

# *Mitre-Mite*®

## *VN Manual*

Instruction Manual

Version H



**TW AMP**

***Technology for Frame Assembly***

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# 1. GENERAL INFORMATION

## 1.1 PRODUCER

The firm Alfamacchine can boast more than 10 years of experience in the construction of Woodworking Machines. It has acquired technological know-how, developed during years of researches in strict touch with manufacturing and international commercialization. We offer the best warranty that anyone can grant to its customers.

TEL 800-322-4204	FAX 800-426-7019
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## 1.2 ASSISTANCE CENTERS

ITW/AMP is represented both in North & South America by a numerous and prepared selling organization. Contact our directly to get the name of your local distributor.

For every need regarding Use, Maintenance or Request of Spare Parts, the Customer is pleased to address to the authorized service centers or directly to ITW/AMP, specifying the machine's identification data impressed on the plate.

## 1.3 CERTIFICATION

The machine is produced in conformity to the pertinent European Community Norms in force at the moment of its introduction on the market.

## 1.4 WARRANTY

ITW/AMP's products are built to have a long life and are tested one by one.

If in spite of this, any damages or malfunctioning would occur, the replacement of defective parts is warranted (counting from the date written on the delivery bill) for a period of:

- 24 months for mechanical components
- 12 months for pneumatic parts

The driver blade is tested for about 1.000.000 working cycles.

The Warranty does not cover the sending of technical staff. The repair interventions will be performed at ITW/AMP's plants and the freight of shipment will be entirely charged to the Customer.

The warranty does not cover the damages caused by an inappropriate use of the machine or not corresponding to the instructions described in this handbook.

The warranty decays in case of unauthorized modifications or because of accidental damages or tampering performed by unqualified personnel.

The warranty also decays in case you use V-nails different from the original ITW/AMP ones.

To take advantage of warranty services it is necessary at the moment you receive your machine ,to completely fill out the warranty card and send it back as soon as possible to ITW/AMP.

The warranty will be valid only after ITW/AMP receives the warranty card & records it.

## 1.5 PRE-ARRANGEMENTS CHARGED TO THE CUSTOMER

It the customer's duty on times agreed with the producer to execute what is indicated in our documentation.

Things normally charged to the customer:

- Premises predisposition, included building works and/or canalization eventually requested

## 1.6 HANDBOOK STRUCTURE

The customer must pay extreme attention to the indications reported in this handbook. The proper Pre-Arrangement, Installation and Use of the Machine, constitute the basis of a correct customer-distributor relationship.

### 1.6.1 Object and contents

The goal of this handbook is to provide to the customer all the necessary information so that they can properly use the machine & be able to run it in complete autonomy and safety. The handbook contains information concerning the technical aspects, machine working and standstill, maintenance, spare parts and safety. Before making any operation on the machine, the qualified technicians and operators must carefully read this handbook. In case of doubt about the correct interpretation of these instructions, ask ITW/AMP or your local distributor to have the problem explained.

### 1.6.2 Utilizers

This handbook is made both for operators and technicians authorized to perform the machine maintenance.







The operators can not execute operations reserved to the qualified technicians.

The producer does not answer to damages deriving from not-observing this prohibition

### 1.6.3 Preservation

The instruction handbook must be kept very closed to the machine in a special container protecting it from liquids and whatever could compromise its legibility

#### 1.6.4 Symbols utilized

 P...	DANGER	It indicates a danger with a mortal risk for the operator
 A...	WARNING	It indicates a warning or a note about key functions or useful information. Pay the maximum attention to the paragraph marked with this symbol.
 O...	OBSERVATION	It is requested to take a measurement data, to check a signal,....
 I...	INQUIRY	The user is requested to check the proper positioning of any element of the machine, before operating a certain command
 C...	EXAMINATION	It's necessary to consult the handbook before performing a certain operation
 R...	ADJUSTMENT	In case of a strange situation and/or anomalies, you can be requested to perform a certain mechanical adjustment.

## 2. MACHINE DESCRIPTION

### 2.1 WORKING PRINCIPLE

The Frame Assembling Mitre-Mite VN Manual has been realized to assemble any kind of frame.

The Mitre-Mite VN Manual being of simple construction and extremely easy to use, makes it possible to join with absolute precision any kind of moulding by means of special steel V-nails.

It uses V-Nails with the “pulling power” effect in different sizes.

### 2.2 MAIN COMPONENTS

The main components constituting the machine are:

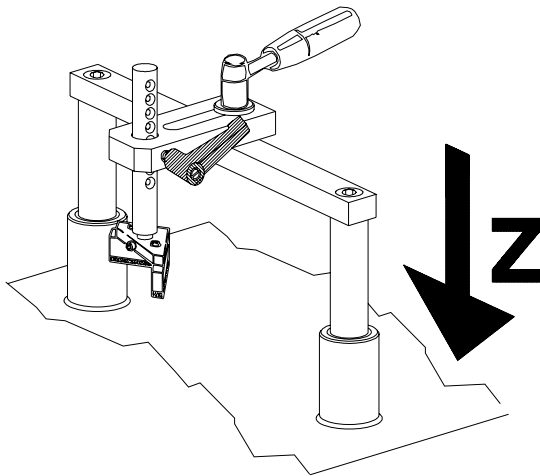
- Mechanical operating foot pedal
- Nail heads sizes 7, 10 and 15 mm.

### 2.3 MACHINE STRUCTURE

#### Z AXIS

Movement of vertical clamp

Fig. 2.1 A movement directions



### 2.4 DIMENSIONS

The overall dimensions are reported on table 2.9-A

### 2.5 SURROUNDING CONDITIONS

The machine does not need special surrounding conditions. It has to be installed inside an industrial building, lit, aired and with a compact and flat floor. The permitted temperatures go from 41° to 104° F, with a humidity level not higher than 50% at 104° F or 90% at 68° F.

