



OPERATOR MANUAL

MDT500 HE



Serial No.

Year



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0.1. IMPORTANCE OF THIS MANUAL

The manual contains the instructions for start up, use and maintenance of the embosser **MDT500 HE**. Before installing and starting up the machine it is necessary to read carefully all the instructions contained herein as the effectiveness of the operation strictly depends on properly and systematically following all the instructions.

Please, remember that in case of problems or faults the TECHNICAL SUPPORT SERVICE of MF Group S.p.A. - CIM division is always at your complete disposal for any explanation or assistance.

Therefore MF Group S.p.A. - CIM division accepts no responsibilities in case of wrong or inappropriate use.

MF Group S.p.A. - CIM division reserves the right to make changes at any time for the purpose of product improvement without notice.

Make sure that any modification or updating of this Manual you receive is added to the text.

MF Group S.p.A. – CIM division is not liable for technical or editorial errors or omissions contained herein.

0.2. HOW TO KEEP THIS MANUAL

Do not remove, tear out or rewrite parts of the manual for any reasons.

Keep the manual in a dry and cool place

0.3. HOW TO CONSULT THIS MANUAL

This manual consists of:

- COVER WITH IDENTIFICATION OF THE GROUP THE EMBOSSEES BELONG TO
- TABLE OF CONTENTS
- INSTRUCTIONS AND/OR NOTES ON THE PRODUCT

By referring to the COVER you can identify the model of the embosser described in the manual. Referring to the TABLE OF CONTENTS you can find the CHAPTER and the PARAGRAPHS where you can read all the notes regarding a given topic.

All INSTRUCTIONS AND/OR NOTES ON THE PRODUCT aim at identifying the safety warnings, the correct procedures and operational qualifications required for a proper servicing of the embosser.

Moreover we would like to underline that some images contained in the manual to make the identification of the described parts easier might not look exactly as the embosser you purchased.

0.4. SYMBOLS

The symbols used in this manual to identify warnings and notifications relevant for safety and for the proper use of the machine are described below.
 The same symbols can be present on the machine itself to signal the danger areas and the reference to the corresponding safety notes contained in the manual.

MEANING OF THE SYMBOLS



GENERAL OPERATING NOTE PAY ATTENTION TO SYMBOLS AND TO THE INSTRUCTIONS CONTAINED IN THE TEXT NEXT TO THEM

Prescription and Indication signs (rectangular shape): obligation to use the protections indicated on the sign to carry out the operation described beside the symbol:



COMPULSORY HAND PROTECTION (GLOVES)



COMPULSORY EYE PROTECTION (GOGGLES)



PROTECT EARS BY WEARING THE SUITABLE EAR MUFFS

Caution Signs-Danger Signs (triangular shape): situations of General Danger for the safety of the person or the machine:



CAUTION ! GENERAL DANGER



CAUTION ! DANGEROUS VOLTAGE



CAUTION ! HIGH TEMPERATURE



CAUTION ! CRUSHING HAZARD



CAUTION ! MACHINE MOVING COMPONENTS



INFORMATION

1. GENERAL FEATURES

METAL DOG TAG 500 HE (MDT500 HE), below referred to as **MDT500 HE** or simply **MDT**, is an automatic system for the customization of “Dog Tag” and “Medical Red Alert Tag” type metal tags.

The main feature of the **MDT500 HE** embosser is to produce tags in STAND-ALONE mode, that is without the aid of computer.

The STAND ALONE mode also provides the possibility to enter data manually with the keyboard.

MDT500 HE can also work connected to a Computer with a RS 232 serial connection.

Moreover, protocol standards are available on the machine and make the **MDT500 HE** system versatile so it can be connected to several existing application packages.

MDT500 HE embosses both “Dog Tag” plates (Pic. A) and “Medical Red Alert Tag” plates (Pic. B).
Any other usage of the embosser, is not warranted.



Pic. A



Pic. B

The embosser can be easily carried. However, it weighs 24 kg, therefore it is necessary to be extremely careful when moving it.

The machine is fitted with an adjustable handle that allows to hold and carry it vertically. During transportation it can be placed in a vertical position as it is supported by 4 rubber feet.

It is advisable to take all necessary precautions regarding its transportation, such as locking the clamp with retainer pin.

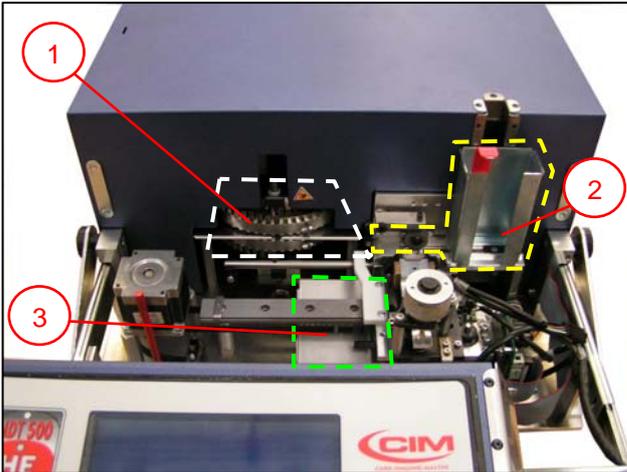
When the machine reaches its destination, it must be positioned horizontally to operate. Release the clamp from the lock.



1.1 MAIN COMPONENTS OF MDT500 HE.

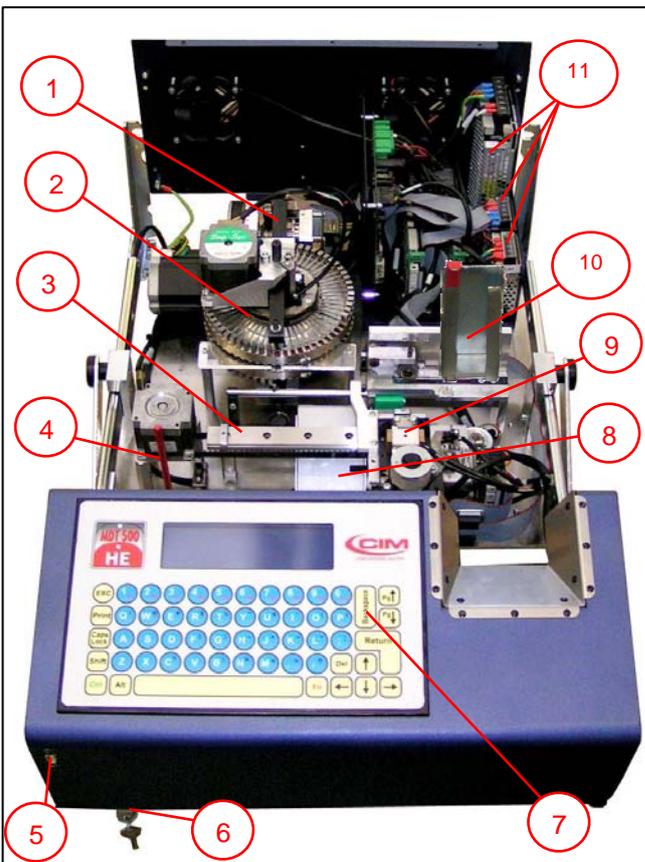
This paragraph shows the main components of the embosser MDT500 HE, for their identification. It is also meant as an instrument that allows the operator to interface with specialized technicians in the most appropriate and suitable way.

▪ Working areas.

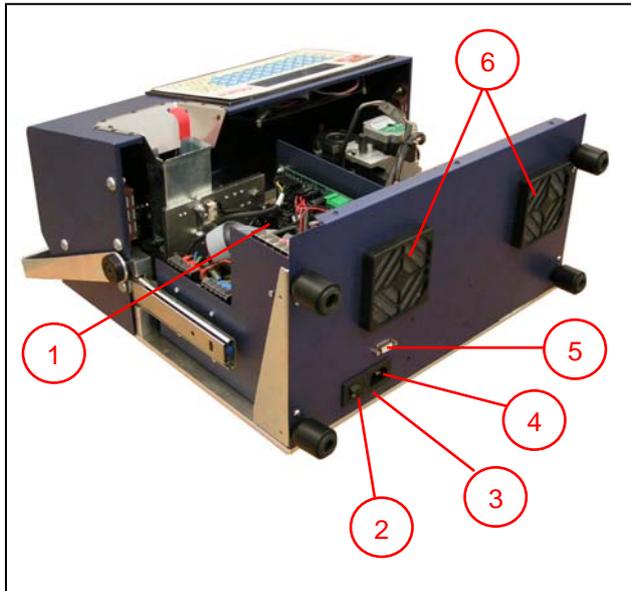


1. Embossing area
2. Tag loading area
3. Tag unloading area

▪ Main components and their position

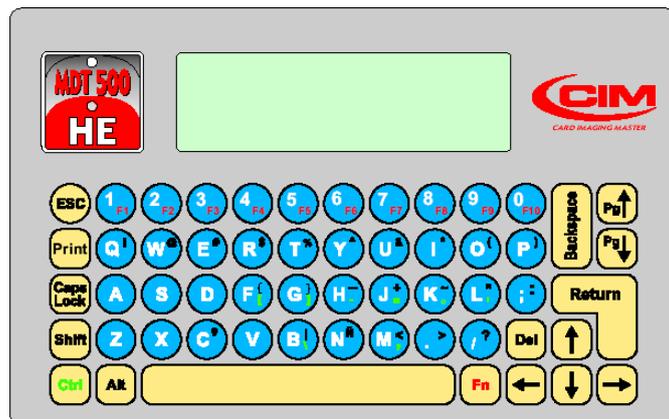


1. Embossing unit
2. Drum unit
3. X Axis Clamp sliding
4. Clamp retainer pin
5. USB port (only to use the USB pen drive)
6. Key to open the front panel
7. Console
8. Tag slide
9. Tag picking clamps
10. Removable tag feeder
11. Machine power supply unit



1. Electronic components
2. On/Off Power Switch
3. Fuse holder
4. Socket PA80 for power cable
5. RS 232 Serial Communication Port
6. Cooling fans

- **Console**
MDT500 HE console consists of a graphic display and a waterproof alphanumeric membrane keyboard.



- The resolution of the graphic display is 320x180 pixel, and it allows to view the operating state of the machine, the functions connected to the production of tags, the work settings and the machine settings. It displays also different symbols, logos and fonts. The display is backlit with an optimized viewing angle and it is possible to set the contrast to allow for easy reading even when the room is brightly lit such as with sunlight reflection.
- The membrane keyboard (waterproof) has ergonomic and functional keys associated with different colors according to their function. With the keyboard you can access the various functions provided by the machine, such as arranging tasks, setting the machine and checking its functionality.

1.2 OPERATING PRINCIPLE OF MDT500 HE.

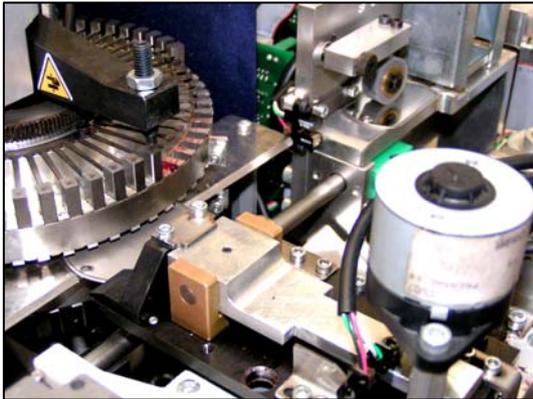
To produce a tag, **MDT500 HE** carries out a sequential cycle that can be briefly summarized in the following stages:

- LOADING
- EMBOSSING
- UNLOADING

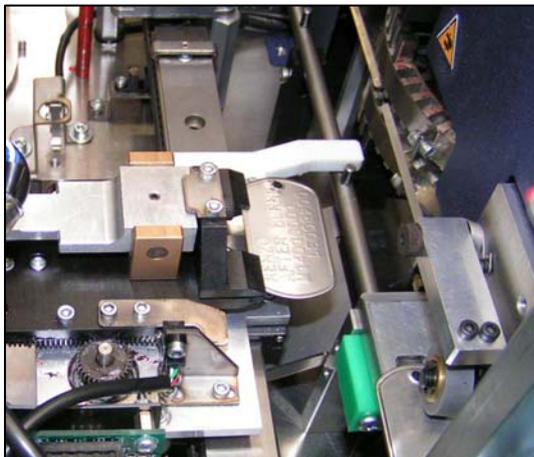
- Description of the stages



- - LOADING
The tag is ejected from the loader by the thrust of a sprocket moved by the tooth that takes it to the loading area.
When it reaches the area, the tag is picked up by the clamp.



- - EMBOSSING
After picking up the tag, the clamp takes it to the printing area, placing it under the drum and simultaneously extracting another one from the loader.
At the same time the drum rotates, thus moving the character to be embossed under the stamp and starting the embossing cycle.



- - UNLOADING
When all the characters of the tag have been embossed, the clamp moves to the unloading area and drops the tag into the provided tray
The unloading stage ends the operating cycle of the tag.

**IMPORTANT:
THE OPENING OF THE FRONT PANEL
CAUSES THE IMMEDIATE STOP OF THE
MACHINE AND THE INTERRUPTION OF
ALL THE PROCESSES IN PROGRESS.**

1.3 ELECTRICAL SPECIFICATIONS

Power supply	100-240 Vac 50/60 Hz
Max Absorbed Current	1,50 A
Absorbed Power	120 W
Fuse (5x20 mm)	T 2A
Main controller	Coldfire 32 bit, 66 MHz BGA technology
PC interface	RS 232
Baud Rate	Programmable
Working Noise	Lower than 73 dB (A)
Display	Backlit graphic display with 320x180 pixel resolution.
Console	Waterproof membrane keyboard

1.4 RATING OF THE EQUIPMENT AND APPLICABLE STANDARDS

Category	II
Protection classification	IP 20
Applicable standards	UL60950-1 IEC 60950-1 IEC EN 55022 IEC EN 55024 IEC EN 61000-3-2 IEC EN 61000-3-3

1.5 TERMS OF USE

Working temperature	+ 10° ÷ +35°
Humidity	20% ÷ 85%
Storage temperature	0 ÷ +50°
Altitude	1000 m

1.6 DIMENSIONS AND WEIGHT

Height	270 mm
Width	486 mm
Depth	495 mm
Weight	24 Kg

1.7 PRODUCTION CAPACITIES

Tag size	28x50 mm (Dog Tag) 32x57 mm (Med. Alert Tag)
Materials and Thicknesses	0.60 ÷ 0.78 mm Aluminum 0.32 ÷ 0.40 mm Stainless Steel (values referring to the centre of the tag)
Drum Capacity	Up to 60 Characters
Max punchable surface	Embossing is possible up to 3 mm from the clamp. With OPTIONAL "reverse hole" it is possible to emboss until the lower border of the tag.
Loading hopper capacity	130 Tags (Dog Tag) 150 Tags (Medical Alert Tag)
Productivity	5 lines x 9 characters up to 130 tags/hour, depending on the job

1.8 OPERATING PRECAUTIONS AND SAFETY REGULATIONS



- The machine must be placed in a closed room, duly protected from dust and excessive humidity. It should be positioned so that its distance from walls, doors, windows, other machines or workstations allows to have immediate access to its various parts in case of emergency, or to make the necessary maintenance or repair work easier.

- Do not install the machine near operating machines that produce dust, since the dust might settle and accumulate inside the machine itself thus damaging the internal electric devices.
Do not place the machine near a heat source, excessive cooling sources, water sources, electromagnetic sources and smoke.
The machine must be placed on a top raised from the floor and properly leveled at least at 60 cm height.
Do not run the machine in vertical position.



- The machine is provided with special safety guards that prevent the operator from coming into contact with the mechanical and electrical parts inside the machine. Only specialized and authorized operators can access these parts for maintenance and repairs. Simple general maintenance can be performed by the operator without any risks of electrocution or other damages due to mechanical devices but it must be carried out after the machine has been stopped and the power supply disconnected.
Do not tamper with the machine safety devices and do not modify them, even partially.

- The machine is made of flame-resistant materials in order to reduce the risk of fire.
Moreover it is fitted with a short circuit protection system that guarantees the prompt isolation of the power supply.

- Always make sure that the power cable is intact and has no cuts and cracks.
The presence of cuts or cracks might cause the user's electrocution and might create serious damages to the machine.



- Do not place or drop liquids on the machine cover as it is not watertight.
It is particularly important to avoid any risk of oxidation that might cause wear and tear and erosion of the mechanical parts.



- The noise level produced by the machine is lower than 75 DB (measured at 1 m distance and at 1.60 m height from the floor).
The above mentioned value can be higher when special types of steel tags are worked or if the machine is placed on a worktop that amplifies the noise or if the machine has not been properly adjusted.
If the operator is exposed every day to a noise level probably higher than 85 DB, it is necessary to use ear protection as provided for by standards 86/188/CEE

1.9 SAFETY REQUIREMENTS



- The Operator's Area of **MDT500 HE** is compliant with all the safety requirements set by the main European and non-European regulations.

Still, we suggest to read carefully the indications contained in the following pages, where the symbols used in the Machine Operator Area, the possible dangerous situations and the necessary precautions are described.



- **Dangerous mechanical parts (belts and pulley) - Risk of being crushed or trapped .**

Make sure you do not enter the working areas with your hands. Tie your hair to avoid the risk of it being trapped in the machine.

For the same reason keep any hanging objects that you might wear such as ties, necklaces, pendants or others away from the machine.

The machine is provided with mechanical protections (locks, screens, shields) and software protection systems to stop immediately all the moving parts when the front guard is opened. However, in case of damages to the safety system the machine can work even with the cover open. In this case the moving mechanical parts represent a potential danger for the operator's safety. If the protection systems are damaged, switch off the machine and call for technical support.

Warning: The machine can be started even with a remote control (Personal Computer). When you have to work on potentially dangerous parts (removing stuck boards, resetting in case of errors or routine maintenance) be extremely careful.



- **High voltage parts - Electrocutation hazard**

It is not possible to access any high voltage tension part from the Operator's Area. All the high voltage circuits are positioned in closed areas and protected by fixed shieldings.

- To guarantee maximum safety the covers and all the accessible metal parts are electrically grounded. Before putting the machine on the market the efficiency of the ground connection is checked on all the appliances by the staff in charge of quality control.

It is forbidden to remove or modify in any way the external and internal guard protections of the machine. Should it be necessary, please contact the Technical Service of MF Group – CIM division.



The machine is provided with special safety protections to avoid the operator to come into contact with its internal mechanical and electrical parts.

Access to these parts is permitted only to specialized staff in charge of repairs and maintenance and especially authorized to carry out these tasks.

The simple maintenance can be safely carried out by the operator as long as the machine is stopped and disconnected from the power supply.

MF Group S.p.A. - CIM division accepts no responsibility for the damages that might be caused by non-respect of the above stated instructions. In case of faulty operation please contact the technical service.

NEVER REMOVE OR MODIFY THE PROTECTIONS

The machine is provided with labels signaling possible danger areas. Their meaning is described in the following paragraph.

- **MF Group CIM division** cannot be held responsible for the consequences of not abiding by these rules for the use of the machine. In case of breakdown call the technical service.

1.10 OPERATION IN TECHNICIAN MODE

- The authorized technical staff can temporarily disable the safety system associated to the "cover open" thus allowing the use of the machine when protections are not active (menu SERVICE - DISABLE COVER, protected by a password).

CAUTION! DO NOT USE THE MACHINE IN TECHNICIAN MODE UNLESS SPECIFICALLY AUTHORIZED BY MF Group – CIM division. MODE RESERVED TO EXPERIENCED AND AUTHORIZED USERS.

Take the necessary precautions to make sure that the password that allows to disable the safety devices is not given to non-qualified staff.

MF Group – CIM division accepts no responsibility for any damages to people, property or animals due to the non-respect of the above-stated precautions and particularly to the use of the machine with protections disabled by non-authorized staff.

1.11 SYMBOLS PRESENT ON THE MACHINE

Some parts of the machine are covered with symbols on self-adhesive labels signaling their function and dangerousness.

In this way the operator knows what kind of precautions to adopt and can consequently behave in the most suitable way.

It is strictly forbidden to remove them.

SYMBOL

DESCRIPTION



BEWARE OF YOUR HANDS RISK OF BEING CRUSHED OF STRUCK

The machine in the wooden package weighs about 50 Kg, therefore it must be moved by more than one person.

The net weight is 24 Kg. Be extremely careful when moving it.



CAUTION HIGH VOLTAGE

It is forbidden to carry out any work when the machine is under power. To replace the mains fuse or to perform internal maintenance work remove the main power cable and do not work on the socket.



ATTENTION MOVING COMPONENTS

In case of internal maintenance work the technician must disconnect the power supply and work only when the machine has stopped.



