# Mitre-Mite®

# VN144S Operating Manual

## ** Quick Guide **

Version B

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# 1.0 INITIAL START-UP AND USE OF THE MACHINE

The machine must only be operated by authorized and duly trained personnel with adequate technical experience.

The personnel assigned to operate the machine must be aware of the fact that the knowledge and application of safety rules is an integral part of their work.

Unqualified personnel must not gain access to the operating area while the machine is being used.

Before switching on the machine:

Carefully read the technical documentation;

know which protective equipment and emergency devices are available on the machine, where they are located, and how they work. (note: protection safety guard kit is available and can be ordered through your authorized distributor or direct from manufacturer)

The partial removal of the guards (optional, if equipped) and warning signs is forbidden.

Unauthorized use of commercial parts and accessories belonging to the guards and safety devices (optional, if equipped) can result in malfunctions and the occurrence of dangerous situations for operators.

Before starting the production cycle the operator must perfectly

know: the position, function and use of all commands;

the position, function and use of all safety devices; the characteristics of the machine;

be entirely familiar with this manual, and know how to consult it.

**Caution: Operator is to ensure to do one or all of the following during any machine adjustment:**

- **Disconnect main air supply from machine**
- **Release "PLV" switch to "off" (page 7 – figure A)**
- **Make sure foot pedal is away from any type of activation**

## 1.1. OR STATIONS AND OPERATORS TAS S

The machine described herein is designed to be run by 1 operator, suitably trained and instructed with regard to residual risks, with the same safety skills as the maintenance technicians, and with the professional skills.
The normal work zone of the operator and relevant tasks/assignments are:

i. the manual introduction/removal of the rods in the work surface,
ii. the manual loading of the v-nails in the magazine,
iii. the ad ustments and tooling of the main machine units (nail head, handles, angle gauges, etc.) needed to use the machine, using the special tools,
iv. the manual removal of any v-nails ammed in the magazine and nail head,
v. operating checks: these are easy, carried out in safe conditions, and are clearly explained in the Operating Manual;
vi. normal machine operation, i.e. stopping and starting the machine in normal conditions, and stopping it in emergency conditions;
vii. general surveillance during machine operation (for example checking the cleanliness of the machine, etc). If there is a problem, operator must not intervene until machine has been put in maintenance state which means main air supply has been disconnected.
viii. cleaning external and internal machine parts, and any other part that requires cleaning (e.g. the upper/surrounding part of the counter-rotating mechanics) via the cleaning of internal machine parts, is the responsibility of the maintenance technician and should be performed only when machine has been put in maintenance state which means main air supply has been disconnected.

In addition, the operator must supervise machine operation and running, moving freely around it, within the safety areas and with the guards closed.

The operator is responsible for the machining process, and must command the machine by means of the command actuators located in the control panels.

Apart from normal machine operation, the operator must also start and stop the machine in normal conditions, and stop it in emergency conditions.

The operator must also carry out checks and general surveillance while the machine is running. If there is a problem, he must not intervene, but simply call the maintenance service.

All operations that are carried out by the operator must be carried out with all the protection devices activated, any guards in place, and all the safety devices engaged; otherwise there is a risk of in ury to arms, legs and other body parts.

All handling, preparation, ad ustment, installation and connection of the power supplies, along with fine tuning and operating checks must be carried out by trained, skilled maintenance personnel.

All maintenance and control operations must be carried out by trained and skilled maintenance personnel.

All installation and connection operations, and any other operations indicated must be carried out using suitable equipment and tools of suitable dimensions (e.g. a flathead or Phillips screwdriver, hexagonal spanners, Allen spanner, etc.), depending on the screws.

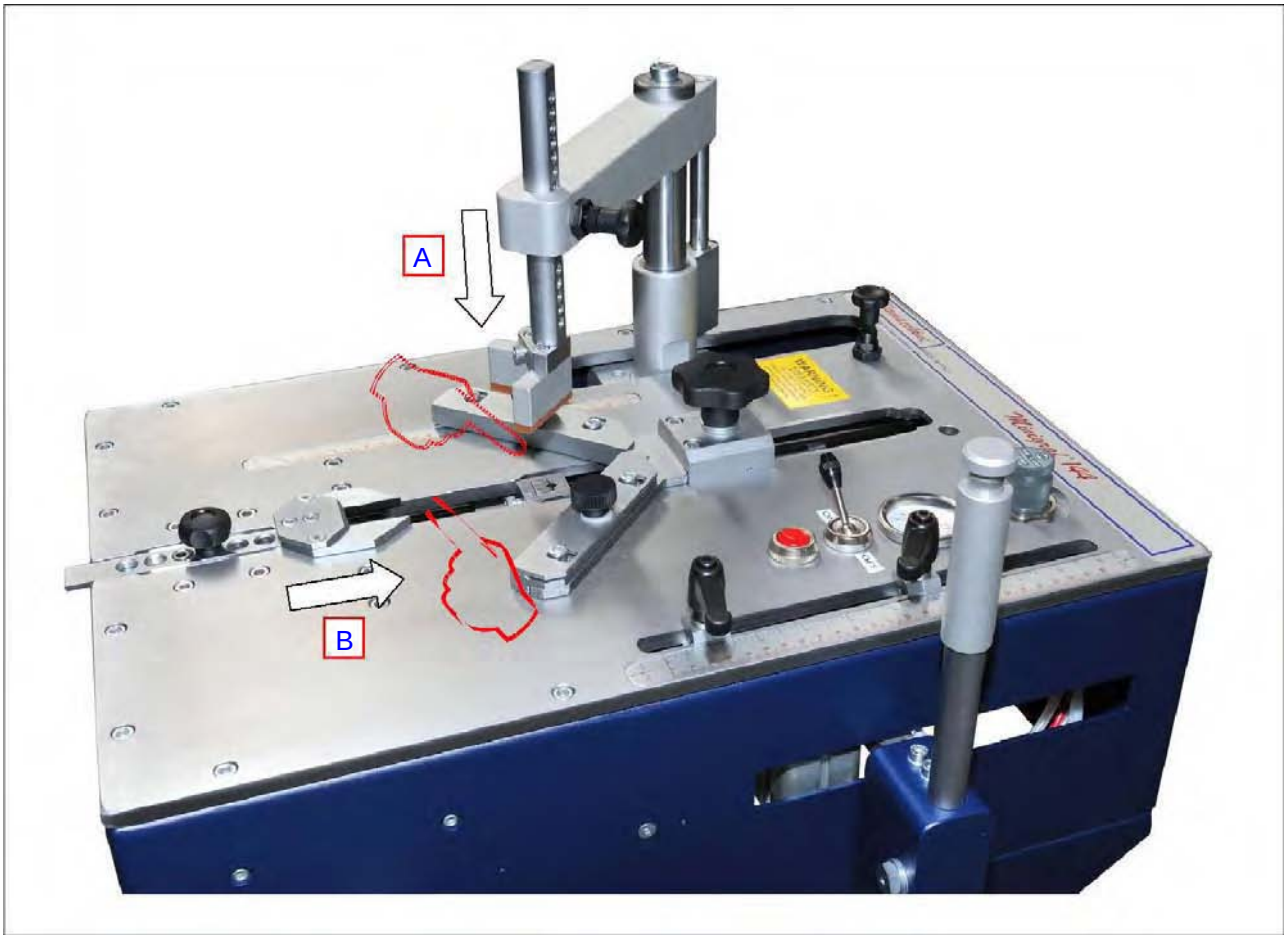
Before carrying out any installation or connection operation, the machine and its components must be thoroughly cleaned.

The main dangerous working areas of the machine, that may produce risks for the operator, are:

i. area beneath the pad of the vertical clamp unit;
ii. area in front of the frontal clamp;
iii. inside of the machine during ad ustment, tooling and cleaning operations.

Schematic diagram showing the dangerous work areas for the machine installer:

A. area beneath the pad of the vertical clamp unit.
B. area in front of the frontal rod clamp.

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- **Make sure foot pedal is away from any type of activation**

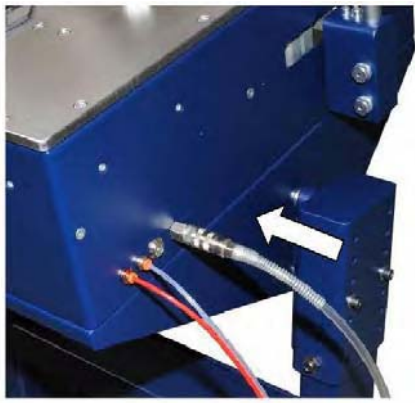
## 1.2. S ITCH-ON - CONTROLS - CHEC S - AD USTMENTS - START-UP

All the functions/operations relating to the operating modes must always respect the safety measures and the prescriptions to protect against residual risks.

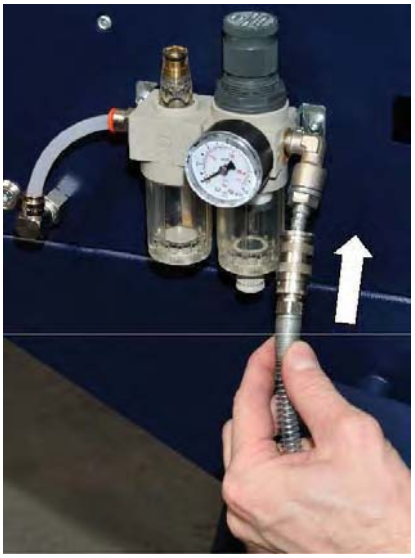
During the working cycle, it is essential to respect the safety measures and prescriptions to protect against residual risks.

