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**AUTOMATIC 15 & 25 mm FLEXIPOINTS
& «U» SHAPED STAPLES MACHINE**



Technical and User Manual

Version 1 : 09/2010

Cassese / Communication

FB7000

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INTRODUCTION

You have just acquired an FB7000. Congratulations on your sensible choice and thank you for having confidence in us. The FB7000 benefits from the experience in automated machines for which Cassese is famous. The FB7000 enables automatic insertion of flexipoints, for permanent or non-permanent fitting of the frame backboard.

ACCESSORIES SUPPLIED WITH THE MACHINE

- 1 quick-release connector (**fitted on the machine**) / 1 standard hose connector / 1 USA connector / 1 quick-release connector
- 1 wrench 10/12 mm
- 1 Allen key 3 mm
- 1 Allen key 5 mm
- 2 cones Z9756
- 2 joints Z2263

SPECIFICATIONS

FRAME DIMENSIONS

MINIMUM:	9 cm / 13 cm (inside dimensions) with a MIN. moulding width of 10 mm
MAXIMUM:	60 cm / 140 cm (inside dimensions) with a MAX. moulding width of 50 mm
MOULDING HEIGHT:	min. 12 mm / max. 50 mm
REBATE HEIGHT:	min. <u>with</u> frame backboard: 2 mm
ELECTRIC POWER SUPPLY:	220 V single-phase with earth
PNEUMATIC POWER SUPPLY:	compressed air 6-7 bar
POWER CONSUMPTION:	electric = 2.5 kW
DIMENSIONS (MM) :	L = 2950 / W = 2035 and W (cover open) = 2410 / H = 2225 and H (cover open) = 2760
WEIGHT:	800 kg

Maintenance: FB7000 is equipped with a modem so to allow on-line maintenance, and liveupdate of softwares.

FLEXIPOINTS

For FB7000 equipped with Cassese CS 6-15 : Cassese 15 mm (5/8") flexipoints, in bulk packs of 83,000 pcs. Ref: 274POIN (Black). 1 strip = ± 340 points.

For FB7000 equipped with Cassese CS 6-25 : Cassese 25mm (1") flexipoints in bulk packs of 3000 pcs. Ref : 2317225MM (Gold) - 2317425MM (black). 1 strip = ± 214 points.

U-SHAPED STAPLES

For FB7000 equipped with Cassese CS 5/8 : Z14014 0 6 mm (box of 20000) / Z14015 0 8 mm (box of 20000) / Z14016 10 mm (box of 20000) / Z14017 12 mm (box of 10000) / Z14018 14mm (box of 10000) / Z14019 16 mm (box of 10000).

For FB7000 equipped with Cassese CS 80: Z15459 04 mm (box of 1000) / Z15458 06 mm (box of 1000) / Z15457 08 mm (box of 1000) / Z15456 10 mm (box of 1000) / Z15455 12 mm (box of 1000).

OPTIONS

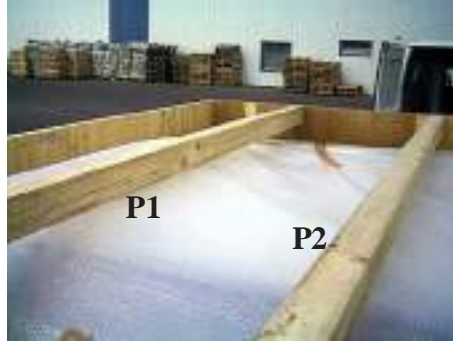
1 x CS 6-15 pistol unit: Z10374 (points 15mm) / 1 x CS 6-25 pistol unit: Z10490 (points 25mm)
1 x CS 5/8 pistol unit: Z13093 (U- shaped staples) / 1 x CS 80 pistol unit: Z16292 (U- shaped staples)
Upstream: Belt conveyor to feed the frames / Downstream: Belt conveyor for transfer to shrink wrapping.
System of measuring by lasers

GUARANTEE

The FB7000 is guaranteed for 1 year, parts and labour, against all manufacturing faults. Wearing parts and those damaged by usage not conforming to the provisions of this document shall be excluded from the guarantee.

UNPACKING AND PREPARATIONS FOR PUTTING INTO SERVICE

A) UNPACKING



Remove the top of the solid box, then remove battens P1 and P2. Remove the 2 sides then battens P3, P4, P5 and P6.



Once battens P8 and P7 have been removed, remove the machine's plastic protection.