ATTENTION GENERAL DANGER

The machine has various moving mechanical parts. Do not work inside and do not remove the covers except for the front door used to load the plates



GROUNDING CONNECTION

Connection point of the protection grounded conductor.

1.12 RAAE REGULATION

INFORMATION FOR THE USERS

pursuant to art. 13 of the Legislative Decree of 25th July 2005, n. 151 "Implementation of the Directives 2002/95/CE, 2002/96/CE and 2003/108/CE, concerning the reduction in the use of hazardous substances in electrical and electronic equipment as well as the disposal of waste "

- The symbol of the crossed-out bin on the equipment or on its packaging indicates that the product at the end of its life must be discarded separately from other waste.
- The separate collection of the present equipment at the end of its life is arranged and managed by the manufacturer. The user who wishes to get rid of the equipment should contact the manufacturer and follow the procedure they have adopted to allow the separate collection of the equipment itself.
- Suitable separate collection allows the discarded machine to be recycled, processed and disposed of in an environmentally compatible way and it helps to avoid possible negative effects on the environment and health and so it facilitates the reutilization and recycling of the materials that make up the equipment.
- The illegal disposal of the product by the owner entails the application of the administrative sanctions provided for by the current regulations.



1.13 ROHS STANDARD

The machine is built in compliance with all the directives provided by the ROHS standards.
The declaration of compliance is enclosed in the following page.



DECLARATION OF EU ROHS DIRECTIVE CONFORMITY

The manufacturer MF Group SpA, CIM division, Via Serra, 2 – 40012 Calderara di Reno Bologna – ITALY,

DECLARES

under sole responsibility that all CIM range product:

MPS Metal Plate Systems MDT500HE

comply with the European Union Directive 2002/95/CE and the subsequent modifications 2005/618/CE, 2005/717/CE, 2005/747/CE.

Gianni Toselli
Plant Manager CIM



Calderara di Reno, december 22, 2008

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ROHS ITA Rev. 01-06/06

1.14 DECLARATIONS OF COMPLIANCE

The manufacturer MF Group S.p.A. - CIM division - Via Serra, 2 - 40012 Calderara di Reno - Bologna – Italy, declares under its sole responsibility that the embosser MDT500 HE is compliant with the main international standards and particularly that:



MDT500 HE complies with part 15 of FCC rules, subchapters A and B - sections 15.107 (b) (e) and 15.109 (b) (g) - concerning Class A digital devices.

The device complies with the provisions contained in part 15 of the FCC rules. Its functioning depends on the following two conditions:

- (1) This device cannot cause damaging interferences, and
- (2) This device must allow prospective interferences, including those that might cause undesired operation.



UL60950 Approval (Safety of Information Technology Equipments)
File No. E231519



The equipment complies with the following European Directives: 2004/108/EC, 2006/42/EC, 2006/95/EC.



MDT500 HE complies with the IEC International Standards on Safety of Information Technology Equipment, EN 60950-1:2006 and IEC 60950-1:2005 (modified)
Certificate N. NO50313/A1 dated 2008-12-12



MDT500 HE complies with all the requirements of China RoHS standards concerning pollution caused by Electronic Information Products (SJ/T11363-2006, SJ/T11364-2006, SJ/T11365-2006)

Part Name	Toxic or Harmful Substances or Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr VI)	Polybrominated biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
MDT500 HE	O	O	O	O	O	O

O: indicates that this toxic or harmful substance contained in all homogeneous materials used for this part is below the limit set by the provision SJ/T11363-2006.
X: indicates that this toxic or harmful substance contained in at least one of the homogeneous materials used for this part is above the limit set by the provision SJ/T11363-2006.

Contact directly MF Group – CIM division to obtain a copy of the original declarations of compliance.

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2.1 UNPACKING

The machine is delivered in a wooden case to avoid damages during transportation.

CAUTION:
DO NOT PERFORM ANY WORK BEFORE CAREFULLY READING THE WHOLE OPERATOR'S MANUAL.



CAUTION:
ALL DISPLACEMENTS MUST BE CARRIED OUT WITH A DOUBLE FORK-LIFT OR BY 2 PEOPLE, AS THE GROSS WEIGHT OF THE CASE IS ABOUT 50 Kg AND ITS OVERALL DIMENSIONS ARE:
830x730x600 mm.



CAUTION:
THE EMBOSSEUR WEIGHS ABOUT 24 Kg.
HANDLE WITH CARE AND CAUTION



To unpack the machine follow the instructions below:



- Before opening the case, check that the packing is intact and not damaged. Make sure that the case has not been turned over during transportation. Check that the seal on the indicator is not red.



- Lift the case with a fork-lift.
- Remove the bottom screws with a screwdriver or an electric screwer.



- Lift and remove the case.
- Keep the packing material for possible future use or dispose of it in the suitable container for separate collection of waste.



- Open the protective wrapping being extremely careful not to damage the machine. It is advisable to cut the wrapping along its seam.



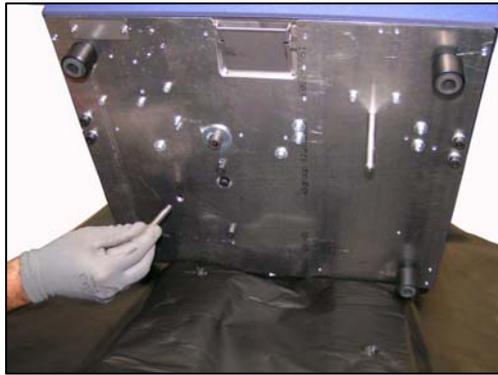
- Remove the protective wrapping.



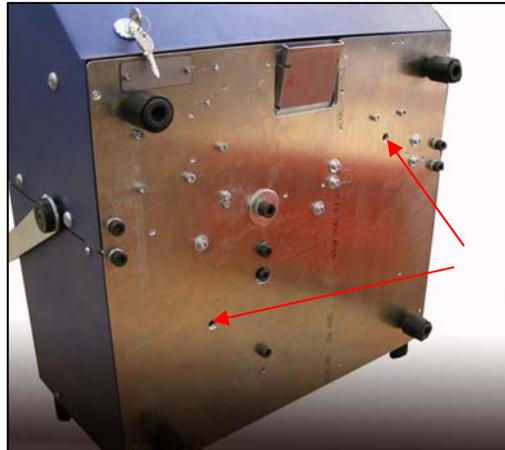
- Remove the accessories bag placed on the top panel of the machine. Later check its contents referring to chapter 3.
- Remove the anti-humidity bags from the machine.



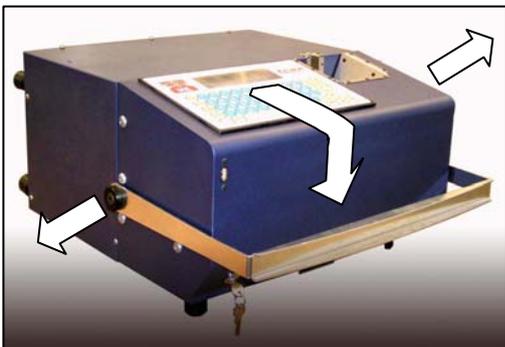
- Using a CH 17 wrench remove the clamp nuts of the two anchor pins placed under the pallet top.



- Unscrew the two anchor pins from the base of the machine.



- Close the holes of the pins with the M10 screws supplied with the machine.



- After closing the holes it is possible to lift the machine and place it on a worktop. To move it properly take the handle to the horizontal position opposite the panel. To do this, pull the two side knobs and release them once the required position has been reached.

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3.1 ACCESSORIES CHECK LIST

Before installing the machine it is advisable to check the integrity of the machine and of the accessories. Any damage occurred during transportation might prejudice the overall functioning. The accessories supplied with the embosser, in a separate bag, are listed below:

- 1 POWER CABLE WITH SCHUKO PLUG (CEE VII)
- 1 POWER CABLE WITH AMERICAN PLUG (498 G)
- 1 USB PEN DRIVE CONTAINING THE OPERATOR'S MANUAL
- 2 KEYS TO OPEN THE MACHINE
- 1 MOUSEPAD
- 1 ACCESSORIES BAG
- 1 REMOVABLE TAG FEEDER FOR DOG TAG TYPE
- 1 REMOVABLE TAG FEEDER FOR MEDICAL RED ALERT TAG TYPE
- 1 TAG COLLECTION TRAY
- 2 CLOSING SCREWS
- SAMPLE EMBOSSED TAGS



The following optional accessories can be supplied in the same packaging:

OPTION 1

- 1 DIGIPACK WITH BLADE APPLICATION SOFTWARE AND USB DONGLE
- 1 SERIAL COMMUNICATION CABLE RS232 DB9M-DB9F



OPTION 2

- 1 USB U3 PEN DRIVE CONTAINING THE APPLICATION SOFTWARE BLADE LIGHT



WARNING:
THE EMOSSER WEIGHS ABOUT 24 Kg.
HANDLE WITH CARE AND CAUTION



WARNING:
USE ONLY POWER CABLES NOT LONGER
THAN 4.6 M, TYPE SVT OR SJT, 3X18 AWG 10
A, EQUIPPED WITH GROUND CABLE.



WARNING:
DO NOT PERFORM ANY WORK BEFORE
CAREFULLY READING THE WHOLE
OPERATOR'S MANUAL.



3.2 POSITIONING THE MACHINE

Install the machine on a surface at least at 0.6 m height.

Check that the place where the machine is installed meets the environmental requirements previously specified.

Leave at least 0.3 m distance between each side of the machine and the closest walls in order to guarantee better access to the connectors and to allow suitable air circulation.

A clearance of 0.4 m above the covers is necessary to be able to open them.

Make sure that the surface on which the machine is placed does not amplify the noise level above the allowed value and that it is sufficiently strong and solid to stand the weight of the machine (24 Kg).

Do not run the machine in vertical position.

3.3 REMOVING MECHANICAL LOCKS AND INSTALLING ACCESSORIES

After placing the embosser in horizontal position and having respected all safety requirements (**chapter OPERATING PRECAUTIONS AND SAFETY REGULATIONS**) and before setting up the electrical connection it is necessary to remove the retainer pin that locks the clamp.

The machine does not operate when the pin is installed.

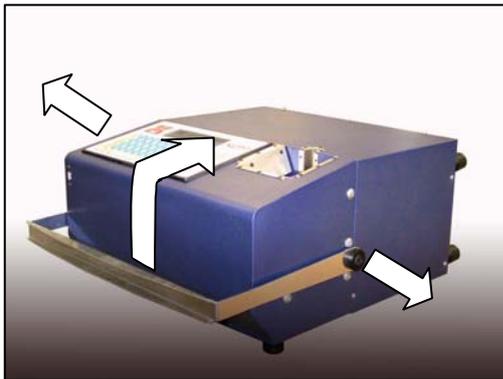
IMPORTANT:
DO NOT START THE EMBOSSER BEFORE REMOVING THE CLAMP RETAINER



WARNING:
EVERY TIME THE EMBOSSER MUST BE MOVED, LOCK THE CLAMP WITH THE SPECIALLY PROVIDED PIN



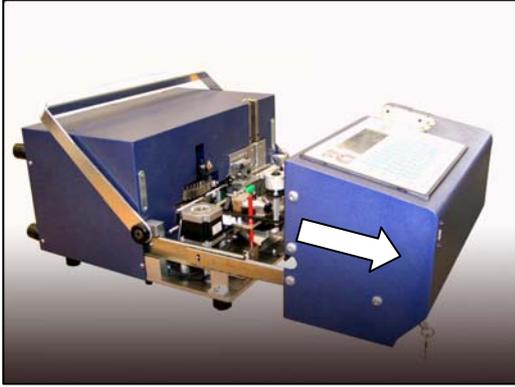
Follow the indications below to make the machine operative:



- After placing the machine on a worktop lift the handle by pulling the 2 side knobs and move it until it comes close to the top panel. When it has reached the position, release the knobs facilitating their return to their seats. It is not advisable to move the handle down as the lower part of the front panel could touch it and prevent its proper opening.



- Put the key into the lock, located on the bottom left side of the front panel, and turn it.

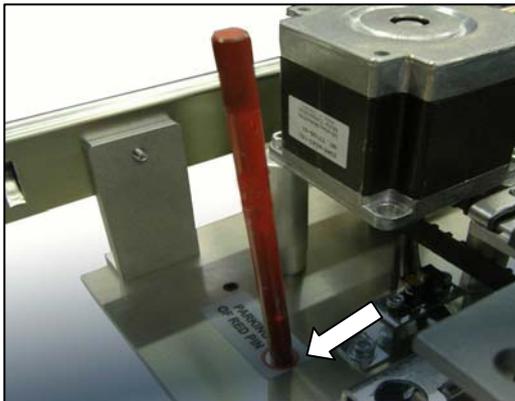


- Pull the front panel forward.



- Remove the clamp retainer pin.
To remove it:
 - 1 - remove the wing nut placed under the machine base where there is the pin.
 - 2 - Unscrew the pin and take it out.

NOTE:
The retainer pin is red

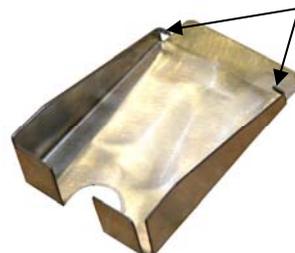


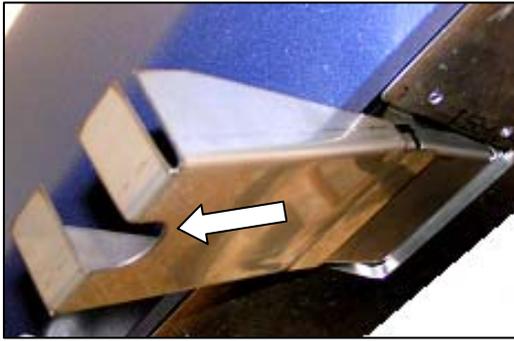
- Put the pin in the suitable hole shown by label located on the left side in front of the stepper motor and replace the wing nut.

- Close the front panel, lock it with the key and pull the key out.

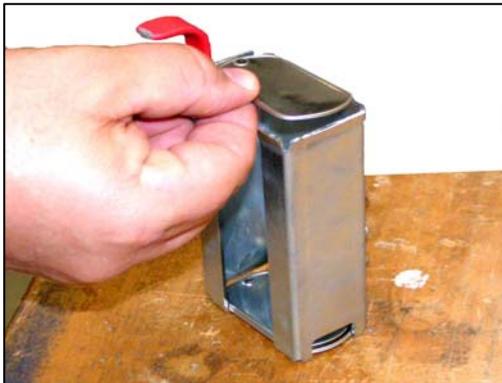


- Fix the tag collection tray to the bottom of the machine at the outlet port of the discharge chute.
To fix it:
 - 1 - Put the two flaps into the slots of the support





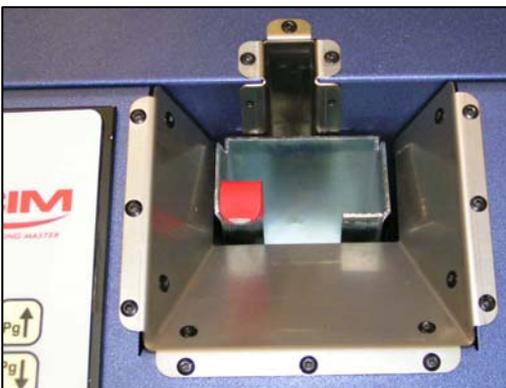
2 - Pull the tray towards you.



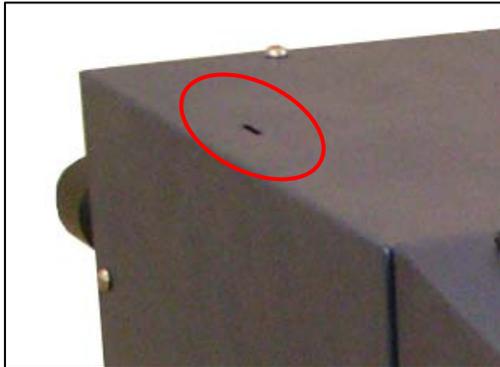
- Fill the loader with the tags.
For the position of the tags refer to chapter 5 "TAGS PRODUCTION"



- Insert the loader into its compartment.



- The position of the loader is held in place by a magnet.

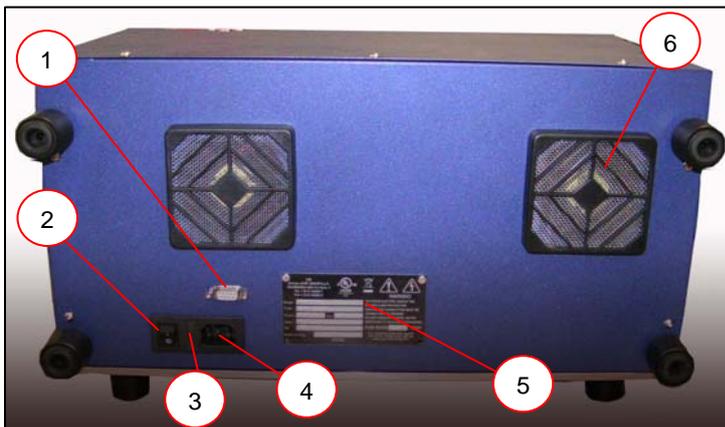


- Place the unused loader in the proper slot for storage, on the left side of the embosser cover.

To move the embosser somewhere else, when the machine is off remove all electrical connections and repeat the above-stated operations in the reverse order.

3.4 ELECTRICAL CONNECTIONS

The installation of the embosser **MDT500 HE** can be easily carried out by accessing the various plugs for the connections located on the rear panel.



1. SERIAL PLUG FOR PC 9 MALE PIN
2. POWER SWITCH
3. MAINS FILTER AND FUSE
4. SOCKET PA 80 FOR MAINS CABLE
5. IDENTIFICATION PLATE
6. VENTILATION FILTER GRIDS

Proceed as indicated below:

- Connect the serial cable between the Computer and the Embosser in case you use the embosser in ON-LINE mode.
- Check that the main AC Voltage corresponds to the value indicated in the plate.
Before proceeding, note down the information contained in the paragraph "WARNINGS AND INSTALLATION PRECAUTIONS"
- Connect the power cable.

CAUTION:

Connect only to systems provided with grounding circuit compliant with the National System Regulations

CAUTION:

The serial cable must be connected only when the machine is off.

3.5 CONNECTION TO A COMPUTER

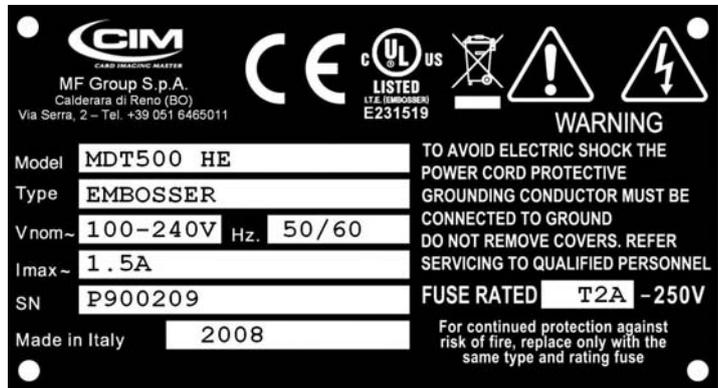
The **MDT500 HE** can be supplied with a 2 m long cable (optional) for the serial connection. If this length is not enough, it is necessary to use an extension cable not longer than 15 meters, respecting the corresponding connections.

3.6 WARNINGS AND INSTALLATION PRECAUTIONS

- The identification plate located in the rear panel indicates the serial number, the type of machine, the power voltage and the absorbed current. Thus, check that the power source is compatible.
- Before turning the machine on, make sure that the clamp retainer pin has been removed and that all cables have been properly connected.
The layout of the identification plate is as follows:

After the Corporate name on the plate there are 7 embossed fields described below:

- Model : Embosser model
- Type : Machine Type
- Vnom: Power Voltage
- Hz : Supply Frequency
- I_{max} : Absorbed Current
- SN : Serial Number
- Made in Italy Year of construction
- Fuse Rate: Rating of the fuse



- If the supply voltage is more than 20% higher than base voltage, the safety quick-acting fuse might cut off the current.
To replace it remove the power plug and insert the tip of a flat-topped screwdriver in the space at the bottom of the plug entrance.
Lift the fuse holder extremely carefully until you can manually remove it.
Should it be necessary, please contact the Technical Service of MF Group – CIM division.



TO REPLACE THE FUSE USE ONLY FUSES OF THE SAME TYPE AND WITH THE SAME NOMINAL POWER.
Fuses Requisites:
Europe - IEC 60127 Approval
America - UL248-1 and UL248-14 Approval

3.7 POWER ON AND CHECKING

After the installation you can get power to the machine turning the switch to **I** position.

