

# Instruction manual ■ ■ ■

## 9028



Safety



Printing and interface overview



Start / Stop the printer



Selecting and viewing a message



Printing a message



Editing a message



Checking and replacing consumables



Servicing the print head



Faults and alarms



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A DOVER COMPANY

## Safety

### DECLARATION DE CONFORMITE CE EC DECLARATION OF CONFORMITY

**MARKEM-IMAJE SAS**  
9 Rue Gaspard Monge, BP 110  
26501 Bourg Les Valence Cedex, France  
certifie que l'équipement imprimante à  
jet d'encre, désigné ci-dessous :

**MARKEM-IMAJE SAS**  
9 Rue Gaspard Monge, BP 110  
26501 Bourg Les Valence Cedex,  
France  
ensures that the ink jet printer  
equipment referenced below:

	Serial nb. : N° de serie:
--	------------------------------

est conforme aux directives européennes applicables aux imprimantes à jet d'encre, soit :

- à la directive machines 2006/42/CE et aux normes européennes qui en constituent la réponse technique, EN60950, 2006, ISO13849-1, 2008, EN12100 : 2010
- à la directive compatibilité électromagnétique 2004/108/CE et aux normes européennes qui en constituent la réponse technique, EN61000-6-2, 2005, EN 61000-6-4, 2007
- à la directive basse tension 2006/95/CE et aux normes européennes qui en constituent la réponse technique, EN60950-1: 2006 + A11:2009

En conséquence, le matériel ci-dessus cité, peut porter le marquage CE.

Bourg-les-Valence, le 04 octobre 2011

*Is in accordance with European directives applicable to ink jet printers that is to say:*

- with the machinery directive 2006/42/EC and with the relevant European standards, EN60950, 2006, ISO13849-1, 2008, EN12100 : 2010
- with the electromagnetic compatibility directive 2004/108/EC and with the relevant European standards, EN61000-6-2, 2005, EN 61000-6-4, 2007
- with the low voltage directive 2006/95/EC and with the relevant European standards, EN60950-1: 2006 + A11:2009

*The above referenced equipment bears the CE marking.*

*Bourg-les-Valence, October, 04<sup>th</sup>, 2011*

Dominique CHANUT  
Responsable Normalisation/homologation  
Regulatory Compliance Manager



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## Safety

Before using this printer, please read and fully comply with these instructions, the material safety data sheet (MSDS) for consumables used, and safety labels affixed to the printer. Servicing must be performed only by qualified people who are appropriately trained.

### ■ Liability

Markem-Imaje shall not be liable for any damage or injury resulting from any failure to follow these safety instructions, as well as good manufacturing practices and safety standards that are generally applicable in the industry, when installing, using or servicing Markem-Imaje equipment.

Any user who modifies or repairs Markem-Imaje equipment, uses consumables, spare parts or accessories other than those supplied by Markem-Imaje, or fails to comply with Markem-Imaje specifications shall have sole responsibility for the consequences thereof.

Markem-Imaje shall not be liable for any malfunction or damage caused by any modification of the equipment or use of the equipment for any purposes other than those for which it is designed. The user shall be solely responsible to take any precautions required by any use to which the user puts the Markem-Imaje equipment.

Markem-Imaje consumables (inks, cleaning products and other consumables), spare parts and accessories are designed for use with Markem-Imaje equipment.

Use of consumables, spare parts or accessories, that are not produced or recommended by Markem-Imaje for use with the specific Markem-Imaje equipment may harm the equipment and cause performance failures.



## Safety

Because Markem-Imaje equipment is tested with Markem-Imaje consumables and spare parts for conformity with certain regulations and safety standards, use of non-Markem-Imaje consumables and spare parts also may be inconsistent with testing conditions and affect compliance of the equipment with certain standards. The user shall bear all risks associated with use of unsuitable consumables and spare parts.

This equipment is certified in accordance with the requirements for CE marking.

### ■ Health / Hygiene / Environment

For certain consumables:

- || Wearing contact lenses when handling these consumables is strictly prohibited.
- || Ink-resistant gloves and safety goggles are recommended during cleaning operation.

Max. noise level < 70 dB A.

Operating temperature : +5°C to +40°C (+41°F to +104°F)

Humidity: 0 - 90% RH with no condensation. The use of certain inks may limit the temperature and humidity ranges (see the ink specification sheet).

The printer must not be used in explosive atmospheres.

### ■ Fire prevention

**CAUTION:** For continued protection against possible fire, use only the ink/solvent mixtures specified by Markem-Imaje.

If your printer uses flammable ink or make-up:

- || Never leave containers containing ink, make-up or cleaning products, or ink-soaked rags (even dry) near the printer.
- || Install a foam, CO2 or powder extinguisher immediately adjacent to the printer (maximum 10 meters).
- || Never smoke near the printer. Affix a sign «NO SMOKING, FLAMMABLE INK» near the printer.



