



# Colorado 1650

## Extended operation guide



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It uses the practice of sprints to take advantage of the continuous delivery and flexibility that an agile process enables.

Our back office support program (development of service tools and online services) is ISO/IEC 27001:2013 certified.

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# **Chapter 1**

## Introduction

# About this guide

## Introduction

The guide addresses the Colorado 1650 and is written for the printer operator.

It describes **the complete workflow of the printer**: from setup to the operation, maintenance and troubleshooting of the machine.

Process	Actions	Reference
<b>Before using the system</b>	Components of the printer	<a href="#">Explore the system on page 29</a>
<b>Daily use</b>	Use the RIP software	<a href="#">Configure media in the RIP on page 40</a>
	Load, wind, and cut media	<a href="#">Handle the media on page 37</a>
	Print a job	<a href="#">Print a job on page 159</a>
	Improve quality	<a href="#">Improve quality on page 235</a>
<b>Maintenance</b>	Clean and maintain the print-heads	<a href="#">Maintain the print quality on page 166</a>
	Maintain the rest of the printer	<a href="#">Maintain the printer on page 192</a>
<b>Network and security</b>	Network and security options	<a href="#">Configure the network and security settings on page 245</a>
<b>Troubleshooting</b>	Clear jams, stop the printer	<a href="#">General troubleshooting on page 288</a>
	Clean polluted parts	<a href="#">Clean pollution on the printer on page 324</a>

## Operator skill level

This guide describes safeguards for the protection of an instructed person. Instructed person is a term applied to persons who have been instructed and trained by a skilled person, or who are supervised by a skilled person, to identify energy sources that may cause pain and to take precautions to avoid unintentional contact with or exposure to those energy sources.

# About the users

## Introduction

There are various types of users who can use the Colorado 1650 each with its own role in the complete workflow.

The various roles can be filled in by the same person or by multiple people. This manual is mainly written for the **Printer operator**.

## Prepress operator

- Receives and prepares job
- Uses design suites and RIP front ends to prepare the specific jobs
- Delivers 'ready to print jobs' to the printer operator

## Media specialist

- Creates media profiles for new media or applications
- Manages media types and media profiles

## Printer operator

- Operates the RIP to process and print jobs
- Manages the jobs, such as pausing, resuming and deleting jobs, loading, winding and cutting media etc.
- Operates the printer and takes care of the daily use
- Maintains the printer, such as cleaning the matrix plate, maintenance station, refilling ink etc.

## System administrator

- Configures and manages the network
- Configures and manages the security settings
- Keeps the system up-to-date and secure
- Controls access



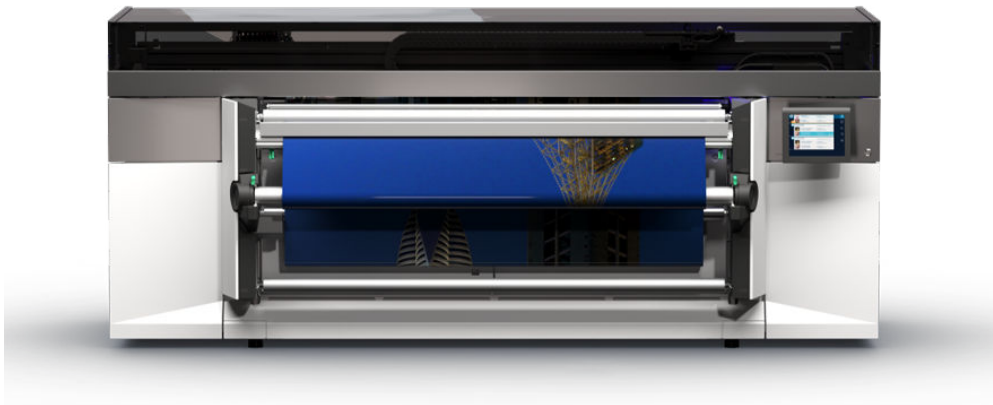
### NOTE

This guide describes safeguards for the protection of an instructed person. Instructed person is a term applied to persons who have been instructed and trained by a skilled person, or who are supervised by a skilled person, to identify energy sources that may cause pain and to take precautions to avoid unintentional contact with or exposure to those energy sources.

# About the Colorado 1650

## Introduction

The Colorado 1650 is a 64 inch roll to roll production printer that uses a unique UV gel ink technology.



# Safe use

## Introduction

When you operate the Colorado 1650 you have to take note of the safety precautions and follow the guidelines.

## Safety documents

Before you operate the printer read the following documents and follow the instructions:

- The safety chapter in this operation guide
- The MSDS - safety data sheets

For more information, see [Available documentation on page 16](#).

## Stickers

Take note of the safety and precaution stickers in and on the machine. You can find an explanation of all the stickers in the safety chapter in this operation guide.

## Working with UVgel ink

The Colorado 1650 UVgel ink needs to be handled with care. Follow the instructions in this manual to work with ink safely and read all the warnings before you start the procedure. When you have to clean ink protect yourself and follow the prescribed procedure. For more information, see [Guidelines for cleaning uncured ink on page 324](#).

# Notes for the reader

## Typography






This manual uses the following typography to indicate elements that are part of the user interface.




Typography	Indicates
[Text between square brackets]	Name of a button, tile, setting, value, or other option of the user interface
<Text between angle brackets>	<ul style="list-style-type: none"> <li>Name of a key on a keyboard</li> <li>Name of a variable: item that varies according to the context</li> </ul>
Text displayed in courier font	<ul style="list-style-type: none"> <li>File path</li> <li>Command Prompt comment</li> </ul>
[Text] →[displayed in] →[menucascade]	Names of options to be used in a fixed order

## Safety symbols

Before you use this product, make sure you read and understand the safety information that belongs to the product. Find the safety information on "<http://downloads.cpp.canon>". Also be sure to follow all warnings and instructions marked on the product.





This manual uses the following safety symbols to indicate hazards and precautions.

Symbol	Type of symbol	Indicates
	<b>WARNING</b>	Indicates a warning concerning operations that may lead to death or injury to persons if not performed correctly. To use the machine safely, always pay attention to these warnings.
	<b>CAUTION</b>	Indicates a caution concerning operations that may lead to injury to persons if not performed correctly. To use the machine safely, always pay attention to these cautions. This indication can concern hazards that have a specific CAUTION symbol. The 'hot surface', 'electric shock', 'moving parts' and 'laser beam' cautions are listed below.
	<b>CAUTION</b>	<b>Hot surface</b> Indicates a caution concerning operations that may lead to injury to persons if not performed correctly. To use the machine safely, always pay attention to these cautions.
	<b>CAUTION</b>	<b>Electric shock</b> Indicates a caution concerning operations that may lead to injury to persons if not performed correctly. To use the machine safely, always pay attention to these cautions.
	<b>CAUTION</b>	<b>Moving parts</b> Indicates a caution concerning operations that may lead to injury to persons if not performed correctly. To use the machine safely, always pay attention to these cautions.

Symbol	Type of symbol	Indicates
	<b>CAUTION</b>	<b>Laser beam</b> Indicates a caution concerning operations that may lead to injury to persons if not performed correctly. To use the machine safely, always pay attention to these cautions.
	<b>IMPORTANT</b>	Indicates an operational requirement or restriction. Read these items carefully in order to prevent damage to equipment, software, data, media, or property.
	<b>NOTE</b>	Indicates a clarification of an operation or contains additional explanations for a procedure. Reading these notes is highly recommended.

### Body protection symbols

This manual uses the following body protection symbols to indicate that it is important to protect yourself before performing a specific task or action.

Symbol	Type of symbol	Indicates
	<b>IMPORTANT</b>	<b>Hand protection</b> Wear the mentioned type of gloves when you perform this task or action.
	<b>IMPORTANT</b>	<b>Eye protection</b> Use the mentioned type of eye protection when you perform this task or action.
	<b>IMPORTANT</b>	<b>Body protection</b> Wear the mentioned type of body protection when you perform this task or action.
	<b>IMPORTANT</b>	<b>Foot protection</b> Wear the mentioned type of safety footwear when you perform this task or action.

# Available documentation

## Introduction

This manual is part of a complete documentation set. The following table shows a complete overview of the available documentation.

## Available documentation



**NOTE**

For up-to-date documentation: visit the downloads website "<http://downloads.cpp.canon>", select your printer and language, and find all the support information.

Documentation	Available
Operation guide - User manual	<ul style="list-style-type: none"><li>• On the downloads website under the product name.</li><li>• Available as a PDF file in multiple languages.</li></ul>
Extended operation guide - User manual	<ul style="list-style-type: none"><li>• On the downloads website under the product name.</li><li>• Available as a PDF file in multiple languages.</li></ul>
Online help	<ul style="list-style-type: none"><li>• Embedded in the application via a weblink.</li><li>• Available in multiple languages.</li></ul>
MSDS - Safety data sheet	<ul style="list-style-type: none"><li>• On the downloads website under the product name.</li><li>• Available as a PDF file.</li></ul>
Care and Use poster	<ul style="list-style-type: none"><li>• On the downloads website under the product name.</li><li>• Available as a PDF file.</li></ul>

## Instruction videos

Scan the following QR code or follow the link to see the available instruction videos.



*["Link to instruction videos"](#)*



## **Chapter 2**

### **Safety information**

# Safety and Environment Information

## Important Safety and Environment User Information

Before using your printing system, make sure that it is properly installed and that you have read and understand the User Documentation in order to operate the system safely and in accordance with its functional offerings. When using your machine make sure to always comply with the User Documentation.

## Warning and caution indicators

In order to warn and make aware all persons operating the machine of possible risks, dangers and/or hazards, safety warning labels have been applied where required. For safe operation it is important to understand the meaning of every label. Make sure you read and understand all label descriptions before you start operating the machine.

**In order to avoid potential hazards, make sure that preventive and remedial maintenance is executed by skilled persons and/or service technicians only.**

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The websites of the regional Canon sales offices are listed on the cover of the User Documentation. There you can find the addresses of the local Canon sales offices.

Canon Production Printing and its suppliers may collect, combine and use non-personal machine and (individual) user information and data you provide using the machine. Information on what type of information and data is retrieved or received and how access or entry to such information and data by Canon Production Printing and its suppliers is secured please visit Canon's Terms of Use and Privacy Statement at "<https://cpp.canon>".

## Notes

- In some regions where this product is sold the following product name(s) may be registered as model number(s).

Product name	Model number
Colorado 1650	Océ 01079
RFID Reader	Océ 01087

- Depending on the context, the terms "printer", "system", "machine", and "equipment" used in the User Documentation mean the printing system for which this User Documentation shall apply.
- Some consumables and materials designated to be used by this machine are accompanied with Safety Data Sheets. Please refer to the corresponding Safety Data Sheets for specific






Safety and Environment information and operating instructions. You may download the actual Safety Data Sheets from the support site of your product at "<http://downloads.cpp.canon/>".

- The machine bears the CE-mark to show conformance with applicable legal EEA-requirements. If applicable, the relevant CE Declaration of Conformity is part of the User Documentation. You may also download it from the support site of your product at "<http://downloads.cpp.canon/>".



Canon Production Printing shall not be liable for damages from:

- Failure to comply with the User Documentation;
- Work performed incorrectly on the machine;
- Unauthorized modifications.







The following indicators are used in the User Documentation to identify and categorize the level of the seriousness of hazard:





Symbol	Type	Description
	<b>WARNING</b>	Indicates a warning concerning operations that may lead to injury or even death to persons if not performed correctly. To use the machine safely, always pay attention to these warnings.
	<b>CAUTION</b>	Indicates a caution concerning operations that may lead to injury to persons if not performed correctly. To use the machine safely, always pay attention to these cautions.
	<b>IMPORTANT</b>	Indicates operational requirements and restrictions. Be sure to read these items carefully to operate the machine correctly, and avoid damage to the machine or property.
	<b>PROHIBITED</b>	Indicates an operation that must not be performed. Read these items carefully, and make sure not to perform the described operations.
	<b>NOTE</b>	Indicates a clarification of an operation, or contains additional explanations for a procedure. Reading these notes is highly recommended.

If applicable the following Personal Protection indicators are used in the User Documentation and or machine:

Symbol	Type	Description
	Mandatory action	Wear protecting gloves as prescribed in this document when performing a task or action in this area.
	Mandatory action	Read the user instruction manual/user documentation before starting work or before operating equipment or machinery.

The following labels are used in the machine to identify and categorize the hazard level:

Label	Type	Description
	Warning	General warning sign.
	Warning	Electricity: Hazardous electrical voltage inside. Do not remove cover.
	Caution	Hot surface: Take care to avoid direct contact with hot surfaces.
	Caution	Optical radiation: Take care to avoid injury to eyes and skin when in the vicinity of optical radiation.
	Caution	Sharp element: Take care to avoid injury from sharp elements.
	Caution	Crushing of hands: Take care to avoid injury to hands when in the vicinity of equipment with moving mechanical parts.

Label	Type	Description
	Warning	Electricity: Warning, shock hazard. Disconnect all power plugs from their electrical outlet before you start a maintenance or repair action.
	Warning	Electricity: Double-pole neutral fusing. Risk of electric shock. Disconnect mains before servicing.
	Warning	Electricity: The machine must be connected to a grounded power outlet.
	Caution	Electricity: High leakage current. The machine must always be connected to a grounded power outlet.

**Persons for ITE (LVD) machines according Directive 2014/35/EU**

- Instructed person**  
 This User Documentation describes safeguards for the protection of an instructed person. Instructed person is a term applied to persons who have been instructed and trained by a skilled person, or who are supervised by a skilled person, to identify energy sources that may

cause pain and to take precautions to avoid unintentional contact with or exposure to those energy sources.

## Power source



### WARNING

- **Put the power plug directly into a power outlet that has the same configuration as the plug. The use of an adapter can result in an inadequate power supply. If a proper power outlet is not available, ask a qualified electrician to perform the installation.**
- **This machine has two power connections. Do not connect both mains power cables to same building branch circuit.**



### IMPORTANT

- Do not connect the machine to a mains voltage or frequency which differs from the value stated on the power marking label. When a connection to a different mains voltage or frequency is required, contact your authorized service representative.

## Grounding / Power cord



### WARNING

- **Do not scratch, abrade, heat, twist, bend, or place a heavy object on the power cord or cause any other damage to it. The use of a damaged power cord (e.g. exposed core wire or broken wire) could result in an electrical shock, fire or malfunction of the machine. If the power cord is damaged, immediately switch off the power switch and unplug the power cord from the power outlet. Contact your authorized service representative.**
- **Do not use a multiple outlet adapter or an extension lead. Contact your authorized service representative if an extension lead is required. The use of an extension cord may result in fire or electrical shock.**
- **Do not use any power cord other than the one provided. Never use the power cord with any other electrical device.**
- **Only use a power cord that is fitted with a protective earth conductor.**
- **When the machine has to be connected via a wall socket, place the machine close to a wall socket that is easily accessible. The power plug serves as a disconnecting device.**
- **Do not route the power cords in such a way that they can be stepped on or tripped over.**
- **Connect the power cord to a power outlet that is equipped with a protective earthing (PE) terminal.**
- **This equipment is not designed for connection to an IT power system. An IT power system is a voltage network in which the neutral wire is not connected to earth.**
- **Do not disconnect the machine's separate grounding terminal. This is a machine with high leakage current, so earth connection is essential before connecting the mains supply and before operating the machine. It is the responsibility of the customer to provide a suitable building installation (reliable protective earthing connection) in accordance with local legislation.**

## Installation

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### WARNING

- The machine may be transported, assembled, installed, moved and repaired only by an authorized service representative.
  - The installation of accessories and options not permitted for the machines may constitute a violation of the Safety Regulations and Directives, and can also damage the machine.
  - Consult your authorized service representative for details on which accessories and options are permitted for the machine.
  - Only use cables specified by the manufacturer.
  - Place the machine on a horizontally level surface of sufficient support.
  - Do not place the machine in a location that is subject to vibrations and shocks.
  - Do not use flammable sprays, liquids or gases near the product as this can cause fire.
- 

## Space requirements and operation precautions

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### WARNING

- The machine must be connected to an air exhaust (to the outside atmosphere) or must contain the filters and proper room ventilation for keeping the chemical emission below the limits. See the Product Safety Data Sheet (PSDS) for the ventilation recommendations.
  - For keeping the chemical emission below the limits do not place the machine in a room which is too small or insufficiently ventilated. See the Product Safety Data Sheet of the machine for the ventilation recommendations.
- 

## Operation

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### WARNING

- Do not lean, lie or stand on any part of the machine, including parts that can be pulled outwards (e.g. media drawers).
  - Read the User Documentation carefully before operating the machine. In case of any questions or uncertainties regarding the content of this document, contact your authorized sales or service representative.
  - Make sure that no objects (e.g. jewelry chains, paper clips, coins) or liquids can get into the interior of the machine. Do not place containers with fluid on top of or near the machine.
  - Disconnecting the product from the mains-supply network (unplug, power-switch) might result in damage to the system.
  - Do not open any door when the machine is starting up or running, unless the control panel displays a message that asks you to open one or more doors.
  - If you operate the machine remotely, make sure that nobody is working on the machine.
- 



### CAUTION

- This equipment is not suitable for use in locations where children are likely to be present.
-

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## Maintenance, repair and modification

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**WARNING**

- Do not modify the machine. Modifying the machine can cause a hazard like fire, electrical shock or other injuries or jeopardize given warranties.
  - Only perform maintenance activities as described in the User Documentation.
  - Only instructed or skilled persons are allowed to maintain the machine, to avoid any risk and not to jeopardize given warranties.
  - Do not bridge or disable any safety interlock devices. Disabling or otherwise defeating safety interlock devices will cease their function as safety guard and may create hazardous conditions for all people operating the machine.
- 

**CAUTION**

- Repairs to the machine may only be performed by authorized service representatives.
  - Service areas may only be opened by authorized service representatives. Do not remove covers and panels that are fixed to the machine. Some parts of the machine may have a hazardous electrical component, hazardous heat source or a laser beam source inside that could cause an electrical shock or other injuries.
- 

## Relocation of the machine

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**CAUTION**

- Disconnect the power cord and other cables before you move the machine.
  - Only skilled person(s) are allowed to move the machine.
- 

## Actions in response to problems

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**WARNING**

- In case smoke and/or fire is noticed:
  - Immediately try to close in a safe way all machine covers and doors so that the smoke or fire stays within the enclosure of the machine. Prevent personal injury during closing of these doors and covers.
  - Immediately cut off the electrical power to the machine by disconnecting the mains plug or proper disconnecting device. Make sure that the machine cannot be switched on any more.
  - Immediately inform the emergency response services.

Poisonous gases can be produced in any fire. They can also result from a fire in this machine. Keep into account:

Canon Production Printing systems are designed in such a way that fire is encapsulated within the enclosure, thus preventing the further spread of fire to the customer's premises.

- In case of damage to the covers, power cable, operating elements, or in case of penetration of fluids or foreign bodies, disconnect the machine from the power supply and contact your authorized service representative.
-

## Consumables, supplies and maintenance materials

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### **WARNING**

- Do not throw ink or ink containing parts or contaminated parts into an open flame.
  - Do not leave ink or ink containing parts or contaminated parts within reach of children.
  - Store consumables, supplies and maintenance materials away from any food and drinks.
  - Be careful when handling fluids. Clean up spilled fluids immediately.
- 



### **CAUTION**

- Only use the materials the manufacturer recommends and that are developed for the machine.
  - Use maintenance materials and other materials for their intended purpose only.
  - Ink polluted gloves are considered chemical waste and must be disposed according to local regulations.
  - Dispose of waste of consumables, supplies and maintenance materials and its packaging containing residues according to federal, state and local regulations.
  - From the point of view of occupational health and safety it is not recommended that people who are sensitive to chemicals (e.g. people with asthma) work with ink or chemicals.
-



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## UV ink

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### CAUTION

- UV inks can be harmful if not properly handled. Cumulative exposure can lead to sensitization. Follow always the ink related Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.
- Avoid skin contact with ink and uncured printed media.
- Curing of media of the Canon Production Printing supported media-list is tested and considered sufficient under standard conditions.
- After a printer error, wear gloves to handle the unfinished print.
- Wear safety glasses with side shields when handling ink or maintenance materials. Follow always the ink related Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.
- Wear gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the ink related Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.
- If a glove, sleeve or apron is contaminated with ink follow the ink related Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.
- Do not reuse single-use gloves.
- Do not handle prints without gloves if the ink is not properly cured.
- Ink polluted gloves and uncured media are considered chemical waste and must be disposed according to local regulations.
- If ink contacts your skin: clean immediately with soap and water. Do not use alcohol or other solvents.
- If ink contacts your eye(s) flush with water, consult the ink related Safety Data Sheet (SDS) and contact a doctor.
- Inks are not suitable for food-related or children-related applications.
- Always measure the media thickness and set the print carriage height correctly for that media. Printing at an incorrect height causes excessive emissions of UV light and UV ink (mist).
- All waste containing uncured UV ink is hazardous and must be disposed of separately according to local regulations. Do not mix ink waste with non-hazardous waste (household, office, etc.). Do not allow ink waste to reach sewage systems or drinking water supplies. Ink waste includes maintenance pads, cloths, gloves and any other material containing uncured or partly cured UV ink. Dispose Ink waste according to federal, state and local regulations.
- Discard the ink bottle or maintenance material bottle if it shows any sign of wear, physical damage (cracking or leaking) or at expiry (date), according to federal, state and local regulations.

---

## UV light (UV lamps)

---



### CAUTION

- Avoid looking directly at the UV light.
-

## Liquid Crystal Display (LCD)

---



### CAUTION

- Do not touch or ingest fluids from a broken Liquid Crystal Display (LCD). When clothes or skin come into contact with the fluid, immediately clean the clothes and skin with soap and water. After eye contact, immediately rinse the eyes with a washing lotion for at least 15 minutes and consult a physician.
  - Do not rub, press or touch the (LCD) display surface with a hard material, because the polarizer at the surface can be easily scratched. The LCD module can get damaged when you drop, pinch too hard or punch the module, as it is made of glass. When glass breaks, be careful you do not get injured by pieces of glass.
- 

## Printing room (pollution)



### IMPORTANT

- Keep your printing room environments clean. This prevents dust buildup inside the printer and avoids damage to the machine.

## Disposal of parts

---



### WARNING

- All parts are produced according to the sustainability policy of Canon Production Printing. You can discard all used parts into a common dustbin, or follow your local or national sustainability and waste disposal procedures.
- 

## Magnetic parts

---



### WARNING

- This machine contains static magnetic part(s) where there may be a risk of interference with Active Implanted Medical Devices (AIMD) e.g. cardiac pacemakers. Persons with an AIMD please keep at a safe distance. For more information please contact: Canon Production Printing.
- 

## Commissioning, disassembly, recycling and disposal

---



### CAUTION

- For any information (e.g. requirements) about commissioning, disassembly, recycling, and disposal of CPP machines and/or materials (e.g. packaging waste, supplies, consumables) in your country or state please consult your local Canon NSO, Canon RSHQ and/or dealer.
-

# Safety System

## Safety System

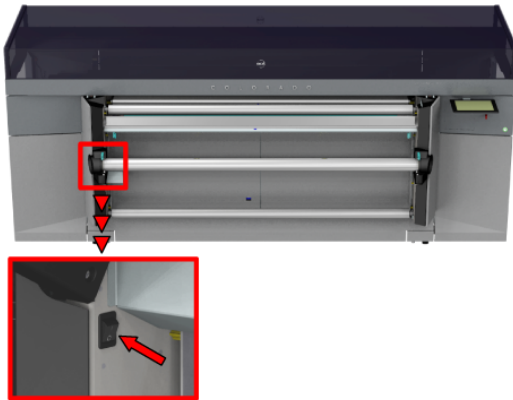


### CAUTION

- Winder

Do not position the tension bar when there is no media present. Keep your fingers away because the tension bar can fall down.

The winder has an emergency stopping device; It is located on the winder. Activating this emergency stopping device stops all winder motion.





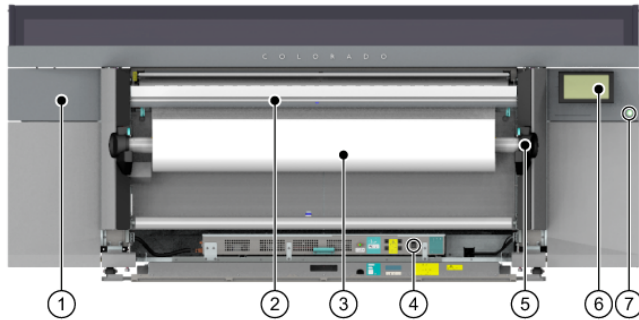
# **Chapter 3**

Explore the system

# The components of the printer - media output side

## Introduction

From the media output side you can access the operator panel, access the roll winder, collect your print, or replace the knife.



Number	Component
1	Knife compartment
2	Guide plate
3	Take-up media roll
4	Power switch
5	Roll winder
6	Operator panel
7	On/off button

# The components of the roll winder

## Introduction

The roll winder is located on the media output side and can be used to wind the printed media.



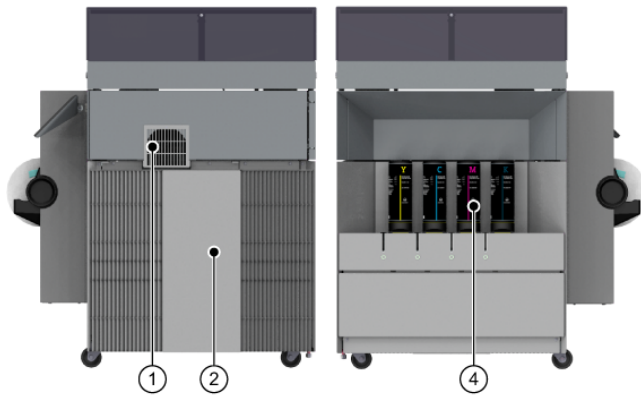
Number	Component
1	Power switch winder
2	Guide plate
3	Take-up media shaft
4	Tension bar

# The components of the printer sides

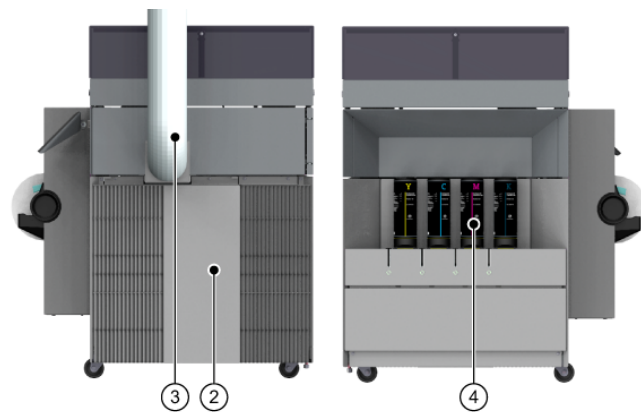
## Introduction

On both printer sides you can perform maintenance actions.

## Filter configuration (optional)



## Exhaust configuration



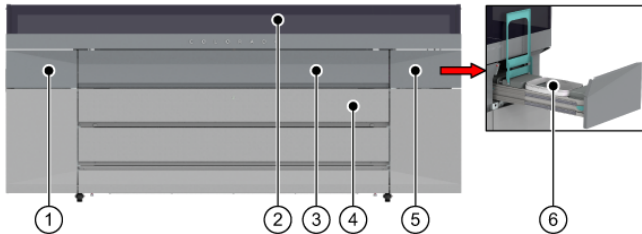
Number	Component
1	Filter fan (filter configuration)
2	Chiller
3	Exhaust (exhaust configuration)
4	Ink bottle



# The components of the printer - media input side

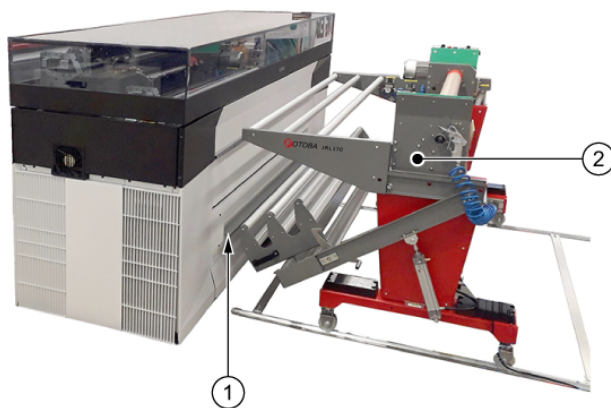
## Introduction

From the media input side you can load media, open the top cover, get access to the maintenance tray and printhead maintenance.



Number	Component
1	Manual maintenance door
2	Top cover
3	Media cover
4	Media drawer
5	Maintenance drawer
6	Maintenance tray

## Media input unit (optional)



### NOTE

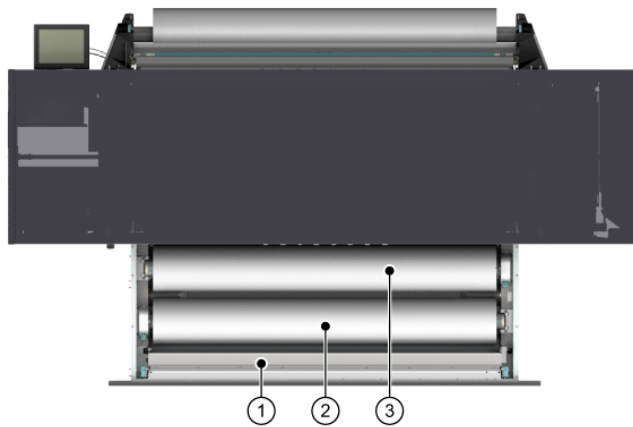
The Fotoba JRL170 is an example of an external media input solution for the Colorado 1650

Number	Component
1	Media input unit
2	The Fotoba JRL170 is an example of an external media input solution for the Colorado 1650

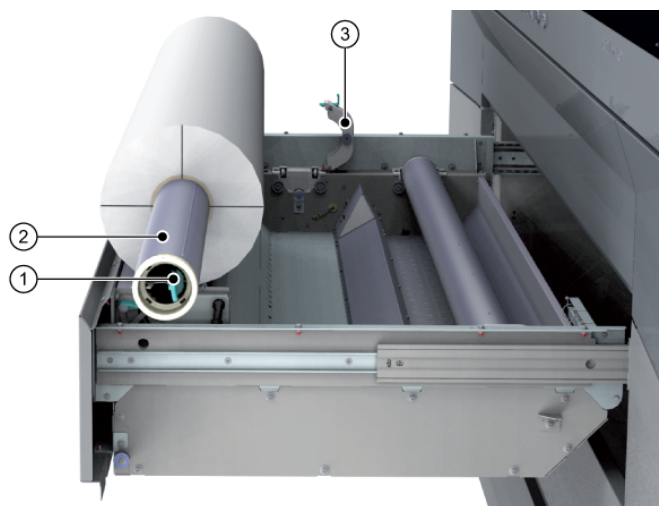
# The components of the media drawer

## Introduction

You can open the media drawer on the media input side to load your media rolls.



Number	Component
1	Roll loading station
2	Media roll (position 1)
3	Media roll (position 2)

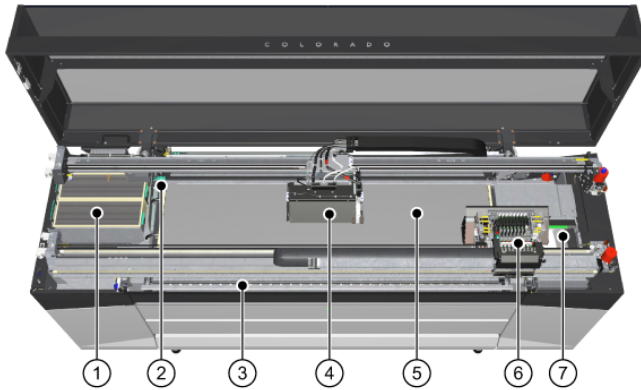


Number	Component
1	Locking mechanism
2	Feed media shaft
3	Roll clamp

# The components of the printer - top cover open

## Introduction

When you open the top cover you can access the carriages, the platen area and perform several maintenance actions.



Number	Component
1	Filter (optional)
2	Knife
3	X-tran rollers
4	Curing carriage
5	Platen
6	Printhead carriage
7	Maintenance station



# **Chapter 4**

## Handle the media

# Media specifications

## MEDIA

Item	Specification
Roll width	Up to 1,625 mm (64 inch)
Print margin	5,3 mm * (0.21 inch)
Roll weight	Up to 50 kg ( 110 lb.)
Roll diameter	Up to 220 mm (8.7 inch)
Media thickness	Up to 0,8 mm (0.03 inch)
Media input	Print side wound-in or out Double-sided printing possible Automatic and manual feed
Number of input rolls	2 (automatic roll-feeding and -switching depending on media used)
Media take-up system	Both loose and tight winding possible

# General workflow for using media

## Introduction

Use the following workflow to handle the media correctly.

Step	Action
1	<a href="#">Configure media in the RIP on page 40</a> . Download and install a media profile, and manage the profiles in the RIP.
2	<a href="#">Prepare media for printing on page 85</a> . Load a media roll in the media drawer, a core on the roll winder and calibrate your media.
3	<a href="#">Print with or without winding on page 120</a> . Print without winding or tape media to the take-up roll core to wind media, with or without a tension bar.
4	<a href="#">Cut and unload media on page 145</a> . Cut media and unload a roll from the winder and the media drawer.

# Configure media in the RIP

## Manage media profiles in ONYX

### Introduction



#### IMPORTANT

Changing the media settings can cause damage to your printer which may void your machine warranty service.

It is recommended to have a media profile for each media type.

You can use ONYX as the RIP software to manage media profiles. You can:

- [Install a downloaded media profile in ONYX on page 41](#)
- [Create a new media profile in ONYX on page 44](#)
- [Copy an existing media profile and edit it in ONYX on page 48](#)
- [Sync and delete media types in ONYX on page 53](#)

For more information on the use of ONYX use the ONYX documentation



# Install a downloaded media profile in ONYX

## Introduction

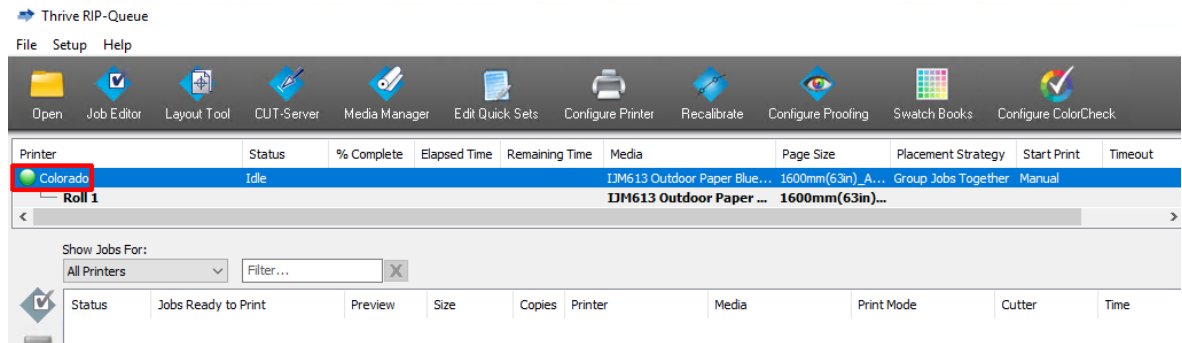
In order to get the best results it is strongly advised to use the Colorado 1650 media profiles.

## Before you begin

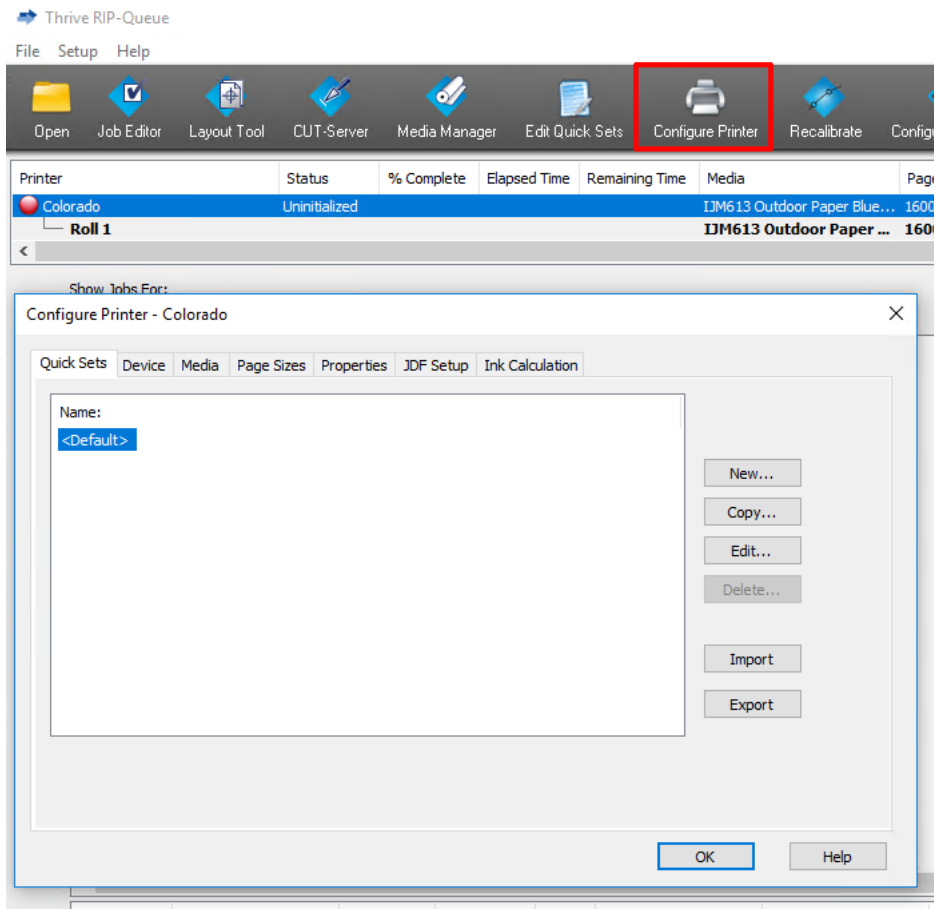
First make sure you download an Colorado 1650 media profile via the ONYX website or via your local sales and support channel, saved in a media library file (\*.OML or \*.prninst including the driver) for ONYX.

## Procedure

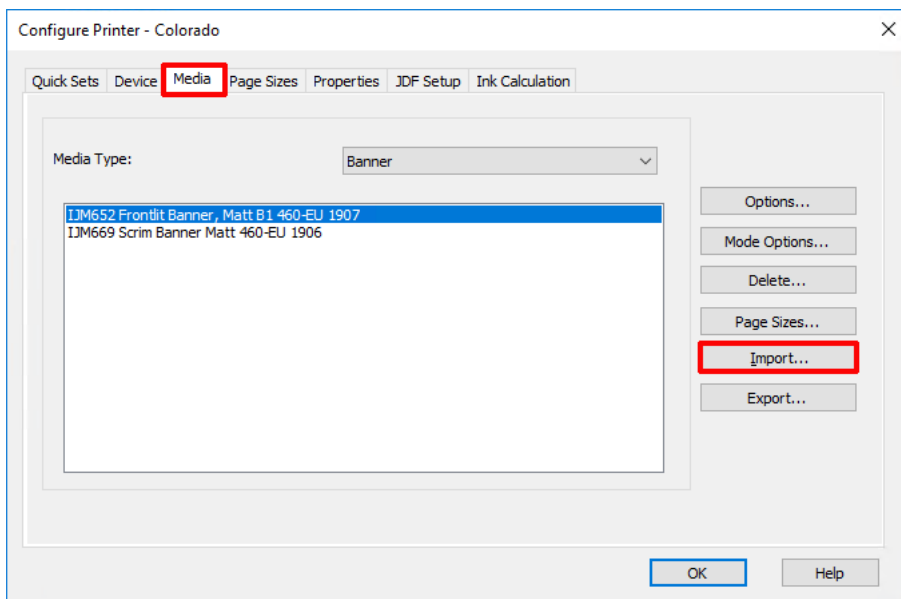
1. Open the ONYX RIP queue.
2. Select the Colorado 1650 printer name.



3. Click on [Configure printer]. The [Configure printer] window opens.

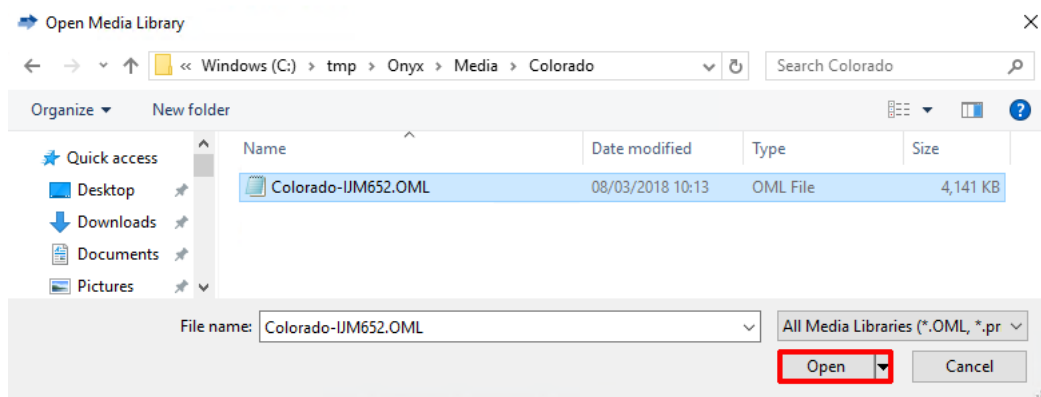


4. Select the [Media] tab and click on [Import].



A window opens.

5. Browse to find your media library files and click on [Open].



6. Click on [Ok]. A new window opens listing the media profiles in the selected file.
7. Select the media profiles you want to import and click on [Import]. The window closes.
8. Click on [Ok] to close the [Configure printer] window.
9. In the RIP queue you can see that the media profiles are installed and can be used.

# Create a new media profile in ONYX

## Introduction

When you are working with a new media that does not have a profile, you can create a new profile in ONYX.

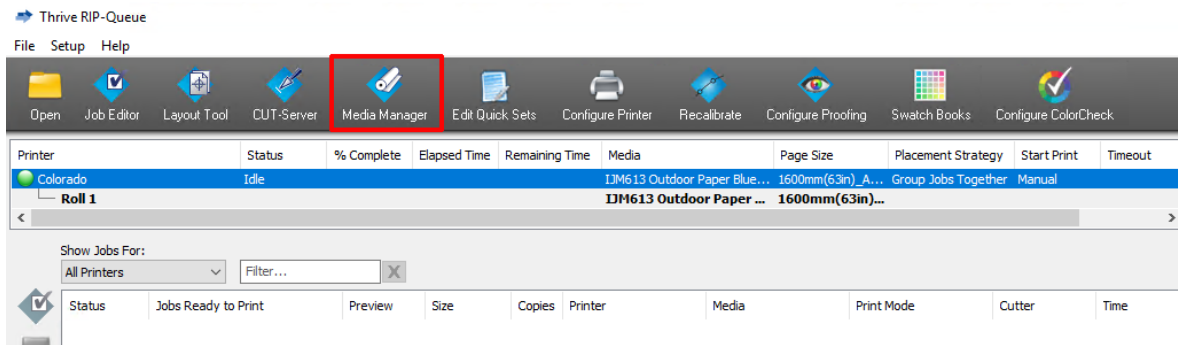


### NOTE

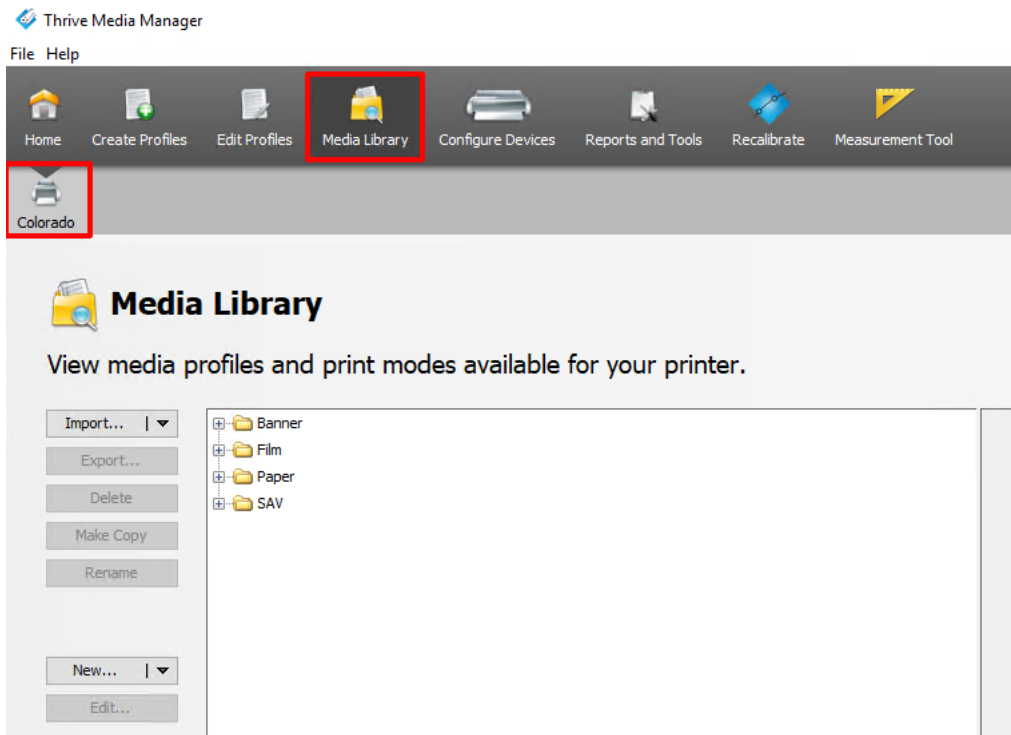
This manual provides you with basic information in order to create and change media profiles. Profiling is an expert task which requires additional information and tools not covered by this manual. Contact your local support organization when you want to create or change media profiles.

## Procedure

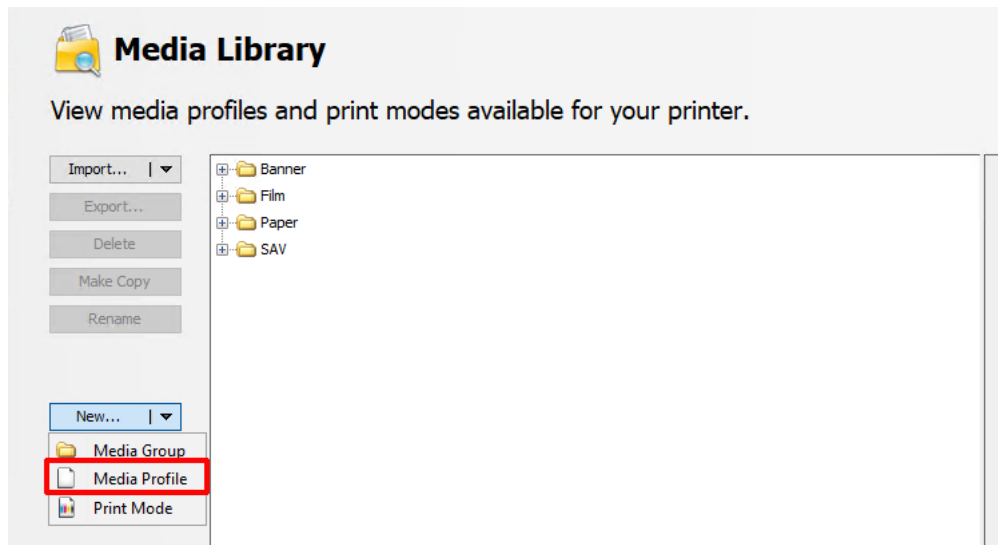
1. Open the ONYX RIP queue.
2. Click on [Media Manager]. The Media Manager application opens.



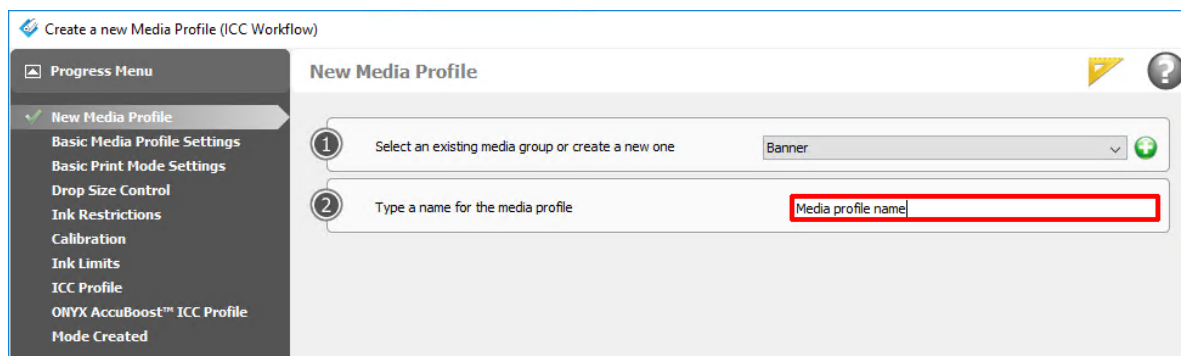
3. Click on the Colorado 1650 printer icon and click on [Media library] above.



4. Click on [New...]→[Media Profile].

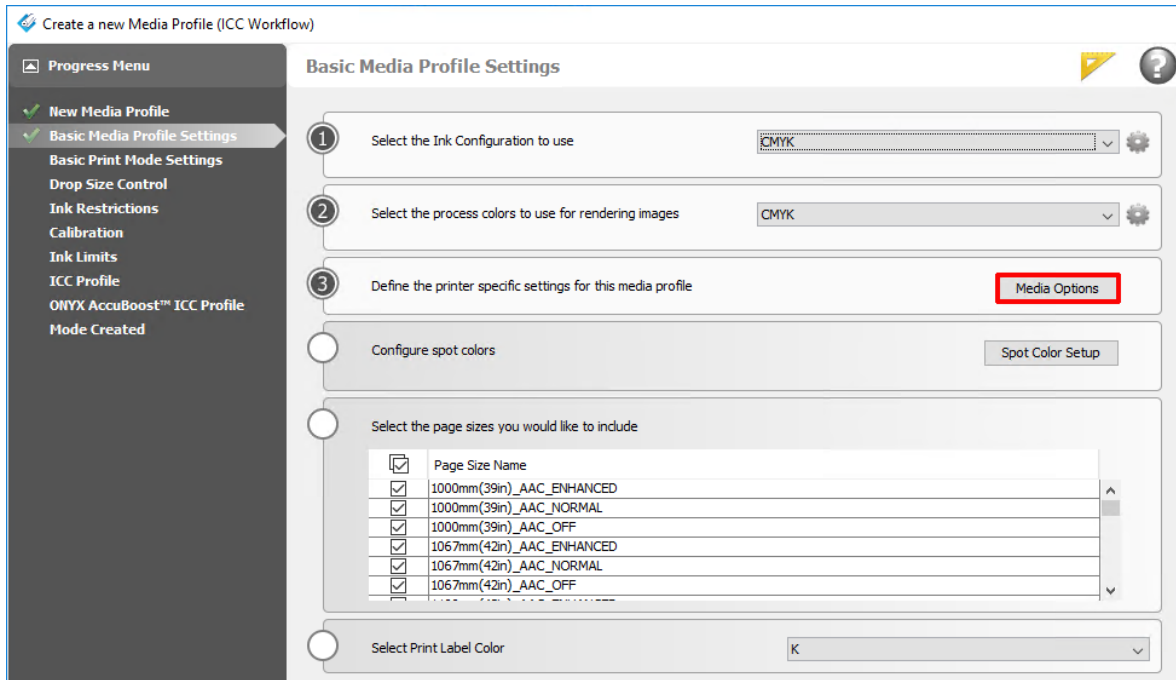


- A new window opens.
5. Fill in the new media profile name.



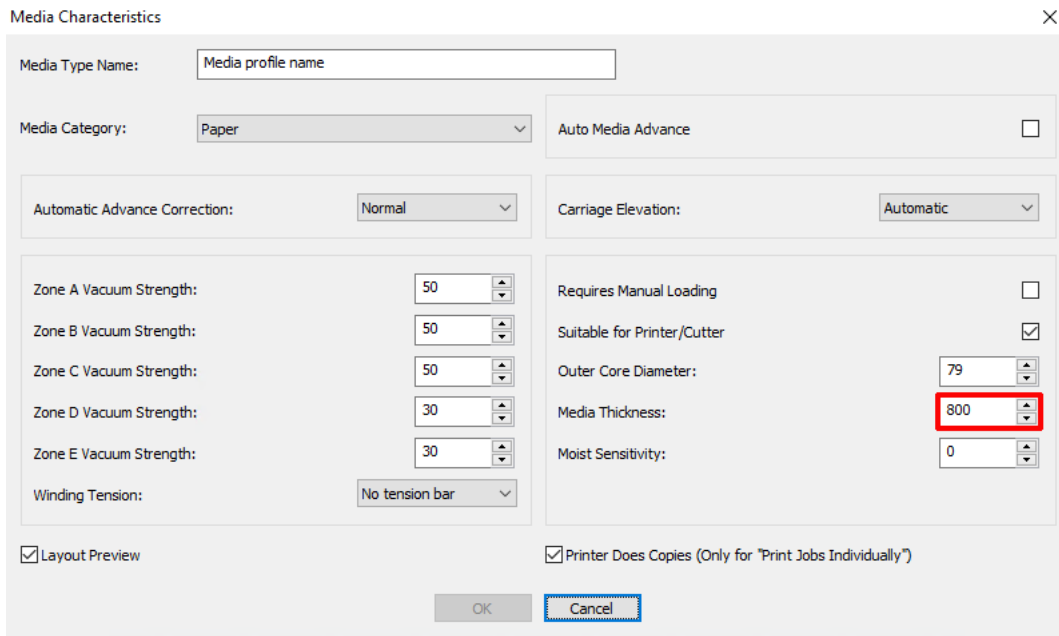
6. Click on the 'Next' icon. For more information on the general steps use the ONYX documentation.
7. Specify the correct media settings under [Basic Media Profile Settings].

8. Click on [Media options].



A new window opens.

9. Select the **media category** and set the **media settings** correctly. For more information, see [Choose a media category on page 72](#), [Change the media settings on page 74](#).



**NOTE**

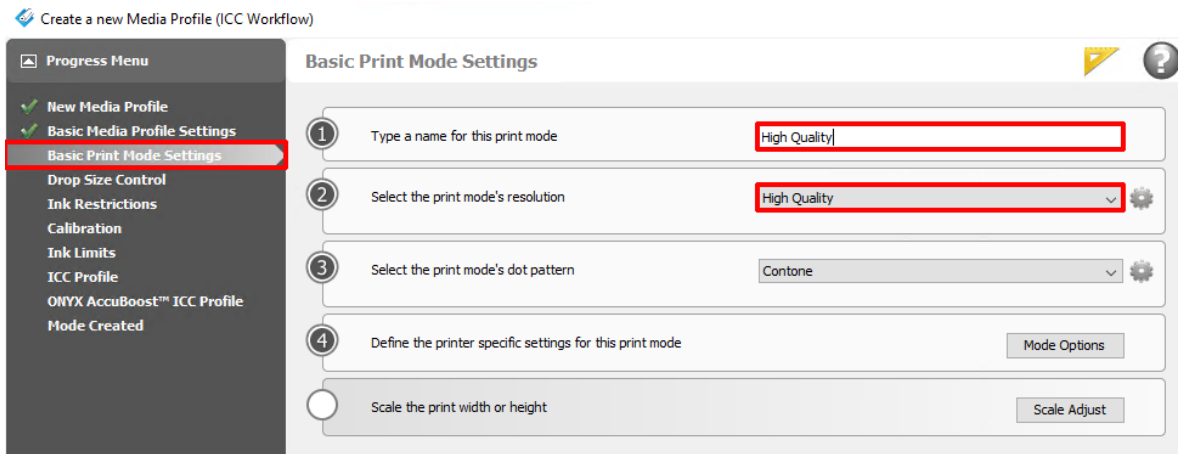
[Media Thickness] is set default to 800 and has to be set correctly.

- 10. Give the media a new [Media Type Name] and click on [Ok]. The window closes.
- 11. Click on the 'Next' icon to follow the steps.
- 12. You can change the specific print mode settings under [Basic Print Mode Settings].

13. You can select the **print mode** and fill in the print mode name. For more information, see [Select a print mode on page 83](#).

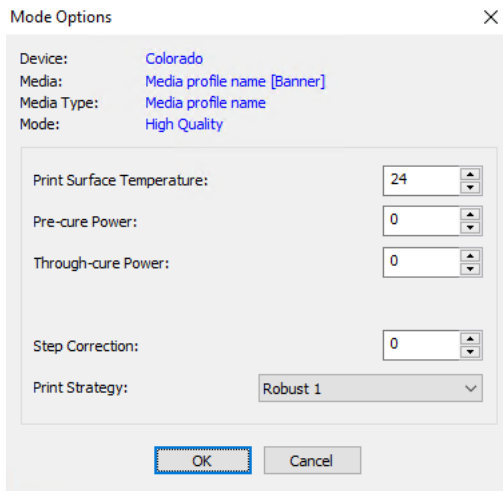
**NOTE**

Fill in the same name as the selected print mode to avoid confusion.



14. Click on [Mode options]. A new window opens.

15. You can change the rest of the **media settings**. For more information, see [Change the media settings on page 74](#).



16. Click on [Ok]. The window closes.

17. Finish all the steps to create the media profile.

# Copy an existing media profile and edit it in ONYX

## Introduction

You can also use an existing media profile as a basis and edit the settings in ONYX.



### IMPORTANT

Copy a media profile with the correct media category. Do not change the media category, this can cause damage to the printheads.

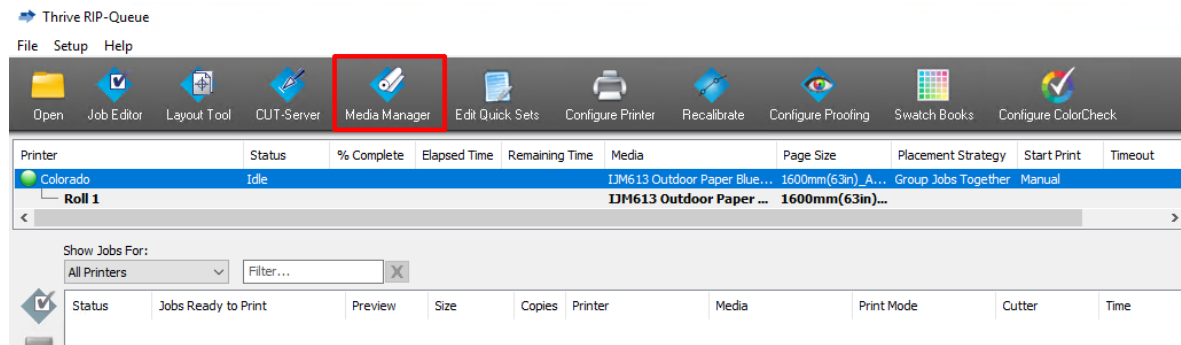


### NOTE

This manual provides you with basic information in order to create and change media profiles. Profiling is an expert task which requires additional information and tools not covered by this manual. Contact your local support organization when you want to create or change media profiles.