Start cycle

- When starting MDT500 HE performs a reset and self-test cycle, without showing any message on the display.
- After about 20 seconds it displays the CIM logo.
- Just after that, MDT500 HE begins to load in sequence the following functions
LOAD
CONFIG
SETTINGS
FORMATS

Finally it performs the test of the LCS CPU 2.

```

Load Status .....OK
Load Config .....OK
Load Settings .....OK
Load Formats .....OK
Init LCS .....OK
  
```

- When the testing of the electronic part has been completed the machine goes to the "ON" status, but it is not enabled to produce plates yet.

```

MODEL MDT500 HE
Status: ON
Target: 0/1
Format: No active format

Press RETURN to start
  
```

NOTE:

The message "No active format" is displayed when the machine cannot find any preset format.

- Press **RETURN** to continue and enable the embosser.
When **RETURN** has been pressed, the embosser performs the reset cycle, which includes the unloading of the tags left inside the machine after the previous working session and the check of the axes taking them to their starting positions (HOME).
When the reset cycle is completed the embosser goes from the ON state to the READY position.

```

MODEL MDT500 HE
Status: READY
Target: 0/0
Format: No active format

1 LCD EDIT, 2 SETUP, 3 SERVICE
  
```

- Now the machine is ready to operate both in STAND ALONE mode and in ON-LINE mode connected to a computer.
- If a BLADE application software is used, the system is already able to produce metal plates either through a serial connection or USB.
But if another application software is employed, it is necessary to check the correct configuration of the parameters concerning the communication protocol.
To access those parameters refer to the chapter "USE AND SETTINGS OF THE MACHINE".
- Refer to the chapter "USE AND SETTINGS OF THE MACHINE" also to operate in STAND ALONE mode.

If the machine does not start, make sure that the supply voltage is correct and check the integrity of the fuse.

CAUTION:
IF THE DISPLAY LIGHTS UP BUT NOTHING APPEARS ON THE SCREEN, SWITCH THE EMBOSSER OFF AND CALL THE TECHNICAL SERVICE

IMPORTANT:
IF YOU HEAR UNUSUAL NOISES OR SOUNDS COMING FROM THE MACHINE, SWITCH IT OFF IMMEDIATELY AND CALL THE TECHNICAL SERVICE

If the machine does not complete the cycle described above, then malfunctions might be occurring. In this case see the chapter Error messages and problem solving.

▪ **CHECKING THE FUNCTIONALITY OF SAFETY DEVICES**

In order to guarantee the functioning of the machine in safety conditions it is necessary that the interlock switches of the panels work properly.

Before starting the work shift (at least once a day) switch the machine on and when it is in READY condition, open the front cover. Then check that the machine, after any input, signals an alert situation "cover open or pin in its seat". Close the cover and press RETURN; the machine will run a reset cycle to go back to the READY condition.

If the machine does not do as described above, this means that the safety devices are not operating correctly. In this case, switch the machine off and contact the technical service.

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USE AND SETTINGS OF THE MACHINE

4

4.1 INTRODUCTION

MDT500 HE is a highly technological embosser that offers maximum functionality and wide operability to meet all the requirements of the operators of metal plates embossers.

The machine allows to plan and perform a job, set its options and parameters and check the functioning of some of its electrical and mechanical components .

To do so the operator uses the console located on the front side of the panel.

4.1 MAIN SCREEN

This screen is always displayed by the embosser except when you enter one of the functions of the "MAIN MENU".

Base screen



Complete screen



- Panel definition

Model MDT500 HE

Bar for the identification of the machine model

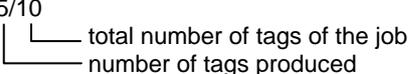
Status:

Machine state.
It indicates the status of the machine.
The status are:

ON	The machine is on but it is not ready to produce tags.
READY	The machine is ready and enabled to produce tags.
LOADING	Loading of the tag in progress.
EMBOSSING	The plate is being embossed.
UNLOADING	Embossing is completed and the tag is ejected.

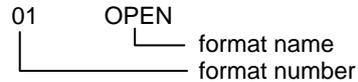
Taget

Number of tags ready referred to the job.
It indicates the number of tags produced with reference to the total amount required for that job.

5/10


Format

Format being used.
It indicates the number and name of the format being used, that is the preset active format.



Error

Error condition, machine blocked.
It shows the code and message of the error that caused the machine halt.
The notice appears only when an error condition occurs.
The machine does not work and waits for a command.



Alarm signal.
It draws the operator's attention by flashing continuously until the error condition is removed.
The signal is always associated to an error code and message generated by the embosser.



Tag presence detector control disabled.
The embosser embosses even without the tag.
When this function is active do not put tags into the loader.



Continuous mode enabled.
The embosser continuously repeats the last task launched.



Pause mode enabled.
If you repeatedly press key RETURN the embosser performs step by step each single process of tag customization.



Machine partial counter.
It displays the number of tags produced from the moment it was enabled.
The counter is not connected to any format or job.
It can be enabled/disabled and reset at any time by the user.

4.3 MAIN MENU

When the embosser is in READY status, the bottom part of the display shows "MAIN MENU", thus allowing the user to access the various functions available on the machine. Simply press on the keyboard the number corresponding to the required option. It is possible to access it also when the machine is in ON status.



The functions contained in the "MAIN MENU" are:

- LCD EDIT** Option for the user to plan work and start production.
- SETUP** Option for the user but especially for specialized technical staff to set up the various parameters and the machine configuration.
- SERVICE** Option for specialized technical staff to check the functionality of the various machine components and run possible updating.

To go back to "MAIN MENU" press  key.

4.4.0 LCD EDIT

Through the various functions present in the **LCD EDIT** menu it is possible to produce tags in STAND ALONE mode. This option contains all the functions necessary to create, plan and perform a job.

How to access

You can access the **LCD EDIT** option by simply pressing the key  on the keyboard, while to exit and go back to the "MAIN MENU", you must press key .

The option displays the following screen, showing the contents of its menu.



- **LCD EDIT Functions.**
LCD EDIT contains the following functions:

- 1) TAG
- 2) PREVIEW TAG
- 3) FORMATS
- 4) AUTOMATIC JOB PRODUCTION
- 5) SAVE JOB REPORT TO USB

How to access

To access one of the various functions you must move by pressing the keys  or  until you reach the required function and then press .

It is possible to access directly by pressing the number key corresponding to the specific function.

4.4.1. TAG

Information about ...

- .1 It allows the manual entering of data in the fields of the preset active format and the embossing.
The format is preset in the "Formats" option and the screen opened by the option shows the corresponding number in its heading.

How to access

- .2 From the "LCD EDIT" menu you can access the **Tag** function by pressing key



To return to "LCD EDIT" press the key

Screen Description

.3



The **Tag** screen is displayed as a chart consisting of 3 columns, each with its own heading.
Each line represents and defines an embossing field.
The option's heading indicates also the number of the format used.

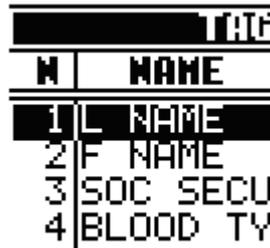
N Number of the field

NAME Name of the field

NOTE:

If the field name consists of two identical letters, this indicates that it has been automatically assigned by the program when creating its format.

However it is possible to rename the field, using a name that identifies it more suitably.



This function is available in the "Formats" option.

TEXT Field contents.

F2 It displays the print preview of the tag, directly using the
Prev function "Tag preview". Pressing  you go back to the **Tag** menu.

 It displays a HELP menu concerning the active screen.

Procedure
- How to enter data

.4 To enter the data to be embossed it is necessary to follow the instructions below:

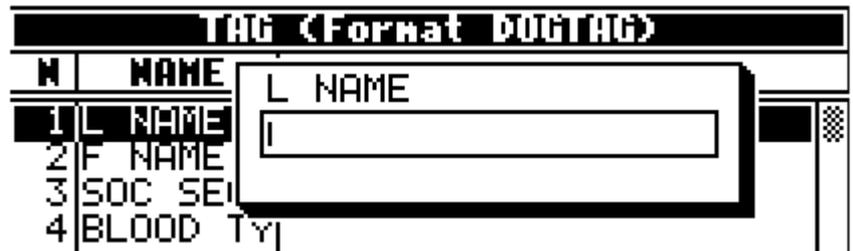
1- Refer to the instructions at point 4.4.0 to enter into "**LCD EDIT**".

2- In the option "**LCD EDIT**" press  or  or  until you reach "**Tag**" and finally press .



3- In the **Tag** menu move with the keys  or  until you reach the field you want to enter data into, then press .

After having pressed  the program will open a box with the name of the field it refers to. It is possible to access this screen by just start typing the data in.



4- Using the keyboard you can write the required text.
 Example JONES



NOTE:

The maximum number of characters that can be entered depends on the definition of the field in the "Formats" option

- 4- Press  to exit the box and save the entered data

TAG (Format D0GTAG)		
N	NAME	TEXT
1	L NAME	JONES
2	F NAME	
3	SOC SEI	
4	BLOOD TY	

NOTE:

If you press key  the entered data are not saved and after leaving the box you return to the previous condition.

TAG (Format D0GTAG)		
N	NAME	TEXT
1	L NAME	
2	F NAME	
3	SOC SECU	
4	BLOOD TY	

- 6- Press  to move the cursor to the following field

TAG (Format D0GTAG)		
N	NAME	TEXT
1	L NAME	JONES
2	F NAME	
3	SOC SECU	
4	BLOOD TY	

- 7- To enter new data, repeat in the same order the steps described above.

TAG (Format D0GTAG)		
N	NAME	TEXT
1	L NAME	JONES
2	F NAME	TOM
3	SOC SECU	123 45 6789
4	BLOOD TY	0 POS

- 8- To display the tag preview press F2.

- 9- Pressing  you go back to the **Tag** menu

- 10- To emboss the entered data press 

- 11- Pressing  you go back to LCD EDIT menu

4.4.2. PREVIEW TAG

Information about ...

- .1 The function is used to view in advance the tag to be produced and then make possible changes.
Preview tag retrieves the active selected format used to display the contents of the fields and their layout on the tag (card-layout).

How to access

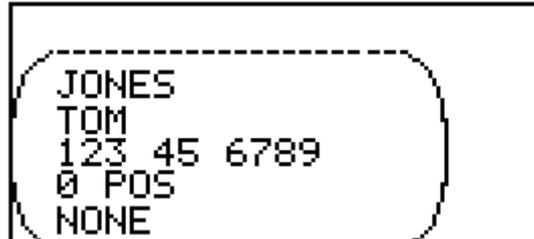
- .2 From the "LCD EDIT" menu you can access the "Preview tag" function by pressing key **2**.



To exit "Preview tag" and go back to LCD EDIT press **esc**.

Screen Description

.3



The screen generated by "Preview tag" displays the tag to be produced showing the positions and contents of each field, both variable and protected, or the counter.

The content of each line can represent more than one field.

To emboss the displayed data press **print** (print).

4.4.3. FORMATS

Information about ...

- .1 It is one of the key functions to operate a **MDT500 HE** especially in **STAND ALONE** mode.
This function allows to create, modify and remove print formats.
The formats have the same structure and layout of a tag, defining the position of the required text fields. Each field is provided with specific settings, such as coordinates, spacing, number and type of characters.

How to access

- .2 From the "**LCD EDIT**" menu you can access the **Formats** function by pressing the key **[3]**.



To exit **Formats** and go back to **LCD EDIT** press **[esc]**.

Screen Description

.3

FORMATS			
	NUM	Fields	NAME
*	01	26	OPEN
	02	03	SAMPLE TAG

- 1 Edit
- 2 New
- 3 Delete
- 4 Fields
- 5 Counters
- 6 Active y/n

Also the main screen of **Formats**, like the main screen of **Tag** is displayed as a chart, made up of 4 columns, each with its own heading.
Each line represents and defines a format previously saved in the machine.
The maximum number of savable formats is 20.

* It indicates the active format that will be used to enter data and to produce the tags.

NUM It identifies the format number.

Fields It identifies the number of fields present in that specific format.

NOTE:

The maximum number of available fields for each format is 26

NAME It indicates the format name.

Beside the chart and below you can see the list of available utilities that can be retrieved by pressing the corresponding number on the keyboard.

- 1 Edit
- 2 New
- 3 Delete
- 4 Fields
- 5 Counters
- 6 Active y/n



NOTE:

All utilities apply to the format where the cursor bar is placed (highlighted) and not to the active preset one.

1 Edit

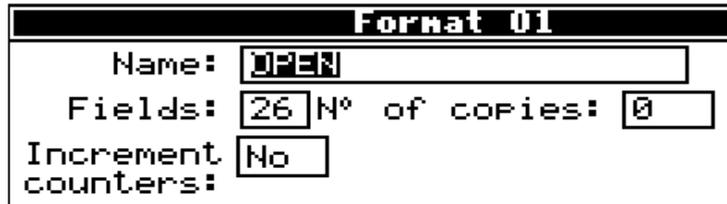
It allows to view again and modify an existing format, both in the structure and in the options.

How to access

To access **Edit** press **[1]**.

To go back to **Formats** menu press **[esc]**.

The utility displays the following screen



Screen Description

Format 01

Heading.

It shows the number of the format being used.

Name

name of the format retrieved.

In this box it is possible to give a different name to the format.

Fields

number of fields present in the format.

In this box it is possible to vary the number of fields present.

N° of copies

Quantity of tags to be duplicated.

In this box it is possible to change the number of copies of the same tag (duplicates).

Increment counters

It allows to enable or disable the increase of the counters on defined fields during the duplication of the same tag.

The option is active only when the number of copies is different from 0.

2 New

It allows to create a new format, giving the name to the format and defining the number of fields.

The newly created format will be set as active format.

NOTE:

The fields will then be defined in the Fields utility.

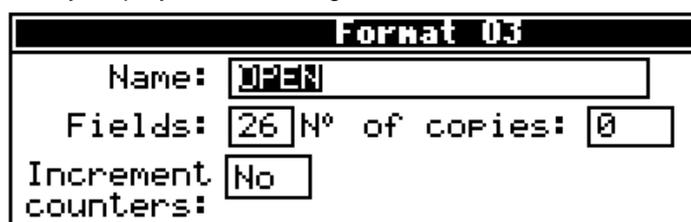
How to access

To access **New** press **[2]** on the keyboard.

To go back to **Formats** menu press **[esc]**

The format is thus created and enabled.

The utility displays the following screen



Screen Description

- Format 03** Heading.
It displays the number given to the format.
The number is automatically assigned progressively from the last one present in the list.
- Name** Box where the name is given to the format.
The name cannot be longer than 19 alphanumeric characters.
Only the first 14 characters will be displayed in the menu.
- Fields** Box where the number of fields of the format is indicated.
The maximum number of allowed fields is 26.
- N° of copies** Box where the quantity of copies to be produced of the same tag is indicated.
The maximum number of copies is 999.
- Increment counters** It enables the increase of counters in the defined fields during the duplication of the same tag.
The option is enabled only when the number of copies is different from 0 (zero).

3 Delete

It allows to remove a format previously introduced.

NOTE:

If the format to be removed is the preset active one, it will be necessary to enable another one to print in standalone mode.

How to access

To remove the format you must move with the keys  or  along the formats list, until you reach the one to be deleted, then press .

FORMATS			
	NUM	Fields	NAME
	01	26	OPEN
*	02	03	SAMPLE TAG
	03	26	123456789012345

1 Edit
2 New
3 Delete
4 Fields
5 Counters
6 Active y/n

Then press  to confirm its removal and return to the Formats menu or press  to undo the operation and go back to the Formats menu.

Delete selected format
Press ENTER to confirm.

4 Fields It allows to define the structure of the embossing fields of a specific format.
The retrieved format is the one where the cursor bar is positioned.

How to access To access the “Fields” utility, you must move with the keys  or  along the formats list, until you reach the format where the fields must be defined. Then press  .
To go back to Formats menu press  .
The utility displays the following screen

FIELDS (Format 01)		
NUM	TYPE	NAME
01	Variable	AA
02	Variable	BB
03	Variable	CC
04	Variable	DD

Screen Description

Also the main screen of Fields like the main screen of Formats is displayed as a chart, made up of 3 columns, each with its own heading.
Each line represents and defines a field previously created in the New utility.

- FIELDS (Format 01)** Heading.
It shows the number of the format being used.
- NUM** It identifies the field number.
NOTE:
The maximum number of available fields is 26
- TYPE** It identifies the field type.
- NAME** It indicates the field name.

How to access

To enter fully into the “Fields” utility and then define the field in all its aspects you need to move to the required field.
Then you must move along the fields list by pressing the keys  or  until you reach the specific field and press  .
After pressing  the display will show the following screen.

Field 01 AA	
Name:	<input type="text" value="AA"/> Millimeter
Space:	<input type="text" value="7"/> X: <input type="text" value="66"/> Y: <input type="text" value="216"/> Max: <input type="text" value="15"/> 20
Type:	<input type="text" value="Variable"/> Font: <input type="text" value="Normal"/>

Field 01 AA

Heading
It displays the number and the name of the field given when creating your own format.

Millimeter
Inch

It indicates which unit of measurement X and Y refer to.

Name

Box where the name is given to the field. The name cannot be longer than 19 alphanumeric characters.

NOTE

When opening the Fields screen, the field already has a generic name consisting of two identical letters, assigned in alphabetical order when the format is being created.

It is advisable to change it, choosing a name that can allow better identification.

Space

Box where the spacing between two adjacent characters is specified (distance between one character and the other one).

The value is defined according to the number of motor steps between characters. Usually the value of the spacing for characters of the type Dog Tag and Simplex is 7, while for those of the BLOCCO type the value is 10-11.

Note 1

The smaller the value the closer together the characters will be embossed on the tag. Consequently, the larger the value the further apart the characters will be.

Note 2

The spacing between characters depends on the number of motor steps required to move the tag between 2 adjacent characters.

The motor steps are identified as "constant". A 07 constant produces a spacing between the characters equal to 10 cpi, while a constant of 10 produces a spacing of 7 cpi. Each motor step (01 constant) is equal to a distance of 0.36 mm.

The following chart can be used to assign the value of the spacing between the characters.

SPACING CHART			
Constant	Characters per inch (cpi)	Characters per centimeter	MAX (e.g. when X=60)
05	14.4	5.56	28
06	11.7	4.61	23
07	10	3.93	20
08	8.8	3.47	17
09	7.82	3.08	15
10	7.04	2.87	14
11	6.40	2.52	12
12	5.85	2.31	11
13	5.42	2.14	10
14	5.03	1.98	10

- X** Box where the starting point of the field along the X axis coordinate is indicated. The value can be indicated in tenths of millimeter (.1mm) or hundredths of inch (.01") according to the unit of measurement set in SETUP under the heading "Configuration". That value is the distance between the left edge of the tag and the left side of the character. For reasons due to the tag structure, in order not to write on the hanging hole it is advisable not to emboss below these values:
 65 dmm (about 26 in inches) for Dog Tag
 70 dmm (about 27 in inches) for Red Tag.
- Y** Box where the starting point of the field along the Y axis coordinate is indicated. The value can be indicated in tenths of millimeter (dmm) or hundredths of inch (inch) according to the unit of measurement set in SETUP under the heading "Configuration". That value is the distance between the lower edge of the tag and the lower side of the character. For reasons due to the tag structure, it is not possible to emboss below these values:
 40 dmm (about 16 in inches) for both Dog Tag and Red Tag.
- Max** Box where it is possible to choose the number of characters in the field. It is not possible to type in a value higher than the one indicated.
- 20** It is (for example 20) the maximum value of the number of characters beyond which MAX cannot be set. The value is automatically calculated on the basis of the tag size, the starting point of the field along the X axis and the spacing between one character and the other.
- Type** Box where the type of field is defined.

 - Variable** field where the data to be embossed are entered. The data can be entered manually or loaded from a data base.
 - Protected** field with fixed text where the contents cannot be modified.

Counter field with counter function. The number of the counters used is assigned when closing the panel, while its specifications are defined in the "Counters" utility.

Duplicate field where the contents are a copy of those of another field.

Font Box where the Normal or OCR font used to emboss the data entered into the field is determined

5 Counters It allows to define the counter specifications.

How to access

To enter into COUNTERS you must move with the keys  or  along the formats list until you reach the specific format where the counter fields are defined. Then press  .

To go back to Formats menu press  .

