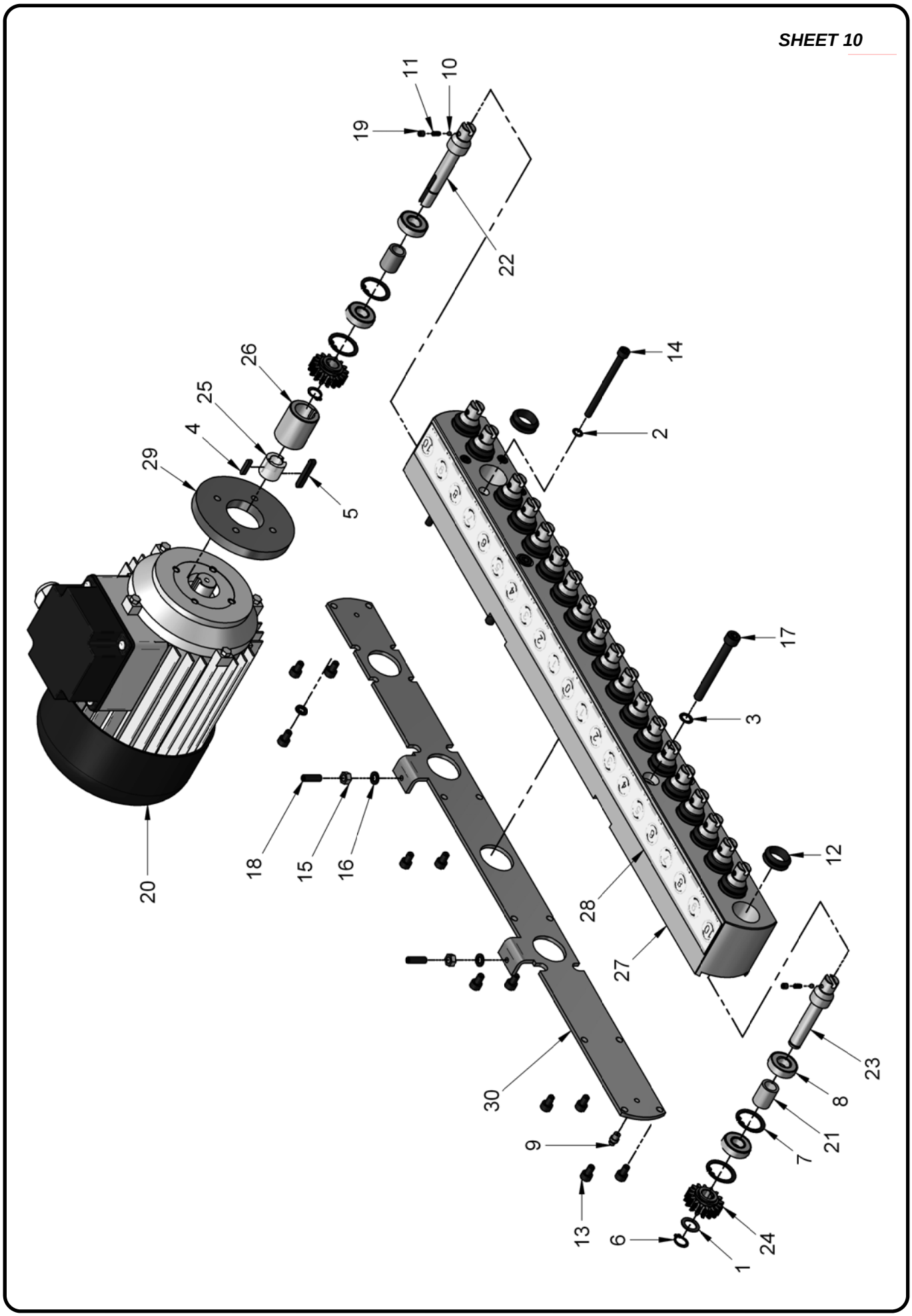
SHEET 9



26275600 BACK STOP UNIT

POS.	CODE	PART NAME	QUANTITY
1	00000042	SCHNOR WASHER Ø8	2
2	00003104	BOTECO 732-25 M8x16	2
3	00004025	SNAP LEVER M8 L50	2
4	00004028	SNAP LEVER M6 L10 BRASS	2
5	00018327	SCREW VTCEI M8X35 UNI-5931	2
6	00018377	SCREW VTCEI M8X40 UNI-5931	4
7	00018521	WASHER Ø8 UNI-6592	6
8	00018523	WASHER Ø13 UNI-6592	2
9	36050801	DOWEL	8
10	36092602	BACK STOP	2
11	36222011	RH BACK STOP CARRIAGE	1
12	36222012	LH BACK STOP CARRIAGE	1
13	36224153	TIE ROD Ø11	2
14	36240603	PLATE THICKNEES	2
15	36251601	BACK STOP GUIDE	1
16	36275605	EXTRUDE THICKNEES 21	2
17	49900040	CAP 8 40x40 - 0.0.026.01 BLACK	2