Move the machine off its base using a lift-truck. The forks must be positioned between points F1 and F2 under the machine. **EXTENDED FORKS WILL BE NEEDED (MINIMUM 2.5 METERS)**

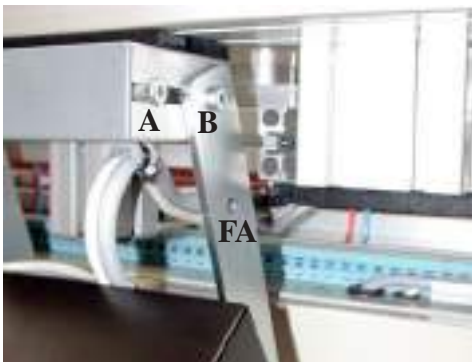
B) ASSEMBLING THE LUMINOUS COLUMN



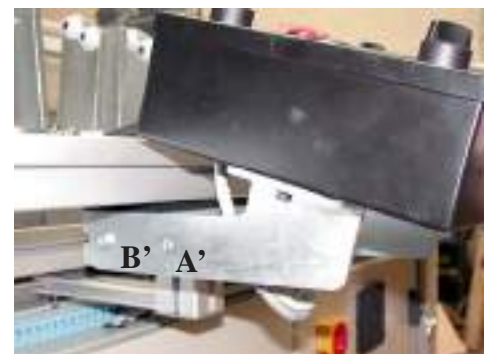
A mounting plate is fitted on the foot of the column. The column is placed on the top left front corner of the machine cover. Retrieve the 2 bolts at this location and mount the luminous column using a 5 mm Allen key.



C) INSTALLING THE CONTROL PANEL



Remove bolts A and A' with a 5 mm Allen key. After unfastening bolts B and B', move the control panel up until holes FA and A are aligned. Secure the 2 arms in position with bolts A and A'. Retighten bolts B and B'.



D) RELEASING THE PISTOLS



The 16 pistols of the FB7000 are in place on their stand and attached by a plastic retainer. Remove them using a cutting tool (e.g. cutting pliers).

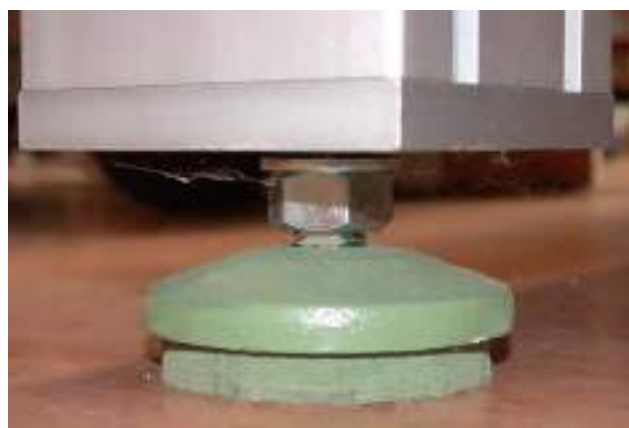
E) ELECTRIC / PNEUMATIC CONNECTION



- a) Open the left access door.
Connect the compressor outlet as indicated on page 5.



- b) Connect the FB7000 to an electric socket, 220 V single-phase with earth.



F) LEVEL ON THE GROUND

Press the Emergency Stop button to prevent any movement. Turn on the electric power to the FB7000 by turning the electric power supply button B (see page 6). Press on the home screen. In the MAIN menu press on SERVICES then on OPEN COVER.

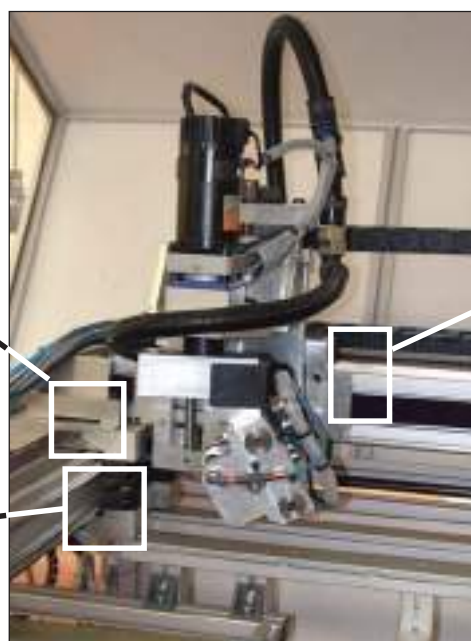
Raise the cover of the FB7000. Check the level of the width and depth on the feed belt. Use the 4 height-adjustable feet to correct these levels, if necessary. To do this, unscrew nut A with a 24 mm wrench then raise or lower the machine by working on the bottom part of the threaded rod with a 12 mm wrench.

