

Model Z20T

CENTRALIZED CARD ISSUANCE SYSTEM



OPERATOR MANUAL

Revision 2.01



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Chapter 1 – Introduction

1.1 Warnings



Respect these warnings and follow the indications labeled on the system. Power the system through the electrical power supply indicated on the related label.

Connect the system to plugs-in provided with a grounding device. Avoid using plugs-in placed on the same circuit in connection with machines starting up and stopping periodically. Take care of the power supply cable, in order to avoid damaging or wearing out.

The system has never to be installed near heat or cooling sources.

When the cover is open the system automatically stops all the motors; this kind of safety is useful when cleanings and changing of consumables have to be performed.

Only perform the adjustments reported in this manual: a wrong adjustment may cause serious damages.

1.2 Specifications

| | |
|-----------------------------------|---|
| Productivity Speed | more than 900 card per hour (45 ch./card) |
| Printing Mode | Thermal Transfer and Sublimation 300 DPI Edge-to-edge printing |
| Ribbon Type | Black (500 meters) Scratch Off (100 meters) 2 panels Black and Overlay (500 images) 5 panels YMCKO (700 images) YMCKO_S with small YMC (400 images) |
| Card Format | ISO CR80 – ISO 7810 |
| Hopper Capacity | Input: 250 cards Output: 200 embossed cards (approx.) |
| Size (incl. floor support) | Width: 210 cm (82.6") Depth: 55 cm (21.7") Height: 118 cm (46.5") |
| Weight (incl. floor supp.) | 275 Kg (606 lbs) |
| Communication Interface | RS232 serial port and parallel or USB |
| Electrical Requirements | 110V, 120V, 220V, 240V; 50/60 Hz |
| Operational Environment | Temperature: 13/35°C (55/95°F) Humidity: 20% to 80% non-condensing |

1.3 Choice of site

Follow the instructions reported below to choose the site where you want to place the Z20T system and to remove the package.

Before starting the installation, choose a wide and functional area with the following requirements:

- A level and rigid surface. Yielding surfaces, like pre-manufactured platforms or floors covered with a fitted carpet, don't guarantee the right alignment of the modules making up the Z20T system.
- A good accessibility. Leave free spaces all around the machinery, in order to allow access to inspection and maintenance areas, and a right ventilation of the system. Also leave at least one meter in front of the machine, so that the operator using the front panel has got a proper working area.
- Favorable environment conditions. Install the Z20T system in a cool and dry place; avoid too cold or too warm temperatures; keep the machinery far from humidity, dust and smoke. Don't directly expose to heat or sunlight. No electromagnetic interferences.
- Proper electrical power supply. Connect the system and its devices with cables fit to your electrical power supply net. When using extensions or multiple plugs-in, be sure that the total absorption doesn't exceed the maximum allowed value.

1.4 Removal of the package

The system is delivered with two wooden cases: one for the machine and the other for the floor support.

It's necessary to pay attention to the infrastructures' size (doors, hoists, etc.) through which the machine must be passed to be definitively settled in its site.

To dismantle the cases, carry out the following procedure:

- Unscrew the side upper screws to remove the top cover.
- Remove the accessories: cables, keyboard, documentation, etc.
- Remove the top polyurethane shell.
- Unscrew the bottom screws to remove the side cover.
- Extract the machine or the support from the bottom polyurethane shell (using at least four persons).
- Remove the polyurethane film protection.

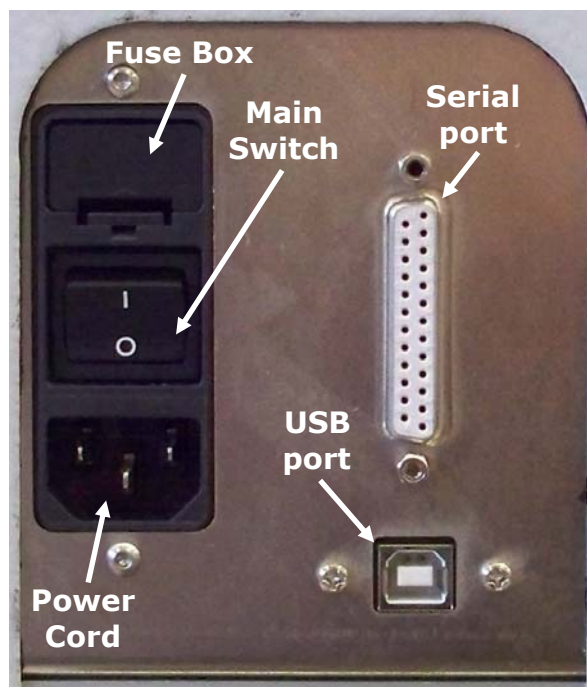
Inside the machine floor support there is the monitor support.

It is advisable to keep the cases, the pallets and the protective materials for possible reuse.

In addition to the machine, the following components are also packed inside: Power cord, USB cable, Serial cable, Keyboard, CD containing MatiCard® Card Design Software, Operator Manual and other documentations.

1.5 Installation

Now you have to connect the power cord and the interface cable on the back panel of the system. On the same side you'll find the machine label containing the specifications of the system; verify that the voltage marked on the label corresponds with your country voltage supply.

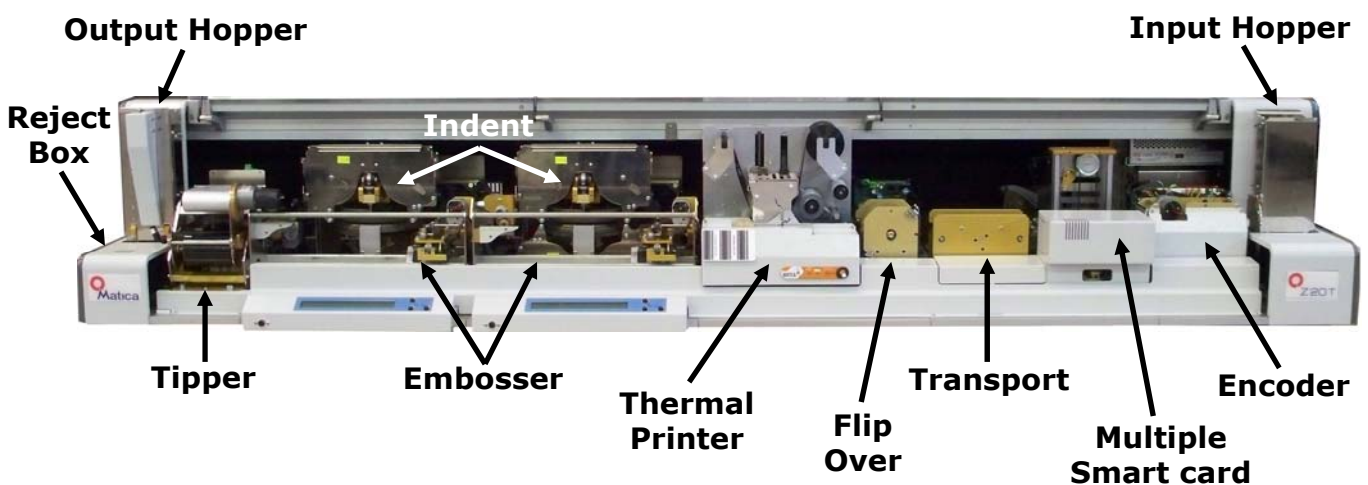


Chapter 2 – Start up

2.1 Configuration

The Z20T system is provided with the following features:

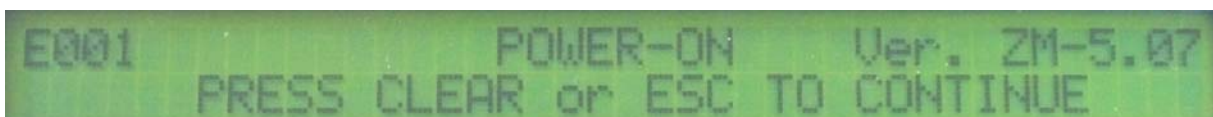
- Automatic Input Hopper
- HiCo (2540~4000 Oe) / LoCo (300 Oe) Magnetic Stripe Encoder
- Single Smart card personalization module (optional)
- Two Transport modules (standard)
- Two Multiple Smart card modules (optional)
- Single Flip Over module (standard)
- Two Flip Over modules for dual sided printing (optional)
- Full color Thermal Printer module
- Two Embossing modules
- Two Front and Rear Indent modules (optional)
- Tipper module
- Output Hopper with Reject Box



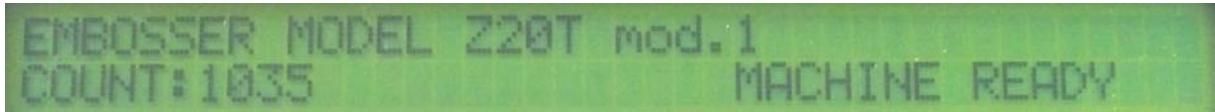
Refer to paragraph 2.4 for details and to chapter 3 for consumables.