## Safety

- || Ensure that the printer is kept particularly clean, as dried ink deposits remain highly flammable.
- || Drums of ink, make-up and cleaning solution must be closed and stored in a ventilated room.

### ■ Handling

When a printer contains consumables, it may only be moved in a vertical position, over a short distance (e.g. within a workshop). Completely drain the printer before moving it in a position other than vertical, or if it is to be transported for a longer distance (e.g. in a vehicle).

Printer weight: 18,5 Kg (40.8 lbs)

Due to the weight of the system, several people are required to handle it.

### ■ Installation

Installation work must be performed without fail by a team of Markem-Imaje technicians. Any person modifying the installation shall be wholly liable for such modifications.

The print head must be secured firmly in place with fastening devices. The printer must be installed in a ventilated location, away from any source of heat, flames or sparks.

The printer installation on the production line must not generate any risks for staff. The console must not be integrated on a moving system. The operator's work station faces the printer.

The printer must be connected to a single phase mains electricity network with earth ground, using the cable supplied with the printer. The standard plug on this cable must be easily accessible.



## Safety

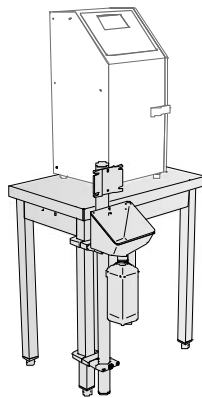
The electrical and pneumatic installations upline of the printer must comply with applicable regulations. Printer electrical characteristics: see manufacturer's plate inside the door near the consumables.

When the printer or a part thereof is attached to a stand, the stand must be connected to earth ground.

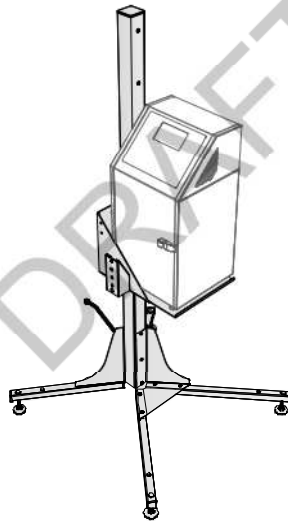
Earth ground all conducting parts not at a voltage reference and which are related to or close to the printer (metal frames, protective guards, etc.).

For information on fastening a Markem-Imaje accessory, refer to the assembly instructions delivered with it.

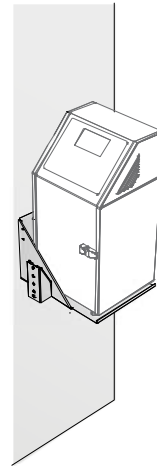
### ■ Typical installation:



Tabletop



On base



Wall-mounted



### ■ Use

The printer is designed for contact-free printing by projecting ink. Any other use of the printer is prohibited, and any consequences shall be under the entire responsibility of the user.

### ■ Servicing

We recommend that maintenance work be carried out only by staff who have received technical training from Markem-Imaje and who have the appropriate personal protective equipment (safety shoes, glasses, gloves, etc.). Any maintenance work not described in this manual must be carried out by Markem-Imaje technicians.

Disconnect the printer from the mains before any operations requiring components to be removed or exchanged.

Use appropriate tools for any work on the electrical and hydraulic circuits. After each maintenance operation, the waste receptacles used should be emptied and cleaned. Do not leave rags soaked with consumables near the printer.

This unit contains a non-replaceable internal lithium ion battery. The battery may burst or explode, releasing hazardous chemicals. To reduce the risk of fire or burns, do not crush, puncture, or dispose of the battery in fire or water.



## Safety

### ■ Recycling



Disposal of used batteries and rechargeable batteries (applicable in European Union countries and other European countries with selective waste collection systems).



Disposal of used electrical and electronic equipment (applicable in European Union countries and other European countries with selective waste collection systems).



These symbols indicate that the electrical and electronic device, and the batteries and rechargeable batteries therein, must not be disposed of at the end of its life as ordinary municipal solid waste. By ensuring that these items are disposed of appropriately, you play an active role in avoiding the harmful consequences that incorrect disposal could have on the environment and human health. The recycling of materials contributes to the preservation of natural resources.

By entrusting your end-of-life electrical devices to a duly authorized disposal company, you ensure that all the items therein will be handled correctly.

In all other cases and in order to safely remove batteries, rechargeable batteries and other materials, see the user manual or contact your Markem-Imaje representative.

### ■ Waste consumables

The Consumable waste must be managed in compliance with local regulations related to waste management and dangerous goods transport.

Transport, transit, treatment of consumable waste must be operated by entity owning appropriate waste management licences.





Consumable waste must be treated in compliance with local regulations either by recycling solution (e.g distillation), incineration with energy recovery, incineration or specific land filling.

### ■ FCC Rules

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

For Canada :

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication. This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: this device may not cause interference and this device must accept any interference, including interference that may cause undesired operation of the device.