26275700 HEAD UNIT

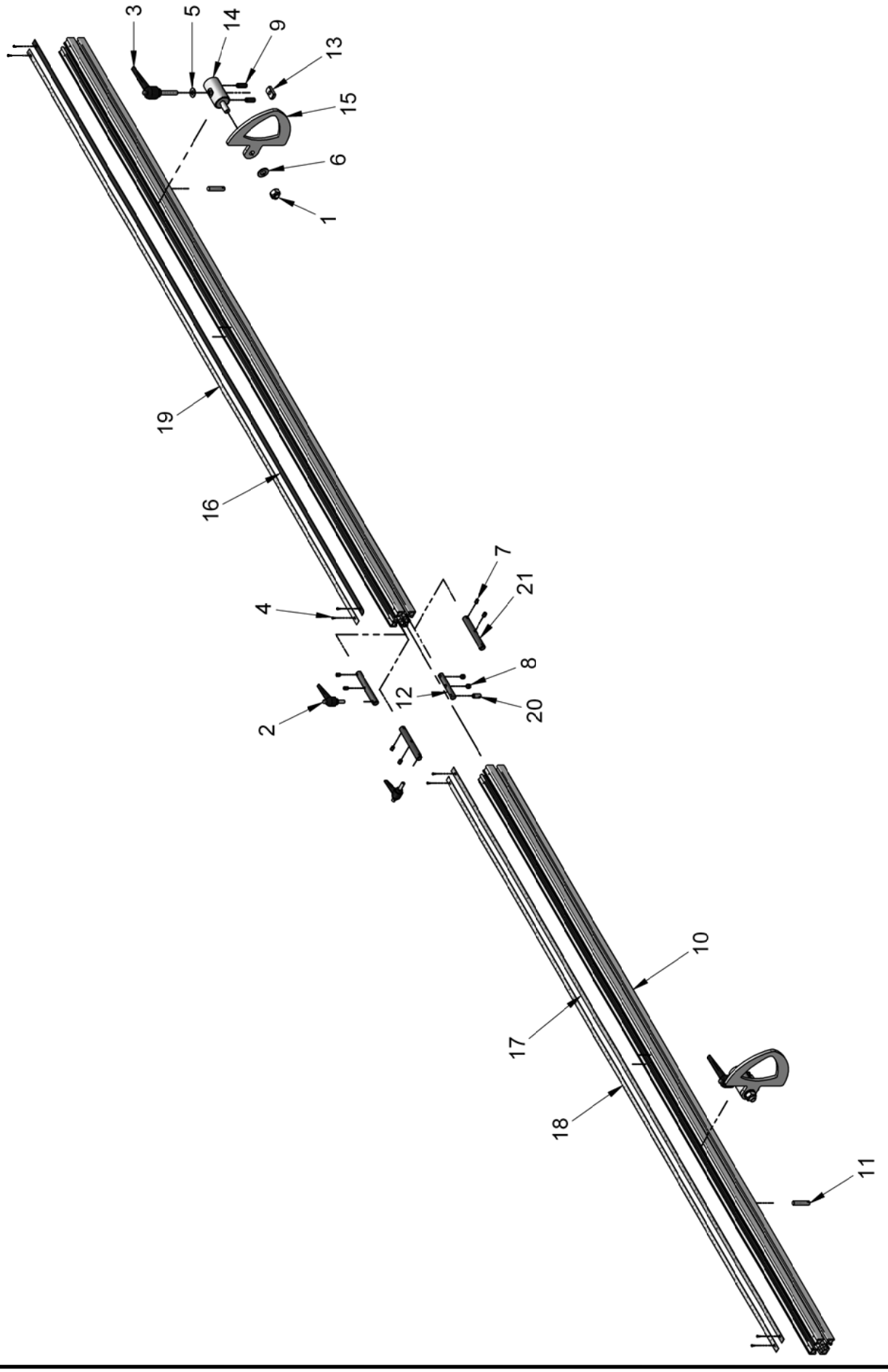


26275700 HEAD UNIT

POS.	CODE	PART NAME	Q.TY
1	00000037	WASHER Ø12X18X1	20
2	00000041	SCHNOR WASHER M6	4
3	00000042	SCHNOR WASHER Ø8	4
4	00000250	PARALLEL KEY 4x4x18 UNI-6604 A	1
5	00000253	PARALLEL KEY 5x5x35 UNI-6604 A	1
6	00003305	SEEGER E12	21
7	00003337	SEEGER I 28	42
8	00003424	BEARING 6001 2RS1	42
9	00003703	GREASING NIPPLE	1
10	00004103	BALL 1 / 8	21
11	00005025	SPRING Ø 4 L=9	21
12	00005097	SEAL Øi 20 Øe 25,5	21
13	00018302	SCREW M6X10 UNI-5931	11
14	00018326	SCREW VTCEI M6X80 UNI-5931	4
15	00018500	NUT M6 UNI-5588	2
16	00018520	WASHER Ø6	3
17	00018655	SCREW VTCEI M8X75 UNI-5931	4
18	00100614	SCREW VTSTEI M6X20 P.P. UNI-5923	2
19	00130501	SCREW VTSTEI M5X5 P.P. UNI-5923	21
20	26251701	ENGINE M802T 230-400-50 2HP	1
21	36000063	BEARINGS SPACER	21
22	36001059	DRIVING SPINDLE	1
23	36001060	DRIVEN SPINDLE	20
24	36022062	GEAR Z16 M2	21
25	36050711	NYLON JOINT	1
26	36050712	ENGINE JOINT	1
27	36203704	HEAD	1
28	36220700	LABEL	1
29	36250703	ENGINE PLATE	1
30	36250705	HEAD COVER	1