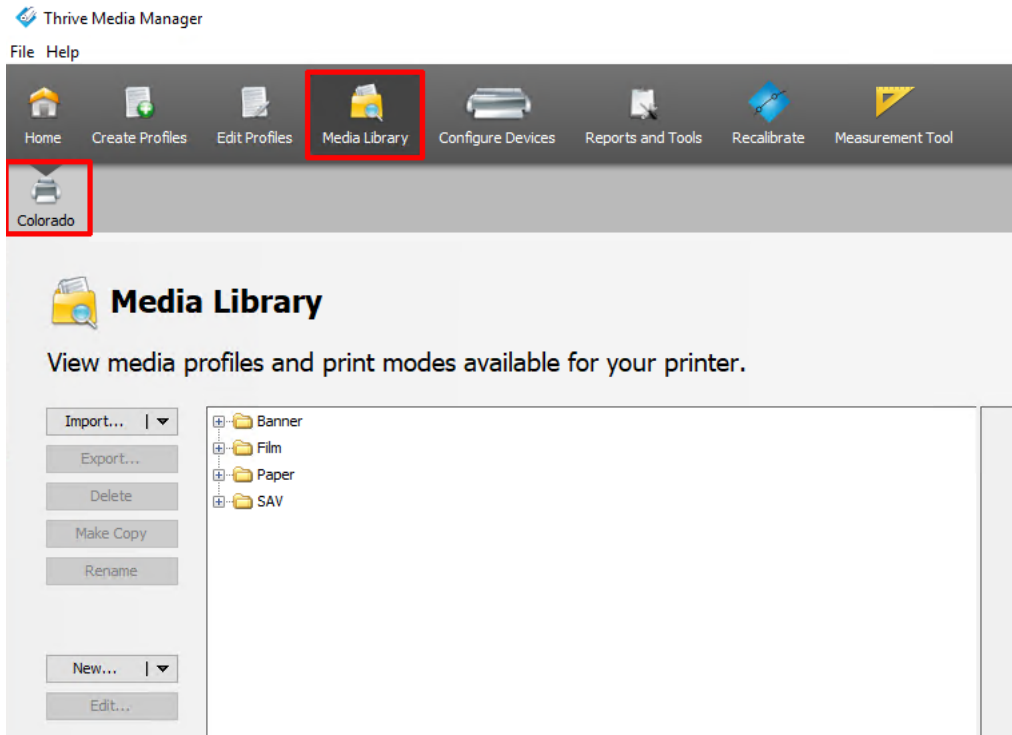
## Procedure

1. Open the ONYX RIP queue.
2. Click on [Media Manager]. The Media Manager application opens.

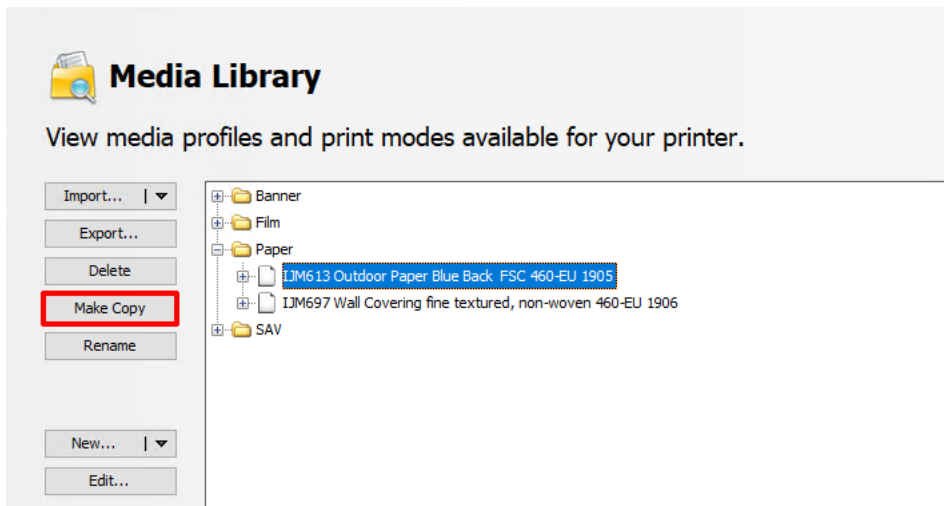




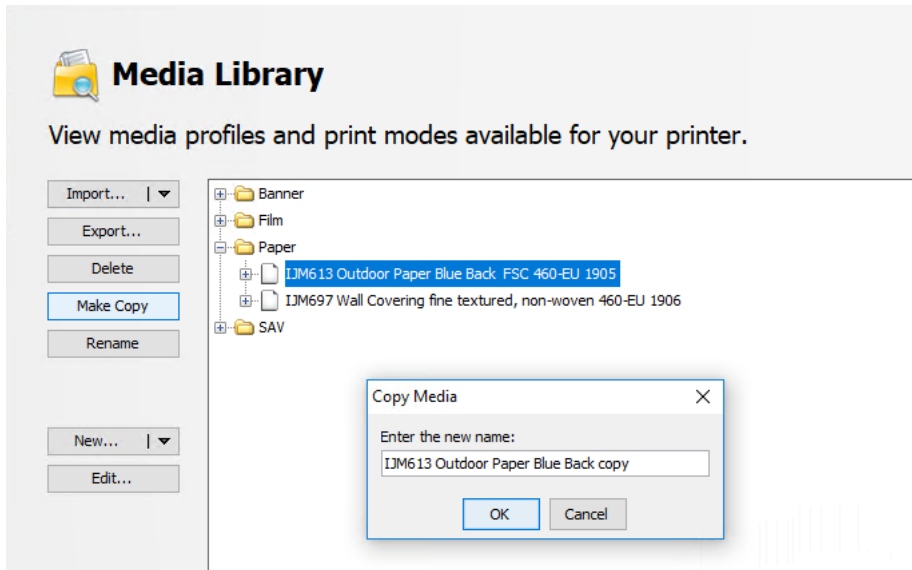
3. Click on the Colorado 1650 printer icon and click on [Media library] above.



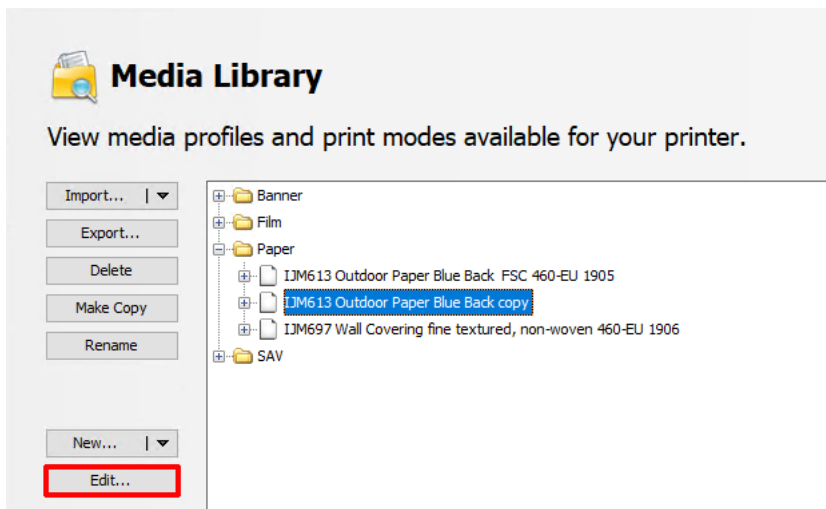
4. Select the media profile from the list and click on [Make Copy]. A new window opens.



5. Fill in the new media profile name and click on [Ok].



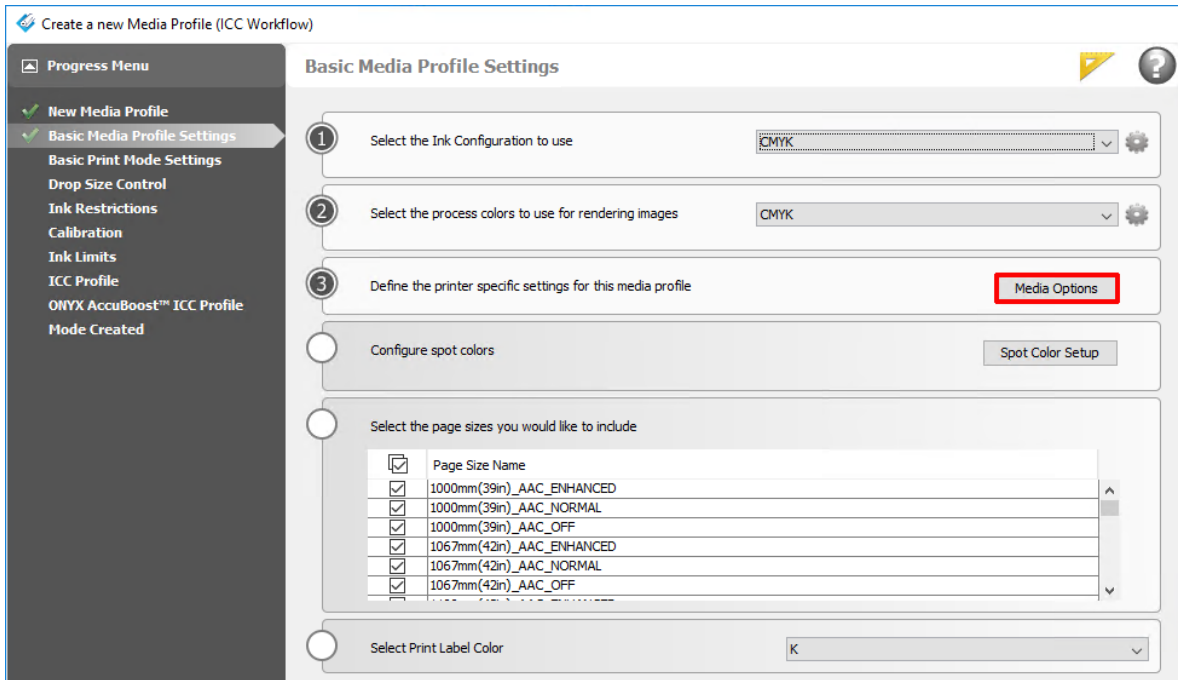
6. Select the new media profile from the list and click on [Edit].



A new window opens.

7. Click on the 'Next' icon. For more information on the general steps use the ONYX documentation.
8. You can change the media settings under [Basic Media Profile Settings].

9. Click on [Media options]. A new window opens.

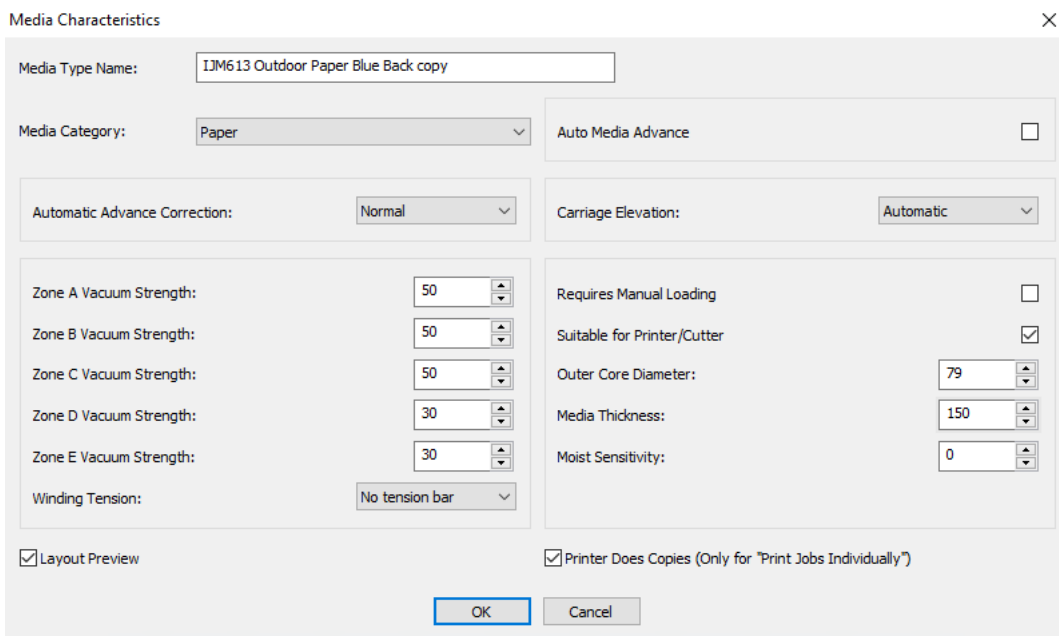


10. Check the **media settings**. For more information, see [Change the media settings on page 74](#).



**IMPORTANT**

Do not change the media category, this can cause damage to the printheads.



11. Give the media a new [Media Type Name] and click on [Ok]. The window closes.



**NOTE**

Check that the media type name is changed. Default it should be the same as the media profile name. You can also choose a different media type name, as long as it is unique. Also check all the other settings, especially the media thickness as your new media might have a different thickness than the media of the copied media profile.

12. Click on the 'Next' icon to follow the steps.

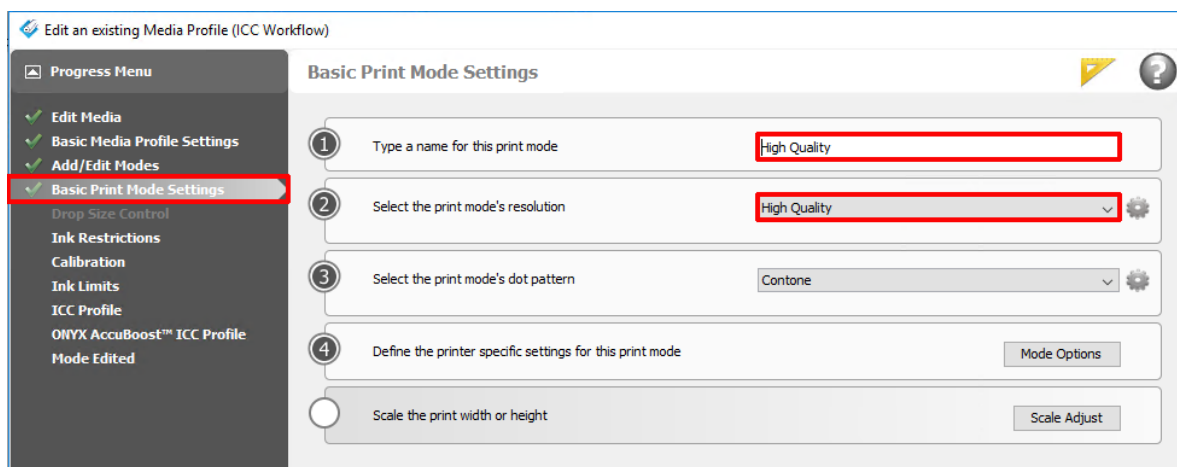
13. You can select the **print mode** under [Add/ Edit Modes]. For more information, see [Select a print mode on page 83](#).

14. You can change the specific print mode settings under [Basic Print Mode Settings].



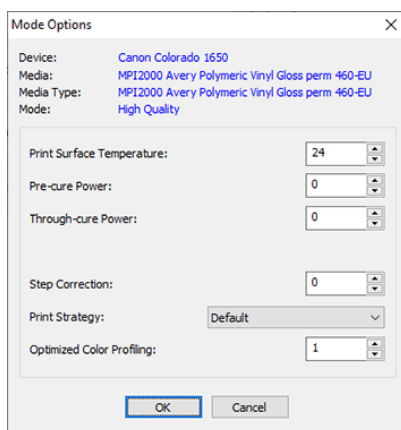
**NOTE**

Fill in the same name as the selected print mode to avoid confusion.



15. Click on [Mode options]. A new window opens.

16. You can change the rest of the **media settings**. For more information, see [Change the media settings on page 74](#).



17. Click on [Ok]. The window closes.

18. Finish all the steps to create the media profile.

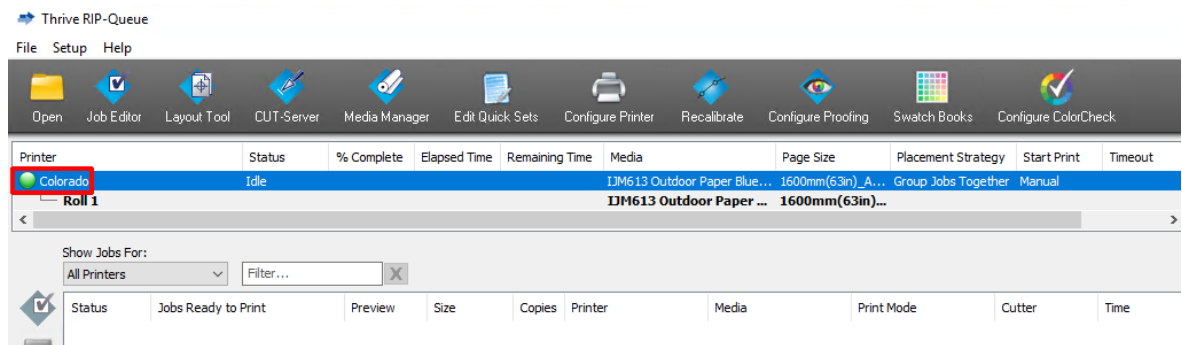
## Sync and delete media types in ONYX

### Introduction

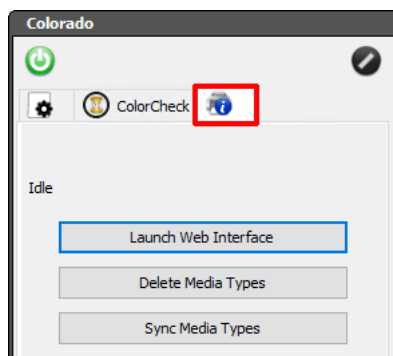
After you downloaded or created the media profiles in ONYX, you can sync them with the printer so they become visible as media types on the operator panel. Sometimes you also want to delete media types from this list.

### Procedure

1. Open the ONYX RIP queue.
2. Select the Colorado 1650 printer name.



3. In the top right pane click on [Device Info].



4. To sync media types:
  1. Click on [Sync Media Types].



#### NOTE

Always sync media types after you made an import.

5. To delete media types:
  1. Click on [Delete Media Types].
  2. Select the media types to be deleted from the list.  
You can select multiple media types with the Windows controls (shift and control).
  3. Click on [Ok] to delete the selected media from the printer.  
The selected media are deleted from the list on the operator panel under, [Media]→[Media type].

## Manage media profiles in Caldera

### Introduction



#### IMPORTANT

Changing the media settings can cause damage to your printer which may void your machine warranty service.

It is recommended to have a media profile for each media type.

You can use Caldera as the RIP software to manage media profiles. You can:

- [Install a downloaded media profile in Caldera on page 55](#)
- [Create a new media profile in Caldera on page 58](#)
- [Copy an existing media profile in Caldera and edit it on page 64](#)
- [Sync and delete media types in Caldera on page 69](#)

For more information on the use of Caldera use the Caldera documentation.

## Install a downloaded media profile in Caldera

### Introduction

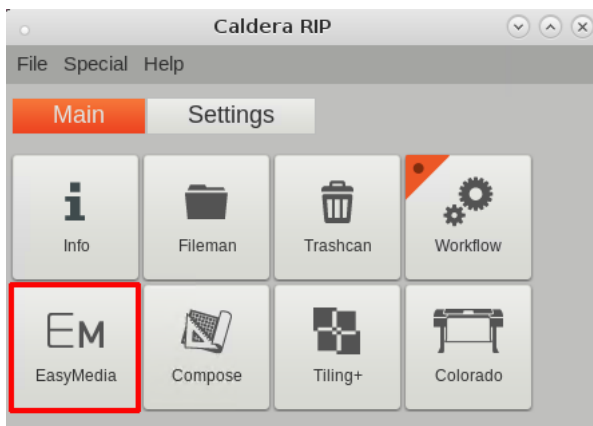
In order to get the best results it is strongly advised to use the Colorado 1650 media profiles.

### Before you begin

First make sure you download an Colorado 1650 media profile via your local sales and support channel, saved in a calpatch file for Caldera (\*.calpatch).

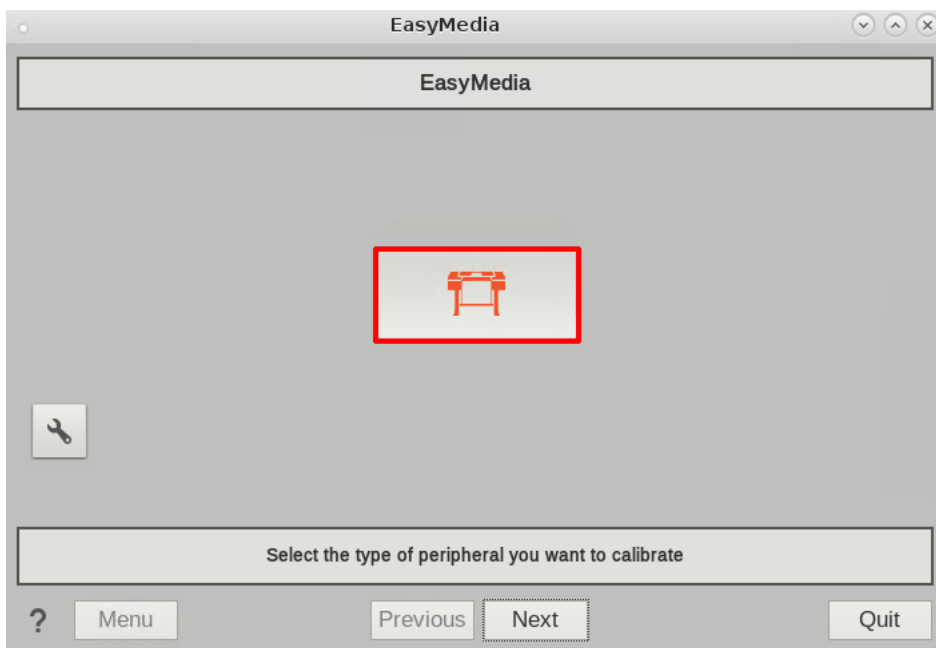
### Procedure

1. Open Caldera.
2. Double-click on the [EasyMedia] icon.



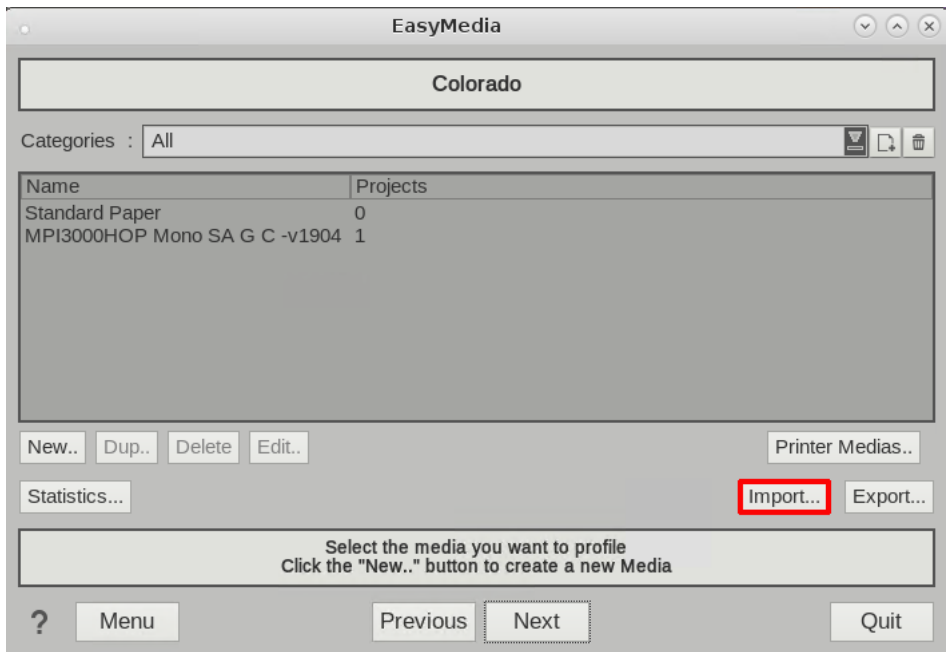
A window opens.

3. Select the printer icon and click on [Next].



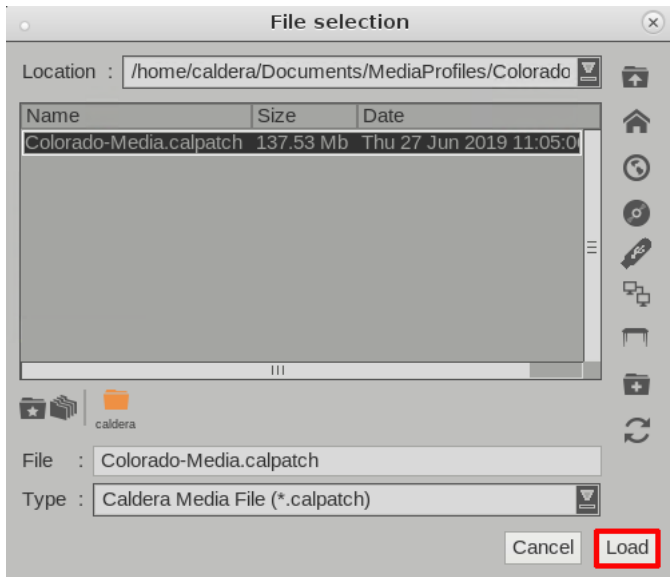
4. Select your printer and click on [Next].

- 5. Click on [Import...].



A window opens.

- 6. Click on [Install patch].  
The file selection window opens.
- 7. Browse to your calpatch file (\*.calpatch) and click on [Load].



A window with profiles opens.



8. Select the profiles you want to install and click on [Install selection].



9. A message appears with the number of installed profiles, click on [Ok].

## Create a new media profile in Caldera

### Introduction

When you are working with a new media that does not have a profile, you can create a new profile in Caldera.

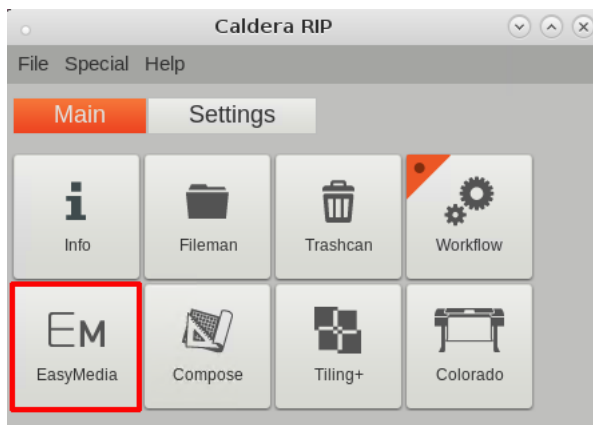


#### NOTE

This manual provides you with basic information in order to create and change media profiles. Profiling is an expert task which requires additional information and tools not covered by this manual. Contact your local support organization when you want to create or change media profiles.

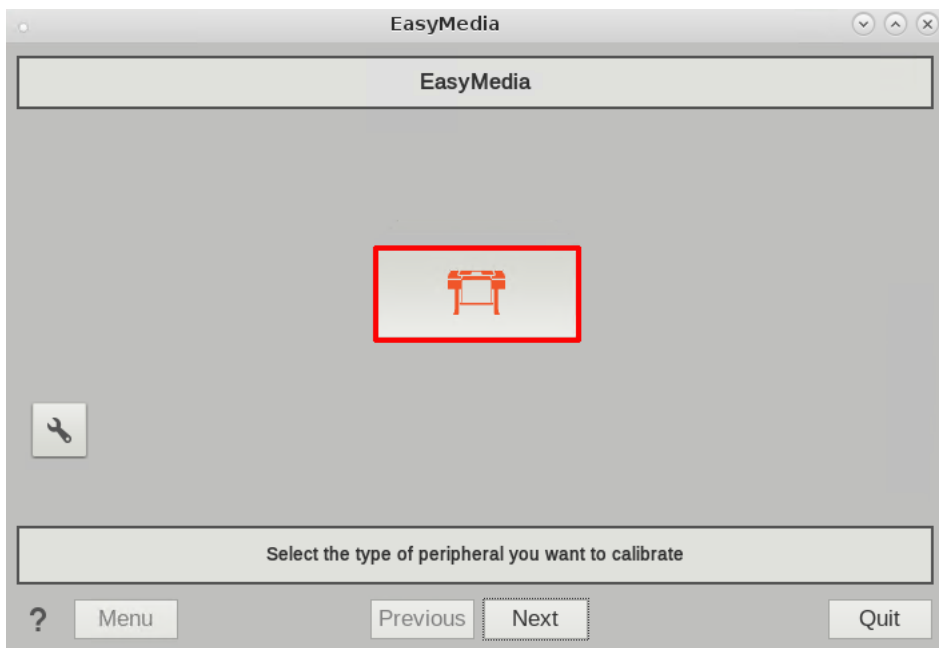
### Procedure

1. Open Caldera.
2. Double-click on the [EasyMedia] icon.

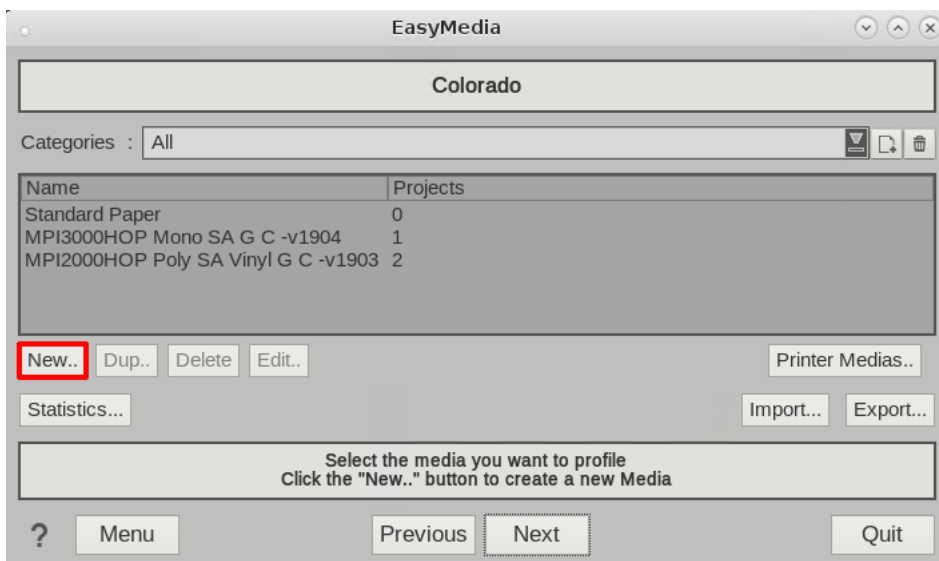


A window opens.

3. Select the printer icon and click on [Next].

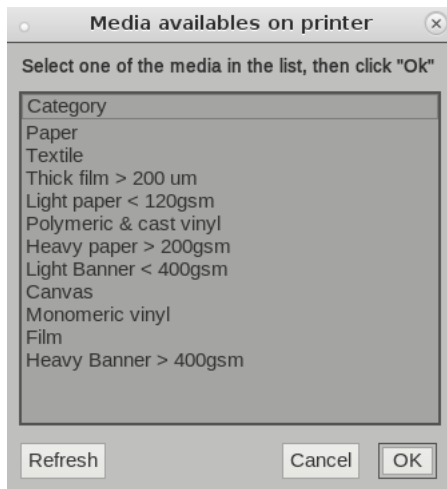


4. Select your printer and click on [Next].
5. Click on [New..].

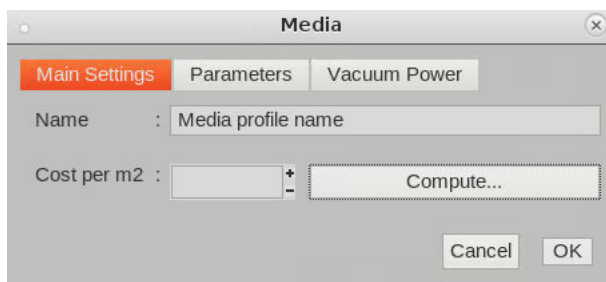


A window opens.

6. Select the **media category**. For more information, see [Choose a media category on page 72](#).



7. Click on [Ok]. The window closes.
8. Fill in the values in the media window. For more information on the general settings use the Caldera documentation.
9. Fill in the new media profile name under [Main Settings].



10. Check the **media settings**:
  - Under [Parameters]: [Change the media settings on page 74](#).

Media

Main Settings Parameters Vacuum Power

Horizontal compensation (%) : 0.00 Compute...

Vertical compensation (%) : 0.00 Compute...

Category : Paper

Automatic advance correction : Normal

Tight winding : No tension bar

Auto media advance

Carriage elevation : Automatic

Support cutter

Requires manual loading

Moist Protection : 0

Outer core diameter (mm) : 79

Media thickness (µm) : 800

Cancel OK

**NOTE**

[Media Thickness] is set default to 800 and has to be set correctly.

- Under [Vacuum Power]: [Change the media settings on page 74.](#)

Media

Main Settings Parameters Vacuum Power

Zone 1 : 50

Zone 2 : 50

Zone 3 : 50

Zone 4 : 30

Zone 5 : 30

Cancel OK

11. Click on [Ok]. The window closes.
12. Click on [Next].

13. Click on [New..] to create a new media project (print mode with media settings).

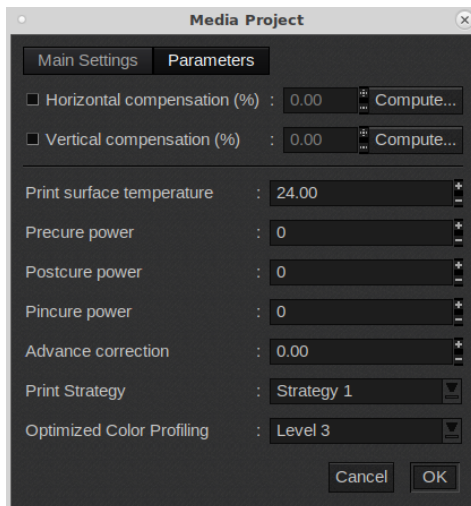


14. You can change the rest of the **media settings**:

- Under [Resolution]: [Select a print mode on page 83.](#)



- Under [Parameters]: [Change the media settings on page 74.](#)



15. Click on [Ok] and follow the rest of the steps.

## Copy an existing media profile in Caldera and edit it

### Introduction

You can also use an existing media profile as a basis and edit the settings in Caldera.

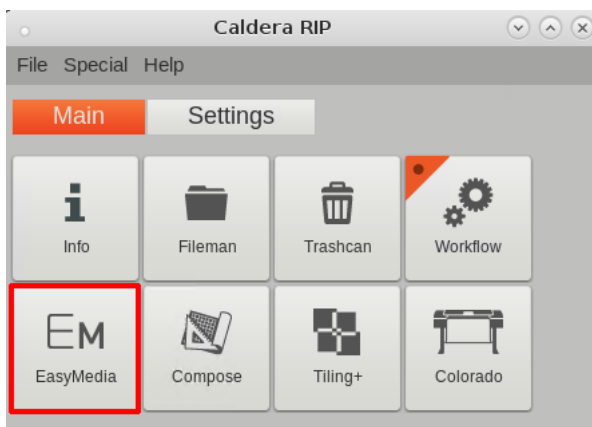


#### NOTE

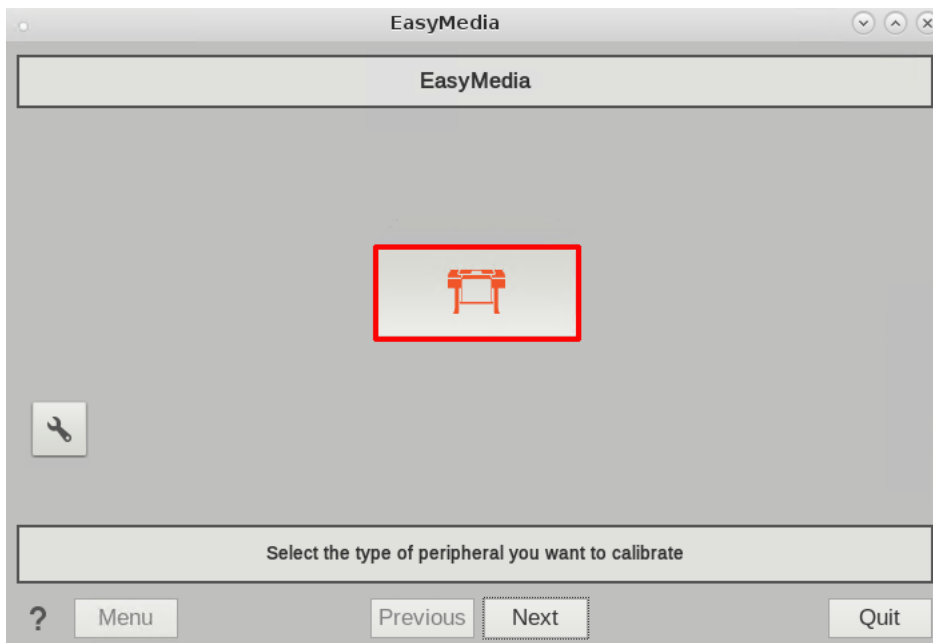
This manual provides you with basic information in order to create and change media profiles. Profiling is an expert task which requires additional information and tools not covered by this manual. Contact your local support organization when you want to create or change media profiles.

### Procedure

1. Open Caldera.
2. Double-click on the [EasyMedia] icon in the ApplicationBar. A window opens.



3. Select the printer icon and click on [Next].



4. Select your printer and click on [Next].

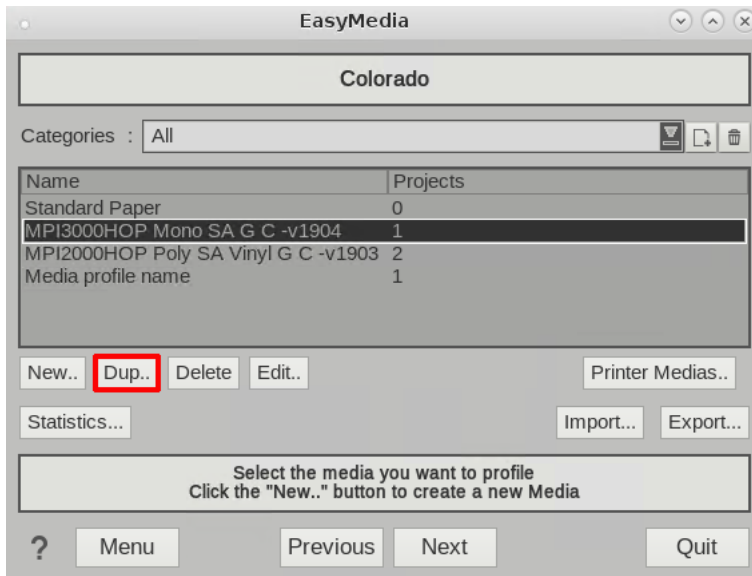


5. Select the media profile you want to copy and edit.

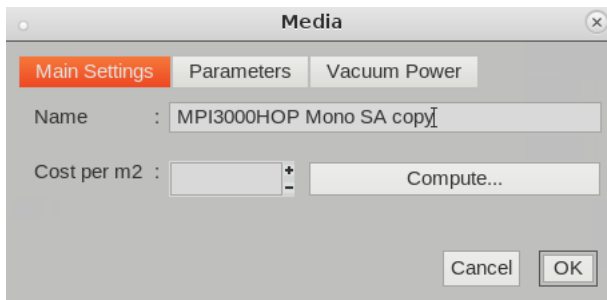
**NOTE**

Make sure you choose a media profile with the preferred **media category**, as you cannot change the media category of a media profile in Caldera. For more information, see [Choose a media category on page 72](#).

6. Click on [Dup..]. A window opens.



7. Fill in the values in the media window. For more information on the general settings use the Caldera documentation.
8. Fill in the new media profile name under [Main Settings].

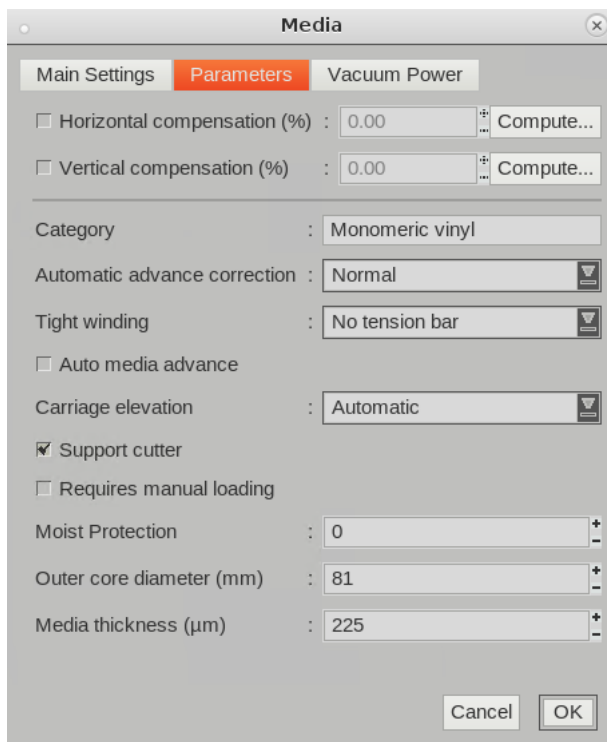


9. Check the **media settings**:

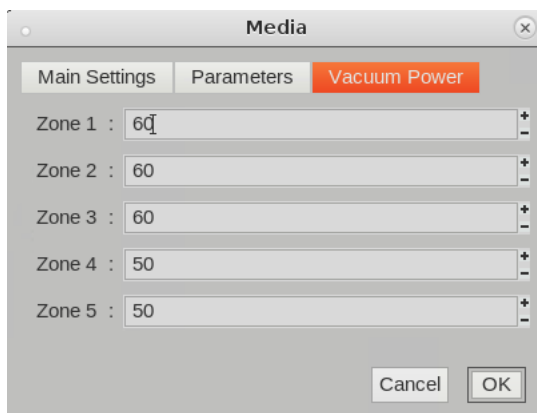
- Under [Parameters]: [Change the media settings on page 74](#).

**NOTE**

You cannot change the media category of a media profile in Caldera. Check especially the media thickness as your new media might have a different thickness than the media of the copied media profile.

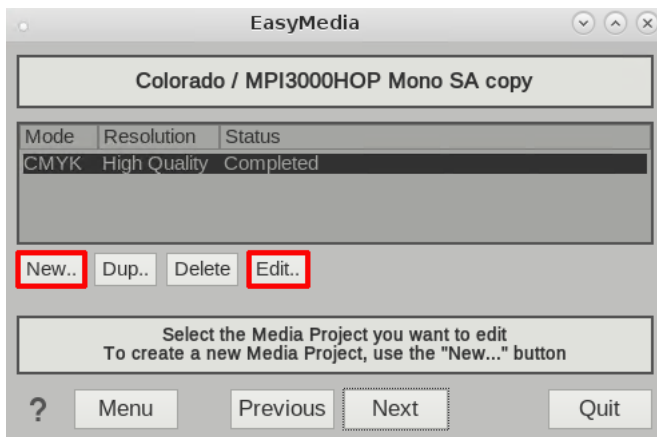


- Under [Vacuum Power]: [Change the media settings on page 74.](#)

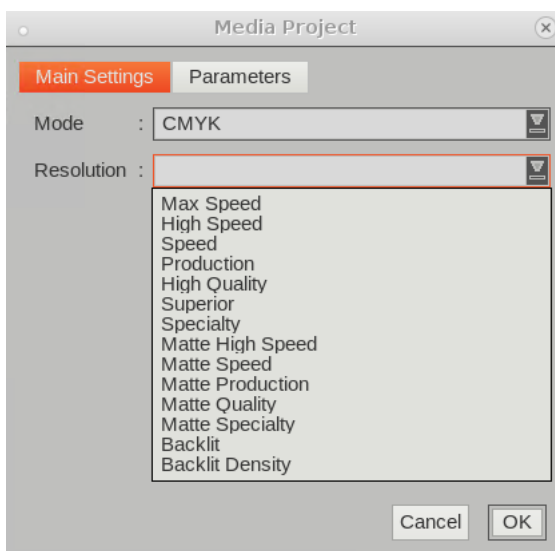


10. Click on [Ok]. The window closes.
11. Click on [Next].

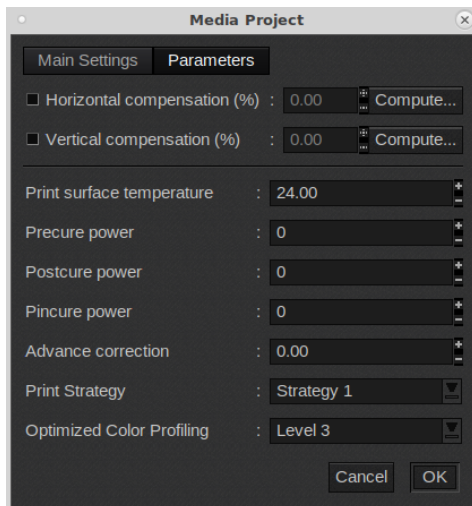
- Click on [New..] to create a new media project (print mode with media settings), or select a media project from the list and click on [Edit..] to edit.



- You can change the rest of the **media settings**:
  - Under [Resolution]: [Select a print mode on page 83.](#)



- Under [Parameters]: [Change the media settings on page 74.](#)



14. Click on [Ok] and if needed follow the rest of the steps.

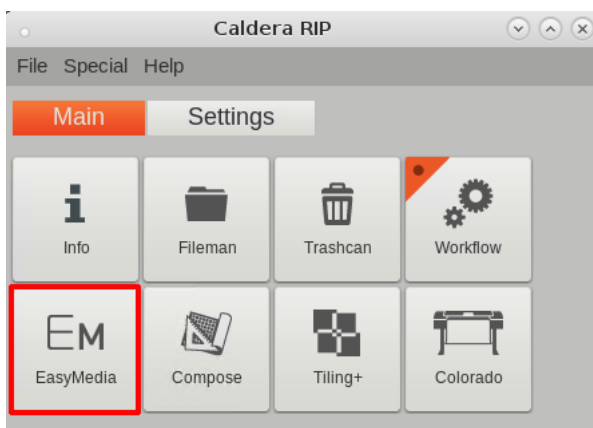
## Sync and delete media types in Caldera

### Introduction

Caldera synchronizes all changes automatically, but you can also manually sync the media profiles with the printer so they become visible as media types on the operator panel instantly. Sometimes you also want to delete media types from this list.

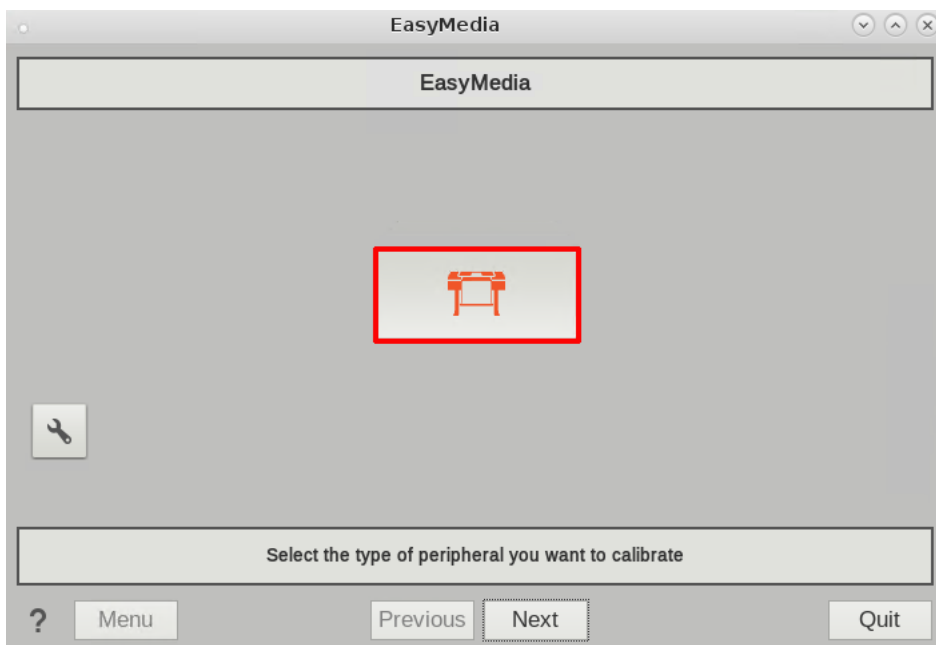
### Procedure

1. Open Caldera.
2. Double-click on the [EasyMedia] icon.



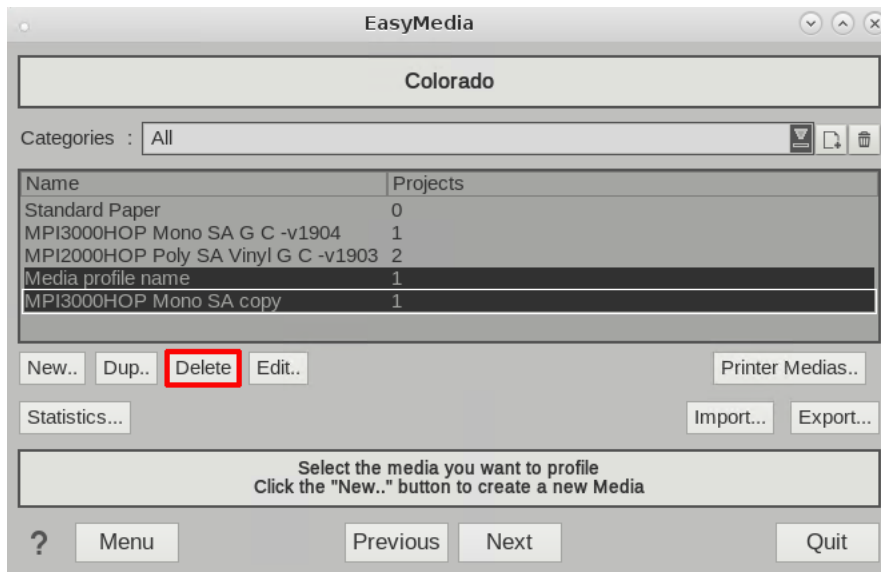
A window opens.

3. Select the printer icon and click on [Next].



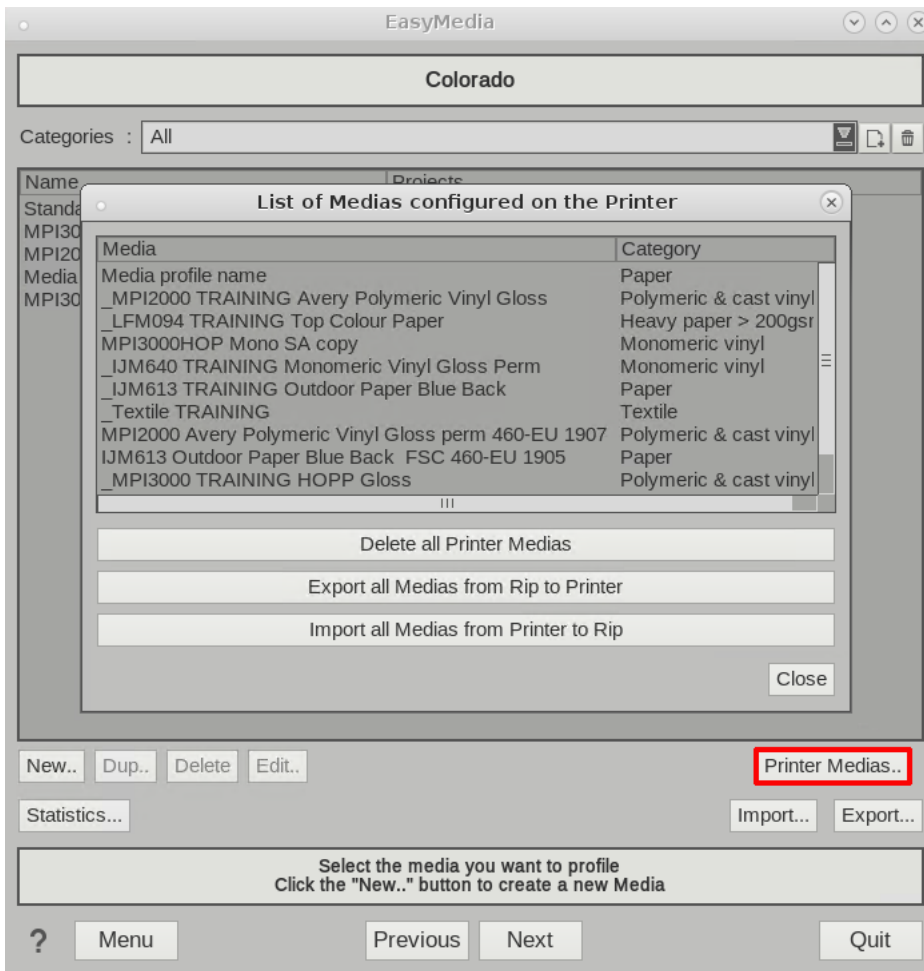
4. Select your printer and click on [Next].
5. To delete media types:

1. From the list of media, select one or more media types you want to delete.



2. Click on [Delete] and confirm per media type. The media types are immediately removed from the printer.  
They are removed from the list on the operator panel under, [Media]→[Media type].
6. To delete all media types from the printer:

1. Click on [Printer Medias]. A new window opens with all the media types known in the printer.



2. Click on [Delete all Printer Medias] to delete all the media types on the printer.



**NOTE**

All media types on the printer are deleted, this also includes media types added via other RIPs.

7. To sync media types:
  1. Click on [Export all Medias from Rip to Printer] to sync the media types of the RIP with the printer.  
They are removed from the list on the operator panel under, [Media]→[Media type].

## Choose a media category

### Introduction

You must choose a media category when you copy or change a media profile in the RIP.

### When to do

Only when you create a new media profile or edit an existing media profile you can change the media category. It is advised to use the Colorado 1650 media profiles and not change the media category. Only advanced users or application specialists should edit media profiles and have to choose the media category.



#### NOTE


This manual provides you with basic information in order to create and change media profiles. Profiling is an expert task which requires additional information and tools not covered by this manual. Contact your local support organization when you want to create or change media profiles.

### Before you begin



The location of the media category setting differs, depending on the RIP you are using. For more information, see [Manage media profiles in ONYX on page 40](#), [Manage media profiles in Caldera on page 54](#).

### Media categories

Use the information on the sticker of the media box, to choose the right media category. When it is difficult to decide, use the overview to choose the correct category.

Media category	Characteristics
Paper 120-200 gsm (32-54 lb bond)	<ul style="list-style-type: none"> <li>• Can be torn by hand</li> <li>• Is humid sensitive: will deform permanently after exposure to water</li> </ul>
Light paper < 120 gsm (32 lb bond)	<ul style="list-style-type: none"> <li>• Can be torn by hand</li> <li>• Is humid sensitive: will deform permanently after exposure to water</li> </ul>
Heavy paper > 200 gsm (54 lb bond)	<ul style="list-style-type: none"> <li>• Can be torn by hand</li> <li>• Is humid sensitive: will deform permanently after exposure to water</li> </ul> <p> <b>NOTE</b> As an exception, textile wallcovering, wallcovering (solid vinyl with non-woven backing), wallcovering (solid vinyl and blown vinyl with paper backing), wallcovering (solid vinyl with textile backing), wallcovering (non-woven glassfiber), wallcovering (Woodchip - Raufaser) are classified under this media category.</p>



Media category	Characteristics
Monomeric self-adhesive vinyl	<ul style="list-style-type: none"> <li>• Smooth surface</li> <li>• Usually have a liner</li> <li>• Self-adhesive</li> </ul> <p> <b>NOTE</b> As an exception, wallcovering (embossed self-adhesive vinyl) and wallcovering (self-adhesive textile) are classified under this media category.</p>
Polymeric & cast self-adhesive vinyl	<ul style="list-style-type: none"> <li>• Smooth surface</li> <li>• Usually have a liner</li> <li>• Self-adhesive</li> </ul> <p> <b>NOTE</b> As an exception, wallcovering (polymeric and cast self-adhesive vinyl), perforated media (with liner) and transparent media (with opaque liner) are classified under this media category.</p>
Light banner < 200 gsm (54 lb bond)	<ul style="list-style-type: none"> <li>• Smooth surface</li> <li>• Is flexible</li> <li>• Cannot be torn by hand</li> </ul>
Heavy banner > 400 gsm (221 lb index)	<ul style="list-style-type: none"> <li>• Smooth surface</li> <li>• Is flexible</li> <li>• Cannot be torn by hand</li> </ul>
Film	<ul style="list-style-type: none"> <li>• Smooth surface</li> <li>• Is difficult to tear by hand</li> </ul>
Thick film > 200um	<ul style="list-style-type: none"> <li>• Smooth surface</li> <li>• Is difficult to tear by hand</li> </ul>
Canvas	<ul style="list-style-type: none"> <li>• Made of cotton</li> <li>• Rough surface</li> <li>• Heavy media weight</li> <li>• Cannot be torn by hand</li> </ul>
Textile	<ul style="list-style-type: none"> <li>• Made of polyester</li> <li>• Soft and flexible</li> <li>• Low level of stiffness</li> <li>• Cannot be torn by hand</li> </ul>

## Change the media settings

### Introduction

You can change the media settings of a media profile in the RIP.

### When to do

Only when you create a new media profile or edit an existing media profile you can tune the media settings. It is advised to use the Colorado 1650 media profiles and not change the media settings. Only advanced users or application specialists should edit media profiles and have to tune the media settings.



#### IMPORTANT

Changing the media settings can cause damage to your printer which may void your machine warranty service.




#### NOTE

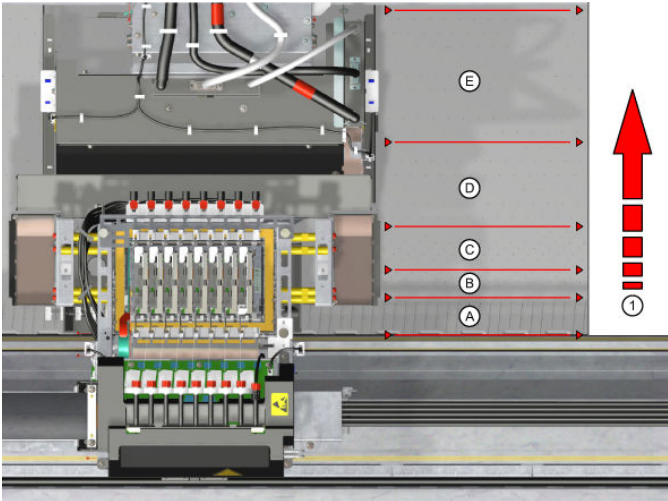


- Changing the media settings can result in poor print quality.
- This manual provides you with basic information in order to create and change media profiles. Profiling is an expert task which requires additional information and tools not covered by this manual. Contact your local support organization when you want to create or change media profiles.




### Before you begin




The location of the media settings differs, depending on the RIP you are using. For more information, see [Manage media profiles in ONYX on page 40](#), [Manage media profiles in Caldera on page 54](#).