## Safety

### ■ Printer integration



If this equipment is integrated in a machine, please read the instruction manual for the machine before working on the printer.

If the printer is incorporated in a machine or assembled with other machines in a way that forms machinery covered by the Directive 2006/42/CE:

- It may not operate independently
- It must not be commissioned until the end machine in which it is incorporated has been declared to comply with the relevant provisions of the Machinery Directive and other European directives applicable to the end machine.

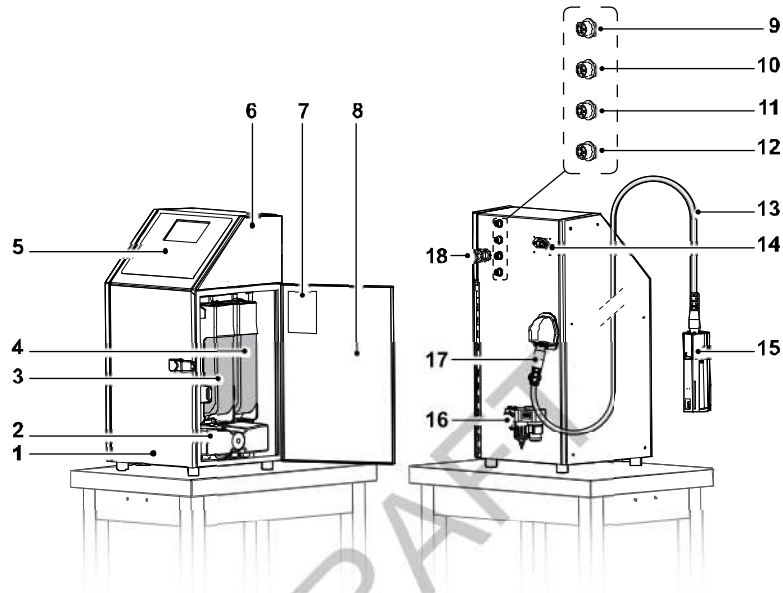
DRAFT



<b>DECLARATION D'INCORPORATION</b> Déclaration d'incorporation selon la Directive Européenne Machine 2006/42/CE, annexe II B <b>DECLARATION OF INCORPORATION</b> Declaration of incorporation in terms of the European Machinery Directive 2006/42/EC, annex II B			
<b>MARKEM-IMAJE SAS</b> 9 Rue Gaspard Monge, BP 110 26501 Bourg Les Valence Cedex, France déclare que l'équipement imprimante à jet d'encre, désigné ci-dessous :	<b>MARKEM-IMAJE SAS</b> 9 Rue Gaspard Monge, BP 110 26501 Bourg Les Valence Cedex, France declare that the ink jet printer equipment referenced below:		
	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">N° de série: Serial n°.:</td> <td style="width: 50%;"></td> </tr> </table>	N° de série: Serial n°.:	
N° de série: Serial n°.:			
répond aux exigences générales de sécurité et de santé de la Directive Machines 2006/42/CE, Annexe 1.  Que cet équipement imprimante à jet d'encre répond de plus aux directives CE applicables, soient :	meets the general safety and health of the Machinery Directive 2006/42/EC, Annex 1.  Ink jet printer equipment that responds more to the EC directives, that is to say:		
<ul style="list-style-type: none"> <li>• A la Directive Machines 2006/42/CE et aux Normes Européennes qui en constituent la réponse technique : EN60950-1 : 2006, ISO13849-1 : 2008, EN12100 : 2010</li> <li>• A la Directive Compatibilité Electromagnétique 2004/108/CE et aux Normes Européennes qui en constituent la réponse technique : EN61000-6-2 : 2005, EN 61000-6-4 : 2007,</li> <li>• A la Directive Basse Tension 2006/95/CE et aux Normes Européennes qui en constituent la réponse technique : EN60950-1 : 2006 +A11: 2009.</li> </ul>	<ul style="list-style-type: none"> <li>• with the Machinery Directive 2006/42/EC and European Standards that constitute the technical answer: EN60950-1: 2006, ISO13849-1: 2008, EN12100 : 2010</li> <li>• with the Electromagnetic Compatibility Directive 2004/108/EC and European Standards that constitute the technical answer: EN61000-6-2: 2005, EN 61000-6-4: 2007,</li> <li>• with the Low Voltage Directive 2006/95/EC and European Standards that constitute the technical answer: EN60950-1: 2006 + A11:2009</li> </ul>		
La documentation technique pour cet équipement imprimante à jet d'encre a été rédigée selon l'annexe VII, partie B.	The documentation for this Ink jet printer equipment has been drafted in accordance with Annex VII, Part B.		
Le fabricant s'engage à transmettre, à la suite d'une demande motivée des autorités nationales, les informations pertinentes concernant cet équipement imprimante à jet d'encre.	The manufacturer undertakes to forward, following a motivated request of national authorities, relevant information regarding this Ink jet printer equipment.		
Cet équipement imprimante à jet d'encre est destiné à être incorporé dans une machine ou à être assemblé avec d'autres machines en vue de constituer une machine à laquelle s'applique la directive 2006/42/CE et qu'il ne peut fonctionner de façon indépendante.	The Ink jet printer equipment is intended to be incorporated into machinery or assembled with other machines to create a machinery to which the Machinery Directive 2006/42/EC and that cannot work independently.		
Cet équipement imprimante à jet d'encre ne doit pas être mis en service avant que la machine finale dans laquelle il doit être incorporé ait été déclaré conforme aux dispositions pertinentes de la Directive Machines et aux Directives Européennes applicables à la machine finale.	This Ink jet printer equipment may not be put into operation until conformity of the final machine into which it is to be incorporated has been declared in conformity with the relevant provisions of the Machinery Directive and the European Directives applicable to the final machine.		
Bourg-lès-Valence, le 04 octobre 2011  Dominique CHANUT Responsable Normes et homologations Regulatory Compliance Manager	Bourg-lès-Valence, October, 04 <sup>th</sup> , 2011  		
	Markem-Imaje SAS 9, rue Gaspard Monge – BP 110 – 26501 Bourg-lès-Valence Cedex France Tel. : +33 (0)4 75 75 55 00 – Fax : +33 (0)4 75 82 98 10 – www.markem-imaje.com		