G) UNLOCKING THE FRAME GUIDANCE AND CLAMPING BARS

The frame guidance (axes Y / X) and clamping bars have all been locked by a bolt fitted in the groove of their movement shaft. After opening the cover, unfasten and remove these 3 bolts with a 10 mm wrench. The nut can be left captive in the profiled section.



Above: AXIS Y



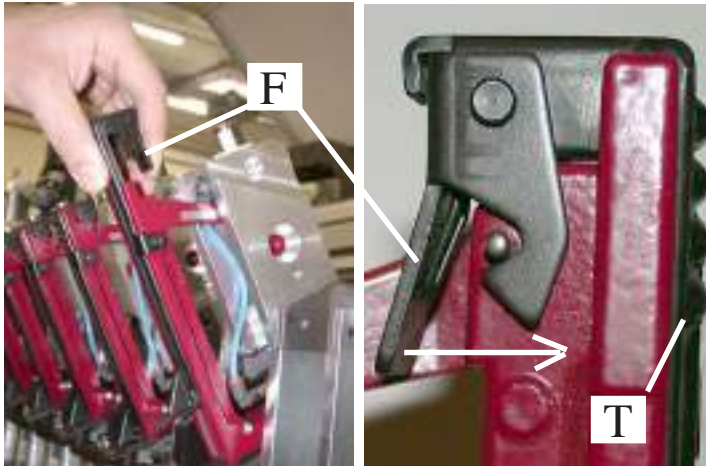
AXIS X



Below: FRAME CLAMPING SYSTEM

PUTTING INTO SERVICE

1) LOADING THE PISTOLS



Release slide T of the pistol by pressing on lever F and lifting up the assembly.