2.2 Power On

Power on the machine switching the main switch in the **I** position and the LCD display will show:



Press CLEAR on the console (or ESC on the keyboard) to restore the machine and the LCD display will show:



Now the system is ready to work.

2.3 Console

The Z20T console is made by:

1. LCD display (2 lines per 40 characters)





2. Three function keys:

- key CLEAR to clear the error condition
- key PAUSE to enter in pause mode
- key SET to personalize the card in pause mode one module per time.

Pressing the PAUSE key the RED LED will blink. Now use the CLEAR key to have a "Step to Step" motor motion (only in the embosser module). When finished, press the PAUSE key again.



3. Two colors LED with the following meaning:

- GREEN color : when the machine is READY
- RED color : when standing the machine is BUSY
when blinking the machine is in ALARM

4. One connector for the keyboard

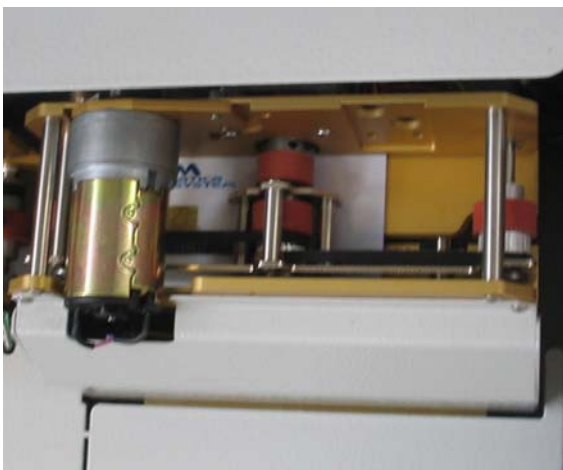


2.4 Working Cycle

To perform a working cycle you must introduce the plastic cards to be personalized into the automatic Input Hopper, with the magnetic stripe on the bottom right side of the card. Then you had to run the desired job with the MatiCard® software.



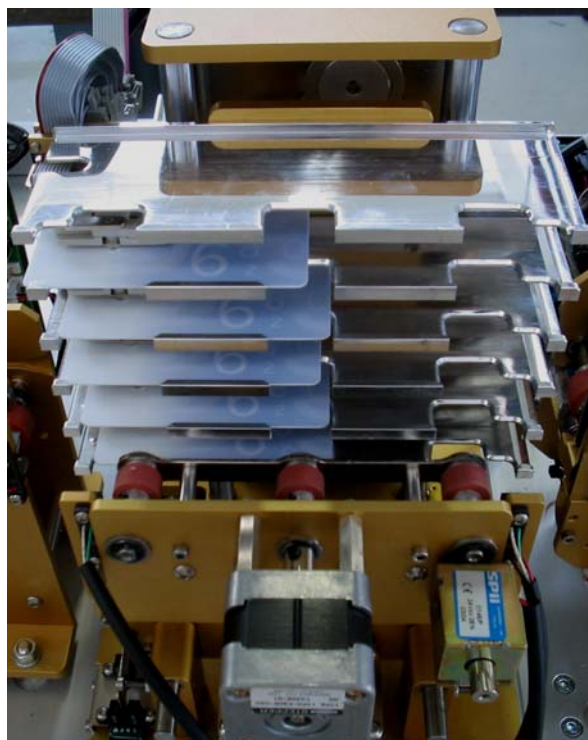
The card is first moved towards the Encoder. This module encodes (write & read) the magnetic stripe present on the card, with a capacity of reading and writing 3 tracks at high or low coercivity. The Encoder could also be equipped with a chip contact to personalize a smart card.



The card is then passed to the Smart Card personalization module or to a Transport module, depending on the configuration of the system.

The Smart Card module can manage the personalization of the chip present up to five cards in the same time. The mechanism works as an “elevator” by which the 5-station Smart Card module raises itself one station at the time until all 5 stations have been loaded, upon which the module descends to its initial position. At this point the first card, now fully personalized, is transferred to the first Flip Over module and replaced by a new card, and the process described above is repeated.

If there isn't any chip personalization, the Smart Card module just passes the card to the next module.



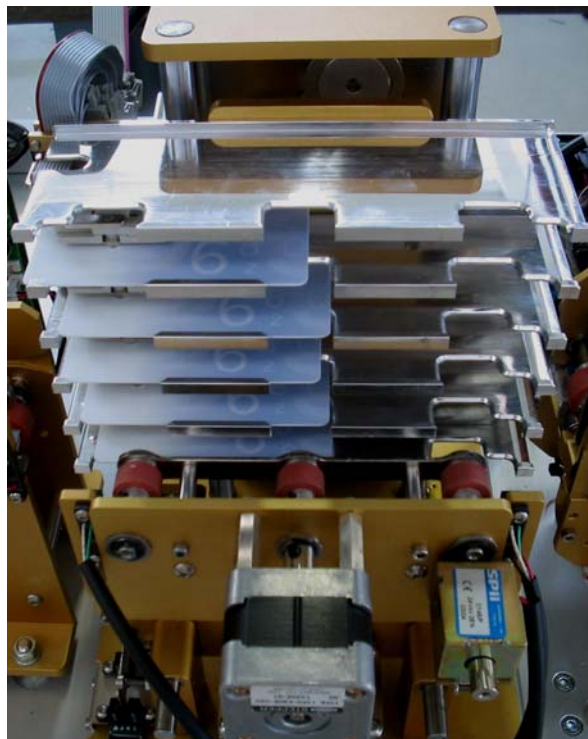
The Transport module only passes the card to the next module.



The card is now passed to another Smart Card personalization module, to another Transport module or to a Mini Transport module, depending on the configuration of the system.

The Smart Card module can manage the personalization of the chip present up to five cards in the same time. The mechanism works as an “elevator” by which the 5-station Smart Card module raises itself one station at the time until all 5 stations have been loaded, upon which the module descends to its initial position. At this point the first card, now fully personalized, is transferred to the first Flip Over module and replaced by a new card, and the process described above is repeated.

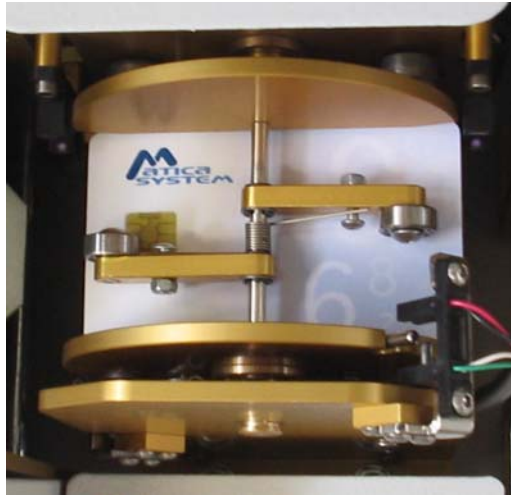
If there isn't any chip personalization, the Smart Card module just passes the card to the first Flip Over.