9028



1	Housing	10	M12 connector: RS-232 outlet
2	M6'	11	M12 connector: Encoder (blue)
3	Additive cartridge	12	M12 connector: Alarm warning light (yellow)
4	Ink cartridge	13	Ombilical 2 meters (3 m in option)
5	Operator interface	14	Mains connector
6	Air filter cover	15	Print head
7	Manufacturer's plate	16	Head pressurization kit
8	Consumables access door	17	Umbilical outlet
9	M12 connector output cell (Black)	18	Ethernet port (optional)



# Interface overview

Operating keys	Function keys
On / Off	Select a message
Run a print test	Create a message
View printer parameters View and acknowledge faults and alarms	Edit the message being printed
	Parameters of message being printed
	Counter status and initialization
	Additive cartridge level Ink cartridge level
	Access maintenance functions
	Access production functions

Navigation keys
Confirm a selection, menu or operation
Go back one level or access submenu
Select a parameter Access submenus or dialog boxes Tab

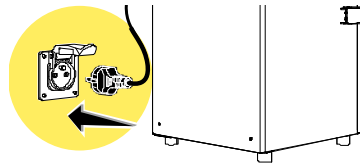
  

1 Ink circuit status	1	ON	2	03/02/15 15:51	3	PABIS	4	N : 006
2 Date, time or menu name	5	Message	Font	Variables	Parameters			
3 Message name	6	New	Open	Save	Save As	Load Printer	Delete	Close
4 Message number	7							
5 Submenus	8	Set up a new message						
6 Functions or commands	9	↑ ↓ ← → for selection and ENTER						
7 Print area	10							
8 Description of function or command								
9 Navigation help								
10 Uppercase (Caps Lock)								

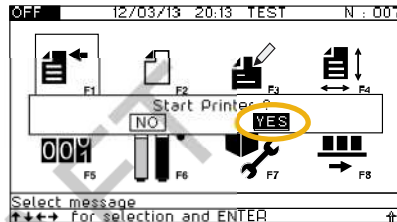


## Start the printer

1



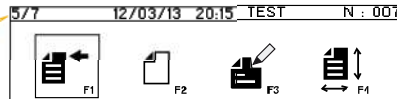
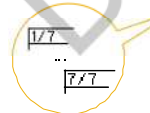
2