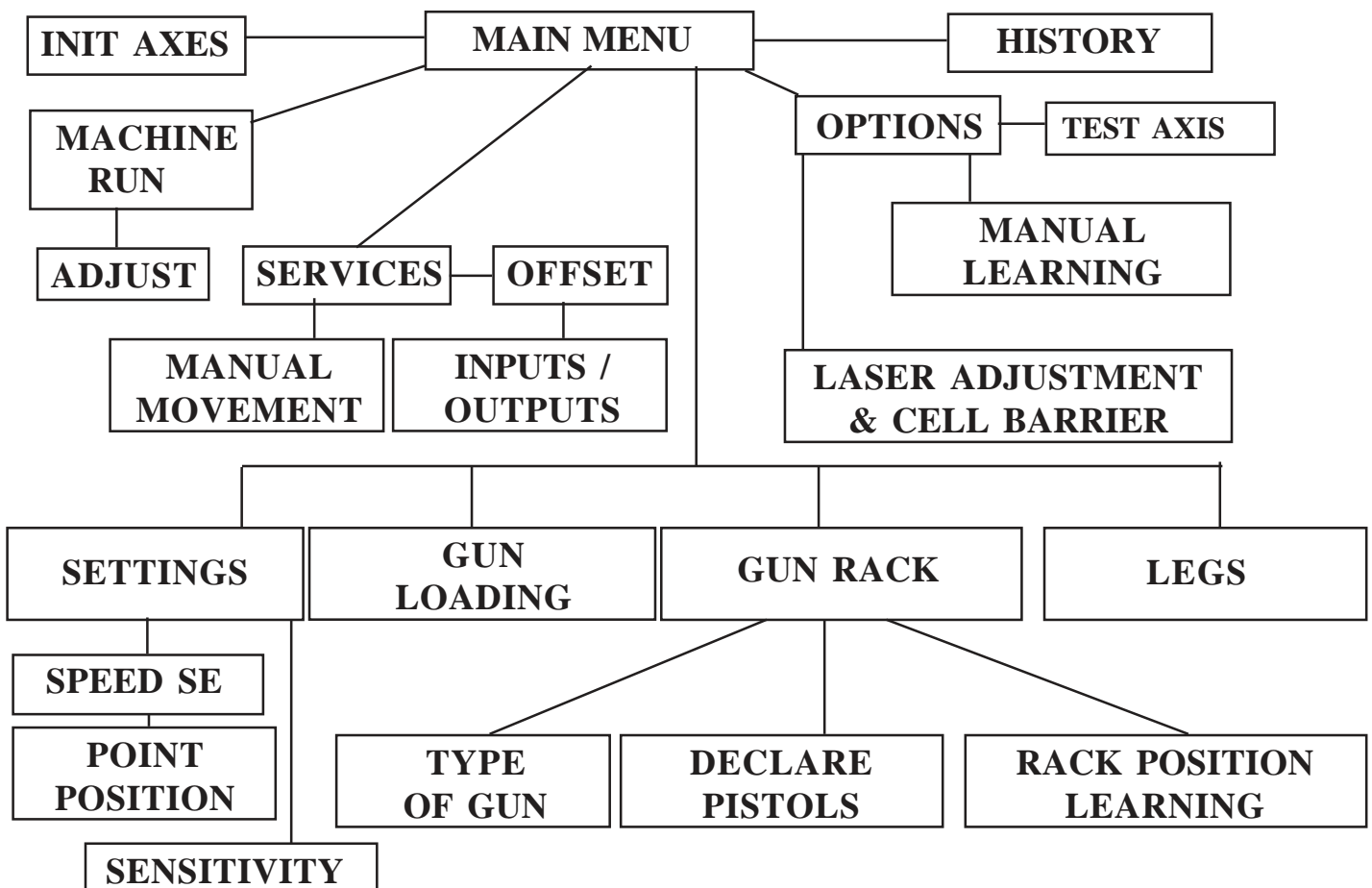


Insert the point strip (flat edge to the inside), then reclose the pistol by pressing on lever F to enable locking of the cartridge.



Follow the same procedure for the other pistols.

DIAGRAM OF FB7000 PROGRAM



FB7000 AIR LINE CONNECTION



USA

STANDARD

MALE CONNECTOR
FB7000

Z 675



Z 675

QUICK RELEASE
FEMALE AIR
CONNECTOR



Z 749



US MALE
CONNECTOR
Z 701

STANDARD HOSE
CONNECTOR
Z 556



COMPRESSOR

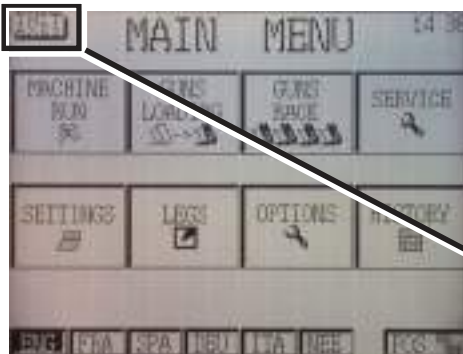
STARTING UP

1) INITIALISATION OF THE AXES

Switch on the FB7000 by turning the electric power supply knob B. Turn on the machine's air supply (see page 2).



The touch screen is initialised and the home screen is displayed:



Press a finger on the screen and the MAIN MENU is displayed. Disengage the Emergency Stop (AU)*, if necessary. Initialisation of the axes is started. Once finished, the flashing display "INITIALISATION NOT DONE" disappears.

*If the emergency stop is engaged, initialisation of the axes starts when you press the INIT AXES button of the MAIN MENU

2) ACTIVE PISTOL

In the GENERAL MENU press GUNS RACK.



This screen shows you the number of pistols present on the machine and the flexipoint loading status of each one.

Each pistol has a number inscribed under its clamp.

After each reload, you must press the EMPTY key corresponding to the pistol. The key will then indicate: FULL. touch also the button (P1 to P16) showing the amount of points shoot by the gun to reset it.

This screen also indicates to you the presence of a pistol on the head:

- CURRENT GUN: number of active pistol.
- ABSENT GUN: Indicates that the gun is in its stand.

IMPORTANT:

a) If the FB7000 indicates the presence of a pistol on the head, and the head is empty, the pistol must be put in place manually to avoid the risk of breakdown. Below is an example of how to proceed.

- Return to the MAIN MENU, then press SERVICE.
- Press OPEN COVER and raise the latter.
- If the present pistol is no. (X), hold it and press the key M(X), to open the clamp and remove it from its stand. Then press the OPEN HEAD key to place the pistol no. (X) on the head. Press the OPEN HEAD key again to reclose the head clamp.
- Reclose the cover and press again on OPEN LOCK to lock it in place.



IMPORTANT: b) If the FB7000 does not indicate the presence of a pistol on the head, but the head is carrying one, this pistol must be removed and replaced manually in its rack. An example of how to proceed is given below using (X) as the pistol number.



In the MAIN MENU press SERVICE, then OPEN LOCK. Open the cover. Holding the pistol, press OPEN HEAD, and retrieved it from the head. Then press key M (X) to open the clamp on the rack corresponding to pistol (X). Replace the pistol, then reclose the rack by pressing M(X) again. Reclose the cover guiding the key into the safety lock. Press OPEN LOCK once again to lock it.

UTILIZATION

1) LEARNING THE FRAME

Please note: The minimum free height in the rebate with the frame backboard = 2 mm.

Minimum distance of frame backboard hanger attachment = 40 mm

If the distance from the hanger attachment is less than 40 mm, learning can be done with a backboard with no attachment.

Press the NEW FORMAT button on the top left of the control panel. The clamping plate then withdraws to the outside and the belt begins to move.