### 1.2.1. START-UP

Insert the pneumatic supply connector in the machine input.



If there is a filter unit (optional accessory), insert the pneumatic supply connector in the filter unit input.



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## 1.2.1. MECHANICAL AD USTMENTS / MAINTENANCE

Carry out the operations below using only the tools supplied with the machine.

Below there is a list of all the ad ustment and control interventions to be carried out during the production cycle, and which can be performed by the machine operator, in accordance with the indications given. It is essential to respect the safety measures and prescriptions to protect against residual risks.

### Inserting the v-nails in the magazine

Insert the v-nails in the following way:

1. turn the PL valve (A) to the OFF position;

(Figure A)

2. the v-nail pusher will open;
3. insert the v-nails in the magazine (B), making sure the sharp part (glue edge side) is facing upwards, and the is positioned as in the photo;
. turn the PL valve back to the ON position.



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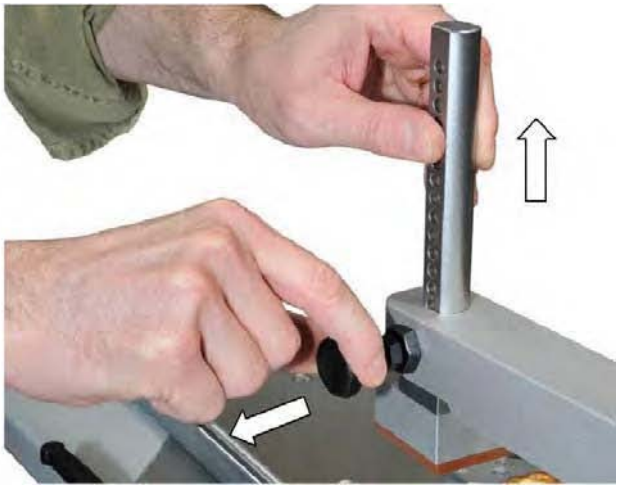
## Replacing the magazine

To use v-nails of a different size, you must replace the magazine.

This is a simple operation:

1) Turn the PL valve (A) to the OFF position



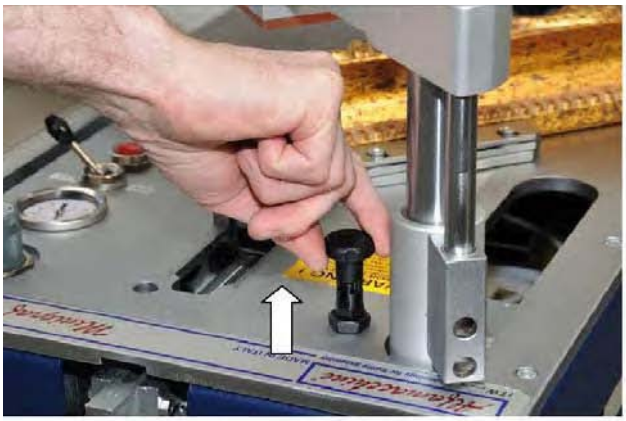
2) If necessary, to get past the locking knob of the ad ustable fence unit, lift the hold down vertical pad by pulling the plunger pin knob

3) Press the red button to move the carriage beyond the upper end stop

) Take out the magazine

) Insert the new magazine, pressing it down

) Push the magazine right in, until it is locked in place



) Raise the carriage release knob to bring it back within the range of the end stops

) Press the red button again, to bring the carriage back within the range of the end stops, then reposition the hold down vertical pad

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## Aligning the nail head

The operation to align the nail head with the driver and the magazine is necessary at times due continuous operation, because the components themselves may become worn, and because of amming during driving.

To align the nail head, proceed as follows:

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1) Loosen the mm Allen screw that fixes the nail head in place

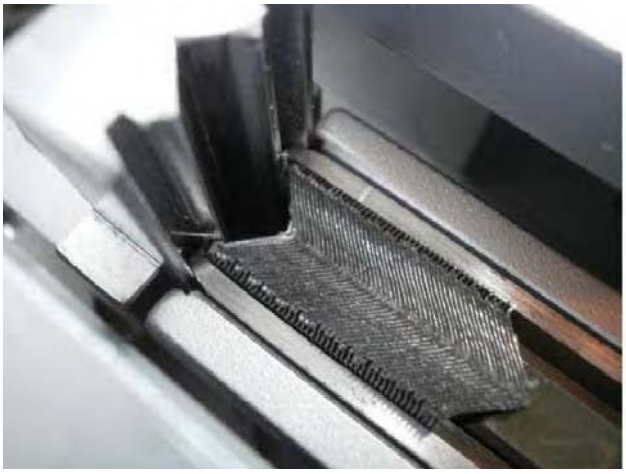

2) Remove the nail head

3) Loosen the screws that fix the L suppport


) ith the driver up, bring the L support near the driver and tighten the screws

) Bring the magazine near the L support by loosening the two M magazine locking screws

) Check the v-nail magazine and the L support are perfectly aligned



) Insert a v-nail in the magazine, resting it against the L support to check that the v-nail wings are perfectly inserted in the guide

) Re-assemble the nail head


) Insert a v-nail strip in the magazine, then activate the inserting of the v-nails ( make sure operator hands, clothing, vertical frontal clamp are completely away from driver test area) (with no frames inserted) to ensure v-nails are correctly e ected

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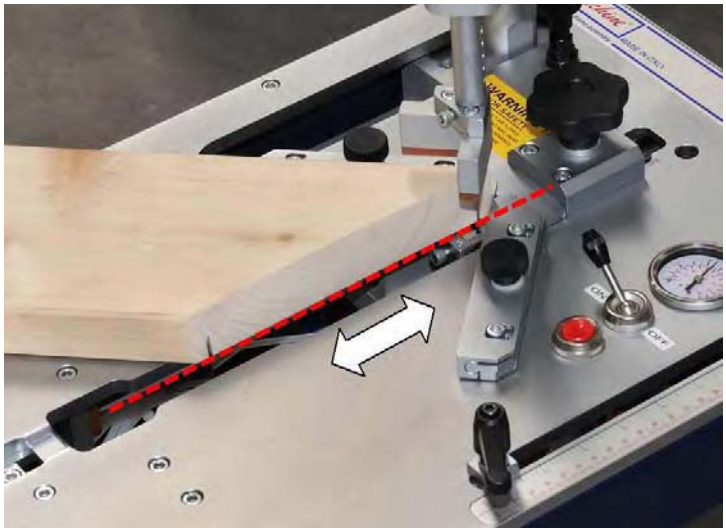
## Adjusting, aligning and tilting the fences

**To check the correct positioning for frames at 90°, you can request from AMP the transparent fence alignment tool (code #T757), on which the alignment trueness is indicated by an etched line.**

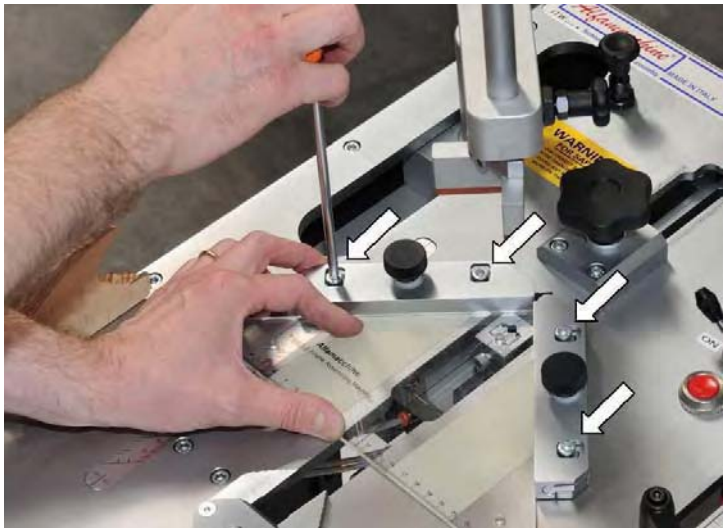
**Position the fence tool up against the limit stop, then use the handle to bring the nail head down as far as possible, checking that the middle of the nail head is aligned with the fence tool line.**

**Another way of aligning the fences is to use a reference frame corner with a very precise cut at 90°, 120° or 135°. Position the frame corner up against the limit stop of an angle gauge, then use the handle to bring the nail head down as far as possible, checking that the middle of the nail head is aligned with the cut of the frame.**

**Repeat the operation with the other fence.**



**To correct the angle of the fences, loosen the 4 fixing screws and adjust the position (taking advantage of the length of the slots), then retighten the screws.**



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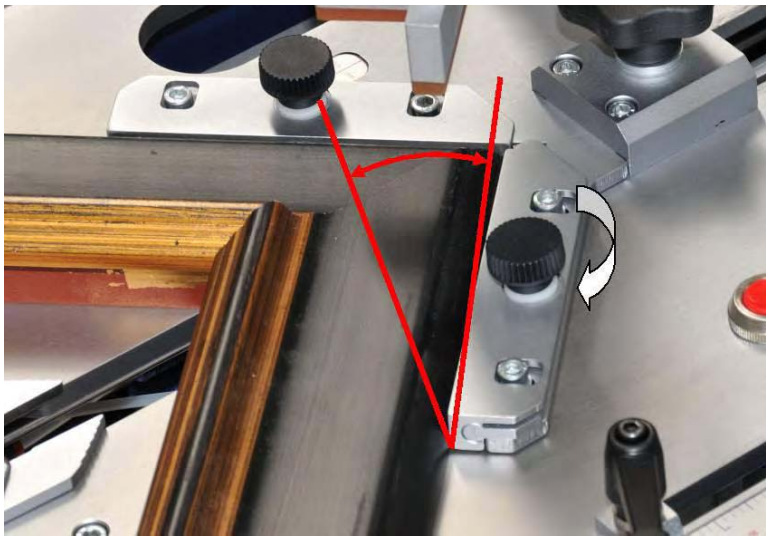
The mouldings may have a slightly tilted outer edge. To improve the contact with the moulding profile, the edge of the fences can also be tilted.