26286801 1,5 +1,5 Mt EXTENSION FENCE + N° 2 ROTARY STOPS UNIT

SHEET 11



26286801 1,5 +1,5 Mt EXTENSION FENCE + N° 2 ROTARY STOPS UNIT

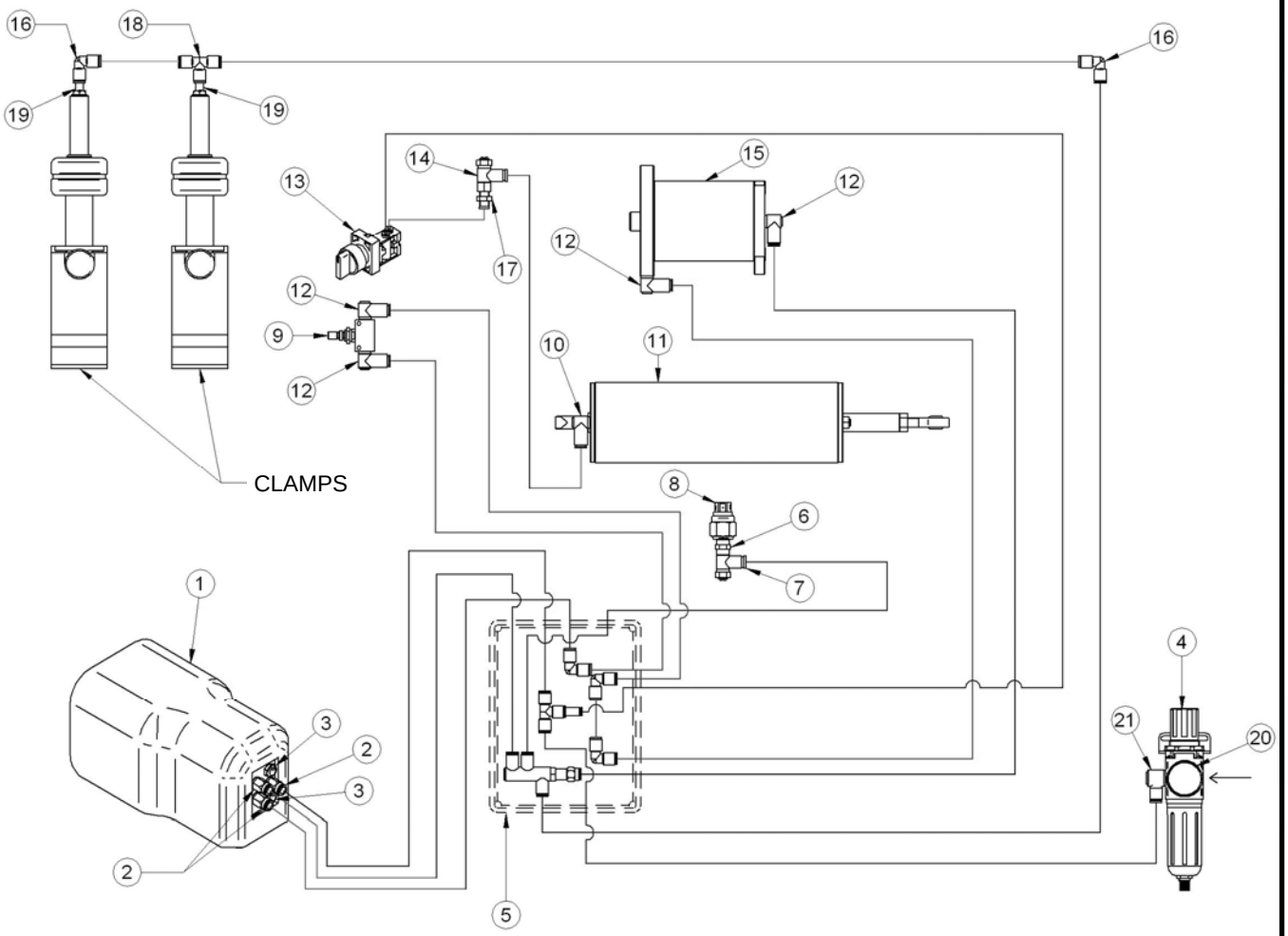
POS.	CODE	PART NAME	Q.TY
1	00000150	SELF LOCKING NUT M10 UNI-7473	2
2	00003932	SNAP LEVER 563-43 M6 x 16	2
3	00004020	SNAP LEVER ART 523-65 M8x40	2
4	00005127	SELF TAPPING SCREW TC Ø2,2x6,5 ISO1481	8
5	00018521	WASHER Ø8 UNI-6592	2
6	00018522	WASHER Ø10 UNI-6592	2
7	00140602	SCREW VTSTEI M6X8 P.P. UNI-5923	6
8	00150802	SCREW VTSTEI M8x8 PC UNI5927	2
9	00150808	SCREW VTSTEI M 8X20 P.P. UNI 5923	4
10	36001176	FENCE SECTION BAR 1,5 Mt	2
11	36003078	ALIGNMENT PIN	2
12	36050612	DOWEL REFERENCE	1
13	36050801	DOWEL	2
14	36050802	STOP HOLDER	2
15	36051803	ROTARY STOP	2
16	36054805	RH MILLIMETRED RULE 0-1500	1
17	36054806	LH MILLIMETRED RULE 0-1500	1
18	36054807	LH MILLIMETRED RULE 70-1500	1
19	36054808	RH MILLIMETRED RULE 70-1500	1
20	36090801	ALIGNMENT PIN	1
21	36223080	PIN	3