## Media settings






[Media setting ]	Description
[Automatic advance correction]	<p>Prints yellow or black markers on the media that the printer uses as guidance to optimize the media step accuracy. Select [Normal] to print the yellow markers or [Enhanced] to print the black markers. Select [None] when you do not want to print markers.</p> <p>Use [Enhanced] as a default for most media types. The printer can detect black markers more easily, which will result in the highest media step accuracy. Take note that these markers are visible with the naked eye, unlike the yellow markers. Black markers may have to be cut out from the printed output, depending on your applications.</p> <p>Use [Normal] for typically smooth, white, opaque, non-reflective media types, or when your applications demand markers that are not visible with the naked eye.</p> <p>When the printer cannot read the markers, due to the media type used, a message appears on the operator panel. Select [None] when both yellow and black markers cannot be read. See <a href="#">Solve specific quality problems on page 304</a>.</p> <p>The use of markers has influence on the width of the print: [None] adds no width but uses the 5.3 mm (0.21 inch) default margin, [Normal] 9 mm (0.35 inch) margin, [Enhanced] 17.5 mm (0.69 inch) margin.</p> <p> <b>NOTE</b></p> <ul style="list-style-type: none"> <li>This setting is enabled for the print modes [High Quality], [Specialty], [Superior], [Matte Quality], [Matte Specialty], [Backlit], [Backlit Density], [Production] (strategy 2 only), [Matte Speed] and [Matte Production].</li> </ul>





[Media setting ]	Description
[Vacuum power]	<p>Controls the suction of the media on the platen. Per media category default values are used for each of the five zones available. Only change the vacuum power when you encounter problems:</p> <ul style="list-style-type: none"> <li>• Make sure the values for zones A, B, and C are always higher than for zones D and E.</li> <li>• Increase the vacuum power with steps of 10% when the vacuum power appears to be too low, e.g. when media is not flat on the printer platen.</li> <li>• Decrease the vacuum power with steps of 10% when the vacuum power appears to be too high, e.g. when the leading edge of the media is blocked halfway across the printer platen, or when dark tracks are visible around the swath boundary<sup>1</sup> and graininess is poor within swaths.</li> <li>• Do not set the values below 30% when [Winding tension] is set to [No tension bar] or [Locked tension bar].</li> <li>• Always re-calibrate the media after you changed the vacuum power.</li> </ul> <p>Location of the zones A, B, C, D, E, with (1) media transport direction:</p>  <p><sup>1</sup> Swath boundary. Two adjoining swaths/passes of the printhead must be positioned without overlap (dark lines), or gap (white lines ).</p> 
[Winding tension]	<p>Controls winding. For printing without winding or for winding without tension bar select [No tension bar]. For certain media types it is necessary to wind the media with a tension bar in order to let it run smoothly. Select [Tension bar] for media that is weak and buckle-sensitive but not too stiff. Select [Locked tension bar] for media that is very stiff . Depending on what is selected here, the operator panel will display a request for taping media, locking, or placing a tension bar.</p> <p> <b>NOTE</b> After you have changed the setting, make sure to reload the media roll in the media drawer. Only then the change will take effect. ▶</p>

[Media setting ]	Description
[Auto media advance]	<p>Prevents pinch roller marks that can occur on sensitive media while it sits idle in the loaded position or while it lies on the printer platen for more than two minutes. When you create a new media profile, [Auto media advance] is disabled by default. When enabled, this setting advances the media past the pressure point at the start of a print job or at the request of a manual cut. Depending on the media position, the setting can spool forward a longer media length.</p> <p> <b>NOTE</b></p> <ul style="list-style-type: none"> <li>• After you have changed the setting, make sure to reload the media roll in the media drawer. Only then the change will take effect.</li> <li>• After you finish printing on sensitive media, it is advised to roll up the media roll in the media drawer.</li> </ul>
[Carriage elevation ]	<p>Controls the height of the carriage. When [Automatic] is selected the optimal carriage height is automatically determined based on the [Media thickness ] set in the media profile. It is advised to select [Automatic] as this will result in the best print quality. Only select [Highest] when you are experimenting with new media that can touch the carriage.</p>
[Manual loading]	<p>Use this setting when you print on weak or curled media. Mostly used with a leading strip of rigid media. Width detection will be done just before printing at the position of the printhead. You can open the top cover and you can place the media manually in position.</p>
[Suitable for printer cutter ]	<p>Controls the use of the printer cutter. Disable the use of the automatic cutter when it is not suitable for the media type, for example with textile, canvas or heavy banners. When disabled the printer will request the operator to cut the media manually.</p> <p> <b>NOTE</b></p> <p>After you have changed the setting, make sure to reload the media roll in the media drawer. Only then the change will take effect.</p>
[Outer core diameter ]	<p>Fill in the outer core diameter of the media roll in millimeters. With this information and the data collected while printing jobs, the printer will calculate the remaining media length. If the [Remaining length] is displayed as [Unknown] on the operator panel, continue printing until the remaining media length can be calculated.</p> <p> <b>NOTE</b></p> <p>After you have changed the setting, make sure to reload the media roll in the media drawer. Only then the change will take effect. ▶</p>

[Media setting ]	Description
[Media thickness ]	<p>Fill in the thickness of the media before the media is loaded for the first time. This value represents the total thickness of the media, e.g. for self-adhesive vinyl, PVC including the liner. The media thickness determines the printhead carriage height and must be set correctly in order to perform printhead carriage calibration.</p> <p> <b>NOTE</b></p> <ul style="list-style-type: none"> <li>• An incorrect setting of the media thickness can lead to a wrong calculation of the length of the media on the media roll.</li> <li>• The media thickness must be set correctly and is crucial for good print quality. Incorrect media thickness can lead to print quality artefacts like banding or unsharp fonts and even can cause media touches which can damage the printhead.</li> <li>• After you have changed the setting, make sure to reload the media roll in the media drawer. Only then the change will take effect.</li> </ul>
[Moist sensitivity]	<p>Prevents to print on media that might have been affected by humidity or moisture. When you create a new media profile, [Moist sensitivity] is disabled by default: the value is set to 0. When enabled, the printer spools the media forward at the start of a print job or at the request of a manual cut after the defined inactivity time limit is reached: where value[1] is the longest time (1800 sec.), [2] (250 sec.), and [3] the shortest time (120 sec.). By spooling the media forward, the part of the media that is on the platen or that sits idle in the loaded position is not used to print on. It is advised to use the moist sensitivity setting when you use paper-based media that is sensitive to and exposed to temperature and humidity variation. This way you prevent printing on waved and wrinkled media and the print quality is not compromised.</p> <p> <b>IMPORTANT</b></p> <p>Incorrect moist sensitivity can cause waved and wrinkled media. This can lead to a carriage crash and can damage the machine, which may void your machine warranty service.</p> <p> <b>NOTE</b></p> <ul style="list-style-type: none"> <li>• After you have changed the setting, make sure to reload the media roll in the media drawer. Only then the change will take effect.</li> <li>• After you finish printing on sensitive media, it is advised to roll up the media roll in the media drawer.</li> </ul>

Media settings	Description
[Printer platen temperature]	<p>Controls the temperature of the platen. Generally there is no need to change this settings. Therefore recommended to keep this setting as defined in the media profile, and only adjust after consulting with an application specialist. ▶</p>

Media settings	Description
[Precure power]	<p>Controls the curing intensity of the LED for the first part of the curing zone. Default value is 0. Tune by decreasing or increasing the setting and minimize gloss banding, especially in dark areas. When you turn the [Precure power ] completely off ink adhesion can improve, but this can result in gloss banding. The LED is off when the value is set to -5. Tune with small steps of 1 or 2 at a time.</p> <p> <b>CAUTION</b> Changing the curing settings can result in insufficient curing of the UV-ink layer. When you have changed the settings, wear Colorado 1650 approved gloves the first time you handle the printed output to prevent any possible contact with uncured ink.</p> <p> <b>IMPORTANT</b> Changing the curing settings can result in insufficient curing of the UV-ink layer. Especially in combination with the [Moist protection] setting there is a risk the printer can get polluted. When the machine is polluted make sure you clean it or call your local service representative.</p>
[Throughcure/ Postcure power]	<p>Controls the curing intensity of the LED for the subsequent part of the curing zone. Default value is 0. Increase to get rid of smudges (due to rubbing) or not fully cured ink. Decrease to minimize the appearance of a white haze on dark areas. Decrease to limit heating of the media. The LED cannot be turned off.</p> <p> <b>CAUTION</b> Changing the curing settings can result in insufficient curing of the UV-ink layer. When you have changed the settings, wear Colorado 1650 approved gloves the first time you handle the printed output to prevent any possible contact with uncured ink.</p> <p> <b>IMPORTANT</b> Changing the curing settings can result in insufficient curing of the UV-ink layer. Especially in combination with the [Moist protection] setting there is a risk the printer can get polluted. When the machine is polluted make sure you clean it or call your local service representative.</p>  <p>[1] Smudging</p>

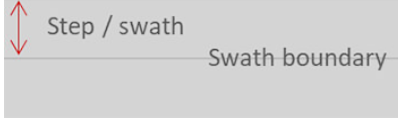
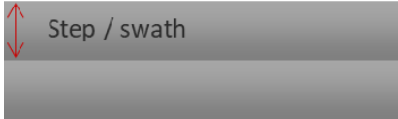
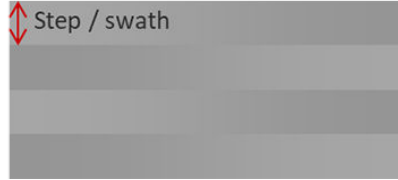
Media settings	Description
[Pincure power]	<p>Controls the curing intensity of the LED for matte print modes. Default value is 0. Increase or decrease for minor adjustment of the gloss value, for respectively lower or higher gloss value. Decrease to lower the heat load on sensitive media. Decrease to diminish eventual visibility of print surface suction holes in case of very thin media. The LED cannot be turned off.</p> <p> <b>CAUTION</b>  <b>Changing the curing settings can result in insufficient curing of the UV-ink layer. When you have changed the settings, wear Colorado 1650 approved gloves the first time you handle the printed output to prevent any possible contact with uncured ink.</b></p> <p> <b>IMPORTANT</b>            Changing the curing settings can result in insufficient curing of the UV-ink layer. Especially in combination with the [Moist protection] setting there is a risk the printer can get polluted. When the machine is polluted make sure you clean it or call your local service representative.</p>
[Advance correction (Caldera) / Step correction (ONYX)]	<p>Controls the average step size for the selected media and print mode. Only change this setting when media calibration and [Automatic advance correction] do not help enough in improving the print quality. Decrease for smaller steps, in case of constant light lines (at the swath boundary). Increase for larger steps, in case of constant dark lines. When both light and dark lines are present, you cannot correct it via this setting.</p> <p> <b>NOTE</b></p> <ul style="list-style-type: none"> <li>• The [Automatic advance correction] setting will still work when you use [Advance correction/Step correction].</li> <li>• The change of this setting is only applied to a job when the queue is empty. Send jobs one by one to make sure that the changes are applied</li> </ul>
[Print strategy]	<p>Controls the print strategy used for layering the ink. By using the right print strategy, the ink is positioned in such a way you optimize the print quality and especially reduce artefacts at swath boundaries. The [Print strategy] setting can be selected in the print modes shown in the illustration below "Print strategy selection".. For all the other print modes [Print strategy 1] is the default and cannot be changed. Only for specific media or when you want to optimize print quality, especially reduce artefacts at swath boundary, you should select a different value. Always evaluate the print quality after you have changed the value. For more information on [Print strategy] selection see the paragraph below.</p> <ul style="list-style-type: none"> <li>• When you change the [Print strategy] setting, the bitmap that is sent from the RIP to the printer is not changed. Nevertheless, the image processing in the printer differs per print strategy. This sometimes can result in small differences in color.</li> </ul> <p> <b>NOTE</b></p> <p>The change of this setting is only applied to a job when the queue is empty. Send jobs one by one to make sure that the changes are applied</p> <ul style="list-style-type: none"> <li>• When color accuracy is very important, use re-linearization or re-profiling to optimize the color accuracy for the chosen print strategy.</li> </ul>



Media settings	Description
[Optimized color profiling]	The [Optimized color profiling] level is set as part of the color profiling sequence. When the level is set to <b>1</b> , no color corrections are made. In case of wrinkles (see <a href="#">Wrinkles on page 312</a> ) increase the [Optimized color profiling] in order to reduce the ink limit in an optimized way. This will reduce the risk of wrinkles.

**Print strategy selection**

Print mode		Gloss							Matte							
		Max Speed	High Speed	Speed	Production	High Quality	Superior	Specialty	High Speed	Speed	Production	Quality	Specialty	Backlit	Backlit HD	
Strategy (ONYX / Caldera)	Default / Strategy1	b	b	a	a	a	a	b	Default / Strategy1	b	a	a	a	a	a	a
	Robust 1 / Strategy2				b	a	a	a	Robust Quality / Strategy2		b	b	b	b		
	Robust 2 / Strategy3					b	b	b	High density / Strategy3		a-hd	a-hd	a-hd	a-hd		

<p>Strategy type b is more robust than type a (same print mode) for: Swath boundary lines or Gradient banding (OD/gloss variation within the swath).</p>	 
<p>Risk for strategy b: Zebra banding (varies left-right and from swath to swath). This cannot occur for strategies of type a.</p>	
<p>Type a-hd are similar to type a, but allow for higher OD and have a higher risk image quality problems.</p>	

Use the tables below to diagnose possible issues related to media and print modes. Start at the left column of the table and find your situation. Read the table from left to right find the problem and the resolution or action to take.

Matte print modes

Media type	Strategy (ONYX / Caldera)	Result / action	Strategy (ONYX / Caldera)	Result / action
Structured	High density / Strategy 3	No action		

Media type	Strategy (ONYX / Caldera)	Result / action	Strategy (ONYX / Caldera)	Result / action
Smooth	Default / Strategy 1	Print quality OK		
		Lines at swath boundary or gradient banding	Robust Quality / Strategy 2	Print quality OK
				Print quality not Ok, select a slower print mode

Gloss print modes

Mode	Strategy (ONYX / Caldera)	Result / action	Strategy (ONYX / Caldera)	Result / action
Production	Default / Strategy 1	Paper step markers Off (AAC) Less robust for media step variations * Speed = 57 m <sup>2</sup> /h (187 ft <sup>2</sup> /h)		
	Improved Media Step / Strategy 2	Paper step markers On (AAC) More robust for media step variations * More robust for gradient banding Speed = 53 m <sup>2</sup> /h (173.9 ft <sup>2</sup> /h)		
High Quality mode Superior mode Specialty mode	Default / Strategy 1	Media with less ink spread or Banding visible	Robust 1 / Strategy 2	
		OD lines at swath boundary or gradient banding	Robust 2 / Strategy 3	Print quality OK Print quality not Ok, select a slower print mode

\* Media step can be visible as dark or light lines at swath boundary.

## Select a print mode

### Introduction

You can select a print mode that best suits your application. Choose a gloss or matte finish and select your print mode in the RIP software.

The location of the print modes differs, depending on the RIP you are using. For more information, see [Manage media profiles in ONYX on page 40](#), [Manage media profiles in Caldera on page 54](#).

### Print modes



#### NOTE

The available print modes can differ, depending on the media type configuration in the RIP.

#### Gloss print modes

Print mode	Passes	m <sup>2</sup> /hr	ft <sup>2</sup> /hr
[Max speed]	1	159	1709
[High speed]	1	114	1225
[Speed]	2	80	860
[Production]	2	57	613
[High quality]	4	40	430
[Superior]	6	27	290
[Specialty]	8	20	215

#### Matte print modes

Print mode	Passes	m <sup>2</sup> /hr	ft <sup>2</sup> /hr
[Matte high speed]	3	46	495
[Matte speed]	4	38	409
[Matte production]	4	31	333
[Matte quality]	6	27	290
[Matte specialty]	8	20	215
[Backlit]	8	20	215
[Backlit density]	14	10	108

Select a print mode

Media	Application	Gloss							Matte						
		Max Speed	High Speed	Speed	Production	High Quality	Superior	Specialty	Matte High	Matte Speed	Matte Production	Matte Quality	Matte Specialty	Backlit	Backlit density
<i>Speed (m<sup>2</sup>/h)</i>		159	114	80	57	40	27	20	46	38	31	27	20	20	10
MC Paper	POP					Strat2						R			
Coated Paper	POP					Strat2 R						R			
Uncoated Paper	(wall)paper Wrappings											R			
Vinyl	Wallcovering (textured)					R						R			
PVC banner	Indoor/outdoor banner; Mesh					R					R				
SAV mono/poly	Fleet graphics; window graphics Decals; stickers					R							R		
SAV cast	Fleet graphics												R		
Soft-signage	Frontlit SEG										Strat3	Strat3 R			
Soft-signage	Backlit SEG													R	
Film	Backlit													R	
Film	Frontlit/rollup banner							**				R			
Canvas	Canvas											R			

R	Recommended		Good quality for most applications
	Best quality for most applications		Low quality applications

\* There are different print strategies for smooth and textured media, see [Change the media settings on page 74](#).

\*\* For Film frontlit/rollup, in gloss mode, the quality is very media depending by wrinkle or ink spread. Uncoated paper: gloss print mode is not recommended because the curing quality is not guaranteed. Backlit mode: gloss mode is not recommended because wrinkles could appear.

# Prepare media for printing

## Load a media roll (position 1)

### Introduction

You can load multiple media rolls on your printer for optimal productivity.

### Before you begin

Before you load a roll on the printer:

- Make sure you have added a media profile with the correct media type via the RIP. For more information, see [Configure media in the RIP on page 40](#).
- Check the media width of your roll before loading. When your media width is not present in the list on the operator panel, you can type it in.
- Put on gloves to avoid pollution of the paper by your fingerprints.



### CAUTION

- **Watch your fingers when you handle the media roll.**
- **Loading heavy media, 25 kg (55 lb) or more, has to be done by two people or with the help of external lifting tools.**

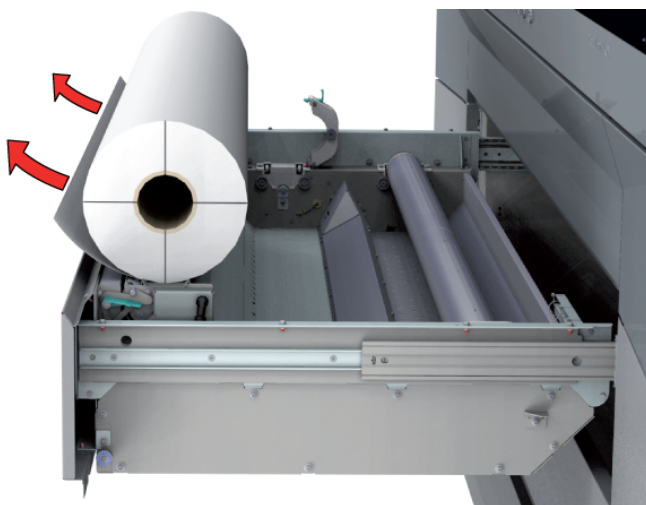


### IMPORTANT

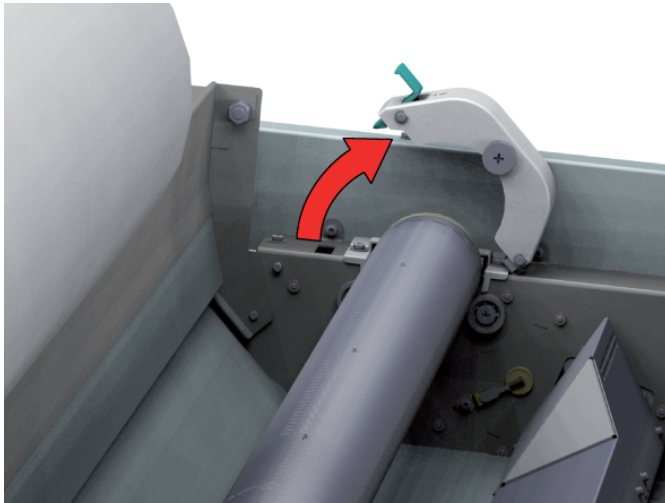
- Do not use dented or damaged media rolls to prevent damage to the printheads.
- Only open the media drawer when the indicator light on the drawer is on. Do not open the drawer when the light is off, you can damage the machine.

### Procedure

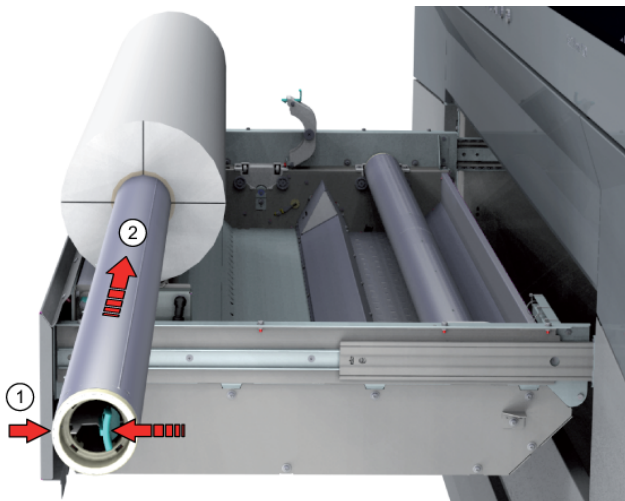
1. Pull firmly to open the media drawer.
2. Place the new media roll, with the media flap on the bottom and towards you, on the roll loading station.



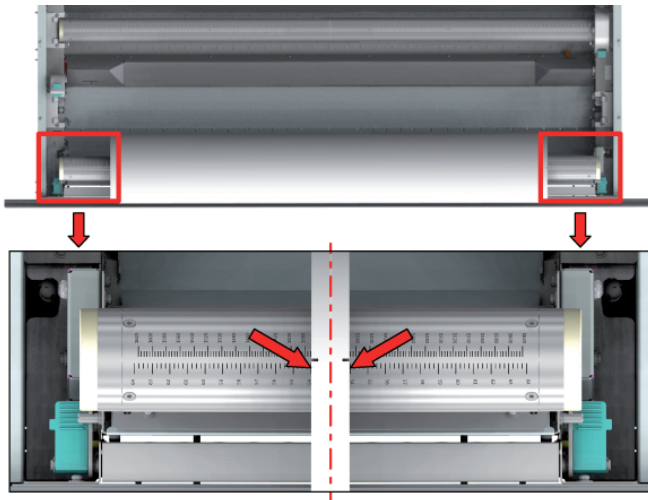
3. Pull the lever and open the clamp.



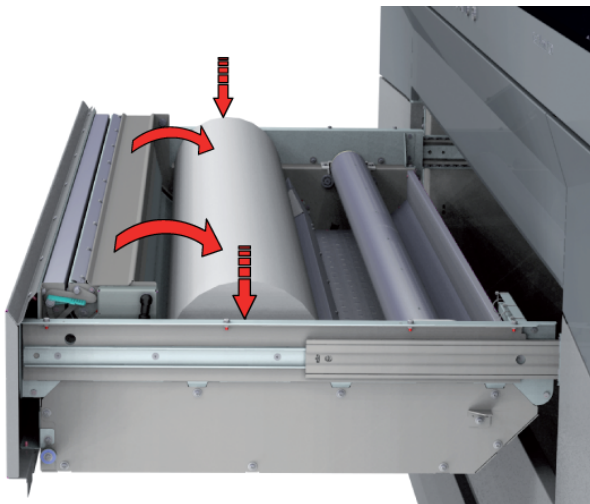
4. Take the feed media shaft out of the drawer.
5. Pull (1) the handle of the locking mechanism towards you. Slide (2) the media shaft into the side of the core of the new media roll.



6. Accurately align the roll on the media shaft. Place it on the corresponding media size with the help of the ruler. Check on the left and right side of the roll if both are aligned on the same size.



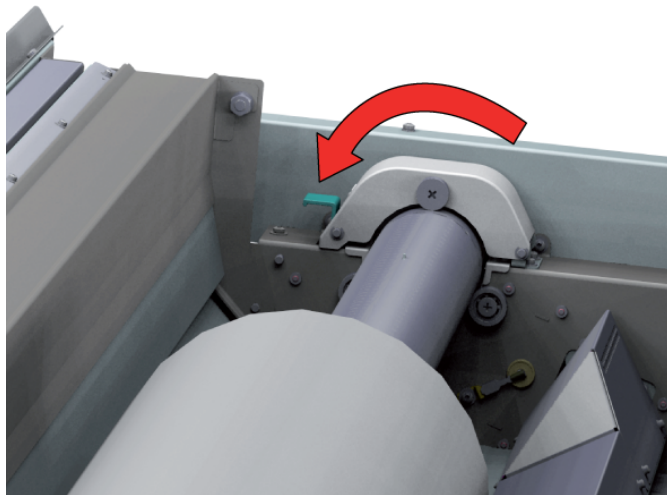
7. Release the handle of the locking mechanism.
8. Remove the tapes from the new media roll, if present. Place the media roll in the media drawer.



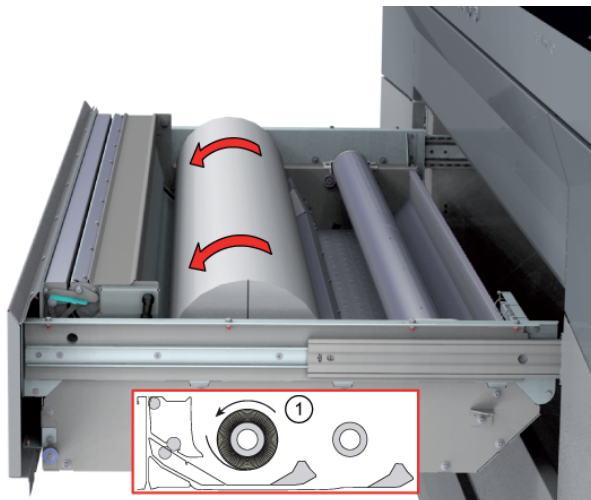
9. Close the clamp firmly.

**IMPORTANT**

Make sure you close the clamp completely until you hear a click, otherwise the roll can come loose and can damage the machine.



10. Use both hands to turn the media roll backwards (1) until the media flap has passed the metal paper guide.



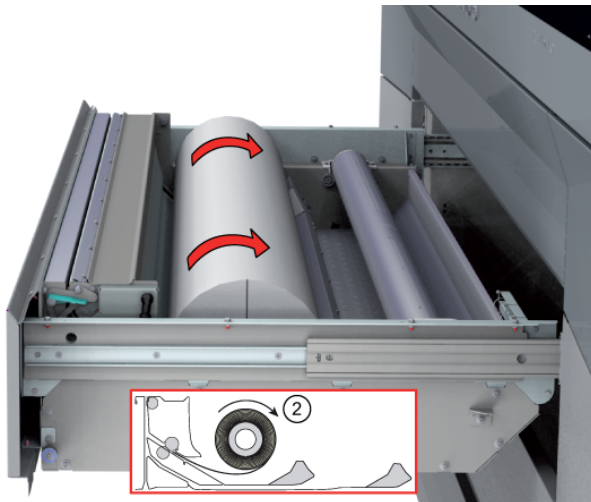
11. Use both hands to move the media forward and slide it under the metal paper guide (2) until the media is transported automatically. You will hear a beeping sound when the media is correctly fed and loaded.



**IMPORTANT**

Make sure media is always rolled up evenly on the core. Do not load media that is not rolled up evenly (telescoping) as it can damage the machine.

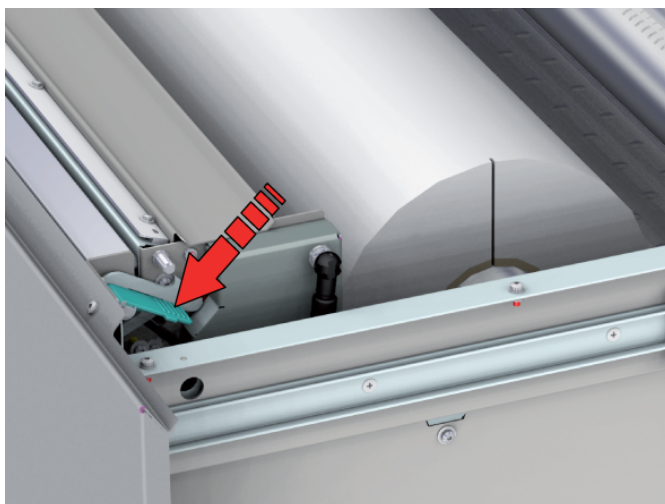




When the printer does not take the media (no beeping sound), you can feed the media manually. The manual feeding option is recommended for weak and difficult to load media, such as canvas and textiles.

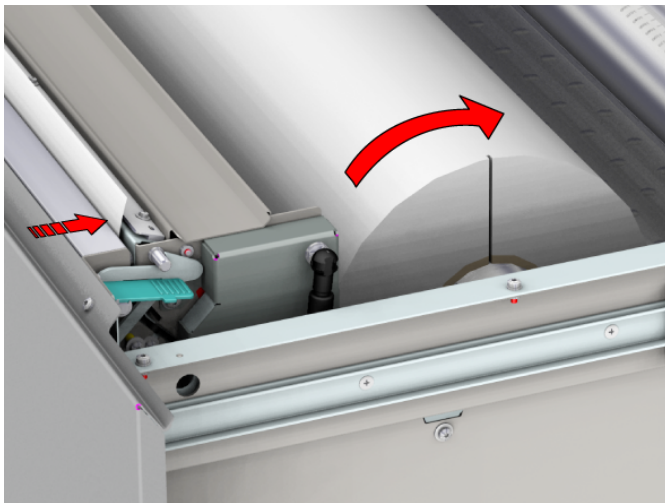
For manual feeding:

1. Push the handles on the left and right side of the loading station to open the media feed.



2. Use both hands to move the media forward and slide the media under the metal paper guide until you see it coming out on top.

3. Close the media feed.



4. If necessary, you can manually cut the leading edge of the media when it has not been cut straight. Take a knife and cut the media in the cutting guide.



**NOTE**

Always use a straight cut leading edge for media types that are more difficult to transport (e.g. canvas).

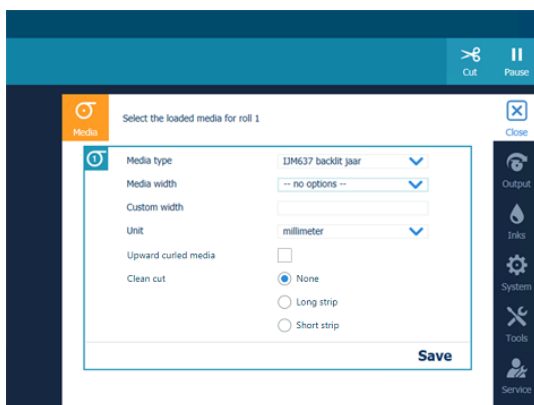
12. Close the media drawer carefully. The operator panel displays the message that new media is detected.



**IMPORTANT**

Do not open the media drawer when the indicator light is off, you can damage the machine.

13. On the operator panel, select the correct media type and fill in the media width.



14. When the media you use has an upward curl select [ Upward curled media].

This setting persists as long as the media is assigned. When enabled, the system feeds the media to the output position. You can then open the top cover and guide the media. After you close the top cover, the media is transported to the clamp. Open the top cover and guide the media again. Printing starts after these actions have been completed.

15. Select if and what type of clean cut you want the printer to make, when you use the media for the first time.

For winding with a tension bar or with a locked tension bar the clean cut is neglected.

16. Tap on [Save].



**NOTE**

For the highest output quality, it is advised to always perform a media calibration when you load a new media type or a new media width. For more information, see [Calibrate the media on page 116](#).

## Load a media roll (position 2)

### Introduction

You can load multiple media rolls on your printer for optimal productivity.

### Before you begin

Before you load a roll on the printer:

- Make sure you have added a media profile with the correct media type via the RIP. For more information, see [Configure media in the RIP on page 40](#).
- Check the media size of your roll before loading. When your media size is not present in the list on the operator panel, you can type it in.
- Put on gloves to avoid pollution of the paper by your fingerprints.



#### CAUTION

- **Watch your fingers when you handle the media roll.**
- **Loading heavy media, 25 kg (55 lb) or more, has to be done by two people or with the help of external lifting tools.**

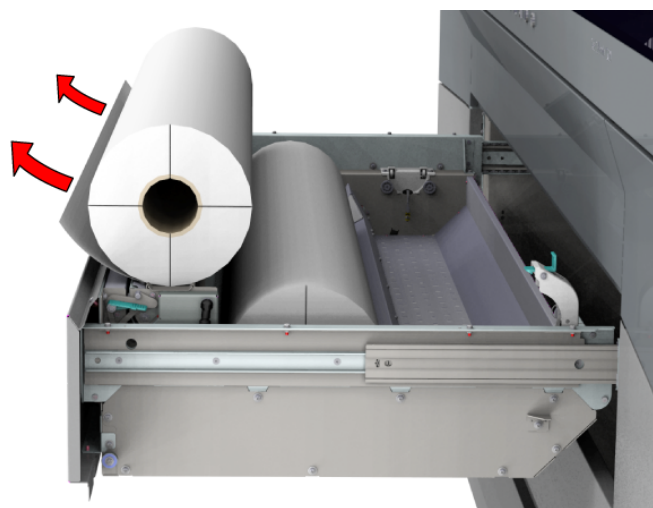


#### IMPORTANT

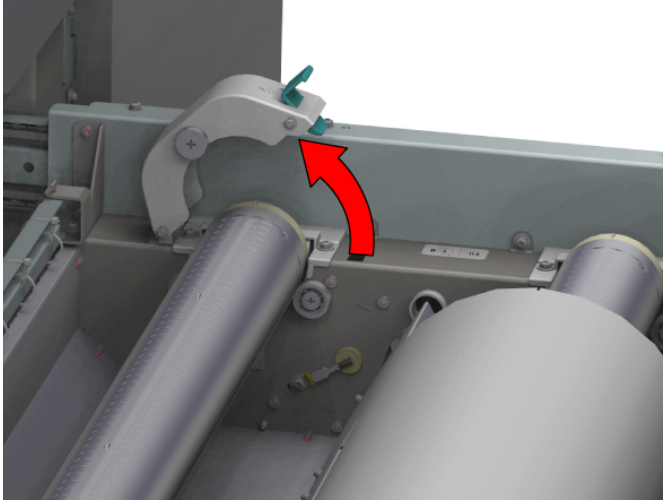
- Do not use dented or damaged media rolls to prevent damage to the printheads.
- Only open the media drawer when the indicator light on the drawer is on. Do not open the drawer when the light is off, you can damage the machine.

### Procedure

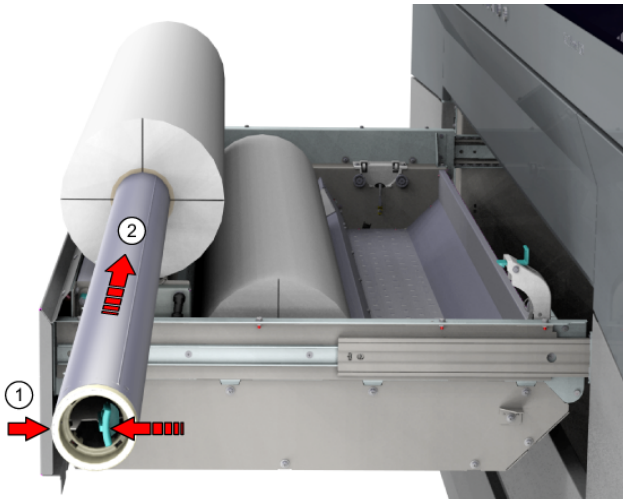
1. Pull firmly to open the media drawer.
2. Place the new media roll, with the media flap on the bottom and towards you, on the roll loading station.



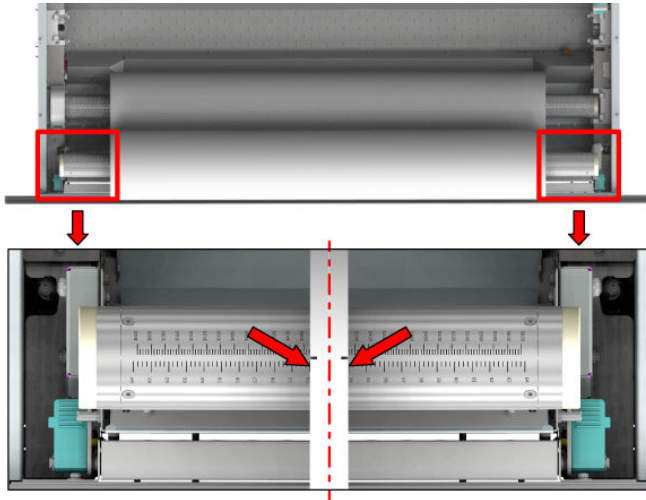
3. Pull the lever and open the clamp.



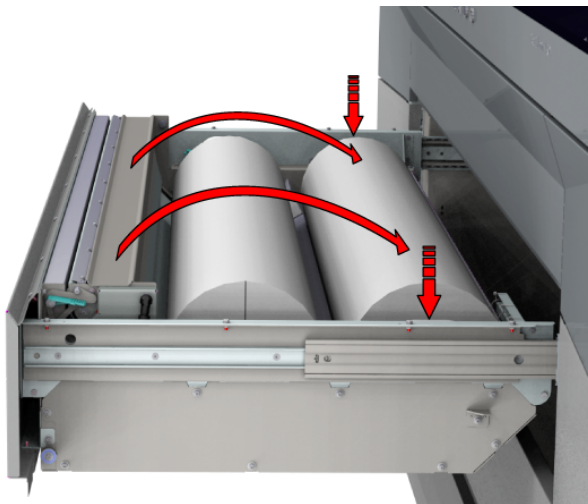
4. Take the feed media shaft out of the drawer.
5. Pull (1) the handle of the locking mechanism towards you. Slide (2) the media shaft into the side of the core of the new media roll.



6. Accurately align the roll on the media shaft. Place it on the corresponding media size with the help of the ruler. Check on the left and right side of the roll if both are aligned on the same size.



7. Release the handle of the locking mechanism.
8. Remove the tapes from the new media roll, if present. Place the media roll in the media drawer.

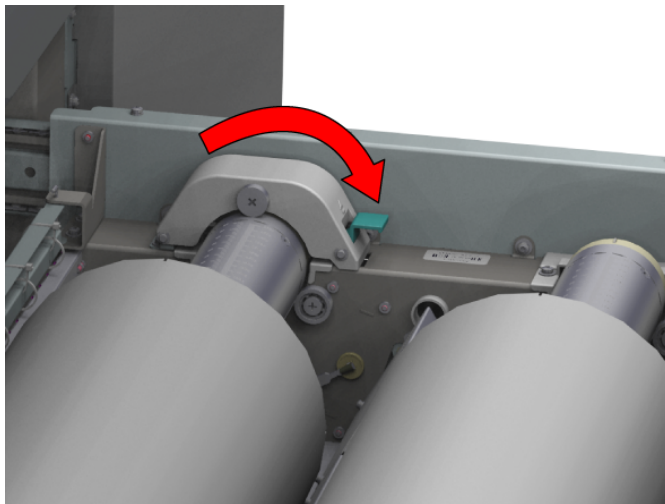


9. Close the clamp firmly.

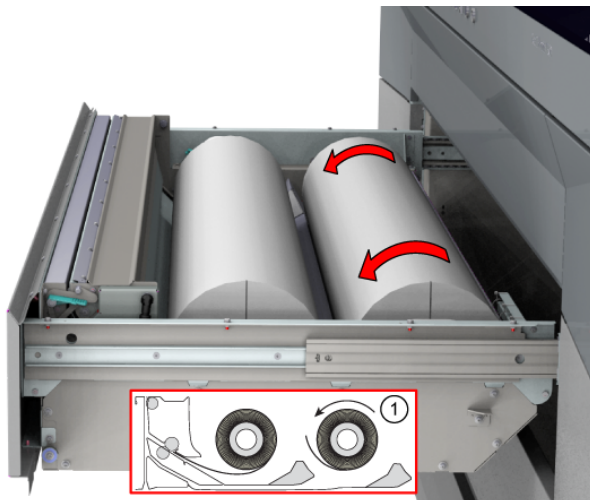


**IMPORTANT**

Make sure you close the clamp completely until you hear a click, otherwise the roll can come loose and can damage the machine.



10. Use both hands to turn the media roll backwards (1) until the media flap has passed the metal paper guide.

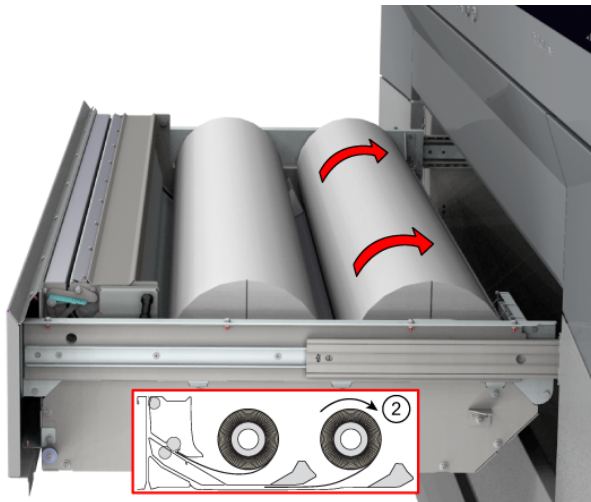


11. Use both hands to move the media forward and slide it under the metal paper guide (2) until the media is transported automatically. You will hear a beeping sound when the media is correctly fed and loaded.



**IMPORTANT**

Make sure media is always rolled up evenly on the core. Do not load media that is not rolled up evenly (telescoping) as it can damage the machine.



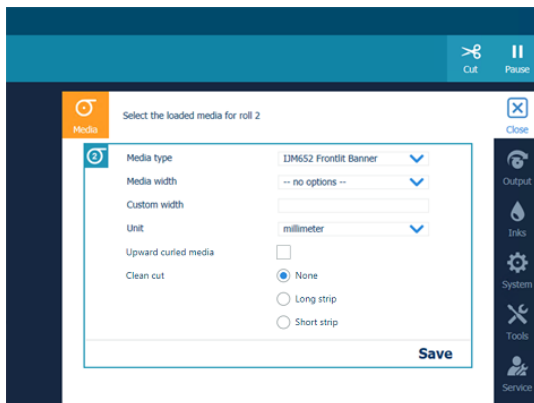
12. Close the media drawer carefully. The operator panel displays the message that new media is detected.



**IMPORTANT**

Do not open the media drawer when the indicator light is off, you can damage the machine.

13. On the operator panel, select the correct media type and fill in the media width.



14. When the media you use has an upward curl select [ Upward curled media].

This setting persists as long as the media is assigned. When enabled, the system feeds the media to the output position. You can then open the top cover and guide the media. After you close the top cover, the media is transported to the clamp. Open the top cover and guide the media again. Printing starts after these actions have been completed.

15. Select if and what type of clean cut you want the printer to make, when you use the media for the first time.

For winding with a tension bar or with a locked tension bar the clean cut is neglected.

16. Tap on [Save].



**NOTE**

For the highest output quality, it is advised to always perform a media calibration when you load a new media type or a new media width. For more information, see [Calibrate the media on page 116](#).



## Load a media roll for inside printing

### Introduction

You can load a media roll to print on the inside.



#### NOTE

- We recommend to use inside printing only in combination with a locked tension bar, see [Print and wind with a locked tension bar on page 128](#).
- When you print on the inside both roll positions are used. You load the media roll at roll position 2. You cannot use a second roll at position 1.

### Before you begin

Before you load a roll on the printer:

- Make sure you have added a media profile with the correct media type via the RIP. For more information, see [Configure media in the RIP on page 40](#).
- Check the media size of your roll before loading. When your media size is not present in the list on the operator panel, you can type it in.
- Put on gloves to avoid pollution of the paper by your fingerprints.



#### CAUTION

- **Watch your fingers when you handle the media roll.**
- **Loading heavy media, 25 kg (55 lb) or more, has to be done by two people or with the help of external lifting tools.**



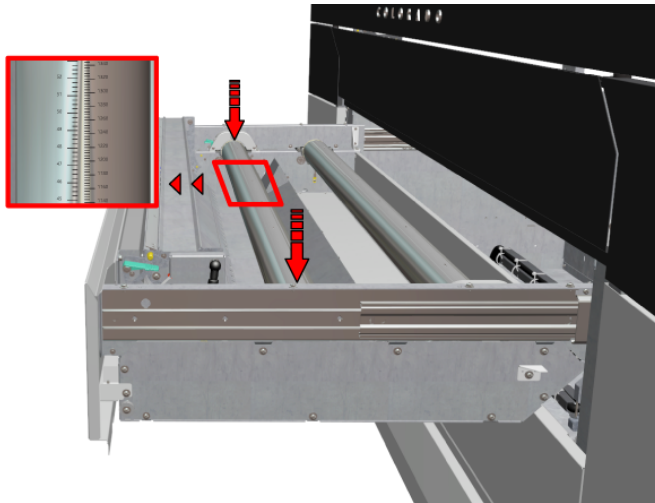
#### IMPORTANT

- Do not use dented or damaged media rolls to prevent damage to the printheads.
- Only open the media drawer when the indicator light on the drawer is on. Do not open the drawer when the light is off, you can damage the machine.

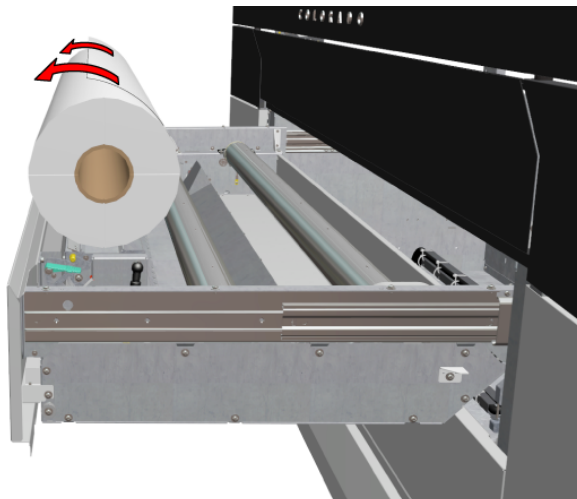
### Procedure

1. Pull firmly to open the media drawer.
2. Unload the media roll in position 1. For more information, see [Unload a media roll from the drawer on page 154](#).

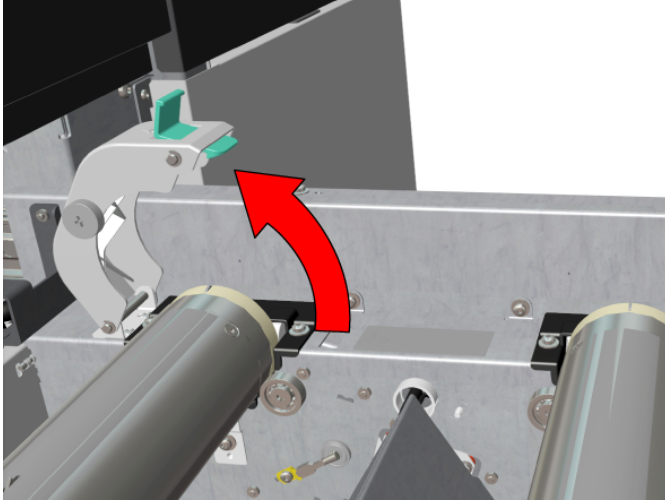
- Put the feed media shaft back into the drawer with the ruler and the pins of the locking mechanism facing up to prevent damage to the media. Firmly close the clamp. Make sure you close the clamp completely until you hear a click.



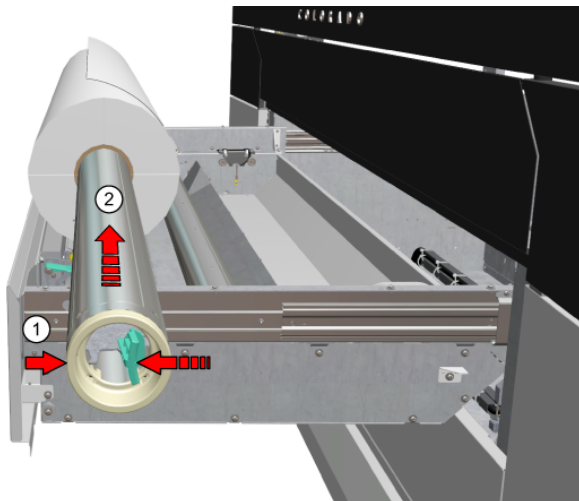
- Place the new media roll, with the media flap on top and towards you, on the roll loading station.



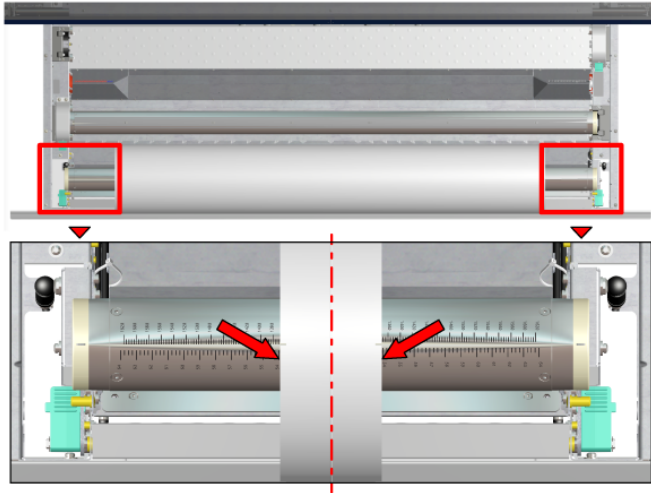
5. Pull the lever and open the clamp of position 2.



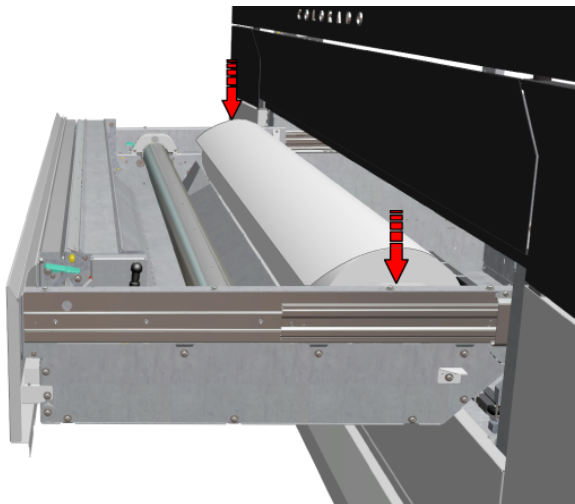
6. Take the feed media shaft out of the drawer.
7. Pull (1) the handle of the locking mechanism towards you. Slide (2) the media shaft into the side of the core of the new media roll.



8. Accurately align the roll on the media shaft. Place it on the corresponding media size with the help of the ruler. Check on the left and right side of the roll if both are aligned on the same size.



9. Release the handle of the locking mechanism.
10. Remove the tapes from the new media roll, if present. Place the media roll in the media drawer.

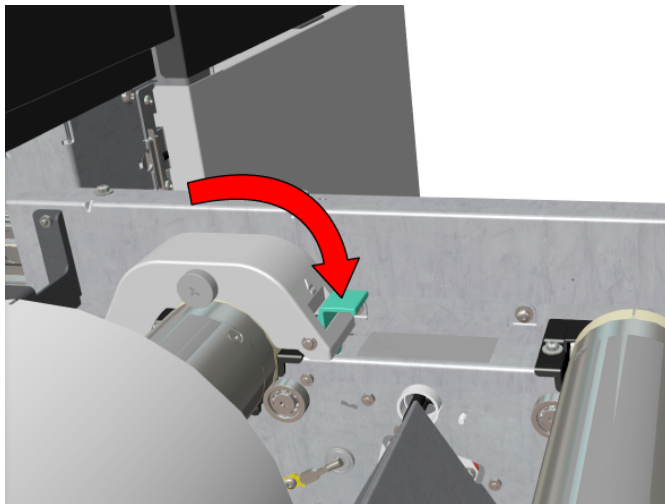


11. Close the clamp firmly.



**IMPORTANT**

Make sure you close the clamp completely until you hear a click, otherwise the roll can come loose and can damage the machine.

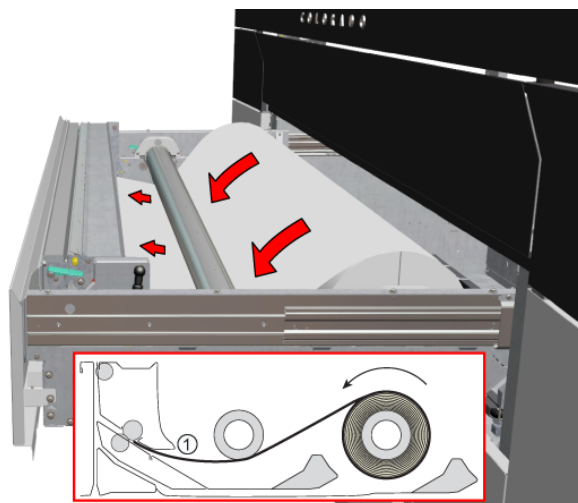


12. Use both hands to turn the media roll backwards and slide the media under the metal paper guide (1) until the media is transported automatically. You will hear a beeping sound when the media is correctly fed and loaded.



**IMPORTANT**

Make sure media is always rolled up evenly on the core. Do not load media that is not rolled up evenly (telescoping) as it can damage the machine.



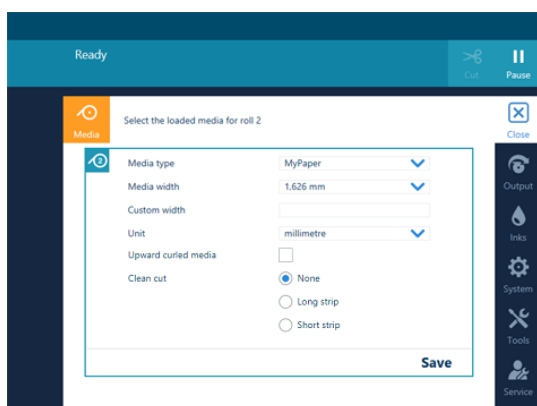
13. Close the media drawer carefully. The operator panel displays the message that new media is detected and an icon in the top left corner indicates that a roll is loaded for inside printing. This can take 5 seconds.



**IMPORTANT**

Do not open the media drawer when the indicator light is off, you can damage the machine.

14. On the operator panel, select the correct media type and fill in the media width.



15. When the media you use has an upward curl select [ Upward curled media].  
This setting persists as long as the media is assigned. When enabled, the system feeds the media to the output position. You can then open the top cover and guide the media. After you close the top cover, the media is transported to the clamp. Open the top cover and guide the media again. Printing starts after these actions have been completed.
16. Select if and what type of clean cut you want the printer to make, when you use the media for the first time.  
For winding with a tension bar or with a locked tension bar the clean cut is neglected.
17. Tap on [Save].



**NOTE**

For the highest output quality, it is advised to always perform a media calibration when you load a new media type or a new media width. For more information, see [Calibrate the media on page 116](#).

---

# Load weak media for outside printing

## Introduction

When you load weak media in the printer, such as canvas and textiles, manual feeding and the use of the tension bar are recommended. You can configure the settings for manual feeding and the tension bar in the RIP. You can also use the help of rigid media to feed the weak media more easily in the paper path.

Follow the procedure below to attach a leading strip of rigid media to your weak media. This technique will prevent media transportation issues.

In case you cut the media after printing, the media roll is unloaded. To print on the weak media again you must redo the procedure to attach a leading strip of rigid media.

This procedure describes the steps for outside printing. For outside printing it is recommended to load the weak media in position 1.

This procedure is also explained in a separate instruction video, click ["here"](#) to visit.

## Before you begin

Before you load a roll on the printer:

- Make sure you have added a media profile with the correct media type via the RIP. For more information, see [Configure media in the RIP on page 40](#).
- Check the media width of your roll before loading. When your media width is not present in the list on the operator panel, you can type it in.
- Put on gloves to avoid pollution of the paper by your fingerprints.



### CAUTION

- **Watch your fingers when you handle the media roll.**
- **Loading heavy media, 25 kg (55 lb) or more, has to be done by two people or with the help of external lifting tools.**



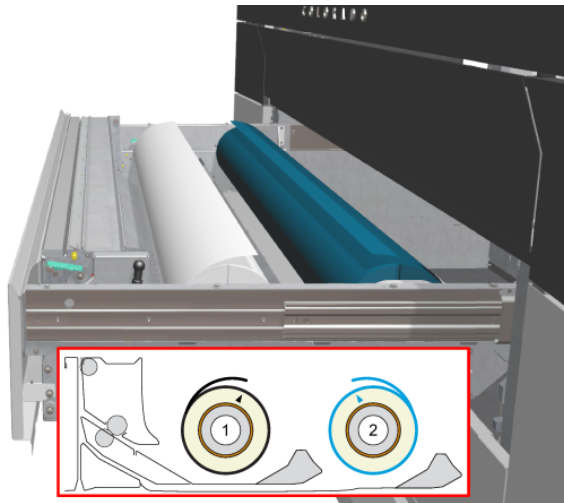
### IMPORTANT

- Do not use dented or damaged media rolls to prevent damage to the printheads.
- Only open the media drawer when the indicator light on the drawer is on. Do not open the drawer when the light is off, you can damage the machine.

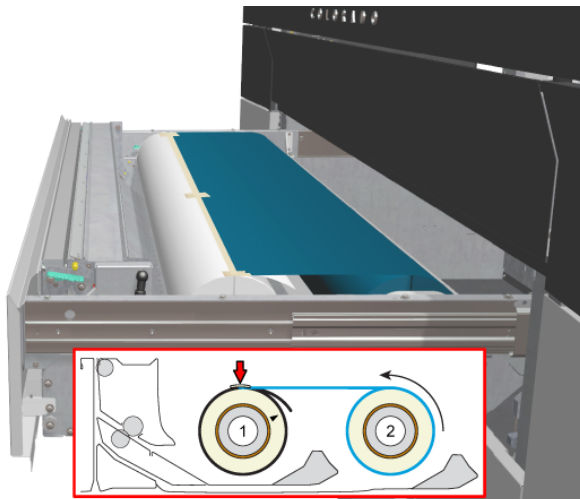
## Procedure

1. Pull firmly to open the media drawer.
2. Load the media roll of weak media in position 1, with the media flap on top pointing away from you.

3. Load a media roll of rigid media in position 2, with the media flap on top and towards you.

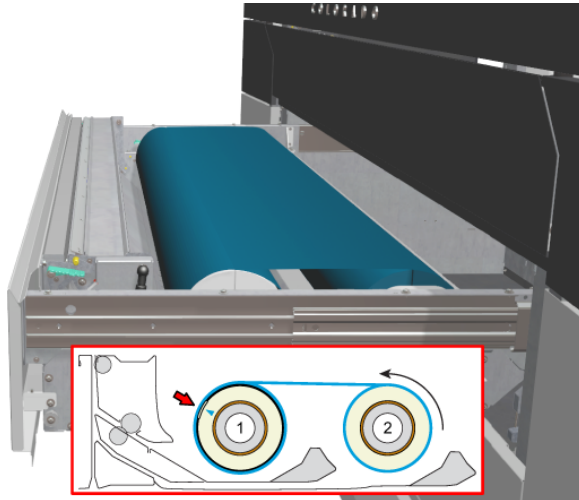


4. Take the leading edge of the rigid media and tape it to the roll of weak media.
  1. Tape first the center and the sides of the media.
  2. Then, tape along the leading edge of the media.

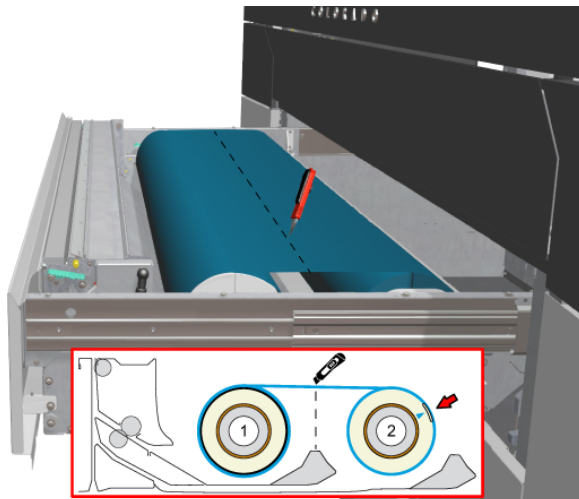




5. Use both hands to turn the media roll in position 1 towards you. Add  $\pm 80$  cm (31.5 inch) of rigid media to the weak media roll.



6. Take a knife and cut the rigid media manually.



7. Pull the media from the weak media roll in position 1 until the taping position is at the media loading position.
8. Tape the leading edge of weak media on top of the rigid media.
  1. Tape first the center and the sides of the media.
  2. Then, tape along the leading edge of the media.
9. Use both hands to turn the weak media roll in position 1 backward.
10. Take a knife and cut the media in the cutting guide to get a straight leading edge. Always use a straight cut leading edge to prevent damage to the printheads.
11. Use both hands to turn the weak media roll and slide the media under the metal paper guide until the media is transported automatically. You will hear a beeping sound when the media is correctly fed and loaded.



**IMPORTANT**

Make sure media is always rolled up evenly on the core. Do not load media that is not rolled up evenly (telescoping) as it can damage the machine.

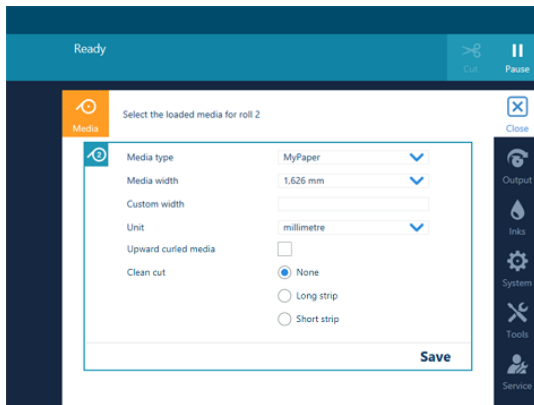
12. Close the media drawer carefully. The operator panel displays the message that new media is detected and an icon in the top left corner indicates that a roll is loaded for inside printing. This can take 5 seconds.



**IMPORTANT**

Do not open the media drawer when the indicator light is off, you can damage the machine.

13. On the operator panel, select the correct media type and fill in the media width.



14. When the media you use has an upward curl select [ Upward curled media].  
This setting persists as long as the media is assigned. When enabled, the system feeds the media to the output position. You can then open the top cover and guide the media. After you close the top cover, the media is transported to the clamp. Open the top cover and guide the media again. Printing starts after these actions have been completed.
15. Tap on [Save].



**NOTE**

For the highest output quality, it is advised to always perform a media calibration when you load a new media type or a new media width. For more information, see [Calibrate the media on page 116](#).

**After you finish**

After the weak media is loaded, a print job does not start automatically. First you have to:

1. Feed the media. For more information see [Feed and retract media manually on page 134](#).
2. Transport the media on the platen to the desired position. For more information see [Transport media by distance on page 137](#), [Transport media by manual control on page 136](#).

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# Load weak media for inside printing

## Introduction

When you load weak media in the printer, such as canvas and textiles, manual feeding and the use of the tension bar are recommended. You can configure the settings for manual feeding and the tension bar in the RIP. You can also use the help of rigid media to feed the weak media more easily in the paper path.

Follow the procedure below to attach a leading strip of rigid media to your weak media. This technique will prevent media transportation issues.

In case you cut the media after printing, the media roll is unloaded. To print on the weak media again you must redo the procedure to attach a leading strip of rigid media.

This procedure describes the steps for inside printing. For inside printing it is recommended to load the weak media in position 1.