Turn the knobs, as shown in the photo alongside, to tilt the edges.



## Ad usting the angle of the fences

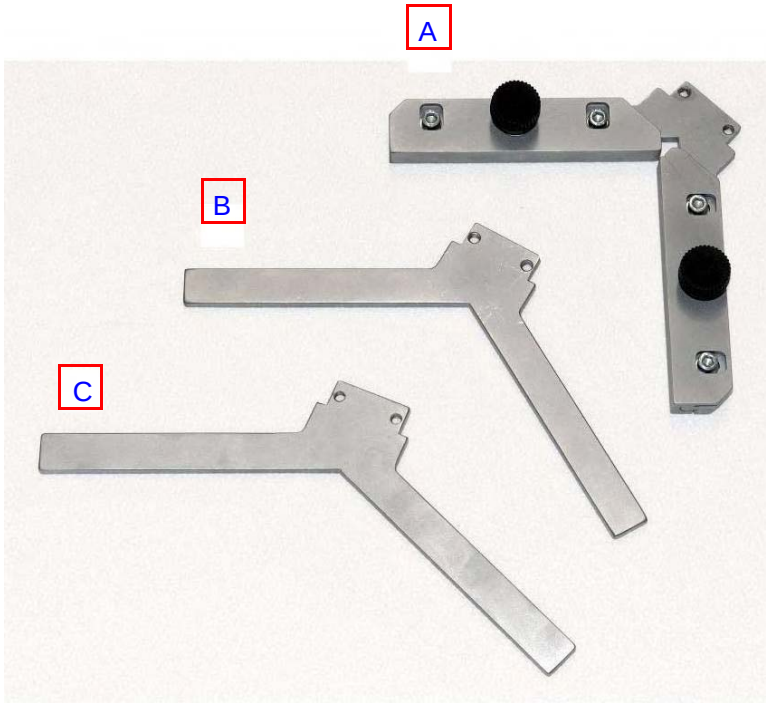
To alter the angle, you must replace the fixed fences support with another that has the required angle.

The 2 knob tilting fence for 0 oints (A) ( -sided frame) is supplied as standard.

By installing fence (B optional), the machine can be used for 120 oints ( - sided frames).

By installing fence (C optional), the machine can be used for 13 oints ( - sided frames).

Note: the declared machine stroke (200mm) is determined using the standard 0 fences.
If fences with different angles (120 and 13 ) are used, the stroke will be reduced due to the greater dimensions.

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To replace the fixed fences support, you must loosen the 2 Allen screws.

Take out the screws, then remove the fixed fences support.

To assemble the new fences, follow this procedure in reverse and retighten the 2 Allen screws.

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- Disconnect main air supply from machine
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If the fixed fence has no end stops, you must disassemble these from the old gauge and transfer them to the new one. To do this,  ust loosen the  screws shown in the figure.

To disassemble the ad ustable fences unit,  ust loosen the knob.

After loosening the knob, remove the slide in the lower part of the working bench.

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## Ad usting the height of the hold down vertical pad, and replacing it

To adapt the buffer position to the thickness of the frame, proceed as follows:

1. pull the plunger pin knob outwards;
2. raise or lower the perforated rod, depending on your needs;
3. release the plunger pin knob to lock the rod in place.

To replace the pad, you must loosen the screw that fixes it to the rod, then remove it by pulling it downwards.

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Once the new pad or the magnetic pad support has been inserted, retighten the Allen screw.

Position the magnetic accessories under the pad and check it is in the right position by inserting a frame to be  oined.

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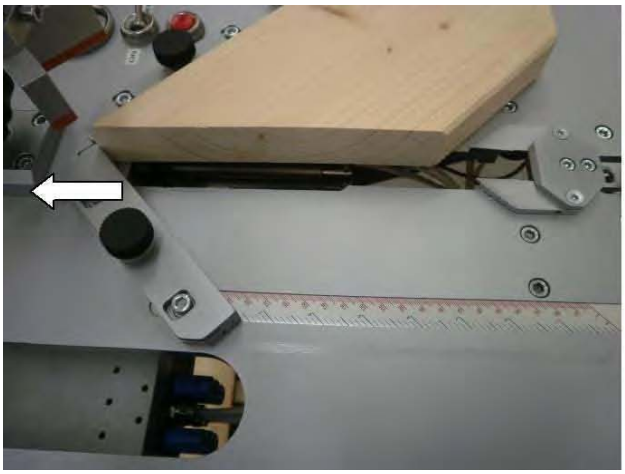
- Make sure foot pedal is away from any type of activation

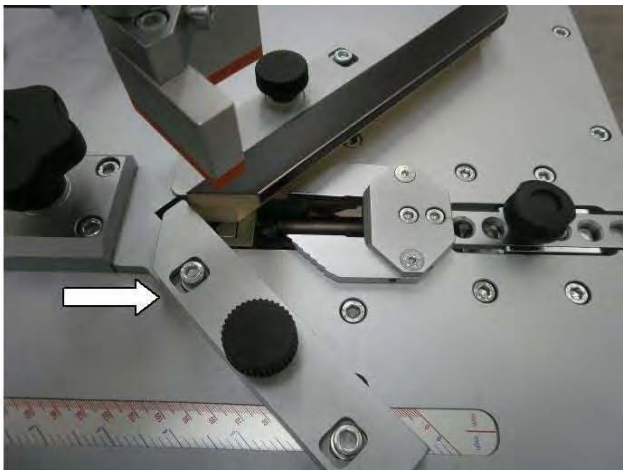
Ad usting the frontal clamp rod and ad ustable fences unit

Depending on the dimensions of the frames to be assembled, you must make a series of ad ustments regarding the frontal clamp rod and ad ustable fences unit - the procedure is described below:



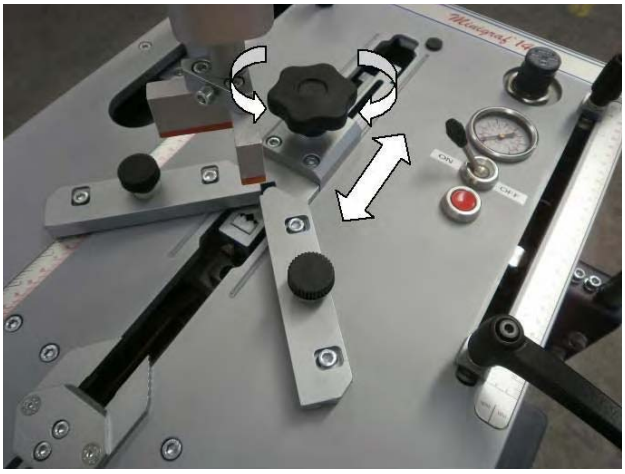
ide Profile Moulding

If the frame is wide, the ad ustable fences unit must be moved towards the outer part of the machine



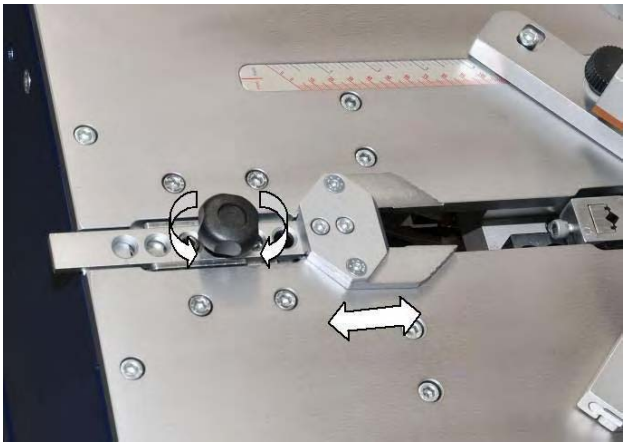
Narrow Profile Moulding

If the frame is narrow, the ad ustable fence unit must bemoved towards the frontal lamp rod.



Ad usting the Fence

To slide the ad ustable fences unit on the working bench, loosen the knob by turning it counter-clockwise then, when the fence is in the right position; lock it in place by turning the knob clockwise



Ad usting the Frontal Clamp

To position the frontal clamp rod, loosen the knob (if using) and remove it, then move the perforated rod to the required position and lock in by remounting the knob (optional)

The optimum gap to leave between the frontal clamp rod and the moulding frame is -10 millimeters (1/ )

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## Ad usting the pressure of the mouldings clamping devices

The procedure for ad usting the pressure of the vertical and horizontal mouldings clamping devices is described below.

The work pressure must be suitable for the hardness of the mouldings to be oined.

