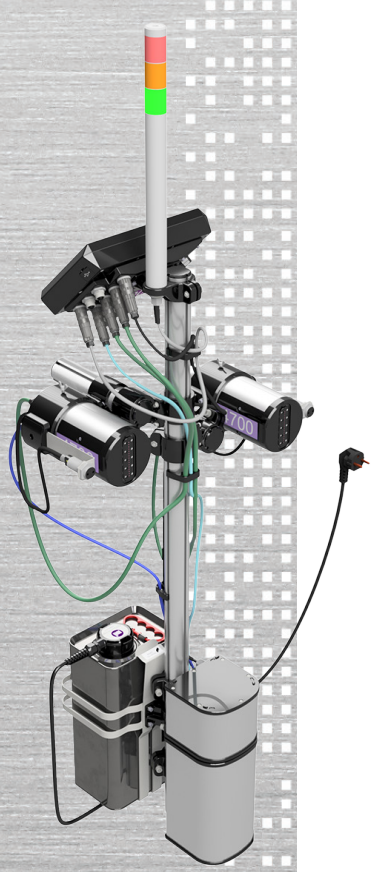

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markem·imaje
a DOVER company

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EN

Keep this information to hand so you can refer back to it at a later date.

■ Important note

The **instruction manual** provides information on the printer description, its start-up and shutdown, printing and job modification as well as first-level maintenance and troubleshooting.
The **instruction manual** is accessible in PDF format from the DVD supplied with your printer.
The **user manual** that lists all of the features is also available in PDF format from the DVD supplied with your printer.

■ EC DECLARATION OF CONFORMITY (translation)

MARKEM-IMAJE INDUSTRIES
9 Rue Gaspard Monge
26500 Bourg-Lès-Valence France

MARKING AND CODING EQUIPMENT

Model: Serial number:

• This declaration of conformity is issued under the sole responsibility of the manufacturer.

• The object of the declaration described above is in conformity with the relevant Union harmonization legislation.

• This printer complies with all the relevant provisions of the European directive 2006/42/EC.

• References to the harmonized standards used, in relation to which conformity is declared:

NF ISO EN12100: 2010. ISO 13849-1: 2015.

Bourg-les-Valence, July 9th, 2018

Signed by the Regulatory Compliance Manager, on behalf of Markem-Imaje, authorized to draw up this declaration and to compile the corresponding technical documentation:

Dominique CHANUT
Regulatory Compliance Manager

This document was originally written in French.

■ EU DECLARATION OF CONFORMITY (translation)

MARKEM-IMAJE INDUSTRIES
9 Rue Gaspard Monge
26500 Bourg-Lès-Valence France

MARKING AND CODING EQUIPMENT

Model: Serial number:

• This declaration of conformity is issued under the sole responsibility of the manufacturer.

• The object of the declaration described above is in conformity with the relevant Union harmonization legislation.

Directive 2014/53/EU
Directive 2011/65/EU

• European standards used which form part of the technical response:

EN 61000-6-2: 2005, EN 61000-6-4: 2007 + A1: 2011, EN61000-3-2: 2014, EN61000-3-3: 2013, ETSI EN 301 489-1 V2.2.0 :2017-03, ETSI EN 301 489-3 V2.1.1 :2017-03,EN 55032 :2015, ETSI EN 300 330 V2.1.1 :2017-02,, EN 50364: 2010, EN 62369-1: 2009, EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2: 2013, EN62479 :2010.

Bourg-les-Valence, July 9th, 2018

Signed by the Regulatory Compliance Manager, on behalf of Markem-Imaje, authorized to draw up this declaration and to compile the corresponding technical documentation:

Dominique CHANUT
Regulatory Compliance Manager

This document was originally written in French.

■ 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.
This printer has been designed for reliable use in good safety conditions. However, this safety depends on being aware of and respecting a number of usage rules and taking certain precautions.
□ Do not print on objects whose temperature exceeds 100°C at the time of printing.
□ Do not expose the printer to dirt, or high levels of dust or humidity.
□ The equipment should only be used by appropriately trained staff. We recommend that the device is supervised whilst in use.
□ To clean the device do not use plastic basins which easily become electrified, use metal basins instead.
□ To cut off the power supply, remove the plug from the power outlet.