The utility displays the following screen

COUNTERS (Format 01)			
NUM	VALUE	INCREMENT	ALIGN
01	1	1	->
02	1	1	->
03	1	1	->
04	1	1	->

Also the main screen of COUNTERS like the main screen of FORMATS is displayed as a chart, made up of 4 columns, each with its own heading.

Each line represents and defines a counter.

The maximum number of counters available for the different uses is 4

Screen Description

COUNTERS (Format 01)

Heading. It shows the number of the format being used

NUM

It identifies the counter number.

VALUE

It indicates the starting value of the counter.

INCREMENT

It indicates the increase value of the counter.

ALIGN

It indicates the alignment of the counter inside the field.

How to access

Move along the counters list by pressing on the keyboard the keys or until you reach the required counter; then press .

After pressing the display will show the following screen.

Counter	
Value:	<input type="text" value="1"/>
Increment:	<input type="text" value="1"/> Fill with 0: <input type="text" value="Yes"/>
Justify:	<input type="text" value="Right"/>

Screen Description

Counter

Heading

Value

Box where the starting value of the counter is indicated.

NOTE:

The length of the counter, that is the number of digits that make it up, is assigned during the field definition in the FIELDS utility.

Increment

Box where the incremental value of the counter is indicated.

Fill with 0:

Box that enables to fill with zeros the remaining digits of the counter that have not been used yet.

Example:

Counter length = 4	
Option = Yes	0003
Option = No	3

Justify

Box that allows to define the alignment of the counter digits inside the field.

Right	right alignment
Left	left alignment

This option is valid only when "Fill with 0" is equal to NO.

6 Active y/n

It allows to enable or disable a format from the “active” setting. The active format is highlighted with a star and it is the one where the data will be entered and the tags produced.

How to access

To enable an active format you must move with the keys  or  along FORMATS, until you reach the specific format; then press  .

Repeat the same procedure if you wish to disable it.

FORMATS			
NUM	Fields	NAME	
*	01	26	OPEN
	02	03	SAMPLE TAG

- 1 Edit
- 2 New
- 3 Delete
- 4 Fields
- 5 Counters
- 6 Active y/n

FORMATS			
NUM	Fields	NAME	
	01	26	OPEN
	02	03	SAMPLE TAG

- 1 Edit
- 2 New
- 3 Delete
- 4 Fields
- 5 Counters
- 6 Active y/n

Procedure 4

How to create a format 4.1 To create a format it is necessary to follow the instructions below:
NOTE:

In this case, to make it easier and cancel any doubts of the operator of the MDT500 HE, the procedure starts from the beginning, repeating the phases previously described and explaining everything step by step.

- 1- With the machine in the "READY" status, press key **[1]** on the keyboard and access the "LCD EDIT" option.

MODEL MDT500 HE	
Status:	READY
Target:	0/0
Format:	01 OPEN
1 LCD EDIT, 2 SETUP, 3 SERVICE	

- 2- In "LCD EDIT" press key **[3]** on the keyboard to enter into the function or press the keys **[↓]** or **[↑]** to move to "Formats" then press **[RETURN]**.

LCD EDIT	
1)	Tag
2)	Preview tag
3)	Formats
4)	Automatic job production
5)	Save Job Report to USB

- 3- In the Formats menu, press key **[2]**.

FORMATS				
NUM	Fields	NAME		
*	01	26	OPEN	1 Edit
	02	03	SAMPLE TAG	2 New
				3 Delete
				4 Fields
				5 Counters
				6 Active y/n

- 4- Enter into the "New" screen and in the "Name" box give the new name to the format, then press **[RETURN]** to move to the next one.

Format 03	
Name:	<input type="text" value="SYSTEM"/>
Fields:	<input type="text" value="26"/> N° of copies: <input type="text" value="0"/>
Increment counters:	<input type="text" value="No"/>

- 5- In "Fields", define the number of fields that make up the tag and finally press to confirm and move automatically to the box "N° of copies".

Format 03	
Name:	SYSTEM
Fields:	6 N° of copies: 0
Increment counters:	No

- 6- When you are in the box "N° of copies", enter the number of copies to be duplicated if you need to reproduce the tag various times.
- 7- Should there be an increase in the counter field even during duplication, press for Yes.
- 8- In the box "Increment counters" press the keys or to enable the option. The option is enabled when it is on Yes.

Format 03	
Name:	SYSTEM
Fields:	6 N° of copies: 1
Increment counters:	Yes

- 9- Press to exit the "New" menu.

FORMATS			
NUM	Fields	NAME	
01	26	OPEN	1 Edit
02	03	SAMPLE TAG	2 New
* 03	06	SYSTEM	3 Delete
			4 Fields
			5 Counters
			6 Active y/n

NOTE:

The format is included in the list and it is set as active format, but it has not been saved in the machine yet.

- 10- Press to exit the menu and then to save the format in the machine.

FORMATS			
NUM	Fi	NAME	
01			1 Edit
02			2 New
* 03			ete
			lds
			inters
			off

save

Press ENTER to confirm.

- 11- If you do not wish to save it, press .

Set-up the fields of a format 4.2

This procedure can be seen as the prosecution of the previous procedure, taking as a reference the fields given in that format and defining each of them in their various options.

- 1- If you are in the "MAIN MENU", enter into "LCD EDIT" and then into "Formats".
Refer to points 4.4.0 and 4.4.3.

- 2- In the Formats menu, press the keys  or  to move to the format where the fields must be defined.

FORMATS			
NUM	Fields	NAME	
	01	26	OPEN
	02	03	SAMPLE TAG
*	03	06	SYSTEM

1 Edit
 2 New
 3 Delete
 4 Fields
 5 Counters
 6 Active y/n

- 3- Press key 

- 4- Press  to enter into the first field or move with  or  until you reach the field to be set.

FIELDS (Format 03)			
NUM	TYPE	NAME	
01	Variable	AA	
02	Variable	BB	
03	Variable	CC	
04	Variable	DD	

- 5- Enter into the screen and into the "Name" box then give a new name to the field.

This to identify and recognize it better. Finally press , confirming the new name and moving to the next box.

Field 01 MODEL			
Name:	<input type="text" value="MODEL"/>	Millimeter	
Space:	<input type="text" value="7"/>	X: <input type="text" value="66"/>	Y: <input type="text" value="216"/> Max: <input type="text" value="15"/> 20
Type:	<input type="text" value="Variable"/>	Font: <input type="text" value="Normal"/>	

"Variable" Field

- 6- In each box enter the settings and move by pressing . The settings in Type and Font can be selected by pressing the keys  or .

In this case Type is defined as Variable.

Press  to exit.

- 7- Press  to move to the next field and finally press .

FIELDS (Format 03)		
NUM	TYPE	NAME
01	Variable	MODEL
02	Variable	BB
03	Variable	CC
04	Variable	DD

"Protected Field"

- 8- Repeat points 5 and 6 to set the field with its own settings and select Type as "PROTECTED".

Field 02 VOLTAGE	
Name:	VOLTAGE Millimeter
Space:	7 X: 66 Y: 167 Max: 15 20
Type:	Protected Font: Normal

- 9- Press .

- 10- When you are in the new screen, type in the fixed text and finally press to exit.

Field 02 VOLTAGE	
Name:	Text of field VOLTAGE imeter
Space:	220 V] 20
Type:	

"Counter" field

- 11- Press to move to the next field and finally press .

- 12- Repeat points 5 and 6 to set the field with its own settings and select Type "COUNTER".

Field 03 SERIAL N.	
Name:	SERIAL N. Millimeter
Space:	7 X: 66 Y: 125 Max: 15 20
Type:	Counter Font: Normal

- 13- Press .

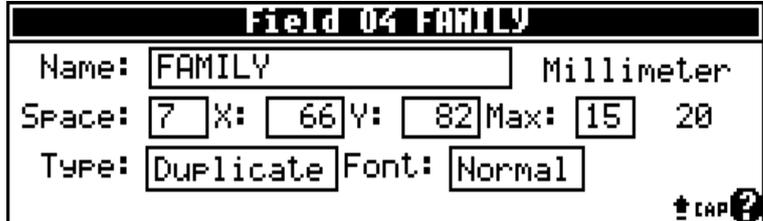
- 14- Select one of the 4 available counters and press to exit.

Field 03 SERIAL N.	
Name:	SERIAL N. Millimeter
Space:	7 X: Counter: 1 : 15 20
Type:	Counter Font: Normal

"Duplicate" Field

15- Press  to move to the next field and finally press 

16- Repeat points 5 and 6 to set the field with its own settings and select Type "Duplicate".



17- Press 

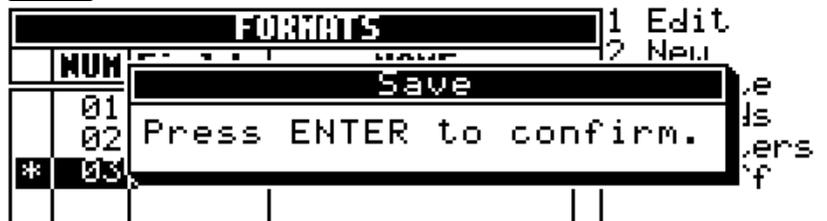
18- Specify the field you wish to duplicate then press  to exit and move on to the next field.



19- Press  to exit and return to the "Formats" menu.

FIELDS (Format 03)		
NUM	TYPE	NAME
01	Variable	MODEL
02	Protecte	VOLTAGE
03	Counter	SERIAL N.
04	Duplicat	FAMILY

20- In the "Formats" menu, press  to exit and finally press  to confirm the saving of the settings.



The procedure shows how to set the “counter” associated to the field defined “Counter” inside a format.

- 1- If you are in the “MAIN MENU”, enter into “LCD EDIT” and then into “Formats”.
Refer to the previous points.

- 2- In the Formats menu, press key **5** to access the “Counters” utility.

FORMATS			
NUM	Fields	NAME	
01	26	OPEN	1 Edit
02	03	SAMPLE TAG	2 New
* 03	06	SYSTEM	3 Delete
			4 Fields
			5 Counters
			6 Active y/n

- 3- Press the keys **↓** or **↑** until you reach the counter that has been associated to the field defined “counter” inside a format then press **RETURN**.

COUNTERS (Format 03)			
NUM	VALUE	INCREMENT	ALIGN
01	1	1	->
02	1	1	->
03	1	1	->
04	1	1	->

- 4- Set the various parameters entering the value directly or through the keys **↓** or **↑**.

Press **RETURN** to move from one parameter to the other.

Counter	
Value:	<input type="text" value="1"/>
Increment:	<input type="text" value="1"/> Fill with 0: <input type="text" value="Yes"/>
Justify:	<input type="text" value="Right"/>

- 5- Press **esc** to exit and return to the “Counters” menu

COUNTERS (Format 03)			
NUM	VALUE	INCREMENT	ALIGN
01	1	1	->
02	1	1	->
03	1	1	->
04	1	1	->

- 6- From the "Formats" menu, press **esc** to exit and finally **RETURN** to confirm the saving of the format.

FORMATS		
NUM	Fields	NAME
01		Save
02		Press ENTER to confirm.
* 03		

1 Edit
 2 New
 3 Delete
 fields
 counters
 ctive y/n

4.4.4. AUTOMATIC JOB PRODUCTION

Information about ...
.1

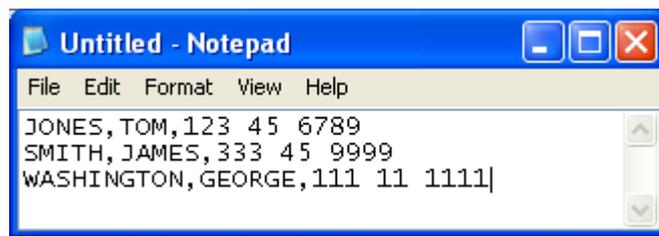
It is the function that allows the use of a USB FLASH PEN DRIVE for the production of tags by retrieving the data from a database file with the .csv extension.

Switching off the machine deletes the print queue and makes saving the log file of the job impossible (function "SAVE JOB REPORT TO USB").

The csv (Comma Separator Value) data files can be generated through commercial application software (Excel, Access, Notepad...) or through the application software Blade USB.

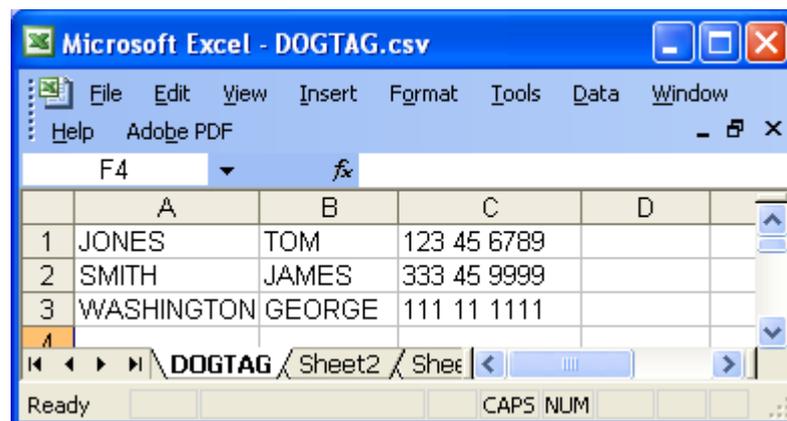
The .csv file consists of records (lines) separated from each other by a CR (Carriage Return). Each record contains data that might be divided in fields by a separator such as "comma" (,), "semicolon" (;) or tab.

To create a .csv file with Notepad enter/edit the data as shown in the example. On each line enter the data in sequence separated by tab or by a comma, or a semicolon" (;), except at the end of the line. A tag corresponds to each line and each text adjacent to a tab, comma or semicolon corresponds to a field.



Saving this file with csv extension on the Pen drive will make it possible to print three tags with names, surnames and serial numbers set as in the example.

To create a csv file with Excel enter/edit the data as shown in the example. Each line corresponds to a tag and each cell corresponds to a field.



Saving this file with csv extension on a pen drive will make it possible to print three tags with names, surnames and serial numbers set as in the example.

How to access

.2

From the "LCD EDIT" menu you can access the "Automatic Job Production" function by pressing key **4**.

LCD EDIT	
1)	Tag
2)	Preview tag
3)	Formats
4)	Automatic job production
5)	Save Job Report to USB

To exit "Automatic Job Production" and go back to LCD EDIT press

Screen Description

.3

Print cards (LOCAL)			1
NAME	DIR	DATE	
file.csv		17/10/	2
Print.csv		17/09/	

Also the main screen of "Print cards (Local)" like the main screen of "Tag" for example, is displayed as a chart, made up of 3 columns, each with its own heading.

The chart shows the contents of the directory of the selected device.

Each line indicates a database file with .csv extension or a directory.

It is possible to move in the various directories present in the device until you reach the database work file.

NAME It indicates the name of the database file or the directory.

DIR It indicates if the object in "NAME" is a directory.
If it is so, the entry DIR appears in the column.
While if it is a file, nothing is displayed in the column.

DATE It indicates the creation date of the object.

Beside the chart and below you can find the list of the devices you can connect to in order to access to database file.

The device can be selected by pressing the corresponding number on the keyboard. USUALLY N° 2 FOR USB.

1 The data base file is resident in the machine internal memory. FACTORY INSTALLED OPTION ONLY

2 Database file stored on USB FLASH PEN DRIVE.



NOTE:

The selected database file will use the active selected format.

Procedure
 - How to open a
 csv file from a USB pen
 drive

4 To produce tags automatically from a USB FLASH PEN DRIVE there are two methods. Read the procedure carefully to decide whether to start from point 1 or from point 2.

1- In the main screen, when the USB pen drive is plugged in, the machine automatically displays the csv files it contains.
 Now refer to point 5 to continue.

2- Follow the previous instructions to access manually to the **LCD EDIT** menu.

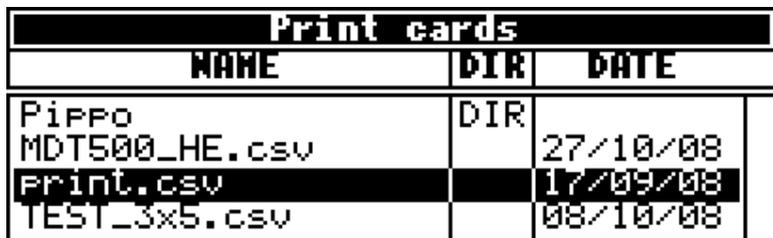
3- In the “**LCD EDIT**” option press **[4]** or the keys **[↓]** or **[↑]** until you reach “**AUTOMATIC JOB PRODUCTION**” and press **[RETURN]**.



4 - In the “**Automatic Job Production**” menu, press **[2]** to access the USB pen drive.



5- When the contents of the USB pen drive are displayed, select the required csv file with the keys **[↓]** or **[↑]** or reach the directory that contains the file.



6- Press **[RETURN]** to emboss all the tags with the data contained in the database file. If the used format has a number of copies other than zero, each tag of the database will be produced various times.

- If you wish to suspend or interrupt the production press

[esc] on the keyboard and confirm your choice.

4.4.5. SAVE JOB REPORT TO USB

Information about ... 1

The option allows to generate and save only on a USB FLASH PEN DRIVE, a log file named MDT500_HE.csv.

The file contains the information concerning the processed tags, both the produced ones and the rejected ones and the possible errors that have been generated and solved during the machine operating phase.

The aim is to provide the operator with an instrument that allows them to control production and generate statistics.

How to access 2

From the "LCD EDIT" menu you can access the "SAVE JOB REPORT TO USB" function by pressing key **5**.



To exit **SAVE JOB REPORT TO USB** without saving the data and return to **LCD EDIT** press **esc**

Procedure
- How to save a log file

3 To save the data of the embossed tags follow the instructions below:

1- Refer to the instructions at point 4.4.0 to enter into **LCD EDIT**.

2- Plug the USB FLASH PEN DRIVE in the suitable USB port.

3- In the "**LCD EDIT**" option press **5**, or the keys

↓ or **↑** until you reach "**SAVE JOB REPORT TO USB**", then press **RETURN**.



4- Press **RETURN** on the keyboard to confirm saving the file on the USB pen drive.

Press ENTER to confirm.

If the USB pen drive contains a previous log file, the new file will overwrite it.

4.5 SETUP

The **SETUP** option allows to set and modify the machine parameters and to define some elements of its configuration so that it can guarantee the maximum performance in terms of quality and flexibility and to adapt to the different production requirements of metal tag producers.

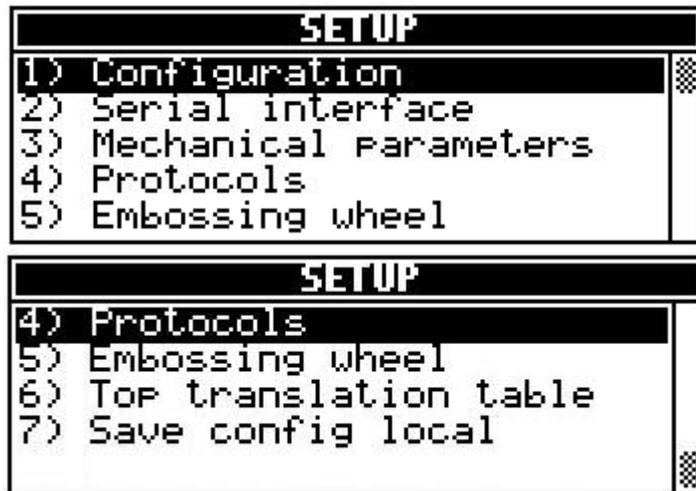
As this option deals with parameters that determine the proper functioning of the embosser, the option must be used by specialized technical staff or at least under their supervision. For this reason it is protected with a password.

How to access

You can access the **SETUP** option simply by pressing key **2** from the “Main Menu” while to leave and return to the previous situation press key **esc**.

Due to the size of the display, the option shows the first five functions of the menu.

To view the next functions simply press key **↓**.



▪ Functions contained in SETUP

The **SETUP** menu consists of seven main functions:

- 1) CONFIGURATION
- 2) SERIAL INTERFACE
- 3) MECHANICAL PARAMETERS
- 4) PROTOCOLS
- 5) EMBOSSING WHEEL
- 6) TOP TRANSLATION TABLE
- 7) SAVE CONFIGURATION LOCAL

How to access

To access one of these you must move with the keys **↓** or **↑** until you reach the specific function and then press **RETURN**.

It is possible to access directly by pressing the number key corresponding to the specific selected function.

All the functions present in the “SETUP” menu must be set only by qualified staff or at least under their supervision.

The wrong setting of some parameters can result in malfunctioning of the embosser and it can cause serious damage. Some parameters are set directly by the manufacturer.

