



DURAFLEX™

Printhead Cleaning Storage and Shipping Guide

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1 Introduction

This document is part of the OEM-facing technical documentation suite for Memjet DuraFlex® module-based printing systems. It references, and therefore requires access to, additional documentation available for download from your Memjet Partner Site.

1.1 Aim and Audience

The aim of this document is to provide Original Equipment Manufacturers (OEMs) with the correct storage, handling and printhead recovery procedures they can use to ensure DuraFlex printheads are maintained and stored correctly to prevent any occurrences that may damage or affect the printhead reliability or print quality.

This document is intended for OEM personnel who are using and operating the print unit.

1.2 Prerequisites and Scope

The reader is expected to be familiar with Memjet inkjet printing technology, its applications, and implementation. This document does not cover the installation or use of DuraFlex-based printing system or printheads.

Note: Documents referenced above are available for download from your Memjet Partner Site.

1.3 Typographic Conventions

Throughout this document, the following typographic conventions are used:

Code Character	<code>Courier</code> font is used to identify HTTP GET and POST commands with associated arguments, as well as references to source code, job states, registry settings, directory/file names, XCI commands, and XML settings.
Bold	Text that appears on-screen in the user interface is shown in bold font . This includes UI buttons, engine states, warning codes, and fault codes.
Yellow Highlighting	Yellow highlighting indicates sections that are new or updates in this version of the document, compared to the previous version.

1.4 Related Documentation

Other documents, besides this guide, provide further details for specific readers:

- *System Overview* – For OEM managers and non-technical personnel charged with evaluating the DuraFlex components for use within their products. This document describes the DuraFlex concept and Memjet-supplied DuraFlex components and gives an overview of the operational considerations. It introduces the components an OEM is required to design and manufacture to ensure the DuraFlex Modules function as designed in a DuraFlex-based print engine.
- *Mechanical and Fluidic Databook and Design Guide* – For mechanical design engineers and developers, providing details of the Memjet hardware modules and components (including printhead and maintenance system) and specifications of the ink delivery system fluidics.
- *Electrical Databook and Design Guide* – For electrical design engineers and developers, providing details of the Memjet power requirements, electronic assemblies, and connections.
- *Software Databook and Design Guide* – For software and firmware engineers who need to understand the software interfaces, commands, scripts, and reference software applications.
- *Demo GUI User Guide* – For OEM personnel using the DuraFlex Demo GUI reference application.



- Installation and Commissioning Guide – For OEM personnel who are installing and commissioning a new printing system.
- *Operations Guide* – For OEM engineers and operators to perform operational tasks.
- Troubleshooting Guide – For OEM engineers and technicians to identify symptoms and resolve issues.
- *Service and Repair Guide* – For OEM engineers and technicians to perform DuraFlex inspection and maintenance tasks and component and consumable replacement.
- *Job Submission Library Guide* – For OEM software engineers to incorporate the Job Submission Library (JSL) into their chosen Raster Image Processor (RIP).
- *Technical Bulletins* – For various audiences to announce product or process update or to provide specifics on single-subject technical topics.
- *CAD and Schematics* – For various audiences to provide detailed dimensions related to specific areas.

Note: All technical documentation is available on your Memjet Partner Site.

1.5 Glossary

For terms, acronyms, and abbreviations used in this guide and some product-specific terms, see the [DuraFlex Glossary](#).

Note: This document is hyperlinked to the glossary. For offline reading, download the DuraFlex Glossary file from your Memjet Partner Site.

1.6 Additional Documentation or Access

For additional product-related technical documents, go to your Memjet Partner Site.

If you need Partner Site access, enter a case in Service Desk (<https://OEMsupport.memjet.com>), send an email to Memjet Customer Support (customer.support@memjet.com), or contact your Technical Account Manager.






2 Printhead Cleaning, Storage, and Shipping

2.1 Required Tools and Supplies

Gather the items listed below before beginning this procedure.

Table 1 – Required Tools and Supplies

Quantity	Item	Image	Description
As needed	Filtered or DI water		<ul style="list-style-type: none"> Water used to clean any surface of the printhead must be: <ul style="list-style-type: none"> Colorless Odorless Free of any obvious impurities Clean, room-temperature tap water and non-carbonated, non-mineral drinking water are suitable. Never use mineral water, soap, cleaning fluids, solvents or hot water to clean the printhead.
As needed	Lint-free cloths		<ul style="list-style-type: none"> Must be clean and free of any contaminants including lint, chemicals, cleaning fluids or scents. Examples include: <ul style="list-style-type: none"> Clean, lint-free cloth Microfiber cloth such as spectacle/glasses cloth Clean sponge (new) The cloth used to wipe the printhead will likely become stained with ink and should be discarded appropriately, after use. The following must not be used for cleaning printheads: <ul style="list-style-type: none"> Tissue paper, paper towels or newspaper Any wipes that may contain lint, chemicals, cleaning fluids or scent
As needed	Powder-free, nitrile gloves		N/A
1	Resealable plastic bag(s)		Should be large enough for the printhead and cover.
1	DuraFlex printhead protective case		Shipped with every DuraFlex printhead
2	Ink port caps		Shipped with every DuraFlex printhead
1	Printhead Cartridge Shipping Box		Shipped with every DuraFlex printhead