### 2.6 LIGHTING

Premises lighting must be conformed to the norms in force in that Country where the machine is installed and has to guarantee a clear view and can not create dangerous situations.

### 2.7 VIBRATIONS

In standard conditions conformed to the indication of machine proper utilization the vibrations do not create dangerous conditions. The average quadratic weighed level, according to the acceleration frequency to which arms are exposed does not exceed 2,5 m/s<sup>2</sup>.

### 2.8 NOISE EMISSIONS

The machine is designed and projected for reducing the noise emission level to its source. In standard working conditions the Machine noise power level is:

- Acoustic Continuous Equivalent weighed pression A <70dB
- Acoustic Istantaneous weighed pression <130dB

The noise levels indicated are emission levels and are not representative of operating levels. In spite of existing a relationship between emission levels and exposure ones, this can not be used in a reliable way to define if further precautions are necessary. The factors determining the exposure level to which the working force is subjected, include exposure length, working premises characteristics and other noise sources (number of machines, closed building, etc...). Furthermore the allowed exposure levels could change according to the several Countries. At any rate the information provided will allow the Machine Operator to achieve a better evaluation of the danger and risks they are submitted to.



The indicated noise levels are emission ones measured in standard conditions of use. In case of any machine modification, the above mentioned levels could be changed and should be tested on the same machine.

## 2.9 TECHNICAL DATA

We have listed below the Machine's data and technical characteristics to which you can use for reference for any eventual contact with your distributor for Technical Assistance.

- Frames thickness	min-max	.24"- 3.15" mm.
- Frames width	min-max	.24"- 3.15" mm.
- V-nails magazine capacity		n. 220
- V-nails size		7, 10, 15 mm.
- V-nails size on request		3, 5, 12 mm.
- Weight		about 110 lb
- Height of working bench		39.36"
- Overall dimensions		15.75"x19.68"x45.27"

## 2.10 STANDARD EQUIPMENT

The equipment listed below is standard.

### 2.10.1 Standard accessories

Once you have removed the packaging, please check the presence of the following accessories:).

- N.1 nail head mm. 7
- N.1 nail head mm.10
- N.1 nail head mm.15
- N.1 L shaped pressure pad
- N.1 Rounding pressure pad
- N.1 Allen Wrench 5 mm. for V-nail head replacement
- N.1 Brass rod magnet to remove V-nails

### 2.10.2 Upgrading and implementing of mechanical parts

The machine has been realized following a modular criterion, therefore the existing equipment can be further upgraded with additional accessories that will not alter its basic structure.

Technical upgrades on the machine model, if any, will be such that they can be installed at any time without requiring any substantial modifications to the machine structure.

### 2.10.3 Optional accessories

- Adjustable tilting fences (see fig. 1)
- Metallic working bench extension
- V-nail claw heads size 3-5-12 mm.
- Special fences for octagons (see fig. 3)
- Special fences for hexagons (see fig. 2)

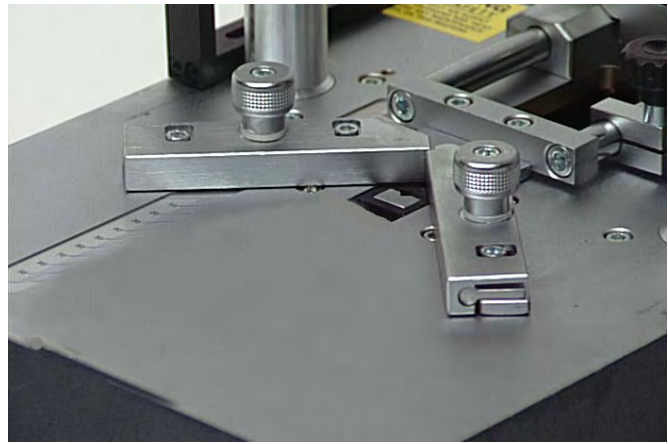


Figure 1



Figure 2

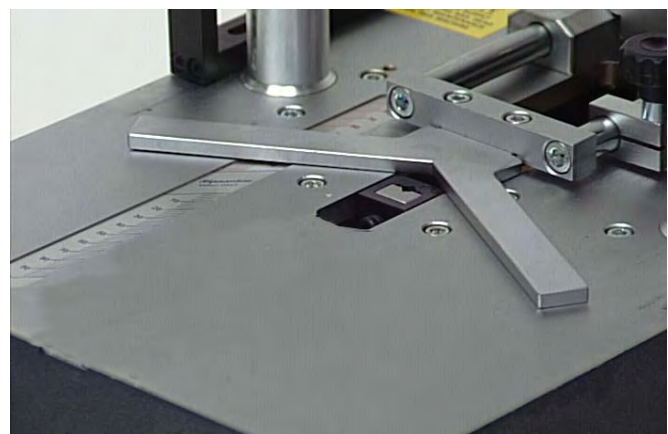


Figure 3

### 2.10.4 Customized optional accessories

Thanks to its versatility this machine can be 'custom-made' to meet our users' requirements, with additional accessories that can make frame assembling easier: e.x. special fences for peculiar moulding shapes, special clamps to ensure the mouldings are locked properly during V-nail firing, and so on. You can have your local machine shop make these for you.

### 3. SAFETY

#### 3.1 GENERAL WARNINGS

The operator must read paying the maximum attention to the information written on this Handbook, expressively about proper precautions for Safety listed in this chapter. It is indispensable for the operator to follow the warnings list here below:

- Keep clean and ordered the machine and the working premises
- Provide appropriate containers to stock both just worked pieces and ready to work ones.
- Use the Machine only in normal psycho physical condition
- Wear an adequate clothing to avoid obstacles and/or dangerous entangles to/from the machine
- Wear the individual protection gears prescribed by instructions handbook, regarding the effected operations
- Do not remove or alter the warning plates and adhesive signs
- Keep the fingers away from the working area
- Keep the foot separated from the pedal during Machine regulation

#### 3.2 SCHEDULED USE

The Machine is designed and constructed to execute junctions of frames.