4.5.1. CONFIGURATION

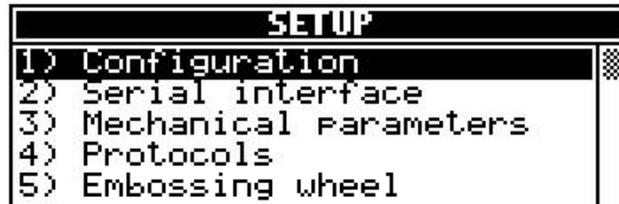
Information about ...

- .1 The option allows to set the general parameters of the machine.

How to access

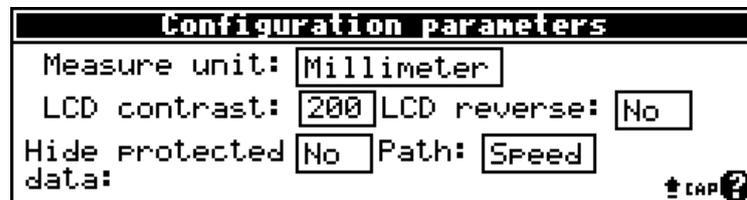
- .2 From the “**SETUP**” menu you can access the **Configuration** function by pressing key **[1]**

To return to “**SETUP**” press key **[esc]**.



Screen description

.3



Measure unit: unit of measurement adopted for X and Y coordinates of the fields.
Unit in millimeters or inches

LCD Contrast: value of the graphic display contrast.

LCD Reverse: function to reverse the color of the pixels; useful when you work in an environment with strong light exposure.

Hide protected data: it does not display the data of protected fields.
When leaving the page the saving of the data is required if they changed. By pressing the **ESC** key the modifications are cancelled while by pressing the **ENTER** key they will be saved.

Path: it sets the way to drive the axes: by punch, by line or according the path optimization algorithm.

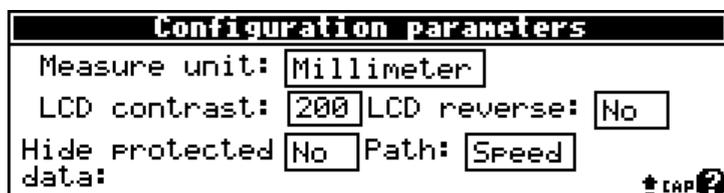
Procedure

- .4 1- Refer to the previous point 2 to enter into the menu.

- 2- To enter and move around the various boxes present in the menu,

simply press **[RETURN]**, while to set or modify the respective parameters press **[↓]** or **[↑]**.

In case of “LCD Contrast” the two keys allow to increase or decrease the value.



3- After having modified the relevant parameters, press  to leave the screen.

4- Press  to save the newly set parameters.



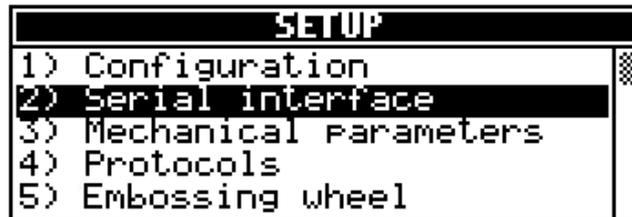
4.5.2. SERIAL INTERFACE

Information about ...

- .1 The option allows to set the standard communication parameters of the serial port RS 232 of the embosser to connect it to a computer and respect the specifications of the application software.

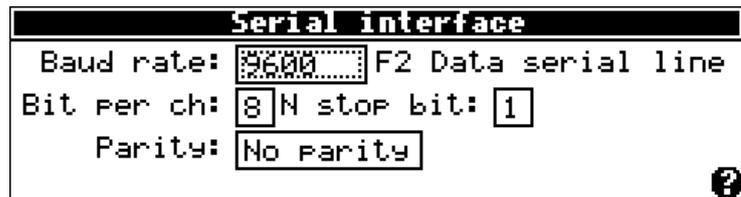
How to access

- .2 From the “**SETUP**” menu you can access the **Serial Interface** by pressing key **2** or by moving with the keys **↓** or **↑** until you reach the function and then press **RETURN**.
To return to “**SETUP**” press key **ESC**.



Screen Description

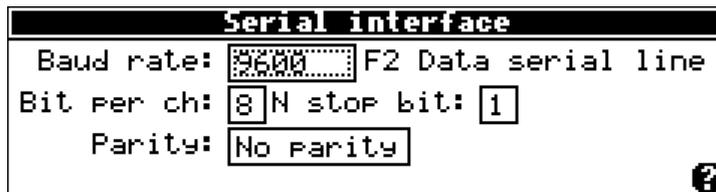
.3



- Baud Rate:** data transmission rate between embosser and computer.
The value of the transmission rate is as provided for by RS 232, and it ranges from 110 Baud Rate up to 115200 Baud Rate.
The rate normally used is 9600 Baud Rate.
- F2** it allows to enable the “Data Scope” function.
This function allows to see on the display the data transmission between the embosser and the computer and vice versa.
- Bit per ch:** is the length of the character expressed in number of bits.
Its value can be 7 or 8.
- N stop bit:** it defines the number of stop bits.
Its value can be 1 or 2.
- Parity:** it indicates the type of checksum to be done on the character. Parity can be even, odd or none.

Procedure

- 4 1- Before setting the various parameters concerning serial communication RS 232, note down the communication settings of the application program used to produce the tags.
- 2- Refer to the previous point 2 to enter into the menu.
- 3- To enter and move around the various boxes present in the menu, simply press , while to set or modify the respective parameters press or .



- 4- After having modified the relevant parameters, press to leave the screen.
- 5- Press to save the newly set parameters.



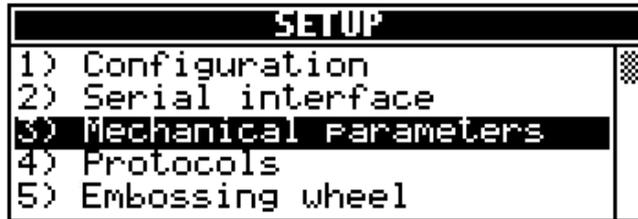
4.5.3. MECHANICAL PARAMETERS

Information about ...

- .1 This menu allows to set some mechanical parameters of the machine. In this option the axes offsets are defined, that is the starting points of the axes are regulated so that they coincide with the values of the coordinates of the fields assigned both to the DOG TAG plates and to the MEDICAL RED ALERT TAG plates.
Warning: assigning non-correct values causes the malfunctioning of the embosser and possible damage to some of its components, therefore we strongly recommend that only specialized technical staff use it.
The "Mechanical Adjustments" menu consists of 10 items.

How to access

- .2 From the "SETUP" menu you can access the **Mechanical parameters** by pressing key 3 or by moving with the keys  or  until you reach the function and then press  .
To go back to "SETUP" press the key .



Screen Description

.3

MECHANICAL ADJUSTMENT	
DESCRIPTION	VALUE
Dog tag X emb adjust	0
Med tag X emb adjust	0
Y emboss adjustment	0
X load adjustment	0
MECHANICAL ADJUSTMENT	
DESCRIPTION	VALUE
Y load adjustment	0
Dog tag norm punch	0
Dog tag OCR punch	0
Med tag norm punch	0
MECHANICAL ADJUSTMENT	
DESCRIPTION	VALUE
Dog tag OCR punch	0
Med tag norm punch	0
Med tag OCR punch	0
Reversed Type	NO

Dog Tag X emb adjust Sets the zero location of the embossing fields with the furthest left edge of the Dog Tag.
Each unit corresponds to 0.36 mm

Med Tag X emb adjust	Sets the zero location of the embossing fields with the left edge of the Medical Red Alert Tag. Each unit corresponds to 0.36 mm
Y emboss adjustment	Sets the zero location of the embossing fields with the bottom edge of the tag. Each unit corresponds to 0.25mm
X load adustment	Sets the tag picking position along the X axis. Each unit corresponds to 0.36 mm
Y load adustment	Sets the tag picking position along the Y axis. Each unit corresponds to 0.25 mm
Dog tag norm punch	To adjust the pressure that the hammer exerts on the normal size characters during the embossing of Dog Tag plates. With this function the relief of the embossed character or the depth of the debossed character can be adjusted.
Dog tag OCR punch	To adjust the pressure that the hammer exerts on blocco (OCR) type characters during the embossing of the Dog Tag plates. With this function the relief of the embossed character can be adjusted.
Med tag norm punch	To adjust the pressure that the hammer exerts on normal size characters during the embossing of Medical Red Alert Tag plates. With this function the relief of the embossed character or the depth of the debossed character can be adjusted.
Med tag OCR punch	To adjust the pressure that the hammer exerts on blocco (OCR) type characters during the embossing of Medical Red Alert Tag plates. With this function the relief of the embossed character can be adjusted.
Reversed type	it indicates if the types of punches present on the machine are reversed so that the relief is rotated. This function is adopted if you need to write very close to the bottom edge of the tag. Punches are OPTIONAL

- 1- Refer to the previous point 2 to enter into the menu.
- 2- To enter and move around the various parameters present in the menu, you must press  or  until you reach the specific parameter. When you have reached it, press .

MECHANICAL ADJUSTMENT	
DESCRIPTION	VALUE
Dog Tag X emb adjust	0
Med Tag X emb adjust	0
Y emboss adjustment	0
X load adjustment	0

- 3- Enter the value selected for that type of parameter or press  to increase it or  to decrease it.

Dog tag X emb adjust 13

- 4- Press  to fix the new value and leave the parameter.
- 5- Having modified the relevant parameters, press  to leave the menu.
- 6- Press  to save the newly set parameters.

Save
Press ENTER to confirm.

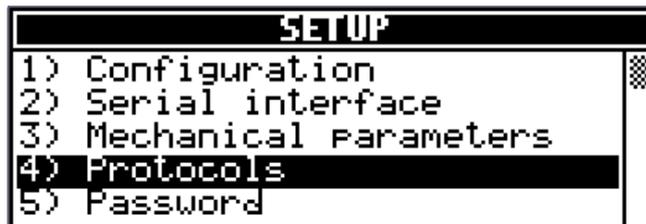
4.5.4. PROTOCOLS

Information about ...

- .1 The menu allows to select and set in the embosser one of the communication protocols that can be used with this type of machine and that are necessary for the serial connection RS232.
This guarantees flexibility and adaptability of the embosser to the various interfacing requirements of the user.
The protocols available in the MTD500 HE are listed below.
 - CIM** Default Protocol (required by Blade Software)
 - Pound Pound**
 - Xon/Xoff**
 - Multi Protocol**
 - Stored Default**
 - Stored Selected**

How to access

- .2 From the "SETUP" menu you can access the **Protocols** function by pressing key **4** or by moving with the keys **↓** or **↑** until you reach the function and then press **RETURN**.
To return to "SETUP" press key **ESC**.



Screen Description

.3

PROTOCOLS		1 Char
DESCRIPTION	VALUE	2 Code
Active Protocol	CIM	?
Continuous XON transmi	0	
Start of text	STX	
End of text	ETX	

PROTOCOLS		1 Char
DESCRIPTION	VALUE	2 Code
Field separator	CR	?
US code opener	US	
US code OCR opener	(
US code OCR closer)	

PROTOCOLS		1 Char
DESCRIPTION	VALUE	2 Code
Norm/block	Norma	?
Norm line space (unit)	16	
Norm char space (step)	7	
Block line space (unit)	20	

PROTOCOLS		1 Char
DESCRIPTION	VALUE	2 Code
Norm char space (step)	7	
Block line space (unit)	20	
Block char space (step)	10	
Ignore Line Feeds	Yes	?

Active protocol: To select and set which of the following protocols present in the machine must be used for the communication with the computer.

NOTE: Set the PC Serial Port Flow Control to Xon/Xoff.

- CIM** type protocol to send data and formats according to the specifications defined by CIM.
 - Pound Pound** type protocol to send data and formats for applications based on the specifications defined by the Pound Pound standard.
 - Xon/Xoff** Xon/Xoff type protocol to send only data using the X and Y coordinates defined by SETUP.
 - Multi Protocol** protocol known also as Multi Embosser, with a machine selection command and the sending of data and format.
 - Stored Default** type protocol to send only data using a format present in LCD EDIT and selected by setup.
 - Stored Selected** type protocol to send only data using a format present in LCD EDIT and selected by a text in the text string sent to the embosser.
- 1 Char:** it displays the values of the commands used in the protocols as alphabetical characters.
- 2 Code:** it displays the values of the commands used in the protocols as decimal numeric code
- Continuous Xon transmi** it allows to send the control character Xon continuously with intervals that can be set between 0 sec and 99 sec. The set value 0 (zero), disables the function.
- Start of Text** To define the Start of Text character
- End of Text** To define the End of Text character
- Field separator** To define the character to be used as field separator between the data sent in application programs developed by other users.
- US code opener** To define the character to open the command "US code" that enables to select with 7 digits a specific coordinate of the tag. This character is valid only for the Xon/Xoff protocol.
- US code OCR opener** To define the opening character that identifies the OCR type character font. This character is valid only for the Xon/Xoff protocol.
- US code OCR closer** To define the closing character that identifies the OCR type character font. This character is valid only for the Xon/Xoff protocol.

- Line spacing**
- 
- Norm/Block** Selects the spacing between characters to be applied according to the type of character font set (standard or blocco (OCR) character). This parameter is valid only for the Xon/Xoff protocol.
 - Norm line space** it allows to set the line spacing of standard or normal characters with a resolution of 0.25 mm. This parameter is valid only for the Xon/Xoff protocol.
 - Norm char space** it allows to define the embossing spacing of standard or normal characters with a resolution of 0.36 mm. This parameter is valid only for the Xon/Xoff protocol.
- Char Spacing**
- 
- Block line space** it allows to set the line spacing of the blocco or OCR characters with a resolution of 0.25 mm. This parameter is valid only for the Xon/Xoff protocol.
 - Block char space** it allows to define the embossing spacing of blocco or OCR characters with a resolution of 0.36 mm. This parameter is valid only for the Xon/Xoff protocol.
 - Ignore Line Feeds** To ignore the unwanted Line Feeds that can be sent by various programs such as Notepad.

Procedure

- .4
- 1- Refer to the previous point 2 to enter into the menu.
 - 2- To enter and move around the various parameters present in the menu, you must press or until you reach the specific parameter. When you have reached it press

PROTOCOLS	
DESCRIPTION	VALUE
Active protocol	CIM
Continuous XON transmi	0
Start of text	STX
End of text	ETX

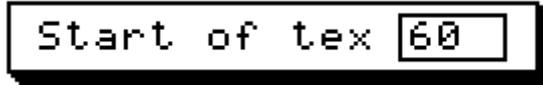
- 2- When you are in the "Active protocol" menu, select the type of protocol the embosser has to communicate with.

To do this, press or until you reach the type of specific protocol.



- 3- Press to confirm and return to the protocols menu.
- 4- Move on to the next parameters and enter the corresponding values, according to the type of protocol selected.

Within the parameter, press the keys  to increase the value or  to decrease it, or if it is easier, directly set the corresponding value.



5- Press  to save the newly set value and leave the parameter, or press  to cancel the operation.

6- Having modified the relevant parameters, press  to leave the menu.

7- Press  to save the newly set parameters.



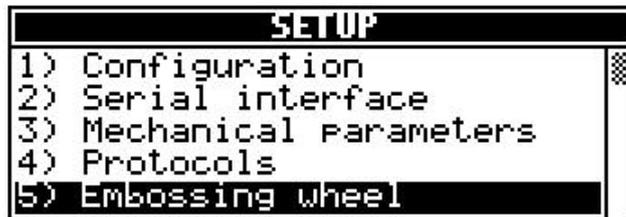
4.5.5. EMBOSsing WHEEL

Information about ...

- .1 It indicates which drum configuration and characters layout are installed on the machine.
The characters listed by the specified drum layout must coincide perfectly with those really installed on the embosser, as type, font and position.

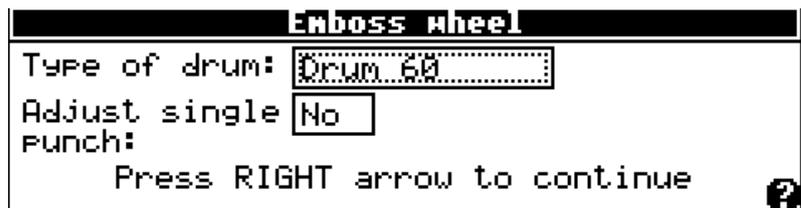
How to access

- .2 From the "SETUP" menu you can access the **Embossing Wheel** function by pressing key **[6]** or by moving with the keys **[↓]** or **[↑]** until you reach the function and then press **[RETURN]**.
To return to "SETUP" press key **[esc]**.



Screen Description

.3



Type of drum:

it specifies which drum configuration exists on the machine among the defined ones; for example:

60
SPECIAL
***SERIAL**

SPECIAL is the only drum that can be edited in all its parts while in all the others only the embossing level can be set in case the "single punch correction" function is enabled.

With the managing software (optional) and through serial connection it is possible to load on the machine a configuration that will be named **SERIAL**. Such configuration is overwritten every time a new one is loaded.

Adjust single punch

The "single punch correction" enables the possibility to adjust the embossing strength specifically for each character in order to make the relief level as uniform as possible.

When the settings have been confirmed, MDT500 HE enters into the drum menu, which displays the present characters, their font, their code and their possible pressure adjustment.

Drum SPECIAL (NORMAL)			
NUM	Char	Dec	Adjust
01	3	167	0
02	0	048	0
03	1	049	0
04	2	050	0

- 1 Punch ADJ
- 2 View Norm
- 3 View OCR



- 1 Punch ADJ** if the "Single punch correction" has been pre-selected it allows to have access to the adjustment of the embossing pressure for each single character.
- 2 View Norm** it displays in the chart only the configuration of standard punches.
- 3 View OCR** it displays in the chart only the configuration of the OCR punches, if present.
- NUM** it indicates the number of the slot where that specific character is entered.
- Char** it specifies which character is in that specific slot.
- Dec** it specifies the decimal value corresponding to the character.
- Adjust** it indicates what is the pressure or strength exerted on that specific character.
If the "single punch correction" function is enabled it is possible to change it selecting a more suitable one.
The value can be positive and in this case the pressure increases or it can be negative and thus the pressure decreases.
The correction adjusts the general pressure defined in the "Mechanical parameters" menu.
The value indicates the number of steps that the embossing motor must perform.

This must be done only by qualified technical staff. A wrong calibration can seriously damage the machine.

Procedure

4

1- Refer to the previous point 2 to enter into the menu.

2- To enter and move around the various boxes present in the menu, simply

press , while to set or modify the respective parameters press  or .



3- Select the type of drum present in the machine and, if necessary, modify also the pressure on the character, enable the corresponding option and finally press .

4- If it is not necessary to modify any parameter, press  or continue with the next point.

5- Now press the keys  or  until you reach the specific point where changes must be made.

When you have reached the position press .

Drum SPECIAL (NORMAL)			
NUM	Char	Dec	Adjust
01	3	167	0
02	0	048	0
03	1	049	0
04	2	050	0

1 Punch ADJ
2 View Norm
3 View OCR



6- Enter the new value in the enabled settings or press the keys  or  to increase or decrease the already existing value.

Punch	
Char:	<input type="text" value="9"/>
Dec:	<input type="text" value="57"/>
Adjust:	<input type="text" value="0"/>

7- Press  to leave the screen and return to the drum layout.

8- Repeat the procedure described above if you need to continue modifying the present settings.

9- Press  to leave the drum menu.

10- Press  to save the newly set parameters or  to cancel them.

Save
Press ENTER to confirm.

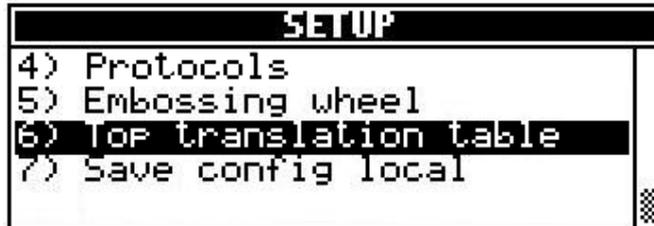
4.5.6. TOP TRANSLATION TABLE (TTT)

Information about ...

- .1 The table shows the association of the input characters with the output characters, thus allowing to change a character into another whenever it is necessary.
For example, this option can be used to turn lowercase characters into uppercase characters or convert the specific code of a character in to the corresponding one in ASCII.
The table contains all the receivable 256 characters divided by value and symbol.

How to access

- .2 From the "SETUP" menu you can access the "Top translation table" function by pressing key **[7]** or by moving with the keys **[↓]** or **[↑]** until you reach the function and then press **[RETURN]**.
To return to "SETUP" press key **[esc]**.