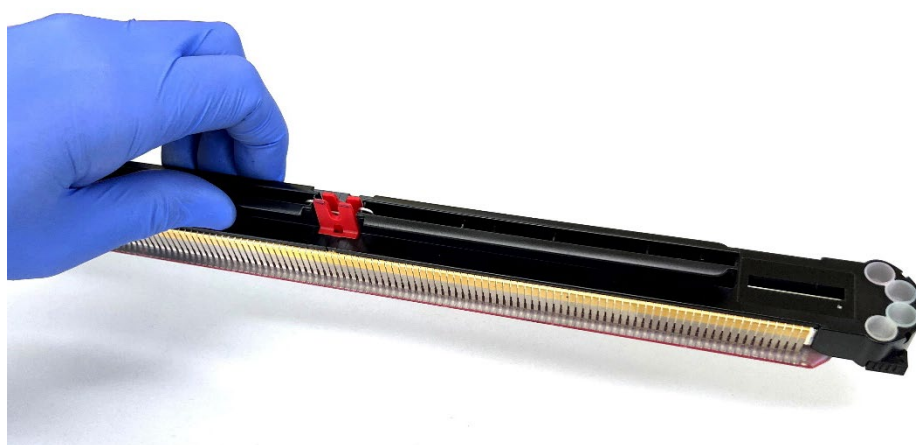
2.2 Cleaning

Note: Read these instructions carefully before removing a printhead from the printer. Ensure all tools and equipment are ready for use and are nearby. A printhead must not remain outside of the printer or its packaging for longer than 30 minutes.

1. Put on ink resistant gloves and wet a cleaning cloth with clean water. It should be damp but not dripping wet.
2. Remove the printhead from the printer in the usual manner. Refer to the *DuraFlex Installation and Commissioning Guide* if more information is required.

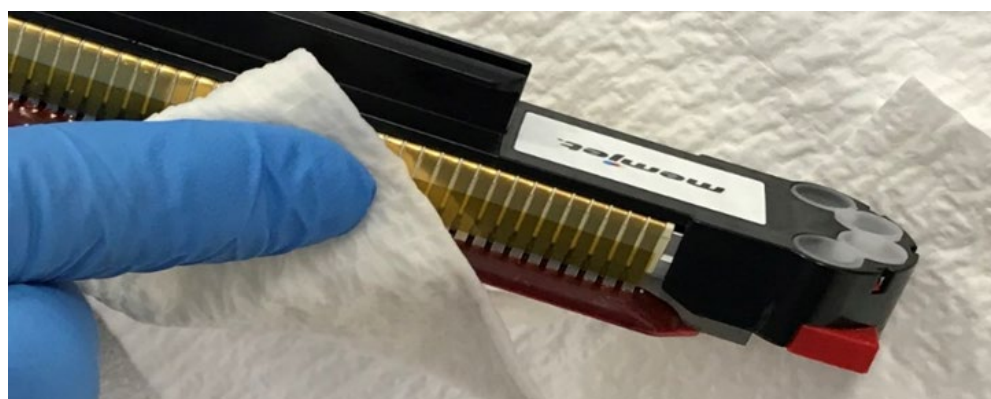
CAUTION: Always handle the printhead via the handles ([Figure 1](#)). Avoid touching the unprotected ink couplings, nozzle surface or electrical contacts. Avoid wetting the electrical contacts with ink.

Figure 1 – Correct Printhead Handling



3. After the printhead has been removed from the printer, residual ink may leak from the printhead, so keep the ink couplings in an upright position to minimize any leakage.
4. Carefully wipe any visible ink from top of the contact pads area ([Figure 2](#)), with a damp, lint-free cloth.

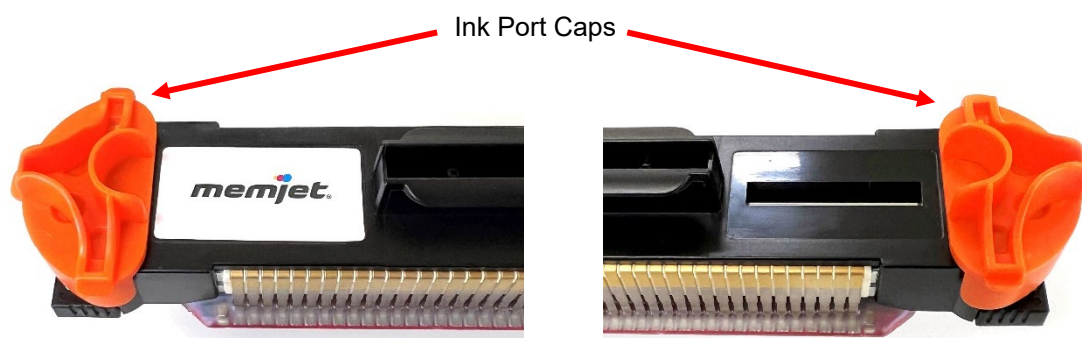
Figure 2 – Remove Excess Ink with Damp Cloth



2.3 Preparing for Shipping

1. Install the ink port caps at both ends of the printhead as shown in [Figure 3](#). There should be no ink dripping outside the protective cover or ink stains on the electrical contacts.