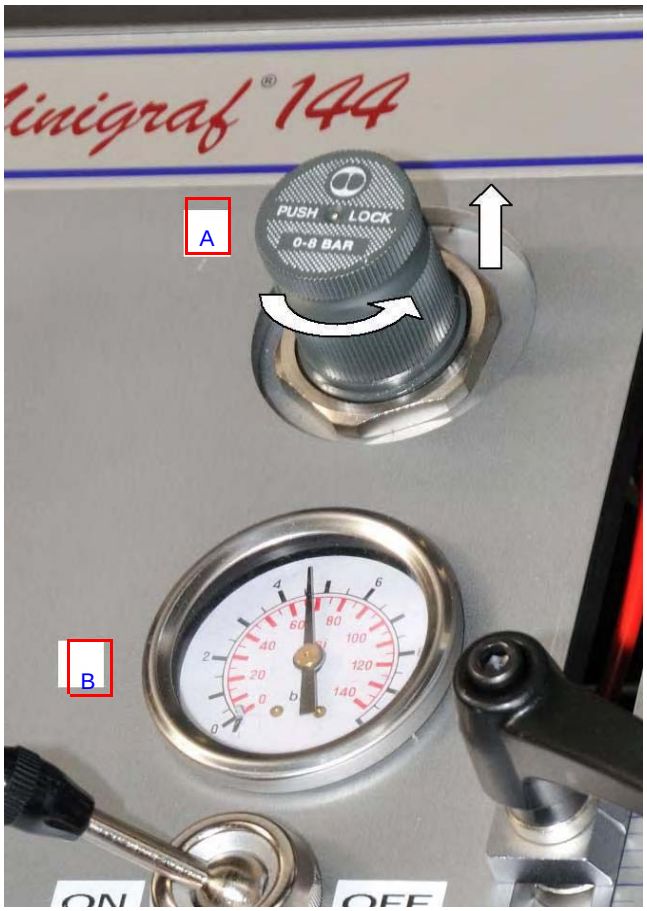
The pressure ad ustment allows you to vary the

locking force of the mouldings to be oined.

Ad ust the locking pressure in such a way as to avoid crushing or damaging the surface of the material to be oined, but make sure the force of the driver for inserting the v-nail does not cause the moulding itself to rise.

The harder the material to be oined, the greater the pressure that can be applied to the clamping devices.

To correctly assemble the mouldings, you must always check they do not rise when the v-nails are being inserted.




An excessively low work pressure may mean the v-nail is not fully inserted in the frame.

The work pressure is ad usted via the special regulator on the pneumatic panel (A), next to the pressure gauge.

To change the work pressure, proceed as follows (B):

1. raise the knob by about 3- mm;
2. turn it clockwise to increase the pressure, or counter-clockwise to reduce the pressure;
3. press the knob to lock it in place.

The following work pressure levels are recommended:

| Type of wood | | Pressure | PSI |
|---|---|---|---|
| Soft | samba, etc. | 2. bar | 0psi |
| Medium | ramino, etc. | bar | 0psi |
| Hard | oak, etc. | . bar | 0psi |

For 1 mm v-nails, increase the pressure/psi by 10 . hen inserting several stacking v-nails, increase the work pressure/psi by 10-1 .

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## Ad usting the tilt of the working bench

Depending on the operator s needs, the working bench can be tilted.

To ad ust it, proceed as follows:

1. loosen the handle beneath the working bench (A);
2. slowly rotate the surface until it is in the required position;
3. retighten the handle.


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## Ad usting the counter-balancing system

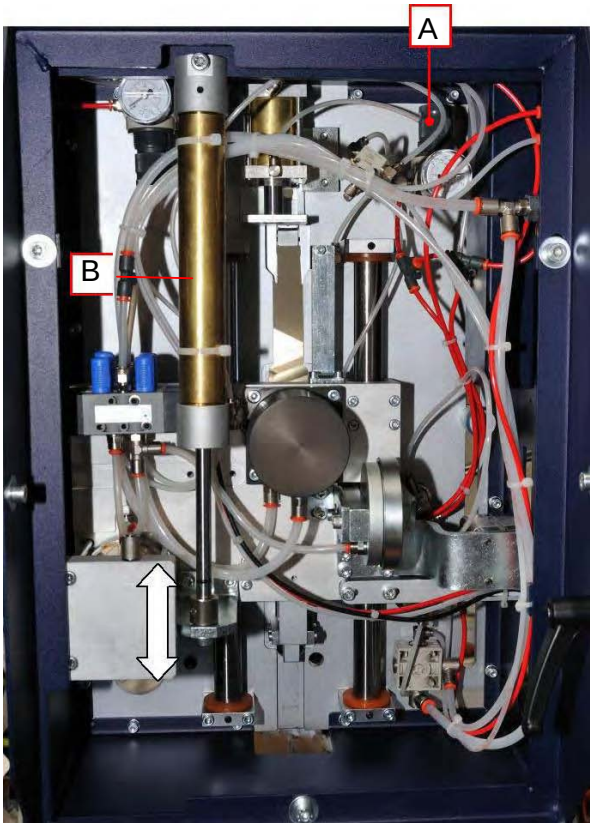
The machine is equipped with a carriage counter-balancing system.

hen you work with the machine tilted, the pressure applied by the counter-balancing system must be ad usted on the basis of the tilt degree.

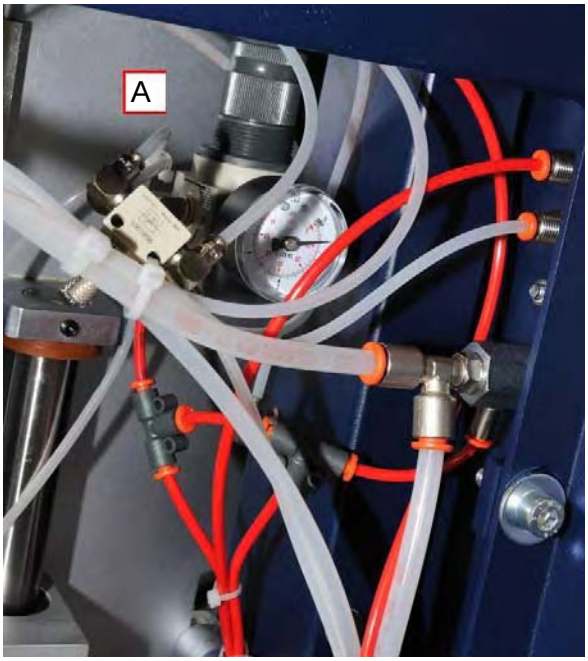
If the calibration is correct, the carriage should remain in place (not falling towards the lower end stop) when the carriage-moving handle is released. To calibrate the counter-balancing system, proceed as follows:

1. tilt the machine as far as the required position;
2. ad ust the knob (A) of the pressure regulator to vary the pneumatic pressure inside the cylinder (B) connected to the carriage;
3. move the handle along its stroke and check the counter-balancing is correct.

Note:
An excessively high pressure tends to push the carriage towards the rear part of the machine. An excessively low pressure is unable to support the carriage, which therefore falls towards the front part of the machine (towards the frontal clamp rod).




To ad ust on the pressure regulator, raise the knob to release it, and then turn it clockwise to increase the pressure or counter-clockwise to reduce it; when the value is correct, lower the knob to lock it in place.

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## Ad usting the v-nail positioning

The machine is equipped with a ad ustable v-nail expulsion unit, assembled on a manually-commanded carriage.

The maximum carriage stroke is 200mm ( / ). various insertion points can be established within this stroke (A).

This picture shows v-nails inserted along the miter oint;

A

2 or more v-nails can be inserted in the same point, depending on the thickness of the frame.

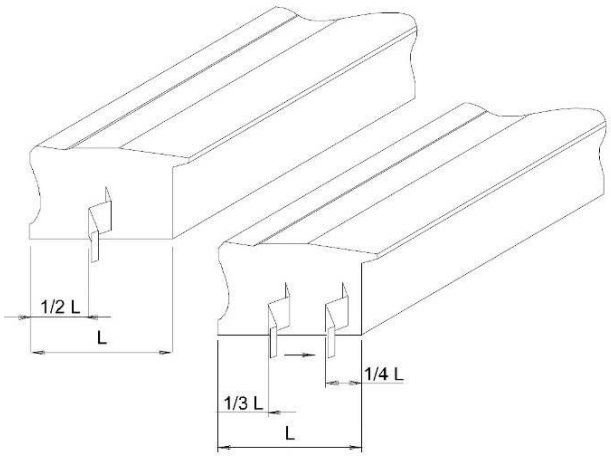
B

Apart from blocking the mouldings, a braking system also ensures the perfect locking of the driving unit (nail head), which allows the multiple insertion of v-nails in a single position.

To allow the machine to produce top quality miter oints with a wide variety of materials, different types of v-nails are needed.

The v-nails can be classified into three different groups:

1. SPT for soft woods and plastic;
2. HPT for medium-hard woods;
3. HDF for hard woods or MDF.




To obtain the best results in the quality of the miter oints created, observe the following guidelines:

- avoid inserting v-nails near the end of the miter oint; the minimum recommended distance from the outer edge is at least 10mm (3/ );
- when creating a miter oint with ust one v-nail , position the v-nail on the center line of the frame;
- when you want to insert at least 2 v-nails for each miter oint, insert the outer v-nail 1/3 from the outer edge, and the inner v-nail 1/ from the inner edge.