This procedure is also explained in a separate instruction video, click "[here](#)" to visit (video shows outside printing).

## Before you begin

Before you load a roll on the printer:

- Make sure you have added a media profile with the correct media type via the RIP. For more information, see [Configure media in the RIP on page 40](#).
- Check the media width of your roll before loading. When your media width is not present in the list on the operator panel, you can type it in.
- Put on gloves to avoid pollution of the paper by your fingerprints.



### CAUTION

- **Watch your fingers when you handle the media roll.**
- **Loading heavy media, 25 kg (55 lb) or more, has to be done by two people or with the help of external lifting tools.**



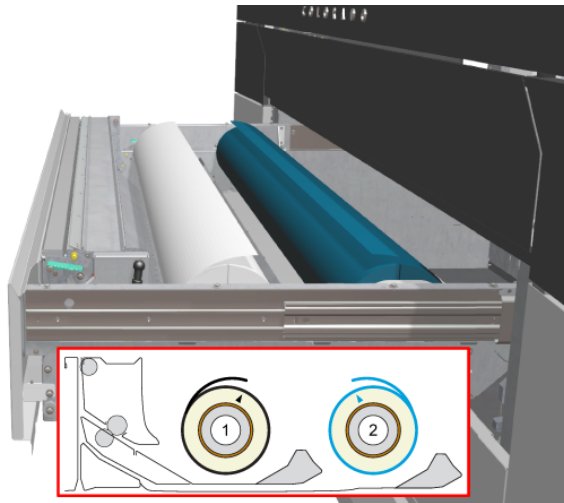
### IMPORTANT

- Do not use dented or damaged media rolls to prevent damage to the printheads.
- Only open the media drawer when the indicator light on the drawer is on. Do not open the drawer when the light is off, you can damage the machine.

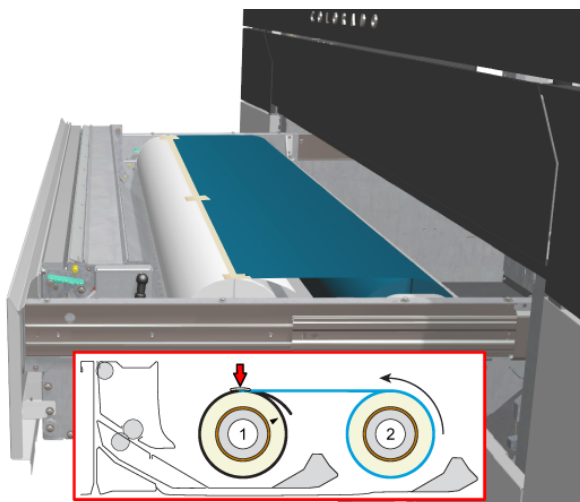
## Procedure

1. Pull firmly to open the media drawer.
2. Load the media roll of weak media in position 1, with the media flap on top pointing away from you.

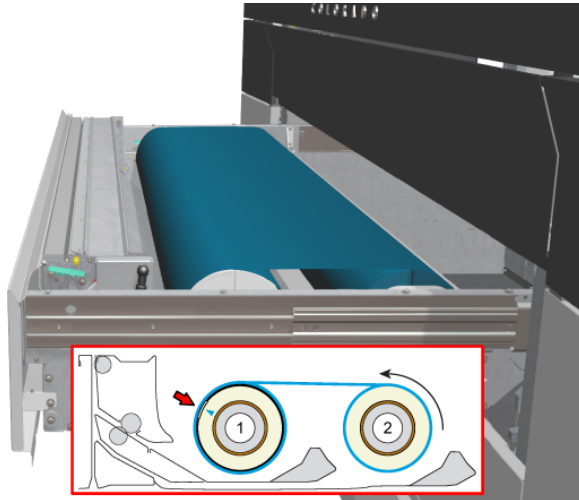
3. Load a media roll of rigid media in position 2, with the media flap on top and towards you.



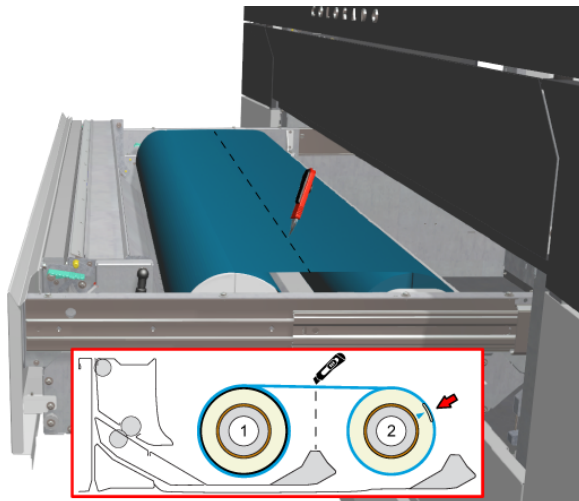
4. Take the leading edge of the rigid media and tape it to the roll of weak media.
  1. Tape first the center and the sides of the media.
  2. Then, tape along the leading edge of the media.



5. Use both hands to turn the media roll in position 1 towards you. Add  $\pm 80$  cm (31.5 inch) of rigid media to the weak media roll.



6. Take a knife and cut the rigid media manually.



7. Pull the media from the weak media roll in position 1 until the taping position is at the media loading position.
8. Tape the leading edge of weak media on top of the rigid media.
  1. Tape first the center and the sides of the media.
  2. Then, tape along the leading edge of the media.
9. Use both hands to turn the weak media roll in position 1 backward.
10. Take a knife and cut the media in the cutting guide to get a straight leading edge. Always use a straight cut leading edge to prevent damage to the printheads.
11. Unload the media roll in position 2. For more information, see [Unload a media roll from the drawer on page 154](#).
12. Unload the weak media roll from roll position 1.
13. Rotate the weak media roll and place the roll with the media flap on top pointing towards you in roll position 2.
14. Put the feed media shaft back into the drawer with the ruler and the pins of the locking mechanism facing up to prevent damage to the media. Firmly close the clamp. Make sure you close the clamp completely until you hear a click.

15. Use both hands to turn the weak media roll and slide the media under the metal paper guide until the media is transported automatically. You will hear a beeping sound when the media is correctly fed and loaded.



**IMPORTANT**

Make sure media is always rolled up evenly on the core. Do not load media that is not rolled up evenly (telescoping) as it can damage the machine.

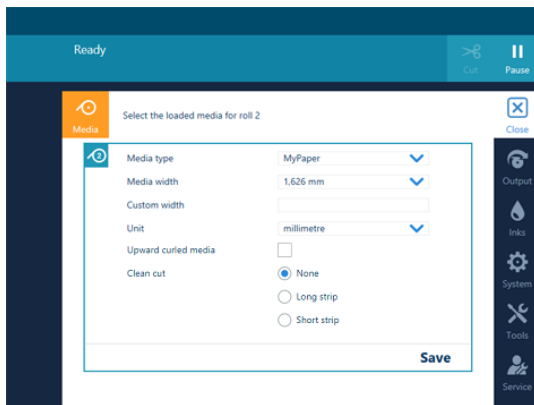
16. Close the media drawer carefully. The operator panel displays the message that new media is detected and an icon in the top left corner indicates that a roll is loaded for inside printing. This can take 5 seconds.



**IMPORTANT**

Do not open the media drawer when the indicator light is off, you can damage the machine.

17. On the operator panel, select the correct media type and fill in the media width.



18. When the media you use has an upward curl select [ Upward curled media].  
This setting persists as long as the media is assigned. When enabled, the system feeds the media to the output position. You can then open the top cover and guide the media. After you close the top cover, the media is transported to the clamp. Open the top cover and guide the media again. Printing starts after these actions have been completed.
19. Tap on [Save].



**NOTE**

For the highest output quality, it is advised to always perform a media calibration when you load a new media type or a new media width. For more information, see [Calibrate the media on page 116](#).

**After you finish**

After the weak media is loaded, a print job does not start automatically. First you have to:

1. Feed the media. For more information see [Feed and retract media manually on page 134](#).
2. Transport the media on the platen to the desired position. For more information see [Transport media by distance on page 137](#), [Transport media by manual control on page 136](#).

## Load media with the media input unit

### Introduction

In this topic you will find information on how to load the media from an external device into the Colorado 1650.

### Before you begin

- Check the media up-front (small roll).  
Calibration can be performed on the media loaded on an external device.
- Load the media roll centered onto the core on the external device.

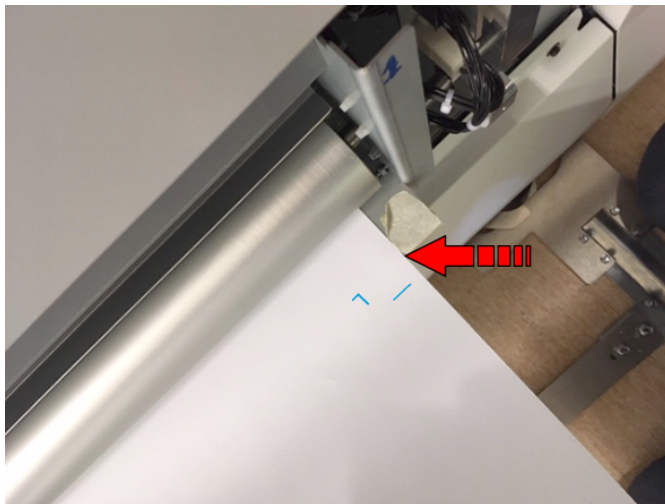



#### NOTE

- Load the media for outside printing is preferred.
- Print quality is guaranteed after 1 meter (39.4 inch).  
When the media is taped to the take-up roll.

### Procedure

1. Place a marker on the frame of the Colorado 1650 media input unit to identify the width of the media (for example a piece of tape).

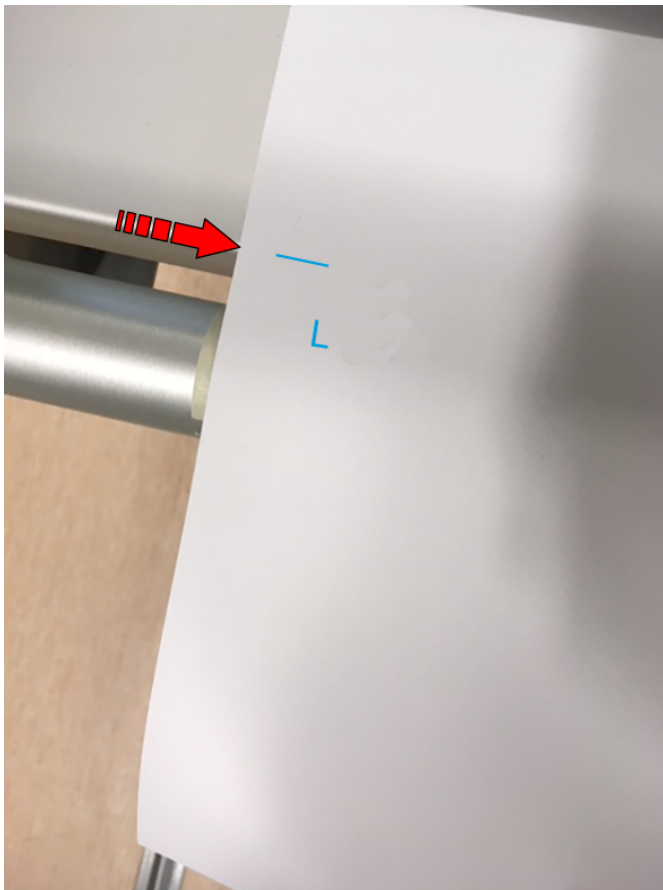


 NOTE

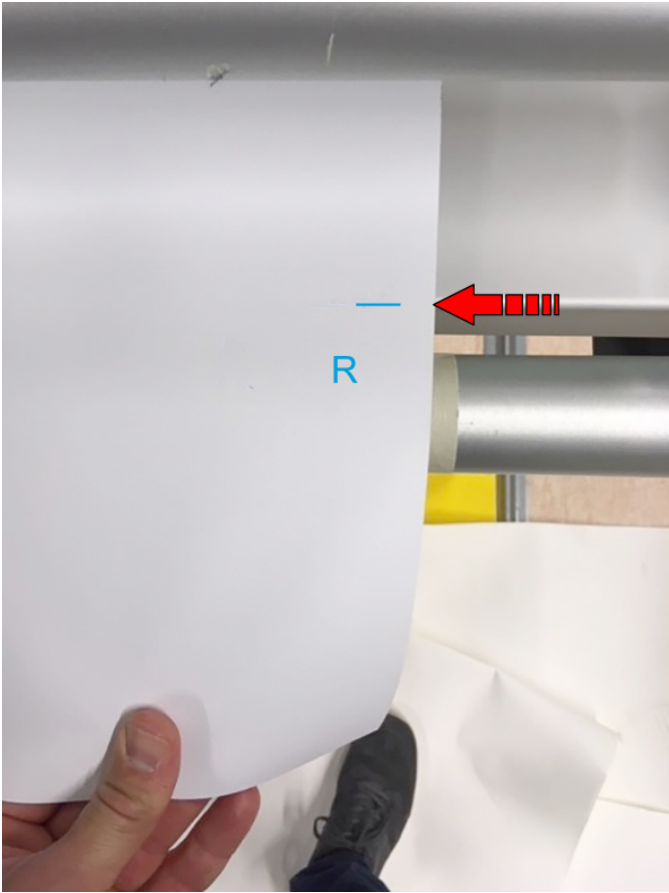


The notch in the illustration above indicates the center of the guiding plate of the media input unit. Place the marker at a distance "media width divided by 2" from the center notch.

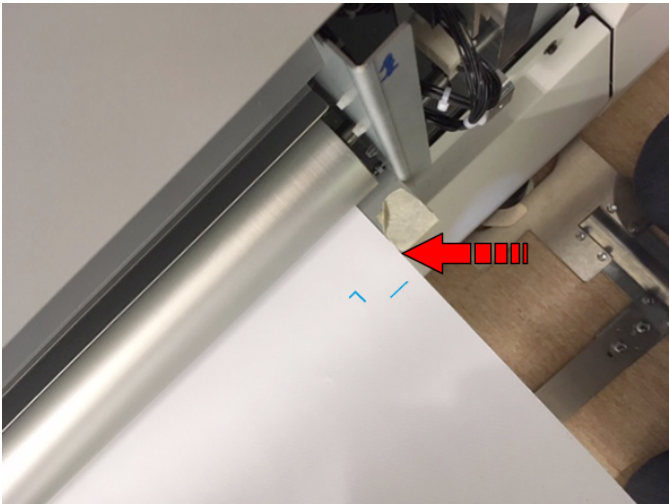
2. Add a mark (line) at a distance of 21 cm (8.3 inch) from the leading edge this on both sides of the media from the external device, left and right.





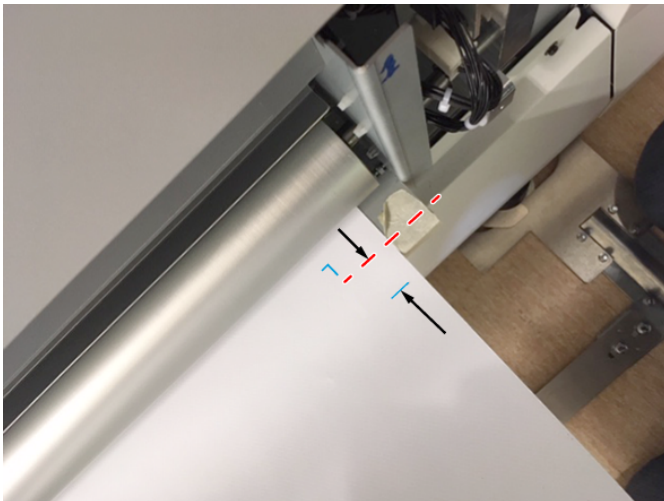
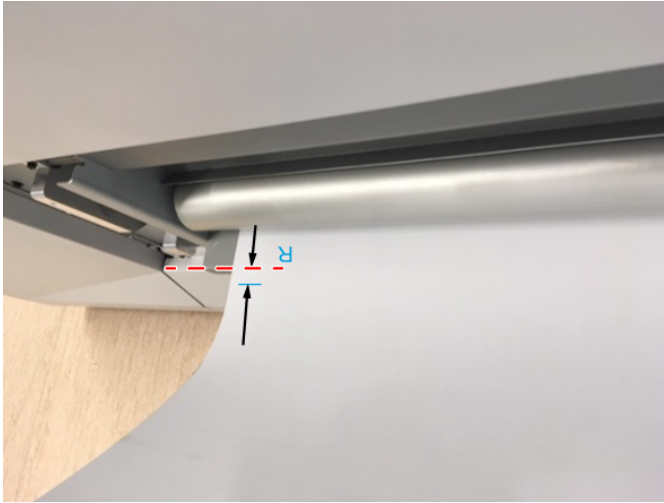


- 3. Before you feed the media into the printer, align the media with the marker on the printer (the tape you applied in step 1).

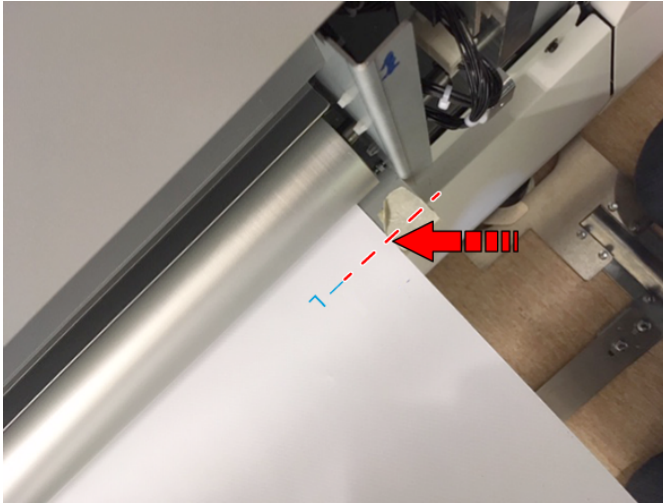


 **NOTE**  
It is highly recommended to perform the next two steps with two persons.

4. Align the 2 markers (lines) on the left and right side of the media with the input unit, see illustration. Distance to red dotted line is 3 cm (1.18 inch).



5. Feed the media into the media input unit. The input unit pinch will start to rotate for 2 seconds and grab the media. Check the media position at the reference marker (lines) position. The allowed tolerance is  $\pm 5$  mm (0.19 inch) at the left and  $\pm 5$  mm (0.19 inch) at the right side.



If the position is not within the tolerance is  $\pm 5$  mm (0.19 inch), pull the media back (2 persons preferred) and feed again until the position is within the tolerance.

# Calibrate the media

## Introduction

In case of print quality issues you should always perform a media calibration.

It is advised to calibrate media when you have loaded a new media type or media width.

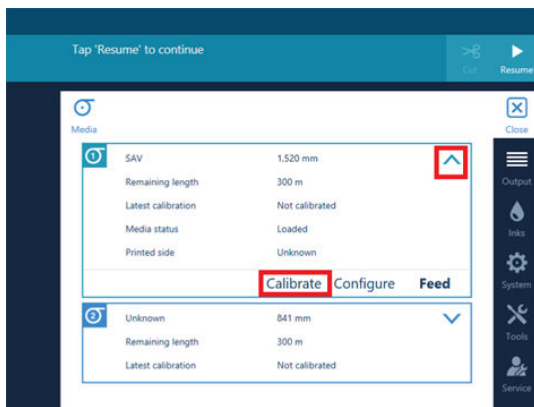


### NOTE

Media calibration is type and width dependent. When you have two different sizes of the same media type you must perform calibration for each size.

## Procedure

1. On the operator panel tap on the [Media] icon on the right.
2. Tap on the arrow to select the roll you want to calibrate and tap on [Calibrate].



The printer starts the calibration. Two small prints are made that can be disposed. This process can take several minutes.

3. When the calibration is finished a message will appear on the operator panel, tap on [OK].

## Add a leading or trailing strip

### Introduction

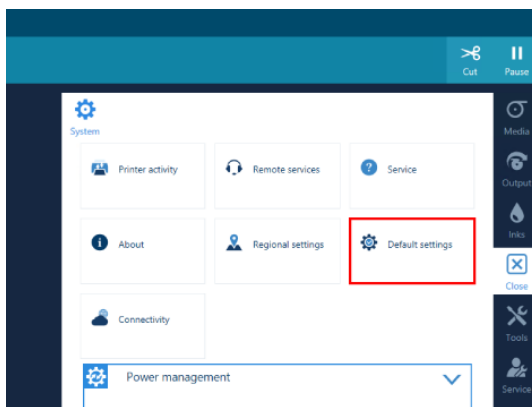
You can define the length of a leading or trailing strip. The strip is added by default to every print job from this moment on.

### When to do

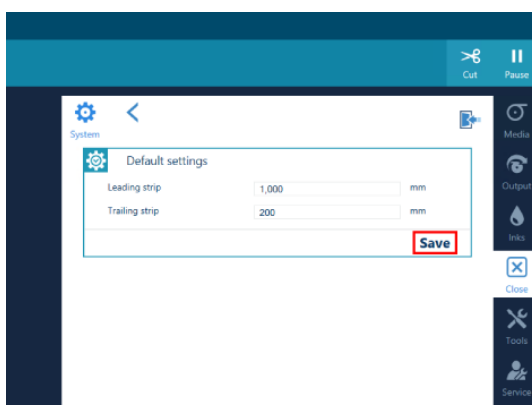
- You can add a leading strip before a job, to add white space when using it with finishers, such as for taping media to the winder.
- You can add a trailing strip after the job, to add white space after an image before you make a cut.

### Procedure

1. On the operator panel, tap on the [System] icon on the right.
2. Tap on [Default settings].



3. Tap on the box after [Leading strip] or [Trailing strip] and fill in the length you prefer. When you fill in 0 no strip will be added.



4. Tap on [Save] to save the settings.

## Load a take-up roll core onto the roll winder

### Introduction

When you want to wind media, you must load a take-up roll core onto the roll winder first.



#### IMPORTANT

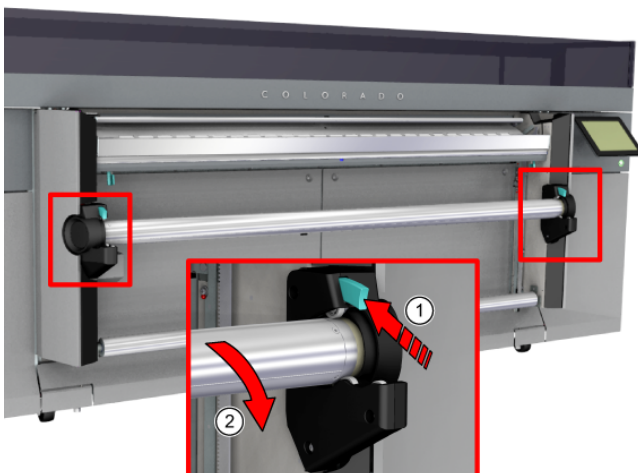
Make sure you use the core of an empty media roll with the same width or wider as the media you are printing on.

### Procedure

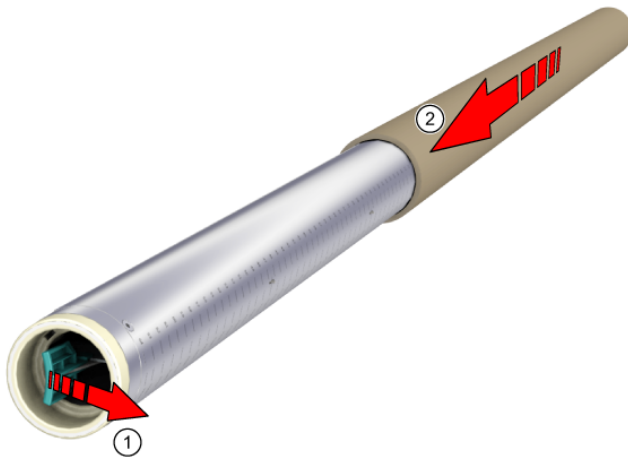
1. Locate the winder on the media output side.



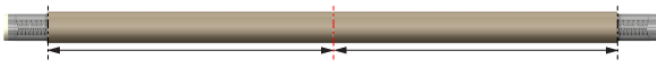
2. Push the green levers on both sides of the take-up media shaft. Remove the take-up media shaft from the winder.



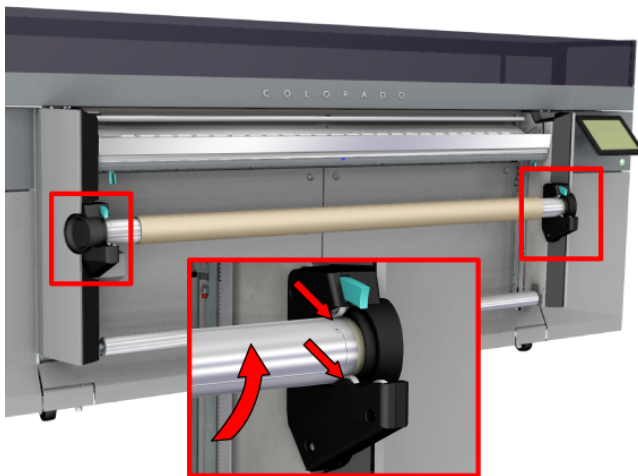
3. Pull the handle of the locking mechanism inside the core towards you. Take the empty media roll core and slide it on the media shaft.



4. Center the core on the media shaft.



5. Push to place the media shaft back on the winder. Make sure it clicks in place.



### After you finish

You can now wind media onto the core, for more information see [Print and wind without a tension bar on page 121](#), [Print and wind with a tension bar on page 124](#), [Print and wind with a locked tension bar on page 128](#).

# Print with or without winding

## Winding options

### Introduction

For the Colorado 1650 there are several winding options depending on the type of media you are using.



#### NOTE

It is very important to select the correct winding option. If you choose the wrong option this can lead to print quality and winding issues.

### Overview

In a media profile a media category is used that corresponds with the loaded media type. Each media category uses default media settings. One of the media settings is [Winding tension] that controls the winding tension that best fits the media type.

For more information, see [Change the media settings on page 74](#).

Options	Media category	[Winding tension] value	Media characteristics
<a href="#">Print and wind without a tension bar on page 121</a> <a href="#">Print without winding on page 132</a> <a href="#">AutoCut on page 149</a>	Polymeric & cast vinyl Monomeric vinyl Film Light paper Paper	[no tension bar]	The media can be transported well and is not too weak.
<a href="#">Print and wind with a tension bar on page 124</a>	Heavy banner Light banner Textile Canvas	[tension bar]	The media is weaker and sensitive for buckling, but not too stiff.
<a href="#">Print and wind with a locked tension bar on page 128</a>	Thick film Heavy paper	[locked tension bar]	The media is stiff.



## Print and wind without a tension bar

### Introduction

Winding media without a tension bar, loose winding, is used for most media that can be transported well and is not too weak.

### Before you begin

- The use of the tension bar is set in the media type configuration in the RIP software. For winding without a tension bar you must select [no tension bar] under [Winding tension]. For more information, see [Change the media settings on page 74](#).
- Make sure you have loaded a take-up roll on the roll winder. For more information, see [Load a take-up roll core onto the roll winder on page 118](#).
- The printer is ready to print.



### CAUTION

- **Do not position the tension bar when there is no media present. Keep your fingers away because the tension bar can fall down.**
- **The winder has an emergency stopping device; It is located on the winder. Activating this emergency stopping device stops all winder motion.**

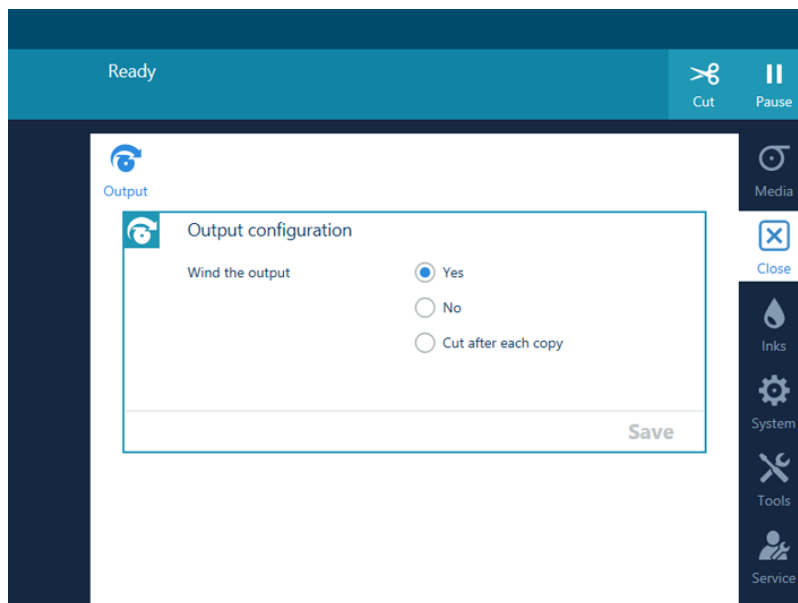
### Procedure

1. On the operator panel tap on the [Output] icon.
2. Make sure [Wind the output] is set to [Yes].

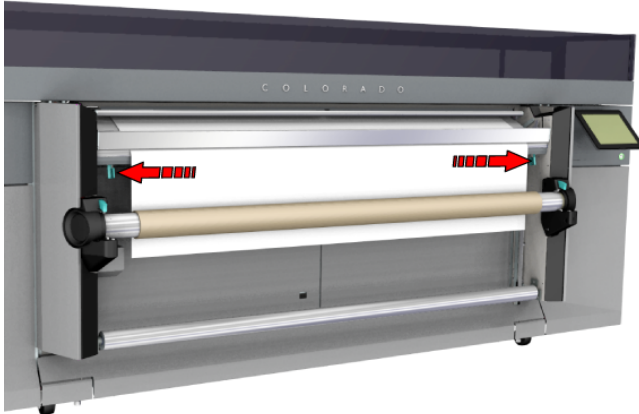


### NOTE

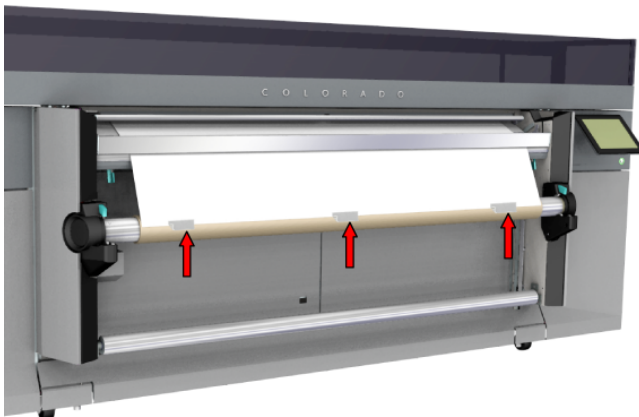
Make sure you set the output configuration in time, as you cannot change the configuration once the media has passed the clamp.



3. Start a print job.  
The printer will continue printing. The clamp closes when the media reaches the tape position, and the operator panel gives a message indicating you can tape the media.
4. Make sure the media guides are out of the way as they can damage the media.



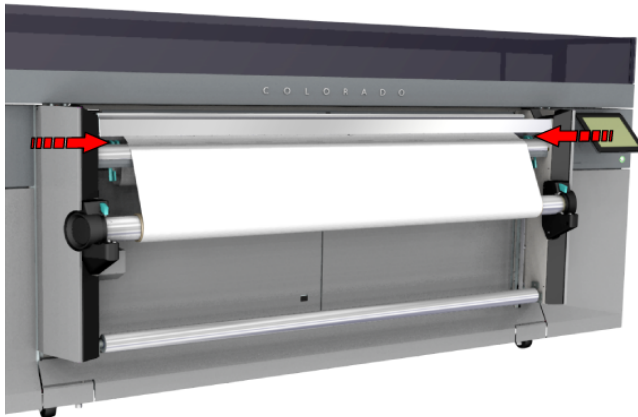
5. Take the leading edge of the media and align it on the core.
6. Tape first the center and then the sides of the media to the core.



**NOTE**

In order to prevent winding issues when printing on the inside, the media has to be taped with enough tapes over the full width of the roll to straighten the curling edge.

7. Move the media guides towards the middle to align with the media.



8. On the operator panel tap on [Ready].  
The printer continues printing while winding the job.

#### After you finish

When you want to stop winding you have to cut the media. For more information, see [Cut the media on page 145](#), [Cut the media \(manual\) on page 147](#).

## Print and wind with a tension bar

### Introduction

Winding media with a tension bar, tight winding, is only used for weaker media in order to prevent media transportation issues. Media that is weak and sensitive for buckling, but not too stiff, can be wound with a tension bar in unlocked position.

### Before you begin

- The use of the tension bar is set in the media type configuration in the RIP software. For winding with a tension bar, you must select [tension bar] under [Winding tension]. For more information, see [Change the media settings on page 74](#).
- Make sure you have placed a take-up roll core on the roll winder. For more information, see [Load a take-up roll core onto the roll winder on page 118](#).
- Make sure you have tape ready.
- The printer is ready to print.



### CAUTION

- **Do not position the tension bar when there is no media present. Keep your fingers away because the tension bar can fall down.**
- **The winder has an emergency stopping device; It is located on the winder. Activating this emergency stopping device stops all winder motion.**

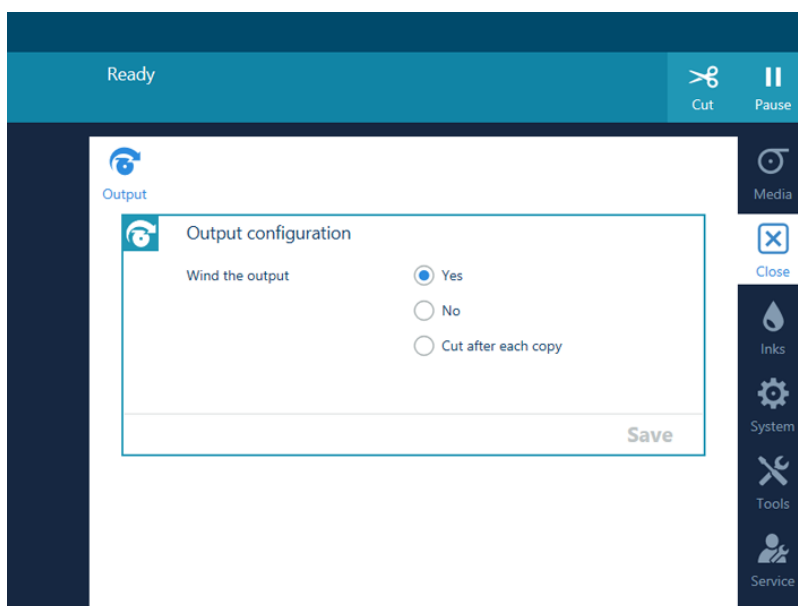
### Procedure

1. On the operator panel tap on the [Output] icon.
2. Make sure [Wind the output] is set to [Yes].

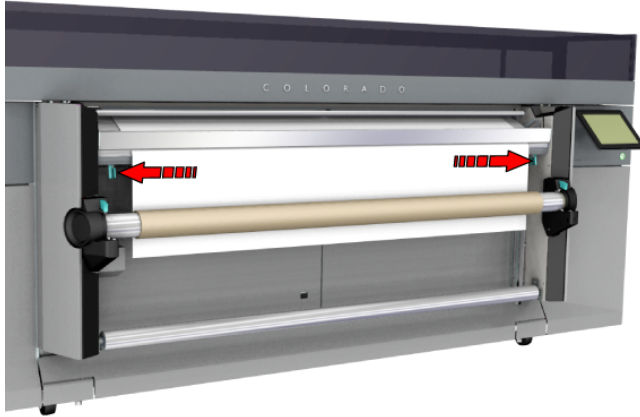


### NOTE

Make sure you set the output configuration in time, as you cannot change the configuration once the media has passed the clamp.



3. Start a print job.  
The printer spools the media until it reaches the tape position. The clamp closes and the operator panel gives a message indicating you can tape the media.
4. Make sure the media guides are out of the way as they can damage the media.



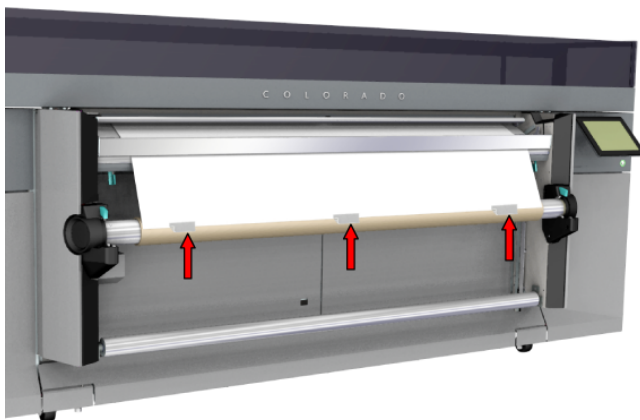
5. Take the leading edge of the media and align it on the core.



**NOTE**

In case of weak media use a ruler to ensure that the media is exactly centered on the core.

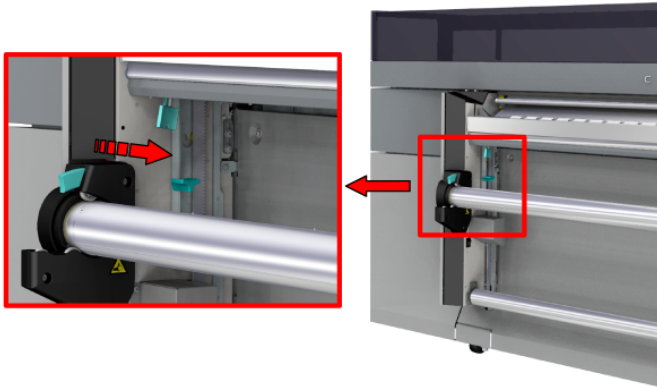
6. Tape first the center and then the sides of the media to the core.



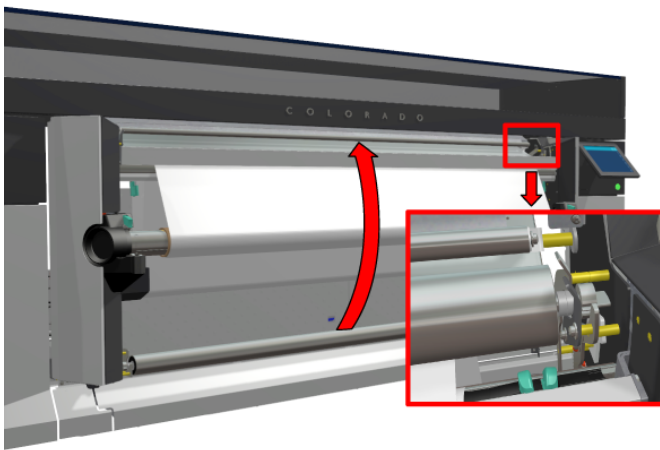
**NOTE**

In order to prevent winding issues when printing on the inside, the media has to be taped with enough tapes over the full width of the roll to straighten the curling edge.

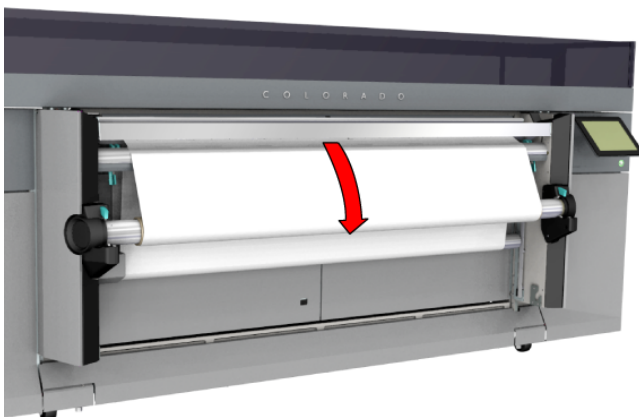
7. Place the tension bar lever in unlocked position.



8. Lift up the tension bar and place it correctly on top of the media.



9. On the operator panel tap on [Ready].  
The printer starts printing while winding the job. Make sure the tension bar follows the media when the blouse is formed.



### After you finish

When you want to stop winding you have to cut the media. For more information, see [Cut the media on page 145](#), [Cut the media \(manual\) on page 147](#).

## Print and wind with a locked tension bar

### Introduction

Winding media with a locked tension bar is only used for stiff media, in order to prevent media transportation issues.

### Before you begin

- The use of the tension bar is set in the media type configuration in the RIP software. For winding with a locked tension bar, you must select [locked tension bar] under [Winding tension]. For more information, see [Change the media settings on page 74](#).
- Make sure you have placed a take-up roll core on the roll winder. For more information, see [Load a take-up roll core onto the roll winder on page 118](#).
- Make sure you have tape ready.
- The printer is ready to print.



### CAUTION

- **Do not position the tension bar when there is no media present. Keep your fingers away because the tension bar can fall down.**
- **The winder has an emergency stopping device; It is located on the winder. Activating this emergency stopping device stops all winder motion.**

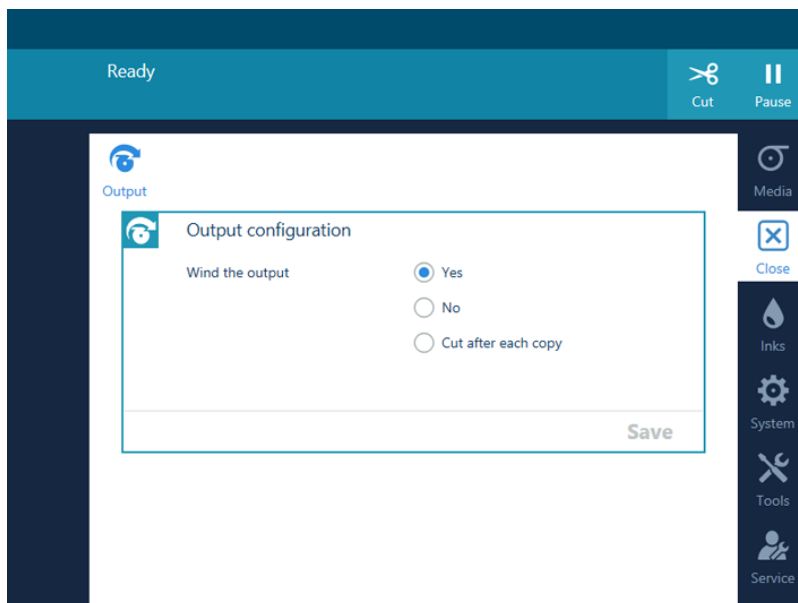
### Procedure

1. On the operator panel tap on the [Output] icon.
2. Make sure [Wind the output] is set to [Yes].



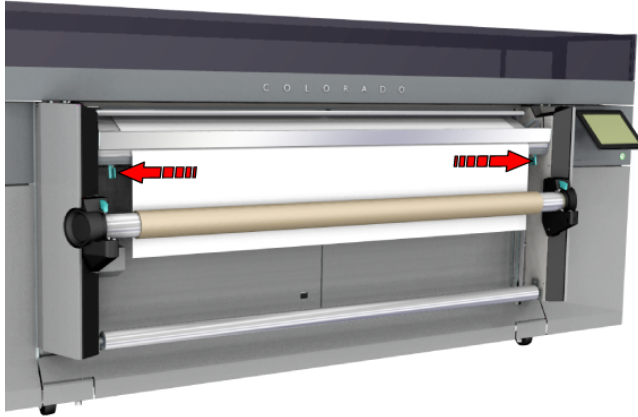
### NOTE

Make sure you set the output configuration in time, as you cannot change the configuration once the media has passed the clamp.

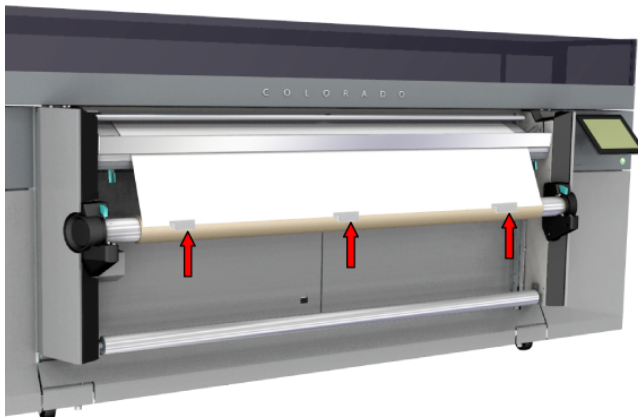




3. Start a print job.  
The printer spools the media until it reaches the tape position. The clamp closes and the operator panel gives a message indicating you can tape the media.
4. Make sure the media guides are out of the way as they can damage the media.



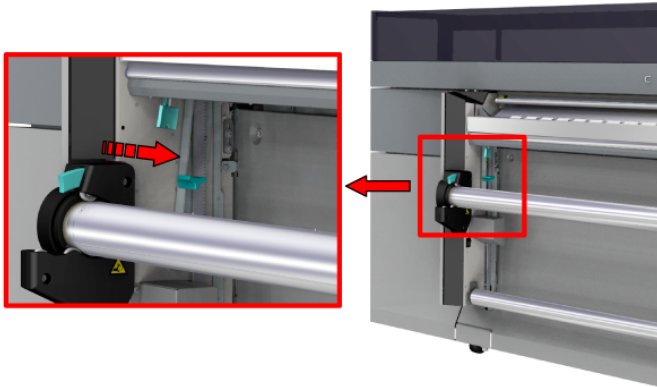
5. Take the leading edge of the media and align it on the core.
6. Tape first the center and then the sides of the media to the core.



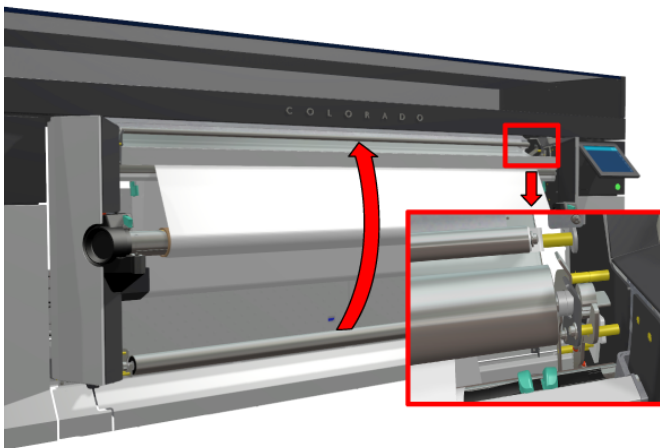
**NOTE**

In order to prevent winding issues when printing on the inside, the media has to be taped with enough tapes over the full width of the roll to straighten the curling edge.

7. Place the tension bar lever in locked position.



8. Lift up the tension bar and place it correctly on top of the media.



9. On the operator panel tap on [Ready].
10. Move the media guides towards the middle to align with the media. Tap on [Ready].  
The printer starts printing while winding the job. Make sure the tension bar falls into the locked position.



### After you finish

When you want to stop winding you have to cut the media. For more information, see [Cut the media on page 145](#), [Cut the media \(manual\) on page 147](#).

# Print without winding

## Introduction

You can also print without winding. Media that is printed without winding can be transported well and is not too weak.

## Before you begin

- Check the media category of your media. Media categories that need a tension bar cannot be printed without winding.
- Printing without winding is set in the media type configuration in the RIP software. For printing without winding you must select [no tension bar] under [Winding tension]. For more information, see [Change the media settings on page 74](#).
- The printer is ready to print.

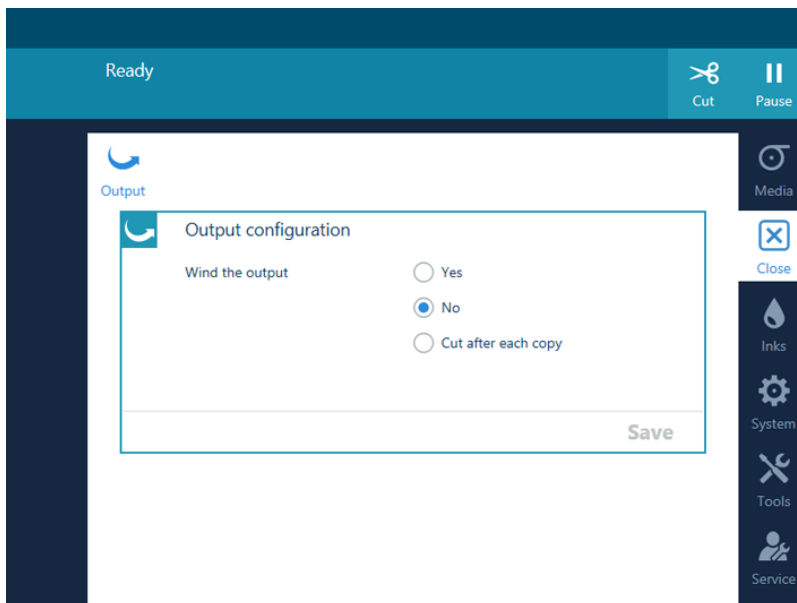
## Procedure

1. On the operator panel tap on the [Output] icon.
2. Make sure [Wind the output] is set to [No].



### NOTE

Make sure you set the output configuration in time, as you cannot change the configuration once the media has passed the clamp.



3. Start a print job. The printer continues printing without winding.



### After you finish

When you want to stop printing without winding you have to cut the media. For more information, see [Cut the media on page 145](#), [Cut the media \(manual\) on page 147](#).

# Move media manually

## Introduction

You can move media manually.

This gives you the option to move the media before and between jobs.

You can:

- Feed and retract media, see [Feed and retract media manually on page 134](#)
- Transport media by manual control, see [Transport media by manual control on page 136](#)
- Transport media by distance, see [Transport media by distance on page 137](#)

## Feed and retract media manually

### Introduction

You can feed the media to the platen or to the tape position, without sending a print job.

### Feed weak media manually

When you feed the media manually, the printhead carriage will move over the media to scan the side edges.

If the media you use requires a leading strip of rigid media then it is required to check the [Requires Manual Loading] setting in the [Media Characteristics] section of the RIP software. With this setting the scan will take place just before printing.



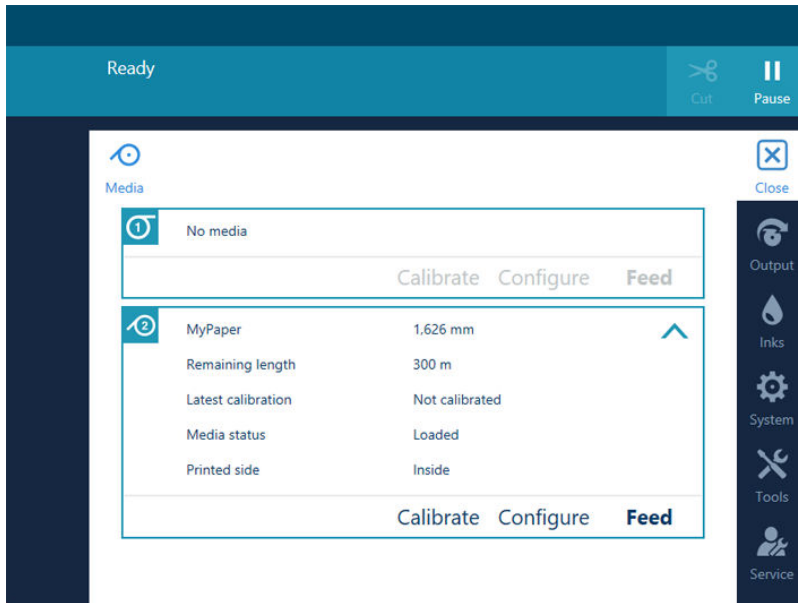
#### NOTE

The setting [Requires Manual Loading] only works when [Winding tension] is set to [Tension bar] or [Locked tension bar].

### Procedure

1. Load the media. For more information see [Prepare media for printing on page 85](#).
2. On the operator panel tap on the [Media] icon on the right.
3. Tap on the arrow to select the roll you want to feed.

4. Tap on [Feed]. The printer feeds the media in the correct position to tape the media or to start printing, depending on the type of media.



5. Tap on [Retract] to retract the media to the drawer.

**NOTE**

You can retract the media only when the media is not yet at the taping position.

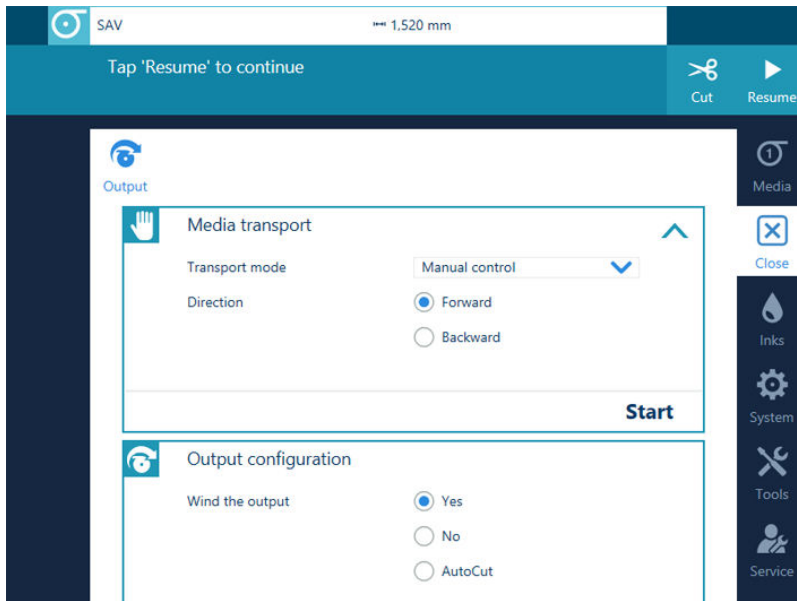
## Transport media by manual control

### Introduction

You can move the media before and between jobs.

### Procedure

1. On the operator panel tap on the [Output] icon.



2. Select [Manual control] as [Transport mode].
3. Select the transport direction.
  - [Forward ] will transport the media towards the winder.
  - [Backward ] will transport the media back in the direction of the drawer.
4. Tap on [Start].

The media will move in the direction you selected. A stop option becomes available.



#### IMPORTANT

When media transport is started in the forward direction, the system will keep spooling media until the roll is empty.



#### NOTE

Backward transport is limited by the available media on the platen and the winder. No media will be removed from the winder. It is not possible to move printed media back into the drawer.

5. Tap on [Stop] to stop the transport.



#### NOTE

Depending on the settings [Moist sensitivity] and [Auto media advance] the actual print position can vary. [Moist sensitivity] timers are restarted after the movement has been stopped.



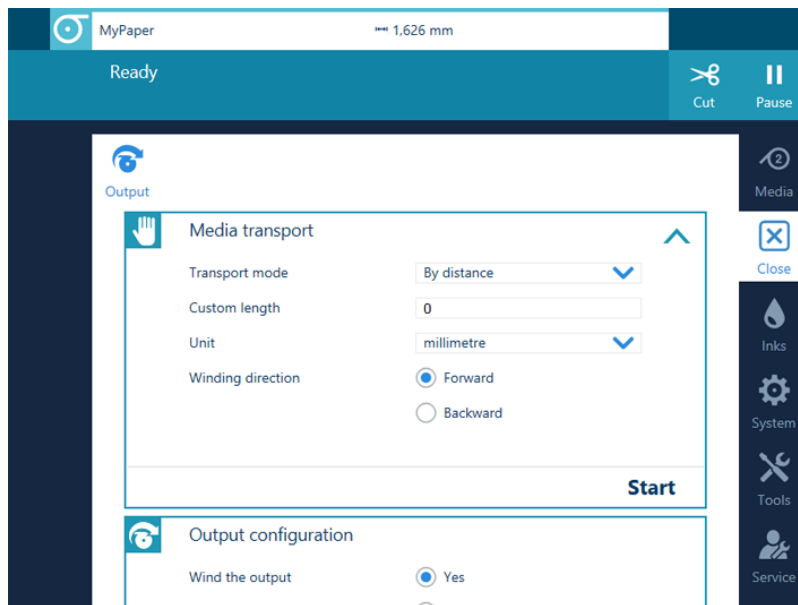
# Transport media by distance

## Introduction

You can move the media before and between jobs.

## Procedure

1. On the operator panel tap on the [Output] icon.



2. Select [Distance] as [Transport mode].
3. Select the winding direction.
  - [Forward ] will transport the media towards the winder.
  - [Backward ] will transport the media back in the direction of the drawer.
4. Enter the [Custom length].
5. Tap on [Start].



### NOTE

Backward transport is limited by the available media on the platen and the winder. No media will be removed from the winder. It is not possible to move printed media back into the drawer.

6. Tap on [Stop] to stop the transport.



### NOTE

Depending on the settings [Moist sensitivity] and [Auto media advance] the actual print position can vary. [Moist sensitivity] timers are restarted after the movement has been stopped.

# Print on the inside of a media roll

## Introduction

To print on the inside of a media roll, load the media roll for inside printing.

## Procedure

1. Load the media roll for inside printing on position 2 in the media drawer, see [Load a media roll for inside printing on page 97](#).
2. Choose a print option depending on the type of media you are using. For more information see [Print with or without winding on page 120](#).

---

# Print double-sided with automatic cut

## Introduction

Colorado 1650 offers the possibility to print on the inside as well as on the outside of the media, which indirectly provides the user a way to print double-sided.

To print double-sided you print on the inside of the media.

This procedure is also explained in a separate instruction video, click ["here"](#) to visit.

## Before you begin

### RIP

- In [Media Characteristics], set automatic advance correction (AAC) to [Enhanced] to achieve an optimal x-registration.  
AAC prints yellow or black markers on the media that the printer uses as guidance to optimize the media step accuracy. See "Change the media settings" in the operation guide.
- In [Placement strategy]→[General], make sure that the left and right are identical.
- In [Placement strategy]→[Options], make sure that the space between copies values are 0.

### Printer

- Use the tension bar (locked).  
In case the media is normally (single-sided) printed without tension bar, switch to the locked tension bar mode.  
You can change this tension bar setting for the media type in the RIP. Change from [No tension bar] to [Locked tension bar].
- Use a matte print mode, preferably the same mode for both sides.
- Do not enable automatic media advance or moist sensitivity settings.
- If necessary calibrate the media.

### Tools

- A media suitable for double sided printing.
- 2 empty cores with the same width as the media you want to use.
- A roll of tape.



Strip	Function	Length of the strip
1	Leading strip	1600 mm (63 inch)
2	Lead-in image	250 mm (9.84 inch)
3	Lead-out image	250 mm (9.84 inch)
4	Trailing strip	1600 mm (63 inch)
5	Leading strip	1600 mm (63 inch)
6	Lead-in image	250 mm (9.84 inch)

Be aware you have to rotate the job for the inside 180 degrees.

The lead-in and lead-out images are used by the AAC to measure and correct for additional media step errors caused by the ink layer of side 1, while printing side 2.

### Procedure

1. Load a media roll on position 2 in the media drawer, with the flap pointing towards you.
2. Pull the media towards you.
3. Uncurl the media using an empty roll.
4. Turn the media back onto the roll in the drawer.
5. Load the media in the inside printing manner, see [Load weak media for inside printing on page 107](#).
6. Place a new empty take-up roll core and push the media shaft back on the winder.
7. On the operator panel tap on the [Media] icon.  
Select the required media and media width.
8. On the operator panel tap on the [Default settings][System] icon and change the leading and trailing edge length to 1600mm (63 inch).

9. Prepare a nest of prints for the outside of the media in one of the supported RIP software applications.  
In ONYX the nesting function is called [Group jobs]. Change the group setting from [Conserve media] to [Group jobs together]. The RIP will not change the order of the images and will treat all jobs in the group as 1 image.  
The nest includes:
  - a lead-in image (in any color)
  - the user images
  - a lead-out image (in any color)

**NOTE**

Please note that when you apply additional space between the separate images, you have to subtract this additional space from the 1600 mm (63 inch) at the trailing edge.

10. Submit the job to the printer and follow the instructions on the operator panel to print side 1.
11. Tape the media to the empty take-up media roll core.
12. Place the tension bar.
13. Lock the tension bar.
14. Adjust the position of the media guides on the left and right side.
15. On the operator panel tap the [Completed] when you are ready to start the print job.
16. Cut the media automatically when the print is completed and follow the instructions on the operator panel.
17. Remove the take-up media roll from the winder, see [Unload a take-up media roll from the roll winder on page 151](#) in the operation guide.
18. Place a new empty take-up roll core and push the media shaft back on the winder.  
This ends the printing procedure of side 1.
19. Prepare the nest of prints for side 2 of the double-sided print in one of the supported RIP software applications.  
The nest includes:
  - a lead-in image (in any color)
  - the user images

**NOTE**

Depending on the application you may need to rotate or mirror the images for side 2.