The machine is projected for manual use only.

#### 3.3 INADVISABLE USE

The machine has not to be used:

- For uses different from those listed in 3.2 paragraph
- In explosive or aggressive atmosphere, at high density of dust or oily substances suspended in the air
- In flammable atmosphere
- Outside in all weather severity
- For working materials not suitable with machine characteristics

#### 3.4 DANGEROUS AREAS

The area of frames leaning is defined “working area”

The dangerous areas of machine, include the movable parts and surrounding zones.

Figure 3.4.A-Dangerous areas



Dangerous areas

#### 3.5 SAFE WORKING PROCEDURES



The machine is projected and realized to eliminate any risk connected with its use. The utilizer is requested to achieve an adequate training to be instructed by Alfamacchine’s technicians.

The other risks related with manual working way, are the fingers crushing in the vertical clamp working area

It is necessary to follow carefully the following instructions:

- 1 Keep the fingers away from the vertical clamp working area
- 2 Keep the foot away from the pedal during machine regulation

#### 3.6 RESIDUAL RISKS

During the normal working cycle and while maintenance, the operators are exposed to several residual risks that, because of operations own nature, can not be totally eliminated.

- Risk of finger crushing due to the presence of vertical clamping

## 4. INSTALLATION

### 4.1 SHIPPING AND HANDLING


The shipment must be performed by a qualified technical staff. The machine has to be shipped in a safe way to avoid any damage to its parts.

- The machine has to be shipped like it is positioned for installation.
- Before the shipment, it is necessary to lubricate the parts which are not painted.
- According to the type of shipment, it is necessary to protect the machine from any jarring impact or stress

Figure 4.1A – machine handling indications



Machine total weight: about 110 lb

	Lifting the machine must be performed by 2 operators.
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Any damage of the machine caused during its shipment or handling is not covered under warranty.

Repairs or replacements of damaged parts are charged to the customer.

### 4.2 STORAGE

In case of long inactivity, the machine must be stored with cautions concerning storage place and times.

- Store the machine indoors
- Protect the machine from jarring impacts and stresses
- Protect the machine from humidity and high temperatures
- Avoid corrosive materials that could touch the machine
- Lubricate the parts which are not painted

### 4.3 PRELIMINARY ARRANGEMENTS

To install the machine it is necessary to prepare a working area adequate to the machine's dimensions, lifting devices chosen and length of mouldings to be worked.

### 4.4 UNPACKING

The machine is shipped & packed into an appropriate carton which is protected with polystyrene sheets.

Remove the external packing and save it for future use.

Check for any casual shipping damage and report them immediately. Shipping damages or any other defects must be reported to *ITW/AMP* not later than 3 days from receipt of the machine.

### 4.5 PRELIMINARY CONTROLS

The preliminary operations before starting the machine, must be executed by a technician appointed by the customer. Before setting up the machine, it is necessary to execute certain verifications and checks to prevent mistakes or accidents during setup.

Verify that the machine has not been damaged during the assembly steps.

### 4.6 MACHINE ARRANGEMENT

#### 4.6.1 V-nails magazine loading

To load the V-nail magazine proceed as follows:

· Move the claw pusher backwards by means of the special control wire located on back side of the machine's working bench. This will give you access to the V-nail magazine (see fig. 7 & 8).

· Insert one or more V-nails strips into the magazine. Make sure that the sharpened edge of the V-nails (glue side) faces up and that they are loaded with the V of the V-nails pointing in the direction as indicated in the figure 8. Check to see if the V-nail size is suitable with the type of claw head mounted. (see fig 9)

· Release the control wire to move the claw pusher forward. (see fig.7).





figure 7



figure 9

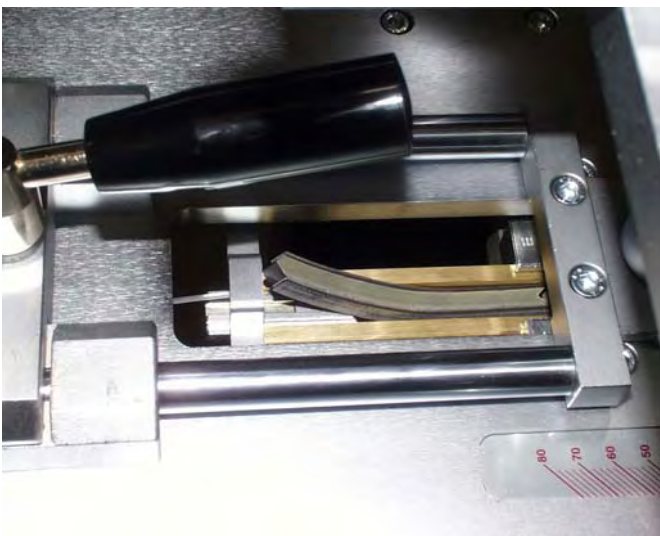


figure 8



figure 10

#### 4.6.2 V-nail guide head replacement to change V-nails size

The V-nail guide head must be changed each time you use V-nails of different sizes.

Proceed as follows to replace it:

- Loosen the locking screw of the V-nail guide head by using the proper 5 mm Allen wrench (the screw is on the opposite side from the V-nails magazine)(See fig. 9)
- Remove the V-nail guide head
- Move the claw pusher backwards by means of the special control wire located on the back side of the machine's working bench. This will give you access to the V-nail magazine (see fig. 7 & 8).
- Remove all the V-nails that are still in the magazine (using the proper brass magnet, if necessary) (see fig.10).
- Insert the new V-nail strip (of desired height) into the magazine
- Move the clawpusher forward, by releasing the control wire (see figure 8).
- Insert the new size V-nail guide head to match the V-nails to be used (see fig. 11).
- Tighten the locking screw of the V-nail guide head (see fig.9).