Place **a single frame** face down on the belt (this is to ensure maximum clamping). When the frame reaches the stop plate, the belt stops and the clamping plate moves onto the frame.

The head then passes over the inside sides of the frame to measure the dimensions.

At the end of the learning process, a display of the frame back is shown on screen with the number of calculated flexipoints per side. The distance between 2 flexipoints can be changed (See page 9).

The number of flexipoints can be adjusted for each side **X and Y** using the + and - keys. The maximum number of points per side is 8.

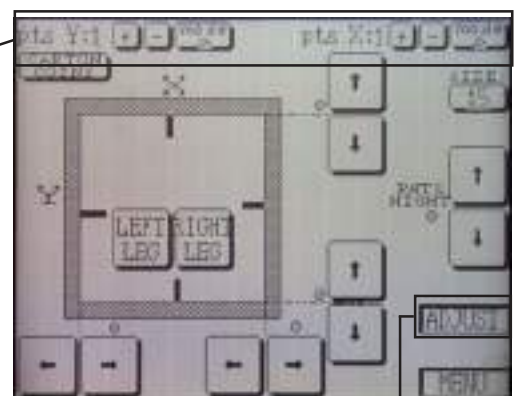
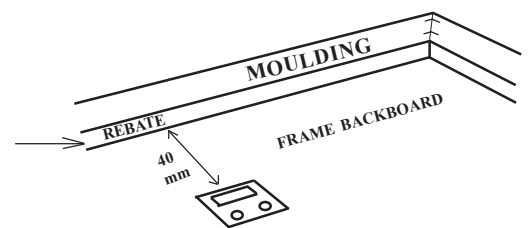
N.B. Learning must be done whenever the type or size of frame changes.

If there is enough space on a frame side to insert at least 2 points, the FB7000 places them in positions that guarantee perfectly square angles (mode 1). If there is only enough space for one point, it will be centred (mode 0).

You can switch from one mode to the other after learning, regardless of the number of points, but in mode 1 there will always be at least 2 points to guarantee square angles.

TIME FRAME: gives you the rate of production (measured per minute).

POINTS and FRAMES gives the frame count and number of points used for the current series. Press these keys to reset the counters to 0.

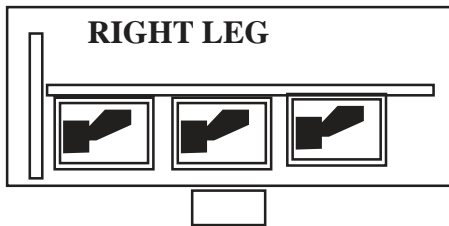
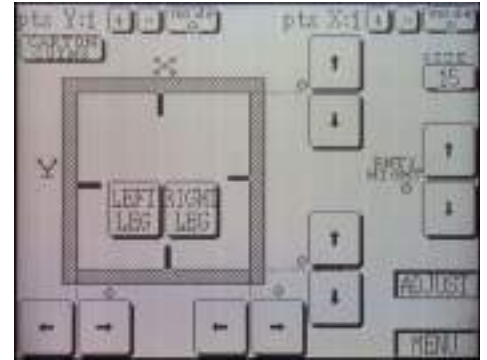


FRAME BACK WITH STRUT LEG

UNDER NO CIRCUMSTANCES MUST THE STRUT LEG PROJECT BEYOND THE OUTSIDE EDGES OF THE FRAME

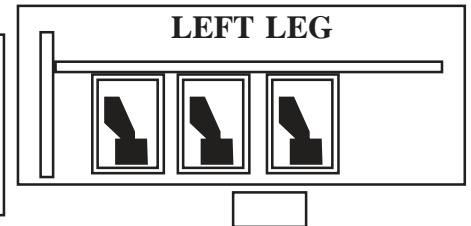
The Learning function for a frame with strut leg is operated as follows:

- Remove backboard with strut from frame
- Fit standard frame backboard of the same thickness.
- In the MACHINE RUN menu, specify left or right leg by pressing the corresponding key inside the frame.
- Place the frame on the conveyor belt.
- Initiate the learning operation, then remove the frame by turning the BELT PASSING button on the control panel.
- Refit the frame backboard with strut



POSITIONS ON BELT

PAY ATTENTION TO THE DIRECTION OF POSITIONING ON THE BELT IN THE CASE OF BACKBOARDS WITH STRUTS. STRUTS MUST NEVER BE POINTING TOWARDS THE OPERATOR



2) EXECUTION

Press the **START** key on the control panel.