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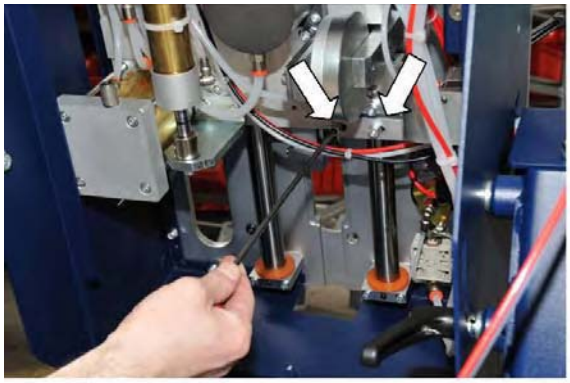
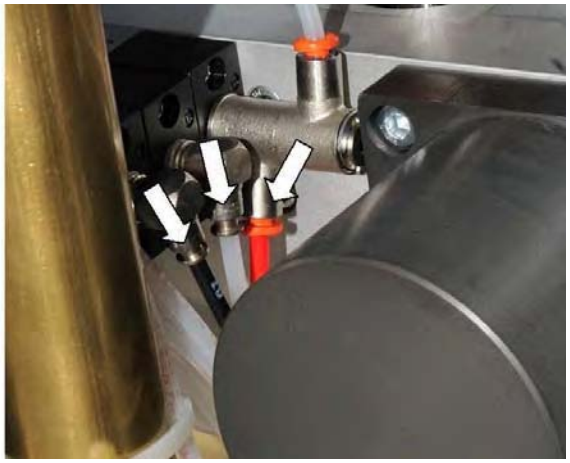
## Positioning the side handle

The machine can work with the handle on the right side or the left. If you want to change the current position, proceed as follows:



1) Remove the 2 screws that fix the lever to the carriage.

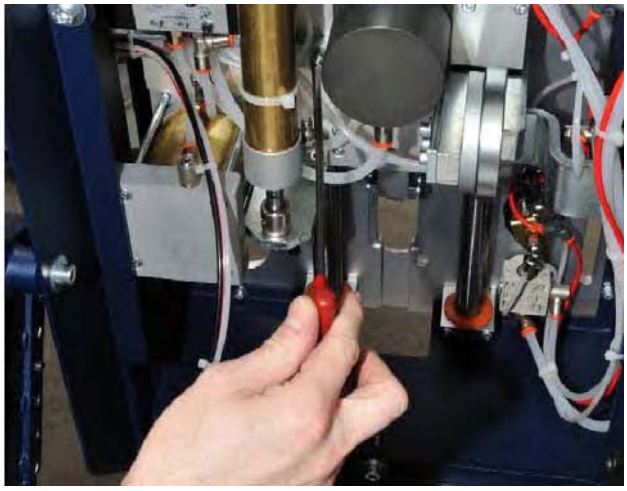


2) Take the 3 tubes out of their connectors, noting the exact position of each one (black, white, red)

3) Take the handle out of the machine

) The disassembled handle looks like this, with the 3 tubes (black, white, red)

) Insert the handle on the other side



)Fix the handle to the carriage by means of the 2 screws, and then reconnect the 3 tubes in the correct positions, as before

Caution: Operator is to ensure to do one or all of the following during any machine adjustment:

- Disconnect main air supply from machine
- Release “PLV” switch to “off” (page 7 – figure A)
- Make sure foot pedal is away from any type of activation

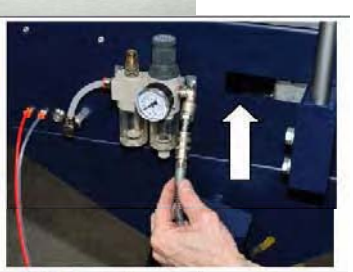
## 1.3. OR C CLE

During normal production, the machine must be used exclusively to work the products of wood, MDF/HDF and polystyrene as described in manual.
During the working cycle, it is essential to respect the safety measures and prescriptions to protect against residual risks.

For details of the functions of each command and information device, refer to the Layout and description of the command and signaling devices given in the pneumatic diagram enclosed with this manual.

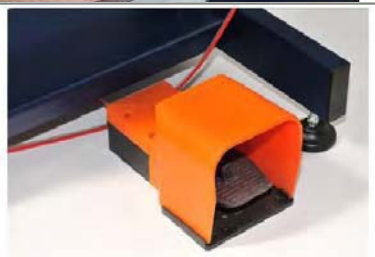
Check the v-nail magazine is full, the nail head is correctly assembled, and the ad ustments have been made.

Insert the pneumatic supply tube directly in the machine (or in the filter unit, if present).



The machine is ready to miter oint. Insert the moulding on the right-hand stop, then bring the left-hand one up next to it.

Press the pedal for the horizontal locking with the frontal clamp rod.



Move the nail head carriage by means of the handle, press the button lightly to block the frames with the buffer, the press fully down to insert the v-nail .

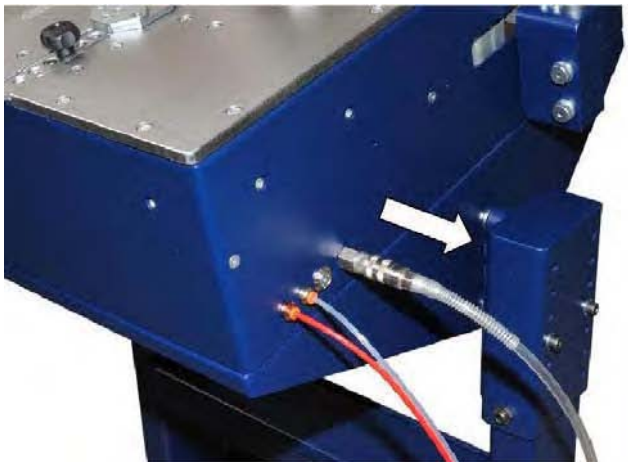
Release the button and move the carriage to the next position, ready to insert another v-nail .

## 1. . DEACTI ATION

After you have finished using the machine, it must be deactivated.
The pneumatic tube that powers it must be disconnected.

The pneumatic actuators may have accumulated energy, and must therefore be discharged to avoid any unexpected and dangerous activation.

If the filter unit is present, rotate the knob to discharge the machine system, and then disconnect the pneumatic supply tube.



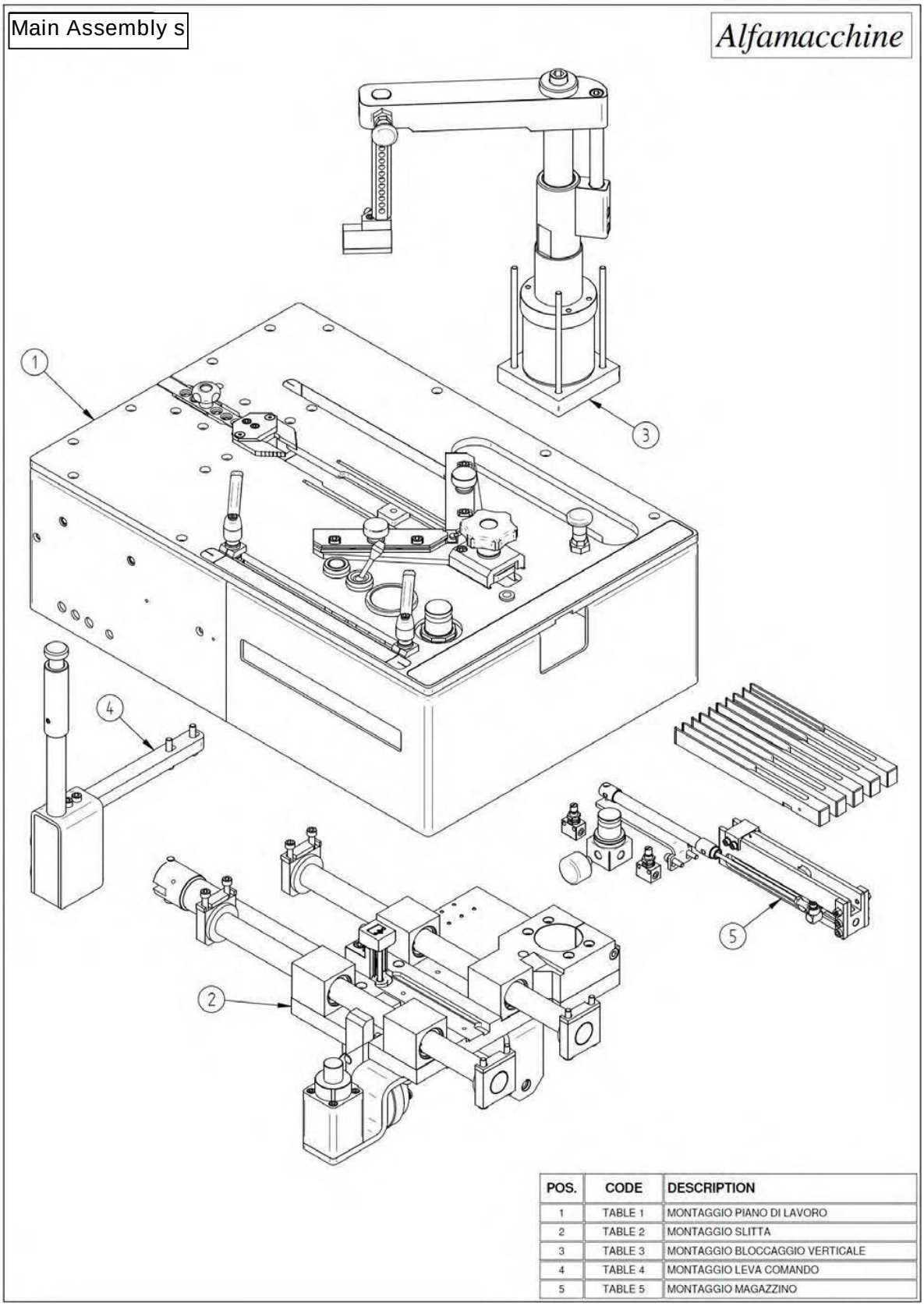
Caution: Operator is to ensure to do one or all of the following during any machine adjustment:

- Disconnect main air supply from machine
- Release “PLV” switch to “off” (page 7 – figure A)
- Make sure foot pedal is away from any type of activation