The Transport module or the Mini Transport module only passes the card to the Flip Over module.



The Flip Over can simply pass the card to the Thermal Printer module, if the card has to be printed on the top side, or rotate it 180° if the card has to be printed on the bottom side.

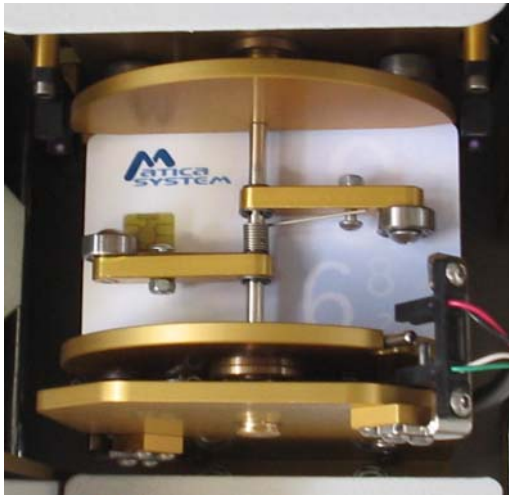


The Thermal Printer module performs a 300 dpi graphic printing of the card in the desired position; the printing could be black, black with overlay protection, scratch off or full color with overlay protection, depending on the ribbon type. The module can support a ribbon length up to 500 meters and print the card from edge to edge (for the available MATICA ribbons see paragraph 1.2). The Printer is equipped with a system which combines a cleaning tape and a cleaning roller called AdvanceClean®, and ensures that cards are free from dust and debris. Furthermore the Thermal module every 5000 cards automatically gives a warning, by blinking a red led on its console, to remember that the printing head has to be cleaned.



The card is then passed to another Flip Over module or to the first Embosser module, depending on the configuration of the system.

This Flip Over can simply pass the card to the Embosser module if the card has to be embossed on the same side, rotate it 180° if the card has to be embossed on the other side, or rotate it 180° and pass it back to the Thermal Printer module if the card has to be printed on the other side.



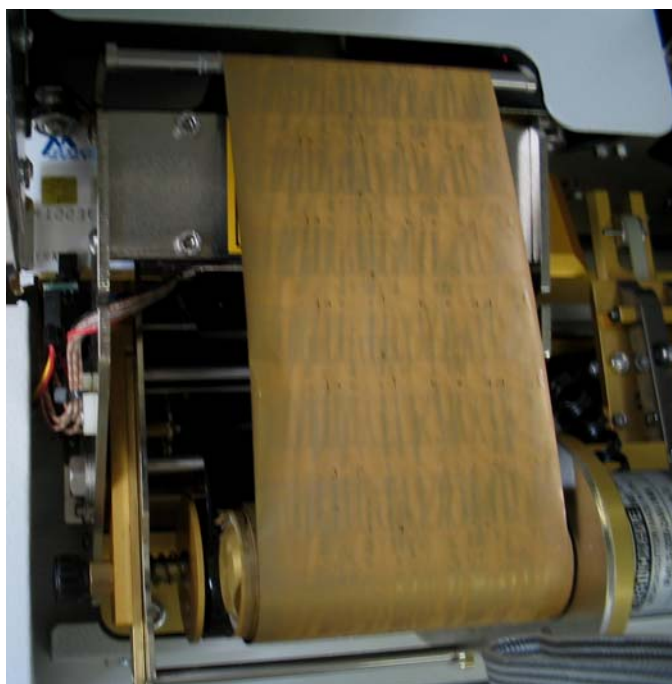
The first Embosser module emboss the characters present into its drum in the desired position on the card. This module can be equipped with two indent module, front and rear, to perform the indenting personalization of both sides of the card in a single pass.



The card is now passed to the second Embosser module. The second Embosser module, as the first one, emboss the characters present into its drum in the desired position on the card. This module can be equipped with two indent module, front and rear, to perform the indenting personalization of both sides of the card in a single pass.



Then the card passes into the Tipper module, which colors the embossed characters; the color depends on the kind of ribbon mounted.



At the end of the cycle, the card is stored in the Output module; if the card is well personalized will be in the upper Output Hopper, while if the card is rejected or defective will be in the lower Reject Box.



Chapter 3 – Consumables

3.1 Changing Thermal module cleaning tape

When the Thermal Printer cleaning tape is finished (**fig. 1**), you have to replace it, in order to avoid plastic cards from dust before printing. First of all you must remove the used tape from its rolls (**fig. 2**).

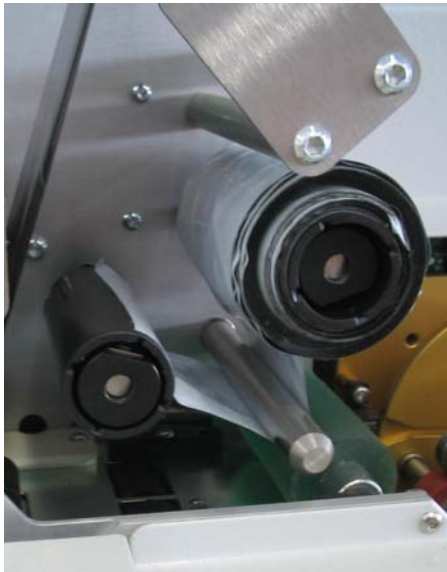


fig. 1



fig. 2

Now you need to insert the new tape in the two related rolls (**fig. 3**) with the full spool in the left roll, the empty spool in the right one and the ribbon over them. Be careful to put the tape under the shaft between the rolls (**fig. 4**).



fig. 3

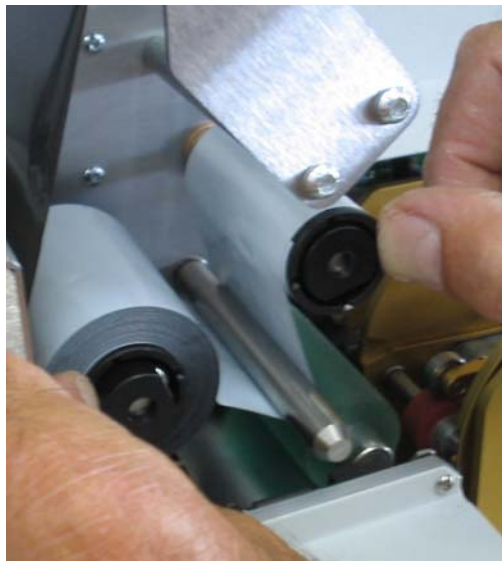


fig. 4

3.2 Changing Thermal module printing ribbon

When the Thermal printing ribbon is finished (**fig. 1**), you must replace it. First of all you had to unhook the print head by pulling the related spring (**fig. 2**), in this way the head lifts up horizontally.



fig. 1



fig. 2

Now it's necessary to remove the used ribbon from its inserts (**fig. 3**).



fig. 3

Then you have to put the new ribbon over its inserts, with the full spool of the ribbon in the right inserts and the empty spool in the left ones (**fig. 4**). Be sure that the ribbon runs over its spools, and also that the large ends of the ribbon spools will be in the inner inserts and the narrow ends in the outer ones.



fig. 4

The first spool to insert is the full one, then you must unwind the ribbon and pass it under the print head (**fig. 5**).



fig. 5

Now you can insert also the empty spool (**fig. 6**).



fig. 6

Finally push down the print head (**fig. 7**) in order to hook the related pin to the module (**fig. 8**).