■ Statements for China

This symbol means that the printer is intended for use only at altitudes not higher than 2000 m above sea level.
仅适用于海拔 2000m 以下地区安全使

This symbol means that the printer is intended for use in non- tropical conditions.
仅适用于非热带气候条件下安全使用

■ 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, accessories or cabling 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 for taking 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, accessories and cabling are designed for use with Markem-Imaje equipment.
Use of consumables, spare parts accessories or cabling, 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.
Because Markem-Imaje equipment is tested with Markem-Imaje consumables, spare parts, accessories and cabling for conformity with certain regulations and safety standards, use of non-Markem-Imaje consumables, spare parts, accessories and cabling 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, spare parts, accessories and cabling.
This equipment is certified for CE, FCC, ISED, GS, RCM markings in accordance with the requirements.

■ 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.
□ All chemical products, including ink, can be dangerous and should be handled with care.

Max. noise level	< 70 dbA
Operating temperature	+5 C to +40 C (+41°F to +104°F)
Humidity	10 - 90% RH with no condensation

The use of certain inks may limit the temperature and humidity ranges (see the ink specification sheet).
This equipment cannot be used in EEx environments (explosion-risk environments).

■ Statement for service personnel

Power Supply Unit

CAUTION DOUBLE POLE/NEUTRAL FUSING

The electronic board installed inside the power supply module has two irreplaceable fuses F1 and F2, which are marked as follows:
T3.15A, 250V AC.

The fuses must not be replaced and/or repaired by the user or service personnel. If the power supply module is damaged, it can be removed as a whole (unassembled) only. It should be returned to the factory for repair.

■ Accident procedure

In case of an ink leak, soak up the ink with an absorbent cloth and dispose of it in accordance with the fire prevention measures and hygiene and occupational safety rules. Immediately remove any clothing which has come into contact with the ink.
In case of eye or skin irritation:
□ Eyes: rinse under running water for 15 minutes then contact an eye specialist,
□ Skin: wash with soap and water.

■ Fire prevention

Read the ink and the used solvent data sheets carefully. In case of inflammable ink or solvent use:
□ Never leave containers containing ink, additive

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.
□ Drums of ink, additive and cleaning solution must be closed and stored in a ventilated room.
□ If you are using inflammable inks, keep the ink canister a minimum of 0.5m away from electrical facilities or sources of sparks or flames. When replacing ink canisters containing inflammable ink, maintain a minimum distance of 1m between the ink canister and all electrical equipment around or above the canister, and a minimum distance of 3m between the ink canister and all electrical equipment below the canister.
□ If you are using inflammable inks, keep the print head a minimum of 2m away from electrical facilities or sources of sparks or flames.

■ Handling

Total printer weight (incl. two printheads, excl. a canister)	≈ 10.0kg (22.05lbs)
Weight of major printer components*:	
- Control unit	≈ 1.3kg (2.87lbs)
- Power pack	≈ 1.1kg (2.42lbs)
- Ink system, without ink	≈ 2.0kg (4.41lbs)
- Printhead	≈ 0.9kg (1.98lbs)
Complete stand (the main stand beam, a case for a 5-liter ink canister, 2 printhead stands, 2 printhead holders)	≈ 3.7kg (8.16lbs)
A 5-liter canister of water-based ink	≈ 5.5kg (12.12lbs)
A 20-liter canister of water-based ink	≈ 22.00kg (48.50lbs)

*Without options, cabling and tubing

The ink system, an ink canister or the printer as a whole can only be transported in the vertical (working) position. The other system components (the control unit, printheads, a power pack, a stand) can be transported in any position. Caution shall be taken not to damage nozzle plates, the control unit screen, cables, tubes while in transit.
Owing to their weight, an ink canister (especially a 20-liter one) and the printer should be transported as two separate items.

■ Storage

Store the printer in a dry place.