PNEUMATIC SYSTEM

SHEET 12

PNEUMATIC SYSTEM

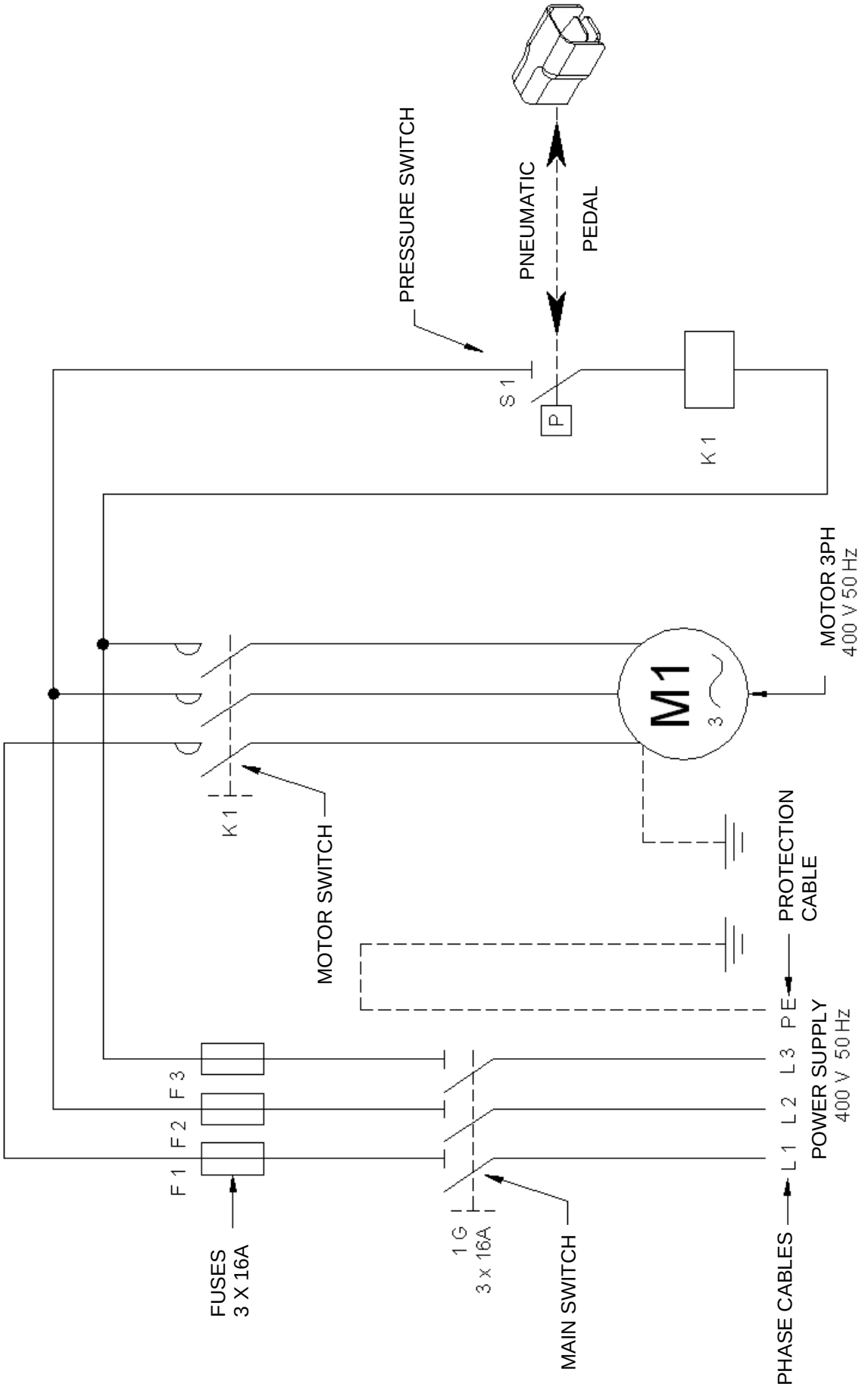
SHEET 13



POS.	CODE	PART NAME	QUANTITY
1	00015220	PNEUMATIC PEDAL	1
2	00001101	PNMX FITTING ART.01-8-1_8	3
3	00001109	PNMX SILENCER 6.05.18	2
4	00015825	REDUCTION FILTER WITH PRESSURE GAUGE	1
5	26054900	PNEUMATIC BOX	1
6	00015900	PNMX SLEEVE ART. 103 10318	1
7	00015805	PNMX FLOW CONTROL T290818"C"	1
8	00015237	PRESSURE SWITCH MG-900.18.1/1-4	1
9	00015229	PNMX FLOW CONTROL G 1/8 CODE 60118NE	1
10	00015815	PNMX SWIVEL UNION 15 150418	1
11	00015400	OVERTURNING CYLINDER	1
12	00001105	PNMX FITTING ART.015-8-1_8	4
13	00004013	PNMX SELECTOR 104 32 6 30 LC	1
14	00015814	PNMX FLOW CONTROL 30 300418	1
15	00015415	FEED CYLINDER	1
16	00001110	PNMX FITTING L -ART-04-8	2
17	00015816	PNMX WALL UNION 25 250418	1
18	00001102	PNMX FITTING R5_8_T	1
19	00001250	UNION_ART_06_8_1-4_CYL	2
20	00015219	PRESSURE GAUGE M-40	1
21	00001108	PNMX FITTING T150814	1