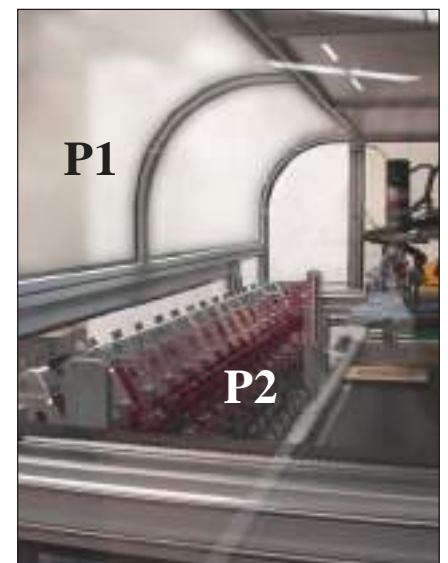
The FB7000 immediately proceeds to fit flexipoints on the learning frame, then removes it towards the machine exit. The result can be checked at this point and corrections made, if necessary. Place the frames of this series upstream of the machine, on the conveyor belt. Frames can be coupled together. The belt stops when the first frame reaches the stop plate. The clamping plate flattens itself against the frame. The FB7000 then fits the flexipoints according to the parameters learnt during the Learning operation, then releases the frame towards the exit, whilst feeding the next frame.

When a series of frames is being executed, when the active pistol is empty, the machine deposits it in its stand. Then starting from the left, it loads the first pistol listed as FULL. On the last pistol being taken, the machine emits 3 short beeps (luminous column = flashing orange). When all the pistols are empty, the machine emits 1 long beep (luminous column = standing orange) and sets itself to standby for gun reloading to continue the frame series.

To reload the pistols during production:

Open the front panel (P1) and fit a strip of points in the pistol(s) (see page 4), then on the MAIN MENU, press GUNS LOADING. Confirm that the pistol(s) is(are) FULL by pressing the EMPTY key corresponding to the pistol number. (If all 15 or 25 mm pistols have been reloaded, use the FILL ALL key). Press also the button (P1 to P16) showing the amount of points shoot by the gun to reset it

SAFETY: The cover must not be opened during use of the FB7000. If the front panel (P1) is opened during pistol loading / unloading, the machine stops and the screen displays •gSAFETY BARRIER ALARM•h. The safety barrier is formed by zone P2, which must not be crossed while panel P1 is open.



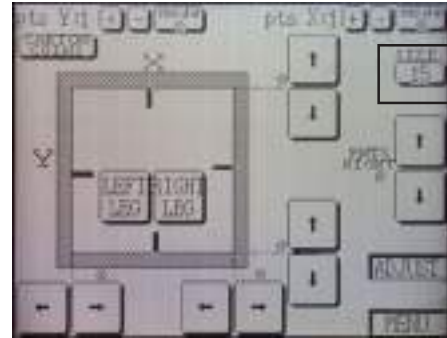
Using type 25 pistols (OPTION)

If you wish to use pistols with 25 mm points, they must first of all be specified as such.

In the MAIN MENU / GUNS RACK / PAGE 2 specify by pressing no. 15 or 25 on the key corresponding to the pistol. Then specify the characteristics of use of the 25 mm point:

- Minimum moulding width
- Minimum length,
- Minimum width
- Distance between points for X and Y. (The specified dimensions are in encoder dots: 200 encoder dots translate into 1 mm).

To enter these values, use the numeric keypad after pressing the KYB key. During a Learning operation, the machine determines whether the conditions have been met and selects point 15 or 25. This selection can nevertheless be changed by pressing the key SIZE in the EXECUTION screen.



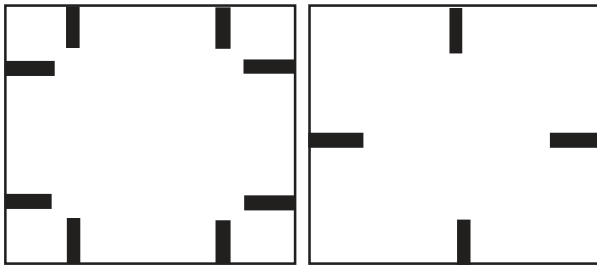
15
or
25

POINT FITTING MODE: 0 or 1.

Point fitting mode is selected automatically when the machine learns the frame. If one of the length or width dimensions is less than 15 cm, mode 0 is selected. If the length and width dimensions are at least equal to 15 cm, Mode 1 will be initiated. This mode enables the points to be placed as near as possible to the angles. Therefore mode 1 necessitates a minimum of 2 points per side.