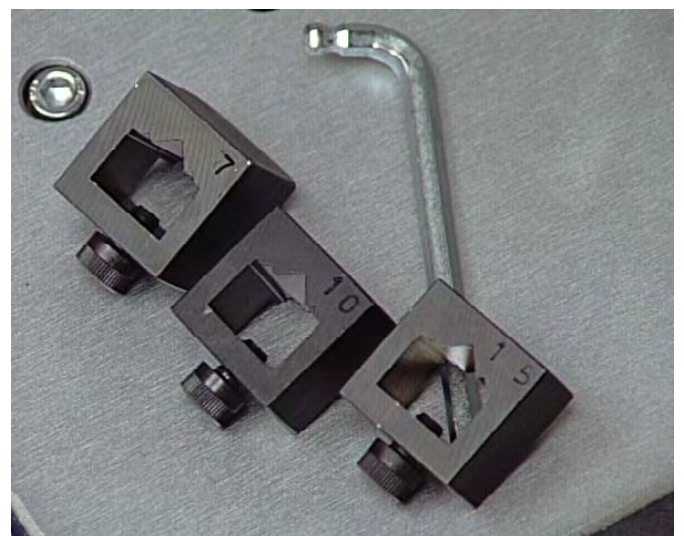


figure 11

## 4.7 ADJUSTMENTS

The machine is completely tested and checked in ITW/AMP's plants before its shipment, so the operator has only to perform the following adjustments:

### 4.7.1 V-nails inserting positions adjustment

To properly position the mouldings to be assembled, the Mitre-Mite Vn Manual is equipped with a 90° fence. The fence can be shifted forward or backward in order to allow the proper positioning of the V-nails in the frame. The fence limits (backward and forward) can be set with precision by means of locking clamps A-B (see fig. 12). The operator can easily use the machine to insert V-nails with extreme precision into 2 different positions.

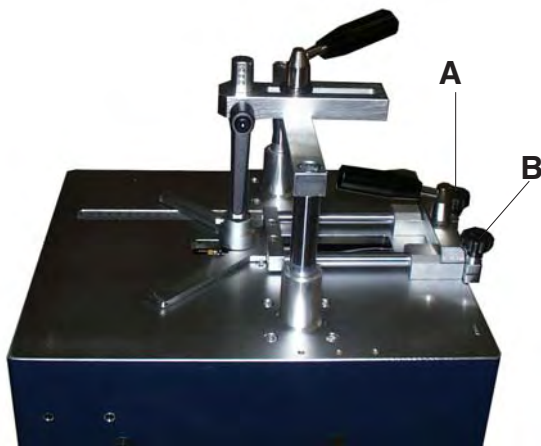


figure 12

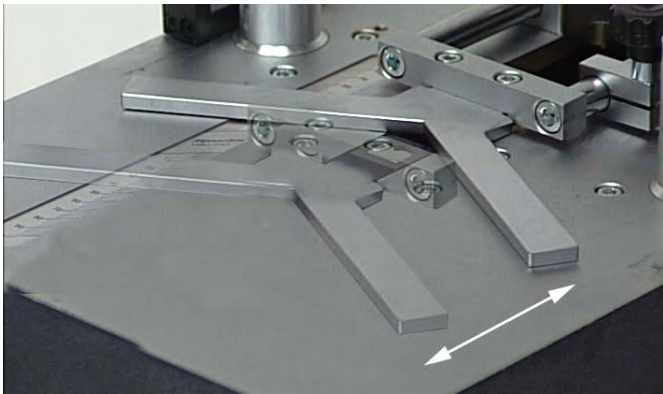


figure 13

### 4.7.2 Vertical clamp adjustment

The vertical clamp can be adjusted in height and position. Proceed as follows to adjust them:

#### 4.7.2a Vertical clamp position adjustment

- Position the mouldings to be assembled on the working bench
- Loosen the top handle (see fig.14) that locks the clamp, which holds the pressure pad bar. This will permit its movement forward or backward. You will want the pressure pad directly over the V-nail inserting point.
- Tighten the handle once you have reached the proper position

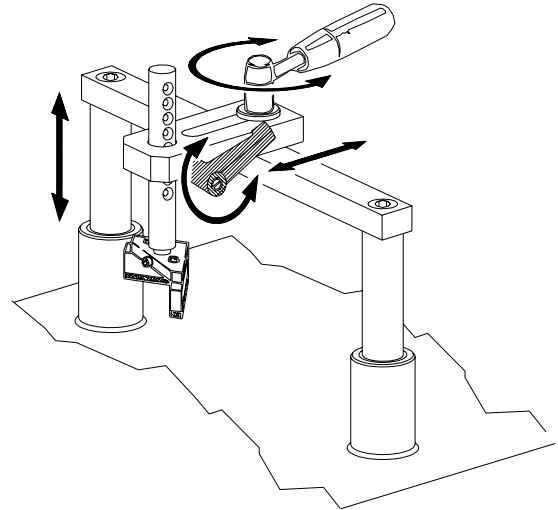


figure 14

### 4.7.2b Vertical clamp height adjustment

- Loosen the side handle (see fig. 15) and adjust the pressure pad height over the frame. We recommend that you put the bar height between 5mm and 8 mm above the moulding. This will help prevent any accidental fingers crushing.
- Tighten the handle once you have reached the proper position
- Lower the vertical clamp by pressing halfway down on the foot pedal. This will verify that the mouldings to be assembled are properly clamped.
- Press all the way down the foot pedal to insert the V-nail.

