



Domino K-Series User Guide

K600i

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HEALTH AND SAFETY

The following safety instructions concern all work carried out on the machine as well as in the area close to the machine. Local restrictions concerning the specific factory should to be taken in consideration.

Risk Assessment

Ensure that risk assessments have been performed at installation of the print system.

SDS

Domino supplies Safety Data Sheets (SDS) giving specific safety information with its ink and flush fluids. Ensure that operators are familiar with the contents of SDS.

Crush Hazards

Risk Area

The risk area is the area around the moving parts in front of the printer:

- From the wash station to the print position (that is, horizontal movement towards the operator) and
- In a vertical direction when the print head moves up/down when the production line is started/stopped.

The print head is designed to move in a horizontal direction across the machine when entering production mode and move back for periods of non-production or cleaning / capping.

Forwards – To print mode

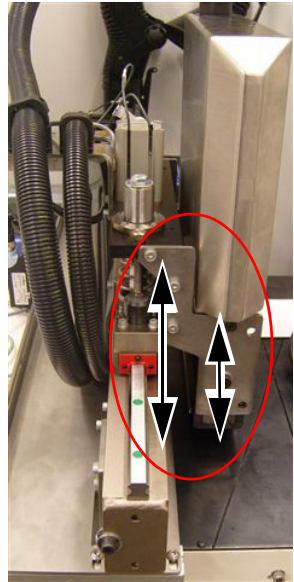
Backwards – Non-production state / cleaning / capped

The print head is designed to move in a vertical direction for periods of production and non-production.

Up – When production line stops

Down – When production line is started.

Note: Up and down movement is a configurable setting and will vary between installations.



- WARNINGS:**
- (1) The encircled area in the above image presents a crush hazard. The risk area may prove difficult to protect, depending upon the type of production line the print system is installed on.
 - (2) Keep hands away from the printer when it is operating.

Note: It remains the responsibility of the customer to perform a Risk Assessment on the printing equipment installed. Domino can assist where necessary.

Printing Inks

Each Domino ink and flush fluid container displays warnings. Refer to the SDS for detailed information. The following notes are for general guidance only.

Industrial Hygiene and Safe Working Practice

When used correctly, printing inks do not present unacceptable hazards or problems. However, everybody using them must be familiar with the appropriate safety standards and be aware of the precautions that must be taken. The following are basic requirements:

- Proper standards of industrial practice relating to cleanliness, tidiness and storage must be maintained
- Inks and ink containers must be handled with care
- All who come into contact with inks must be properly instructed in their use
- Do not use the printer in wet or explosive environments.

Directions for safe working practices vary according to the environment. The following are broad principles so that necessary precautions may be taken:

- Contact with the mouth must be avoided. Therefore eating, drinking or smoking, or any personal habits or actions that may transfer ink to the mouth, must be avoided
- Do not smoke or allow naked flames (or other sources of ignition) in the vicinity of any inks or flushes, as this is highly dangerous
- Contact with the eyes must be avoided. Suitable eye protection must always be worn whenever there is any risk of splashing or misting. If ink does get into the eyes, first aid treatment is to flood the affected eye for 15 minutes with saline solution, or clean water if not available. Take care not to allow the water to run into the unaffected eye. Medical aid must be obtained immediately

- Most inks contain solvents, dyes, binder and photo indicators that may injure the skin. Warning is given on the ink's SDS. Barrier creams, gloves and protective clothing must be used. After exposure to ink, all possible traces must be washed off as soon as possible at the nearest washing facility
- Many inks contain materials that vaporise easily, producing fumes that can be inhaled. Good ventilation is necessary
- Soiled cleaning materials (such as Domino-approved cleaning wipes) are a potential fire hazard. They must be collected for safe disposal after use
- Spillages of printing inks and auxiliary products must be cleaned up immediately. Inks and solvents must not be allowed to enter drains or sewage systems.

Spillages and Disposal

Inks and associated fluids conduct electricity. Therefore, power to the printer must be switched off while spillages inside the printer cabinet are being cleaned up.

Printing inks and associated fluids must not be treated as ordinary waste. They must be disposed of using approved methods according to local regulations.

Storage

Inks and flush fluids must be stored in Domino-approved / supplied containers.

Printing inks must be stored in well ventilated buildings, or in areas set aside for the purpose, chosen for safety in case of fire.

Inks must be stored within the ambient temperatures stated in the SDS. Otherwise ink degradation occurs and could lead to system faults and nozzle faults.

Fire Risk

Fire risk is a most important consideration where printing inks are stored and used. The degree of fire hazard will vary considerably from one type of ink or flush to another.

There are instances where UV inks can become flammable. Refer to the SDS for details.

If there is a fire, there is a likelihood that dangerous fumes will arise from printing inks. For this reason ink must be stored where it can be reached quickly by the fire fighting service, and where it will not spread beyond the store.