MODE 1

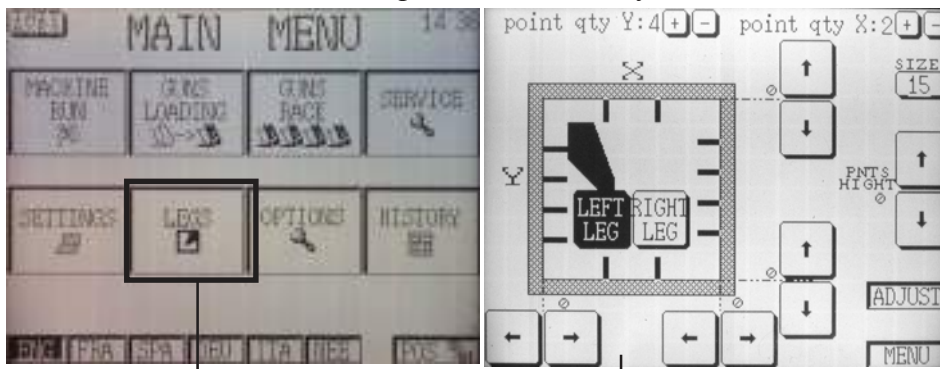
MODE 0



MAIN MENU / SETTINGS/PAGE 2

Specifying parameter setting starting from which size of framework the machine will pass in mode 1

STRUT DIMENSIONS: The X and Y dimension of the strut can be adjusted to enable the point to be fitted as closely as possible to the strut. The setting for each strut can be changed via the numeric keypad. There are 3 possible strut sizes. To do this, on the MAIN MENU press the LEGS key.



The screen allows you to define the X and Y dimensions for each strut.

Strut auto mode = 0 : no automatic strut selection after learning.

Strut auto mode = 1 : after learning, if the frame length is equal to Strut Length 1, 2 or 3, the RIGHT strut, size 1, 2 or 3 is automatically selected.

Strut auto mode = 2 : after learning, if the frame length corresponds to Frame Length 1, 2 or 3, the LEFT strut size 1, 2 or 3 is automatically selected.

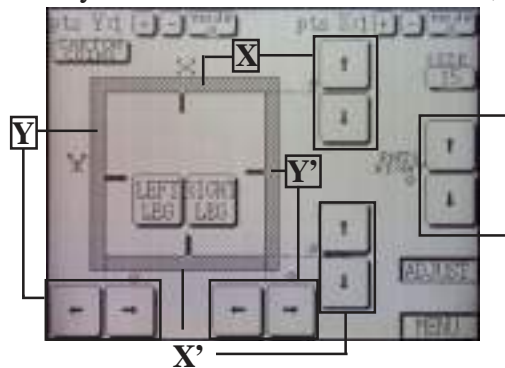
VARIATIONS IN FRAME DIMENSIONS

Variations in dimensions may occur in your frame series, especially when moving from one batch of mouldings to another. This can cause differences in the penetration depth of the flexipoints and trigger alarms.

FORCE SENSOR SAFETY DEVICE

There are 2 possible solutions:

- Perform a LEARNING operation for the new series.
- Adjust the dimensions manually in the MACHINE RUN screen, using the keys marked with an arrow.



Adjusting the dimension of the positioning height of the points in the rebate. The positioning can be adjusted by a maximum of + or - 3 mm, in increments of 0.2 mm.

Maximum correction is 3 mm for the height and 2.5 mm for the sides. Corrections are displayed in tenths of a mm.

Use of CS5/8 and CS80 guns – U-SHAPED STAPLES (OPTION)

1) PARAMETERS



MAIN MENU \ SETTINGS / PAGE 2.

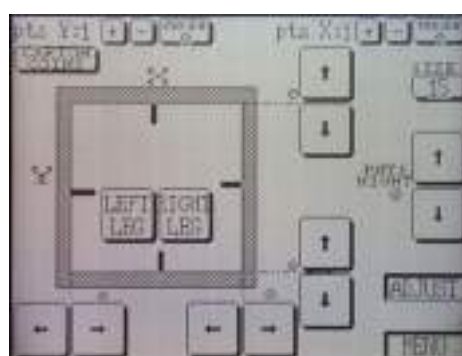
When producing a frame permanently closed with U-shaped staples, the gun does not touch the moulding or back during the insertion operation.

These values redefine the position of the gun. Only CS5/8 and CS80 guns can be offset. Type 15 and 25 guns have the same characteristics.

REMINDER: In each screen where a numerical value can be changed press the “KYB on/off” key to have the numeric keypad displayed / removed. Then move the cursor to the value in question by pressing the ←, →, ↑, and ↓ keys. Change this value using the numeric keypad and confirm by pressing the ↵ key. If necessary, the position of









the keypad can be changed by pressing the  key, if the value to be changed is under it.