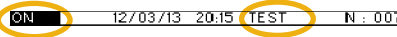
3



4



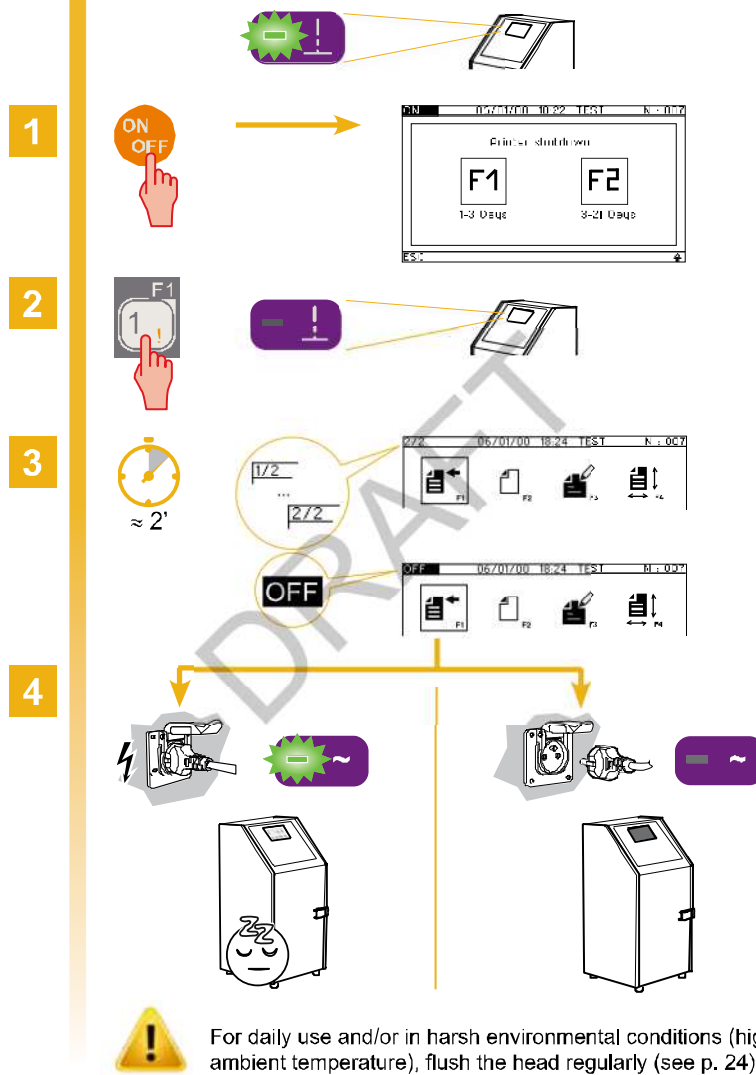
5



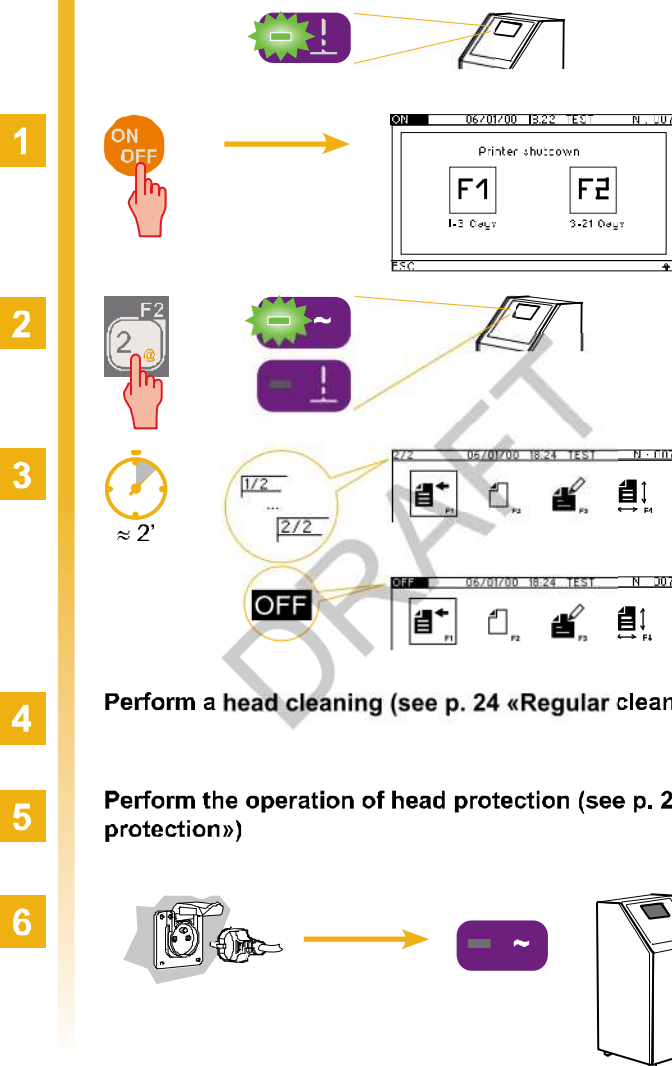
The message «TEST» is ready to be printed.