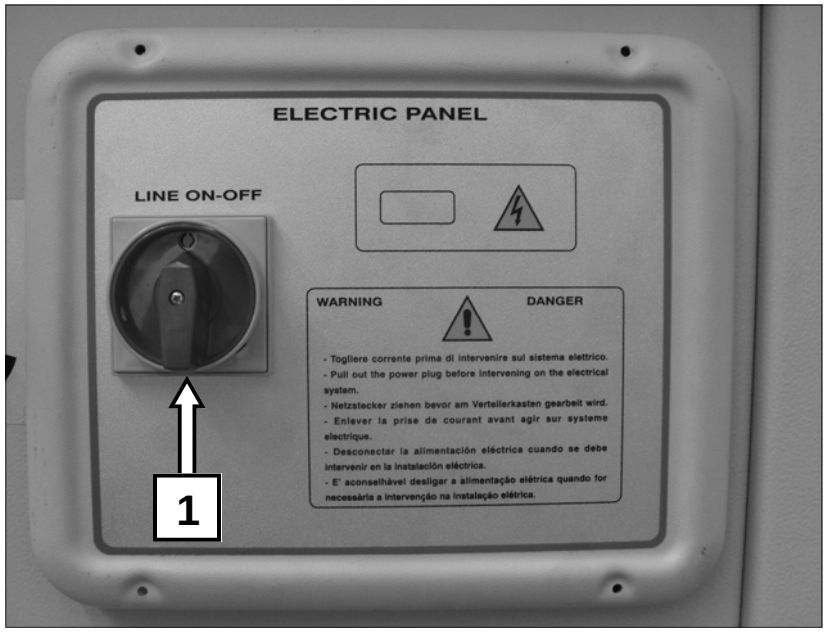
ELECTRIC SYSTEM

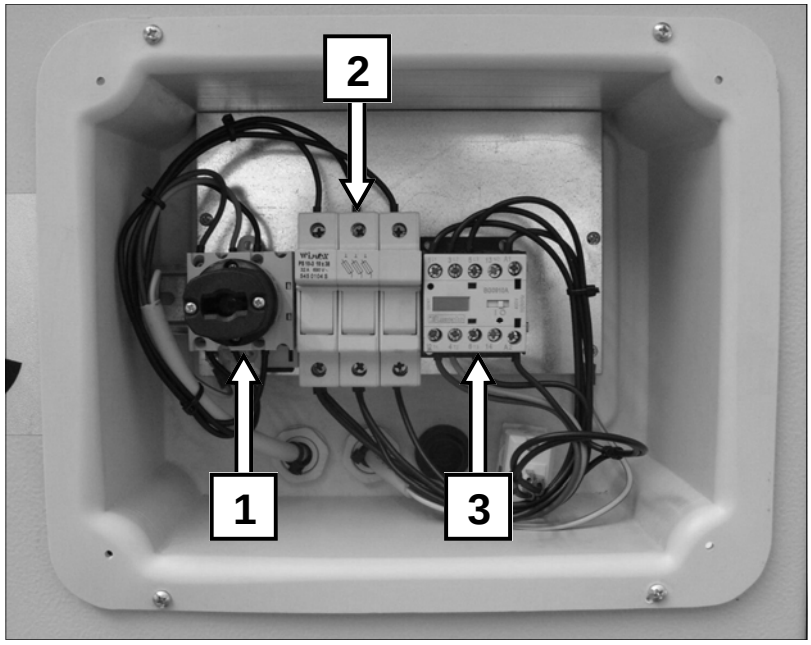
SHEET 15



ELECTRIC SYSTEM

SHEET 16





POS.	SYMBOL	CODE	PART NAME	QUANTITY
1	I6	00005091	COMPLETE MAIN SWITCH	1
2	F1-F2-F3	00005077	TRIPOLAR FUSE HOLDER 10X38 32A	1
		00005078	FUSE 10X38 16A	3
3	K1	00005053	CONTACTOR 400V 50-60HZ	1

26. SPARE PARTS REQUEST

ATTENTION! FILL IN DETAILS THIS FORM

Customer

……..

Address

……..

……..

Date ……

Telephone number

……..

Telefax

……..

MACHINE TYPE	SERIAL NUMBER	DELIVERY DATE	
GROUP CODE	**CODE**	**PART NAME**	**QUANTITY**

NOTE

……

……

……

N.B.: Please attach a copy of each table where the requested part is.

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	Fax. +39 0571 664275
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Spare parts	Tel. +39 0571 635422
	Fax. +39 0571 664043
E mail	Maggi@maggi-engineering.com
Internet	Www.maggi-engineering.com

Associato ACIMALL Member Company

TWT Tuscany Woodworking Technologies

Member of CISQ Federation RINA ISO 9001:2000 Certified Quality System

Azienda con Sistema di Gestione della Qualità Certificato ISO 9001:2000

Development by
MAGGI ENGINEERING