## 4.8 Functions to be checked before starting work

Once the machine has been properly installed (like previously described), check that:

- 1 The mouldings to be assembled are properly positioned on the work bench.
- 2 The magazine is loaded with the type & size of V-nails suitable with the mouldings to be assembled
- 3 The claw head size matches the chosen V-nail height
- 4 The adjustment of the vertical clamp is correct (chapter 4.7.2)
- 5 Pressing half way down on the foot pedal the vertical clamp locks the moulding to be assembled perfectly.
- 6 Pressing the pedal full down inserts the V-nail.



If you want to insert 2 or more V-nails one upon the other in the same position, you must release the pedal halfway and then press it all the way down again to insert the second V-nail.

## 5. FUNCTIONING

### 5.1 OPERATORS

The machine has been projected to be used by only one operator.

The staff assigned to operate on the machine, must be in possession (or acquire through an adequate training) the requirements indicated here below, and, in addition, to have the knowledge of this handbook and of every information concerning safety:

- General and technical culture sufficient to comprehend this handbook contents and understand properly drawings and schemes
- Knowledge of main sanitary, technological and anti-accidental norms
- Overall knowledge of line and plant where is inserted the machine
- Specific experience of frames assembly working technologies
- To know how operate in case of emergency, where to find the individual protection means and how to use them properly.

The Maintenance Men, in addition to the above mentioned characteristics, must be in possession of an adequate technical education.

### 5.2 FUNCTIONING DESCRIPTION

The only possible way of operating of the machine is the manual mechanic functioning by using the foot pedal.  
Press the foot pedal half way to get the frames clamping  
Press the foot pedal full down to get the V-nail ejection.

To effect a junction, you must operate as follows:

- 1 Set the inserting positions by means of fence locking clamps
- 2 Lean the mouldings on the working bench positioning the fence on the first inserting point
- 3 Adjust the vertical clamp height and position
- 4 Press the foot pedal half way down and verify the proper positioning and holding of the mouldings to be assembled
- 5 Press the pedal full down to insert the V-nail. If you want to insert 2 or more V-nails one upon the other in the same position, you must release the pedal until half of its stroke and then press again it full down to insert the second V-nail and so on.
- 6 Release completely the foot pedal
- 7 Shift the mouldings and the fence on the next inserting point and repeat the steps 5,6 and 7.

### 5.3 TIPS FOR PERFECT JUNCTIONS

#### a) *V-nail<sup>(R)</sup> types*

In order to allow the machine to make excellent quality junctions using different materials, it has been necessary to manufacture different V-nails types for different uses.

V-nails can be classified in three different groups:

for soft woods and soft plastic	Suggested V-nail <sup>(R)</sup> code	SPT
for medium woods	Suggested V-nail <sup>(R)</sup> code	HPT
for hard woods	Suggested V-nail <sup>(R)</sup> code	HPT

#### b) *Assembling positions*

It is advisable to operate as follows in order to achieve the best results in terms of junction quality:

⇒ Never drive V-nails near the junction vertex. The minimum recommended distance from the external vertex is at least 10 mm.

⇒ When you want to make the junction using only one V-nail<sup>(R)</sup>, the most suitable position is in the middle of the moulding.

⇒ In case you want to insert 2 or more V-nails<sup>(R)</sup> into each junction, we recommend you to insert the most external one 1/3 from the external vertex and the most internal one 1/4 from the internal vertex.

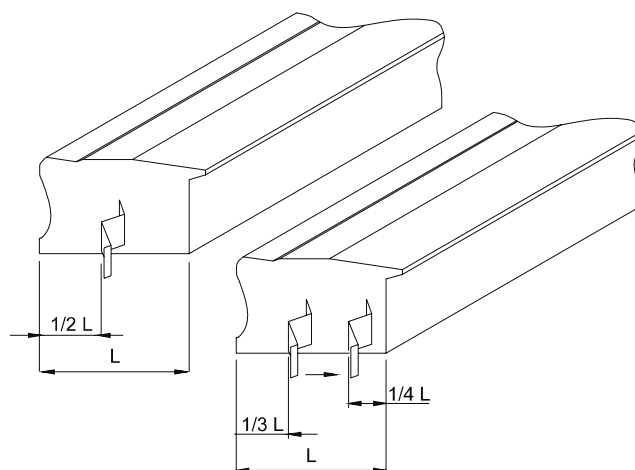


figura 15

### 5.4 MACHINE STOP

The machine can work only by pressing the foot pedal; to stop it is enough to lift the foot from the pedal.

### 5.5 MACHINE REINSTATEMENT

The machine reinstatement is effected by pressing the foot pedal.

## 6. MAINTENANCE

### 6.1 STATE OF MAINTENANCE

The maintenance operations must be performed with the machine in the conditions described at “state of the machine” in the tables 6.6-A and 6.7-A

### 6.2 SPECIAL CAUTIONS

During the maintenance or repair operations is suggested to proceed as follows:

- Before starting any operation place a sign “machine under maintenance” in a well visible position
- Do not use solvents or flammable materials
- Do not disperse into the environment lubricating liquids that have ozone harmful propellents.
- Do not step on the machine parts, because they have not been projected to sustain the weight of persons.
- Once all the operations are finished, replace any protections or shields you removed or opened

### 6.3 CLEANING

The machine structure is simple and robust therefore the mechanical parts do not require any special maintenance.

It is advisable to follow the rules listed below:

- Regularly remove glue or other residues from the V-nail head and from the upper part of the driver blade;
- Always keep the V-nail magazine clean & without residues.
- Remove any residue from the V-nails guide “L” shaped support.

Do not use water to clean the machine, otherwise metallic parts may oxidise.

### 6.4 ORDINARY MAINTENANCE

The following operations must be performed at the times indicated below. Not observing the following instructions exonerate the Producer from any responsibility regarding the warranty.

The operations described below, even if simple, must be executed by qualified staff.