2) USE



It is possible to work with 4 types of gun at the same time. To prevent accidents, the type of gun in each location of the gun rack must be correctly declared.

MEANING OF THE INDICATORS ON THE LUMINOUS COLUMN

	STANDING RED:	Emergency Stop
	BLINKING RED:	Initialisation of the axes not done
	STANDING BLUE:	Machine in operation
	BLINKING BLUE:	Learning underway
	STANDING WHITE:	Cover open
	STANDING ORANGE:	All pistols are empty
	BLINKING ORANGE:	There is only this 1 full pistol left
	STANDING GREEN:	Power normal

MEANING OF THE SOUND ALARMS

- 1 LONG BEEP**
ALL PISTOLS ARE EMPTY
- 3 BEEPS**
ONLY ONE FULL PISTOL LEFT
- 3 REPEATED BEEPS**
FAULT DURING INSERTION OF THE
FLEXIPOINTS (see here below)

MANUAL LEARNING – MAIN MENU \ OPTIONS \ PAGE 3

The FB7000 allows manual learning of the frame dimensions. Insert the frame in the machine as far as the stop. Clamp the frame using key S.

Press SET CLAMP.

Position the head so that the gun is above the moulding height.

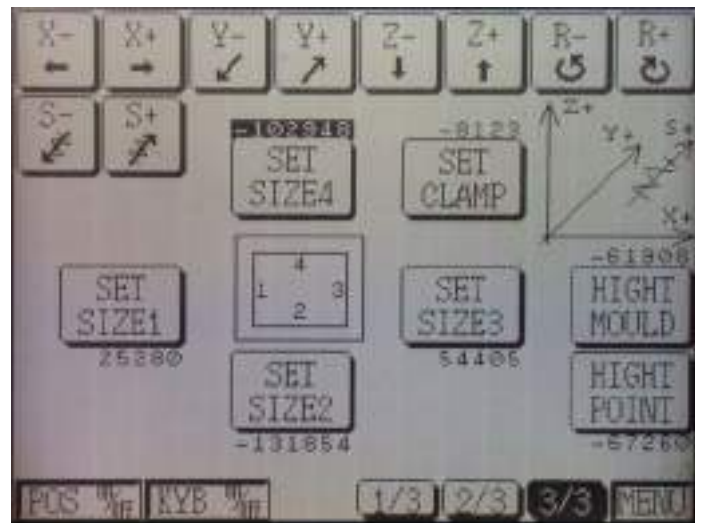
Press HEIGHT MOULD. Position the head so that the gun nozzle is in point firing position.

Press HEIGHT POINT.

Position the head so that the gun is in SIZE 1 production position.

Press SET SIZE 1. Repeat the operation for sizes 2, 3 and 4.

The FB7000 is now set to produce this frame.

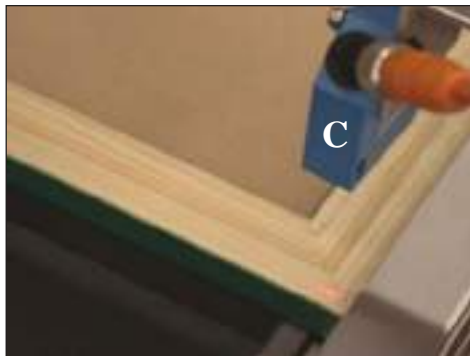
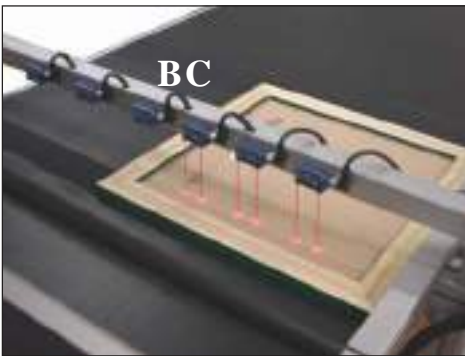


MAINTENANCE: PISTOL LUBRICATION



A warning message will be displayed every million pistol trigger strokes asking you to check the level of the oil remaining in the lubricator (bottom left of the machine). If the oil level is visible in one of the lubricator lights, fill the lubricator with oil ref. ISO FD22, then press RAZ MESSAGE.

LASER (OPTION) - MAIN MENU\OPTIONS\PAGE 2



As an option, the FB7000 can operate with rapid frame dimension detection via a laser cell (C) and cell barrier (BC).

These options reduce the learning time to roughly 15 seconds for any frame dimension.

In addition, for a frame with strut back, learning is possible in a single action without removing the back.

If these options are validated (laser cell = 1, cell barrier = 1), the frame must never be pushed on the main belt of the machine.

It must be pushed against the guide on the upstream belt.





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