Figure 3 – Ink Port Caps Installed

2. Locate the printhead protective case. If the protective case still contains the silica gel and oxygen absorber sachets ([Figure 4](#)), remove them and discard them as per local regulations.

CAUTION: Shipping a printhead with the silica gel still inside the protective case will cause the printhead to dry out and to become unrecoverable.

Figure 4 – Remove the Silica Gel and Oxygen Absorber Sachets from the Printhead Case

3. Place the printhead into the protective case as shown in [Figure 5](#).

CAUTION: All DuraFlex printheads ship with a protective case. If the protective case is not available, skip this step and proceed to [Section 2.4 Shipping a Printhead Without a Protective Case](#). However, there is a chance of the printhead nozzles may be damaged during shipping.



Figure 5 – Printhead in Protective Case

4. To maintain printhead hydration during storage, moisten a clean cloth, fold it, and place it into the Ziploc bag with the printhead in the protective case as shown in [Figure 6](#). The cloth only needs to be damp, there should be no excess water in the bag. Remove air from the bag and seal the Ziploc bag.

CAUTION: DO NOT place the damp cloth inside the printhead protective case. This may cause the printhead to corrode or become contaminated with biological growth.

Figure 6 – Printhead Prepared for Storage or Shipping

5. Ensure that the printhead is stored with the nozzles facing down. Do not store in direct sunlight. Store at room temperature (5°C to 30°C).
- This storage method is dependent on ensuring the cloth stays wet and remains free of biological growth.
 - Memjet recommends that printheads only be stored for up to 30 days using this technique. Storing a printhead for longer than 30 days may cause non-recoverable issues and render the printhead unusable for production printing. OEMs should ensure that any shipped printheads



arrive at the destination within 30 days or earlier to ensure RMA testing can be performed on functioning printheads.

2.4 Shipping a Printhead Without a Protective Case

If the printhead protective case cannot be found, you can ship a printhead back to Memjet using the following technique.

1. Place the orange protective caps on the bare printhead (as per [Figure 3](#)).
2. Place the printhead in a large Ziploc bag, or similar. Remove as much air from the bag as possible before sealing the Ziploc bag. There should be nothing else in the bag with the printhead.
3. Place the sealed printhead bag inside another Ziploc bag.
4. To maintain printhead hydration during storage, moisten a clean cloth, fold it, and place it into the outer Ziploc bag with the sealed printhead. The cloth only needs to be damp, there should be no excess water in the bag. Remove air from the outer bag and seal the Ziploc bag.
5. Wrap the sealed bags with Bubble wrap, or similar cushioning packing material, to a diameter of approximately 150mm (6") and ensure the ends of the printhead are also protected.
6. Secure the Bubble wrap (or similar) with adhesive tape.
7. Follow the instructions in Section [2.5](#), from Step 4 using a shipping box that fits the wrapped printhead.

2.5 Packaging for Shipping

Only a printhead stored in its protective case, sealed in a plastic bag, and placed in a sturdy cardboard box can be shipped.

1. Use original printhead packaging (foam and cardboard box) whenever possible for shipping. If not available, use a sturdy box of similar size with non-collapsible packing material to prevent the printhead from moving. If possible, locate one of the original cardboard shipping boxes the printhead was stored in, or a shipping box of similar dimensions.
2. Wrap the Ziploc bag around the protected printhead and insert both ends of the printhead case into the foam shipping blocks as shown in [Figure 7](#).

Figure 7 – Printhead Case in Foam Blocks to Ensure Proper Orientation



3. Place the printhead and foam blocks into the cardboard box and ensure the printhead case is resting on the center foam block as shown in [Figure 8](#).



Figure 8 – Printhead Case Properly Seated in Shipping Box

4. Seal the cardboard box securely ([Figure 9](#)) and send to Memjet.

Figure 9 – Shipping Box Ready for Forwarding

2.6 Recovery

To recover a printhead into full functionality, the printhead **must** be stored according to the printhead storage instructions. An extra medium service may be required after reinstalling a printhead, only when the printhead has been dehydrated in its protective case.

Follow the guidance in the table below to recover a printhead after storage, either in the printer in a powered-off state or uninstalled.

Table 2 – DuraFlex Printhead Recovery

Scenario	Duration	Service Required
Printhead removed from System	< 30 days	DuraFlex will re-prime which will be sufficient unless the printhead was not stored appropriately. If print quality issues occur after reprime, perform a heavy service (this will consume ink).
Controlled Power Off	< 10 days > 5 days	Deprime and leave the printhead capped. Reprime before using it again.
Controlled Power Off	< 5 days	DuraFlex software will perform maintenance function appropriate for the power-off duration
Uncapped Power Off	< 3 days	DuraFlex software will perform maintenance function appropriate for being uncapped and for the power-off duration

Note: For situations not described above, a heavy service is recommended however the printhead may not fully recover, or some color mixing issues may result.