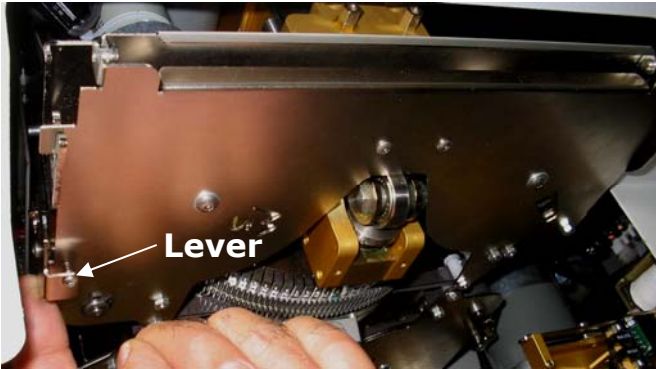
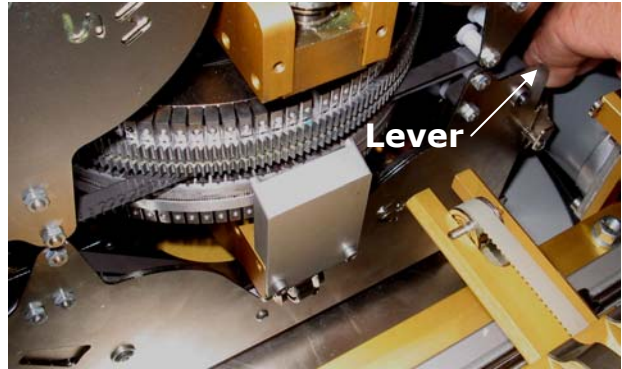
fig. 7



fig.8

3.3 Changing Indent ribbon

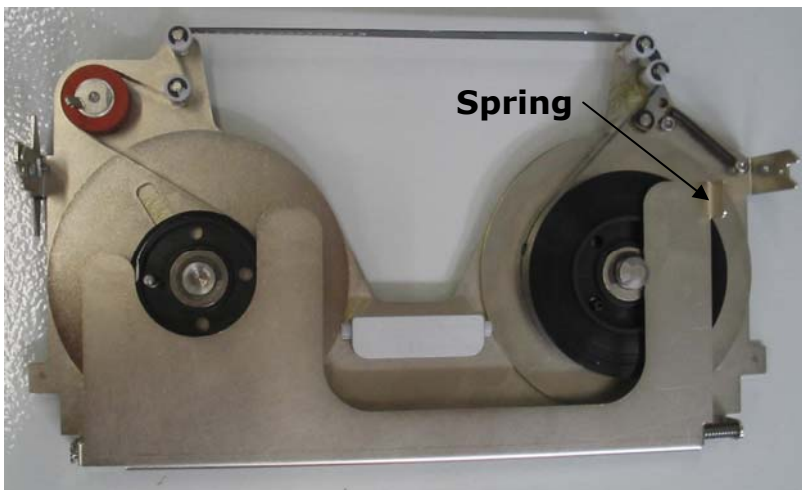
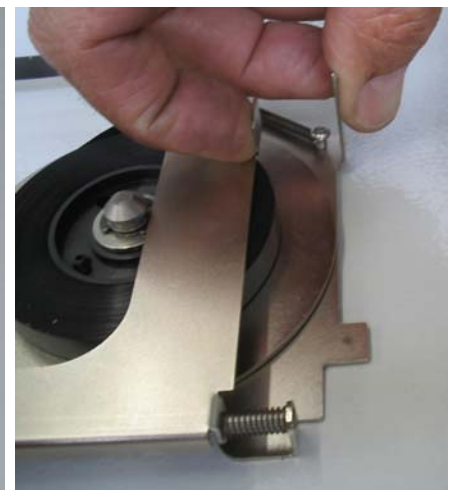
To change the Indent ribbon, first of all you must unhook the desired Indent cartridge by pulling the related lever; for the upper cartridge the lever is on the left side (**fig. 1**) while for the lower cartridge the lever is on the right side (**fig. 2**).

**fig. 1****fig. 2**

Now you can pull out the upper (**fig. 3**) or the lower (**fig. 4**) cartridge.

**fig. 3****fig. 4**

Then you have to put the cartridge, either upper or lower, on a plain surface (**fig. 5**) and pull the spring that releases the ribbon cover (**fig. 6**).

**fig. 5****fig. 6**

At this point you need to lift up the ribbon cover (**fig. 7**) and remove the used ribbon from the cartridge (**fig. 8**).



fig. 7

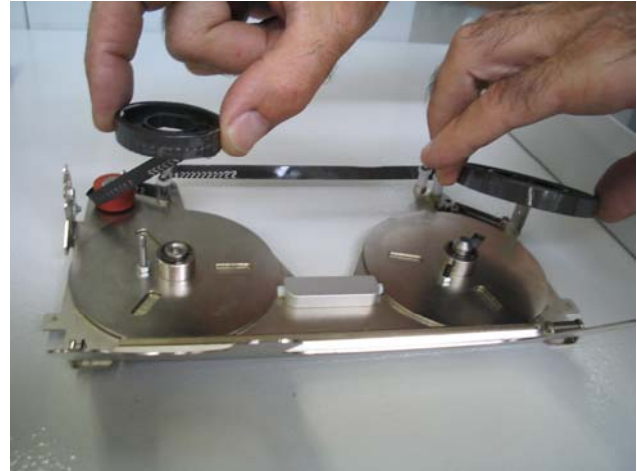
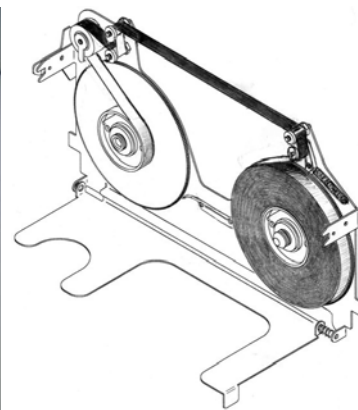


fig. 8

Now you can insert the new ribbon in the related pins with the full spool on the left pin and the empty spool on the two right pins (**fig. 9**), from the ribbon rolls point of view.



fig. 9



You must be absolutely sure that the ribbon runs with the ink side opposite to the pin spools, trough this path: outside the two rolls near the full spool (**fig. 10**), outside the first roll and inside the second roll near the empty spool and finally outside the big red roll (**fig. 11**).

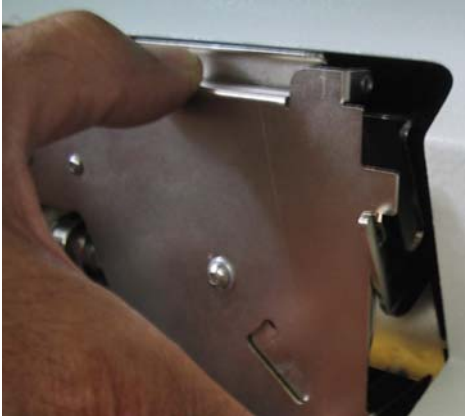


fig. 10

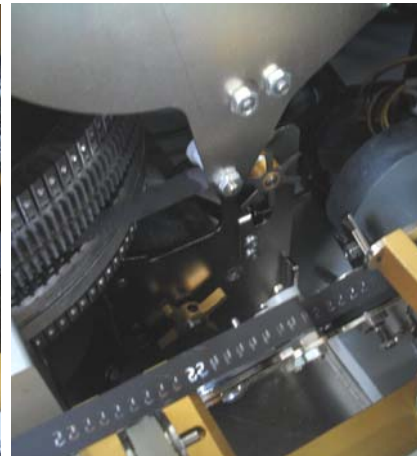


fig. 11

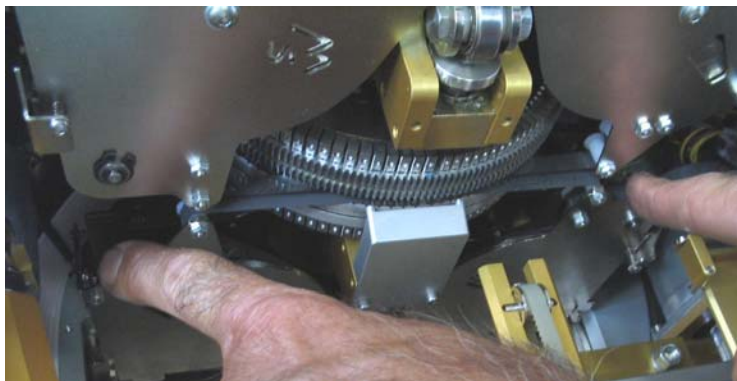
Then you have to put the side projections of the upper cartridge in the related inserts on the module (**fig. 12**). Finally you must push the cartridge in order to hook it, paying attention to pass the ribbon under the upper punches (**fig. 13**).