Screen Description

.3

TOP TRANSLATION TABLE			
IN	MOD	OUT	
000	NULL	000	NULL
001	SOH	001	SOH
002	STX	002	STX
003	ETX	003	ETX

- 1 Enable
- 2 Disable
- 3 Default



- 1 Enable** it enables the TTT function to convert the input data characters with the set output ones.
- 2 Disable** it stops the TTT function from converting the input data characters with the set output ones.
- 3 Default** it restores the original values, canceling all modifications.
- IN** it displays, line by line, the code in decimal value and the symbol of the 256 receivable characters.
- MOD** it highlights with a star (*) the characters that are converted.
- OUT** it displays, line by line, the code in decimal value and the symbol of the 256 output characters.

1- Refer to the previous point 2 to enter into the menu.

2- To reach the character to be converted, press  or  until you are positioned on it and finally press 

TOP TRANSLATION TABLE				
IN	MOD	OUT		
000	NULL	000	NULL	
001	SOH	001	SOH	
002	STX	002	STX	
003	ETX	003	ETX	

1 Enable
2 Disable
3 Default

3- Assign the new code as decimal value and press  to exit.

TOP TRANSLATION TABLE				
IN	MOD	OUT		
000	NULL	000	->	<input type="text" value="0"/>
001	SOH	001	SOH	
002	STX	002	STX	
003	ETX	003	ETX	

1 Enable
2 Disable
3 Default

4- Make sure that the new code is accepted, checking the presence of the star in the MOD box, near the modified character.

TOP TRANSLATION TABLE				
IN	MOD	OUT		
000	NULL	*000	?	
001	SOH	001	SOH	
002	STX	002	STX	
003	ETX	003	ETX	

1 Enable
2 Disable
3 Default

5- Press  to leave the menu.

6- Press  to save the new changes or  to undo them.

Save
Press ENTER to confirm.

4.5.7. SAVE CONFIGURATION (LOCAL)

Information about ...

- .1 It allows to store in the CPU memory of the machine all its parameters and settings.
The file can then be used to restore the embosser to its original or previous condition in case the parameters or settings have been accidentally modified or even lost.

How to access

- .2 From the “**SETUP**” menu you can access the **Save config local** function by pressing key **8** or by moving with the keys **↓** or **↑** until you reach the function and then press  .
To return to “**SETUP**” press key .



Procedure

.3

1- Refer to the previous point 2 to enter into the menu.

- 2- When  has been pressed the **MDT500 HE** automatically saves all its parameters and settings in its memory.
On the display, an hourglass will indicate the saving in progress.
The operation might require a few minutes.



WARNING:

whenever saving, the previously saved file is overwritten.

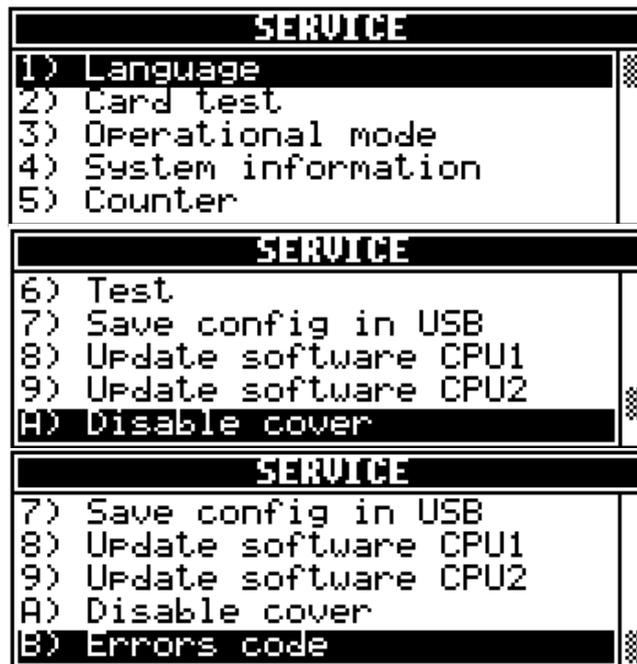
4.6 SERVICE

The **SERVICE** option contains a series of functions for the analysis and updating of the embosser firmware and it is meant only for the specialized or authorized technical staff. For this reason some functions are protected by a password.

How to access

You can access the **SERVICE** option simply by pressing the key **3** from the “Main Menu” while to leave and return to the previous situation press key **esc**.
Due to the size of the display, the option shows the first five functions of the menu.

To view the next functions simply press key **↓**.



- **Functions contained in SERVICE**

The **SERVICE** menu consists of eleven main functions:

- 1) LANGUAGE
- 2) CARD TEST
- 3) OPERATIONAL MODE
- 4) SYSTEM INFORMATION
- 5) COUNTER
- 6) TEST
- 7) SAVE CONFIG IN USB
- 8) UPDATE SOFTWARE CPU1
- 9) UPDATE SOFTWARE CPU2
- A) DISABLE-ENABLE COVER
- B) ERRORS CODE

How to access

To access one of these you can move with the arrow keys **↓** or **↑** until you reach the specific function and then press **RETURN**.
It is possible to access directly by pressing the number key corresponding to the specific selected function.

4.6.1. LANGUAGE

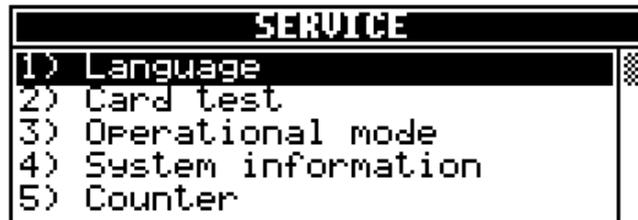
Information about ...

- .1 The option allows the choice of the language that will be used to display all the messages and menus present in the machine.

How to access

- .2 From the “**SERVICE**” menu you can access the **Language** function by pressing key 

To return to “**SERVICE**” press key .



Screen description

.3



- 1) **English** it displays all messages and menus in English
- 2) **Italiano** it displays all messages and menus in Italian.
- 3) **Espanol** it displays all messages and menus in Spanish.

Procedure

- .4 1- Refer to the previous point 2 to enter into the menu.

2- To select the required language, press the keys  or  until the cursor bar reaches it and then press .

It is possible to select it directly, by pressing the key with the corresponding number.

Information about ...

4.6.2. CARD TEST

- .1 This option allows to perform some embossing tests that enable the specialized technical staff to check the proper functioning of the embosser. This option is only for the specialized technical staff or for authorized people.

Information about ...

4.6.3. OPERATIONAL MODE

- .1 This option allows to set some operating modes during the stages of the tag embossing process. There are three working modes: CONTINUOUS, PAUSE, WITHOUT TAG and all their combinations. This option is usually only for specialized technical staff or for authorized people.

Information about ...

4.6.4. SYSTEM INFORMATION

- .1 The option provides technical information about the embosser, such as the level and the version of the CPU boards present in the machine and their firmware as well as the memory state.

4.6.5. COUNTER

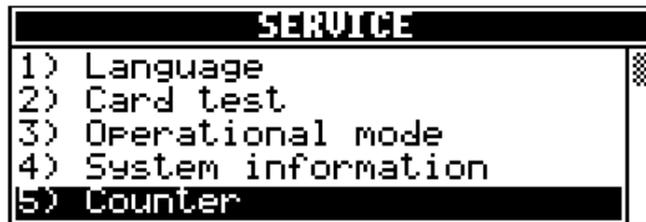
Information about ...

- .1 This option allows to view the total and partial counters regarding the number of the tags produced by the embosser.
The two counters are independent from those connected to the single jobs.
The option allows to enable and show on the display only the partial counter and to reset it any time the operator needs to do it.

How to access

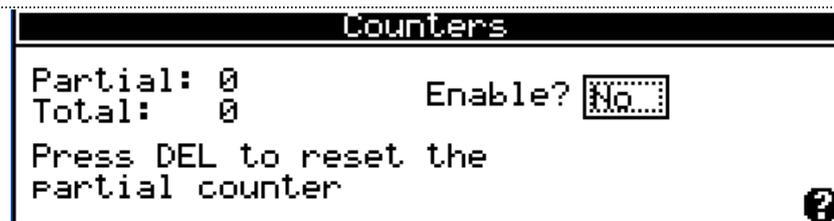
- .2 From the “**SERVICE**” menu you can access the **Counter** function by pressing key **5**

To return to “**SERVICE**” press key **esc**.



Screen description

.3



- Partial** it displays the number of tags produced from the last reset.
- Total:** it display the total number of tags produced by the embosser since its installation.
- Enable?** If the option is Yes, the embosser enables the view of the partial counter on the display.



Procedure

.4

- 1- Refer to the previous point 2 to enter into the menu.
- 2- To enable or disable the partial counter press either key **↓** or key **↑**
- 3- To set the counter to zero press key **DELETE**
- 4- To leave press **esc**.

Information about ...

4.6.6. TEST

- .1** This option is a diagnostic to perform tests on several components of the embosser helping the specialized technical staff to verify their proper functioning.
This option is only for the specialized technical staff or for authorized people and it is protected by password in some of its parts.

Information about ...

4.6.7. SAVE CONFIGURATION IN USB

- .1** This option is to save on a USB FLASH PEN DRIVE all the parameters and settings of the embosser. Whenever saving, the previous file, if present, is overwritten.
The saved file allows to restore the embosser to its original or previous condition, in case the parameters or settings have been accidentally modified or even lost.
This option is only for the specialized technical staff or for authorized people.

Information about ...

4.6.8. UPDATE SOFTWARE CPU1

- .1** This option is to update the firmware and the setup file of one of the CPU boards installed on the machine (CPU1).
This option is only for the specialized technical staff or for authorized people and it is protected by password.
The careless use of this option might cause the deletion or the partial loss of the machine program and consequently the machine would be out of order.

Information about ...

4.6.9. UPDATE SOFTWARE CPU2

- .1** This option is to update the firmware of one of the CPU boards installed on the machine (CPU2).
This option is only for the specialized technical staff or for authorized people and it is protected by password.
The careless use of this option might cause the deletion or the partial loss of the machine program and consequently the machine would be out of order.

Information about ...

4.6.10. DISABLE COVER

- .1** This option is used to inhibit the control of the switch that detects the opening of the front cover, by disabling the safety device that stops the operation of the mechanical parts of the machine and letting it emboss.
This option is meant only for the specialized technical staff or for authorized people and it is protected by password.

4.6.11. ERRORS CODE

Information about ...

- .1 This option allows to display the list of the codes of the errors that can occur in the embosser and it makes the operator understand the possible cause that generated the error.

How to access

- .2 From the “**SERVICE**” menu you can access the **Errors code** function by pressing key **[B]** or by pressing keys **[↓]** or **[↑]** until you reach the function and then press **[RETURN]**.
To return to “**SERVICE**” press key **[esc]**.



Screen description

.3

DESCRIPTION OF ERROR	
CODE	Description
100	PROTOCOL error
101	PROTOCOL error: overflow fie
102	PROTOCOL error: underflow fi
103	PROTOCOL error: bad format

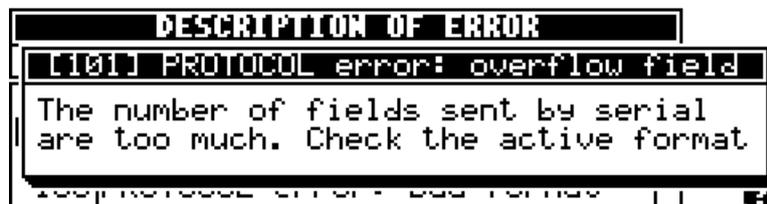
CODE it indicates the numeric code of the error generated by the embosser as a consequence of a failure.

Description it describes the type of error associated to the code.

Procedure

.4

- 1- Refer to the previous point 2 to enter into the menu.
- 2- To know more details about the error generated by the machine and subsequently take the right countermeasures, simply move to the number of the error code with the keys **[↓]** or **[↑]** and press **[RETURN]**.



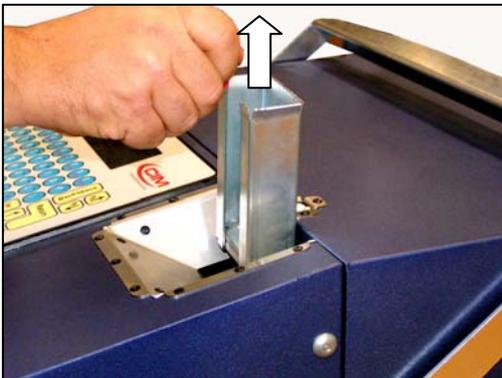
- 3- To leave press **[esc]**.

5. TAGS PRODUCTION

Proceed following the instructions contained in the chapter to start properly the production of tags.

5.1 - LOADING TAGS

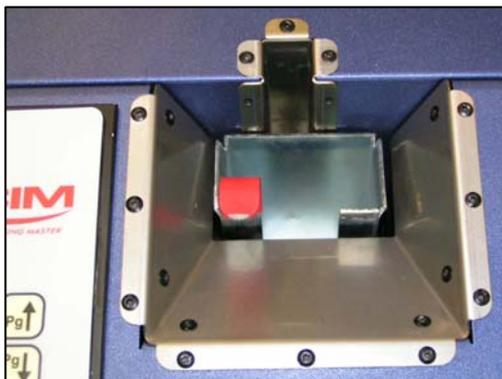
MDT500 HE is supplied with two types of tag loaders, one preset to seat “DOG TAG” type plates and the other for the “MEDICAL RED ALERT TAG” type plates. The tag loader recognition is automatic.



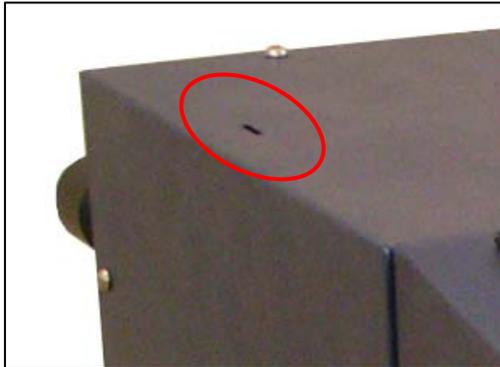
- Carefully pull out the tag loader from the machine holding it by the special handle.



- Insert the metal tags with the hanging hole directed towards the left side of the loader and the ridge, only for “DOG TAG” plates. directed upward.



- Put the loader back into the machine.



- Place the unused loader in the proper slot for storing, on the left side of the embosser cover.

5.2 Tags production in STAND ALONE mode.

To produce the tags in STAND ALONE mode follow the instructions below.
For more information about the various steps, refer to the chapter “USE AND SETTINGS OF THE MACHINE”.

The production of tags in STAND ALONE mode consists of four main stages, with a variation in the data source part.

In this stage data can be entered manually and then produce only the tag as entered; or the data can be taken from a database and then the production cycle of the tags can be launched.

The four main stages are defined as follows:

- Creation of the format and definition of its fields
- Setup of the active format
- entering data manually
- loading data from database.
- tags printing

5.2.1 Format creation and fields definition.

Format creation

With the machine in the “READY” state, press the key **[1]** on the keyboard and access the “LCD EDIT” option.



2- In “LCD EDIT” press **[3]** or **[↓]** or **[↑]** and move to “Formats” and finally press **[RETURN]**.



3- In the Formats menu, press **2** to create a new format in addition to those already present.

FORMATS			
	NUM	Fields	NAME
*	01	26	OPEN
	02	03	SAMPLE TAG

1 Edit
 2 New
 3 Delete
 4 Fields
 5 Counters
 6 Active y/n

4- By pressing **RETURN** you enter into the selected format and in the "Name" box give a new name to the format.

5- Press **RETURN** to move to the next boxes.

Format 03	
Name:	<input type="text" value="SYSTEM"/>
Fields:	<input type="text" value="26"/> N° of copies: <input type="text" value="0"/>
Increment counters:	<input type="text" value="No"/>

6- In "Fields", determine the number of fields that make up the format.

Format 03	
Name:	<input type="text" value="SYSTEM"/>
Fields:	<input type="text" value="6"/> N° of copies: <input type="text" value="0"/>
Increment counters:	<input type="text" value="No"/>

7- If you wish to duplicate a tag more than once, every time you use this format enter the number of required copies in the box "N° of copies".

Format 03	
Name:	<input type="text" value="SYSTEM"/>
Fields:	<input type="text" value="6"/> N° of copies: <input type="text" value="1"/>
Increment counters:	<input type="text" value="No"/>

8- If in the format there are fields defined as counter and you wish to increase them while duplicating, in the box "Increment counters", press **↓** or **↑** to enable the option, moving it to YES. If you choose NO, identical copies will be produced.

Format 03	
Name:	<input type="text" value="SYSTEM"/>
Fields:	<input type="text" value="6"/> N° of copies: <input type="text" value="1"/>
Increment counters:	<input type="text" value="Yes"/>

9- Press **esc** to exit the "New" menu.

FORMATS			
NUM	Fields	NAME	
01	26	OPEN	1 Edit
02	03	SAMPLE TAG	2 New
* 03	06	SYSTEM	3 Delete
			4 Fields
			5 Counters
			6 Active y/n

10- Press **esc** to exit the menu and then **RETURN** to save the format in the machine.

FORMATS			
NUM	Fields	NAME	
01	26	OPEN	1 Edit
02	03	SAMPLE TAG	2 New
* 03	06	SYSTEM	3 Delete
			4 Fields
			5 Counters
			6 Active y/n

Save	
Press ENTER to confirm.	

Fields definition

11- In the Format menu, press the keys **↓** or **↑** and move to the format.

FORMATS			
NUM	Fields	NAME	
01	26	OPEN	1 Edit
02	03	SAMPLE TAG	2 New
* 03	06	SYSTEM	3 Delete
			4 Fields
			5 Counters
			6 Active y/n

12- Press key **4** to access the fields modification.

13- Press **RETURN** to enter into the first field or move with **↓** or **↑** until you reach the field to be set.

FIELDS (Format 03)		
NUM	TYPE	NAME
01	Variable	AA
02	Variable	BB
03	Variable	CC
04	Variable	DD

14- Enter into the screen and into the "Name" box, then give a new name to the field, for easier identification, then press **RETURN** to move to the next one.

Field 01 AA	
Name:	MODEL
Font:	Normal X: 66 Y: 216 Max: 15 20
Type:	Variable Ch. space: 7

15- In each box assign the settings then move to the next one by pressing .
 The settings in Font and Type can be selected by pressing the keys or .
 If the field has been chosen to receive the data either entered manually or coming from data base, define the Type as Variable.

16- Press to exit and move on to define the next fields.

17- Press to exit and return to the "Formats" menu.

FIELDS (Format 03)		
NUM	TYPE	NAME
01	Variable	MODEL
02	Protecte	VOLTAGE
03	Counter	SERIAL N.
04	Duplicat	FAMILY

18- To save the settings, press and then to confirm the saving of the settings.

FORMATS		1 Edit
NUM	NAME	2 New
01	Save	3
02	Press ENTER to confirm.	4
* 03		5
		6

5.2.2 Active field setup

In the Formats menu, press the keys or and move to the format then press key to enable the format.

FORMATS			1 Edit
NUM	Fields	NAME	2 New
01	26	OPEN	3 Delete
02	03	SAMPLE TAG	4 Fields
* 03	06	SYSTEM	5 Counters
			6 Active y/n

The active format is highlighted by the star *

5.2.3 Entering data manually and embossing the tag

Entering data manually

1- Return to "LCD EDIT".

2- In "LCD EDIT" press or or until you reach "Tag" and finally press .

LCD EDIT	
1) Tag	
2) Preview tag	
3) Formats	
4) Automatic job productio	
5) Save Job Report to USB	

- 3- In the **Tag** menu, by pressing  or , go to the field where data must be entered.
Press  or directly start typing.

TAG (Format 01)		
N	NAME	
1	AA	AA
2	BB	
3	CC	
4	DD	

- 4- Using the keyboard you can write the required text.
5- Press  to leave the box and save the entered data
6- Pressing  the cursor goes on to the next field.

TAG (Format 01)		
N	NAME	TEXT
1	AA	METAL PLATE
2	BB	
3	CC	
4	DD	

- 7- To enter new data, repeat the operations described above in the same order.

TAG (Format 01)		
N	NAME	TEXT
1	AA	METAL PLATE
2	BB	MDT500
3	CC	MF GROUP CIM DI
4	DD	

Tag embossing

- 8- To emboss the tag with the entered data press  (print).

5.2.4 Loading data from a data base and embossing the tag

Loading data from a database

- 1- In the main screen, when you plug in a CIM USB FLASH PEN DRIVE, the machine automatically displays the csv files it contains.
2- Or in the "LCD EDIT" option press  or  and go to "**AUTOMATIC JOB PRODUCTION**" and press .