1. MECHANICAL SCHEMATIC

Main Assembly s

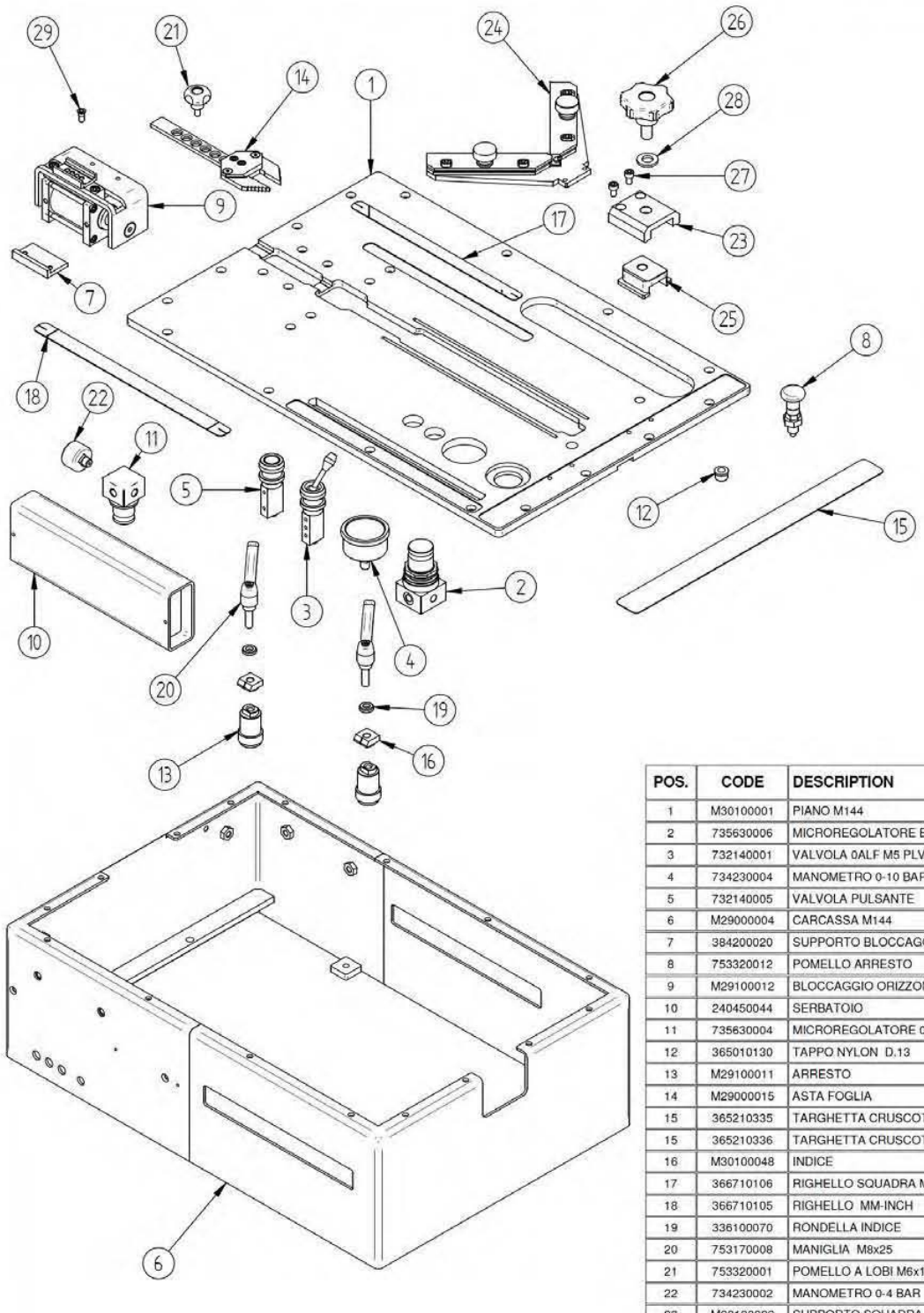
Alfamacchine




| POS. | CODE | DESCRIPTION |
|---|---|---|
| 1 | TABLE 1 | MONTAGGIO PIANO DI LAVORO |
| 2 | TABLE 2 | MONTAGGIO SLITTA |
| 3 | TABLE 3 | MONTAGGIO BLOCCAGGIO VERTICALE |
| 4 | TABLE 4 | MONTAGGIO LEVA COMANDO |
| 5 | TABLE 5 | MONTAGGIO MAGAZZINO |

| M144 - VN144 | TABLE 1 | Top Base Components |
|---|---|---|

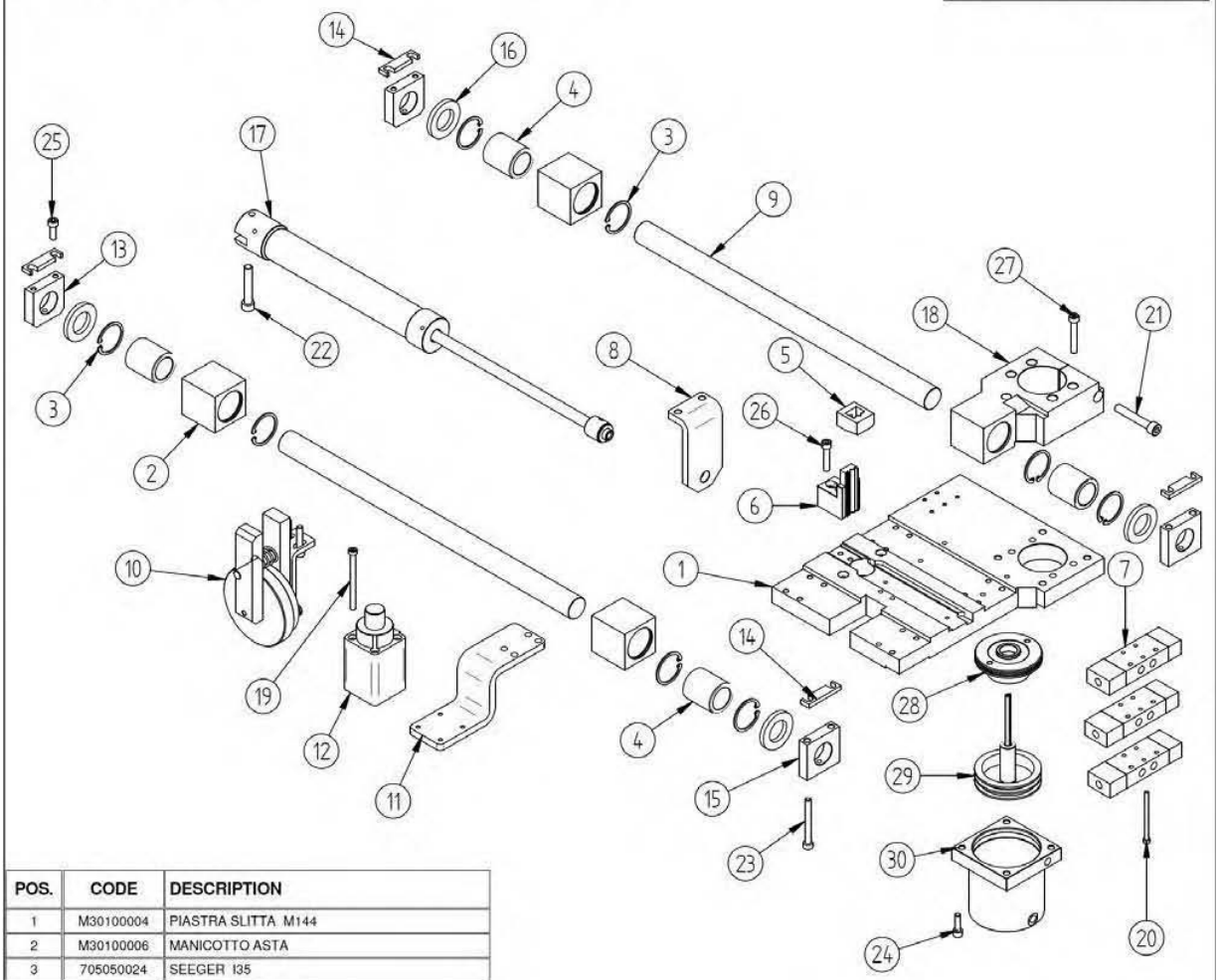
Alfamacchine




| POS. | CODE | DESCRIPTION |
|---|---|---|
| 1 | M30100001 | PIANO M144 |
| 2 | 735630006 | MICROREGOLATORE BIT 1/8 |
| 3 | 732140001 | VALVOLA 0ALF M5 PLV |
| 4 | 734230004 | MANOMETRO 0-10 BAR 1/8 |
| 5 | 732140005 | VALVOLA PULSANTE |
| 6 | M29000004 | CARCASSA M144 |
| 7 | 384200020 | SUPPORTO BLOCCAGGIO ORIZZONTALE |
| 8 | 753320012 | POMELLO ARRESTO |
| 9 | M29100012 | BLOCCAGGIO ORIZZONTALE M144 |
| 10 | 240450044 | SERBATOIO |
| 11 | 735630004 | MICROREGOLATORE 0-4 1/8 |
| 12 | 365010130 | TAPPO NYLON D.13 |
| 13 | M29100011 | ARRESTO |
| 14 | M29000015 | ASTA FOGLIA |
| 15 | 365210335 | TARGHETTA CRUSCOTTO M144 |
| 15 | 365210336 | TARGHETTA CRUSCOTTO VN144 |
| 16 | M30100048 | INDICE |
| 17 | 366710106 | RIGHELLO SQUADRA MM-INCH |
| 18 | 366710105 | RIGHELLO MM-INCH |
| 19 | 336100070 | RONDELLA INDICE |
| 20 | 753170008 | MANIGLIA M8x25 |
| 21 | 753320001 | POMELLO A LOBI M6x12 |
| 22 | 734230002 | MANOMETRO 0-4 BAR 1/8 |
| 23 | M30100009 | SUPPORTO SQUADRA |
| 24 | M29100004 | SQUADRA 2 POMELLI M144 |
| 25 | M30100010 | SLITTA BLOCCAGGIO SQUADRA |
| 26 | M30100080 | VOLANTINO A LOBI M12x22 |
| 27 | 710100072 | VITE TCEI M6x10 |
| 28 | 718100006 | RONDELLA M12 |
| 29 | 366210030 | VITE AZIONAMENTO ASTA FOGLIA |