**fig. 12****fig. 13**

Similarly, you have to put the side projections of the lower cartridge in the related left (**fig. 14**) and right (**fig. 15**) inserts on the module

**fig. 14****fig. 15**

Finally you must push the cartridge in order to hook it, paying attention to pass the ribbon over the lower punches (**fig. 16**).

**fig. 16**

3.4 Changing Tipper ribbon

When the Tipper ribbon is finished (**fig. 1**) you have to unhook the ribbon cartridge, by pulling the black knob on the left of the module, in order to extract the cartridge itself (**fig. 2**).

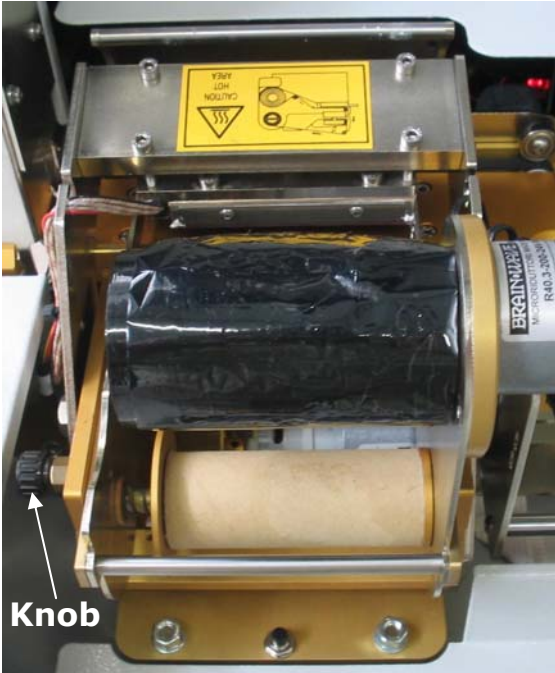


fig. 1



fig. 2

While you are holding the cartridge, you must remove the used ribbon from its spool (**fig. 3**) and pull the disk spring that holds the old carton core (**fig. 4**).



fig. 3

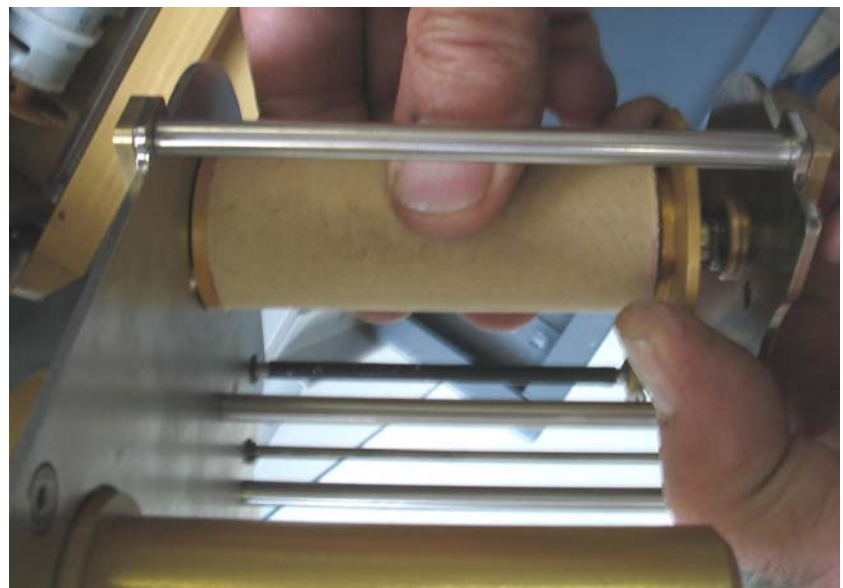


fig. 4

Then you can extract the old carton core (**fig. 5**) and insert in the same position the new ribbon by pulling the related disk spring (**fig. 6**). Be careful that the ribbon unwinds over the core.

**fig. 5****fig. 6**

Now you must be absolutely sure that the ribbon follows this path: over the nearest first shaft, under the black shaft (**fig. 7**), between the third little shaft and the fourth one, over the fifth little shaft and finally under the farer shaft (**fig. 8**).

**fig. 7****fig. 8**

At this point you have to pull up the ribbon, pass it over the upper shaft, and put the cartridge in its beginning position on the module (**fig. 9**); then you can hook the cartridge by pushing it until the black knob clicks (**fig. 10**).



fig. 9



fig. 10

Now you must insert the new carton core in the top spool (**fig. 11**) and fasten the ribbon on it with a stick tape (**fig. 12**).

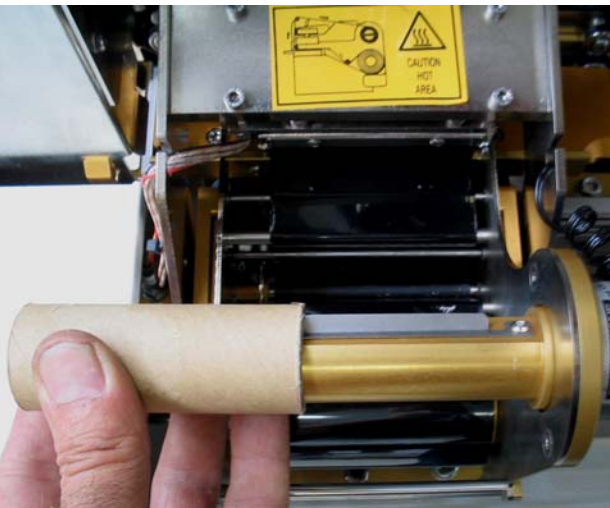


fig. 11



fig.12

Finally you have to push the black button on the module (**fig. 13**) in order to tighten the ribbon and wind it on the top spool (**fig. 14**).

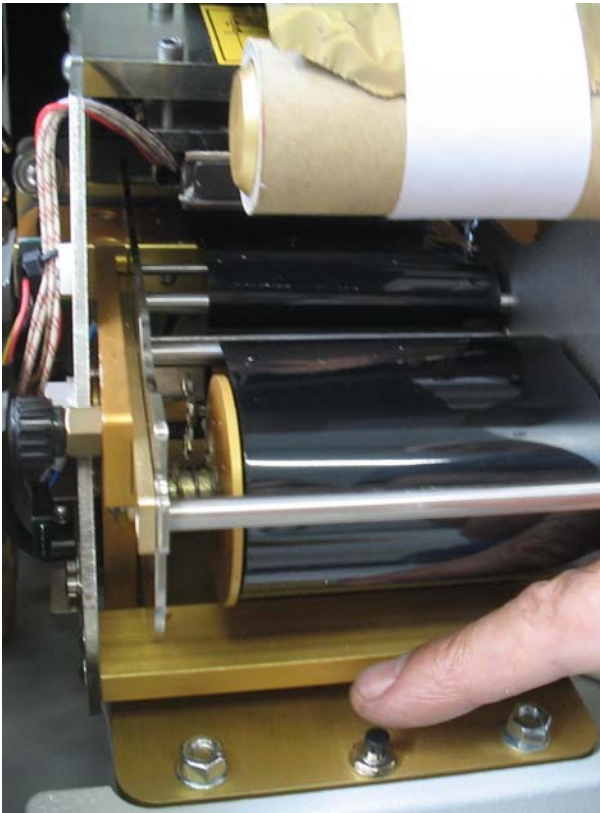


fig. 13



fig. 14

Chapter 4 – Error List

When an error occurred the LCD will show the messages listed below. Apply the proper procedure to remove the error condition and then press CLEAR key to continue (please read carefully the error comments).