- 3- Plug the USB FLASH PEN DRIVE in the suitable port.
- 4- In the **AUTOMATIC JOB PRODUCTION** menu, press **[2]** to have access to the contents of the USB pen drive.



- 5- When the contents of the USB pen drive are displayed, select the csv file required with the keys **[↓]** or **[↑]** and press **[RETURN]** to print it.

Print cards		
NAME	DIR	DATE
Pippo	DIR	
MDT500_HE.csv		27/10/08
Print.csv		17/09/08
TEST_3x5.csv		08/10/08

- 6- Before pressing **[RETURN]** make sure that the database file structure is the same as the set active format (number of fields and length of fields).

Tag embossing

- 7- After pressing **[RETURN]** the embosser starts producing the tags.
- 8- If you wish to suspend or interrupt the production press **[esc]** on the keyboard and confirm your choice.

5.2.5 Tags printing

While embossing the tag, the machine shows on the display a progress bar indicating with a percentage the progress of the production process.

When the tag is completed, the machine increases the various counters shown on the display.



5.3.1 BLADE Software Installation (OPTIONAL) Note: There are two options available with Blade. The instructions for using the software and the creation of jobs is the same for either Option.

Option 1 (CD with Serial Cable) for Blade requires the machine to be linked to the computer using the serial port. The port settings of the machine and computer must agree. Also the software uses CIM protocol. If the protocol or any of the protocol default settings on the unit has been changed, Blade will not be able to print the jobs on the machine. The installation instructions below are for this option.

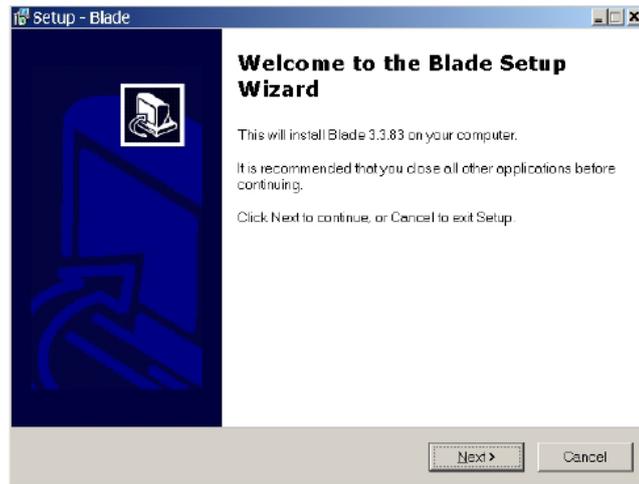
Option 2 is the Blade version that is on the CIM USB Flash Pen Drive and it does not require installation as described below. It is ready for use upon insertion into the computer. It does not install on the PC but runs from the Flash Drive. It also does not communicate to the machine via a serial cable. You create and print the jobs with the key on your computer. It creates a .csv file to be used when you insert the key into the machine and use Automatic Job Production as explained above in section 5.2.4 and in section 4.4.4.

Software installation

- Put the BLADE installation CD into the CD-ROM driver.

If the CD-ROM driver does not automatically launch the file **Autorun.exe**, then from Windows®, **START** menu select **Run** and type in: **X:\Autorun.exe** replacing "X" with the letter of your CD unit.

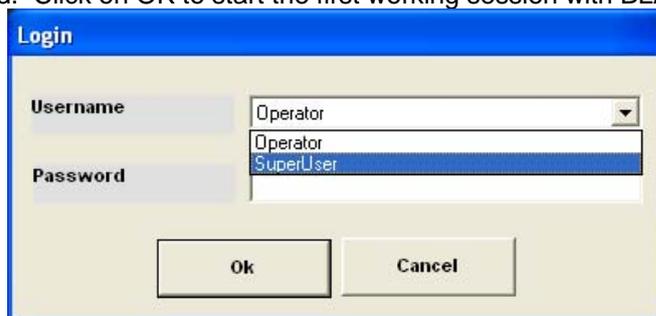
Read carefully the **Readme.htm** file, paying particular attention to the system requirements and follow the instructions for the software installation. When the installation is finished, you will have the blade icon on your desktop window and there will be a new program item "BLADE" in the **Start- Programs** list".



When the installation of all the software components is finished, connect the USB hardware dongle supplied with the CD to the USB port on your computer. This is a security key and not the Option 2 key.

Software Startup

- Start BLADE by double-clicking on the BLADE icon present on the desktop. When Login is requested, enter as Operator (to only run a job) or SuperUser (to modify and create jobs). Use SuperUser now for testing and job creation. No password is required. Click on OK to start the first working session with BLADE.

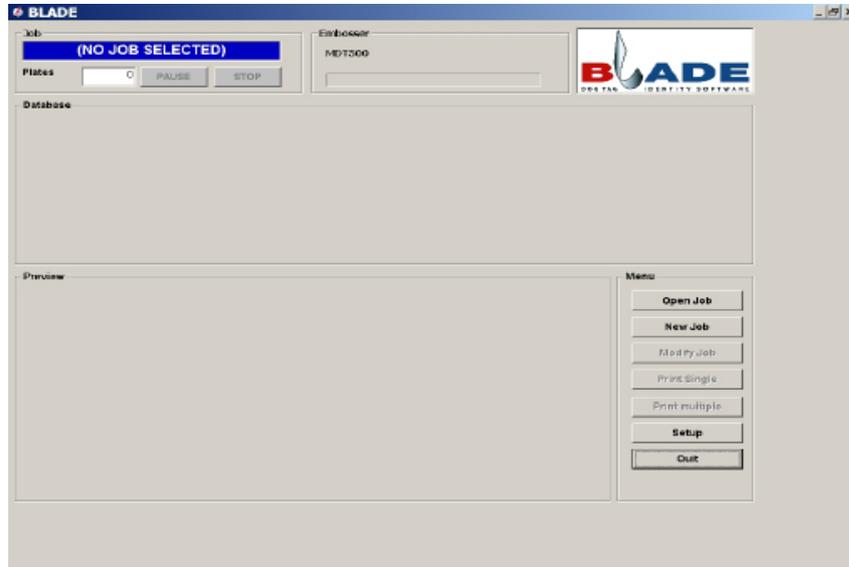


Blade comes with 2 sample jobs as examples so that you can see how to create and use the software. Follow the directions in the HELP menu to create your own jobs and link your database files to the jobs if required. The below instructions show how to use Blade using the jobs supplied as examples.

5.3.2.1 Tags production from BLADE software with database

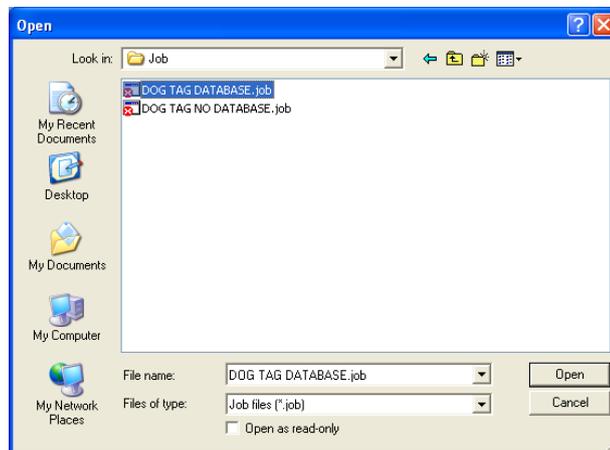
Open Job

- From BLADE main window press the button **Open Job**.

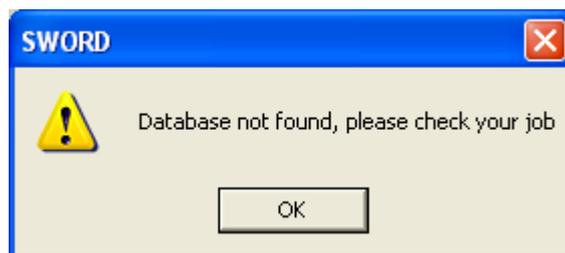


Follow the instructions and images to learn how to associate a database to a job in Blade. The sample job is formatted but does not have the database associated to it.

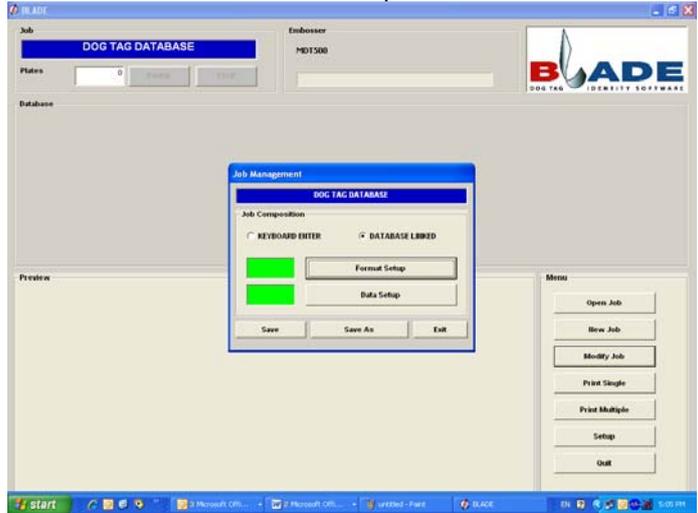
Select the DOGTAG DATABASE job and click on OPEN.



The screen will show the message that the Database was not found.

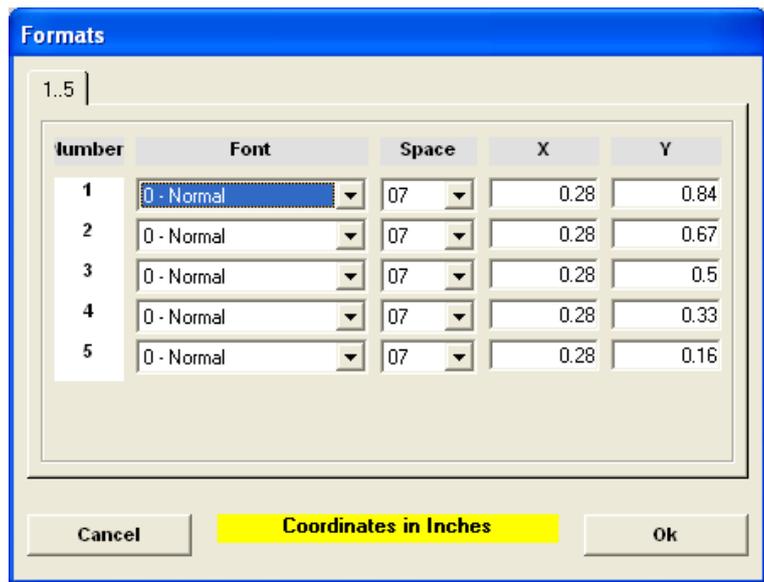


Click OK, and then the Main Screen will come up. Click on MODIFY JOB and Job Management



screen will appear.

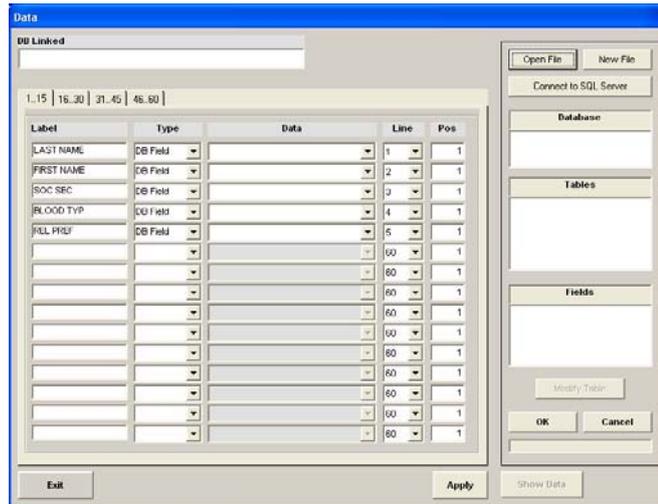
The Format (X and Y dimensions for the fields and character spacing) is already set. Select Format Setup to see the settings. These can be modified if necessary. When creating a job, you need to fill this information in. Click cancel or OK to return to the Job Management Screen.



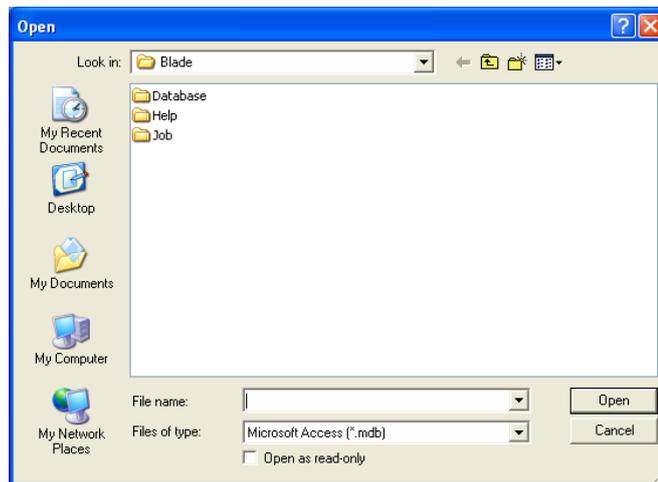
Select Data Setup in the Job Management Screen. You will get the message Database not found.



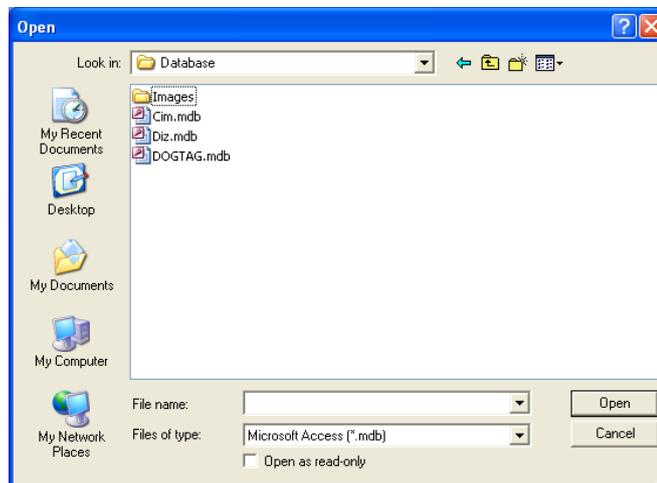
Click on OK and you will get the main Data Screen.



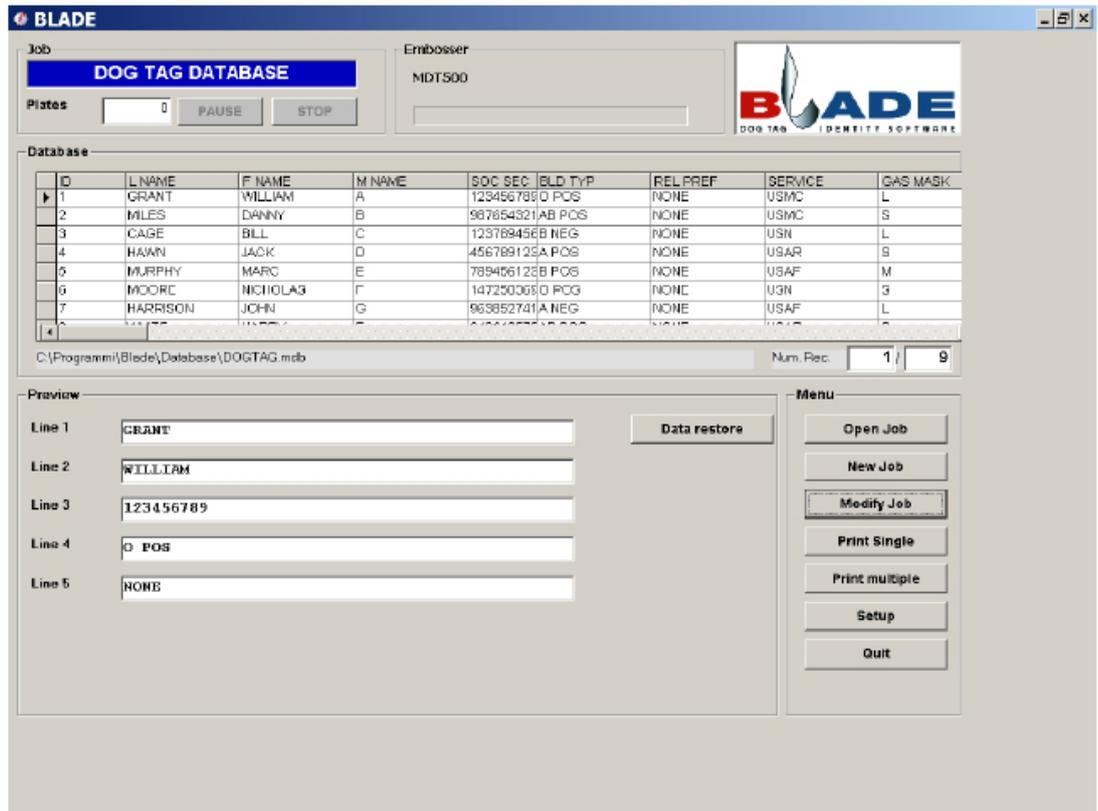
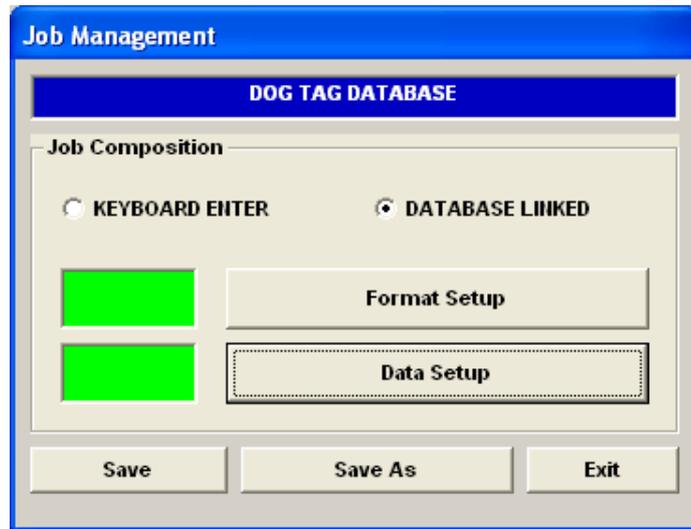
Select OPEN FILE at the top right of the screen. You have now a standard windows search screen to find your database. In this example, open the folder Database.



In the Database Folder, select the DOGTAG.mdb database.

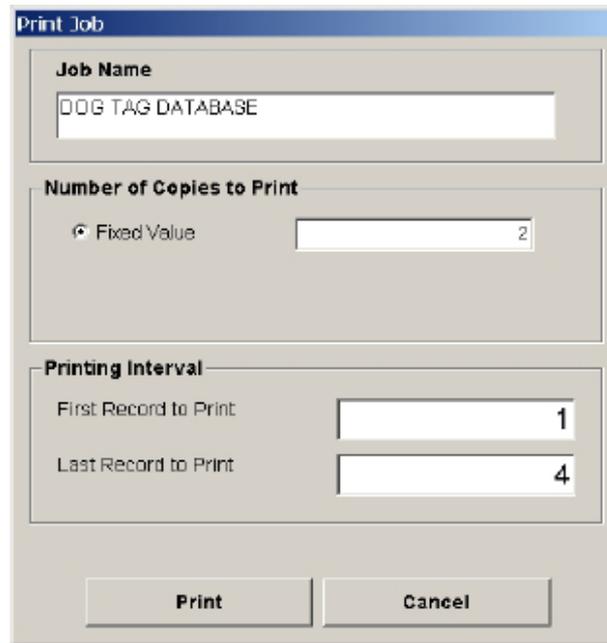


When the Job Management screen returns, Select Save.



The main window of BLADE now displays the database concerning the Job in the “Database” area in the top part of the window; the “Preview” area, in the lower part of the window, shows the text that will be embossed on the tag.

- Press the button **Print Single** to produce one tag with the text displayed in the preview area.
Select another record in the database to produce the next tag.
- Pressing the button **Print Multiple** the “Print Job” window opens.
Set the parameters required in the “Print Job” window, then press the button **Print** to continue with the tags print. Fixed value is the number of copies for each tag. Print Interval asks for the beginning and ending tag from the database (it can begin at any number, and then the number of records to be printed in sequence).