20. Load the media roll for inside printing on position 2 in the media drawer, with the flap pointing towards you.
21. Load the media in the inside printing manner.
22. On the operator panel change the trailing strip to 250 mm (9.84 inch) in the [Default settings].
23. Submit the job to the printer and follow the instructions on the operator panel to print the second side.
24. Repeat the actions of step 11 to 15 you did for printing side 1.
25. Remove the take-up media roll from the winder.

# Print double-sided with manual cut

## Introduction

Colorado 1650 offers the possibility to print on the inside as well as on the outside of the media, which indirectly provides the user a way to print double-sided.

To print double-sided you print on the inside of the media.

This procedure is also explained in a separate instruction video, click ["here"](#) to visit.

## Before you begin

### RIP

- In [Media Characteristics], set automatic advance correction (AAC) to [Enhanced] to achieve an optimal x-registration.  
AAC prints yellow or black markers on the media that the printer uses as guidance to optimize the media step accuracy. See "Change the media settings" in the operation guide.
- In [Placement strategy]→[General], make sure that the left and right are identical.
- In [Placement strategy]→[Options], make sure that the space between copies values are 0.

### Printer

- Use the tension bar (locked).  
In case the media is normally (single-sided) printed without tension bar, switch to the locked tension bar mode.  
You can change this tension bar setting for the media type in the RIP. Change from [No tension bar] to [Locked tension bar].
- Use a matte print mode, preferably the same mode for both sides.
- Do not enable automatic media advance or moist sensitivity settings.
- If necessary calibrate the media.

### Tools

- A media suitable for double sided printing.
- 2 empty cores with the same width as the media you want to use.
- A roll of tape.



Strip	Function	Length of the strip
1	Leading strip	1600 mm (63 inch)
2	Lead-in image	250 mm (9.84 inch)
3	Lead-out image	250 mm (9.84 inch)
4	Trailing strip with a cutting line	1600 mm (63 inch)
5	Leading strip	1600 mm (63 inch)
6	Lead-in image	250 mm (9.84 inch)

Be aware you have to rotate the job for the inside 180 degrees.

The lead-in and lead-out images are used by the AAC to measure and correct for additional media step errors caused by the ink layer of side 1, while printing side 2.

### Procedure

1. Load a media roll on position 2 in the media drawer, with the flap pointing towards you.
2. Pull the media towards you.
3. Uncurl the media using an empty roll.
4. Turn the media back onto the roll in the drawer.
5. Load the media in the inside printing manner, see [Load weak media for inside printing on page 107](#).
6. Place a new empty take-up roll core and push the media shaft back on the winder.
7. On the operator panel tap on the [Media] icon.  
Select the required media and media width.
8. On the operator panel tap on the [Default settings][System] icon and change the leading and trailing edge length to 1600mm (63 inch).

9. Prepare a nest of prints for the outside of the media in one of the supported RIP software applications.

In ONYX the nesting function is called [Group jobs]. Change the group setting from [Conserve media] to [Group jobs together]. The RIP will not change the order of the images and will treat all jobs in the group as 1 image.

The nest includes:

- a lead-in image (in any color)
- the user images
- a lead-out image (in any color)



**NOTE**

Please note that when you apply additional space between the separate images, you have to subtract this additional space from the 1600 mm (63 inch) at the trailing edge.

10. Submit the job to the printer and follow the instructions on the operator panel to print the first side.
11. Tape the media to the empty take-up media roll core.
12. Place the tension bar.
13. Lock the tension bar.
14. Adjust the position of the media guides on the left and right side.
15. On the operator panel tap the [Completed] when you are ready to start the print job.
16. Cut the media manually beneath the printed line when the print is completed and follow the instructions on the operator panel.
17. Remove the take-up media roll from the winder, see [Unload a take-up media roll from the roll winder on page 151](#) in the operation guide.
18. Cut the media precisely on the printed line. Do this outside of the printer.
19. Place a new empty take-up roll core and push the media shaft back on the winder.  
This ends the printing procedure of side 1.
20. Prepare the nest of prints for side 2 of the double-sided print in one of the supported RIP software applications.
- The nest includes:
- a lead-in image (in any color)
  - the user images



**NOTE**

Depending on the application you may need to rotate or mirror the images for side 2.

21. Load the media roll for inside printing on position 2 in the media drawer, with the flap pointing towards you.
22. Load the media in the inside printing manner.
23. On the operator panel change the trailing strip to 250 mm (9.84 inch) in the [Default settings].
24. Submit the job to the printer and follow the instructions on the operator panel to print the second side.
25. Repeat the actions of step 11 to 15 you did for printing side 1.
26. Remove the take-up media roll from the winder.



# Cut and unload media

## Cut the media

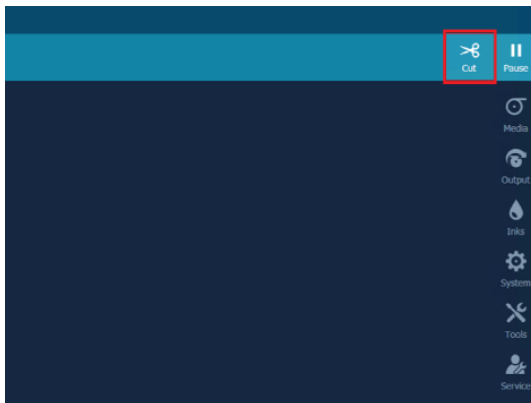
### Introduction

When you cut media, the printer uses the embedded knife.

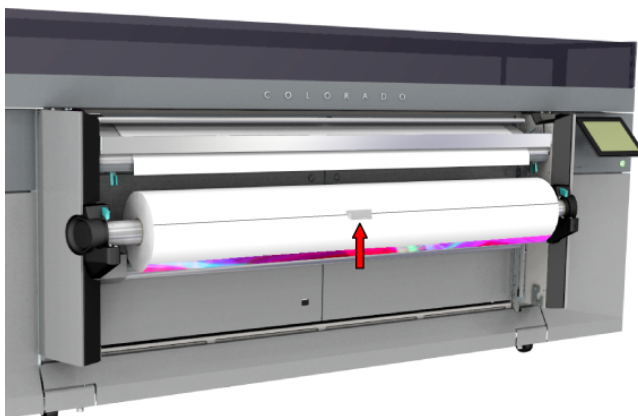
You can also cut the media manually with your own knife. How the media is cut depends on the media type configuration in the RIP. For more information, see [Change the media settings on page 74](#).

### Procedure

1. On the operator panel tap on the [Cut] icon on the top right.



2. Move the media guides to the sides.
3. When a tension bar is present, a window telling you to remove the tension bar opens. Remove the tension bar from the media path and tap on [Completed]. The embedded knife cuts the media.
4. Tape the trailing edge to the take-up media roll in case of winding.



### After you finish

You can now remove the take-up roll from the roll winder. For more information, see [Unload a take-up media roll from the roll winder on page 151](#).

## Cut the media (manual)

### Introduction

When you manually cut media, the printer does not use the embedded knife but you have to use your own knife or pair of scissors.

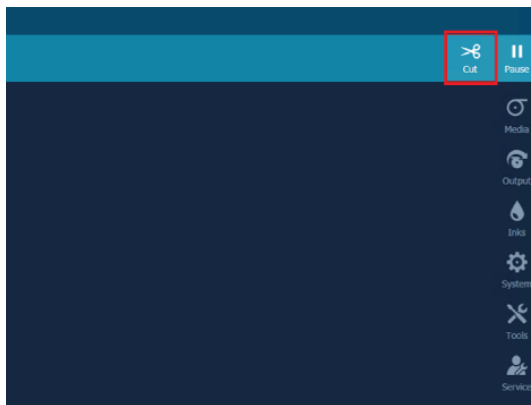
How the media is cut depends on the media type configuration in the RIP. For more information, see [Change the media settings on page 74](#).

### Before you begin

Use a knife or pair of scissors that is sharp enough to cut the media.

### Procedure

1. On the operator panel tap on the [Cut] icon on the top right.  
The printer transports the media automatically. The operator panel displays a request to make a manual cut.

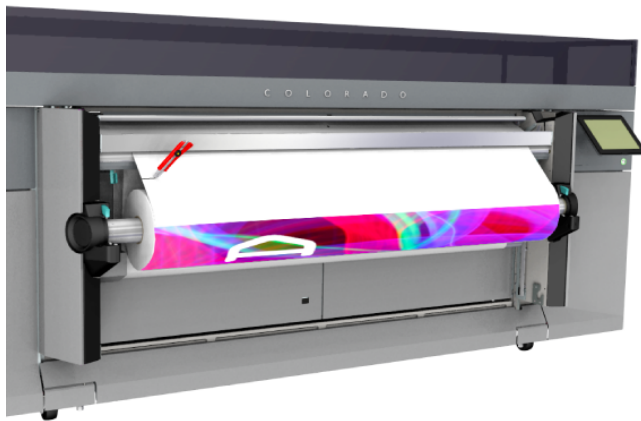


2. Move the media guides to the sides.
3. When a tension bar is present, a window telling you to remove the tension bar opens. Remove the tension bar from the media path.
4. Use a knife to cut the media. Cut the media as close as possible to the take-up roll.

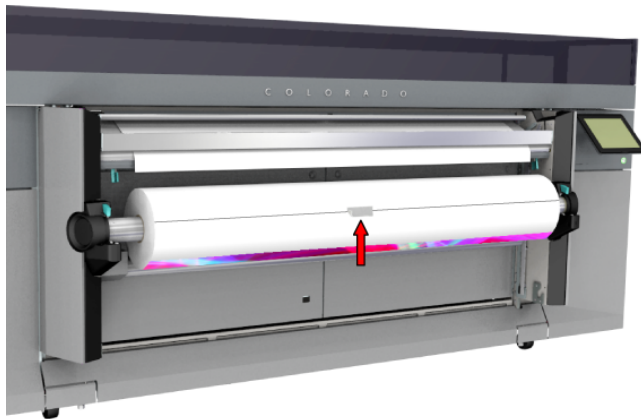


#### IMPORTANT

Cut as indicated in the illustration. Check that nothing is blocking the cutting path.



5. Tape the trailing edge to the take-up media roll in case of winding.



6. After you finish, tap on [Completed] on the operator panel.

### After you finish

You can now remove the take-up media roll from the roll winder. For more information, see [Unload a take-up media roll from the roll winder on page 151](#).

# AutoCut

## Introduction

When you want to print a job in sheets, you can choose to cut the media automatically after each copy. For AutoCut, the printer uses the embedded knife.



### NOTE

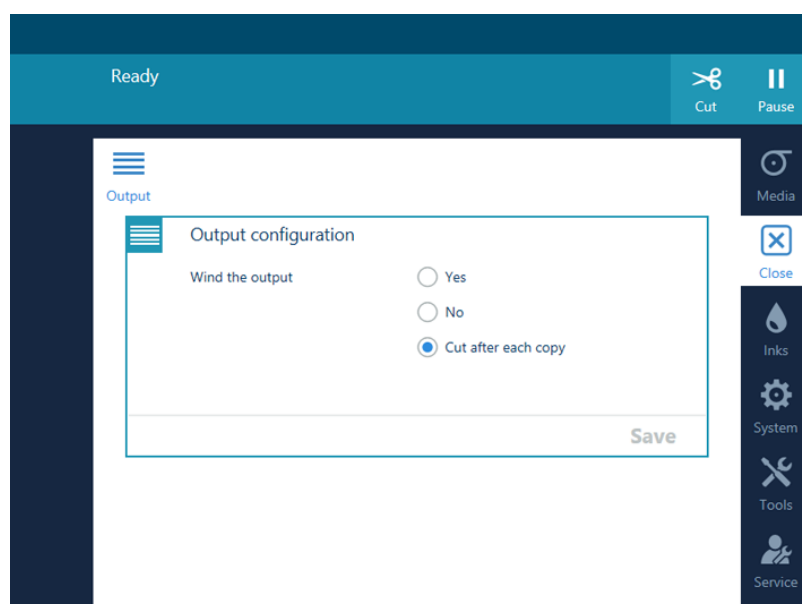
Media categories that need a tension bar or request a manual cut cannot be cut automatically after each copy.

## Before you begin

- Printing with a cut after each copy is set in the [Output configuration] on the operator panel.
- It is highly recommended to change the [Output configuration] only when the queue is empty.

## Procedure

1. Check the media category of your media and make sure the media type configuration is set correctly in the RIP:
  1. Set [Winding tension] to [no tension bar].
  2. Check the box in front of [Suitable for printer cutter].
  3. Check the box in front of [Printer does copies].
2. When you want to add white space between each copy, you have to define a leading or trailing strip in the RIP:
  1. Open the layout preview of your job in the RIP.
  2. Fill in the leading or trailing strip and make sure the value of the [Intercopy spacing] is the sum of their lengths.  
If you had defined a leading or trailing strip by default on the operator panel, reset the values to 0.
3. On the operator panel tap on the [Output] icon.
4. Make sure [Wind the output] is set to [AutoCut].



5. Start a print job.  
The embedded knife automatically cuts the media after each image has been printed.



6. Collect your output at the printer.

### After you finish

When you want to stop cutting after each copy you can change the output configuration again, after the jobs are completed and the queue is empty .

## Unload a take-up media roll from the roll winder

### Introduction

When you want to collect the printed output you have to unload the take-up media roll from the roll winder.

### Before you begin

Make sure you have cut the media. For more information, see [Cut the media on page 145](#) and [Cut the media \(manual\) on page 147](#).

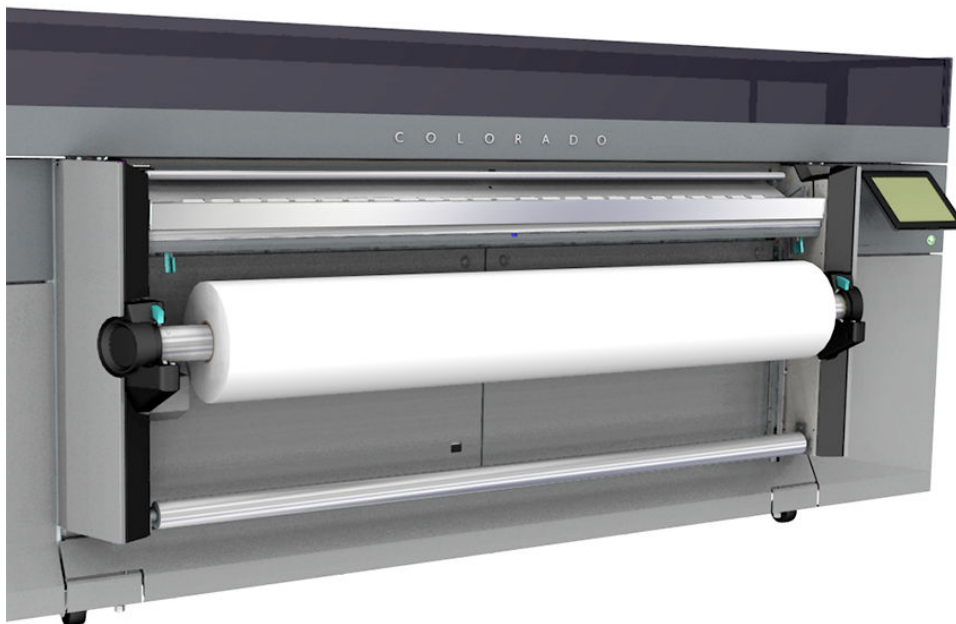


#### CAUTION

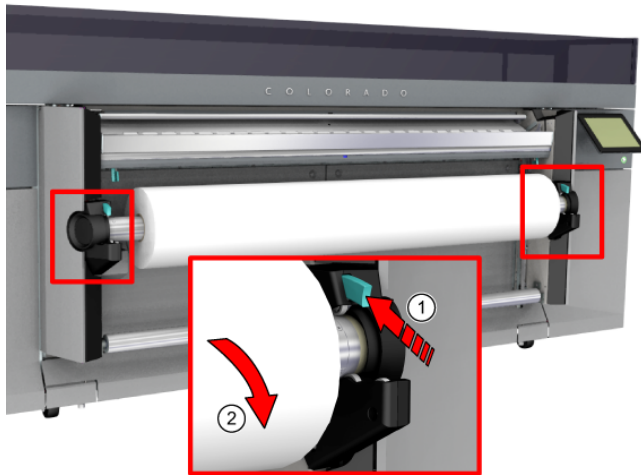
- **Watch your fingers when you handle the media roll.**
  - **Lifting heavy media, 25 kg (55 lb) or more, has to be done by at least two people or with the help of external lifting tools.**
- 

### Procedure

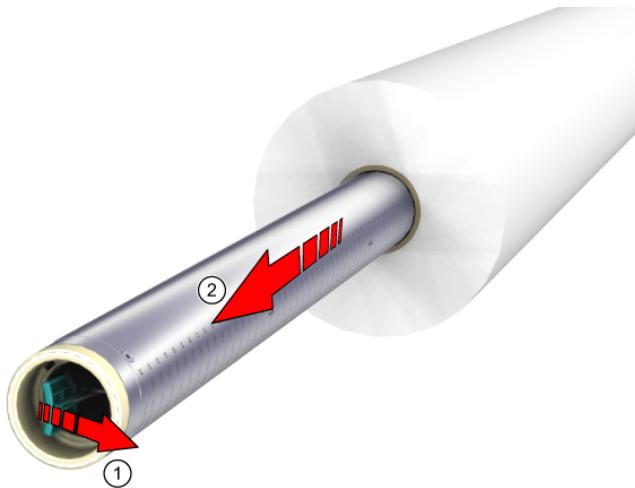
1. Locate the winder on the media output side.



2. Push the green levers on both sides of the take-up media roll. Remove the take-up media roll from the winder.



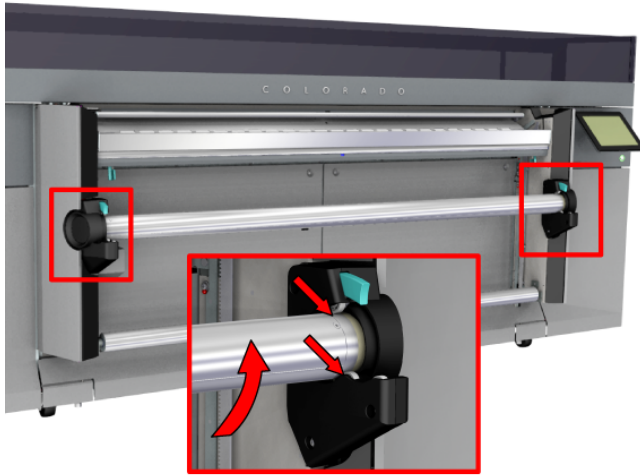
3. Place the take-up media roll on a sturdy surface.
4. Pull the handle of the locking mechanism inside the core towards you. Remove the media shaft from the core of the media roll.



5. You can place a new empty take-up roll core, for more information see [Load a take-up roll core onto the roll winder on page 118](#).



6. Push to place the media shaft back on the winder. Make sure it clicks in place.



## Unload a media roll from the drawer

### Introduction

Unload a media roll from the drawer when you want to load a new media roll.



#### CAUTION

- **Watch your fingers when you handle the media roll.**
- **Lifting heavy media, 25 kg (55 lb) or more, has to be done by at least two people or with the help of external lifting tools.**



#### IMPORTANT

- Handle the media roll with care. A dented media roll can damage the printer.
- Only open the media drawer when the indicator light on the drawer is on. Do not open the drawer when the light is off, you can damage the machine.

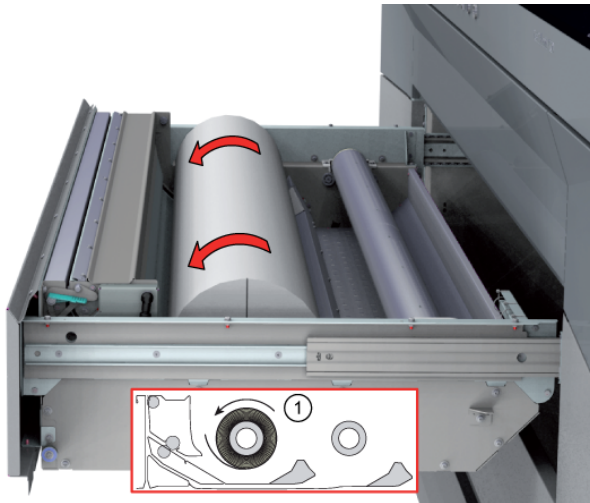


#### NOTE

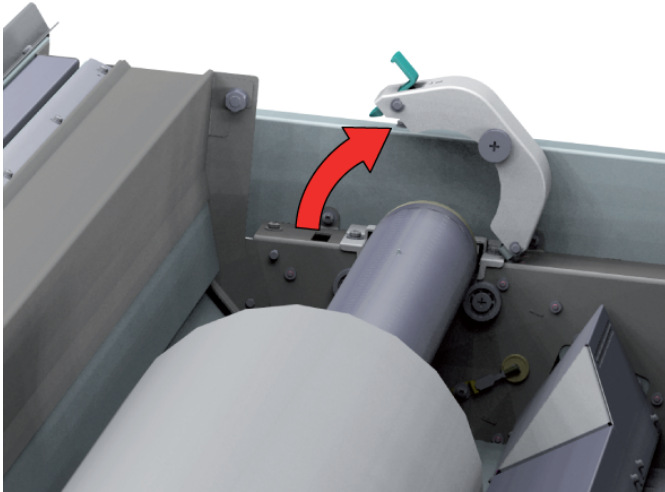
Put on gloves to avoid pollution of the paper by your fingerprints.

### Procedure

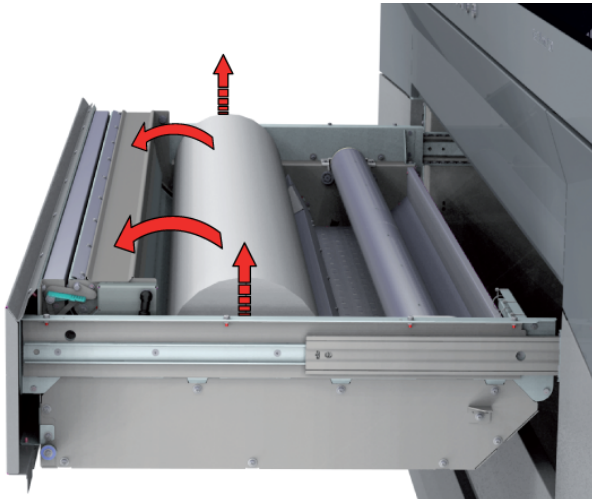
1. Pull firmly to open the media drawer.
2. Use both hands to turn the media roll backwards (1) and remove the media from the metal paper guide.



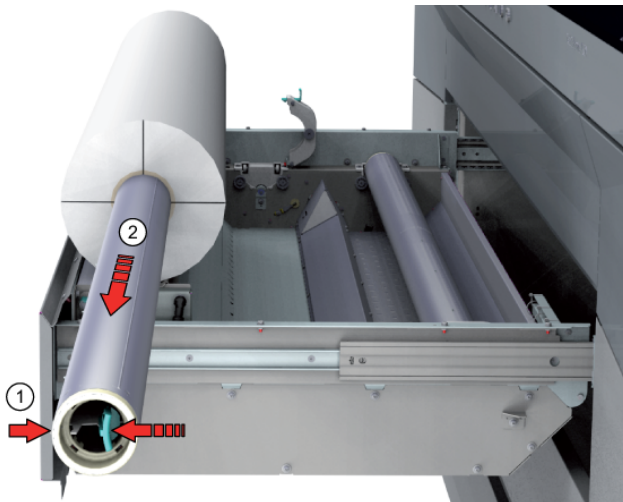
3. Pull the lever and open the clamp.



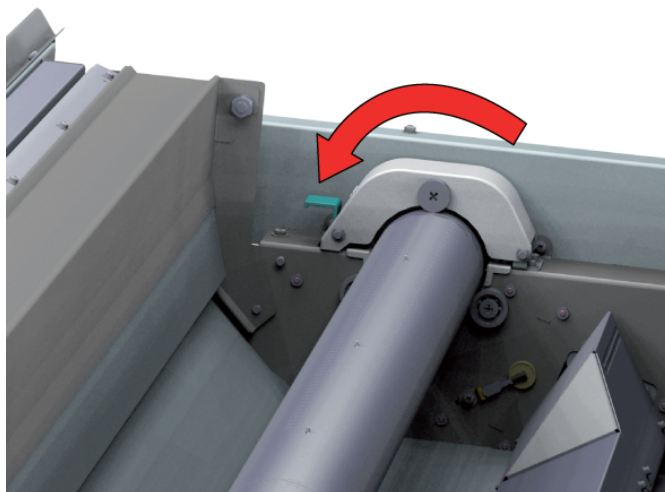
4. Lift up and take out the media shaft with the media roll, and put it on the roll loading station.



5. Pull (1) the handle of the locking mechanism towards you. Remove (2) the media shaft from the core of the media roll.



6. Load a new media roll, for more information see [Load a media roll \(position 1\) on page 85](#). Or put the feed media shaft back into the drawer and firmly close the clamp. Make sure you close the clamp completely until you hear a click.



7. Remove the media roll from the roll loading station. Store it in a safe place, so that it cannot fall over or roll away.
8. Close the media drawer carefully.

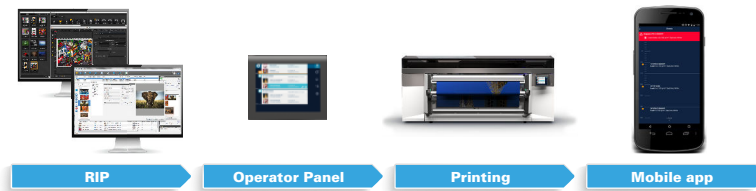
# **Chapter 5**

## **Print a job**

# General workflow for printing a job

## Introduction

There is a general workflow for using the Colorado 1650 explained in this manual.



### 1. RIP

Prepare and submit a job in one of the supported RIP software applications. You can install media profiles and also add or change media profiles and types here. For more information, see [Configure media in the RIP on page 40](#) or check the website of your RIP supplier for documentation.

### 2. Operator panel

Check your job and other jobs in the queue here. Pause, resume and remove a job, or cut the media after a certain job.

You can also perform special actions via the operator panel, such as starting maintenance actions or configuring the printer's system and connectivity settings.

### 3. Printing

Once your job has been submitted and passed the queue the printer prints your job in sheets or roll-to-roll.

### 4. Mobile app

You can monitor the printer via the Remote Control app on your mobile device. The app gives you alerts when operator action is required on media, maintenance or when other actions are coming up.

# Print a job

## Introduction

You can submit and print a job via the RIP.

## When to do

Make sure you have one of the supported RIP applications installed and connected to the printer.

## Procedure

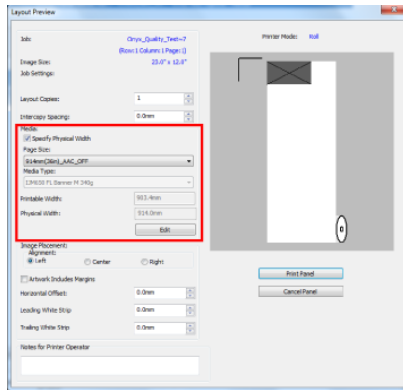
1. Open the RIP.
2. Load one or more files you want to print.
3. Make sure you use a correct media profile for the media you want to print on.  
For more information, see [Configure media in the RIP on page 40](#) or check the website of your RIP supplier for documentation.

4. Submit the job.

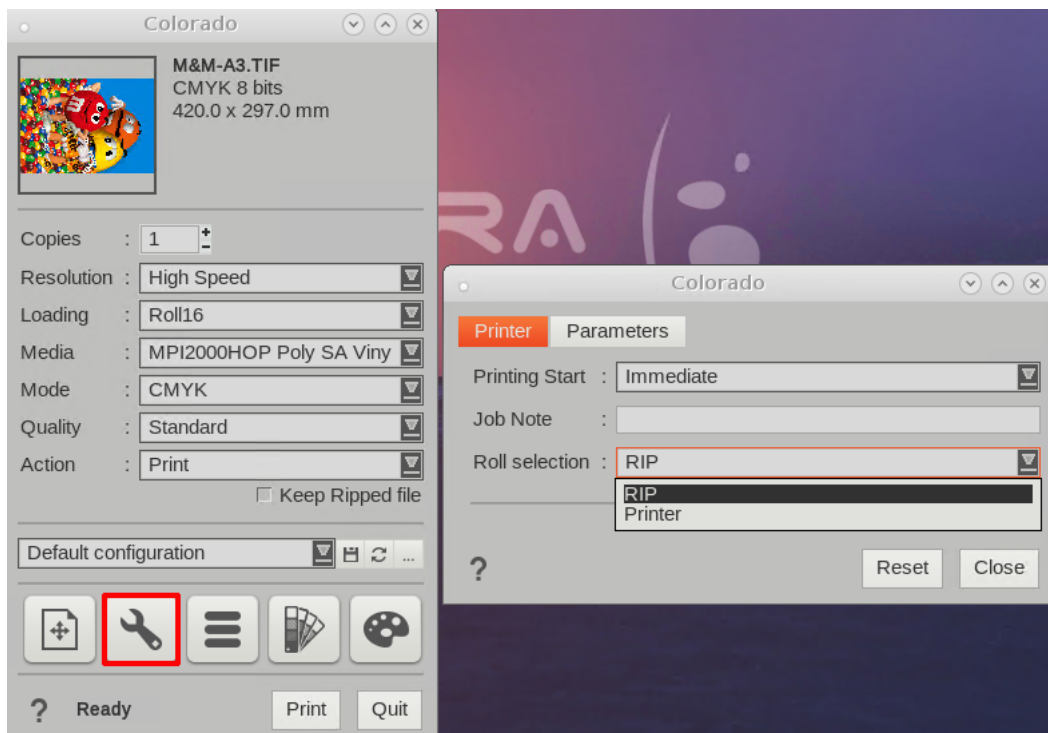


NOTE

- When you have problems submitting your job, check if the physical width in the RIP corresponds with the width of the media roll.  
Take into account the margin used for [Automatic advance correction] (\_AAC\_NONE, \_AAC\_NORMAL, \_AAC\_ENHANCED). You can check the value that is used for the [Automatic advance correction] setting in the RIP
- In ONYX check the box in front of [Specify Physical Width] when you want to set the page size and physical width manually.



- In Caldera you can choose to let the printer or the RIP do the roll selection. Click on the wrench icon and under [Roll selection], select [Printer] or [RIP].



5. Collect your output at the printer.

If requested, tape the media for winding. For more information, see [Print and wind without a tension bar on page 121](#), [Print and wind with a tension bar on page 124](#), or [Print and wind with a locked tension bar on page 128](#).



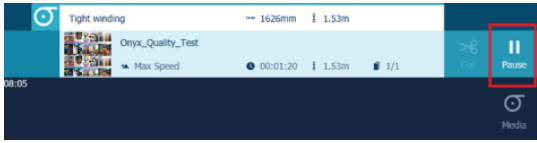

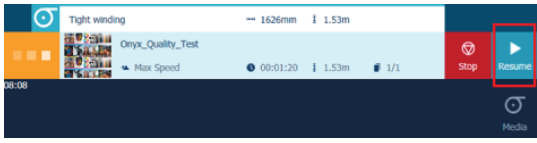
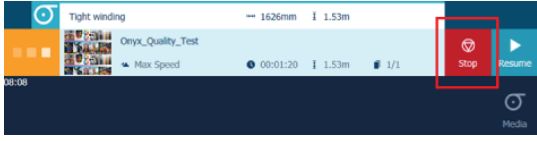

# Perform actions on a submitted job

## Introduction

On the operator panel you can control your job.

## Procedure

1. Submit a job to the printer.
2. On the operator panel, you see the job appearing in the queue, at the top of the screen. The job on top is the active job.

Action		
Pause	Tap the [Pause] icon. The printer pauses the job when the image has been printed.	
Cancel	Tap the job in the header. The [Cancel] icon appears. Tap [Cancel] to cancel the job.	
Re-sume	When the printer is pausing, the [Resume] icon appears. Tap [Resume] to continue printing.	
Stop	When the printer is pausing, the [Stop] icon appears. Tap [Stop] to stop printing. The image that has been printed is cured. The queue is stopped.	
Move up	Tap to select a job from the queue. Tap on the [Move up] icon to move the job up in the queue.	




# Status on the operator panel

## Introduction

The operator panel indicates when an operator attention is required via colors and symbols.




## Colors on the operator panel

When you see an orange or red color indication on the operator panel, tap the tile with the color to see what action is required. You can take action if necessary.

Color	Example	Description	Status
Light-blue		Operator action is coming up in the future, for some actions you can already prepare, e.g.: 'You can refill ink', 'A cut is planned', 'Not calibrated media'.	The system is operational.
Orange		Operator action is possible or required to keep the system running, e.g.: 'You should refill ink', 'You should perform maintenance', 'You should load the correct media type'.	The system stays operational and most of the time can continue its action for now.
Red		Operator action is required now, e.g.: 'You must refill ink to continue printing', 'You must remove media from the paper path to continue printing'.	The system is blocked and will only continue when the indicated action has been performed by the operator.

## Indicators on the operator panel

Indicators on the operator panel want to get your attention to make you aware of an operator action that is coming up (typically used in the queue).

Color	Example	Description	Status
Media (request)		Load required media for this job. Load a roll with the requested media type and width. The roll width can also be bigger than the size that is requested.	When the indicator is orange and this job becomes the active job, the system is paused until you solve the issue.
Cut (request)		Cut the media after this job.	When the indicator is orange and this job is finished, the system is paused until you solve the issue.
Attention (indication)		Operator attention is required. When this icon appears in the queue you have to be aware that most likely the media will run out during this job.	The system continues the action if possible.

# Use the PRISMAsync Remote Control app

## Introduction

With the PRISMAsync Remote Control app you can monitor your Colorado 1650 at a distance.

## Before you begin

To use the PRISMAsync Remote Control app you need a mobile device with:

- Google Android 4.1 or higher
- Apple iOS 7 or higher
- Remote connection on the printer must be enabled and working. For more information, see [Test PRISMAsync Remote Control on page 270](#).

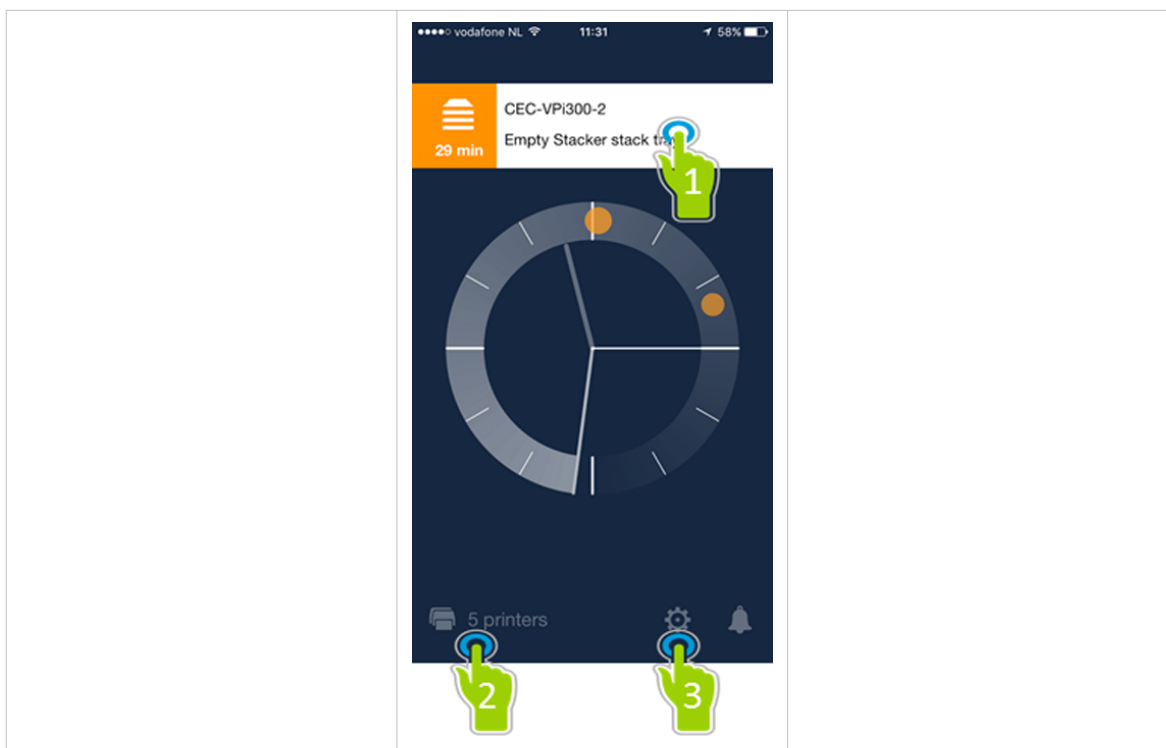


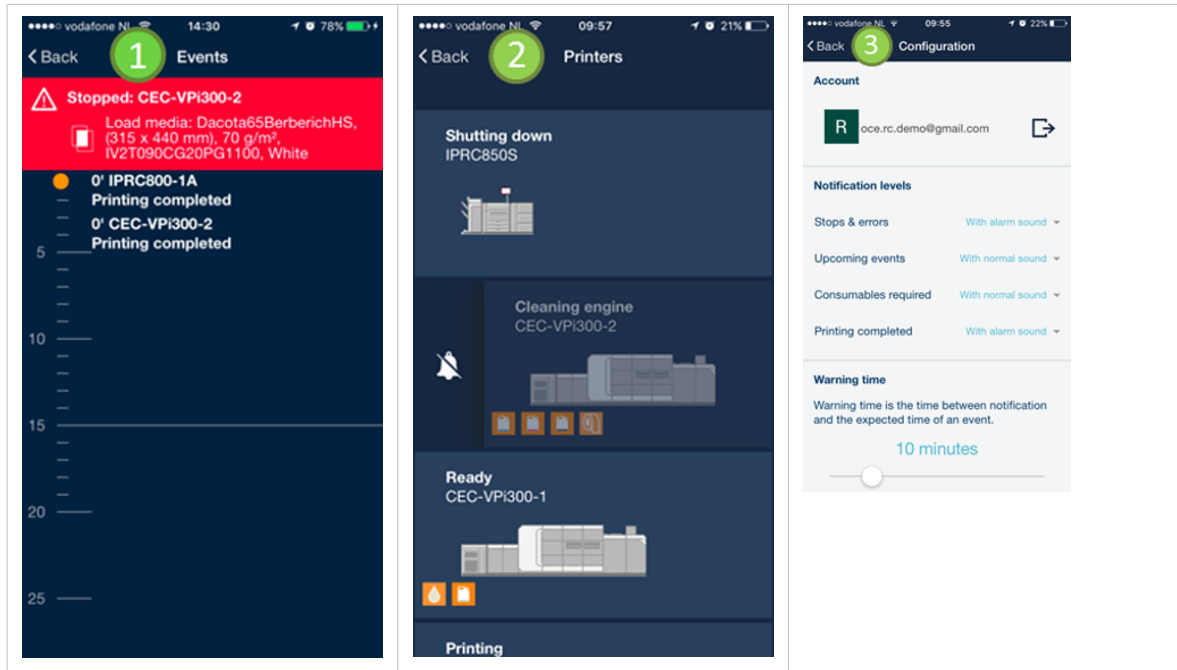
### NOTE

You do not need a license for the PRISMAsync Remote Control app.

## Procedure

1. Make sure the System administrator has added your email address as a PRISMAsync cloud services user for the Colorado 1650. For more information, see [Configure PRISMAsync Remote Control on page 268](#).
2. Download the PRISMAsync Remote Control app via the Google Play Store or Apple App Store onto your mobile device.
3. Open the PRISMAsync Remote Control app on your mobile device.
4. Log in with your Google or Microsoft account that has been registered by the System administrator. The app opens and shows one or more printers you are connected to.
5. Tap on the wheel icon on the bottom of the screen to configure the settings of the app.
6. Use the app for:





- **1. Events:** see events and alerts, such as printing, roll empty, ink empty, all jobs finished, maintenance tray full, replace filters, refill chiller, replace lubricators.
- **2. Printers:** monitor and view the status of one or multiple printers at one glance. Swipe to mute the notifications.
- **3. Configuration:** configure the settings of the app.

# **Chapter 6**

## **Maintain the system**

# Maintain the print quality

## Guidelines to maintain the print quality

### Introduction

To keep the printer in optimal condition it is very important to perform printhead and system maintenance regularly. Next to that, this maintenance can be performed at any time to solve quality problems, or after paper jams and crashes.

You can start the maintenance from the operator panel. There are three different ways to perform maintenance:



#### NOTE

Automatic, manual and periodic maintenance use a more intense purge and wipe to clean the nozzles, which consumes more ink than the purge and wipes taking place during operation .

### Maintenance videos

The maintenance actions are explained in separate maintenance procedure videos, click ["here"](#) to visit or scan the following QR code.



Overview of detailed maintenance actions to maintain the print quality

Maintenance action	Link to the video
Guidelines to Maintain the Print Quality	<a href="#">"Click here to view"</a>
Automatic Nozzle Optimization	<a href="#">"Click here to view"</a>
Clean the Nozzles	<a href="#">"Click here to view"</a>
Clean the Maintenance Station	<a href="#">"Click here to view"</a>
Clean the Matrix Plate	<a href="#">"Click here to view"</a>
Clean the Platen	<a href="#">"Click here to view"</a>
Vacuum the Chiller	<a href="#">"Click here to view"</a>
Clean the Mirrors	<a href="#">"Click here to view"</a>
Clean the M&C Scanner	<a href="#">"Click here to view"</a>
Clean the Printhead Area	<a href="#">"Click here to view"</a>

Maintenance action	Link to the video
Clean the buffer plate	<a href="#">"Click here to view"</a>

**Automatic maintenance**

This is the shortest of the three maintenance procedures. Automatic maintenance is performed fully by the printer, the operator only has to start the procedure. Always start with automatic maintenance first in case of print quality problems.

Initiated by	Performed by	Action
Operator	Printer	<ol style="list-style-type: none"> <li>The printer performs a purge and wipe to clean the nozzles.</li> </ol> <p>You can select the option [Automatic nozzle optimization]. The actions above are explained in separate maintenance procedure videos, click <a href="#">"here"</a> to visit.</p>

**Manual maintenance**

When automatic maintenance has not worked sufficiently then start manual maintenance in case of print quality problems. Manual maintenance is mainly done by the operator. Compared to automatic maintenance it contains four additional optional actions. These additional actions of manual maintenance are, clean the maintenance station, clean the matrix plate, clean the M&C scanner, clean the platen and clean the buffer plate. You can also start manual maintenance in case of a paper jam or crash. For more information, see [Improve quality on page 235](#).



**IMPORTANT**

You must clean the matrix plate once a week to guarantee the print quality.

Every week

Initiated by	Performed by	Action
Operator	Printer and operator	<ol style="list-style-type: none"> <li>The operator can clean the matrix plate.</li> </ol>

Incident-based (quality problems, paper jam, crash)

Initiated by	Performed by	Action
Operator	Printer and operator	<ol style="list-style-type: none"> <li>The operator can clean the maintenance station, including the wiper and clean wall.</li> <li>The operator can clean the matrix plate.</li> <li>The operator can clean the M&amp;C scanner.</li> <li>The operator can clean the platen.</li> <li>The operator can clean the buffer plate.</li> </ol> <p>The printer performs a purge and wipe to clean the nozzles. You can select the option [Automatic nozzle optimization]. The actions above are explained in separate maintenance procedure videos, click <a href="#">"here"</a> to visit.</p>

**Periodic maintenance**

Periodic maintenance is a variety of mandatory maintenance actions that have to be performed by the operator. Periodic maintenance has to be done once a month. The operator panel gives a warning.

Compared to manual maintenance, it contains two additional steps which need to be performed by the operator. These additional steps are, vacuum the chiller and clean the ink unit.



**IMPORTANT**

You must perform all periodic maintenance once a month (or otherwise specified) when indicated, to guarantee the print quality.

Initiated by	Performed by	Action
Printer	Printer and operator	<ol style="list-style-type: none"> <li>1. The operator must clean the maintenance station, including the wiper and clean wall.</li> <li>2. The operator must clean the matrix plate and black protection cover.</li> <li>3. The operator must clean the mirrors.</li> <li>4. The operator must clean the M&amp;C scanner.</li> <li>5. The operator must clean the platen.</li> <li>6. The operator must clean the buffer plate.</li> <li>7. The operator must vacuum the chiller.</li> <li>8. The operator can clean the ink unit (if necessary).</li> </ol> <p>The printer performs a purge and wipe to clean the nozzles. You can select the option [Automatic nozzle optimization]. The actions above are explained in separate maintenance procedure videos, click "<a href="#">here</a>" to visit.</p>

For more information on how to start automatic, manual and periodic maintenance, see [Start automatic maintenance on page 169](#), [Start manual maintenance on page 171](#), [Start periodic maintenance on page 173](#).

**Clean the nozzles by purge and wipe**

In all three maintenance procedures the nozzles are cleaned by a purge and wipe action. During the purge actions every nozzle is refilled with new ink. The old ink including any pollution will be pushed out to the printhead nozzle plate. Next a wiper removes the ink including the nozzle pollution from the nozzle plate. This results in an optimally cleaned printhead.

**Automatic nozzle optimization**

In all three maintenance procedures you can select the option [Automatic nozzle optimization].

During printing the system uses a mechanism called PAINt, to check if all nozzles are functioning. If a nozzle is detected as fail, PAINt will compensate this failing nozzle by a good working nozzle. PAINt can detect the majority of the causes for a failing nozzle during the print.

When you enable [Automatic nozzle optimization] the printer will create a test print on which each individual nozzle will print a pattern. A camera will scan the printed pattern. If the camera detects a missing pattern and PAINt did not detect this nozzle as failing, the nozzle will be switched off permanently. The failing nozzle is compensated by another nozzle for all print jobs, which results in an optimum print quality.

Use a smooth, white, opaque, non-reflective media when you select Automatic nozzle optimization.

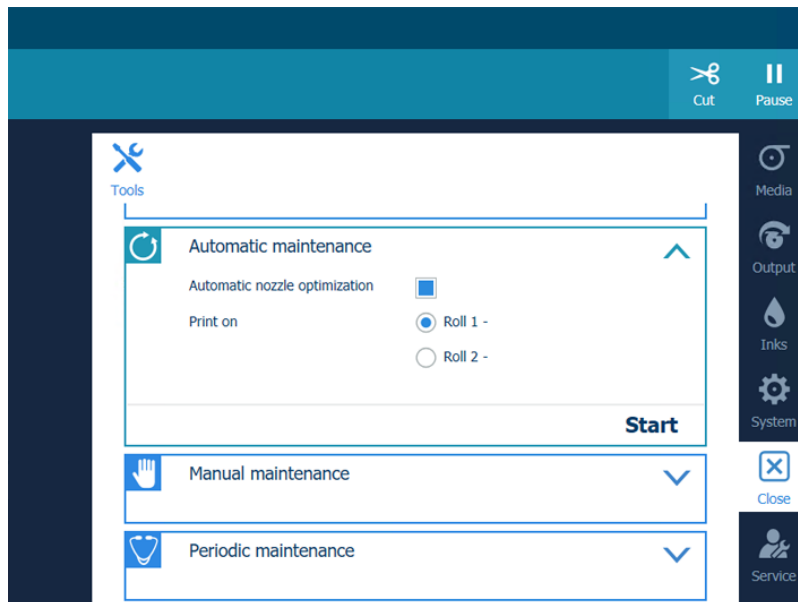


## Start automatic maintenance

### Introduction

Start automatic maintenance in case of quality issues.

The printer performs a purge and wipe and optionally you can print a nozzle classification chart to optimize the nozzles.



### Procedure

1. On the operator panel tap on the [Tools] icon on the right.
2. Tap on [Automatic maintenance].
3. When you want to print a nozzle classification chart to optimize the nozzles:
  1. Make sure [Automatic nozzle optimization] is selected.
  2. Select a roll to print the nozzle classification chart on.



#### NOTE

The nozzle classification chart can only be printed on media of one of the following categories:

- Heavy paper > 200 gsm (54 lb bond)
- Paper 120-200 gsm (32-54 lb bond)
- Film
- Polymeric & cast self-adhesive vinyl
- Thick film > 200 um (0.0079 inch)

On the other media categories, these procedures cannot be performed.

When no roll is loaded with one of the above mentioned categories, no roll will be indicated for the automatic nozzle optimization.

Use a media width that is as large as possible and larger than 840 mm (33 inch) in order to get the best optimization results.

The [Advanced automatic nozzle optimization] can take quite some time, around 25 minutes. The printer will optimize the media step accuracy and print two nozzle classification charts.

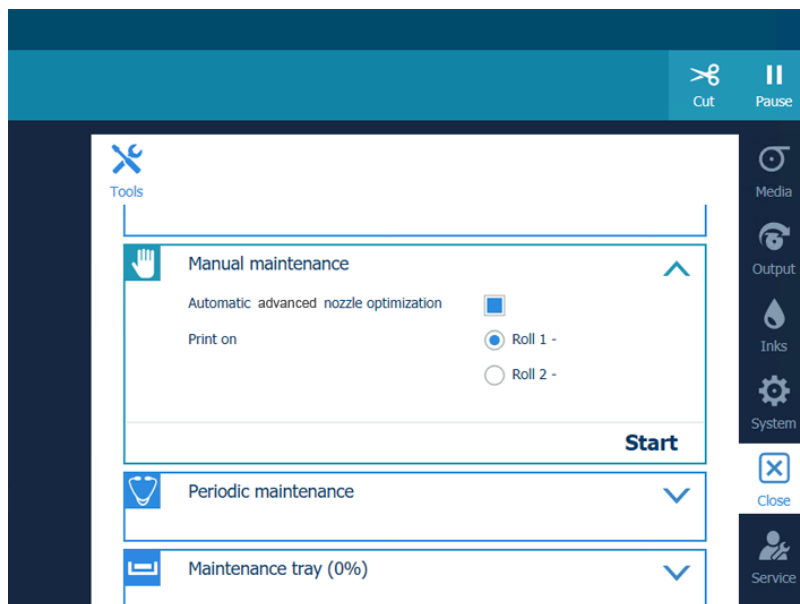
4. Tap on [Start].  
The printer starts the purge and wipe and then prints the chart in case you selected it.

## Start manual maintenance

### Introduction

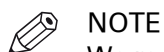
Start manual maintenance in case of quality issues.

You can clean the maintenance station, wiper, clean wall, matrix plate, M&C scanner, platen and you can print a nozzle classification chart to optimize the nozzles.



### Procedure

1. On the operator panel tap on the [Tools] icon on the right.
2. Tap on [Manual maintenance].



#### NOTE

We recommend that you check the [Advanced automatic nozzle optimization] when you are experiencing quality issues. After you have cleaned the matrix plate and the printheads the recovered nozzles have to be switched on again (if you do not check this option the nozzles will keep the status "do not use").

3. When you want to print nozzle classification charts to optimize the nozzles:
  1. Make sure [Advanced automatic nozzle optimization] is selected.
  2. Select a roll to print the nozzle classification charts on.



**NOTE**

The nozzle classification chart can only be printed on media of one of the following categories:

- Heavy paper > 200 gsm (54 lb bond)
- Paper 120-200 gsm (32-54 lb bond)
- Film
- Polymeric & cast self-adhesive vinyl
- Thick film > 200 um (0.0079 inch)

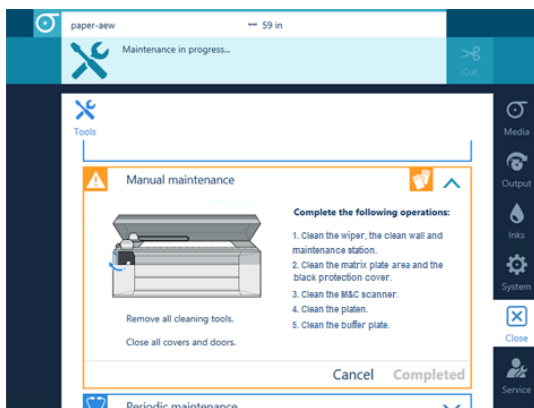
On the other media categories, these procedures cannot be performed.

When no roll is loaded with one of the above mentioned categories, no roll will be indicated for the automatic nozzle optimization.

Use a media width that is as large as possible and larger than 840 mm (33 inch) in order to get the best optimization results.

The [Advanced automatic nozzle optimization] can take quite some time, around 25 minutes. The printer will optimize the media step accuracy and print two nozzle classification charts.

4. Tap on [Start].
5. Perform any or all of the listed actions:
  1. [Clean the maintenance station, wiper and clean wall on page 175](#)
  2. [Clean the matrix plate on page 179](#)
  3. [Clean the M&C scanner on page 184](#)
  4. [Clean the platen on page 187](#)
  5. [Clean the buffer plate on page 190](#)



**IMPORTANT**

Wait until the [Completed] button turns black and the printhead carriage is in maintenance position, before you open the top cover and start cleaning.

## Start periodic maintenance

### Introduction

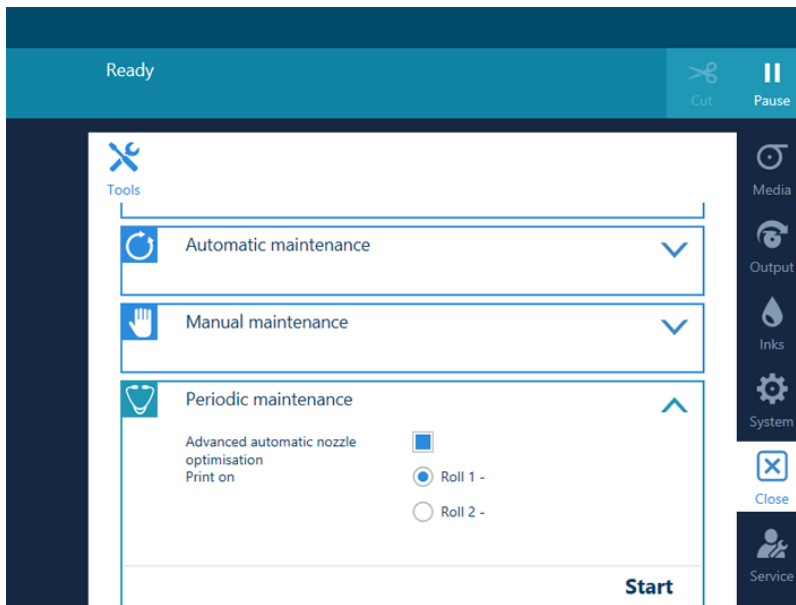
Start periodic maintenance when the operator panel gives a warning.

Periodic maintenance contains a variety of mandatory maintenance actions and the possibility to print a nozzle classification chart to optimize the nozzles.



### IMPORTANT

You must perform all periodic maintenance actions once a month when indicated, otherwise the printer functions are not guaranteed.



### Procedure

1. On the operator panel tap on the [Tools] icon on the right.
2. Tap on [Periodic maintenance].
3. When you want to print nozzle classification charts to optimize the nozzles:
  1. Make sure [Advanced automatic nozzle optimization] is selected.
  2. Select a roll to print the nozzle classification charts on.



**NOTE**

The nozzle classification chart can only be printed on media of one of the following categories:

- Heavy paper > 200 gsm (54 lb bond)
- Paper 120-200 gsm (32-54 lb bond)
- Film
- Polymeric & cast self-adhesive vinyl
- Thick film > 200 um (0.0079 inch)

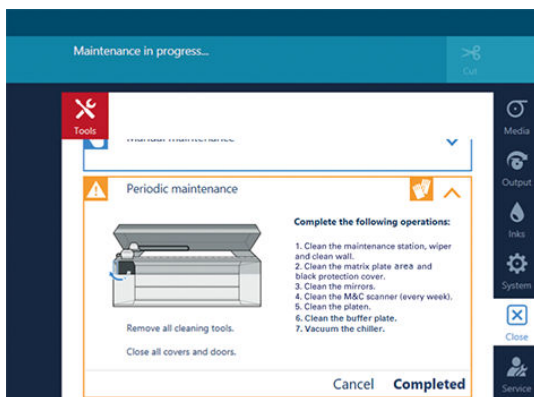
On the other media categories, these procedures cannot be performed.

When no roll is loaded with one of the above mentioned categories, no roll will be indicated for the automatic nozzle optimization.

Use a media width that is as large as possible and larger than 840 mm (33 inch) in order to get the best optimization results.

The [Advanced automatic nozzle optimization] can take quite some time, around 25 minutes. The printer will optimize the media step accuracy and print two nozzle classification charts.

4. Tap on [Start].
5. Perform all off the listed actions:
  1. *Clean the maintenance station, wiper and clean wall on page 175*
  2. *Clean the matrix plate on page 179*
  3. *Clean the mirrors on page 226*
  4. *Clean the M&C scanner on page 184*
  5. *Clean the platen on page 187*
  6. *Clean the buffer plate on page 190*
  7. *Vacuum the chiller on page 224*
  8. *Clean the ink unit on page 230*



**IMPORTANT**

Wait until the [Completed] button turns black and the printhead carriage is in maintenance position, before you open the top cover and start cleaning.

## Clean the maintenance station, wiper and clean wall

### Introduction

The maintenance station plays an important role to keep the printheads optimally cleaned. In the maintenance station you have to clean the wiper and the clean wall.

### Before you begin

Use Colorado 1650 prescribed:

- Microflex gloves for handling ink
- Lint free cloths and swabs
- Cleaning liquid (Cleaner MB - Methyl benzoate)



#### NOTE

For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).



#### CAUTION

- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**



#### IMPORTANT

Use the prescribed cleaning liquid. Do not use any other cleaners.

This maintenance action is explained in a separate maintenance procedure video, click ["here"](#) to visit.

### Procedure

1. Start the maintenance action via the operator panel. For more information, see [Start manual maintenance on page 171](#).
2. Put on the Colorado 1650 approved gloves.
3. Open the top cover from the media input side.
4. Locate the maintenance station with the wiper and the clean wall on the right hand side.



5. Take a lint free cloth and clean the wiper until all residue ink is gone. If necessary, dampen a swab with the cleaning liquid to remove any remaining ink.



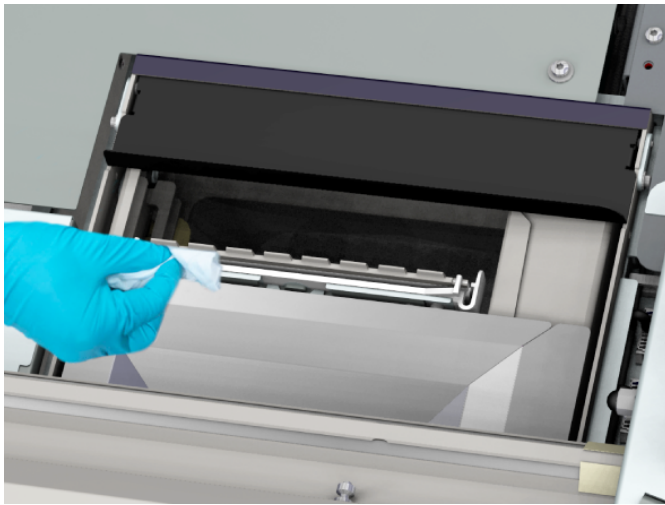
**CAUTION**

- Be careful to touch, the wiper can be hot.
  - Only use the cleaning liquid cleaner MB - Methyl benzoate in combination with swabs. Do not use a cloth.
- 



**IMPORTANT**

- Make sure you do not damage the rubber wiper tips.
- Make sure the wiper is still correctly placed, after cleaning. For more information, see [Replace the wiper on page 201](#).



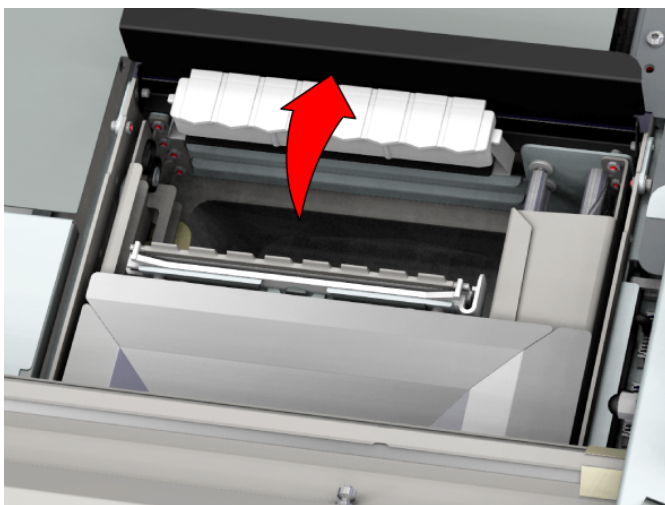
6. Locate the clean wall opposite the wiper.
  7. Lift up the black top cover to expose the clean wall.
- 



**CAUTION**

Be careful to touch, the clean wall can be hot.