If there are two modules of the same kind in the system (for example two Embosser), in order to distinguish which module generated the error, the related code is followed by another number; this number represents the order, in the working cycle, of one module compared to the other one.

| ERROR CODE AND DESCRIPTION | SYMPTOM AND CORRECTIVE ACTION |
|--|---|
| E001 POWER-ON | At the power on the machine will show this message. Press CLEAR to continue. |
| E002 CONFIGURATION LOST | Hardware error: the mechanical parameters of the machine are lost. This can happen when a new version is downloaded. |
| E003 RAM ERROR | Hardware error: the RAM is defect. Power Off and On the machine again, if the error persist is necessary to change the logic board. |
| E004 WORKING TIME LOST | Hardware error: the working time and counters are lost. |
| E005 FORMAT AREA DATA LOST | Hardware error: the stored format is lost. |
| E012 PROTOCOL: FORMAT NUMBER ERROR(F0-F9) | Format error, check the embossing format error. The format number must be from 0 to 9 for the embossing. |
| E013 PROTOCOL: FORMAT NAME RROR | Format error, check the embossing format error. The Format name is max 8 digit. A SPACE or CR must separate the format name to the next command: F1 FN=TEST1 Y100X100 → OK F1 FN=TEST1Y100X100 → WRONG F1 FN=TEST 1 Y100X100 → WRONG |
| E014 PROTOCOL: CARD DIMENSION ERROR | Format error, check the embossing format error. Wrong SX or SY command. |
| E015 PROTOCOL: UNIT MEASUREMENT ERROR | Format error, check the embossing format error. Wrong Un command. |
| E016 PROTOCOL: FIELD NAME ERROR | Format error, check the embossing format error. The Field name is max 7 digit. A SPACE or CR must separate the Field name to the next parameter: N=LINE1 Y100X100 → OK N=LINE1Y100X100 → WRONG N=LINE 1 Y100X100 → WRONG |
| E017 PROTOCOL: Y COORDINATE ERROR | Format error, check the embossing format error. Is OK: Y100 X100; Y50 X50; Y050 X050 Is WRONG: Y10 0 X100; Y 50 X50; Y 050 X050 |
| E018 PROTOCOL: X COORDINATE ERROR | Format error, check the embossing format error. Is OK: Y100 X100; Y50 X50; Y050 X050 Is WRONG: Y100 X10 0; Y50 X 50; Y050 X 050 |
| E019 PROTOCOL: TOO MANY FIELDS (max 50) | Format error, check the embossing format error. You exceed the maximum number of fields (50 max). |
| E020 PROTOCOL: FONT ERROR | Format error, check the embossing format error. Use font 0 (F0) or font 1 (F1). |
| E021 PROTOCOL: CHARACTER SPACE ERROR | Format error, check the embossing format error. Wrong Cinn or CSnn parameters. |
| E022 PROTOCOL: VARIABLE FIELD SYNTAX ERROR | Format error, check the embossing format. Check the syntax. |

| ERROR CODE AND DESCRIPTION | SYMPTOM AND CORRECTIVE ACTION |
|--|---|
| E023 PROTOCOL: FIX FIELD SYNTAX ERROR | Format error, check the embossing format. Check the syntax. |
| E024 PROTOCOL: FORMAT WITHOUT FIELDS | Format error, check the embossing format. The format needs at least 1 field to be used. |
| E025 PROTOCOL: FIELD NOT COMPLETE | Format error, check the embossing format. Check the field. |
| E026 PROTOCOL: FIELD COMMAND ERROR | Format error, check the embossing format. Command or Parameter wrong. |
| E027 PROTOCOL: FORMAT MEMORY OVERFLOW | Format error, check the embossing format. The format memory is over. Reediting the stored format and remove not needed Spaces in order to reduce the used memory. |
| E028 PROTOCOL: FIELD-BUFFER OVERFLOW | Format error, check the embossing format. You exceed the maximum number of characters. |
| E029 PROTOCOL: ILLEGAL CHARACTER | Format error, check the embossing format. A wrong character is received and cannot be emboss. |
| E030 PROTOCOL: ERROR IN SEP PROTOCOL | Protocol generic error. |
| E031 PROTOCOL: ILLEGAL CHAR ON TRACK | You're trying to encode wrong characters. Please check the encoding data. |
| E032 PROTOCOL: OVERFLOW ERROR – DATA CORRUPTED | Too large buffer error. |
| E033 PROTOCOL: FIELD THERMO ERROR | Thermal Printer data error. |
| E034 PROTOCOL: CARD ID ERROR | Cad ID error in readback mode, chip personalization or card ID field. |
| E035 PROTOCOL: MACHINE STATUS ERROR | Machine status error when the setup is coming via SEP protocol. |
| E036 PROTOCOL: FIELD ENCODER ERROR | Encoder data error. |
| E101 FEEDER: FEEDER EMPTY | No card enters the magnetic module. If the hopper is empty add cards. If the hopper isn't empty, check if: a) Cards are stuck together; b) Cards are bowed; c) Mechanical impediments; d) Alignment between modules; e) The DC motor moves correctly; f) Check for correct connection of the motor on the board; g) Replace the motor. |
| E102 FEEDER: FEED SENSOR HOME | Feed sensor error (if there is the Feeder without the Encoder). |
| E103 FEEDER: FEED CARD JAM | Feed card error (if there is the Feeder without the Encoder). |
| E151 ENCODER: COMMUNICATION ERROR | Communication error. Please turn OFF /turn ON the machine. |
| E152 ENCODER: TRACK 1 EMPTY | The machine stops with a card in the magnetic module. a) Check if the cards are up side down; b) Check if the encoder head is connected correctly on the board (two connectors). |
| E153 ENCODER: TRACK 2 EMPTY | The machine stops with a card in the magnetic module. a) Check if the cards are up side down; b) Check if the encoder head is connected correctly on the board (two connectors). |
| E154 ENCODER: TRACK 3 EMPTY | The machine stops with a card in the magnetic module. a) Check if the cards are up side down; b) Check if the encoder head is connected correctly on the board (two connectors). |

| ERROR CODE AND DESCRIPTION | SYMPTOM AND CORRECTIVE ACTION |
|---|---|
| E155 ENCODER: TRACK 1 ERROR | The machine Stops with a card in the magnetic module. a) Check if the magnetic stripe is scratched / dirty on track1; b) Clean encoder head c) Check for timing belt tension. |
| E156 ENCODER: TRACK 2 ERROR | The machine stops with a card in the magnetic module. a) Check if the magnetic stripe is scratched / dirty on track2; b) Clean encoder head c) Check for timing belt tension. |
| E157 ENCODER: TRACK 3 ERROR | The machine stops with a card in the magnetic module. a) Check if the magnetic stripe is scratched / dirty on track3; b) Clean encoder head; c) Check for timing belt tension. |
| E158 ENCODER: ENCODER JAM | The machine stop with or without card(s) in the module. If there is one card in the magnetic module check if: a) The card is slipping on rollers clean them; b) Check if pulleys are fixed correctly on their shaft; c) Check if the DC motor moves; d) Check motor connector. If there is more than one card in the module check if hopper sensor: a) Is dirty: clean it with compressed air or lint free cloth; b) Isn't connected correctly on the board. No card in the module: a) Check if each of the three sensors which control the card movement works correctly; b) Clean the sensors with compressed air or a lint free cloth; c) Replace broken sensor(s). Check the embosser's clamp, it has to be opened. Check spring pressure in the embosser's module. |
| E159 CHIP ERROR | Smart card reading / writing error |
| E160 ENCODER: CARD OUT ERROR | Card out Encoder error. |
| E203-x FLIP OVER x: ROTATION SENSOR ERROR | Movement error when searching the 180° sensor. |
| E204-x FLIP OVER x: CARD IN SENSOR ERROR | Card in error. |
| E205-x FLIP OVER x: CARD OUT SENSOR ERROR | Card out error. |
| E206-x FLIP OVER x: UNABLE TO ROTATE | The Flip Over can't rotate because of a card not positioned in the middle of the module (but under the card in or the card out sensor). |
| E207-x FLIP OVER x: NOT CONNECTED | Communication error on the 485 serial with the Flip Over board. |
| E253-x THERMO: TERMOGRAFICA ERROR | Thermal printer generic error. |
| E254-x THERMO: COMMAND ERROR | Thermal printer command error. |
| E255-x THERMO: PARAMETER ERROR | Parameter error in the buffer sent to Thermal printer. |
| E256-x THERMO: TIME OUT ERROR | Timeout expired. |
| E257-x THERMO: COVER ERROR | Printer head up. |
| E258-x THERMO: CARD IN ERROR | Card in error. |