Consumables storage temperature	0°C to 50°C (32°F to 122°F)

The use of certain inks may limit the temperature range (see the ink specification sheet).
The ink system, a container of ink or the printer as a whole can only be stored in the vertical (working) position. The other system components (the control unit, printheads, a power pack, a stand) can be stored in any position.
The device can be stored for up to 3 months with ink in its circuit. If the storage period exceeds 3 months, the ink must be drained and the circuit should be filled with a suitable diluent.
The above-given period may be shorter, when certain types of ink are used (see the ink data sheet).

■ Installation

See the illustrated section at the end of the document

1	Printheads
2	Control Unit
3	Enclosed power supply
4	Ink system
5	Pick-up unit
6	Ink canister

The printer can be basically installed by a user, following the guidelines given in the installation instructions and **User Manual**.

Advanced features (for special inks, integration into a production line, communication with external devices, etc.) can be installed exclusively either by a person trained adequately by Markem-Imaje or by the Markem-Imaje technical staff. Any person modifying the installation shall be wholly liable for such modifications.
The printer must be installed indoors, in a ventilated location, away from any source of heat, flames or sparks.
The printer must be assembled using the mounting parts provided.

Before use, the printer should be installed on a factory conveyor belt or another element that is firmly fixed to the ground, the wall or another stable building structure member.

The printer must be connected to a power supply which conforms to the information on the rated voltage label. If you are unsure about the type of power supply available, contact the Markem-Imaje customer service department.
The product is intended for use with TN power distribution systems.
The power supply circuit of the printer must be secured with a cut-out device whose rated current is max. 20 A.
Overvoltage category (OVC): II.
Fire rating class: I.
The printer is fitted with a male socket with a ground wire. This is a safety feature. The power cable must be connected to a socket where there is an earth pin. If the male socket is not compatible with the female socket, it must be replaced by a licensed electrician.
We do not recommend using an extension.
Clamps, clips or holders are recommended for fastening running cables and tubes.
The insulation of head cables is resistant to the impact of mineral oils (under CSA 22.2, 4Tage/100ºC), fat or grease, UV radiation and also to abrasion.

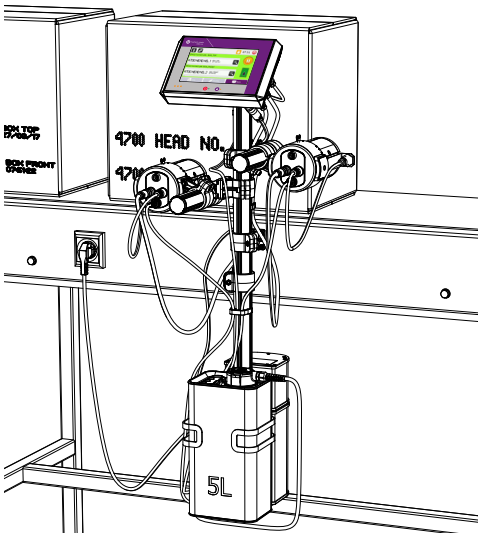
The following can be attached to the printheads:
□ Cables, 1, 3 or 5 meters in length. The 5 meter-long cable is a CMX-type cable.
□ Ink tubes, 1.5, 3.5 or 5.5 meters in length.

The minimum bend radius is:
for 1 and 3 meter-long head cables:
□ 51 mm - static operation
□ 95 mm - dynamic operation
for a 5 meter-long head cable (CMX):
□ 32 mm - static operation
□ 59 mm - dynamic operation
for a hose attached to the ink canister pick-up unit;
□ 30 mm
for the tubes that feed ink to the printheads:
□ 40 mm - static and dynamic operation.
Do not position the printer in an area where the cables (including the power cord) and tubes may be subject to mechanical stress. The cables and tubes must be secured against any damage. They must not dangle or lay on the floor.
The ink tubes or the hose of a canister pick-up unit must not be bent or squeezed.

Cables used for RS-232C communications shall be:
□ shielded,
□ in conformity with the RS-232 requirements,
□ not longer than 15 meters.
External components shall be connected to the I/O BOX module with wires whose lengths do not exceed 30 meters.

Cables used for connecting the printer to an Ethernet network shall be:
□ unshielded,
□ in conformity with the Ethernet requirements,
□ CAT 5, as a minimum.