## Stop the printer ( $\leq 3$ days)




## Stop the printer (3-21 days)

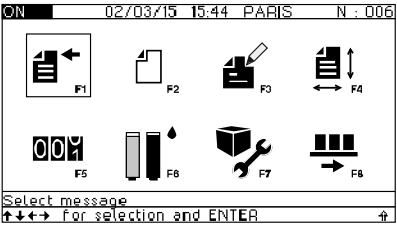





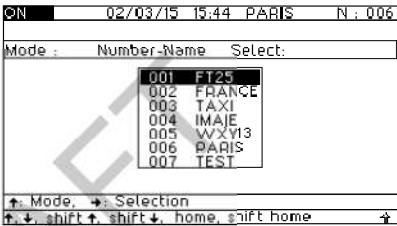
## Selecting a message


### Selecting a message to print

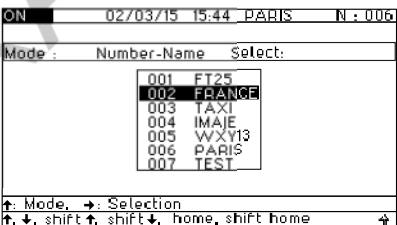
**1**  →



**2**  →



**3**  →

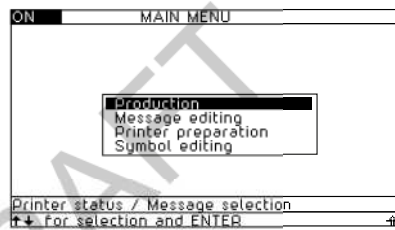
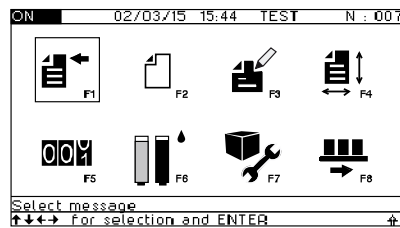


The message «TEST» is ready to be printed.