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8. Take a lint free cloth and clean the clean wall until all residue ink is gone.  
If necessary, dampen a swab with the cleaning liquid to remove any remaining ink.



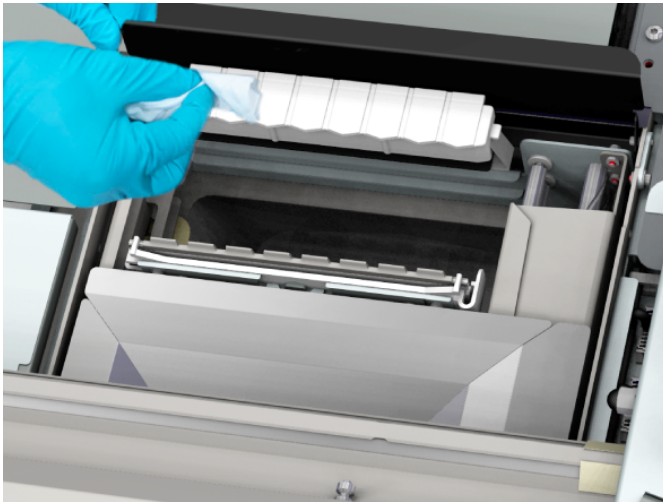
**CAUTION**

**Only use the cleaning liquid cleaner MB - Methyl benzoate in combination with swabs.  
Do not use a lint free cloth.**



**IMPORTANT**

Make sure the clean wall does not click out of the holder.



9. Carefully release the clean wall.
10. Take a lint free cloth to clean the rest of the maintenance station (green indicated area). Clean until all residue ink is gone.  
If necessary, dampen a swab with the cleaning liquid to remove any remaining ink.



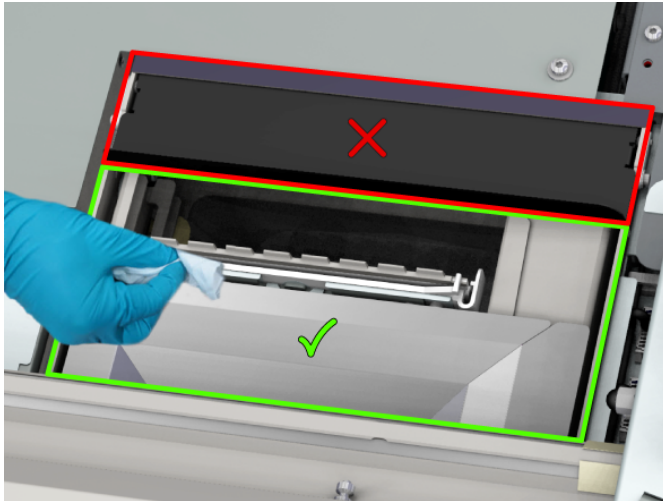
**CAUTION**

**Only use the cleaning liquid cleaner MB - Methyl benzoate in combination with swabs.  
Do not use a lint free cloth.**



**IMPORTANT**

Do not clean the black top cover of the clean wall with cleaning liquid to prevent deterioration of paint. When the cover or the surrounding area is polluted, clean according to the cleaning guidelines. For more information, see [Guidelines for cleaning uncured ink on page 324](#).



11. When all residue ink is removed, remove all tools from the machine and dispose the gloves, cloths and swabs as chemical waste according to local regulations.
12. Close the top cover.



**IMPORTANT**

Make sure all covers are closed correctly to prevent cured ink in your system.

13. On the operator panel tap [Completed] to end the maintenance action or continue to the next action, [Clean the matrix plate on page 179](#).

## Clean the matrix plate

### Introduction

The printheads are located in the matrix plate. The matrix plate needs to be cleaned regularly.

### Before you begin

Use Colorado 1650 prescribed:

- Microflex gloves for handling ink
- Foams and swabs
- Matrix plate cleaning tool
- Cleaning liquid (Cleaner MB - methyl benzoate)



#### NOTE

- For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).
- This maintenance action is explained in a separate maintenance procedure video, click "[here](#)" to visit.
- You can scan the following QR code to find an overview of all available maintenance videos.



#### CAUTION

- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**



#### IMPORTANT

Use the prescribed cleaning liquid. Do not use any other cleaners.

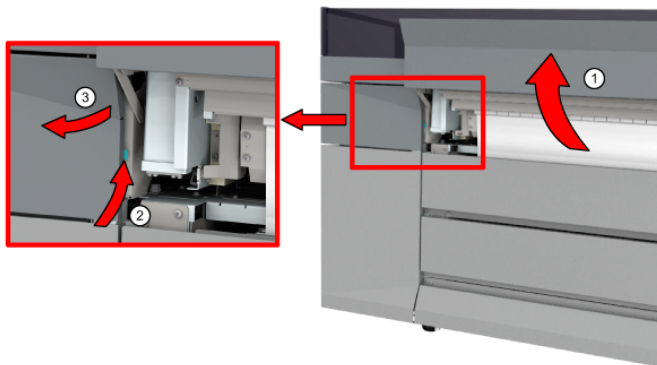
### Procedure

1. Start the maintenance action via the operator panel. For more information, see [Start manual maintenance on page 171](#) or [Start periodic maintenance on page 173](#).
2. Put on the Colorado 1650 approved gloves.
3. Take a new and clean piece of matrix plate cleaning foam and put it in the holder of the cleaning tool.

4. Take the matrix plate cleaning tool, go to the media input side and locate the manual maintenance door on the left.



5. Open the media cover (1) and lift the lever of the manual maintenance door on the left (2).



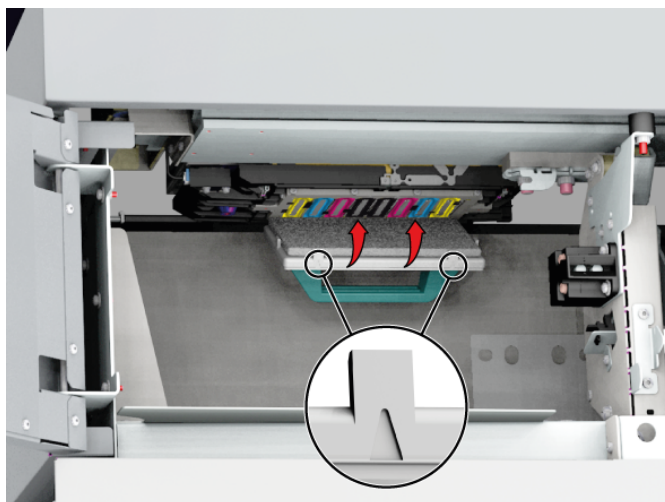
6. Open the manual maintenance door (3). A light is switched on.



**IMPORTANT**

Do not use any external light source to prevent curing of the ink and damage to the printheads.

7. Locate the matrix plate in the compartment.
8. Place the matrix plate cleaning tool against the matrix plate. Position it correctly with the arrows facing you, as illustrated.

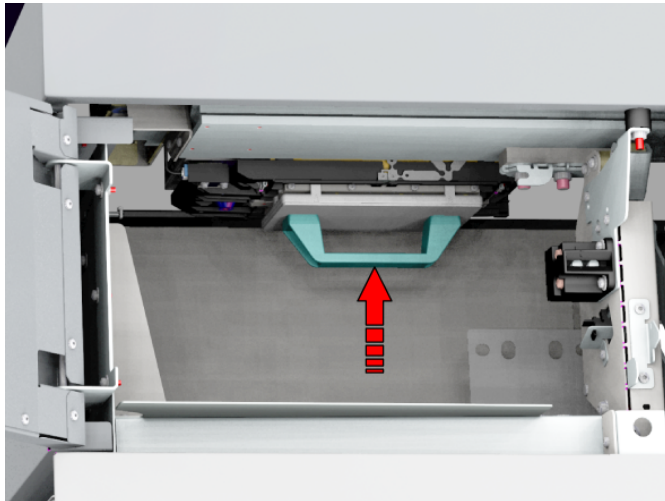


9. Press the cleaning tool against the matrix plate.

**IMPORTANT**

Press until you lift the printhead carriage up very lightly. When you press too hard you will damage the printheads and carriage.

1. Make sure all sides of the tool press against the matrix plate.  
Only when you place the cleaning tool correctly you will hear a beep-beep signal.
2. Hold the cleaning tool in place for at least 24 seconds until you hear a long beep signal.



10. Take out the matrix plate cleaning tool and check the stamp on the foam for ink accumulation.

	<p>When accumulated ink between the printheads is visible, you have to perform the cleaning action again from step 8 with a new foam. See the spots within the red circles in the illustration.</p>
	<p>When only a light stamp mark is visible on the foam, you can continue the cleaning action.</p>
	<p>When the stamp mark density is not uniform on the foam replace the foam and use the tool again. In this example you see that you have applied more pressure at the right-hand side of the foam. you have to perform the cleaning action again from step 8 with a new foam.</p>
	<p>When the stamp mark density is not uniform on the foam replace the foam and use the tool again. In this example you see that you have applied more pressure at the top side of the foam.</p>

11. Take an Colorado 1650 approved swab.
12. Clean the matrix plate, until all residue ink is gone (red indicated area).



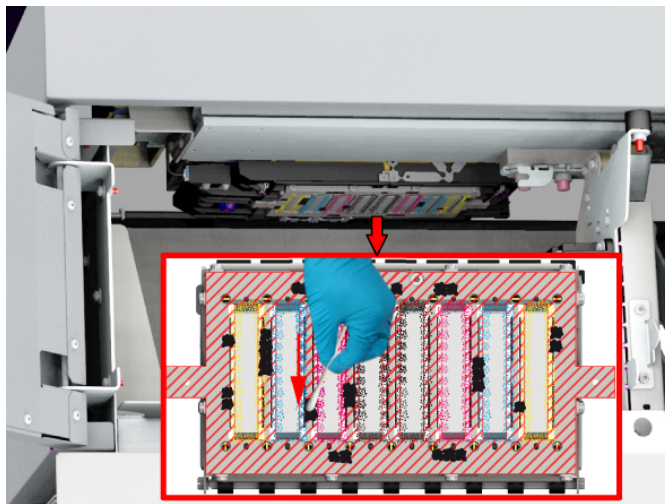
**IMPORTANT**

- Do not touch the nozzle plates of the printhead. When you touch the nozzle plates you can damage the printhead.
- Wipe with the swabs only in the direction of the printer (away from you) to minimize the risk of touching the nozzles. Never clean in the opposite direction (towards you).

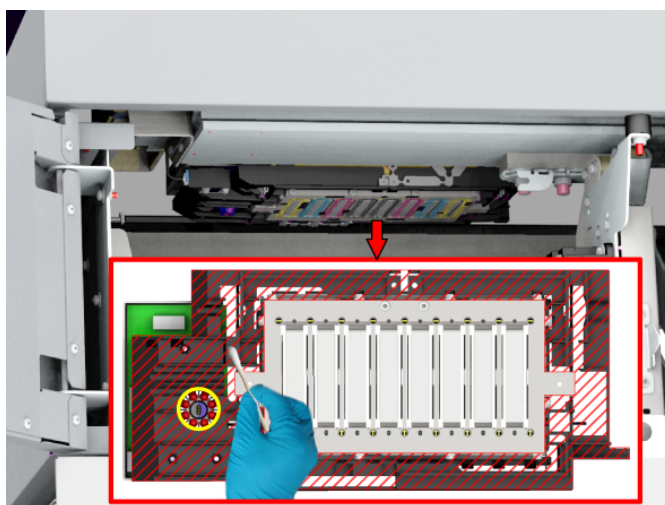


**IMPORTANT**

- Make sure to end the cleaning procedure within 5 minutes, when you use the cleaning liquid. The printer has to perform automatic maintenance after, to make sure the cleaning liquid does not damage the printheads.
- Use as many swabs as necessary.



13. Dampen a new swab with the cleaning liquid cleaner MB and clean the plate again to remove any remaining or non-visible ink.
14. Locate the black protection cover and inspect if it is polluted with ink, media dust or fibers.
15. In case of pollution, take a new swab and clean the black protection cover especially the protruding parts (red indicated area).



16. Only when necessary, dampen a new swab with the cleaning liquid cleaner MB and clean the polluted parts of the black protection cover again.
17. Make sure that all residue ink is removed.
18. Remove all tools from the machine and dispose the gloves, foam and swabs as chemical waste according to local regulations.
19. Close the manual maintenance door and the media cover.



**IMPORTANT**

Make sure all covers are closed correctly to prevent cured ink in your system.

20. On the operator panel tap [Completed] to end the maintenance action.

## Clean the M&C scanner

### Introduction

The M&C scanner is used for the measurement of printed test patterns. The M&C scanner must be cleaned regularly.

When you see pollution on the M&C scanner, immediately clean the scanner.

Cleaning the M&C scanner has to be done at least once a month.



#### NOTE

When you get error **5713: advance media correction not working**, most probably the M&C scanner is polluted, clean the scanner.

### Before you begin

Use Colorado 1650 prescribed:

- Microflex gloves for handling ink
- Lint free cloths
- Cleaning liquid (IPA)



#### NOTE

For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).



#### CAUTION

- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**

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This maintenance action is explained in a separate maintenance procedure video, click ["here"](#) to visit.

### Procedure

1. Start the maintenance action via the operator panel. For more information, see [Start manual maintenance on page 171](#) or [Start periodic maintenance on page 173](#).
2. Put on the Colorado 1650 approved gloves.
3. Go to the media input side and locate the manual maintenance door on the left.





4. Open the media cover (1) and lift the lever of the manual maintenance door on the left (2).

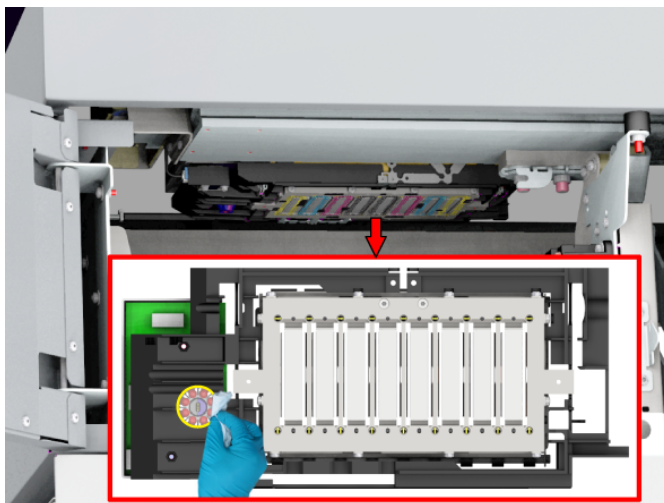


5. Open the manual maintenance door (3). A light is switched on.

**IMPORTANT**

Do not use any external light source to prevent curing of the ink and damage to the printheads.

6. Locate the M&C scanner (indicated by the yellow circle) next to the matrix plate in the compartment.



7. Dampen a lint free cloth with the cleaning liquid and clean then glass plate in front of the M&C scanner.

**IMPORTANT**

Only clean the glass plate of the M&C scanner. Do not touch the nozzle plates of the printhead. When you touch the nozzle plates you can damage the printhead.

**IMPORTANT**

Use the prescribed cleaning liquid. Do not use any other cleaners.

**IMPORTANT**

This cleaning liquid (IPA) is not used for cleaning the matrix plate, wiper and clean wall, maintenance drawer and heated parts of the maintenance station.

8. Make sure that all residue ink is removed.
9. Carefully wipe the glass plate dry.

10. Dispose the gloves and cloths as chemical waste according to local regulations.
11. Close the manual maintenance door and the media cover.



**IMPORTANT**

Make sure all covers are closed correctly to prevent cured ink in your system.

12. On the operator panel tap [Completed] to end the maintenance action.

## Clean the platen

### Introduction

When you see pollution on the platen or on the back of your print, immediately clean the platen.

It is advised to clean the platen regularly to keep the printer in the best condition.

### Before you begin

Use Colorado 1650 prescribed:

- Microflex gloves for handling ink
- Lint free cloths
- Rough lint free cloths
- Cleaning liquid (IPA)
- Compressed air duster
- Micro cleaning brushes (2,5 mm / 0.1 inch)
- Scraper



#### NOTE

For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).



#### CAUTION

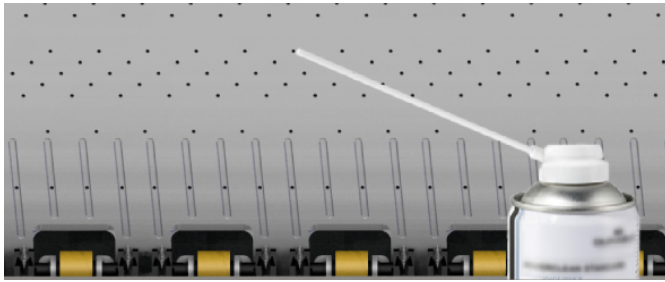
- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**

This maintenance action is explained in a separate maintenance procedure video, click ["here"](#) to visit.

### Procedure

1. Start the maintenance action via the operator panel. For more information, see [Start manual maintenance on page 171](#) or [Start periodic maintenance on page 173](#).
2. Put on the Colorado 1650 approved gloves.
3. Open the top cover from the media input side.
4. If present, remove the media from the paper path. For more information, see [Remove media from the paper path on page 296](#)
5. Examine the platen:
  - When you see uncured ink on the platen, dab the area with a lint free cloth to avoid rubbing ink into the suction holes.
  - When you see cured ink residue, use a scraper to remove the ink carefully.

6. Use the compressed air duster to open the suction holes.



**NOTE**

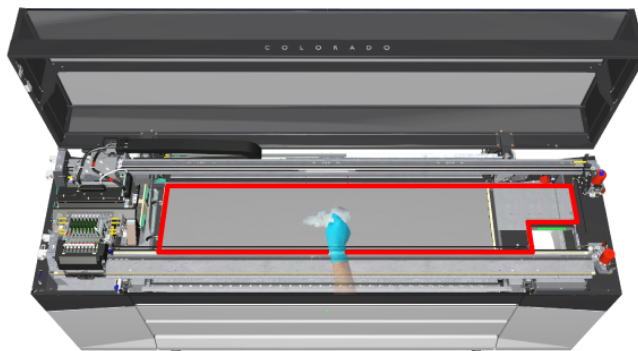
If necessary, you can also use a 2,5 mm (0.1 inch) micro cleaning brush.

7. Dampen a rough lint free cloth with the cleaning liquid and clean the complete platen area. If necessary, you can clean the area surrounding the maintenance station as well.



**IMPORTANT**

- Use the prescribed cleaning liquid. Do not use any other cleaners.
- Do not wet the platen directly, as you can damage the printheads.
- Do not clean outside the indicated area to avoid damaging the system.

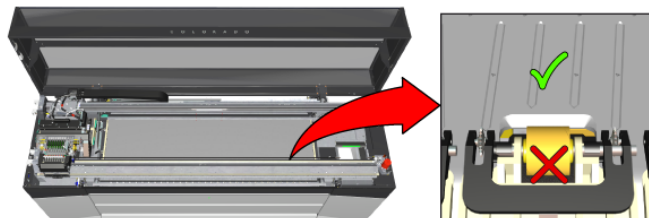


8. When all residue ink is removed, take a new and clean lint free cloth to wipe the complete platen.



**IMPORTANT**

Do not clean the transport rollers. When the rollers are polluted call your local service representative.



9. Dispose the gloves, cloths, and micro cleaning brushes as chemical waste according to local regulations.
10. Close the top cover.
11. On the operator panel tap [Completed] to end the maintenance action.

**After you finish**

Reload the media. For more information, see [Load a media roll \(position 1\) on page 85](#) .

## Clean the buffer plate

### Introduction

When the printer is polluting your media with for example uncured ink or glue, check the buffer plate. In case of pollution, you can clean the buffer plate.

### Before you begin

Use Colorado 1650 prescribed:

- Microflex gloves for handling ink
- Lint free cloths
- Cleaning liquid (IPA)



#### NOTE

For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).



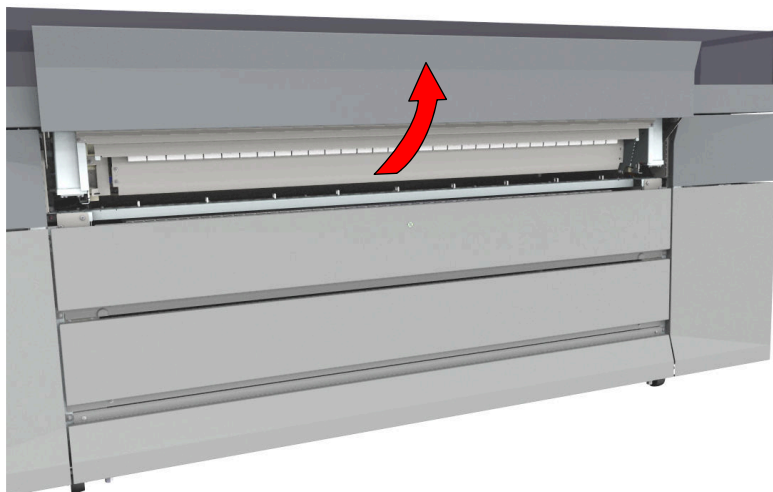
#### CAUTION

- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**

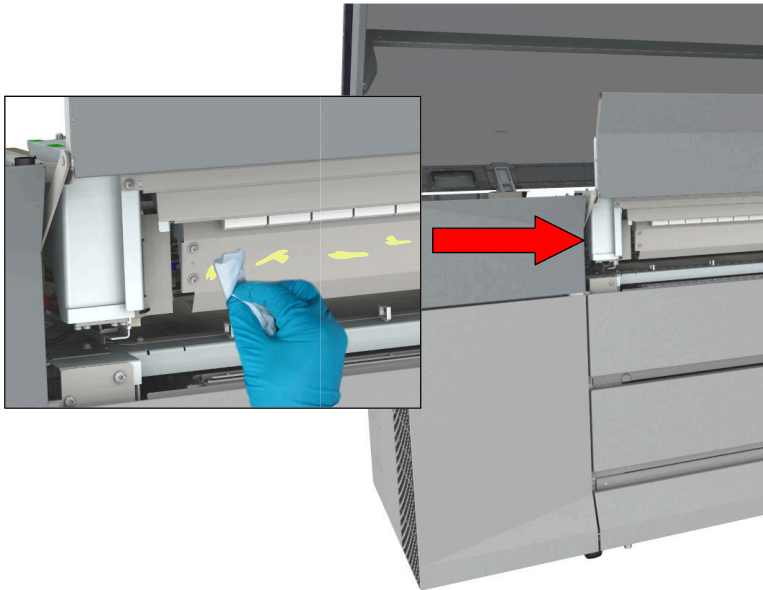
This maintenance action is explained in a separate maintenance procedure video, click ["here"](#) to visit.

### Procedure

1. Put on the Colorado 1650 approved gloves.
2. Go to the media input side and open the media cover.



3. Inspect if the buffer plate is polluted.



4. Take a lint free cloth and clean the buffer plate.
5. Dampen the cloth with the cleaning liquid to remove any remaining ink.

**IMPORTANT**

Use the prescribed cleaning liquid. Do not use any other cleaners.

6. Dispose the gloves, cloths and pin as chemical waste according to local regulations.
7. Close the media cover.

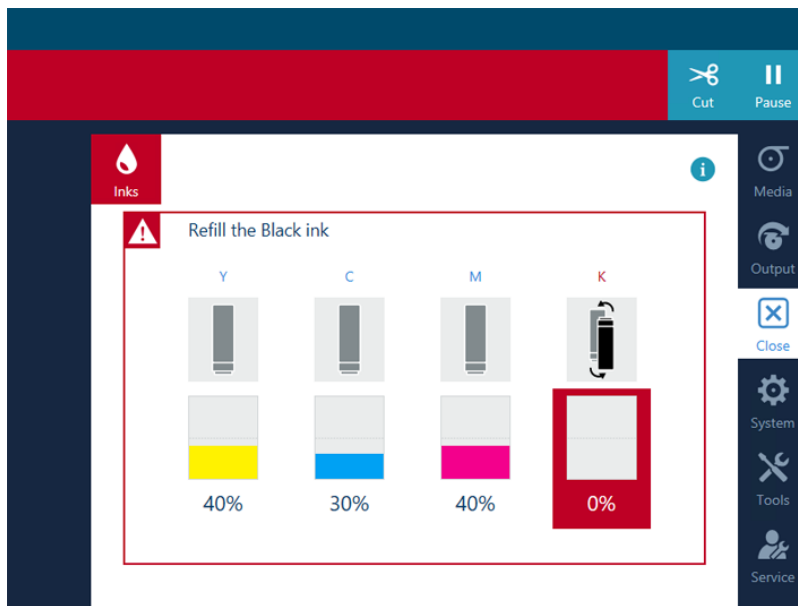
# Maintain the printer

## Refill ink

### Introduction

You can refill ink easily without the risk of spilling ink.

On the operator panel tap on the [Inks] icon on the right. You see an overview of the ink bottles and levels of remaining ink:



- Read the messages above the ink bottles to understand the status of the ink level and the ink bottles. The message indicates when ink is running out or is of the wrong color, bottles are not present, wrong, invalid or expired.
- When the operator panel gives an orange warning, a bottle is not present, invalid, wrong or expired, or it is advised to refill ink for a specific color as the ink is running out.
- When the operator panel gives a red warning, you must refill ink for a specific color. The printing process is stopped until you have refilled the ink.
- For more detailed information on the status, tap the blue information icon at the top right hand corner.
- When one of the LED lights located next to the bottles is on (not blinking), you can refill ink for the related color.
- The order of the bottles from left to right is YCMK.
- When you see ink pollution, immediately clean the affected area. For more information, see [Clean the ink unit on page 230](#).

### Before you begin



#### CAUTION

- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**



**IMPORTANT**

- Make sure you use official Colorado 1650 ink.  
UNDER CERTAIN CONDITIONS, INCLUDING WHEN A USED, REFILLED OR THIRD PARTY INK HAS BEEN DETECTED, THE PRINTER WILL OPERATE UNDER SAFE MODE. THIS MODE IS DESIGNED TO PROTECT THE PRINTER AND THE PRINTHEADS FROM DAMAGE DUE TO UNEXPECTED INK INTERACTION, RESULTING IN DIFFERENT AUTOMATIC MAINTENANCE BEHAVIOR AND IS ACTIVE WHEN THE OPERATOR PANEL DISPLAYS IT. FOR OPTIMAL PERFORMANCE USE ORIGINAL INK. THE PRINT SYSTEM, THE INK AND THE PRINTHEADS ARE DESIGNED AND ENGINEERED IN CLOSE RELATION TO PROVIDE UNCOMPROMISING PRINT QUALITY, CONSISTENCY, PERFORMANCE, DURABILITY AND RUNNING COSTS WITH EVERY PRINT. CANON PRODUCTION PRINTING DOES NOT WARRANT THE PERFORMANCE OF THE PRINT SYSTEM WHEN OPERATED OUTSIDE OF ENVIRONMENTAL SPECIFICATIONS OR WHEN SAFE MODE IS ACTIVE.
- DO NOT USE INK THAT HAS PASSED THE EXPIRATION DATE. WHEN INK IS GOING TO EXPIRE IN THE MACHINE YOU GET A WARNING. MAKE SURE YOU USE UP THE INK BEFORE THE EXPIRATION DATE, AS EXPIRED INK CAN DAMAGE THE MACHINE. YOU CAN REFILL INK AGAIN WHEN EXPIRED INK HAS RUN OUT. IF YOU REFILL VALID INK ONTO EXPIRED INK, THE OPERATOR PANEL WILL DISPLAY AN AVERAGE EXPIRATION DATE.
- When one of the LED lights located next to the bottles is off, you cannot refill ink for the related color. Do not take the bottles out of the slots.
- When the LED light located next to the bottle is blinking slowly, something is wrong. Do not move the green handle, you can damage the machine. Check the operator panel for an explanation of the issue. When you cannot solve it, call your local Service representative.

**Procedure**

1. On the operator panel tap on the [Inks] icon on the right.
2. Check which one or more colors ink has to be refilled or if something is wrong with the bottles.
3. Go to the side of the printer where the ink bottles are located.
4. Put on the Colorado 1650 approved gloves.
5. Move down the green handle which is located left of the bottle you want to replace.  
Do not hold the bottle while you move the handle.

**IMPORTANT**

When the LED light located next to the bottle is off, you cannot refill ink for the related color. Do not take the bottle out of the slot.



6. Take the empty bottle out of the slot.
7. Dispose the bottle as chemical waste according to local regulations.
8. Take a new ink bottle with the same color and shake it well for at least 10 seconds.
9. Place the bottle at an angle in the slot. Push the bottle upright until it clicks in place.



**IMPORTANT**

Make sure the bottle is aligned with the other bottles. If the bottle is not placed correctly and you use force on the green handle, it can break.

The LED light under the handle slot starts blinking fast, wait until the LED light stops blinking. When the LED light stays on you can continue.



**IMPORTANT**

When the LED light under the handle starts blinking slowly something is wrong. Do not move the green handle. A message is displayed on the operator panel explaining the issue.

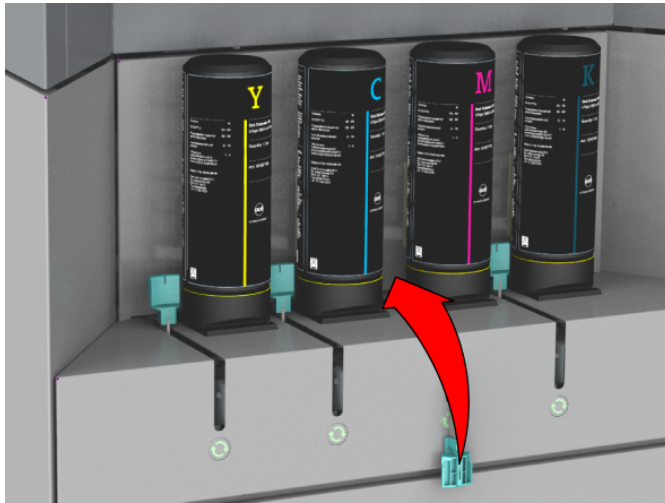
10. Move the green handle back up as far as it will go.



**IMPORTANT**

Do not hold the bottle. In case the handle is resistant, repeat step 9.

The ink will pour out of the bottle. The bottle is locked into place. You can leave the bottle in.

**NOTE**

When it is possible to fill a second bottle, you have to wait 15 minutes. The LED light under the handle will light up again when this is possible.

11. Dispose the gloves as chemical waste according to local regulations.

# Replace the maintenance tray

## Introduction

Replace the maintenance tray when the system gives a warning.

- The operator panel gives an orange warning when you can replace the maintenance tray.
- The operator panel gives a red warning when you must replace the maintenance tray. The printing process is stopped until you have replaced the maintenance tray.

## Before you begin

Use Colorado 1650 prescribed:

- Microflex gloves for handling ink
- Lint free cloths
- Maintenance tray



### NOTE

For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).



### CAUTION

- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**

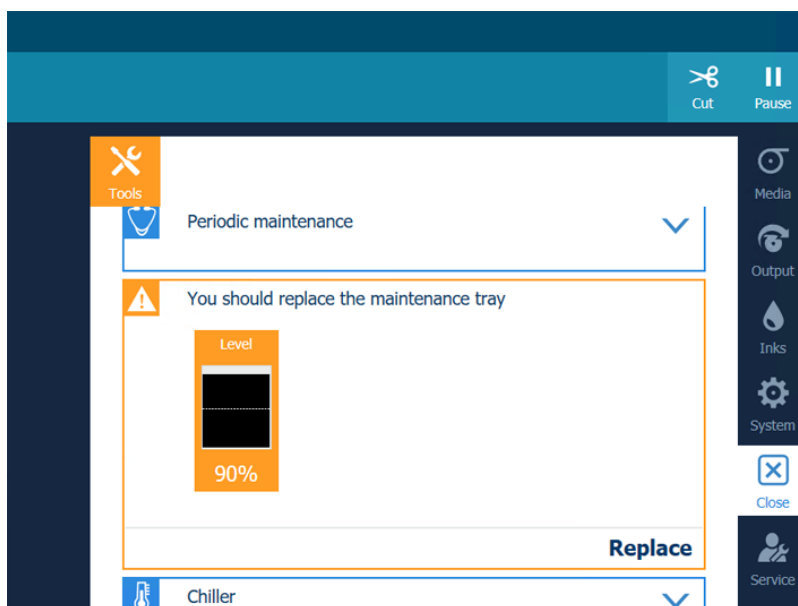


### IMPORTANT

Only open the maintenance drawer when the operator panel displays a message allowing you to open it.

## Procedure

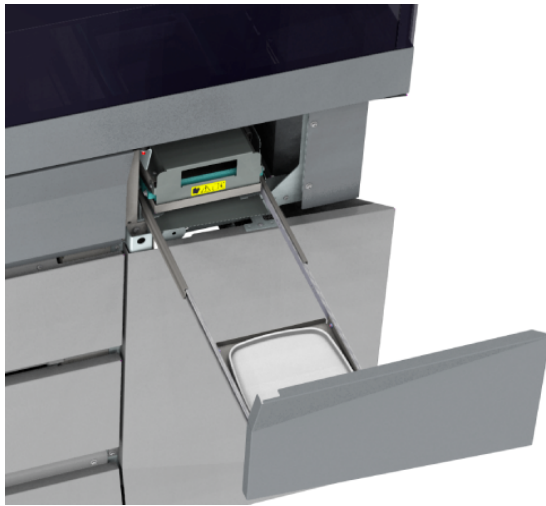
1. On the operator panel tap on the [Tools] icon on the right.
2. Go to [Maintenance tray].



3. Tap on [Replace] and read the instructions.
4. Put on the Colorado 1650 approved gloves.
5. Go to the media input side and locate the maintenance drawer on the right.



6. Pull to open the maintenance drawer.

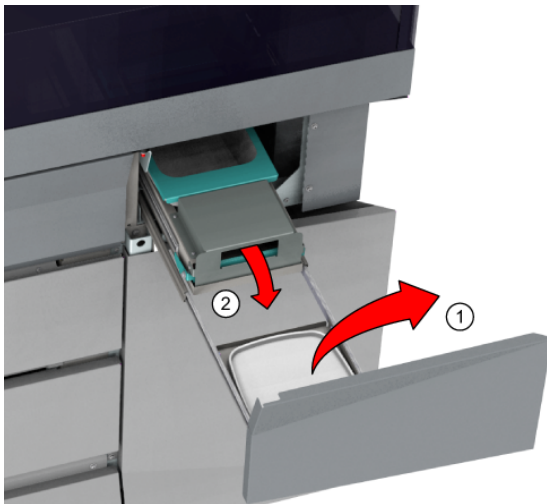


7. Take the lid out of the drawer.
8. Push the handle of the inner drawer and pull carefully to slide the maintenance tray to the front. Make sure to extend the drawer completely.



**CAUTION**

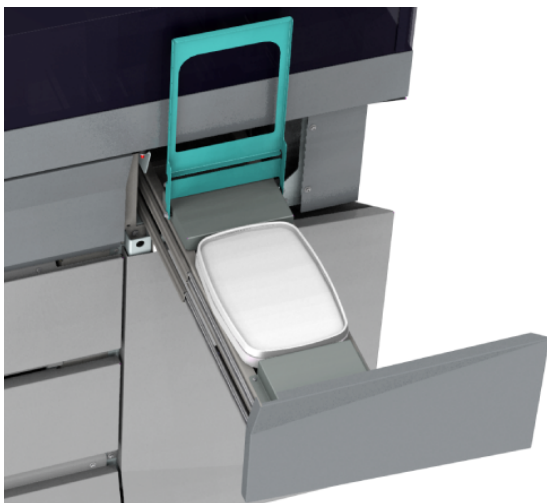
Open the inner drawer very carefully to not let the ink splash and spill.



9. Lift the metal holder up.



10. Put the lid on the tray.



11. For both hands, put your thumb on the lid and your other fingers under the side reel. Squeeze to click and seal the lid completely.

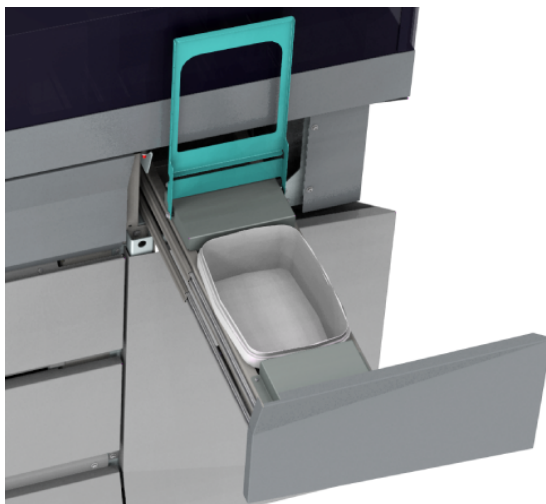


12. Lift the maintenance tray out with both hands on the sides of the tray. Dispose the sealed maintenance tray as chemical waste according to local regulations.
13. Take a lint free cloth and clean the drawer and holder on the inside and outside until all residue ink is gone.
14. Take a new and empty maintenance tray and place it in the inner drawer.



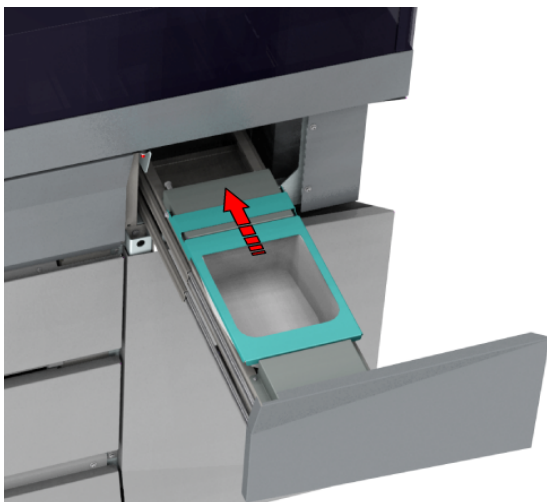
**IMPORTANT**

Do not place the lid on the new maintenance tray, as ink can spill that will damage the machine.

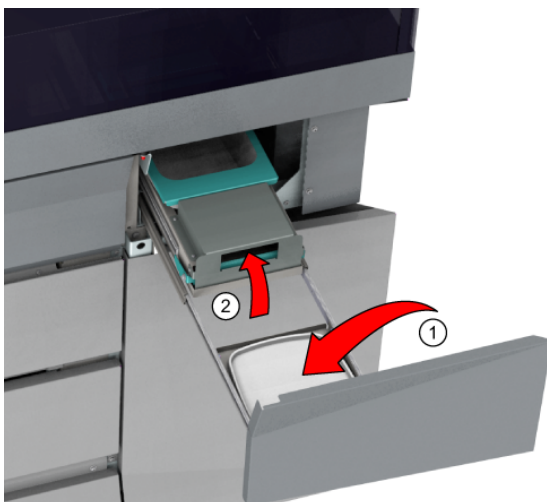


15. Close the metal holder.

16. Push to slide the inner drawer to the back and let it click to close.



17. Take a new lid and place it in the outer drawer.



18. Dispose the gloves as chemical waste according to local regulations.  
19. Push and close the maintenance drawer.  
20. On the operator panel tap [Replaced] to confirm you replaced a full maintenance tray with an empty maintenance tray and end the action.



## Replace the wiper

### Introduction

When you have real quality issues, smudging of your print and the platen, that cannot be solved by manual maintenance or any other of the troubleshooting actions you might need to replace your wiper. For more information, see [Improve quality on page 235](#).

### Before you begin

Use Colorado 1650 prescribed:

- Microflex gloves for handling ink
- Wiper
- Lint free cloths and swabs
- Matrix plate cleaning tool and foam
- Cleaning liquid (IPA) for the platen
- Cleaning liquid (Methyl benzoate) for the matrix plate, maintenance station and clean wall



#### NOTE

- For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).
- It is advised to replace the maintenance tray before you replace the wiper. It prevents the wiper from falling into a maintenance tray filled with ink.

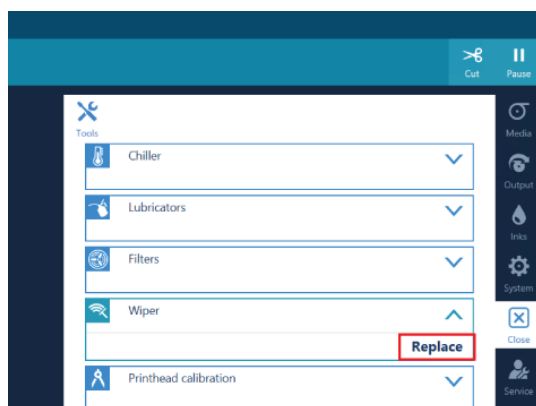


#### CAUTION

- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**

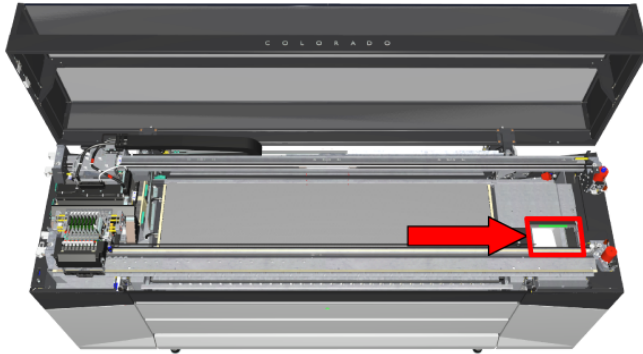
### Procedure

1. On the operator panel tap on the [Tools] icon on the right.
2. Tap on [Wiper].
3. Tap on [Replace] and read the instructions.



4. Move to the media input side and wait till the carriage has moved into position.
5. Put on the Colorado 1650 approved gloves.
6. Open the top cover.
7. Clean the platen. For more information, see [Clean the platen on page 187](#).

8. Locate the maintenance station with the wiper on the right hand side.



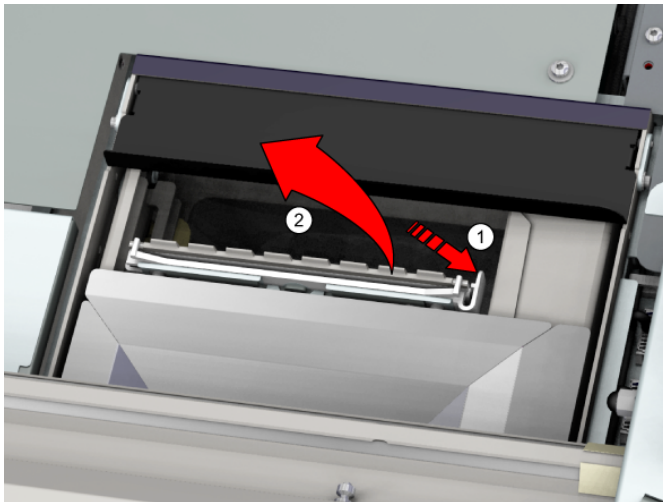
9. Hold the wiper with your left hand and use your right hand to pull the wiper holder on the right (1). Take the wiper out (2).



**CAUTION**

Be careful to touch, the wiper can be hot. Let the wiper cool down for five minutes.

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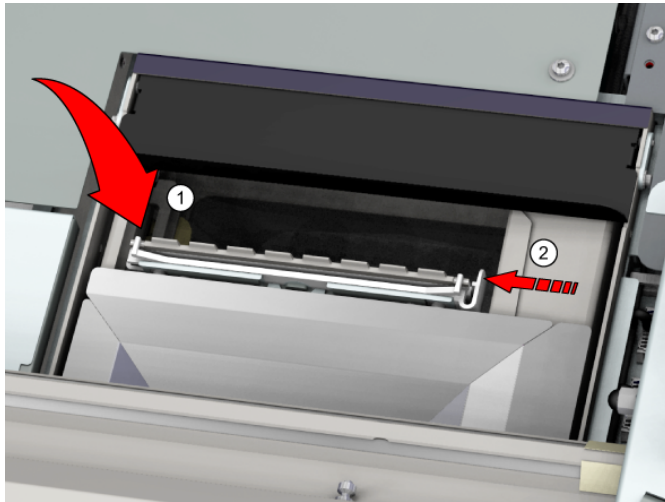
10. Dispose the wiper as chemical waste according to local regulations.
11. Clean the maintenance station and clean wall. For more information, see [Clean the maintenance station, wiper and clean wall on page 175](#).



**NOTE**

Perform the action from step 5, do not exit the 'Clean the wiper' window.

12. Place a new wiper back. Put the left side in first and click the right side into the holder. Make sure the wiper is fully clicked into the holder.



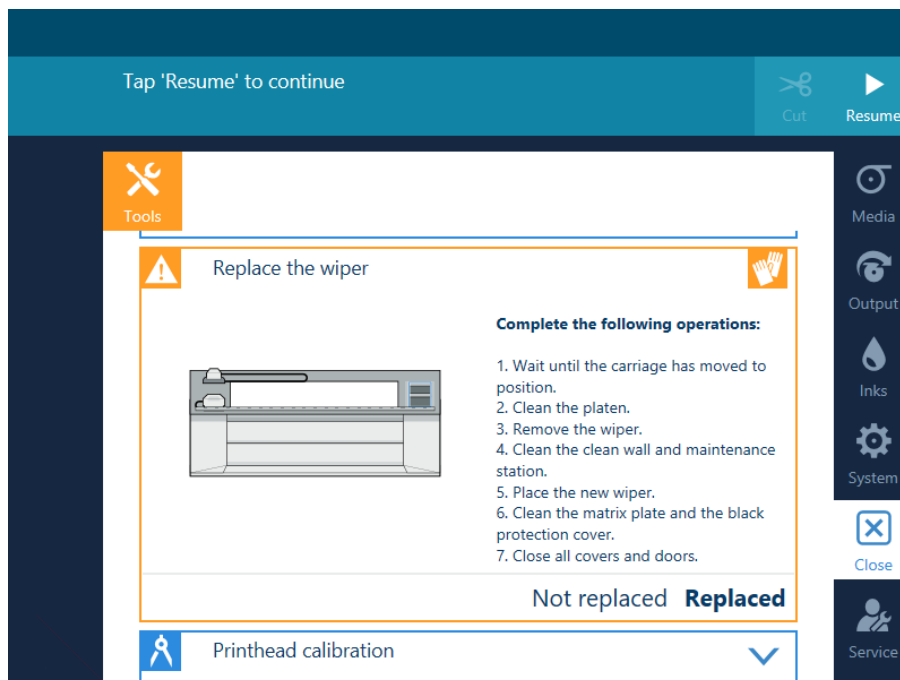
13. Clean the matrix plate. For more information, see [Clean the matrix plate on page 179](#).



**NOTE**

Perform the action from step 3, do not exit the 'Clean the wiper' window.

14. Dispose the gloves as chemical waste according to local regulations.
15. Close all covers.
16. On the operator panel, tap on [Replaced] to end the maintenance action. The counter will be reset.



**IMPORTANT**

When you only have cleaned the wiper, click [Not replaced]. The life time counter for the wiper should not be reset in this case.

## Replace the knife

### Introduction

Replace the knife when the knife does not cut your media correctly anymore.

### Before you begin

Use Colorado 1650 prescribed:

- Microflex gloves for handling ink
- Screwdriver (Torx-25) for the cover
- Screwdriver (Torx-6) for the knife
- Knife



#### NOTE

For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).



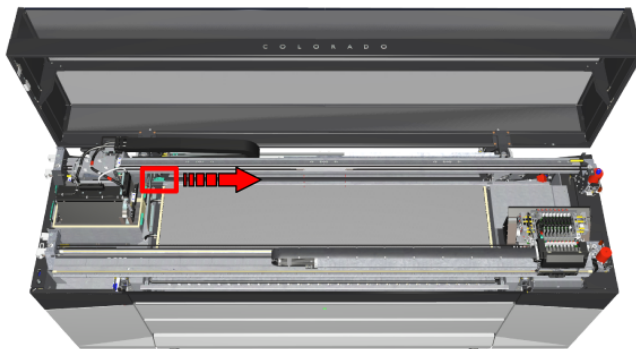
#### CAUTION

- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**

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### Procedure


1. Open the top cover from the media input side.
2. Put on the Colorado 1650 approved gloves.
3. Locate the knife and move it from the left to the right.

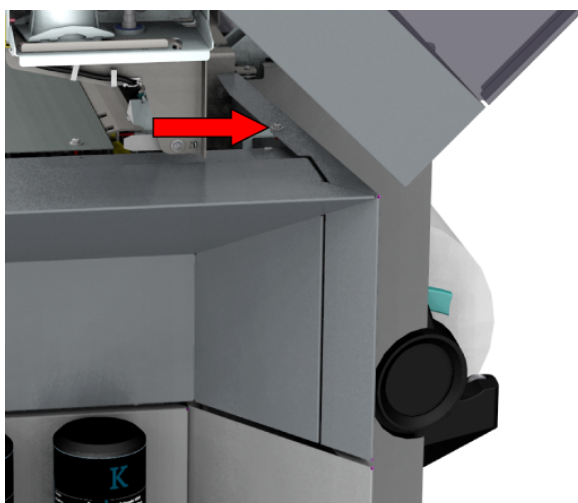


4. Go to the media output side and locate the knife compartment cover on the left.

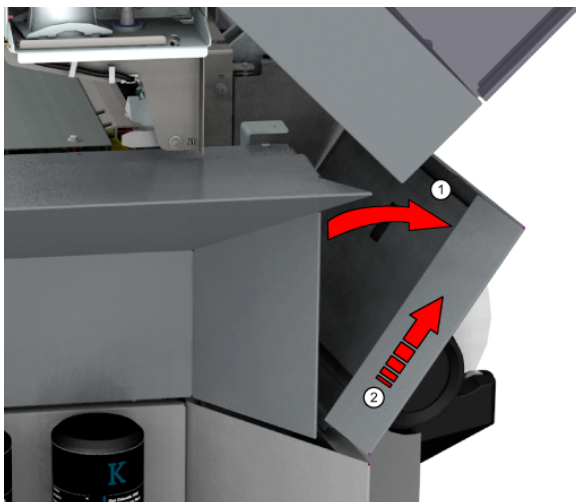


5. Unscrew the screw on top of the cover with the Torx-25.

 **CAUTION**  
Mind your head.



6. Lift the cover up and take it out.

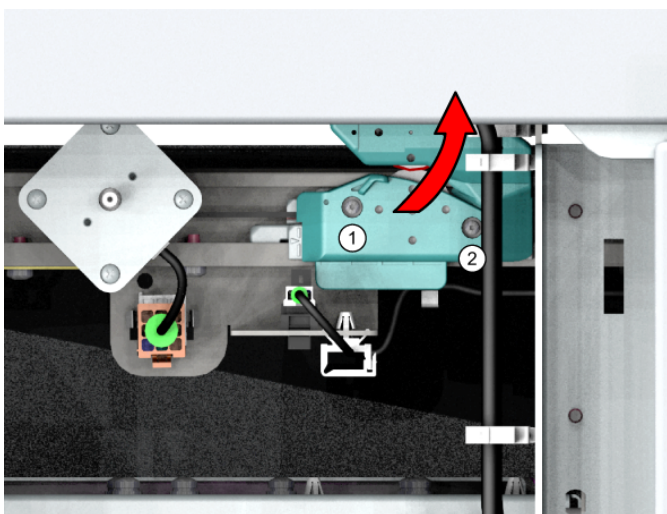


7. Locate the knife in the top right part of the compartment.
8. Unscrew the two screws of the knife (1-2) with the Torx-6.



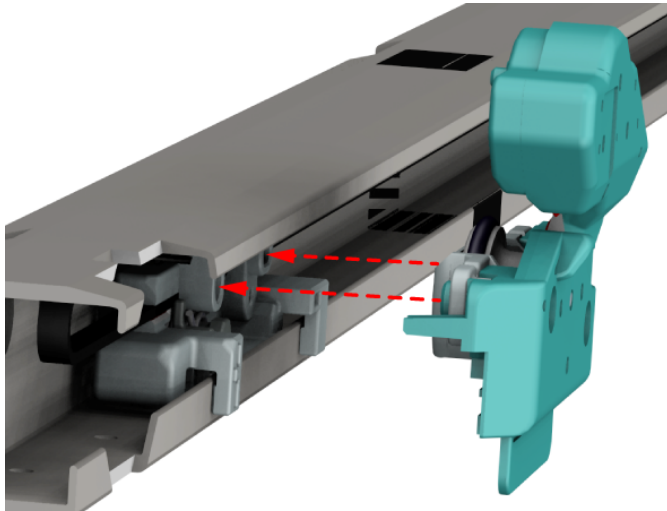
**NOTE**

Hold a piece of paper under the knife to collect any falling screws. This way you make sure you do not lose any of the screws inside the machine.



9. Take the knife out.  
Make sure you position the knife in such a way it does not hit the sensor.

10. Place a new knife with the wheel top-first in the rails and let it fall into position. Test to make sure the knife slides well on the rails.



11. Fasten the two screws, hand tight.
12. Place the knife compartment cover back into position.
13. Fasten the screw on top of the cover.
14. Dispose of the gloves as chemical waste according to local regulations.
15. Close the top cover from the media input side.

## Replace the filters (optional)

### Introduction

Your printer can be equipped with emission filters. You can replace the filters without service assistance:

- The operator panel gives an orange warning when you can replace the filters.
- The operator panel gives a red warning when you must replace the filters. The printing process is stopped until you have placed new filters.

### Before you begin

Use Colorado 1650 prescribed:

- Microflex gloves for handling ink
- Filters



#### NOTE

For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).

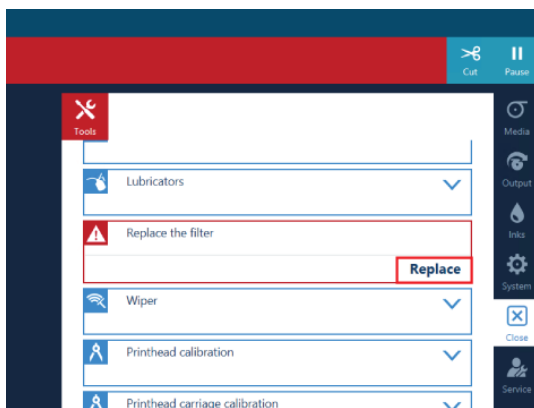


#### CAUTION

- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**

### Procedure

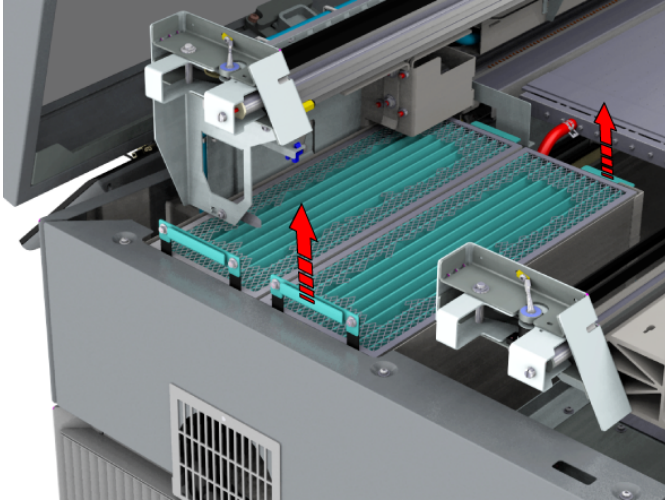
1. On the operator panel tap on the [Tools] icon on the right.
2. Tap on [Replace the filters].
3. Tap on [Replace] and read the instructions..



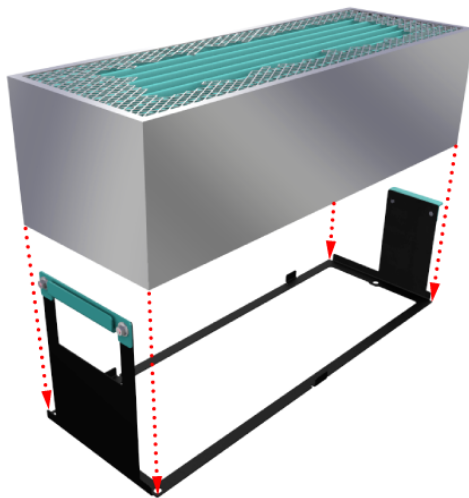
4. Put on the Colorado 1650 approved gloves.
5. Open the top cover from the media input side.
6. Locate the filters on the left.
7. Carefully push the curing carriage to the right away from the filters.



8. Take the front filter box out by the green handles. Place it on a sturdy surface.



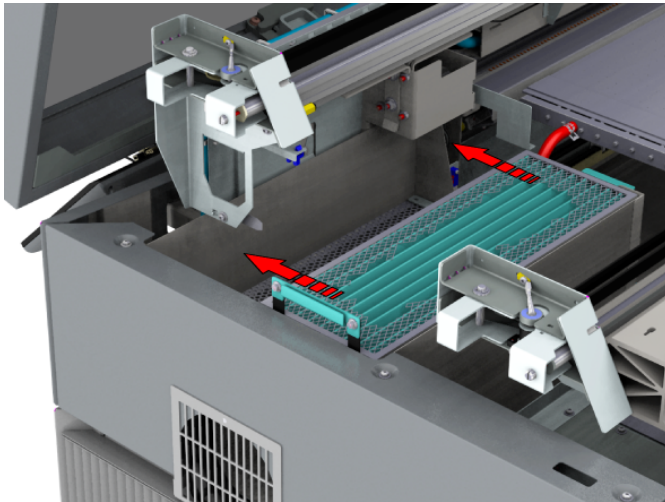
9. Slide the second filter box to the front and take it out by the green handles. Place it on a sturdy surface.
10. Take both old filter boxes out of the frames. Dispose the filter boxes according to your local regulations.
11. Place the new filter boxes in the frames.



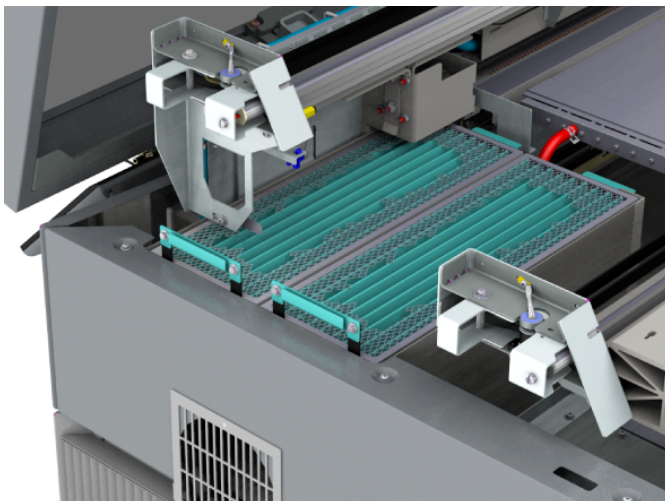
## Replace the filters (optional)

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12. Pick up the filter box holder by the green handles. Place the box in the filter compartment with the higher handle on the left. Slide it to the back.



13. Pick up the second filter box holder by the green handles. Place the box in the filter compartment with the higher handle on the left.



14. Dispose the gloves as chemical waste according to local regulations.
15. Close the top cover.
16. On the operator panel, tap on [Replaced] to end the maintenance action.

# Replace the lubricators

## Introduction

You can replace the lubricators without service assistance. The operator panel gives an orange warning when you can replace the lubricators.

## Before you begin

Use Colorado 1650 prescribed:

- Microflex gloves for handling ink
- Bracket with two lubricators and pins (2x)
- Crosshead screwdriver
- Lint free cloth (optional)



### NOTE

For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).