The scheduled ordinary maintenance includes overhauls, checks and interventions that will help prevent stops and breakdowns, & keep the system working properly.

- Lubrication state of the machine
- Wear and tear parts state

Table 6.4-A

Maintenance	Description
V-nail <sup>(R)</sup> driver blade	Replacement every 1.000.000 V-nails driven
Movable parts lubrication	Lubricate the driver blade every 200 working hours
V-nail <sup>(R)</sup> claw heads	Replacement every 5.000.000 V-nails shot
“L” shaped supports (V-nail <sup>(R)</sup> guide)	Replacement every 5.000.000 V-nails shot

## 7 DIAGNOSTICS

### 7.1 SAFETY WARNINGS

The interventions must be executed by personnel properly trained and they must take all precautions in order to avoid accidental starts.

### 7.2 BREAKDOWN SEARCH

TABLE 7.2 - A

TROUBLE	CAUSE	CHECK AND REMEDY
Pressing the foot pedal the v-nails ejection is not regular	V-nails positioned wrong into the V-nail magazine	check that the sharpened side (glue side) faces up -check the V-nails direction
Pressing the foot pedal the v-nails ejection is not regular	magazine is obstructed or damaged	check that the V vertex of the V-nails is pointed to the machine external side
Pressing the foot pedal the v-nails ejection is not regular	Insufficient pressure on the claw pusher	check that the V-nails slide freely in the magazine. Clean the magazine
Pressing the foot pedal the v-nails ejection is not regular	The claw head does not match-up the v-nail height	Replace the clawhead with the correct one
Wishing to insert several V-nails one upon the other in the same point, they do not stack properly or tilt during their insertion	wrong type of v-nails	Replace the V-nails with suitable ones
Wishing to insert several V-nails one upon the other in the same point, they do not stack properly or tilt during their insertion	The frames clamping is not correct (the frame is moving during the V-nail insertion)	check and adjust the vertical clamp position -replace the vertical clamp pad with one more suitable to the frame you are using
Wishing to insert several V-nails one upon the other in the same point, they do not stack properly or tilt during their insertion	Jammed driver blade	Bad driver blade Replace the driver blade
Wishing to insert several V-nails one upon the other in the same point, they do not stack properly or tilt during their insertion	driver blade dirty	Clean the driver blade's upper part of any glue residue.

### 7.3 REQUEST OF ASSISTANCE

For any information regarding Use, Maintenance, Installation, etc.. we remain at your disposal. The Customer has to formulate clearly their questions by sending us a fax listing detailed descriptions of the problem. For eventual explanations you should use this handbook and the instructions listed in the paragraph 1.2.

**Fax: 1-800-426-7019**  
**Phone: 1-800-322-4204**

## 8. SPARE PARTS

### 8.1 SPARE PARTS LIST

Even though the machine has been submitted to several tests and functional checks, we listed below the components that we suggest you have a minimum and sufficient set of. This will help guarantee the shortest possible downtime.

TABLE 8.1 - A

<b>COMPONENT</b>
V-NAILS DRIVER BLADE
V-NAILS CLAW HEADS "L"
SHAPED SUPPORT (V-NAILS GUIDE)

### 8.2 SPARE PARTS ORDERING

We remind you that only a qualified technician can repair the machine.

Therefore we suggest the intervention of your local distributor or ITW/AMP's Center of Technical Assistance, which has the qualified staff, proper equipment and tools, and who uses original spare parts.

To order the spare parts listed above, follow the instructions listed in the paragraph 1.2

## 9 DEMOLITION

### 9.1 DEMOLITION

At the act of demolition it is necessary to separate the parts in plastic material from electric components. Sometimes they must be sent to different gatherings respecting the current Norms.

Concerning the machine metallic mass, it is enough to subdivide the steel parts and those of other metals or alloys, for a proper recycling by smelting.