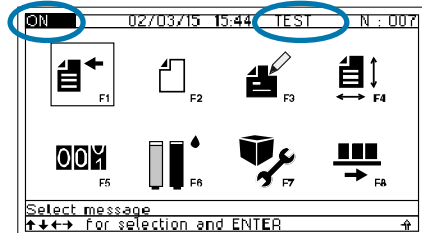


## Viewing a message

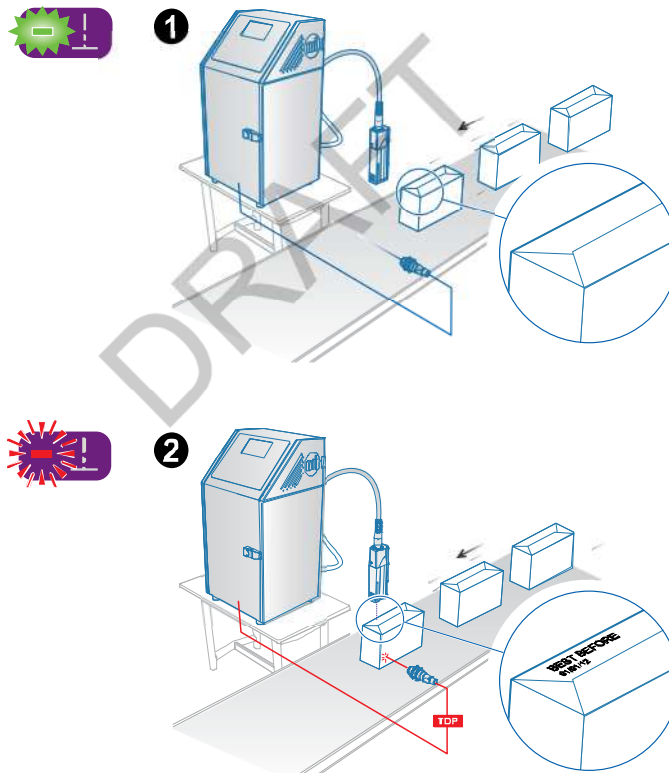
### ■ Viewing the message being printed



## Printing a message

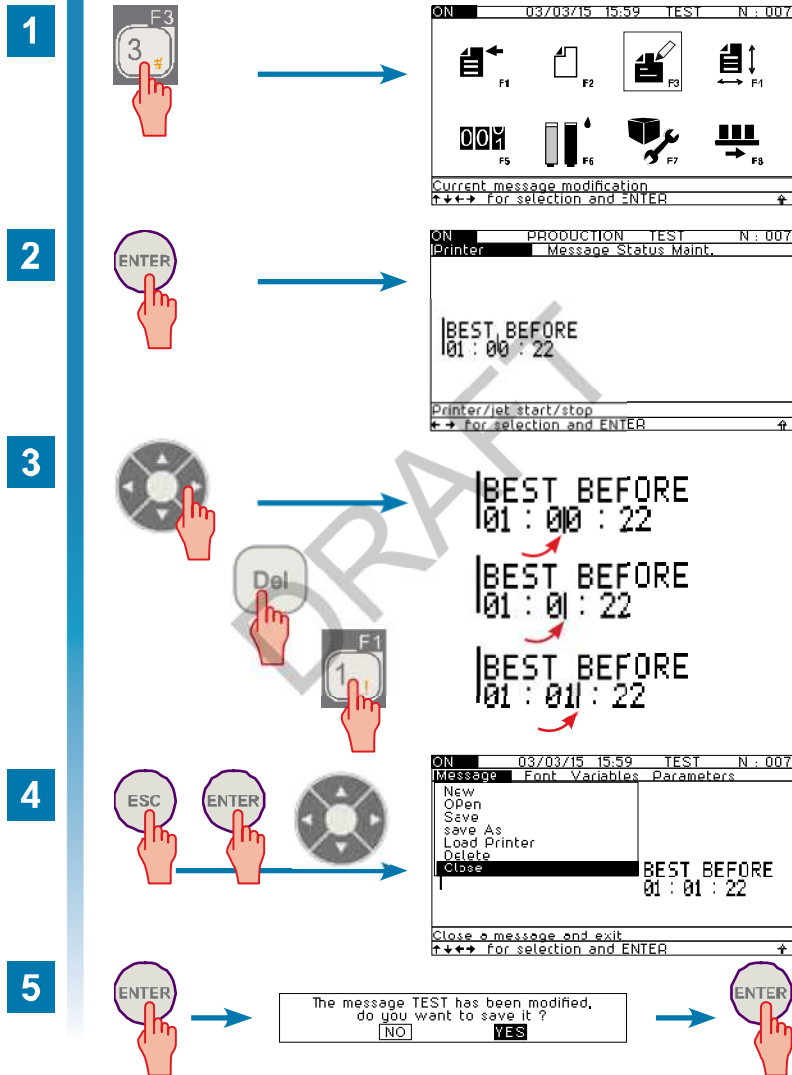


The message «TEST» is ready to be printed.



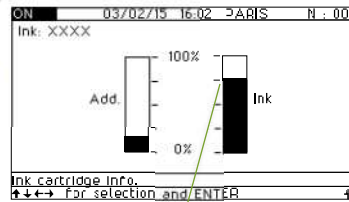
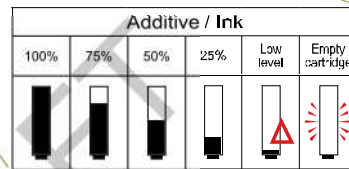
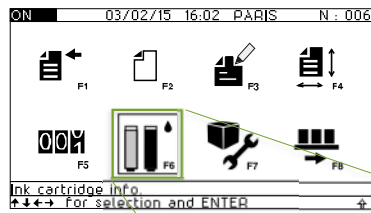
# Editing a message

## ■ Editing the message being printed



# Consumables

## ■ Viewing levels

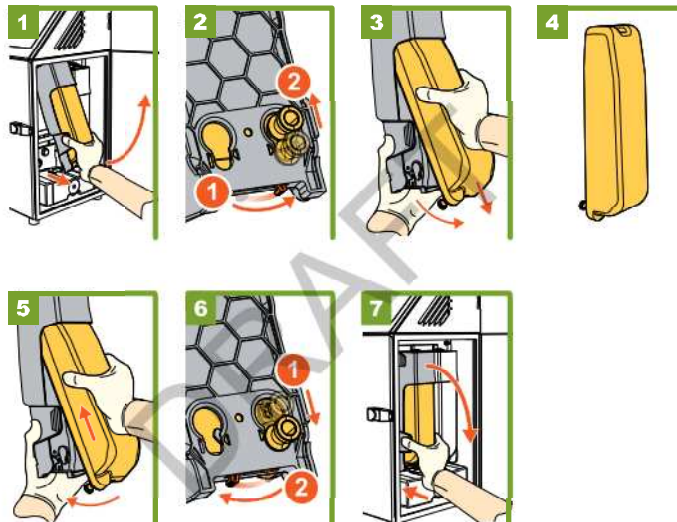
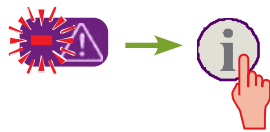


Cartridge level



# Consumables

## ■ Changing consumables

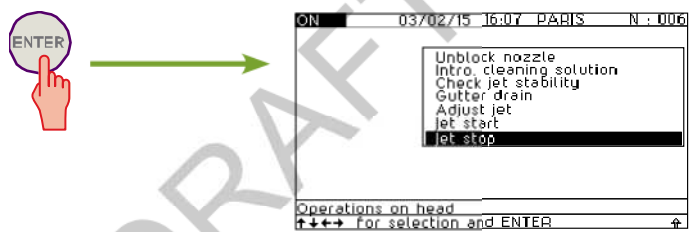
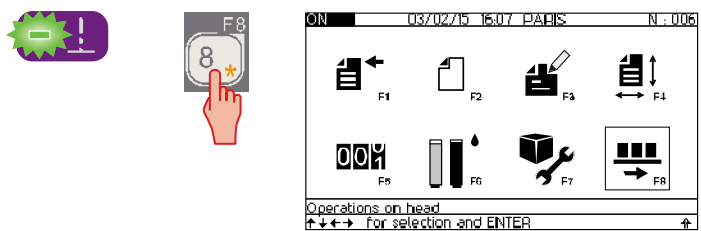


 p. 8 « Waste consumables ».