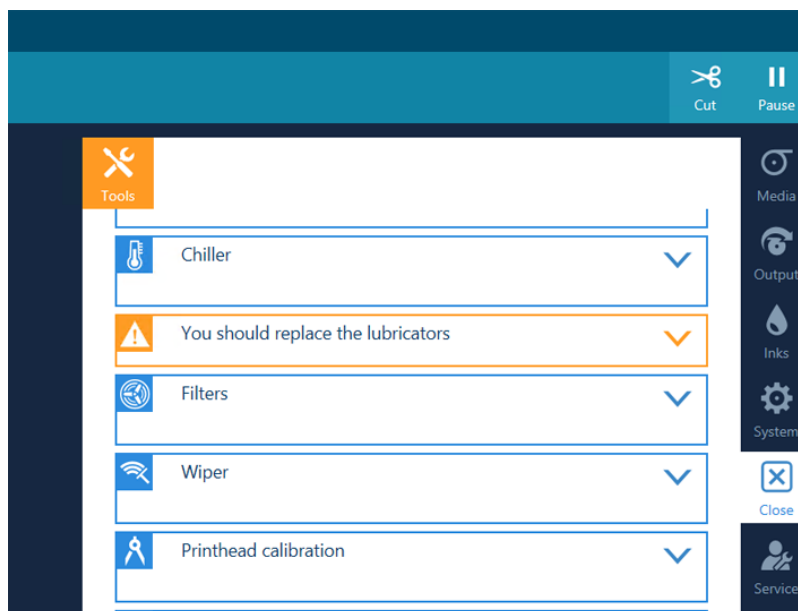


### CAUTION

- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**

## Procedure

1. On the operator panel tap on the [Tools] icon on the right.
2. Tap on [You should replace the lubricators].



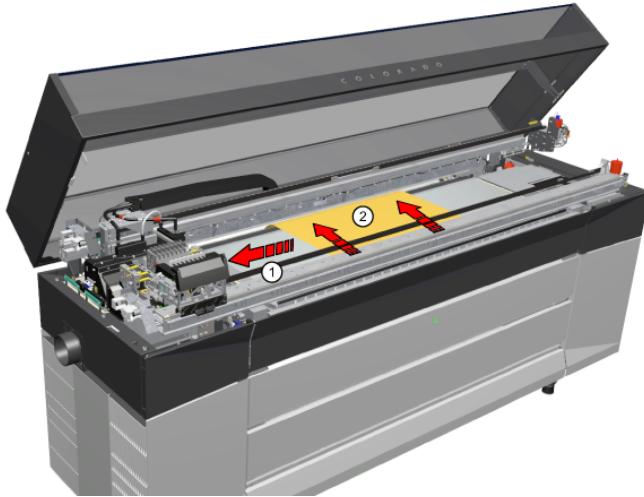
3. Tap on [Replace].
4. Move to the media input side and open the top cover.
5. Put on the Colorado 1650 approved gloves.

6. Carefully push the printhead carriage to the left in manual maintenance position (1).

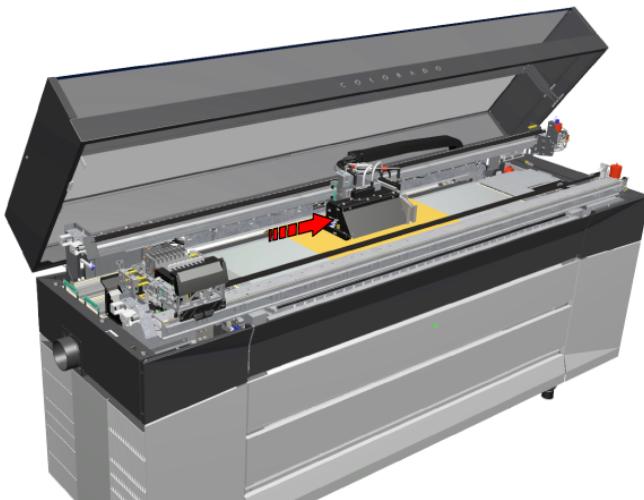


**IMPORTANT**

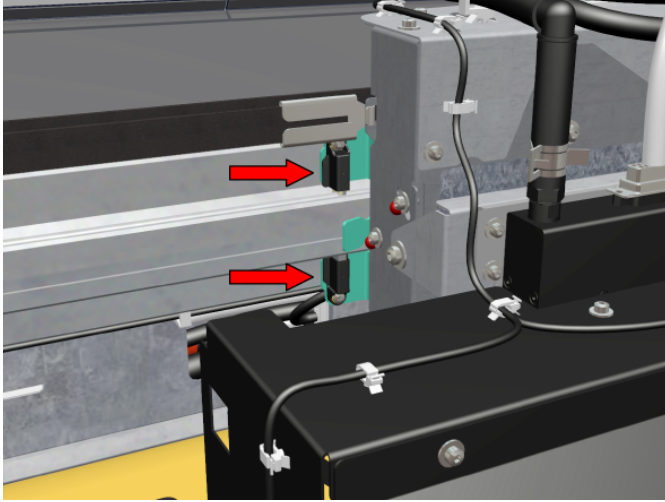
Touch the printhead carriage on the covered area only, otherwise you can damage the printheads.



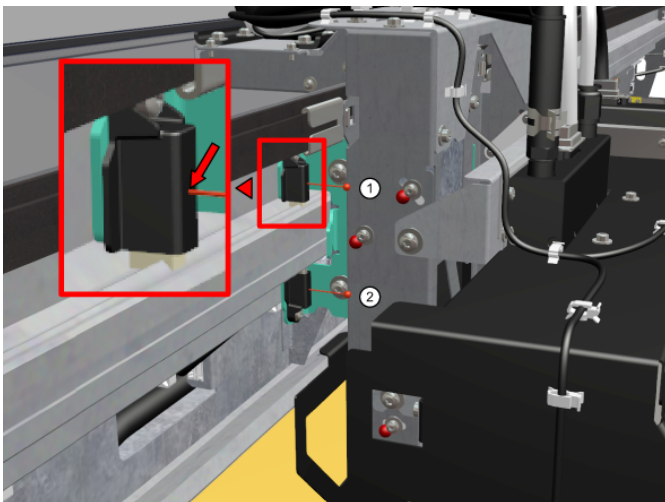
7. Take a piece of paper and place it in the middle of the platen (2).
8. Carefully push the curing carriage to the middle of the platen over the paper. The paper will prevent any loose parts falling into the printer.



9. Locate the lubricators on the left side of the curing carriage.

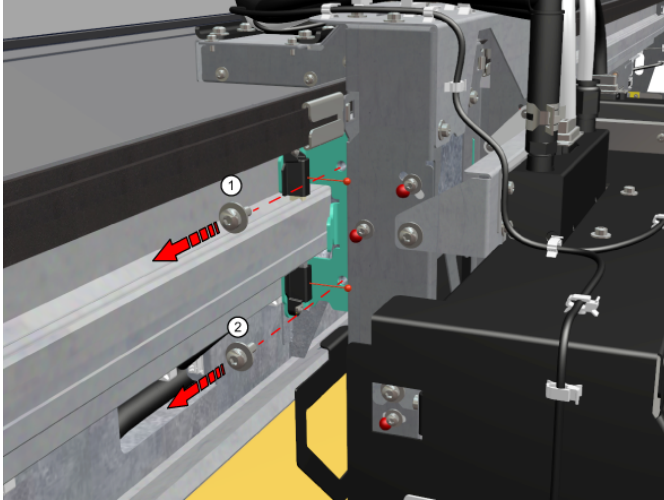


10. Take a pin and place it in the hole of the upper lubricator (1).

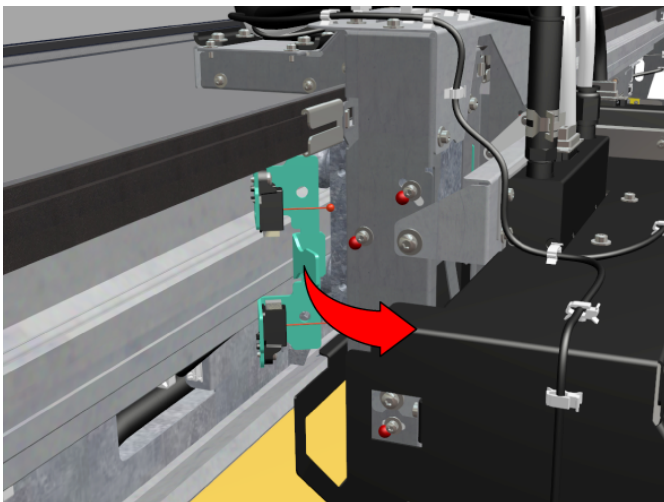


11. Take a second pin and place it in the hole of the lower lubricator (2).

12. Unscrew the two screws (1-2) on the lubricators' bracket with a crosshead screwdriver.

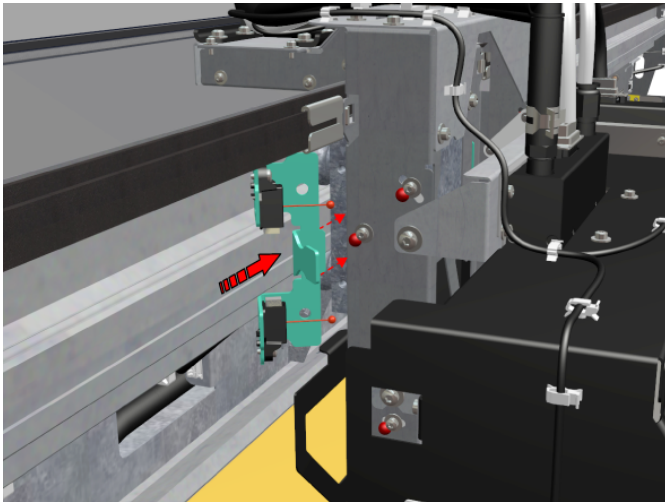


13. Remove the bracket with the lubricators.

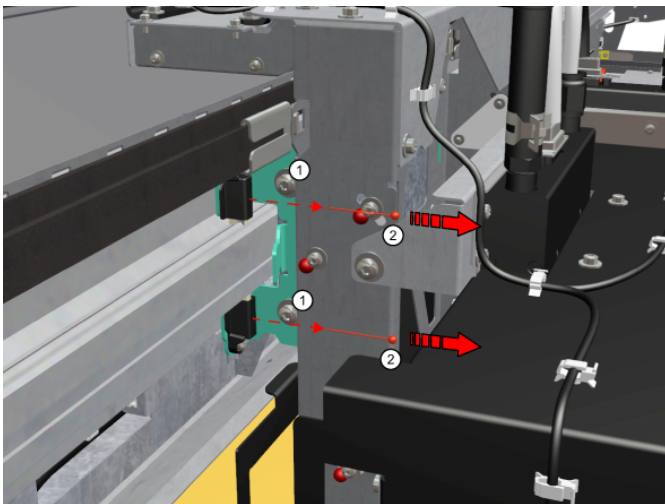


14. Take a new bracket with lubricators and place the two pins in the lubricators' holes.

15. Place the new bracket with the lubricators into position. The bracket should fit into the positioning hole.

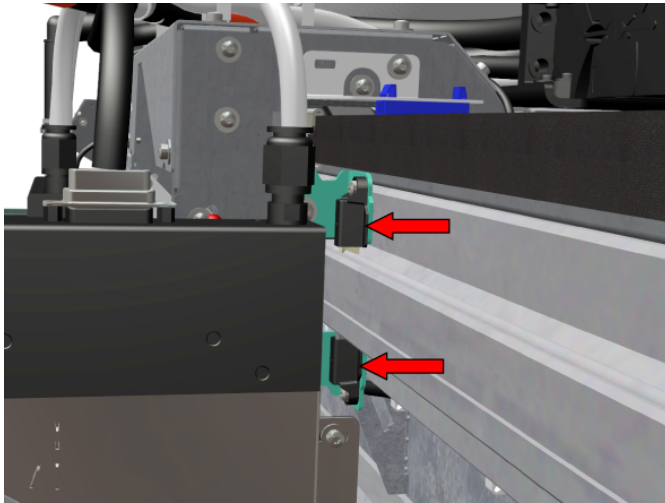


16. Fasten the two screws, hand tight (1).



17. Take the pins out of the lubricators (2).

18. Locate the lubricators on the right side of the curing carriage.

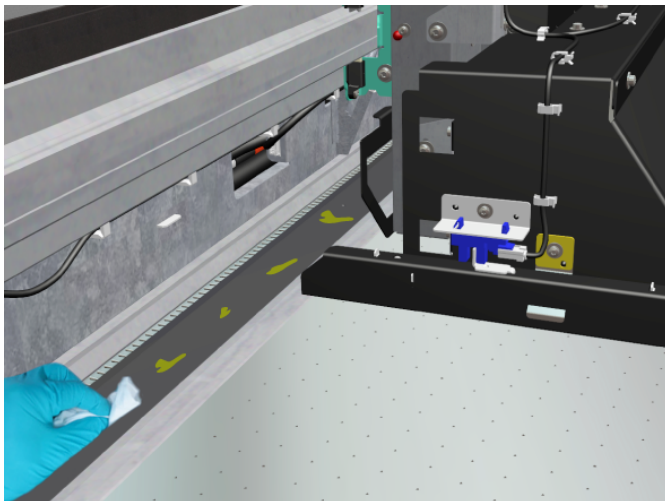


19. Repeat steps 10 to 17.
20. When the lubricators on both sides have been replaced, remove the paper.
21. Dispose the gloves as chemical waste according to local regulations.
22. Close the top cover.
23. On the operator panel tap [Replaced] to confirm you replaced the lubricators and end the action.



**NOTE**

When you have replaced the lubricators, some oil can drip on the platen and the platen edge. When oil has spilled: open the top cover when the printer is not printing, put on gloves, clean the oil with a lint free cloth and close the top cover again.

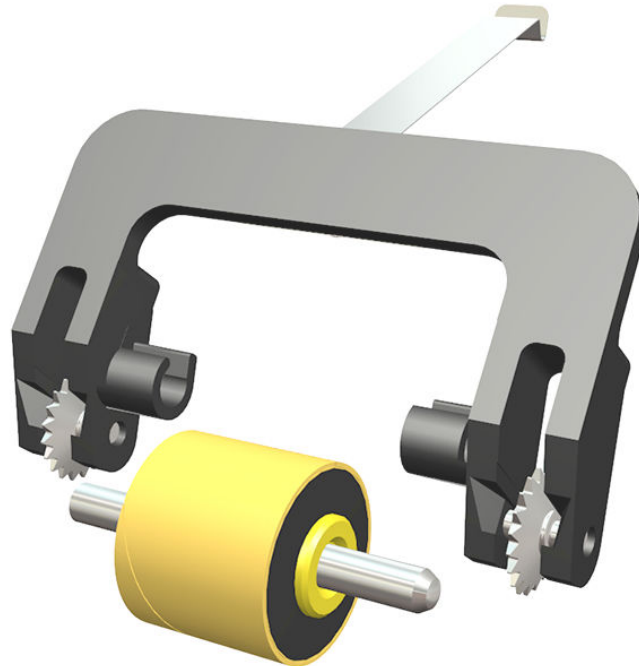




## Replace the rollers of the Xtran pinch

### Introduction

You can replace the Xtran pinch rollers without service assistance. The total amount of rollers over the full width the printer is 32.



[2] The clamp and the roller with axis

### Before you begin

Use Colorado 1650 prescribed:

- Microflex gloves for handling ink
- Xtran pinch rollers, axis and clamps
- Small screwdriver
- Piece of paper (A3)



#### NOTE

For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).



#### CAUTION

- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**

### Procedure

1. Move to the media input side and open the top cover.

## Replace the rollers of the Xtran pinch

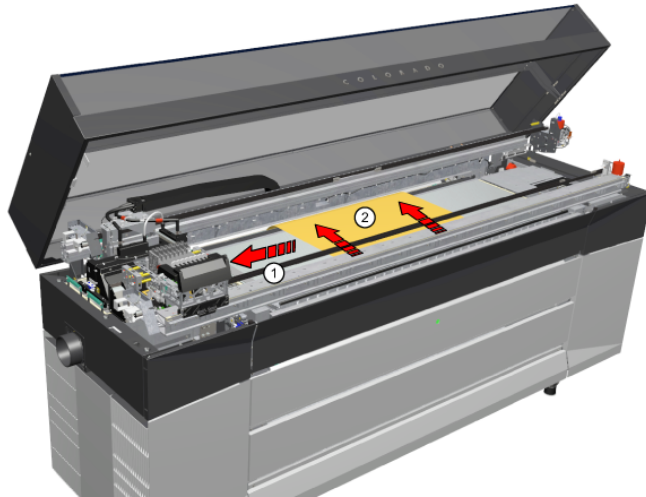
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2. Put on the Colorado 1650 approved gloves.
3. Carefully push the printhead carriage to the left in manual maintenance position (1).

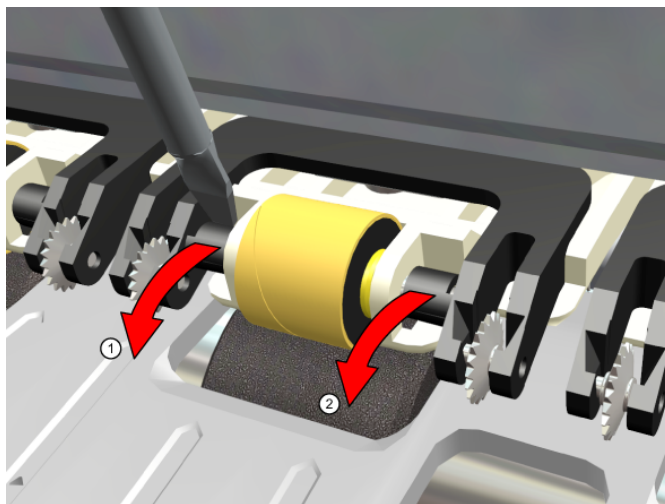


### IMPORTANT

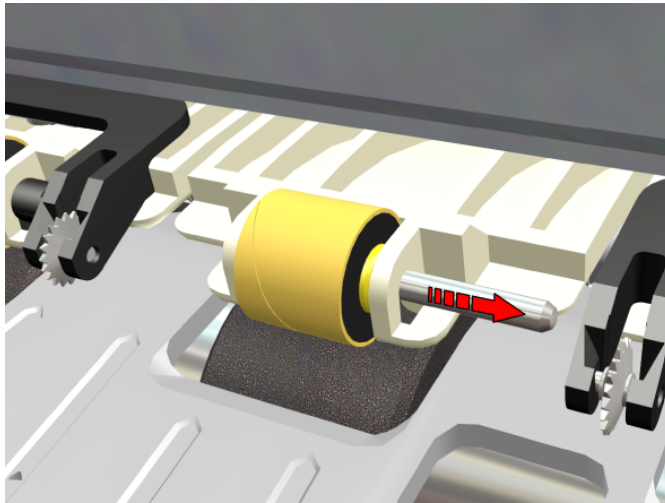
Touch the printhead carriage on the covered area only, otherwise you can damage the printheads.



4. Take a piece of paper and place it under the Xtran roller you want to replace (2).
5. Remove the black clamp from the axis.  
Use the small screwdriver to push the black plastic part of the axis on both sides away from the unit.  
Only push at the top of the plastic part otherwise you will break the axis holder.



6. Remove the axis from the holder.



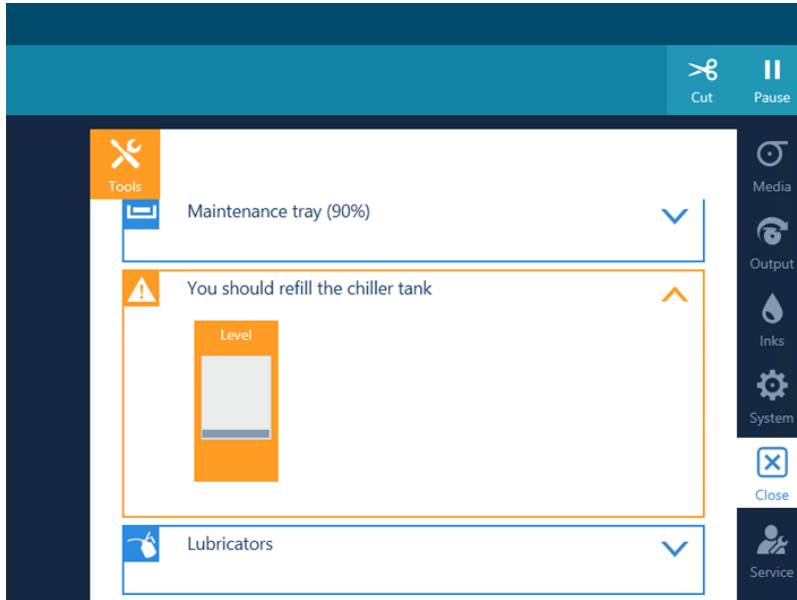
7. Remove the roller from the holder.
8. Take the new roller and place it into the holder.
9. Insert the new axis through the holder and the roller.
10. Install the new black clamp onto the axis.
11. Dispose the rollers, axis, clamps and gloves as chemical waste according to local regulations.

## Refill the chiller

### Introduction

You can refill the chiller without service assistance.

### When to do



- The operator panel gives an orange warning when you can refill the chiller.
- The operator panel gives a red warning when you must refill the chiller.

### Before you begin

Use Colorado 1650 prescribed:

- Demineralized water
- Pouring can
- Screwdriver (Torx-25)



#### NOTE

For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).



#### CAUTION

**Wear specified gloves when you refill the chiller to protect your skin.**



#### IMPORTANT

Only refill one liter of demineralized water when you get a warning, when you use more the liquid can spill and damage the machine.

### Procedure

1. On the operator panel, tap on the [System] icon on the right.
2. Tap on [Power management].

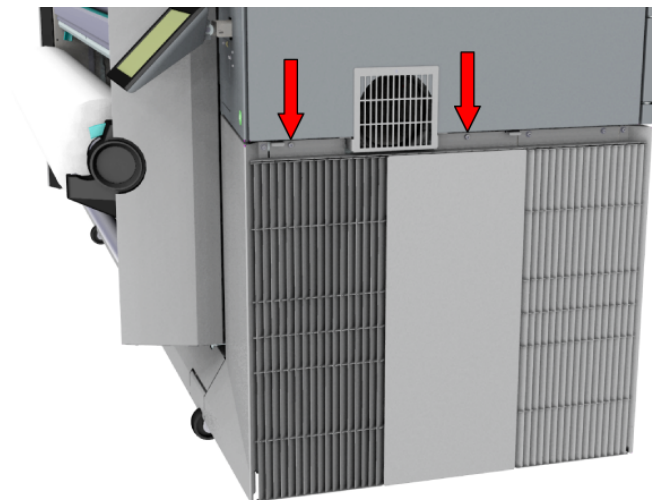
3. Tap on [Power off].  
The system shuts down.
4. When the system has shut down, pull to open the cover under the roll winder.



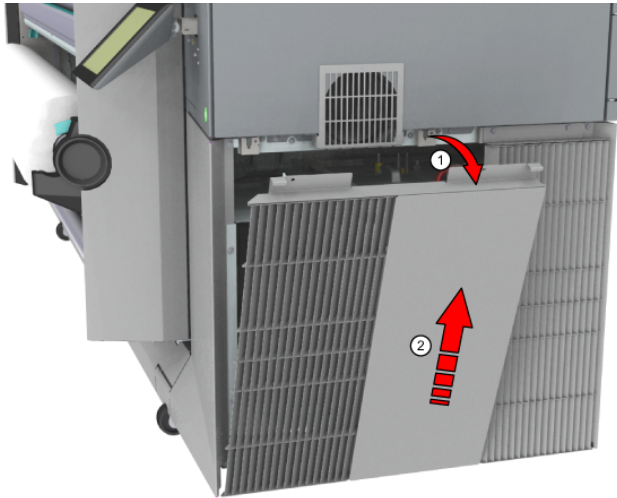
5. Switch the power switch to the 'off' position.
6. Pull out the two power supply plugs from the sockets.



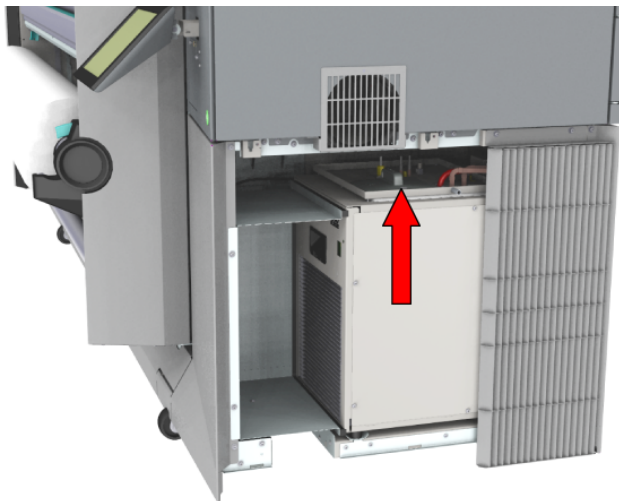
7. Go to the chiller side and locate the cover under the fan.
8. Unscrew the left and right screws on top of the cover with the Torx-25.



9. Lift the cover a little up and towards you (1), then lift it up fully and take it out (2)



10. Locate the lid on top of the chiller.  
11. Pull to remove the lid.



12. Pour one liter of demineralized water from the bottle in the pouring can.



**IMPORTANT**

Use demineralized water, do not use any other liquid.

13. Place the pouring can on the chiller and fill the tank with the liquid.



14. Close the lid, press it firmly.
15. Place the cover back into position.
16. Fasten the left and right screws on top of the cover.
17. Plug the two power supply plugs back into the sockets.
18. Switch the power switch back to the 'on' position, and close the cover.

## Vacuum the chiller

### Introduction

It is advised to vacuum the chiller every month to keep the printer in the best condition. Vacuuming the chiller is part of periodic maintenance so the operator panel gives a warning when you should vacuum the chiller. Always check the fluid level when you vacuum the chiller.

### Before you begin

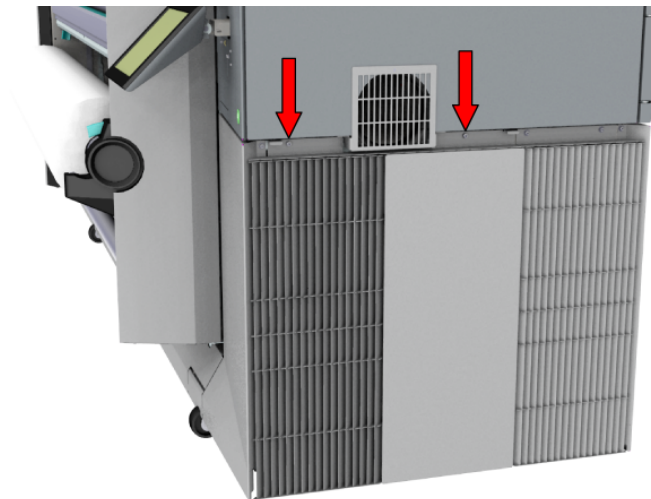
Use Colorado 1650 prescribed:

- Screwdriver (Torx-25)
- Vacuum cleaner with a brush head

This maintenance action is explained in a separate maintenance procedure video, click ["here"](#) to visit.

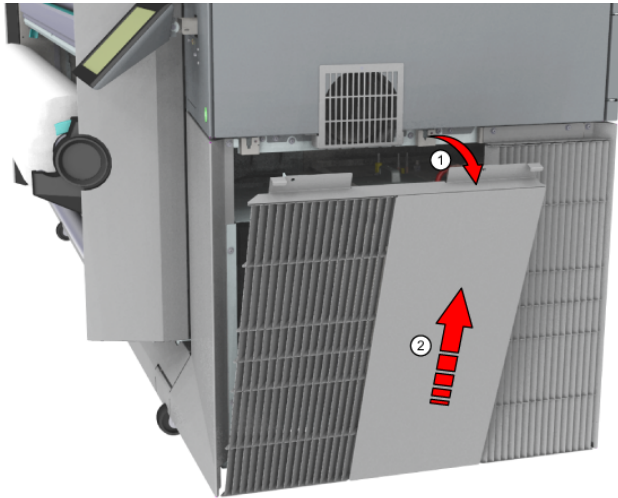
### Procedure

1. Go to the chiller side and locate the cover under the fan.
2. Unscrew the left and right screws on top of the cover with the Torx-25.





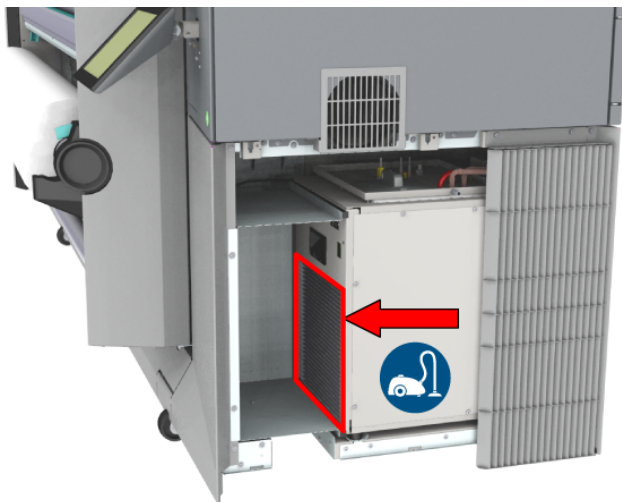
3. Lift the cover a little up and towards you (1), then lift it up fully and take it out (2).



4. Vacuum the condenser surface on the left side of the chiller, as indicated. Make sure you remove all the collected dust.

**CAUTION**

Vacuum the surface with care, make sure you do not damage the condenser surface.



5. Place the cover back into position.

**IMPORTANT**

Keep the area next to the chiller free. Do not store any items there, as it can result in insufficient cooling and damage to the machine.

6. Fasten the left and right screws on top of the cover.
7. When you vacuumed the chiller as part of periodic maintenance, on the operator panel tap on [Completed] to end the maintenance action.

## Clean the mirrors

### Introduction

When you see pollution on the mirrors or on the glass plate in front of the mirror funnel, immediately clean these parts.

It is advised to clean the mirrors and the glass plate in front of the mirror funnel regularly to keep the printer in the best condition.

### Before you begin

Use Colorado 1650 prescribed:

- Microflex gloves for handling ink
- Lint free cloths
- Demineralized water



#### NOTE

For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).



#### CAUTION

- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**

---

This maintenance action is explained in a separate maintenance procedure video, click ["here"](#) to visit.

### Procedure

1. Make sure the printer is not printing.
2. Put on the Colorado 1650 approved gloves.
3. Open the top cover from the media input side.
4. Carefully push the printhead carriage to the left in manual maintenance position.

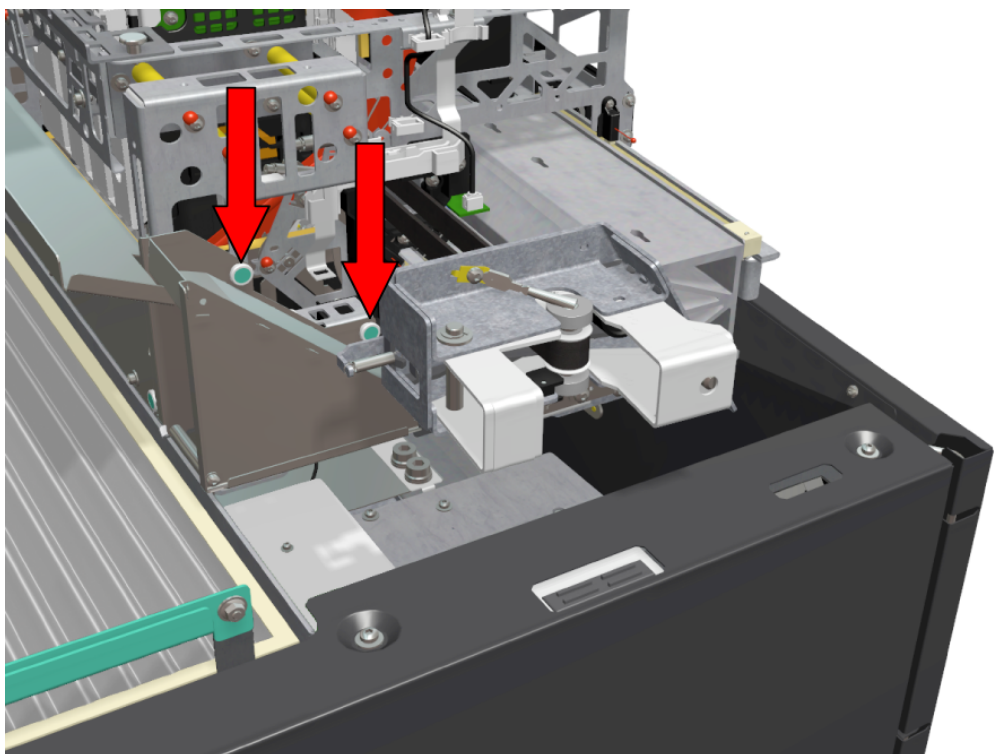
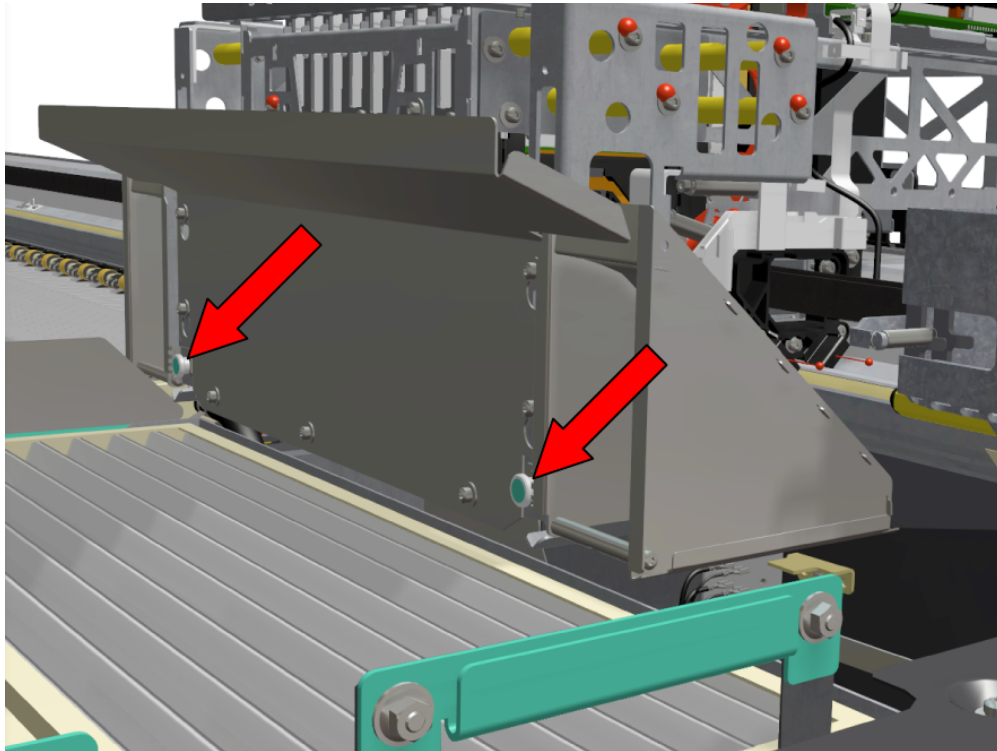


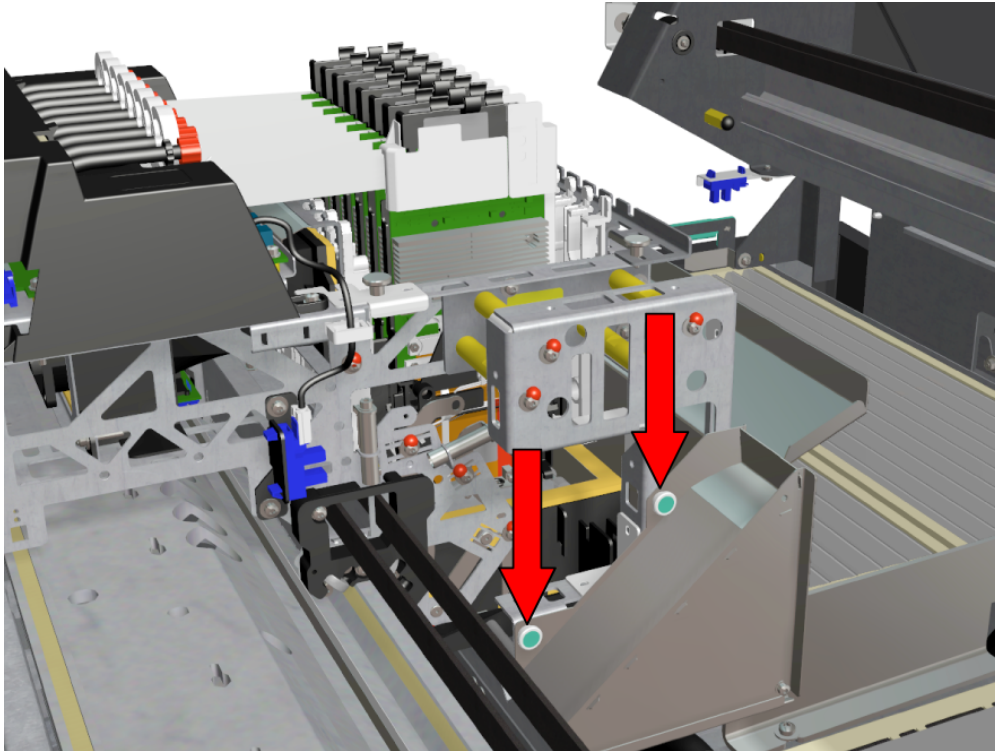
#### IMPORTANT

Touch the printhead carriage on the covered area only, otherwise you can damage the printheads.

5. Locate the mirror boxes on both sides of the printhead carriage.

6. Unscrew the six green screws of both mirror boxes manually.





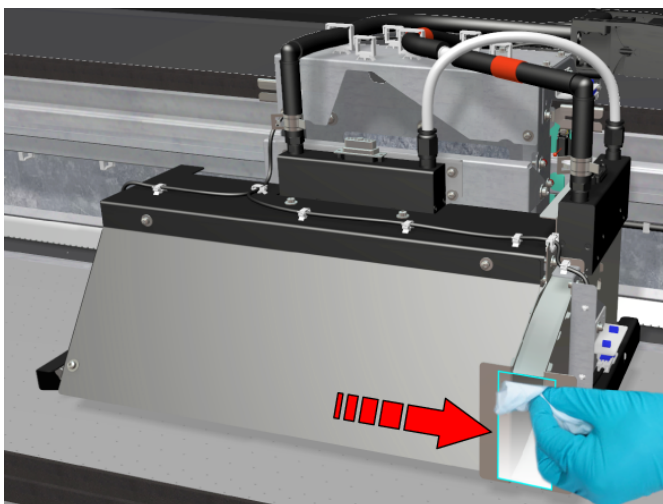
7. Dampen a lint free cloth with the demineralized water and clean all mirrors on the inside of the mirror boxes.



**IMPORTANT**

Use demineralized water, do not use any other liquid.

8. Make sure that all matte deposits are removed.
9. Carefully wipe the mirror boxes dry.
10. Place the mirror boxes back into position.
11. Fasten the screws, hand tight.
12. Carefully push the printhead carriage and the curing carriage past each other to ensure they do not touch each other.
13. Locate the mirror funnel on the curing carriage.



14. Dampen a lint free cloth with the demineralized water and clean the glass plate in front of the mirror funnel.



**IMPORTANT**

Use demineralized water, do not use any other liquid.

15. Make sure that all matte deposits are removed.
16. Carefully wipe the glass plate dry.
17. Dispose the gloves and cloths as chemical waste according to local regulations.
18. Close the top cover.

## Clean the ink unit

### Introduction

It is advised to clean the ink unit regularly to keep the printer in the best condition. You can clean the ink unit when you replace a bottle or during periodic maintenance. When you see ink pollution, immediately clean the affected area.

### Before you begin

Use Colorado 1650 prescribed:

- Microflex gloves for handling ink
- Lint free cloths
- Cleaning liquid (IPA)



#### NOTE

For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).



#### CAUTION

- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**

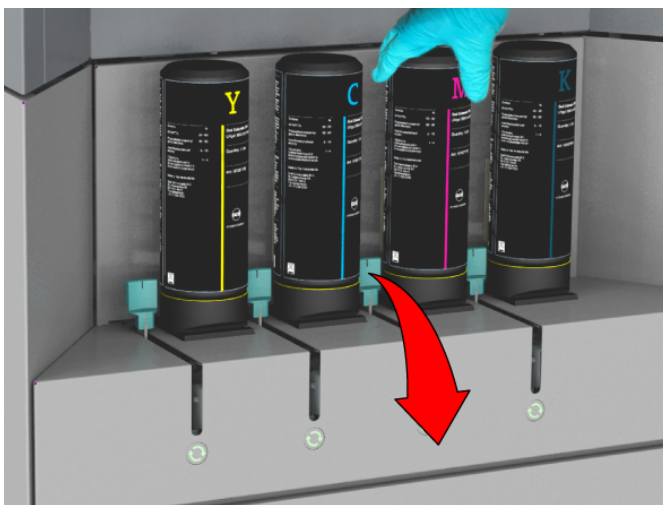


#### IMPORTANT

Use the prescribed cleaning liquid. Do not use any other cleaners.

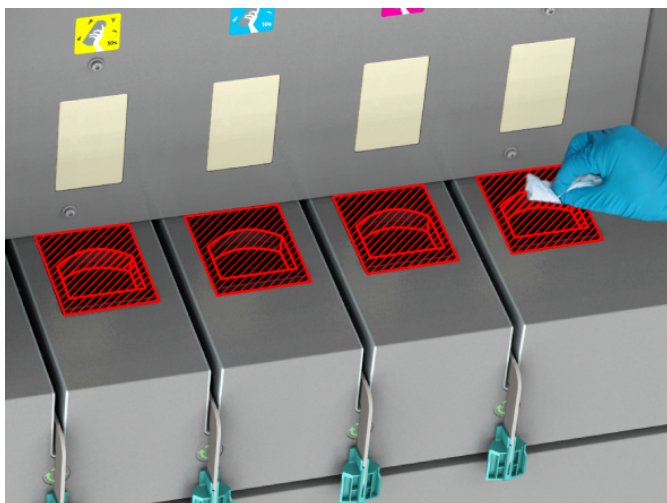
### Procedure

1. Go to the side of the printer where the ink bottles are located.
2. Put on the Colorado 1650 approved gloves.
3. Move down the green handle which is located left of the bottle you want to replace. Do not hold the bottle while you move the handle.



4. Take the empty bottle out of the slot.
5. Dispose the bottle as chemical waste according to local regulations. If preferred and possible, you can repeat the steps to take out all bottles.

6. Take a lint free cloth and clean the indicated areas surrounding the slots until all residue ink is gone.  
If necessary, dampen a swab with the cleaning liquid to remove any remaining ink.



7. When all residue ink is removed, dispose the gloves and cloths as chemical waste according to local regulations.


## Result

If preferred and possible, you can place new bottles and refill ink. The order of the bottles from left to right is YCMK. For more information, see [Refill ink on page 192](#).

## List of Colorado 1650 maintenance materials

### Items to order

The items listed below can be requested from your local representative:

Maintenance material	Used for
Prescribed Microflex gloves	Handling Colorado 1650 UVgel ink.
Lint free cloth	Cleaning the printer when polluted with ink.
Prescribed Swabs	Cleaning pollution on surfaces such as the maintenance station, wiper and clean wall, matrix plate etc.
Matrix plate cleaning tool	Cleaning the matrix plate (holder).
Matrix plate cleaning foam	Cleaning the matrix plate (foam to put in the holder).
Cleaning liquid (Cleaner MB - methyl benzoate)	Cleaning ink pollution on heated surfaces: the matrix plate, wiper and clean wall only. Used only with swabs.   <b>IMPORTANT</b> This cleaning liquid is not used for any other parts in the printer.
Maintenance tray	Replacing a full maintenance tray.
Wiper	Replacing the wiper.
UVgel ink (CMYK)	Refilling new ink.
Set of foams	Replacing polluted guide plate foams.
Roller assy	Replacing a polluted guide plate roller assy.
Filters	Replacing saturated filters.
Bracket with two lubricators and pins	Replacing the lubricators.
Xtran pinch rollers	Replacing the rollers of the Xtran pinch.
Knife	Replacing a blunt embedded knife.
Tension bar	Replacing a tension bar that has been damaged or lost.
Drive gear	Replacing a drive gear that has been damaged on a media shaft.

### Items provided once


The items listed below are delivered only once, together with the machine at installation:

Maintenance material	Used for
Screwdriver (Torx-25)	Opening the chiller cover and the knife compartment cover.
Pouring can	Refilling demineralized water in the chiller.

### Items to provide yourself

The items listed below you should provide yourself:



Maintenance material	Used for
Cleaning liquid (IPA)	<p>Cleaning ink pollution on non-heated surfaces, such as the platen, maintenance tray, drawer, ink unit, M&amp;C scanner, non-heated parts of the maintenance station, etc.</p> <p> <b>IMPORTANT</b> This cleaning liquid is not used for the matrix plate, wiper and clean wall, heated parts of the maintenance station.</p>
Demineralized water	Refilling the chiller and cleaning the mirrors.
Screwdriver (Torx-6)	Replacing the knife.
Screwdriver (Torx-20)	Replacing a drive gear.
Crosshead screwdriver	Replacing the lubricators.
Knife, pair of scissors	Making a manual cut.
Vacuum cleaner	Vacuuming the chiller.
Compressed air duster	Cleaning the platen.
Wooden picks (2mm)	Cleaning the platen.
Rough lint free cloth	Cleaning the platen.
Scraper	Cleaning the platen.



# **Chapter 7**

## Improve quality

# General workflow for improving quality

## Introduction

Follow the general workflow to solve quality problems and improve the output. The preconditions are that you:

- Have performed maintenance regularly.  
Perform automatic and manual maintenance with incidents, and perform periodic maintenance once a month or when the printer requests it. For more information, see [Maintain the print quality on page 166](#).
- Have calibrated the media.  
All media types have to be calibrated first. Redo the calibration for every media width. For more information, see [Calibrate the media on page 116](#).
- See a defect in a high pass mode: [High Quality], [Specialty], [Superior], [Matte Quality], [Matte Specialty], [Backlit] or [Backlit Density].

Shortcuts into different solution directions

Do you see or experience...	Solution
a problem only or mainly visible in the 1 <sup>st</sup> meter?	Perform a media calibration, see <a href="#">Calibrate the media on page 116</a> .
regular, sharp, light lines?	Perform maintenance including nozzle optimization see <a href="#">Guidelines to maintain the print quality on page 166</a> .
a gradient within a swath?	Try a robust print strategy or a slower print mode. See [Step correction] and print mode/strategy selection in <a href="#">Change the media settings on page 74</a> .
OD banding or lines within the swath boundary?	Clean the platen and the buffer plate, see <a href="#">Clean the platen on page 187</a> and <a href="#">Clean the buffer plate on page 190</a> and redo a media calibration.
problems regarding handling or application robustness?	Contact your application specialist or look into the Media Verification Protocol.

## General workflow to solve quality problems

You can stop at any step when the issue is solved.



### NOTE

Most important actions are clean the platen and clean the buffer plate.

## Procedure

1. [Print a printhead quality check chart on page 238](#) to see if the problem occurs here as well.
2. [Start automatic maintenance on page 169](#)
3. [Start manual maintenance on page 171](#)
4. [Start periodic maintenance on page 173](#).
5. [Change the media settings on page 74](#). Check you used the correct media settings and media category in the RIP (e.g. [Media thickness]).
6. [Calibrate the printhead on page 241](#)
7. [Calibrate the media on page 116](#)
8. [Calibrate the printhead carriage on page 243](#)

9. *Print a printhead quality check chart on page 238* again, and *Analyze the printhead quality check chart on page 240*

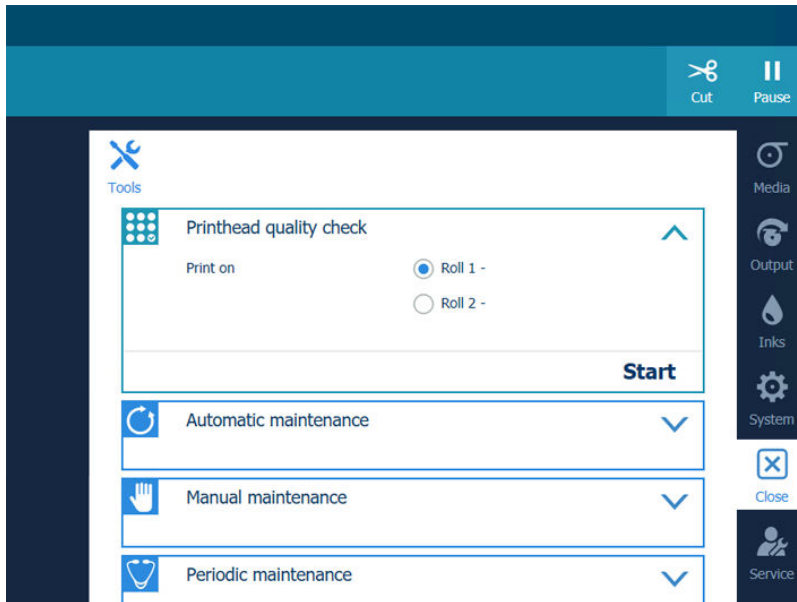
## Result

In case the problem remains, use the printhead quality check chart to identify the issue and try to solve that specific quality problem. For more information, see *Solve specific quality problems on page 304*.

# Print a printhead quality check chart

## Introduction

Print a printhead quality check chart to check your quality and identify any quality issues. If a problem is visible on the chart, you can change the necessary settings to optimize the quality.



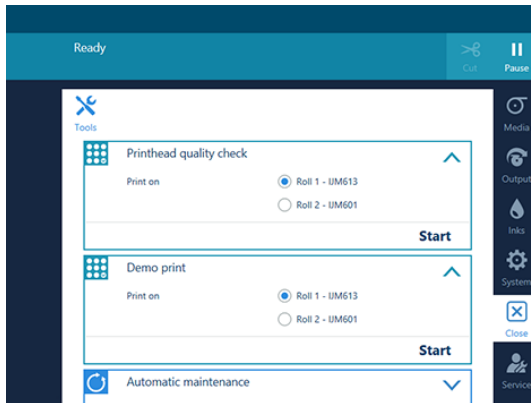
## Procedure

1. On the operator panel tap on the [Tools] icon on the right.
2. Tap on [Printhead quality check].
3. Select a roll to print the check chart on.
4. Tap on [Start].  
The printer prints the check chart.
5. Check the quality of the chart. For more information, see [Analyze the printhead quality check chart on page 240](#).

# Print a demo print

## Introduction

Print a demo print to see the quality of the output.



## Procedure

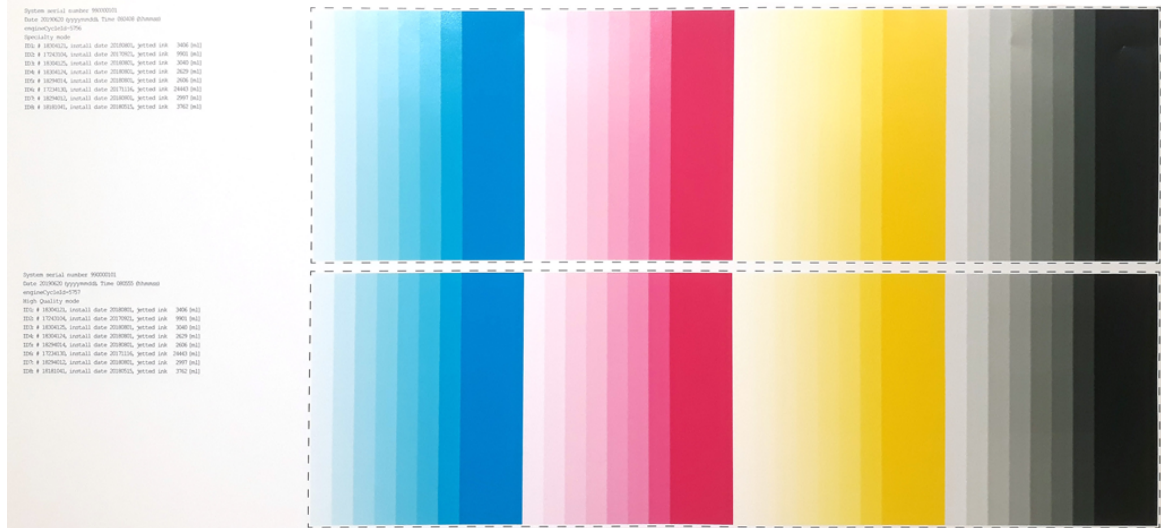
1. On the operator panel tap on the [Tools] icon on the right.
2. Tap on [Demo print].
3. Select a roll to print the demo print on.
4. Tap on [Start].  
The printer prints the demo print.
5. Notice the quality of the demo print.

# Analyze the printhead quality check chart

## Introduction

When you have printed the printhead quality check chart, analyze the chart to help you solve your quality problem.

## Printhead quality check chart



Each area can indicate a quality problem. Use the chart to identify your problem and solve it: [Solve specific quality problems on page 304.](#)



# Calibrate the printhead

## Introduction

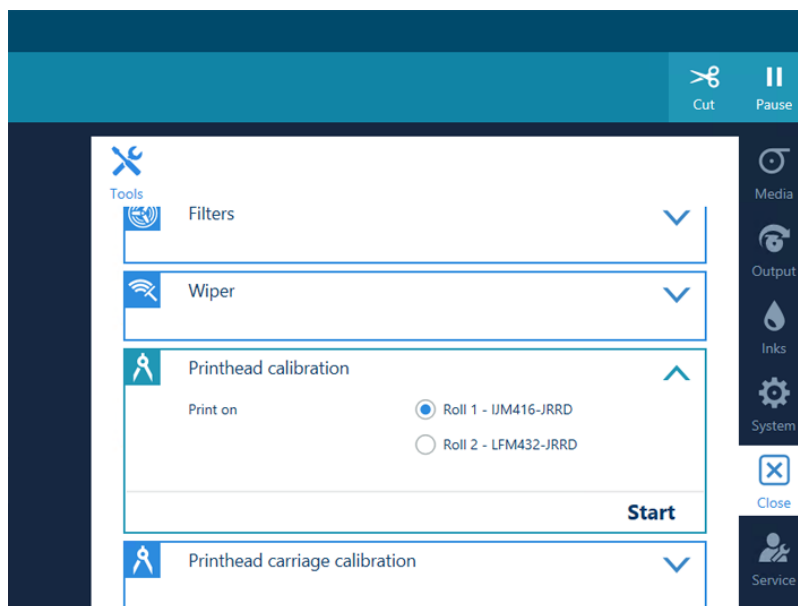
When you are unsure about the density of colors on your printed output, you can optimize the printhead performance. Perform a printhead calibration when you want to optimize colors.

When you enable [Automatic nozzle optimization] the printer will create a test print on which each individual nozzle will print a pattern. Failing nozzles are compensated by other nozzles for all print jobs, which results in an optimum print quality.



### NOTE

- You can only perform printhead calibration when you print without winding. For more information, see [Print without winding on page 132](#).
- You have to use a media width that is larger than 1270 mm (50 inch).
- You have to use a media type that can be used for printing without winding.
- You have to use a smooth, white, opaque, non-reflective media for the printhead calibration of one of the following categories:
  - Heavy paper > 200 gsm (54 lb bond)
  - Paper 120-200 gsm (32-54 lb bond)
  - Film
  - Polymeric & cast self-adhesive vinyl
  - Thick film > 200 um (0.0079 inch)



## Procedure

1. On the operator panel tap on the [Tools] icon on the right.
2. Tap on [Printhead calibration].
3. Select the roll you want to use for calibration.
4. Tap on [Start].  
The printer performs the calibration.



### NOTE

The calibration can take quite some time, around 30 minutes. Wait until the printer is finished with the calibration. When the active job disappears and [Start] is no longer greyed out, the calibration is finished.

### After you finish

The calibration can be successful or it can fail.

When a message appears that the calibration has failed, perform printhead calibration again.

When the calibration fails again, perform automatic maintenance three times without automatic nozzle optimization. For more information, see [Start automatic maintenance on page 169](#).

Perform printhead calibration again.

When the calibration is still not successful, contact your local Service representative.

# Calibrate the printhead carriage

## Introduction

When your image is blurred or fuzzy the registration can be off. Calibrate the printhead carriage to align the registration.

## Before you begin

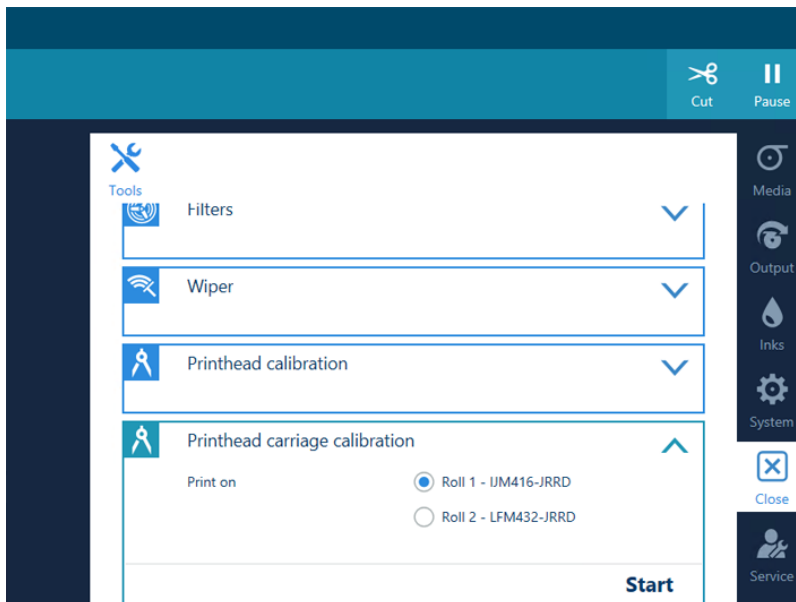
First perform the following actions to try and solve your problem, before you calibrate the printhead carriage:

1. Check if you have filled in the correct [Media thickness ] in the RIP's media settings. For more information, see [Change the media settings on page 74](#).
2. Perform media calibration. For more information, see [Calibrate the media on page 116](#).



### NOTE

- You can only perform printhead calibration when you print without winding. For more information, see [Print without winding on page 132](#).
- You have to use a media width that is larger than 1270 mm (50 inch).
- You have to use a media type that can be used for printing without winding.
- You have to use a smooth, white, opaque, non-reflective media for the printhead calibration of one of the following categories:
  - Heavy paper > 200 gsm (54 lb bond)
  - Paper 120-200 gsm (32-54 lb bond)
  - Film
  - Polymeric & cast self-adhesive vinyl
  - Thick film > 200 um (0.0079 inch)



## Procedure

1. Load the correct media type. For more information, see [Load a media roll \(position 1\) on page 85](#).
2. On the operator panel tap on the [Tools] icon on the right.
3. Tap on [Printhead carriage calibration].
4. Select the roll you want to use for calibration.

5. Tap on [Start].  
The printer performs the calibration.



**NOTE**

The calibration can take quite some time, around 40 minutes. Wait until the printer is finished with the calibration. When the active job disappears and [Start] is no longer greyed out, the calibration is finished.

## **Chapter 8**

Configure the network and security settings


# Configure the network

## Introduction

At installation, the printer is connected to the network and connectivity settings are made. If necessary, you can change the network configuration settings on the user panel.

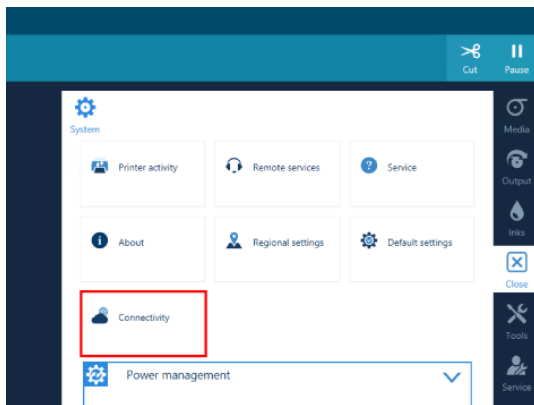
## Network overview

Action	Connection via
The printer receives jobs from the RIP workstation	RAW TCP/IP (port 9100)
The printer connects via the internet with the back office	HTTPS (port 443)
The printer connects to the mail server for password recovery	SMTP (port 25 by default, can be changed)
You can access the settings editor	HTTP (port 80) or HTTPS (port 443 by default, can be changed)

 **NOTE**  
HTTPS requires a valid certificate.

## Procedure

1. On the operator panel, tap on the [System] icon on the right.
2. Tap on [Connectivity ].

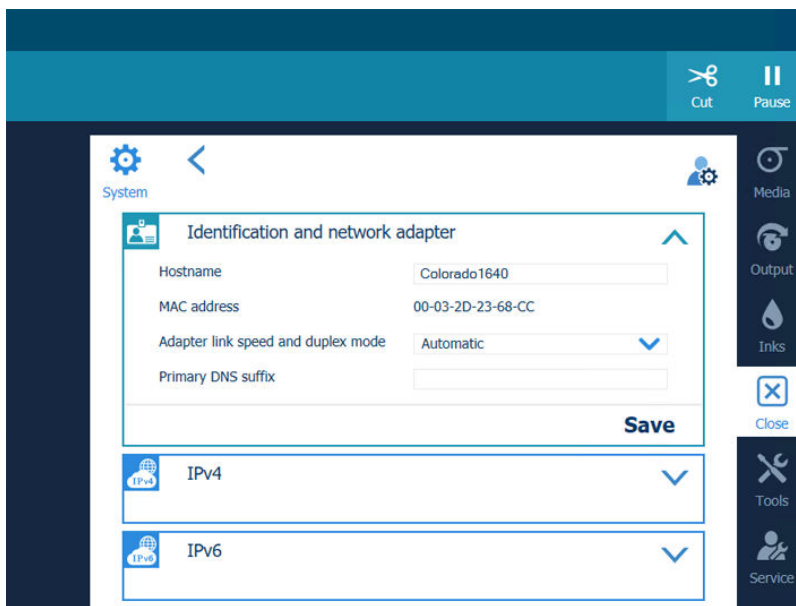


3. Tap on [Identification and network adapter]. You can change the [Hostname], [Adapter link speed and duplex mode] or [Primary DNS suffix].