## 10. ATTACHMENTS

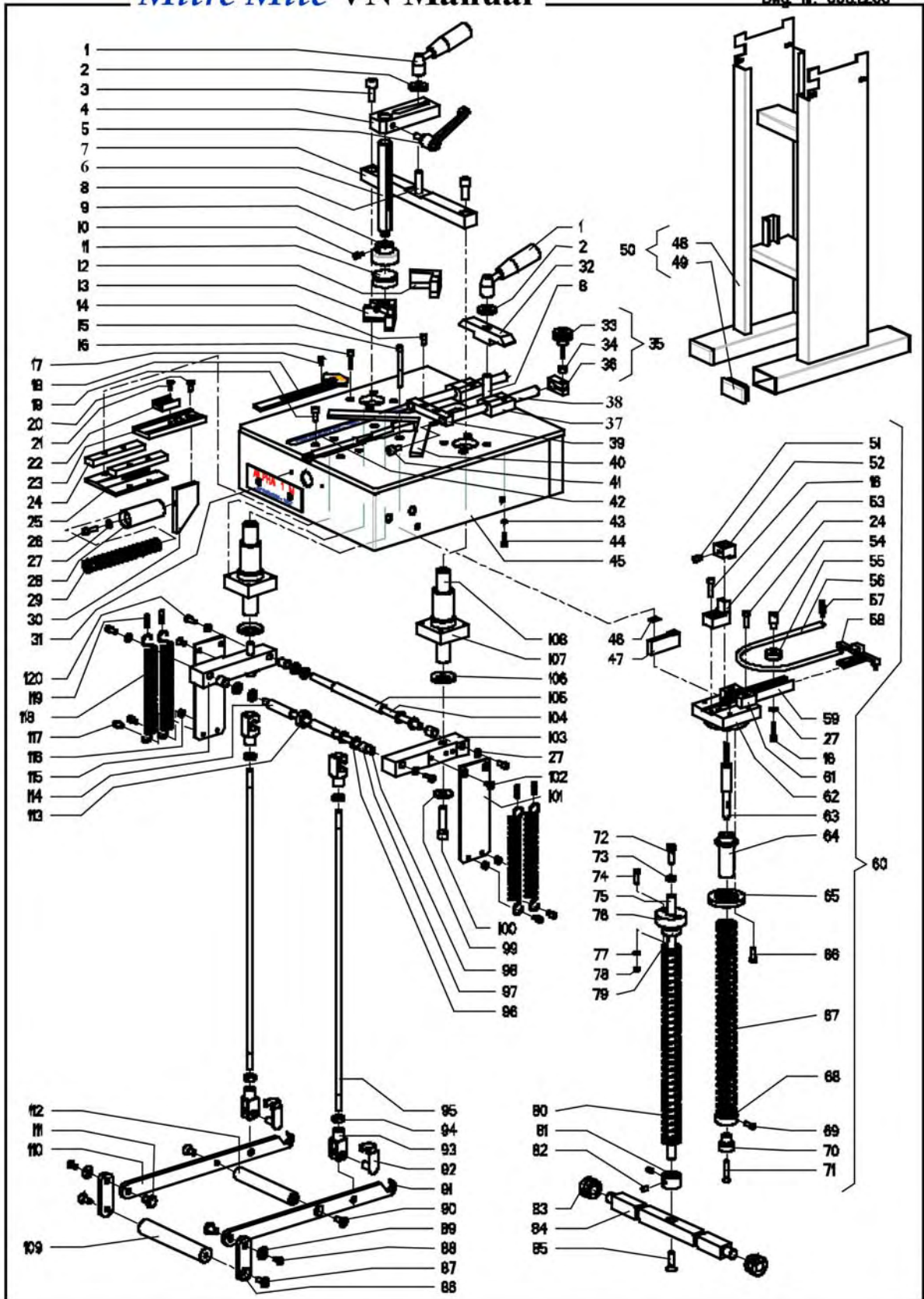
### 10.1 SCHEMES

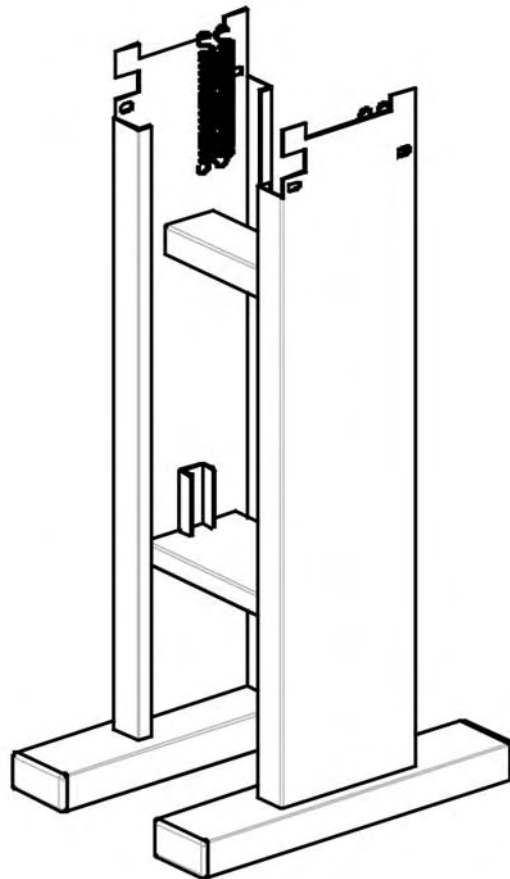
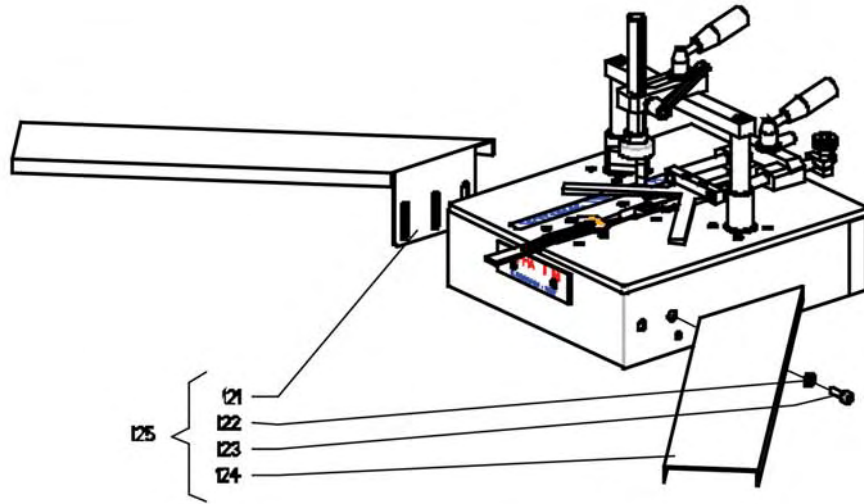
You can find here attached the following schemes:

- (A) Mechanic Schemes
- (B) Sharpening Table

Mitre Mite VN Manual

Dwg. nr. 006.1200







<b>Ref.</b>	<b>Code Number</b>	<b>Qty</b>	<b>Description</b>
1	244660010	2	Ratchet Handle For Top Slide 12mm x 1.25
2	336100030	2	Washer OD=30 ID=12
3	710100151	2	Screw
4	383600061	1	5" Hold Down Rod Clamp 14mm
5	243170010	1	Ratchet Handle for Hold Down
6	244120120	1	Magnetic rod complete
6	334000181	1	Hold Down Rod D=20 L=160
7	376400010	1	Support
8	714300041	2	Set Screw 12 x 60 1.25 Pitch
9	244120130	1	Base For magnetic hold Down
10	710100042	1	Screw SCS 5x10
11	242230010	1	Round pressure plate with felt for magnetic base
11	242230040	1	Round pressure plate with rubber for magnetic base
12	242230020	1	Square pressure plate with felt for magnetic base
12	242230140	1	Square pressure plate with rubber for magnetic base
13	242230060	1	Square pressure plate with rubber bolt on part
14	710100072	2	Screw
15	710100086	4	Screw
16	710100079	12	Screw
17	366210080	1	Screw
18	242170140	1	Screw
19	710100075	4	Screw
20	710200057	2	Screw
21	710200047	1	Screw
22	392750040	1	Support
23	383900600	1	Support
24	381600150	2	Spacer
25	381301180	1	Support
26	710100077	3	Screw
27	718100003	7	Washer
28	336500230	1	Bushing
29	765000022	1	Spring
30	381301190	1	Support
31	365211060	1	Plate
32	383600040	1	Support
33	753320002	2	Fence Stop Clamp Knob
34	336100020	2	Washer For Fence Stop Clamp
35	243150010	2	Complete clamp
36	393150010	2	Fence Stop Clamp
37	334000400	2	Slide
38	383900010	2	Support
39	383900020	1	Support
40	375200010	1	Fence 90 Degree
41	710100112	2	Screw
42	366710050	1	Inch rule
43	718100002	6	Washer
44	710100045	4	Screw
45	211250330	1	Casing
46	381600100	4	Spacer
47	381300080	2	Support
48	291670100	1	Base
49	752600001	2	Lid
50	240450120	1	Complete floor stand
51	710100070	3	Screw SCS 6 x 8
52	394950060	1	Nail Head H5
52	394950020	1	Nail Head H7

<b>Ref.</b>	<b>Code Number</b>	<b>Qty</b>	<b>Description</b>
52	394950030	1	Nail Head H10
52	394950040	1	Nail Head H12
52	394950050	1	Nail Head H15
53	384200050	1	L Block- Support
54	337500220	2	Spacer
55	337000070	2	Pulley
56	765000018	2	Feed Spring 0.8 x 7.5 x 250
57	393850010	2	Spring support
58	245450020	1	Clawpusher with arm
59	398350031	1	Steel nail magazine 2000+
60	224240170	1	Complete head
61	383600020	2	Block for magazine
62	352200240	1	Head
63	298420080	1	Piston and driver blade
64	337000110	1	Slide bushing
65	336100510	1	Washer
66	710100076	2	Screw
67	765000021	1	Spring
68	338500010	1	Ring nut
69	710100044	1	Screw
70	337000120	1	Bushing
71	710200064	1	Screw
72	710600009	1	Screw
73	715350004	1	Nut
74	710100051	2	Screw
75	334000340	1	Stem
76	337000130	1	Bushing
77	718300003	2	Washer
78	715650002	2	Nut
79	337500460	1	Bushing
80	765000022	1	Spring
81	337500391	1	Spacer
82	714300017	2	Set screw
83	337000140	2	Bushing
84	381300701	1	Support
85	710200085	1	Screw
86	381300940	2	Support
87	710200081	2	Screw
88	710200063	2	Screw
89	336100520	2	Washer
90	710200058	2	Screw
91	381300950	1	Support DX
92	753820002	2	Clips
93	753770002	2	Fork
94	715650011	4	Nut
95	334000350	2	Rod
96	395150070	2	Fork
97	718100005	8	Washer
98	337500430	4	Spacer
99	718150005	2	Washer
100	710100158	2	Screw SCS 10 x 45
101	373400521	2	Plate
102	710200059	4	Screw
103	381301070	1	Support DX
104	334000360	2	Rod
105	337500440	2	Spacer

<b>Ref.</b>	<b>Code Number</b>	<b>Qty</b>	<b>Description</b>
106	336100530	2	Washer
107	352200250	2	Head
108	334000330	2	Stem
109	337500410	2	Spacer
110	381300951	1	Support SX
111	334500170	2	Pin
112	337500420	1	Spacer
113	740550018	1	Bearin box
114	337500470	2	Spacer
115	381301060	1	Support SX
116	715650003	2	Nut
117	710100098	2	Screw
118	765800003	2	Spring
119	393850020	2	Spring support
120	710100074	4	Screw
121	710100115	4	Screw
122	391650511	1	Extension SX
123	718100004	4	Washer
124	391650501	1	Extension DX
<b>125</b>	<b>291650010</b>	<b>1</b>	<b>Extension Arm Set</b>

## SCHEMES B - SHARPENING TABLE

	SOFT WOOD			HARD WOOD		
	A	B	C	D	E	F
<i>Height</i> mm	Very soft wood	Soft wood	Averaged soft wood	Averaged hard wood	Hard wood	Very hard wood
<b>H 3* mm</b>	HPT	HPT	HPT	HPT	HPT	HPT
<b>H 5* mm</b>	HPT	HPT	HPT	HPT	HPT	HPT
<b>H 7 mm</b>	SPT	SPT	HPT	HPT	HPT	HPT
<b>H 10 mm</b>	SPT	SPT	HPT	HPT	HPT	HPT
<b>H 12 mm</b>	SPT	SPT	HPT	HPT	HPT	HPT
<b>H 15 mm</b>	SPT	SPT	HPT	HPT	HPT	HPT

SPT      Suitable for soft wood such as: Thailand and Asian South-East wood, Cedar, Pine, Bass, Banak, Obeche, Poplar  
Other materials: Cellular, Polystyrene, Vertical Grain MDF

HPT      Suitable for soft wood such as: Thailand and Asian South-East wood, Cedar, Pine, Bass, Banak, Obeche, Poplar, polystyrene, pvc

HPT      Suitable for soft wood such as: Oak, Ash, Hickory, Pecan, Maple, Cherry, Ramin  
Other materials: Horizontal grain MDF

HDF      Suitable for horizontal Grain MDF & HDF



In order to stack 2 or more V-nails per junction, use V-nails coded **HPT OR HDF**