M144 - VN144 | TABLE 2 | Carriage Assembly

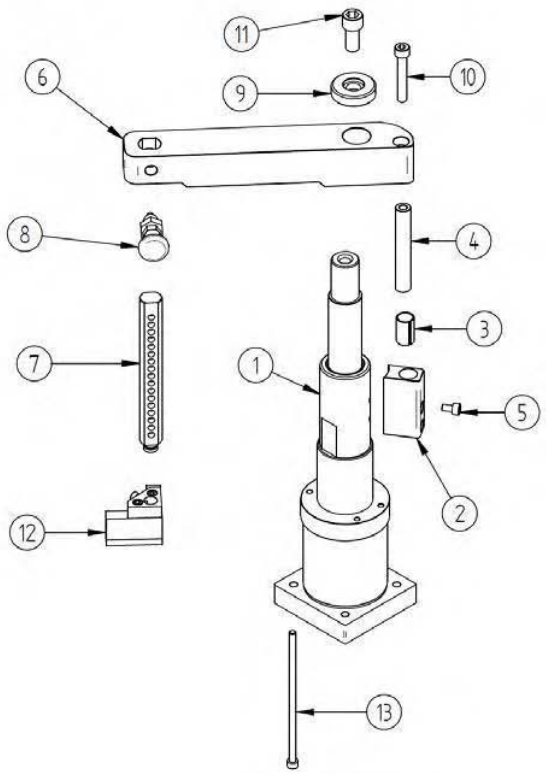
Alfamacchine




| POS. | CODE | DESCRIPTION |
|---|---|---|
| 1 | M30100004 | PIASTRA SLITTA M144 |
| 2 | M30100006 | MANICOTTO ASTA |
| 3 | 705050024 | SEEGER I35 |
| 4 | 740550084 | MANICOTTO KH2540 |
| 5 | 394950570 | TESTINA MC |
| 6 | M30100011 | SUPPORTO L M144 |
| 7 | 732440003 | VALVOLA |
| 8 | M30100039 | SUPPORTO CILINDRO DI BILANCIAMENTO M144 |
| 9 | 334000490 | ASTA MC |
| 10 | M22000004 | COMPLESSIVO FRENO M144 |
| 11 | M30000009 | SUPPORTO CILINDRO ARRESTO |
| 12 | 753750017 | CILINDRO ARRESTO |
| 13 | M30100002 | BLOCCHETTO ANTERIORE ASTE |
| 14 | M30100003 | SPESSORE BLOCCHETTO |
| 15 | M30100005 | BLOCCHETTO POSTERIORE ASTE |
| 16 | M30100012 | ANELLO ARRESTO |
| 17 | M29100008 | CILINDRO BILANCIAMENTO M144 |
| 18 | M30100076 | SUPPORTO ASTA |
| 19 | 710100061 | VITE TCEI M5x70 |
| 20 | 710100015 | VITE TCEI M4x60 |
| 21 | 710100120 | VITE TCEI M8x50 |
| 22 | 710100119 | VITE TCEI M8x45 |
| 23 | 710100147 | VITE TCEI M6x55 |
| 24 | 710100093 | VITE TCEI M6x20 |
| 25 | 710100076 | VITE TCEI M6x18 |
| 26 | 710100080 | VITE TCEI M6x30 |
| 27 | 710100082 | VITE TCEI M6x40 |
| 28 | 352400010 | TESTA CILINDRO |
| 29 | M29100022 | MARTELLETTO COMPLETO M144 |
| 30 | 352200260 | COPPA |

| M144 - VN144 | TABLE 3 | ertical Clamp Assembly |
|---|---|---|

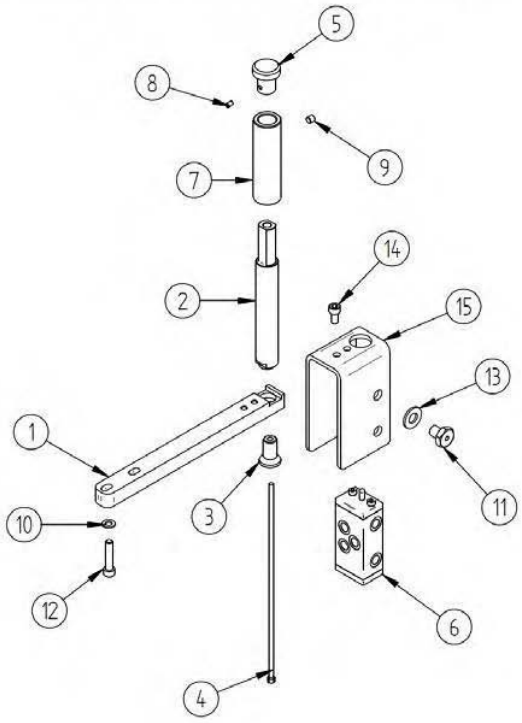
Alfamacchine




| POS. | CODE | DESCRIPTION |
|---|---|---|
| 1 | M22100002 | COLONNA COMPLETA M144 |
| 2 | M30100038 | ARRESTO BRACCIO |
| 3 | 753420016 | BOCCOLA D14 L25 |
| 4 | M30100044 | PERNO ANTIROTAZIONE BRACCO |
| 5 | 710100072 | VITE TCEI M6x10 |
| 6 | M30100018 | BRACCIO M144 |
| 7 | 334000100 | ASTA BLOCCAGGIO VERTICALE |
| 8 | 753320010 | POMELLO BLOCCAGGIO |
| 9 | 336100120 | RONDELLA ARRESTO |
| 10 | 710100120 | VITE TCEI M8x50 |
| 11 | 710100190 | VITE TCEI M12x25 |
| 12 | 242230050 | TAMPONE COMPLETO ANGOLO |
| 13 | 710100067 | VITE TCEI M6x140 |