Electrical/Mechanical Safety

- WARNINGS:**
- (1) High voltages are present within the print head and cabinet. Ensure that the power is removed before opening cabinets, removing panels or removing the print head cover.**
 - (2) Ensure that the correct fire extinguishers are readily to hand.**
 - (3) Domino printers require an electrical input and generate high voltages. Maintenance personnel and service engineers must be competently trained before working on the equipment.**
 - (4) Do not attempt to lift heavy equipment alone. Use lifting equipment or a two-man lift. Ensure that cables do not create a hazard to personnel.**
 - (5) Ensure that all mechanical servicing is carried out by trained and authorised personnel.**

Ultraviolet Light Hazards

- WARNINGS:**
- (1) **Ultraviolet light is harmful to eyes and may cause permanent eye damage, similar to arc welder 'flash'**
 - (2) **Ultraviolet light causes skin burns that are similar to severe sunburn**
 - (3) **All light shielding must be in place during equipment operation.**

Ozone

Ozone, O³, is a toxic gas possessing a distinctive odour and is a normal constituent of the earth's atmosphere. Ozone is produced deliberately for a variety of industrial purposes and is also produced naturally from oxygen whenever ultra-violet radiation or electrical discharges occur.

Background concentrations in the immediate atmosphere vary as a function of season, weather conditions, altitude and humidity.

Exposure Limits

The general policy adopted by the Health and Safety Executive of the UK is that exposure to hazardous substances should be kept at low as is reasonably practicable.

The UK-recommended exposure limit for ozone is 0.1ppm (0.2mg/m³) calculated as an 8-hour time weighted average concentration. There is also a short-term exposure limit for ozone of 0.3ppm (0.6mg/m³) calculated as a 15-minute time-weighted average concentration. Refer to local regulatory guidelines for detailed limits.

Ventilation

Areas into which ozone may escape must be equipped with adequate ventilation and extraction facilities.

Ozone should be prevented from entering the workroom air by the use of exhaust appliances placed close to the source of emission.

First Aid

If a person is overcome by ozone, the following precautions should be adopted:

- (1) Move the patient to a warm uncontaminated atmosphere and loosen tight clothing at the neck and waist
- (2) Keep the patient at rest
- (3) Seek medical aid.

OPERATION

Normal Start-up

Refer to the “Normal Start-up Stand Alone PDF/Offline RIP” section in the K600i Product Manual (Part No. 25410).

Normal Shut Down

Refer to the “Normal Shut Down Stand Alone PDF/Offline RIP” section in the K600i Product Manual (Part No. 25410).

Emergency Shut Down

In the event of a fire, switch off the system by powering off the printer at the on/off switch located behind the system door.

CHANGING FLUID BOTTLES



- CAUTIONS:**
- (1) *Ensure that all replacement fluids are in date and have been stored according to SDS.*
 - (2) *It may be necessary to decant either flush or waste solutions. If this is necessary, follow local health and safety guidelines.*

The K600i contains one ink bottle, one flush bottle and one waste bottle.

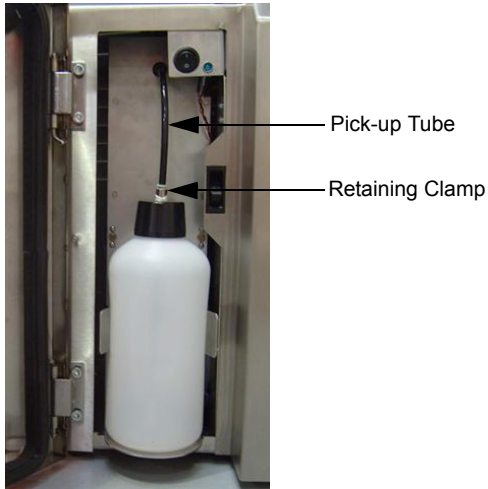
Ink Bottle

The ink bottle resides within the printer cabinet enclosure.

When an “Ink Error” appears, the ink pump stops any further fluid additions and the ink bottle can be changed. Printing can continue beyond the appearance of the “Ink Error” for up to 30 minutes.

CAUTION: *Do not change the ink bottle until the “Ink Error” appears.*

1 Litre Ink Bottle



1 Litre Ink Bottle

To change the 1 litre bottle:

- (1) Ease the bottle away from the retaining clamp.
- (2) Raise and guide the pick-up tube out of the bottle.
- (3) Place the new ink bottle under the pick-up tube. Engage the bottle into the clamp and firmly secure it.
- (4) Clear the errors from the printer system.

10 Litre Ink Bottle



10 Litre Ink Bottle

To change the 10 litre bottle:

- (1) Pull the drawer containing the bottle forward whilst raising the pick-up tube.
- (2) Remove the depleted bottle.
- (3) Place the new ink bottle under the pick-up tube. Engage the bottle into the drawer, ensuring that the pick-up tube is firmly pushed down.
- (4) Clear the errors from the printer system.

Flush and Waste Bottles



CAUTION: *The flush and waste bottles can be changed during production but not during a 'Clean' command.*

The flush bottle and waste bottle reside in the maintenance unit, as shown in the following photograph:



Flush and Waste Bottles

To replace the flush bottle:

- (1) Remove the pick-up tube from the bottle.
- (2) Replace the depleted bottle with the new bottle.
- (3) Replace the pick-up tube and rest the pick-up tube assembly into the bottle.
- (4) Clear the errors from the printer system.

To replace the waste bottle:

- (1) Remove the waste-return cap from the bottle.

Note: Capture any ink spillages with the appropriate Domino-supplied cleaning wipe.

- (2) Cap the full waste bottle and remove it.
- (3) Fit the new bottle and replace the waste-return cap into the bottle.
- (4) Clear the errors from the printer system.



This User Guide, part of pack 25411, shows how to operate your Domino product. For full details, please refer to the Product Manual contained on the CD-ROM.

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