| ERROR CODE AND DESCRIPTION | SYMPTOM AND CORRECTIVE ACTION |
|---|---|
| E259-x THERMO: RIBBON ERROR | Ribbon finished or not present. |
| E260-x THERMO: UNKNOWN ERROR | Unknown error. |
| E261-x THERMO: CLEAN ERROR | Cleaning cycle error. |
| E262-x THERMO: ID SECURITY ERROR | Mismatch between Thermal printer ID card in buffer and ID card present under the printing head. |
| E263-x THERMO: RESET COMPLETED | The module reset is completed. |
| E301 EMBOSSER: X-HOME MOTOR ERROR | <p>Check for X home sensor:</p> <p>a) X home sensor is dirty: clean it with compressed air or lint free cloth;</p> <p>b) X home sensor isn't connected correctly on the board.</p> <p>Check that all pulleys are fixed on the shaft.</p> <p>Check X motor connection.</p> <p>Check the belt's state.</p> |
| E302 EMBOSSER: Y MOTOR ERROR | <p>Card is embossed in a wrong way.</p> <p>Remove any impediments along the embossing Y travel.</p> |
| E303 EMBOSSER: X-END MOTOR ERROR | <p>Card is picked by embossing clamp and is taken to the embosser's exit.</p> <p>Check for X end sensor:</p> <p>a) X end sensor is dirty: clean it with compressed air or lint free cloth;</p> <p>b) X end sensor isn't connected correctly on the board;</p> <p>c) Remove any impediments along the X embossing travel;</p> <p>d) Check that all pulleys are fixed on the shaft;</p> <p>e) Check X motor connection;</p> <p>f) Check the belt's state.</p> |
| E304 EMBOSSER: DRUM MOTOR ERROR | <p>The card can even be picked or not by the embosser's clamp and the embossing sequence isn't completed correctly.</p> <p>If the clamp picks the card but doesn't start punching and the drum keeps on moving:</p> <p>a) Check drum motor home sensor;</p> <p>b) Drum motor home sensor is dirty: clean it with compressed air or lint free cloth;</p> <p>c) Drum motor home sensor isn't connected correctly on the board.</p> <p>If the card is picked, but it is embossed in a wrong way check:</p> <p>a) Belt tension;</p> <p>b) If pulleys are fixed on the shafts;</p> <p>c) If the motor is moving correctly or it stalls.</p> <p>If the card is picked by the clamp but the drum doesn't move check:</p> <p>a) Drum motor connection on the board.</p> |
| E305 EMBOSSER: CARD LOST | <p>Card isn't present in the picker position:</p> <p>a) Card has been mistakenly removed;</p> <p>b) Card jams in the previous module.</p> |

| ERROR CODE AND DESCRIPTION | SYMPTOM AND CORRECTIVE ACTION |
|--|--|
| E306 EMBOSSEER: CARD MISFEED-POSITION CARD | <p>The clamp holds the card, but the embossing cycle doesn't start.</p> <p>Check the entry sensor:</p> <ul style="list-style-type: none"> a) Entry sensor is dirty: clean it with compressed air or lint free cloth; b) Entry sensor isn't connected correctly on the board. <p>The clamp moves straight to embossing area without a card or after having made a bad noise:</p> <ul style="list-style-type: none"> a) Check for Y home sensor; b) Y home sensor is dirty: clean it with compressed air or lint free cloth; c) Y home sensor isn't connected correctly on the board; d) Check Y motor electrical connections; e) Check if the pulley is fixed on Y motor shaft; f) Check belt state. |
| E308 EMBOSSEER: PUNCH MOTOR ERROR | <p>The embossing clamp picks the card but the embossing sequence isn't completed correctly.</p> <p>Check for any mechanical impediments along the embossing leverage.</p> <p>If the card is picked by the embosser's clamp but just one character is embossed:</p> <ul style="list-style-type: none"> a) Check punch motor home sensor; b) Punch motor home sensor is dirty: clean it with compressed air or lint free cloth; c) Punch motor home sensor isn't connected correctly on the board. <p>If the card data aren't embossed correctly check:</p> <ul style="list-style-type: none"> a) Belt status; b) All pulleys are fixed on the shaft correctly. <p>The card is picked correctly by the embosser's clamp and it is placed correctly under the drum, but the embosser mechanism doesn't start, check:</p> <ul style="list-style-type: none"> a) If the embossing motor is connected correctly on the board; b) replace the motor. |
| E309 EMBOSSEER: RIBBON INFILLER ERROR | <p>Card not punched in infill way.</p> <p>If ribbon is finished replace it.</p> <p>If ribbon isn't finished:</p> <ul style="list-style-type: none"> a) Check if ribbon is installed correctly; b) check if ribbon advance sensor is working correctly. |
| E311 COVER OPEN | Machine cover open. |
| E312 EMBOSSEER: DRUM MOTOR ERROR | Drum movement error. |
| E313 EMBOSSEER: Y MOTOR ERROR | Y-axis movement error. |
| E314 EMBOSSEER: X-END MOTOR ERROR | Movement error on the end sensor. |
| E315 EMBOSSEER: CARD MISSING | The card goes out from the previous module but doesn't reach the Embosser. |
| E316 EMBOSSEER: CARD LOST | Card correctly loaded and then lost by the Embosser card guide. |
| E351 TAPE OUT: CARD OUT ERROR | Tipper card out error. Check the output sensor or card jam. |
| E352 TIPPER: COMMUNICATION ERROR | Communication error. Please turn OFF /turn ON the machine. |

| ERROR CODE AND DESCRIPTION | SYMPTOM AND CORRECTIVE ACTION |
|---|--|
| E353 TIPPER: HOME ERROR | The card remained under the tipping zone with the platen pushing on the card. Check for any mechanical impediments along the tipping movement. |
| E354 TIPPER: RIBBON ERROR | The tipper ribbon foil doesn't advance correctly. Check if tipper ribbon foil is finished: a) Replace ribbon. If the card is attached to the ribbon with embossed chars flattened: a) Check plate movement sensor; b) Plate movement sensor is dirty: clean it with compressed air or lint free cloth; c) Plate movement sensor isn't connected correctly on the board; d) Check motor tipping encoder sensor; e) Motor tipping encoder sensor is dirty: clean it with compressed air or lint free cloth; f) Motor tipping encoder sensor isn't connected correctly on the board. If the card is tipped correctly, but doesn't leave module check: a) Take up ribbon motor's connections. If the ribbon moves correctly, but the card is not tipped: a) Check ribbon advance encoder sensor; b) The ribbon advance encoder sensor is dirty: clean it with compressed air or lint free cloth; c) Ribbon advance encoder sensor isn't connected correctly on the board; d) The tipping ribbon foil may slip on one of the shaft. |
| E355 TIPPER: WAITING FOR TEMPERATURE | Waiting for the correct temperature for the tipper. |
| E356 TAPE OUT: CARD IN ERROR | Tipper card in error |
| E357 TAPE OUT: CARD POSITIONING ERROR | Card position error for tipping procedure. |
| E401-x MULTICHIP: HOME SENSOR ERROR | Lift module home error. Check the home sensor. |
| E402-x MULTICHIP: CARD IN SENSOR ERROR | The card doesn't get into the module. Check the card in sensor or the input transport. |
| E404-x MULTICHIP: CARD OUT SENSOR ERROR | The card doesn't get out of the module. Check the card out sensor or the output transport. |
| E407-x MULTICHIP: CASTLE IN ERROR | Card transport input error. Check the related sensor, motor and belt's motor. |
| E408-x MULTICHIP: CASTLE OUT ERROR | Card transport output error. Check the related sensor, motor and belt's motor. |
| E409-x MULTICHIP: COMMUNICATION ERROR | Check the board and the serial cable. |
| E410-x MULTICHIP: CHIP ERROR | Reading or writing error. Check the offset. |
| E411-x MULTICHIP: CHIP CONTACT ERROR | The chip contact is up or down while it should be in the other position. Check the related sensor, motor and offset. |