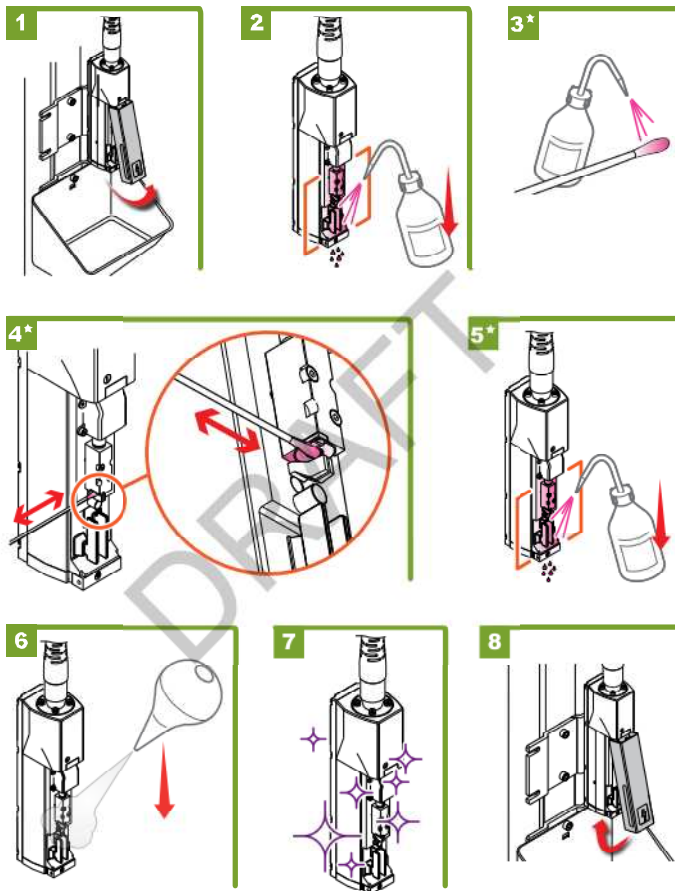
# Servicing the print head

## ■ Stop the jet



## Servicing the print head

### ■ Regular cleaning



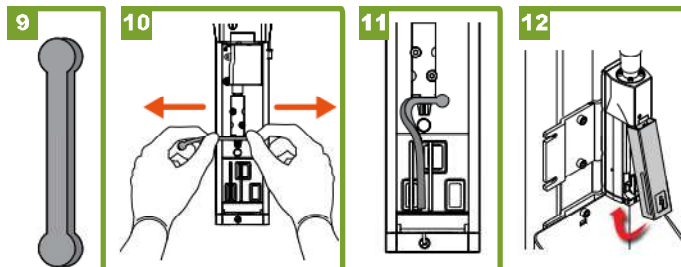
(\* ) Operation required for certain inks (see the safety data sheet for your ink), or if the printer is used in harsh environments (high temperature, dusty surroundings)..





# Servicing the print head

## ■ Head protection



## ■ Starting up the jet after head maintenance

ON 03/02/15 16:19 PARIS N : 006

- Unlock nozzle
- Intro. cleaning solution
- Check jet stability
- Gutter drain
- Adjust jet
- Jet start
- Jet stop

Operations on head  
↑↓←→ For selection and ENTER

ON 03/02/15 16:19 PARIS N : 006

- Unlock nozzle
- Intro. cleaning solution
- Check jet stability
- Gutter drain
- Adjust jet
- Jet start**
- Jet stop

Operations on head  
↑↓←→ For selection and ENTER



## Faults and alarms



→ Fault or alarm condition





→ View a fault or alarm



→ Acknowledge a fault or alarm

N°	Alarm or Fault	Description displayed	Recommendation displayed
50	A	LOW INK level. Prepare new cartridge	Wait for "EMPTY alarm" before replacing
51	A	LOW ADDITIVE. Prepare a new cartridge	Wait for "EMPTY alarm" before replacing
52	A	EMPTY INK Cartridge	Replace ink cartridge
53	A	EMPTY ADDITIVE Cartridge	Replace additive cartridge
81	D	Drop detection jet 1 (left)	Clean and dry carefully head and cover (1)
84	D	Head cover absent	Check presence of head cover or magnet in cover (1)
87	D	High Voltage insulation failure	Clean and dry head carefully (1)
90	A	Temperature out of range	Temperature range 0-45°C (32-113°F)
91	D	Internal cabinet T° > 60°C-140°F	Let the printer cool down

(1)   **A** (Alarm) : printing continues  
**D** (Fault) : printing stops



## Information



S/N : Serial number: \_\_\_\_\_

Additive ref. \_\_\_\_\_

Ink ref. \_\_\_\_\_



For Marking & Coding Equipment. Photographs and drawings are not binding in detail. This document was originally written in French. The French text of this document shall alone be authentic and shall prevail in the event of a dispute. Markem-Imaje reserves the right to modify the specifications of its products without prior notice. Any reproduction, even partial, of this document is prohibited. Translation of the original manual: the original manual (in French) is available on the CD-ROM supplied with the printer.

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the team to trust ■ ■ ■

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User Documentation Department

en 12/2013 - A



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