The level difference between the ink system and the printheads must not exceed ±1.5m.
Objects to be labeled must move in front of the face of either of the printheads from the side of slide.
The ink system and an ink container must be installed in the vertical position. The other system components (the control unit, printheads, a power pack, a stand) can be installed in any position.
A 5-liter ink canister can be installed in a case that is fastened to the printer stand. Owing to its weight, a 20-liter ink canister must be put onto a horizontal, stable base, e.g. on the floor and not exposed to becoming tipped over by other machines or a person.
Ensure that the lighting in the area in which the device is installed conforms to local regulations.
The printer installation on the production line must not generate any risks for staff.
The electrical installations upline of the printer must comply with applicable regulations.
Ensure that the operators and staff responsible for maintenance have adequate space to carry out their work.
Further information regarding installation is available in the instructions provided with the printer.
The drawing below shows an example of how to install the printer on a belt conveyor.



The printer is not equipped with a disconnecting mechanism (power switch) and as such it must be plugged into a power outlet which is close to the device and which is easily accessible.

■ Installation instructions and statement

Requirements for the USA
The specific guidelines about how to run CMX cables whose lengths exceed 3.05 meters (10 feet) are given in sections 725.135 to 725.144 of NFPA 70 National Electrical Code® (NEC) 2017 Edition.
This Code covers the installation and removal of electrical conductors, equipment, and raceways; signaling and communications conductors, equipment, and raceways; and optical fiber cables and raceways.
Read the a/m document before installing the printer with 5 meter-long head cables.

Requirements for the USA/Canada
Printer is not intended for use in server room.

■ 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 the user 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.
Never use sharp or pointed tools to clean the printer or replace the print head.
If the nozzle plate needs to be cleaned, rinse it with an appropriate cleaning product (Markem-Imaje detergent). Never clean the nozzle plate with tools. Carefully dry the nozzle plate with a lint-free cloth. Keep contact with the nozzle plate to a minimum to avoid damaging it. The print head performance may be reduced if the surface of the nozzle plate is damaged.
No printhead must be directed at people, animals, objects whose temperature exceeds 100°C, open flames.
After each maintenance operation, the waste recepticles used should be emptied and cleaned. Do not leave rags soaked with consumables near the printer.
This unit contains a non-replaceable internal lithium battery. The battery may burst or explode, releasing hazardous chemicals, if it is replaced with a battery of a wrong type. The control unit containing a damaged battery should be removed as a whole (unassembled) only. It should be returned to the factory for repair. To reduce the risk of fire or burns, do not crush, puncture, or dispose of the battery in fire or water.

■ 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 user 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:
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.

The 4700 has been designed and complies with the safety requirements for RF exposure in accordance with RSS-102, section 2.5.1 as demonstrated in the RF exposure analysis.

For Marking & Coding Equipment. Photographs and drawings are not binding. 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. © 2018 Markem-Imaje All Rights Reserved.

FR

Conservez ces informations à portée de main afin de pouvoir vous y reporter ultérieurement.

■ Avertissement important

La **notice d'instruction** présente des informations sur la description de l'imprimante, son démarrage et son arrêt, l'impression et la modification des messages ainsi que la maintenance et le dépannage de premier niveau.
La **notice d'instruction** est accessible au format PDF depuis le DVD fourni avec votre imprimante.
Le **manuel utilisateur** regroupant l'ensemble des fonctionnalités est également disponible au format PDF depuis le DVD fourni avec votre imprimante.

■ DECLARATION CE DE CONFORMITE (texte)

MARKEM-IMAJE INDUSTRIES
9 Rue Gaspard Monge
26500 Bourg-Lès-Valence France

MARKING AND CODING EQUIPMENT

Model: Serial number:

• La présente déclaration de conformité est établie sous la seule responsabilité du fabricant

• L'objet de la déclaration décrit ci-dessus est conforme à la législation d'harmonisation de l'union applicable.

• Cette imprimante satisfait à l'ensemble des dispositions pertinentes de la directive européenne 2006/42/CE.

• Références des normes harmonisées appliquées par rapport auxquelles la conformité est déclarée.

NF ISO EN12100 : 2010. ISO 13849-1 : 2015.

Bourg-lès-Valence, le 9 juillet 2018