| ERROR CODE AND DESCRIPTION | SYMPTOM AND CORRECTIVE ACTION |
|---|--|
| E501 OUTPUT STACKER: HOME ERROR | Card can be either ejected or not. During a reset operation or if the card has been ejected: a) Check if the motor moves; b) Motor connection; c) Check stacker sensor; d) Clean the stacker home sensor; e) Check sensor connection; f) Replace stacker sensor. If the card hasn't been ejected: a) Check for mechanical impediments that don't allow the stacker to home correctly. |
| E502 OUTPUT STACKER: NOT PRESENT | Machine stops Check the stacker present connector |
| E503 OUTPUT STACKER: STACKER FULL | The machine stops. If the stacker is full unload it. If the stacker isn't full: a) check if the micro is working correctly. |
| E505 UNLOAD: COMMUNICATION ERROR | Communication error on 485 serial with unload board. |

Chapter 5 – Cleaning

To ensure that the system operates correctly, it is necessary to carry out periodic cleaning of some of the components that otherwise could cause problems in cards production.

To clean all the transport rolls of the system and the Encoder module head, you must absolutely use isopropyl alcohol; at this purpose you can use an apposite cleaning card supplied by MATICA®.

It is recommended to use the aforesaid products only for the indicated components, in order to avoid damaging the system.

It is also useful to carry out a periodic general cleaning of the system, by using a vacuum cleaner every week or 10,000 cards performed.

5.1 Thermal Printer cleaning

Warning: The Print Head must be cleaned every 5000 cards to satisfy the warranty conditions.

To check the cleaning status press on the keyboard ALT + F12 and then the up arrow key two times. The system display will show two counters and a message.

The first counter is the number of card passed.

The second counter indicates when to perform the cleaning cycle.

The message could be:

THERMO x COUNTER if the cleaning cycle has been performed

or

Tx : CLEANING NEEDED if the cleaning cycle has not been performed

(in both messages the digit **x** represents the position in the working cycle of the displayed Thermo Module, regarding other modules of the same kind present in the whole Card Issuance System).

When the Thermal Printer module has to be cleaned, every 5,000 cards, the right led on its own console starts to blink a red light (**fig. 1**).



fig. 1

To clean the print head you must use a PVC printer cleaning kit (**fig. 2**) provided with a cleaning card (**fig. 3**).



fig. 2



fig. 3

Remove the printing ribbon as shown in paragraph 3.2, being sure that the print head is down. Then insert the cleaning card into the first Flip Over (**fig. 4**) and push it until the Thermal module (**fig. 5**).



fig. 4

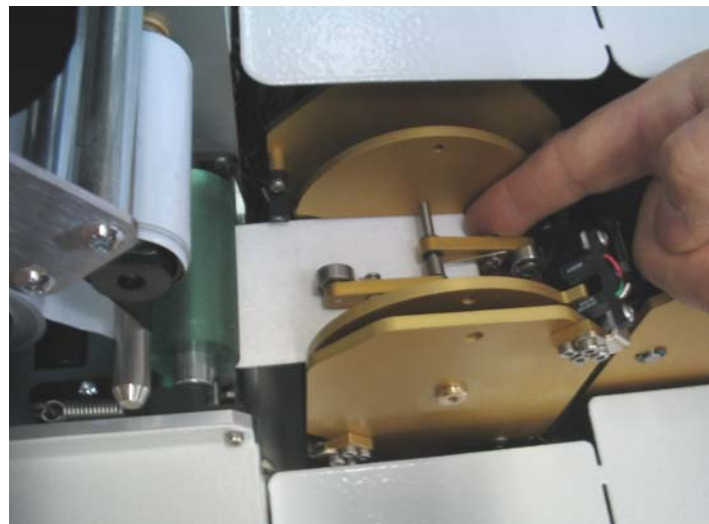


fig. 5

Push and hold the right button on the module console (**fig. 6**).



fig. 6

Now the card passes under the print head (**fig. 7**).

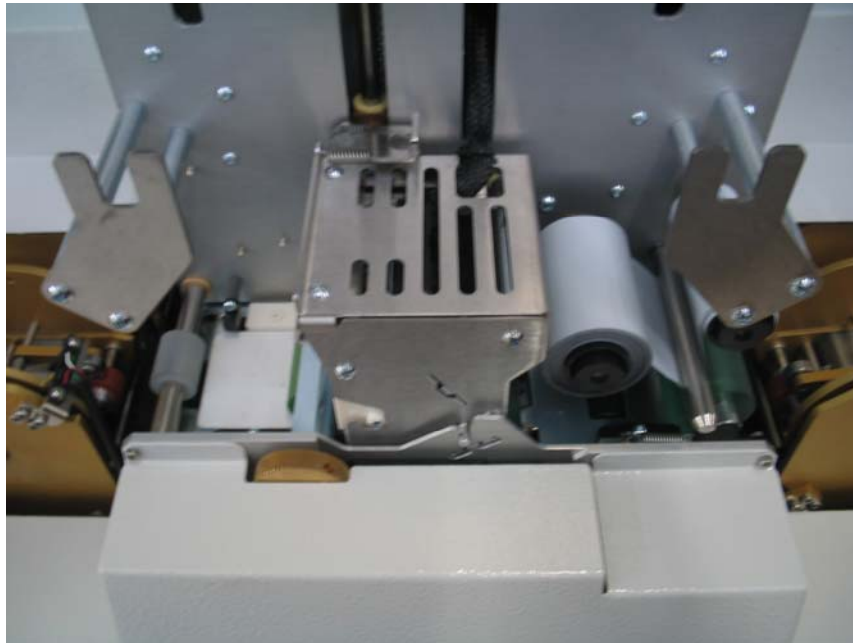


fig. 7

At the end of the cleaning cycle, it goes into the second Flip Over (**fig. 8**) where you can take the card away. Finally you must insert again the printing ribbon as shown in paragraph 3.2.

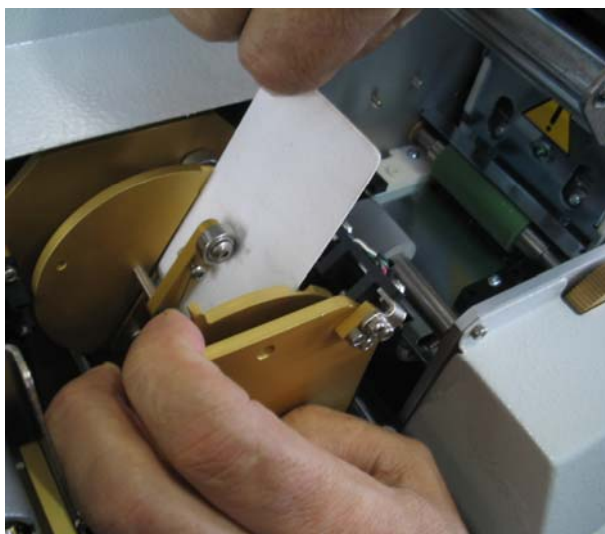


fig. 8