| M144 - VN144 | TABLE 4 | Hand Lever/ alve Assembly |
|---|---|---|

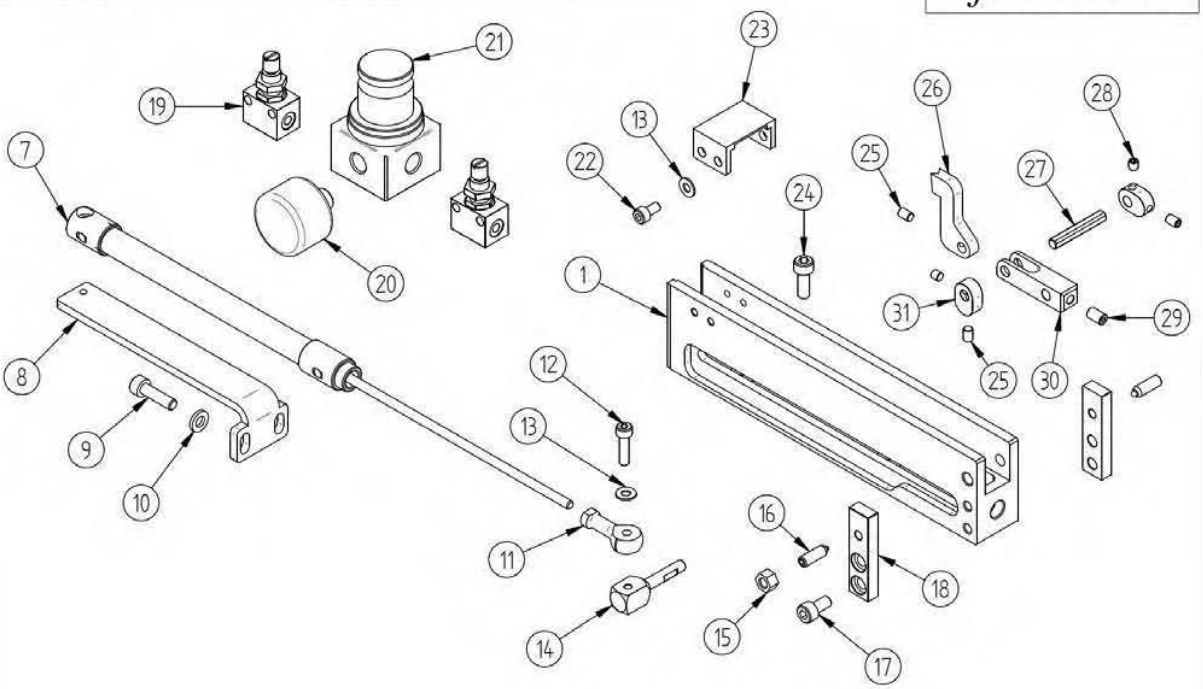
Alfamacchine

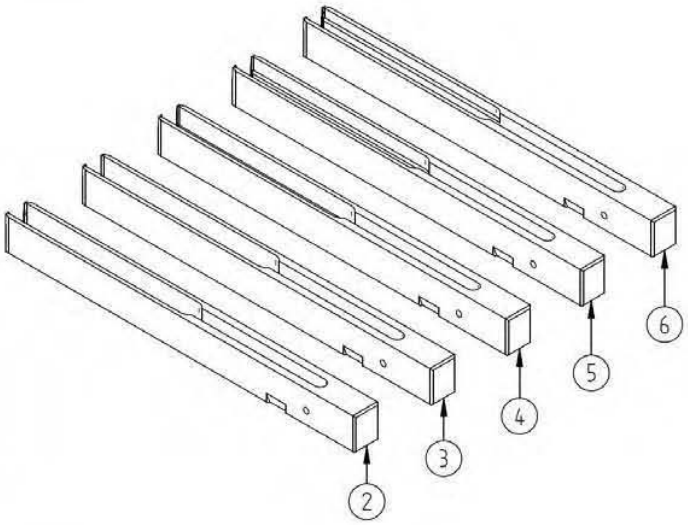



| POS. | CODE | DESCRIPTION |
|---|---|---|
| 1 | M30100017 | LEVA MOVIMENTO SLITTA |
| 2 | M30100051 | PERNO LEVA |
| 3 | 366210020 | VITE FISSAGGIO PERNO LEVA |
| 4 | 331500060 | ASTA COMPLETA PULSANTE |
| 5 | 363710020 | BOTTONE PULSANTE |
| 6 | 732290001 | VALVOLA PULSANTE |
| 7 | 336500090 | BOCCOLA PULSANTE |
| 8 | 714300063 | GRANO M4x6 |
| 9 | 714300015 | GRANO M6x6 |
| 10 | 718100003 | RONDELLA M6 |
| 11 | M30100053 | VITE SUPPORTO VALVOLA |
| 12 | 710100080 | VITE TCEI M6x30 |
| 13 | 718100005 | RONDELLA M10 |
| 14 | 710100073 | VITE TCEI M6x12 |
| 15 | M29000005 | CARTER SUPPORTO VALVOLA |

| M144 - VN144 | TABLE 5 | Magazine Assembly |
|---|---|---|

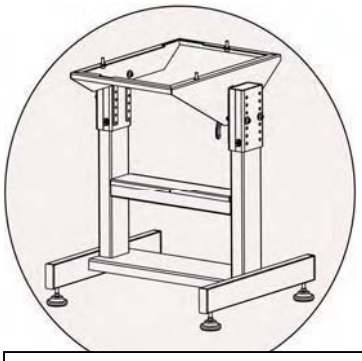
Alfamacchine



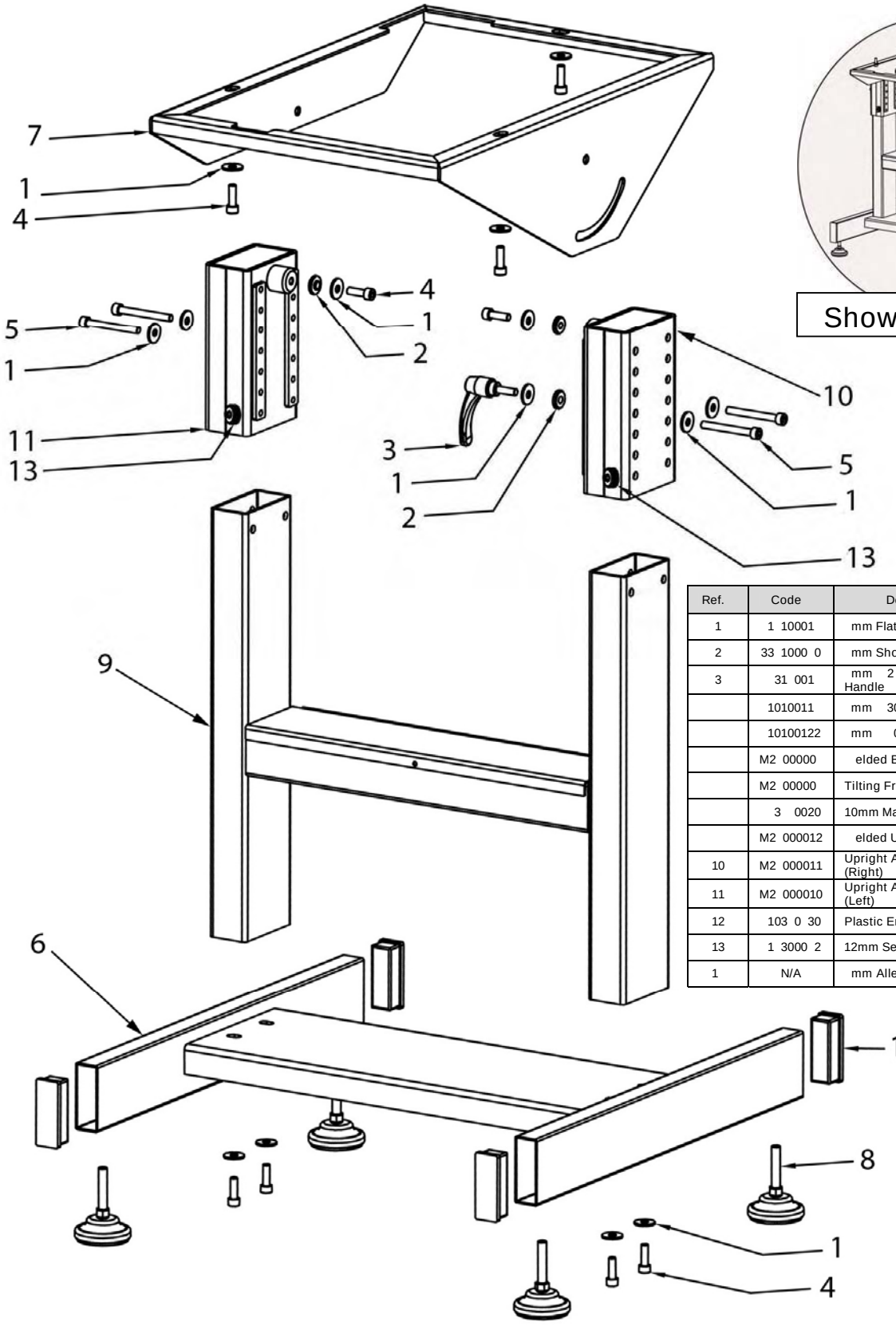




| POS. | CODE | DESCRIPTION |
|---|---|---|
| 1 | M30100054 | MAGAZZINO |
| 2 | M30100055 | **CARICATORE H15** |
| 3 | M30100056 | CARICATORE H12 |
| 4 | M30100057 | CARICATORE H10 |
| 5 | M30100058 | CARICATORE H7 |
| 6 | M30100059 | CARICATORE H5 |
| 7 | M29100020 | CILINDRO SPINGIPUNTI M144 |
| 8 | M30000003 | SUPPORTO CILINDRO SPINGIPUNTI M144 |
| 9 | 710100046 | VITE TCEI M5x18 |
| 10 | 718100002 | RONDELLA M5 |
| 11 | 753320014 | TESTA A SNODO RF4 |
| 12 | 710100006 | VITE TCEI M4x16 |
| 13 | 718100001 | RONDELLA M4 |
| 14 | M30100065 | PERNO MOVIMENTAZIONE |
| 15 | 715650002 | DADO M5 |
| 16 | 753320013 | PRESSORE M5 |
| 17 | 710100042 | VITE TCEI M5x10 |
| 18 | M30100070 | SUPPORTO PRESSORE |
| 19 | 732630003 | REGOLATORE DI FLUSSO |
| 20 | 734230002 | MANOMETRO 0-4 BAR 1/8 |
| 21 | 735630004 | MICROREGOLATORE 0-4 1/8 |
| 22 | 710100002 | VITE TCEI M4x8 |
| 23 | M30100082 | INVITO MAGAZZINO |
| 24 | 710100044 | VITE TCEI M5x14 |
| 25 | 714300063 | GRANO M4x6 |
| 26 | M30100066 | DENTE SPINGIPUNTI |
| 27 | M30100079 | PERNO CURSORE |
| 28 | 714300003 | GRANO M4x4 |
| 29 | 714300073 | GRANO M5x8 |
| 30 | M30100062 | CURSORE SPINGIPUNTI |
| 31 | M30100078 | CAMMA ROTAZIONE DENTE |

| Optional Accessory | Item M22000003 |
|---|---|



Shown Assembled




| Ref. | Code | Description | uantity |
|---|---|---|---|
| 1 | 1 10001 | mm Flat asher | 1 |
| 2 | 33 1000 0 | mm Shoulder asher | 3 |
| 3 | 31 001 | mm 2 mm Turn Handle | 1 |
| | 1010011 | mm 30mm Bolt | |
| | 10100122 | mm 0mm Bolt | |
| | M2 00000 | elded Base | 1 |
| | M2 00000 | Tilting Frame | 1 |
| | 3 0020 | 10mm Machine Levelers | |
| | M2 000012 | elded Upright | 1 |
| 10 | M2 000011 | Upright Ad . Extension (Right) | 1 |
| 11 | M2 000010 | Upright Ad . Extension (Left) | 1 |
| 12 | 103 0 30 | Plastic End Cap, 0 30 | |
| 13 | 1 3000 2 | 12mm Set Screw | |
| 1 | N/A | mm Allen rench | 1 |

# 1. PNEUMATIC SCHEMATIC