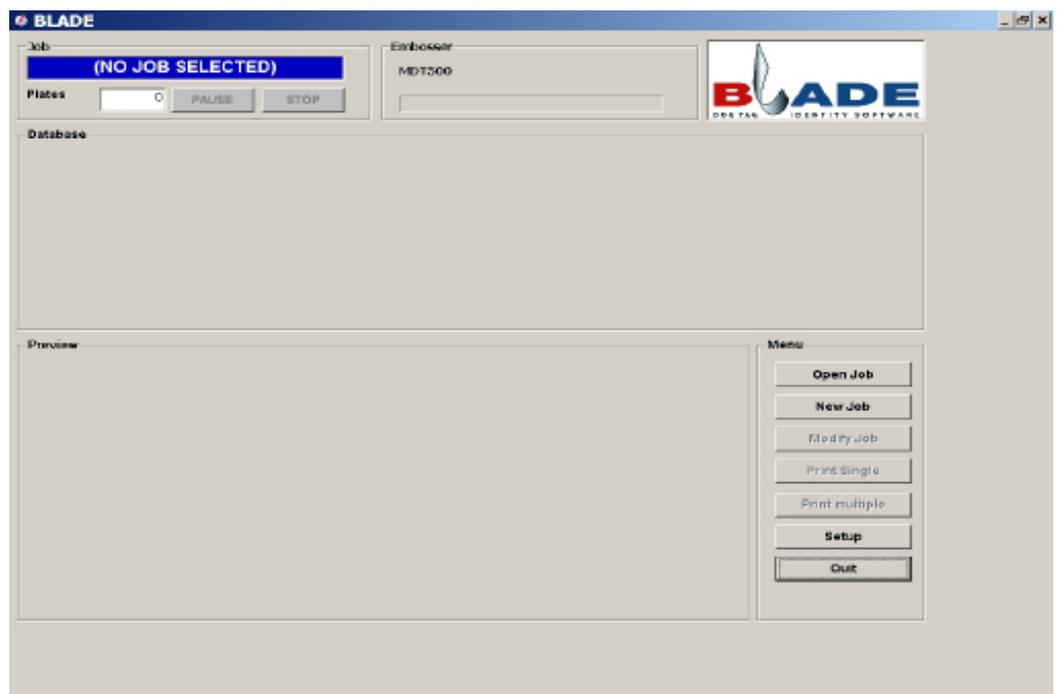
The "Print Job" dialog box contains the following fields and controls:

- Job Name:** A text box containing "DOG TAG DATABASE".
- Number of Copies to Print:** A section with a radio button selected for "Fixed Value" and a text box containing "2".
- Printing Interval:** Two text boxes: "First Record to Print" containing "1" and "Last Record to Print" containing "4".
- Buttons:** "Print" and "Cancel" buttons at the bottom.

5.3.2.2 Tags production from BLADE software without database

Open Job

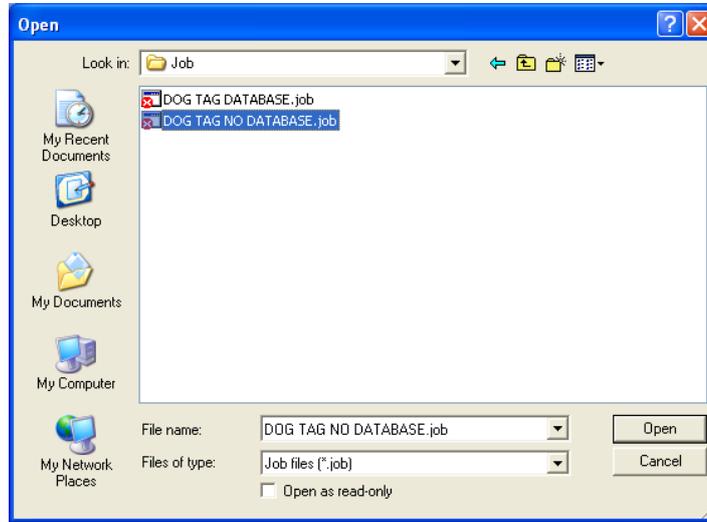
- From BLADE main window press the button **Open Job**.



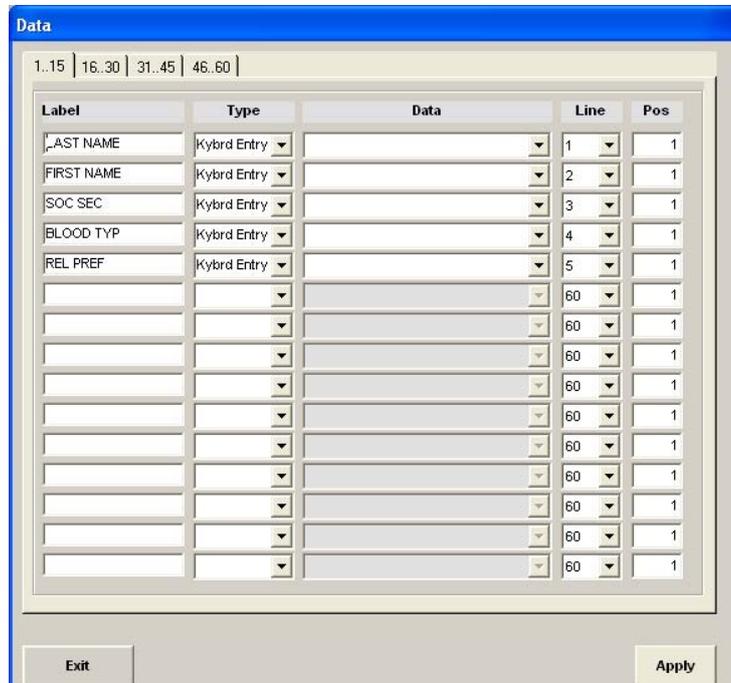
The BLADE main window interface includes the following elements:

- Job:** A status bar showing "(NO JOB SELECTED)".
- Plates:** A text box with "0" and "PAUSE" and "STOP" buttons.
- Embosser:** A text box showing "MDT500".
- Database:** A large empty area for displaying database records.
- Preview:** A large empty area for displaying a tag preview.
- Menu:** A vertical stack of buttons: "Open Job", "New Job", "Modify Job", "Print Single", "Print multiple", "Setup", and "Quit".

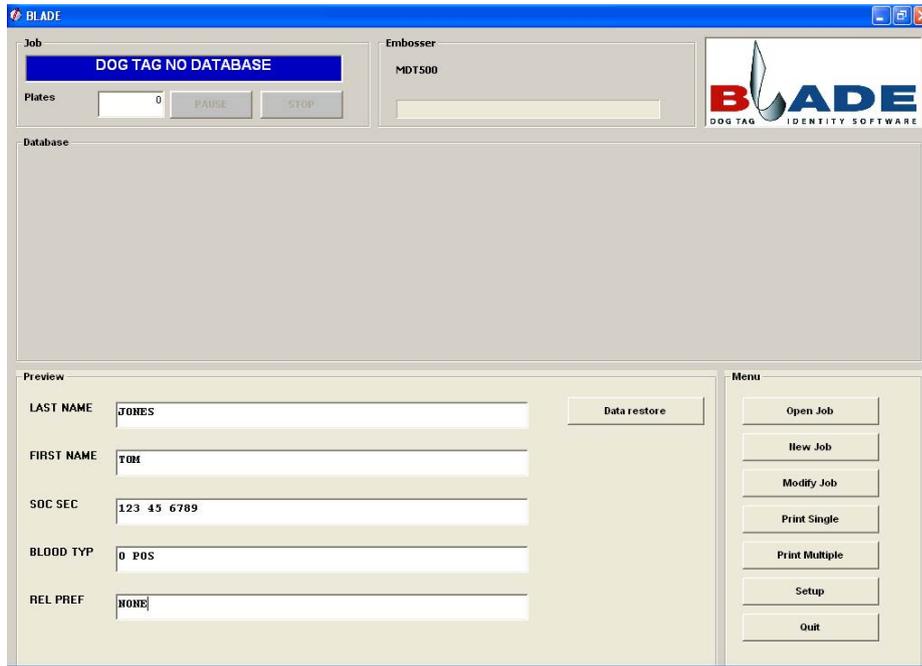
Select the DOGTAG NO DATABASE job and click on OPEN.



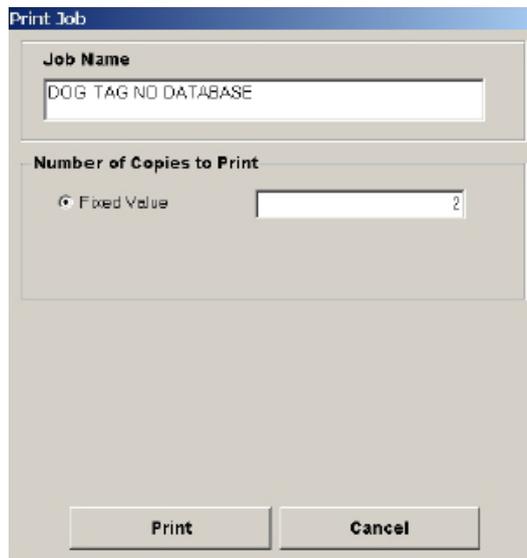
If you select Modify Job and then Data Setup from the Job Management screen you will see the structure for the job. Note that Kybrd Entry is used as the type for each line. This allows for the text to be entered on the screen in the Preview window shown below. Exit from the screen. Then exit from the Job Management screen.



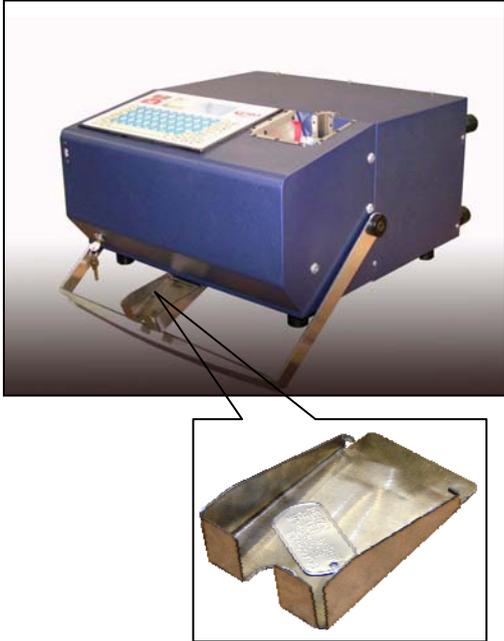
BLADE main window displays in the lower part of the window the “Preview” area with the boxes where the text to be embossed on the tag must be typed in.



- Press the button **Print Single** to produce a tag with the text displayed in the window.
- When pressing the button **Print Multiple** the “Print Job” window opens. Set the required parameter (N° of copies) inside the “Print Job” window, then press the button **Print** to print the tags.



5.4 END OF THE PRODUCTION CYCLE



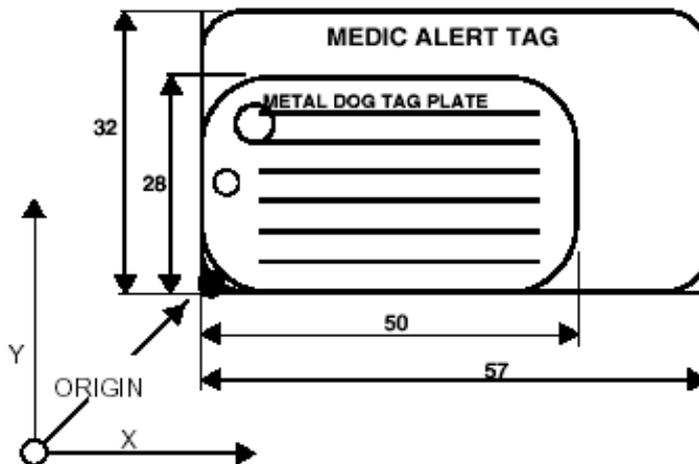
The cycle ends with the ejecting of the card into the front tray of the embosser as indicated in the picture.

MDT500 HE ends its job and goes to the starting state **READY**.

If errors occurred during the cycle, the machine shows on the display the error code and asks if you prefer to repeat the tag or continue.

IMPORTANT:

The coordinates of the fields must take into consideration the tag formats managed by the machine



ERROR MESSAGES AND PROBLEM SOLVING

6.1 ERROR MESSAGES AND PROBLEM SOLVING

In case of failure or operator's error the machine shows on the display the error code followed by a message that caused the interruption of the machine cycle.



Refer to the chart Error Messages to obtain information useful for their resolution.

Error Code	Message	Cause	Solution
100	PROTOCOL error	General protocol error	
101	PROTOCOL error: overflow field	Too many fields sent to the serial port.	Check the number of fields of the active format and make sure that the fields sent by computer are not more than the required number
102	PROTOCOL error: underflow field	Few fields sent to the serial port.	Check the number of fields of the active format and make sure that the fields sent by computer are not less than the required number
103	PROTOCOL error: bad format	The format sent from the serial port is not correct.	Check the format sent from the computer, making sure that the number of fields is not higher than 26 and that the length of each field is not more than 42 characters.
104	PROTOCOL error: long field	The text of a field sent through serial port is too long.	Decrease the number of characters sent from the computer or increase the field length entering into LCD EDIT->Format
200	Invalid drum	The drum setup is not valid.	Go to SETUP->EMBOSSER WHEEL and check the configuration
201	Invalid format	The format used to emboss is wrong or not enabled.	Go to LCD EDIT->Format and check: - active format set - at least one field present in the format. - inter-character spacing higher than 0
202	Not ready to emboss	The machine is not ready to emboss.	In the main screen press RETURN on the keyboard to go to the READY status
203	Busy	The machine is busy and cannot emboss a new tag	- If the machine is embossing, wait until the tag has been completed - leave the protected menu you are in.
300	Communication with cpu 2 fail	Communication with cpu 2 failed.	- The CAN cable might be broken or not properly connected to one of the CPU of the machine. - CPU2 board not supplied with power - software blocked. Contact the Technical Service
301	Comm. CPU 2: start emboss	Communication with cpu 2 failed during the embossing stage	Like error 300
302	Comm. CPU 2: status	Communication with cpu 2 failed during the status request	Like error 300

303	Comm. CPU 2: start app	Communication with cpu 2 failed while starting the application	Like error 300
304	Comm. CPU 2: config	Communication with cpu 2 failed while sending the configuration	Like error 300
305	Comm. CPU 2: send text	Communication with cpu 2 failed during the sending of the embossing text	Like error 300
401	Card not present	No tag present.	Put in a new tag or check that the photocell of the tag presence is operating
402	Motor error (bad tag)	It is not guaranteed that the card has been embossed properly.	- Try to print the card again - Contact the Technical Service
403	Error reset axis X	Error during the X axis resetting	- Check the functioning of the X photocell: enter into SERVICE->Test->Input. - check the motor operation: enter into SERVICE->Test->Motors. - Contact the Technical Service
404	Error reset axis Y	Error during the Y axis resetting	- Check the functioning of the Y photocell: enter into SERVICE->Test->Input. - check the motor operation: enter into SERVICE->Test->Stepper. - Contact the Technical Service
405	Error reset axis Z	Error during the drum resetting	- Check the functioning of the drum photocell: enter into SERVICE->Test->Input. - check the motor operation: enter into SERVICE->Test->Stepper. - Contact the Technical Service
406	Error reset punch	Error while resetting the punch	- Check the functioning of the punch photocell: enter into SERVICE->Test->Input. - check the motor operation: enter into SERVICE->Test->Stepper. - Contact the Technical Service
407	Error reset forceps	Error during the clamp resetting	- Check the functioning of the clamp photocell: enter into SERVICE->Test->Input. - check the motor operation: enter into SERVICE->Test->Stepper. - Contact the Technical Service
408	Cover open or pin lock	The cover is open.	- Front panel or cover open. - Switch broken - Contact the Technical Service.
409	Photocell card present	A card might have fallen in the machine.	Open the front panel and remove it.

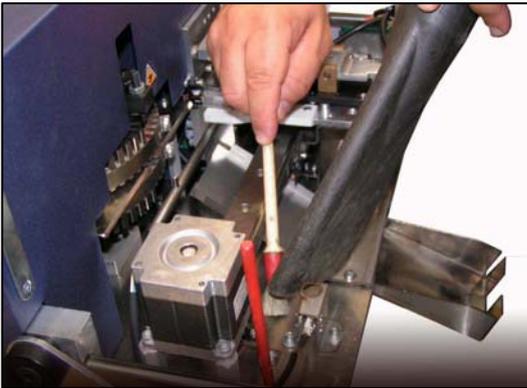
7.1 PREVENTIVE MAINTENANCE PERFORMED BY THE OPERATOR

The operator must regularly perform the maintenance of the embosser to guarantee proper functioning of the machine.

IT IS FORBIDDEN TO REMOVE THE COVER AND THE INTERNAL PROTECTIONS OF THE EMBOSSER

For maintenance work inside the machine, except those indicated below, it is necessary to call the technical service.

ALWAYS REMEMBER TO SWITCH THE MACHINE OFF AND DISCONNECT THE POWER CABLE BEFORE STARTING THE MACHINE MAINTENANCE



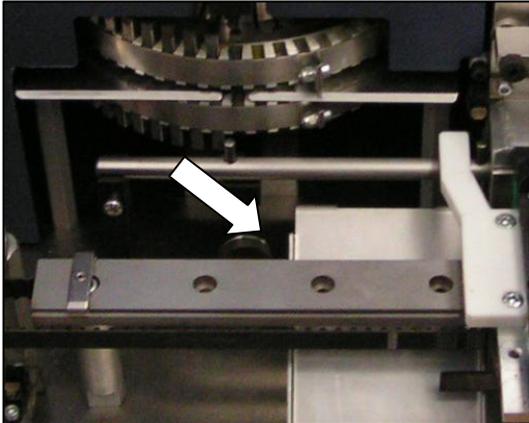
▪ **Every week:**

- Clean inside the machine removing the dust and metal residues. Use a brush to help.
- With a wet or damp cloth, clean the gummed roller located at the outlet of the loader.
- Do not use abrasive substances or materials or alcohol.



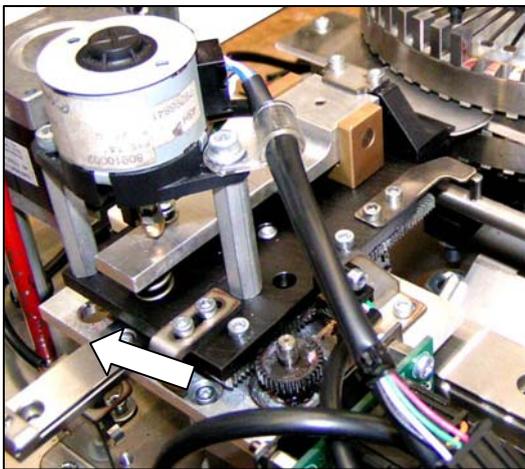
- Carefully remove and clean the external grids of the extractor fans located in the rear part of the machine.

IF THE FILTERS ARE WASHED WITH WATER THEY MUST BE DRIED. IF THEY ARE WET OR DAMP THEY CAN CAUSE SHORT CIRCUITS AND IRREVERSIBLE DAMAGES TO THE MACHINE

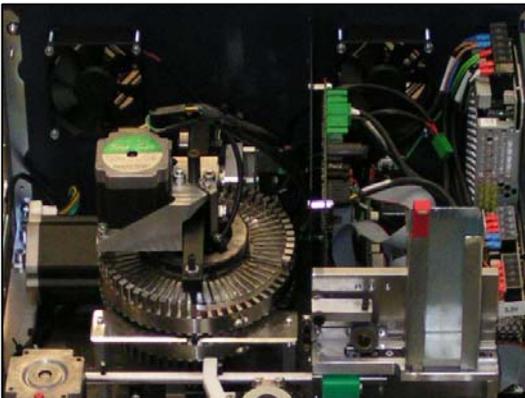


▪ **Every month or every 1,500 tags:**

- Lubricate slightly (just a few oil drops) the rail of the carriage of the X axis clamp after cleaning it accurately with a cloth and after removing the dust. Then manually move the carriage to spread the oil evenly and check that the carriage slides smoothly. If during this operation friction occurs, contact the technical service.
Use only liquid synthetic oil with a viscosity of about 60-68 mm²/sec at 40°.



- Lubricate slightly (just a few oil drops) the rail of the carriage of the Y axis clamp after cleaning it accurately with a cloth and after removing the dust. Then manually move the carriage to spread the oil evenly and check that the carriage slides smoothly. If during this operation friction occurs, contact the technical service.
Use only liquid synthetic oil with a viscosity of about 60-68 mm²/sec at 40°.



▪ **About every 6 months**

a greasing of the internal mechanical parts is necessary. However it can be done exclusively by specialized technical staff.

▪ **Every year**

have the specialized technical staff perform a complete preventive maintenance work, including a test of all the moving mechanical parts and their components such as belts, springs, bearings, bushings and characters. The maintenance should also include an inspection of all electrical supplies and the various setup parameters of the machine.

At the end of every maintenance work, switch the machine on again and check that when opening the front panel the machine stops any operation in progress.

If it is not so, contact the technical service because some safety device might have been damaged.

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