### NOTE

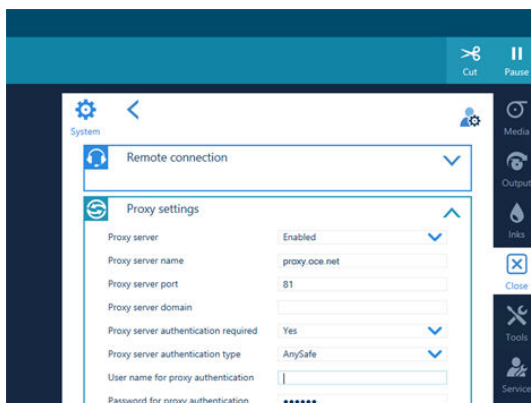
You have to log in as System administrator to change the settings. For more information, see [Log in as a System administrator on page 249](#).



4. Tap on [IPv4] to change the TCPIP v4 parameters.
5. Tap on [IPv6] to change the TCPIP v6 parameters.
6. Tap on Save to save the settings.
7. Tap on the [Back] arrow.
8. Tap on [Remote services]. One of the settings you can change are the [Proxy settings].

**NOTE**

A proxy may be required to access the internet and make use of Remote services. Ask your IT administrator for the settings, if he does not know them use the default values.



9. Tap on [Save] to save the settings.

# Configure remote assistance

## Introduction

Enable and configure remote assistance to give the service organization access to your system. The service technician is then able to operate your system and provide assistance remotely.

## Procedure

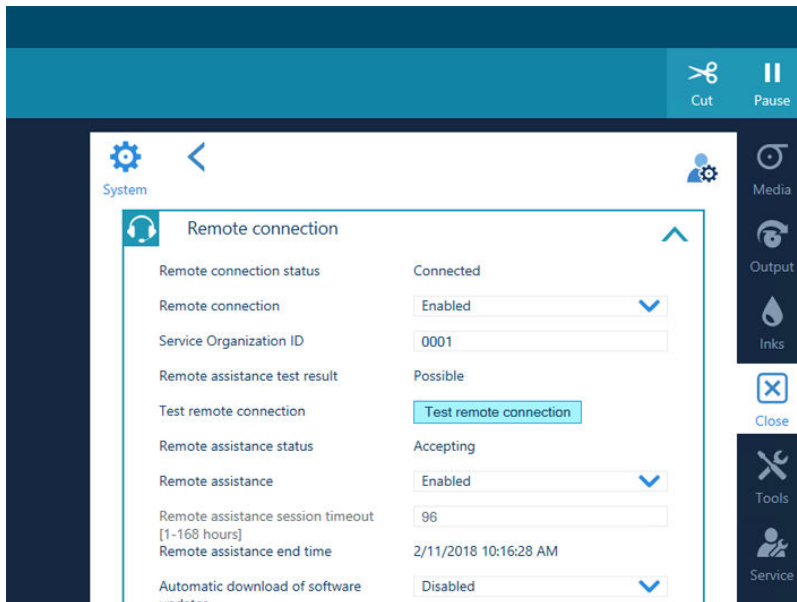
1. On the operator panel, tap on the [System] icon on the right.
2. Tap on [Remote services]→[Remote connection].



### NOTE

You have to log in as System administrator to change some settings. For more information, see [Log in as a System administrator on page 249](#).

3. Next to [Remote assistance], tap on the arrow and select [Enabled].



4. Tap on the box next to [Remote assistance session timeout [1-168 hours]] and fill in the time in hours you want the remote assistance session to automatically end.
5. Tap on [Save].
6. Tap on [Remote connection]→[Test remote connection].
7. Next to [Remote assistance test result] you can see whether the connection was successfully established.



### NOTE

- When you cannot connect remote assistance, contact your local Service representative.
- Since a remote assistance session is established via a point to point connection, only this specific system and none of the other systems at your site can be reached.
- Disable the remote connection when you want to terminate the connection with the service organization. Then you are always in control.



# Log in as a System administrator

## Introduction

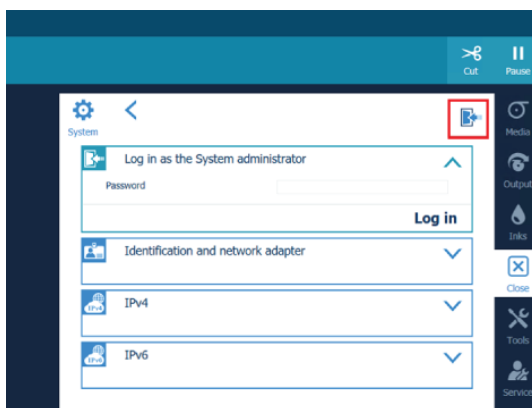
The System administrator settings are password protected. You have to log in as System administrator on the operator panel or in the settings editor to be able to change the system administrator settings.

## Before you begin

The default System administrator password is 71617000. It is highly recommended to change it during system installation or immediately after. For more information, see [Change the System administrator password on page 254](#).

## Log in on the operator panel

1. On the operator panel, tap on the [System] icon on the right.
2. Tap on any of the tiles, for example on [Connectivity ].
3. Tap on the login icon at the top right of the window.



4. Fill in the password and tap on [Log in].

## Log in on the settings editor



1. Open the settings editor.
2. Click on [Visitor] in the top right corner.

3. Click on [Log in], select System administrator as [user name] and fill in the [password].
4. Click on [Log in].

Or,

1. Open the settings editor.
2. Click on a System administrator setting you want to change.
3. Select the System administrator as [user name] and fill in the [password].
4. Click on [Log in].

# Open the settings editor

## Introduction

Next to the settings on the operator panel, you can make some settings for connectivity and security in the settings editor of the printer.



### NOTE

You can make some connectivity and security settings on the operator panel, for more information see [Configure the network on page 246](#).

**Colorado**

Preferences Configuration Support ? Visitor

System settings

System settings

Regional settings		Edit
Setting	Value	
Language	<input type="checkbox"/> English (US)	
Date and time	<input type="checkbox"/> 07 Feb 2018 09:11:12	
Time zone	<input type="checkbox"/> (UTC+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna	
NTP client	<input type="checkbox"/> Disabled	
NTP server name	<input type="checkbox"/> time.windows.com	
Test NTP server connection	<input type="checkbox"/> Start the test	
System of measurement	<input type="checkbox"/> Metric	

Energy save modes		Edit
Setting	Value	
Automatic wake-up	<input type="checkbox"/> Enabled	
Automatic shutdown	<input type="checkbox"/> Enabled	

Wake-up timers		Edit
Setting	Value	
Wake-up Monday	<input type="checkbox"/> Yes	
Wake-up time Monday	<input type="checkbox"/> 07:00	
Shutdown Monday	<input type="checkbox"/> Yes	
Shutdown time Monday	<input type="checkbox"/> 22:00	

## Access the settings editor

Access the settings editor via any web browser, by typing in the printer's:

- IP address, or
- Hostname

# Configure time synchronization

## Introduction

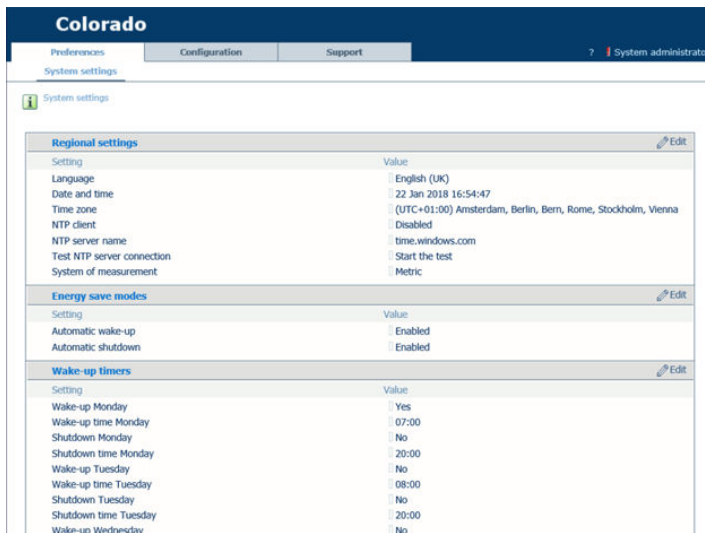
You can enable the time synchronization to connect the Colorado 1650 to a certified time server. Then, the printer is set automatically on the correct date and time.

## Before you begin

Ask your IT administrator for the name of the NTP server the printer has to connect to for time synchronization. The default value is [time.windows.com].

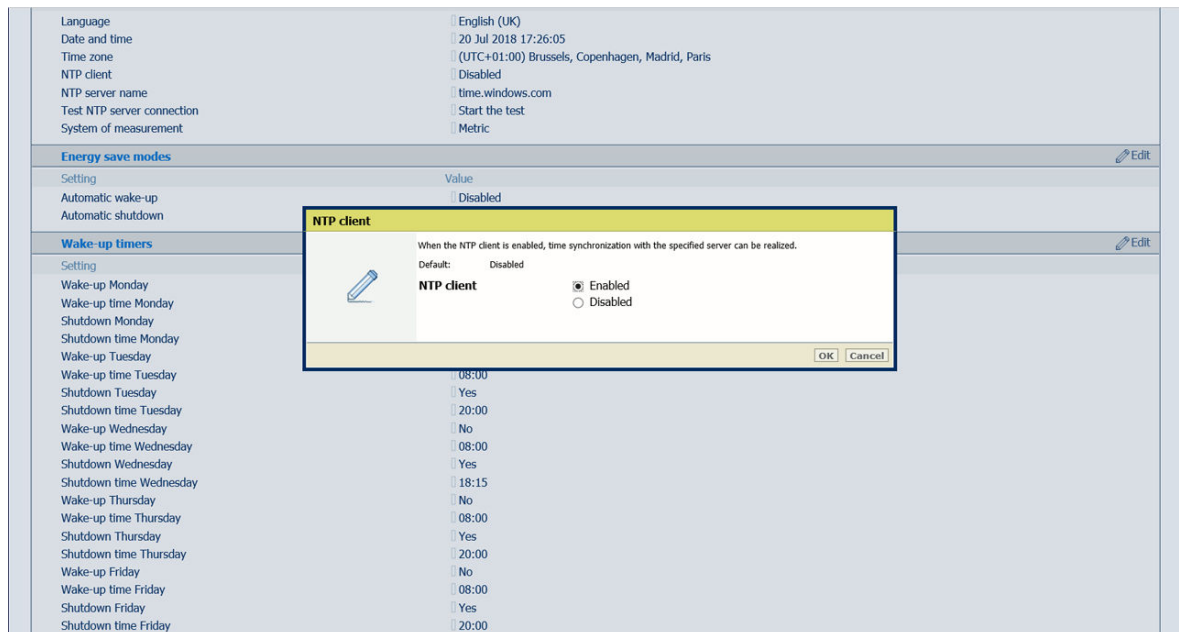
## Procedure

1. Open the settings editor.
2. Click on [Preferences].

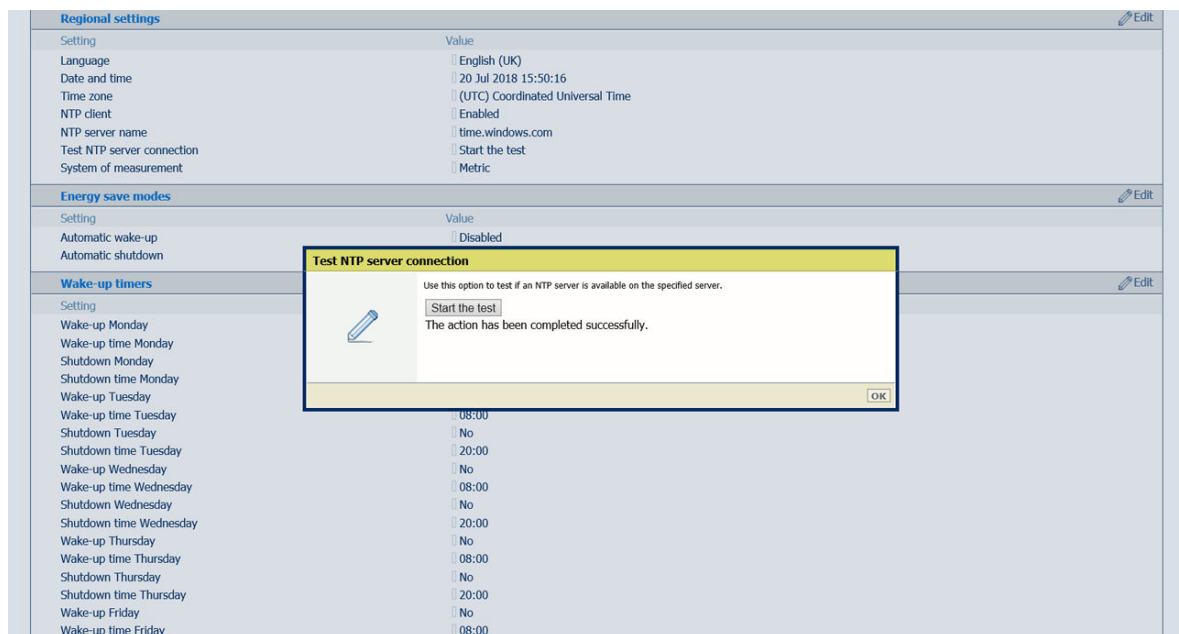


3. Click on the value next to [NTP client]. A window opens.

4. Select [Enabled] and click on [OK].



5. Click on the value next to [NTP server name]. A window opens.
6. Fill in a valid IP address or domain name and click on [OK].  
If you do not know the server name, ask your IT administrator.
7. Click on [Start the test] next to [Test NTP server connection]. A windows opens.
8. Click on [Start the test].



9. Check that the result of the test is successful and click on [OK].  
When the result is not successful, make sure the server name is correct. If you cannot solve the problem, ask your IT administrator.

# Change the System administrator password

## Introduction

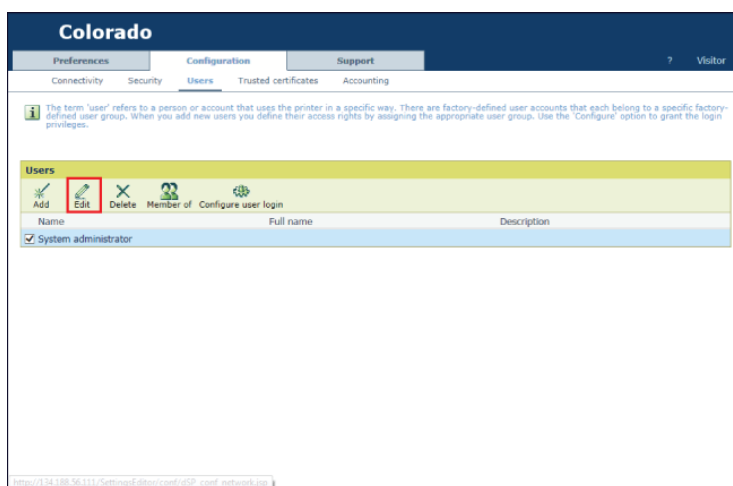
For security reasons it is advised to change the System administrator password during installation or immediately after. Next to that, you should change the password periodically.

## Before you begin

Log in as System administrator in the settings editor.

## Change the password

1. Open the settings editor.
2. Click on [Configuration] →[Users].
3. Check the box in front of [System administrator] and click on the [Edit] icon above.



4. In the window, fill in [Password] and [Confirm password] with your new password.
5. Click [ Ok] to save the password.

## Reset the System administrator account

It is also possible to reset the System administrator account and go back to the default values. Click on [Configuration] →[Security] →[Restore factory-defined account values] and click on [Ok].

# Configure a mail server for password recovery and notifications

## Introduction

When you have forgotten your System administrator password you can recover it, but only when you have configured an email server first.

The email address is also helpful if you want to receive a notification email when a software upgrade is available for your printer.

## When to do

Make sure you configure the mail server as soon as possible, otherwise you cannot recover your password.

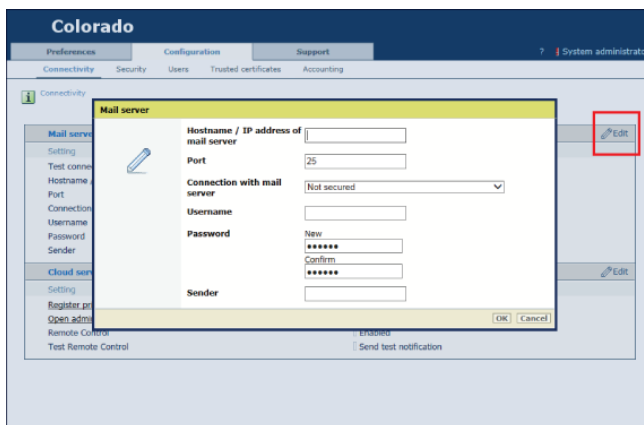
## Before you begin

Make sure you collect the following information before you begin. If you do not have the information, ask your IT administrator.

- Hostname of the mail server
- The port used for the mail server
- Type of mail server connection: secured or not
- In case of a secured connection: the username and password
- The email address you want to use to receive the password recovery link
- If necessary, change the mail server port number (default 25)

## Procedure

1. Open the settings editor.
2. Click on [Configuration] → [Connectivity].
3. Click on [Edit] in the [Mail server] header. A window opens.



4. Under [Hostname / IP address of mail server] fill in the hostname or IP address of the mail server.
5. Under [Port] you can change the port, generally TCP 25 for SMTP protocol.
6. Under [Connection with mail server] select the type of connection. If you do not know the type of connection, ask your IT administrator.



**NOTE**

It is strongly advised to secure the communication between the controller and the mail server, in order to avoid anyone to intercept the password recovery email.

7. In case of a secure connection, fill in the username under [Username].  
If you do not know the username, ask your IT administrator.
8. In case of a secure connection, fill in the password under [Password].  
If you do not know the password, ask your IT administrator.
9. Under [Sender] fill in the name that will be used in the "From" box in your email application.



**NOTE**

This is not your email address.

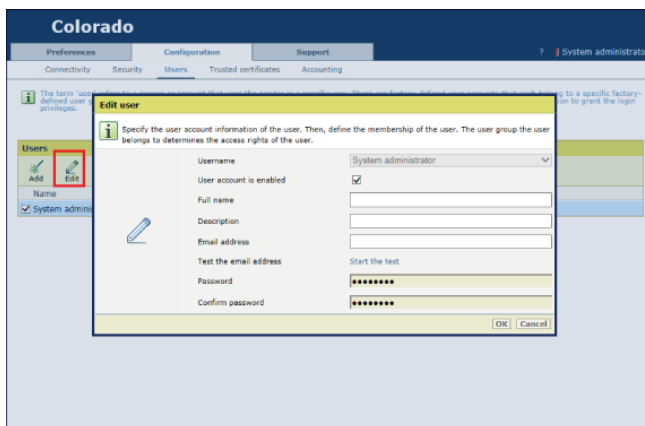
10. Click on [Ok].
11. Click on [Connection test].



**NOTE**

The result has to be [Ok] before you can continue to the email address configuration. When the result is not [Ok], check the error to troubleshoot. For more information, see [Troubleshoot the mail server configuration on page 257](#).

12. Click on [Configuration] → [Users] to configure the email address.
13. Check the box in front of [System administrator] and click on the [Edit] icon above. A window opens.



14. Fill in the [Email address] you want to use for password recovery.
15. Click on [Start the test].
16. Check that [Result of email test ] shows [Test successful].



**NOTE**

When the result is not successful, check the error to troubleshoot. If you cannot solve the problem, ask your IT administrator.

17. Open the email in your email application and check if you have received a test email.  
The email is sent by 'noreply@<colorado\_hostname>' or by the name filled in under [Sender].

**Result**

When you have received the test email, you have configured the email server correctly and you can recover your System administrator password when necessary.



# Troubleshoot the mail server configuration

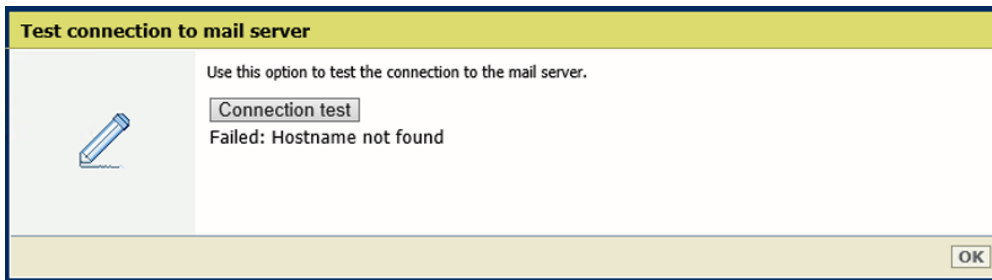
## Introduction

Follow the procedure below to troubleshoot any mail server configuration problems.

## When to do

When in the settings editor, under [Configuration] → [Connectivity], you click on [Connection test] and the result is not [Ok].

## Troubleshoot error messages



Error	Troubleshoot
[Hostname not found]	Hostname or IP address is incorrect. Check the hostname and IP address and fill it in correctly. If you are not sure ask your IT administrator.
[Transfer aborted]	<ol style="list-style-type: none"> <li>1. Check if the connection with the mail server is secure or not. Check the type of connection and fill it in correctly.</li> <li>2. The trusted certificates of the mail server are not imported in the controller. Import the certificates. For more information, see <a href="#">Import a trusted certificate on page 261</a>.</li> </ol>

## After you finish

If you cannot solve the problem ask you IT administrator for help.

# Recover the System administrator password

## Introduction

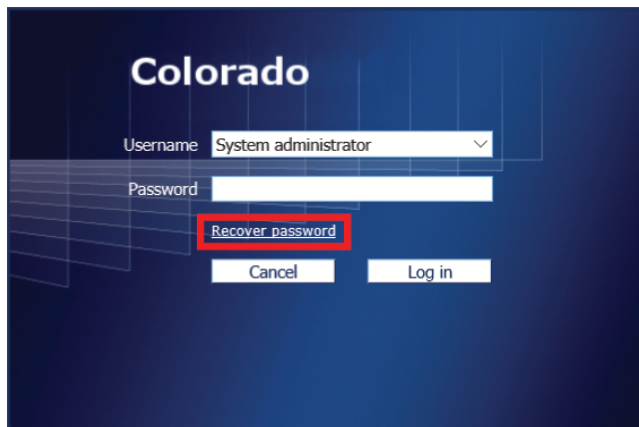
When you have forgotten your System administrator password you can recover it. You can only recover your System administrator password via the settings editor.

## Before you begin

You have to configure an email server first, so an email with a special link for password recovery can be sent to you. For more information, see [Configure a mail server for password recovery and notifications on page 255](#).

## Procedure

1. Open the settings editor.
2. Click on [Visitor] in the top right corner.
3. Click on [Log in] and select the [user name].
4. Click on [Recover password].



5. Click on [Ok] to let the system send an email to you with the recovery link.
6. Open your email and click on the link.  
A new recovery window opens.
7. Fill in the new password, confirm the new password and click on [Ok].  
The new password is configured and can be used to log in.

# Security in the system


## Introduction


The Colorado 1650 is equipped with a Windows 10 IoT Enterprise LTSB 2016 operating system with the following security features:

- OS patches released by Canon Production Printing via "<http://downloads.cpp.canon>".
- Several settings protected by the System administrator password on the operator panel and settings editor.
- A secured System administrator password recovery process, in case of loss.
- IPv6
- Data encryption (HTTPS) on the network for administration.

## Ports and Protocols

The Colorado 1650 uses the following ports and protocols:

Incoming connections	Used for
TCP port 9100	TCP RAW printing, between the RIP and the printer.
TCP port 80	HTTP for settings editor. HTTP for communicating with the RIP to sync media types or monitor the printer status.
TCP port 443	HTTPS for secure settings editor.   <b>NOTE</b> You can change the default value 443.

Outgoing connections	Used for
TCP port 443	HTTPS for Remote Services including the update of Technical Service Manual (TSM) on the printer.
TCP port 25	SMTP protocol to connect to the customer's mail server when the system administrator password is recovered.   <b>NOTE</b> You can change the default value 25.
UDP port 123	NTP protocol for time synchronization with a time server.

# Certificates overview

## Introduction

There are two kinds of certificates:

- Trusted certificates
- Identity certificates

## Trusted certificates

Trusted certificates allow the controller to recognize Root and intermediate certificates that may be sent by :

- The mail server, with secure communication via HTTPS, when configuring or using it for System administrator password recovery.
- The proxy server, during communication with the back office, when Remote Service communication is enabled.

## Identity certificates

Identity certificates are required to allow a browser to establish a HTTPS connection with the controller for access to the settings editor.

## Actions

You can:

- Import trusted certificates used by your company. Ask the IT administrator. For more information, see [Import a trusted certificate on page 261](#)
- Enable the use of a HTTPS protocol, by requesting and uploading a certificate. For more information, see [Enable the use of HTTPS on page 262](#)

# Import a trusted certificate

## Introduction

Your company can use trusted certificates to secure communication with a mail server or a proxy server. When this is the case, you must import the certificates in the settings editor to make sure the controller recognizes them.

## Before you begin

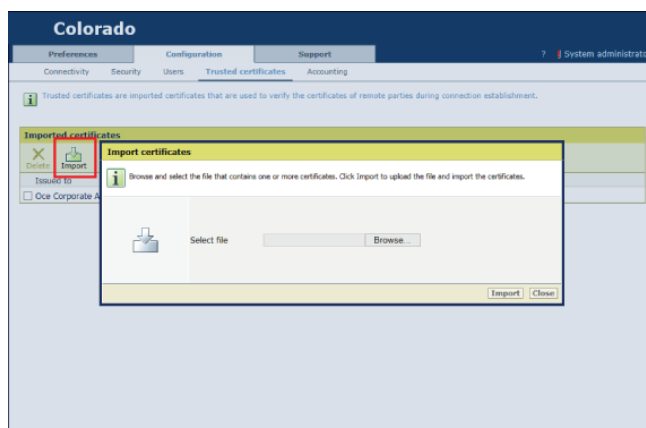
Ask your IT administrator, if there are:

- Intermediate and root certificates used to access the mail sever, e.g. in case of a secure connection via SSL/TLS.
- Intermediate and root certificates used to access any proxy for Internet access.

In case any of these certificates are used make sure you get them from your IT administrator.

## Procedure

1. Open the settings editor.
2. Click on [Configuration] → [Trusted certificates].
3. Click on the [Import] icon.



4. Click on [Browse...] and select the certificate file.
5. Click on [Import].

# Enable the use of HTTPS

## Introduction

You can enable the use of HTTPS to establish a secure communication between a browser and the controller for the settings editor access.



### NOTE

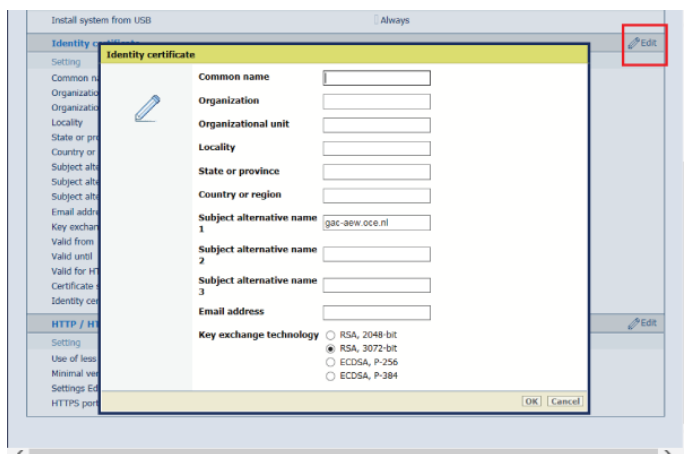
Make sure before you start the procedure you receive the required specific information about the settings and key exchange technologies from your IT department.

To enable the use of HTTPS you have to install a valid identity certificate on the controller. In order to do this you have to:

1. Make a certificate request on the controller
2. Receive a valid certificate from the certificate request
3. Upload the valid certificate on the controller

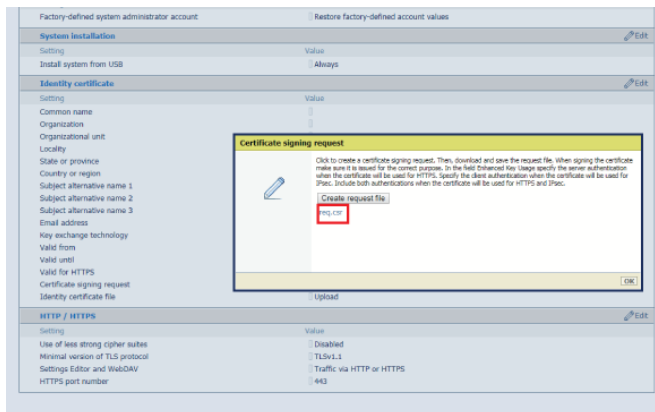
## Procedure

1. Open the settings editor.
2. Click on [Configuration] → [Security].
3. Click on [Edit] in the [Identity certificate] header.



4. Fill in the information for the certificate request:
  1. Fill in the fully qualified domain name of the printer under [Common name].
  2. It is advised to fill in the alternative names (e.g. hostname or IP address) to guarantee access to the printer from any browser.
5. Click on [Ok].  
A new window opens.
6. Click on [Create request file].  
A line with [req.csr] appears under the button.

- Click on [req.csr] to download the file and save it.



- Create a backup to save the private key generated during the certificate request. For more information, see [Make a backup on page 272](#).
- Use the certificate request file to get a valid certificate.



#### NOTE

Get a valid certificate from a Certification Authority (e.g. Thawte, Symantec, Comodo etc.) or ask your IT administrator to get one from your company.

- Click on [Configuration] → [Security].
- Click on [Upload].  
A new window opens.
- Click on [Browse...] and select the valid certificate file.
- Click on [Upload].  
A new window opens.
- Click on [Ok] to restart the system.  
A 'failed' or 'success' window appears.
- Restart the printer. For more information, see [Restart the printer on page 289](#).  
It is advised to make a new backup, which includes the complete valid certificate with the private key.

## Result

You can now use a browser and access the settings editor via HTTPS: `https://<hostname>`. Where hostname is the common name or one of the three alternative names filled in.

You can find the protocol (HTTPS only/ HTTP or HTTPS) used for access to the settings editor under [Configuration] → [Security]. Note that WebDAV is not used for the Colorado 1650.

# Troubleshoot the use of HTTPS

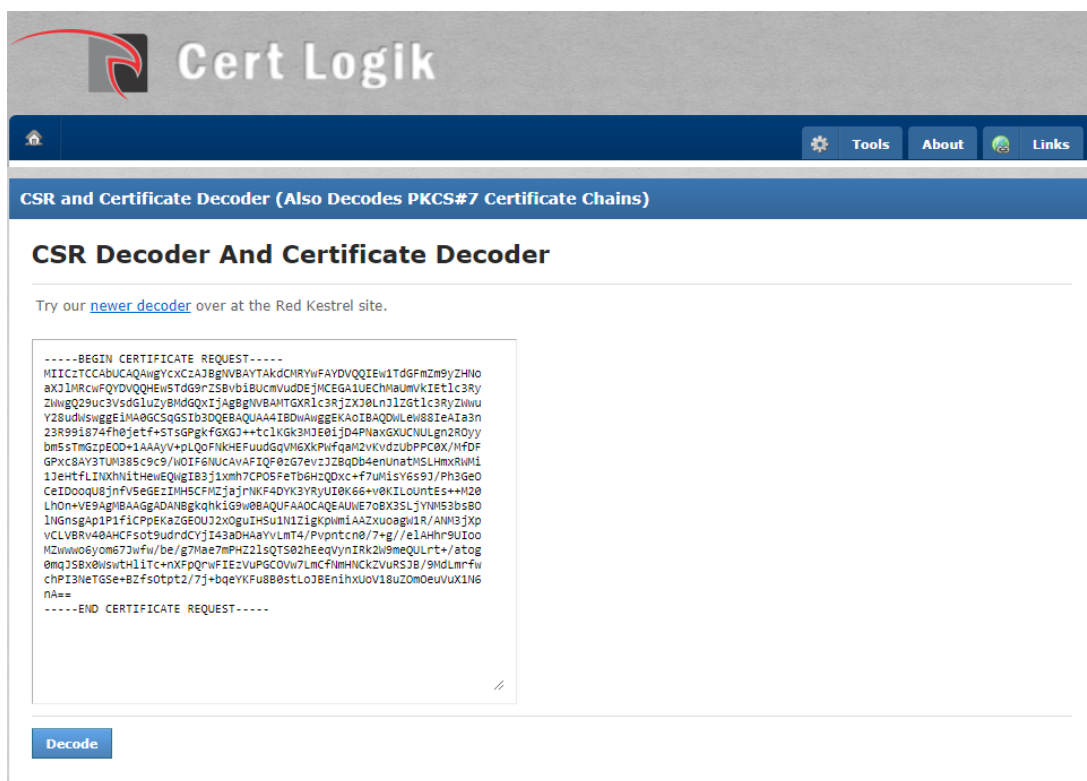
## Introduction

When enabling the use of HTTPS fails, it can be caused by a PKCS7 certificate which is not supported by the printer. When you want to solve this problem:

1. First check if the valid certificate you are using is a PKCS7 certificate.
2. If so, follow the workaround to troubleshoot the problem and enable the use of HTTPS.

## Procedure

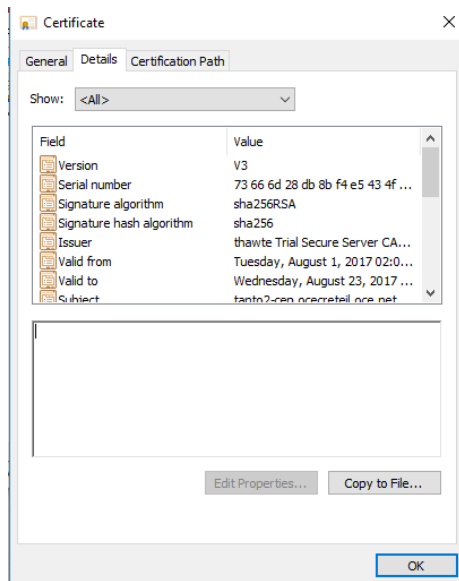
1. Open "<https://certlogik.com/decoder/>"
2. Copy the text of the valid certificate. You got the valid certificate when you tried to enable the use of HTTPS before, for more information see [Enable the use of HTTPS on page 262](#).
3. Paste the text in the decoder field.



4. Click on [Decode].
5. Check in the [Check] field if it is a valid PKCS7 certificate.
6. In case of a valid PKCS7 certificate, select the certificate on your computer and rename the extension to '.p7b'.
7. Doubleclick on the certificate. The 'certmgr' application opens.
8. Doubleclick on your certificate. A new window opens.

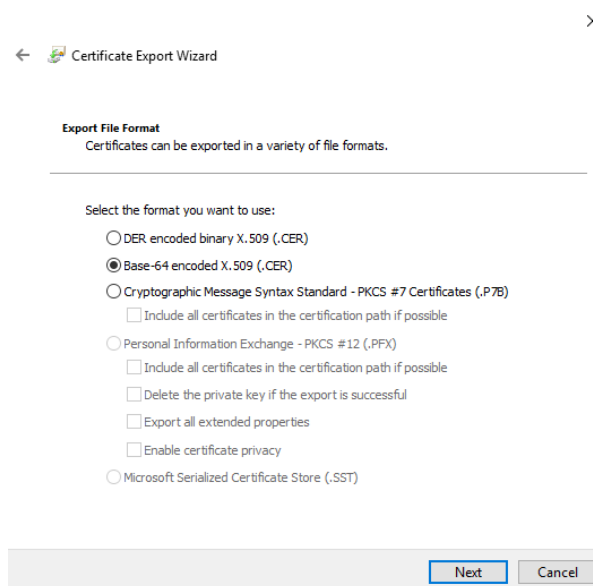


9. Click on [Details] →[Copy to file]→[OK]. A wizard opens.

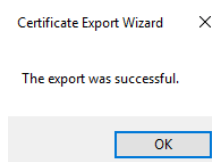


10. Click on [Next].

11. Select [Base-64 encoded X.509 (.CER)] and click on [Next].



12. Click on [Finish] and check that the export is successful.



13. Continue the new valid certificate installation at step 12 of [Enable the use of HTTPS on page 262](#).

# Change the HTTPS security settings

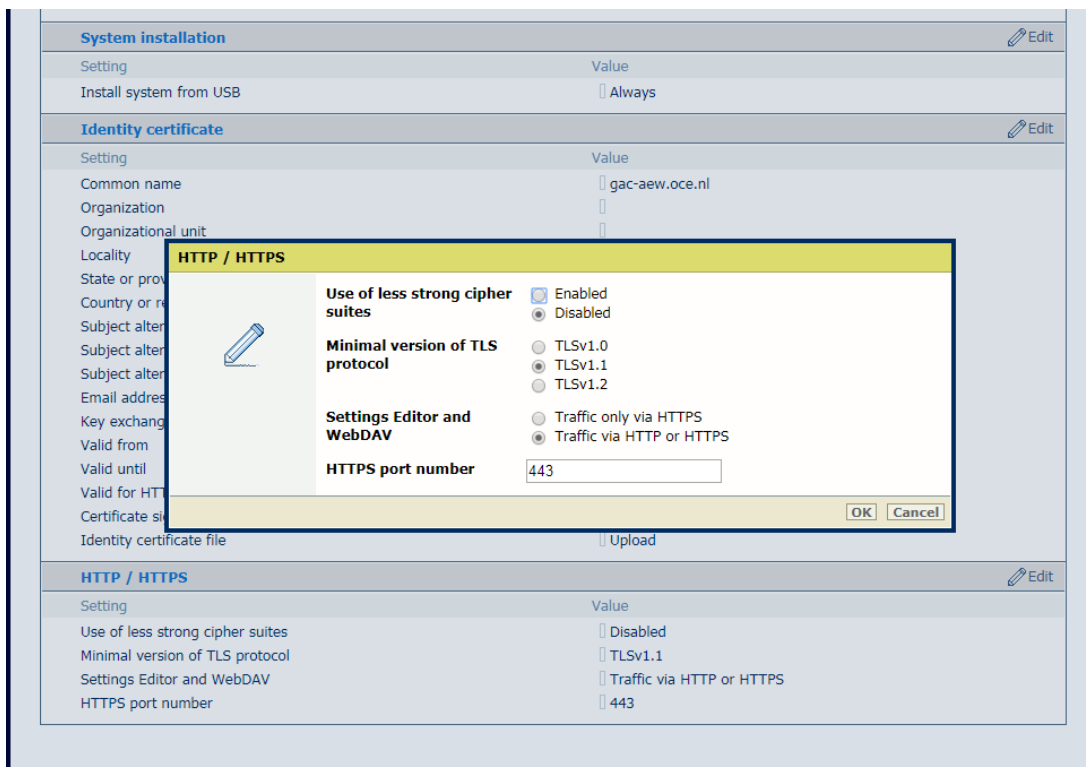
## Introduction

You can change the default HTTPS security settings to best fit your configuration.

## Illustration

## Procedure

1. Open the settings editor.
2. Click on [Configuration] → [Security].
3. Click on [Edit] in the [HTTP/HTTPS] header.



4. The [Use of less strong cipher suites] setting is by default disabled to secure data communication, which is suitable for recent browsers. If you want to use older browsers or HTTPS clients, you can change the setting to [Enabled].
5. The [Minimal version of TLS protocol] setting is by default set to [TLSv1.1]. [TLSv1.2] is a stronger protocol and [TLSv1.0] is weaker. You can change the setting to the minimum security protocol that fits your security requirements. It is also possible to use a lower protocol to allow communication with older browsers or HTTPS clients.
6. Click on [OK] to save the settings.

# Install Windows updates

## Introduction

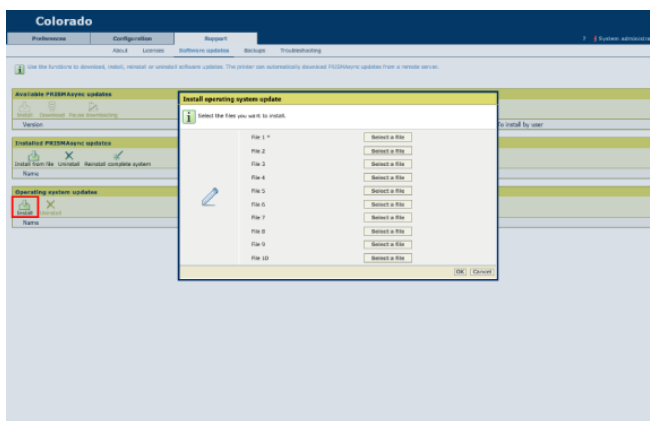
Install Windows updates, also called security patches, when they are available for your product on "<http://downloads.cpp.canon>".

## Before you begin

Go to "<http://downloads.cpp.canon>". Open the page for your product and click on the Security tab to download the available security patches.

## Procedure

1. Open the settings editor.
2. Click on [Support] → [Software updates].
3. Click on [Install] in the [Windows updates ] section.



4. Click on [Select a file] and browse to the patch file. Repeat this step when you have more patch files. The system uploads and installs the patches and displays the result in the [Windows updates] section.
5. Click on [Ok] when the update is finished.

# Configure PRISMAsync Remote Control

## Introduction

When you want to use the PRISMAsync Remote Control app to monitor the Colorado 1650 the System administrator has to configure the right settings first.

## Before you begin

Make sure:

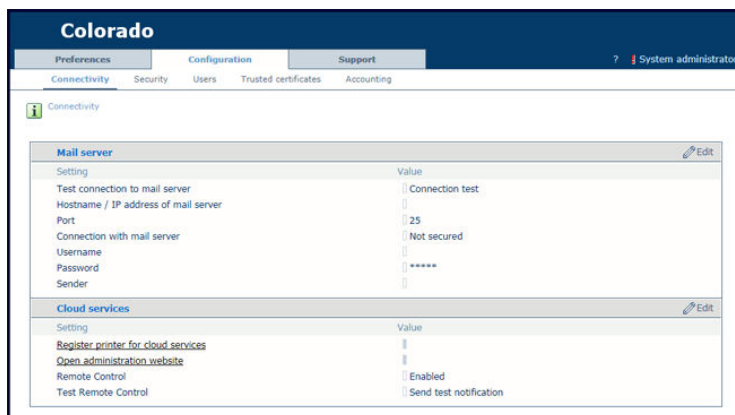
- You have System administrator rights.
- The proxy settings are configured correctly.
- The remote connection is enabled and tested.

For more information, see [Configure the network on page 246](#)

- You have created a Microsoft or Google email account that you can use as an administrator account for PRISMAsync cloud services. It is advised to use a dedicated administration account for all printers and applications using PRISMAsync cloud services.

## Procedure

1. Open the settings editor.
2. Click on [Configuration] → [Connectivity].



3. Click on the value next to [Remote Control]. A window opens.
4. Select [Enabled] and click on [Ok].
5. Click on [Register printer for cloud services]. A new page opens.
6. Log in with your Microsoft or Google administrator account. A new page opens.
7. Fill in the printer name you want to connect to and click on [Add]. Here you can also remove printers.
8. Under [Add a new cloud service user] fill in the email addresses of the users of the PRISMAsync Remote Control app and click on [Add]. Here you can also remove users.



### NOTE

Via settings editor, [Configuration] → [Connectivity] → [Open administration website] you can always log in with your administrator account and add or remove printers and users.

9. Once the printer is added and the requested users are added, you can click on [Log out].

**After you finish**

Test if PRISMAsync Remote Control is working well: [Test PRISMAsync Remote Control on page 270](#).

# Test PRISMAsync Remote Control

## Introduction

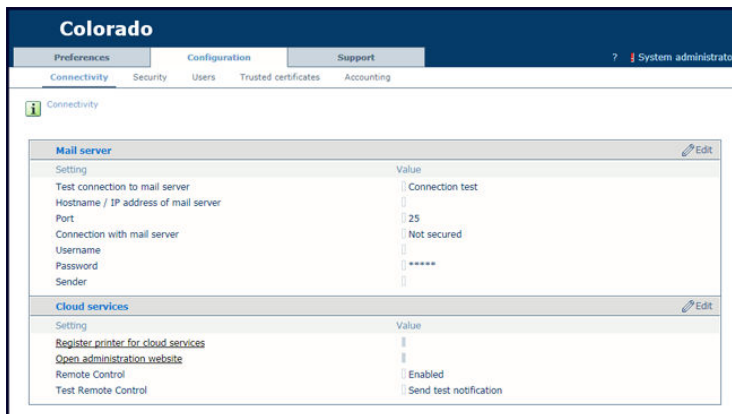
When you have configured PRISMAsync Remote Control, you can test the connection between PRISMAsync Remote Control and the cloud services.

## Before you begin

Make sure you have configured PRISMAsync Remote Control. For more information, see [Configure PRISMAsync Remote Control on page 268](#).

## Procedure

1. Open the settings editor.
2. Click on [Configuration] → [Connectivity].



3. First, test the connection between the printer and the cloud services:
4. Next to [Test Remote Control], click on [Send test notification]. A window opens.
5. Click on [Send test notification].  
The result must be successful. In case of error:
  - Make sure that in the settings editor, [Configuration] → [Connectivity] → [Remote Control] is enabled.
  - Make sure that on the operator panel, [System] → [Remote services] → [Remote connection] is enabled.
  - Make sure that on the operator panel, [System] → [Remote services] → [Proxy settings] the proxy settings are correct.
  - Make sure that on the operator panel, [System] → [Remote services] → [Remote connection] → [Test remote connection] the status is connected.
6. Second, test the connection between the cloud services and your mobile device:
7. Click on [Register printer for cloud services]. A new page opens.
8. Log in with your Microsoft or Google administrator account. A new page opens.
9. Click on [Send test notification].
10. Check on your mobile device if you have received a notification.  
When you did not receive a notification:
  - Make sure that notifications are allowed in the app PRISMAsync Remote Control.
  - Make sure the app PRISMAsync Remote Control is not open on the foreground (active in the background is no problem).
  - Make sure the account used for the PRISMAsync Remote Control app is a registered user. For more information, see [Manage users for PRISMAsync Remote Control on page 271](#).

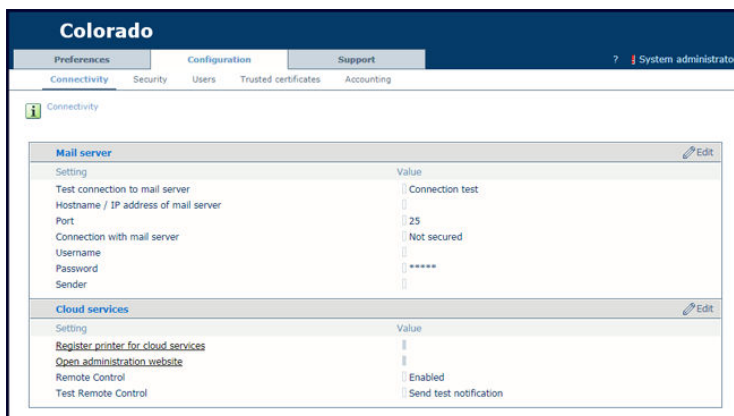
# Manage users for PRISMAsync Remote Control

## Introduction

When you have configured PRISMAsync Remote Control you can manage the users via the cloud services administration website.

## Procedure

1. Open the settings editor.
2. Click on [Configuration] → [Connectivity].



3. Click on [Open administration website]. A new page opens.
4. Log in with your Microsoft or Google administrator account. The page of the PRISMAsync cloud services administration portal opens.
5. To add users: under [Add users for PRISMAsync cloud services] fill in the email addresses of the users of the PRISMAsync Remote Control app and click on [Add].



### NOTE

For Google accounts, dots in email addresses are ignored (e.g. John.Doe@gmail.com is the same as JohnDoe@gmail.com). Therefore, the Google email addresses are stored without dots in the cloud services administration site.

6. To remove users: under [Users of PRISMAsync Remote Control] click on the name of the user, and click on [Remove].
7. Once you are ready, you can click on [Log out].

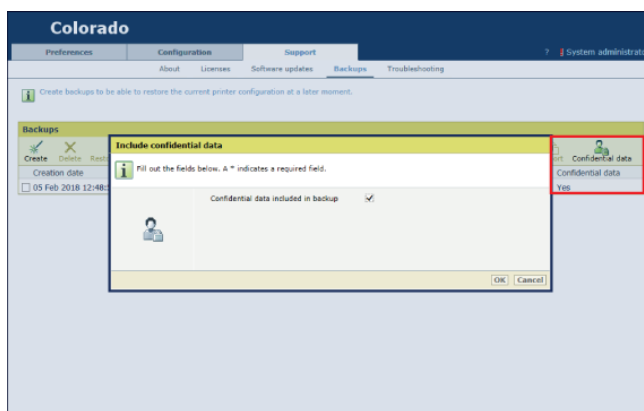
# Make a backup

## Introduction

It is advised to make a backup with confidential data and export it to a file to save on another location than the controller. The confidential data consists of: the System administrator password, identity certificates (including private key), trusted certificates.

## Procedure

1. Open the settings editor.
2. Click on [Support] → [Backups].
3. Click on the [Confidential data] icon.  
A window opens.
4. Check the box to include the confidential data in the backup, and click on [Ok].



5. Click on the [Create] icon.  
A window opens.
6. Fill in the description and click on [Ok].
7. Check the box in front of the created file.
8. Click on the [Export] icon.  
A window opens.
9. Click on [Ok] and save the file on another location than the controller.



# Restore a backup

## Introduction

When you have made a backup you can restore it.

## Before you begin

You need to have a backup created before. It is highly recommended to have exported a backup. For more information, see [Make a backup on page 272](#).

## Procedure

1. Open the settings editor.
2. Click on [Support] →[Backups].
3. In case of an external backup, exported during a backup operation, click on [Import]. Browse to the external backup and confirm the import operation.
4. Check the box in front of the backup file.
5. Click on [Restore user configuration].
6. Click on [Ok] to restore the configuration.

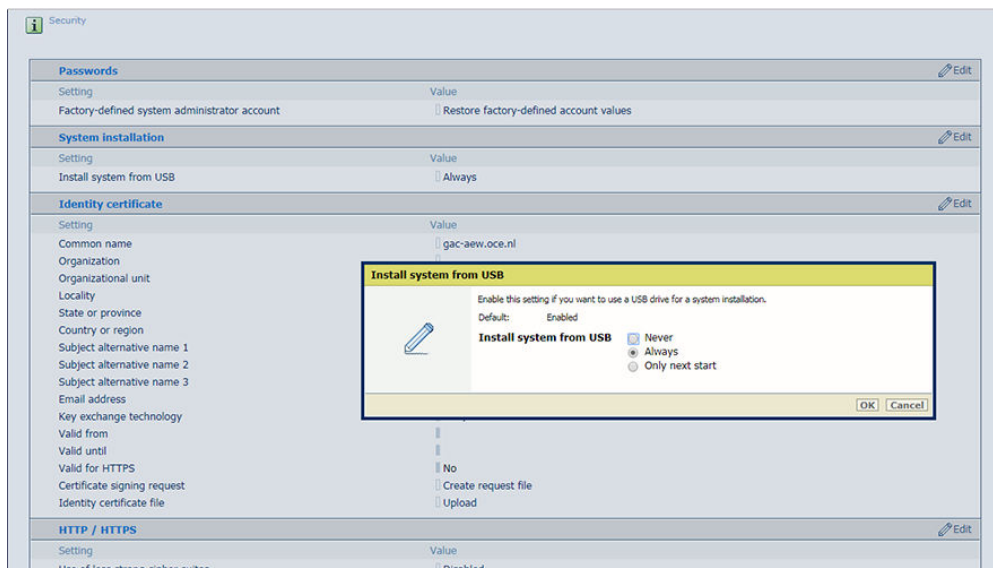
# Enable system installation from USB

## Introduction

Installation from a USB key is used by the Service technician for system installation or reinstallation. For security reasons related to USB, it is possible to disable installation from USB.

## Procedure

1. Open the settings editor.
2. Click on [Configuration] → [Security].
3. Click on the value next to [Install system from USB].  
A window opens.



4. Select [Always], [Never], or [Only next start] according to the customer security policy, and click on [OK].

# **Chapter 9**


## Troubleshooting and support

# Tips and tricks

## Introduction

In order to use the Colorado 1650 in the best way possible it is advised to follow the below listed tips and tricks.

Subject	Tip
Follow step by step actions explained	Always follow the instruction given on the operator panel step by step in the specified order. For example: in case of error handling, operating the winder or performing maintenance actions.
Green light indicators	You can safely perform actions on the drawer or the ink unit, when the green light indicators on the drawer and near the ink bottles are on.
Handle with care	You do not have to use excessive force on any of the handles or levers of the Colorado 1650. You can easily push or pull the levers and handles to perform actions on the printer.
Automatic advance correction	Set [Automatic advance correction] to [normal] for printing modes [High Quality], [Specialty], [Superior], [Matte Quality], [Matte Specialty], [Backlit] or [Backlit Density]. The printer then automatically reads and optimizes the media step accuracy. When you set [Automatic advance correction] to [enhanced], it may improve the media step accuracy more but it also prints black markers on the increased side margin of the media. For textured media the system may ask to turn automatic advance correction off. For more information, see <a href="#">Change the media settings on page 74</a> .
Media step control	When you want to control the media steps and optimize the print quality you can: <ul style="list-style-type: none"> <li>• Perform manual or periodic maintenance with [Advanced automatic nozzle optimization]. The printer automatically optimizes the nozzles to improve media step accuracy.</li> <li>• Print roll to roll (wind your media).</li> <li>• Start with a white space <math>\pm 50</math> cm (19.7 inch), before you make your first print on a roll.</li> <li>• Print in [High quality ] print mode.</li> </ul>
Media not rolled up evenly	Make sure media is always rolled up evenly on the core. Do not load media in the drawer that is not rolled up evenly (telescoping). For more information, see <a href="#">Load a media roll (position 1) on page 85</a> .
Straight leading edge media	The leading edge of the media roll loaded in the drawer must be cut straight. Otherwise it is possible the printer does not detect the leading edge or can print on the platen. For more information, see <a href="#">Load a media roll (position 1) on page 85</a> .

Subject	Tip
Tape leading edge straight	In case of winding, the leading edge of the media must be aligned and taped straight on the take-up roll core for best winding and printing quality. Tape first the center and then the sides. For more information, see <a href="#">Print with or without winding on page 120</a> .
Position media guides	When you wind without a tension bar, position the media guides against the media for best winding quality. For more information, see <a href="#">Print and wind without a tension bar on page 121</a> .
Print is not rolled up	When you have taped your print to the take-up roll but the roll winder has not wound up your print, move the media towards the printer to start the winder. Move the part of the print that is hanging just above the ground in front of the lower sensor towards the sensor. The printer then sees the media and will start winding automatically.
New media type	Always calibrate a new media type in order to optimize the print quality. Calibrate media of the same type with different media sizes for each size. For more information, see <a href="#">Calibrate the media on page 116</a> .
Printing on a larger media width	<p>When you run out of media while printing you will get a media request message. When you want to finish your jobs you can also continue printing on a larger width media roll. Load the larger width media roll and select it, the printer will then continue printing on the larger media width.</p> <p> <b>NOTE</b> Note that you will always have to load the larger width media roll, even if it has already been loaded in the printer. In that case, the printer will only recognize the larger width and start printing on it when it is reloaded.</p>
Media calibration	Perform media calibration from the empty leading edge of the media roll. So start calibration after you made a cut or when you start with a new roll. Do not perform media calibration when there is already a print on the roll. For more information, see <a href="#">Calibrate the media on page 116</a> .
Moist sensitive media	Take note that moist sensitive media will deform when lying on the print platen for some time.
Uncured ink pollution	Be aware of uncured ink on media or the printer. Do not remove uncured prints via the winder or drawer, but only via the top cover. Follow the referred procedure carefully. For more information, see <a href="#">Clean pollution on the printer on page 324</a> .

# General support

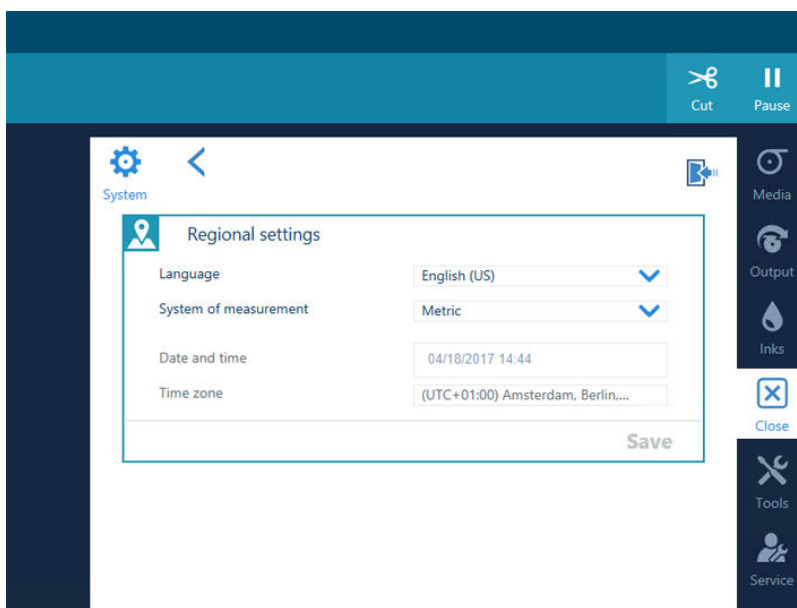
## Change the regional settings

### Introduction

You can change the language, system of measurement, date and time, or time zone under the regional settings on the operator panel.

### Procedure

1. On the operator panel, tap on the [System] icon on the right.
2. Tap on [Regional settings].



3. Change the language, system of measurement, date and time, or the time zone.



#### NOTE

You have to log in as System administrator to change some of the settings. For more information, see [Log in as a System administrator on page 249](#).

When time synchronization is enabled and the date and time of the printer is still out-of-date, make sure the setting is configured correctly. For more information, see [Configure time synchronization on page 252](#).

4. Tap on [Save] to save the settings.

## Set the energy save modes

### Introduction

You can enable the energy save modes, automatic wake-up mode and automatic shutdown mode, via the settings editor. Set timers for each day of the week to wake up or turn off (standby mode) the printer.



#### NOTE

- When the printer is turned off the printer is in standby mode: power to the system is never cut.
- Before the printer can be turned off automatically (standby mode), the printer first has to enter low power mode. The printer will enter low power mode automatically after 30 minutes of inactivity. So when the printer was still active before the shutdown time, the printer will first take 30 minutes to enter low power mode before it will automatically shut down (standby mode).

The screenshot shows the 'Colorado' printer settings interface. The 'System settings' section is expanded to show three sub-sections: 'Regional settings', 'Energy save modes', and 'Wake-up timers'. Each sub-section has an 'Edit' link.

Setting	Value
Language	English (UK)
Date and time	22 Jan 2018 16:54:47
Time zone	(UTC+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna
NTP client	Disabled
NTP server name	time.windows.com
Test NTP server connection	Start the test
System of measurement	Metric

Setting	Value
Automatic wake-up	Enabled
Automatic shutdown	Enabled

Setting	Value
Wake-up Monday	Yes
Wake-up time Monday	07:00
Shutdown Monday	No
Shutdown time Monday	20:00
Wake-up Tuesday	No
Wake-up time Tuesday	08:00
Shutdown Tuesday	No
Shutdown time Tuesday	20:00
Wake-up Wednesday	No

### Procedure

1. Open the settings editor.
2. Click on [Preferences] → [System settings].
3. Go to the [Energy save modes] header and click on [Edit]. Log in as a System administrator. A window opens.
4. Select [Enabled] for [Automatic wake-up] and [Automatic shutdown].
5. Click on [Ok].
6. Go to the [Wake-up timers] header and click on [Edit]. A window with timers for each day of the week opens.
7. Fill in if you want the printer to wake-up and shutdown for each day of the week. If yes, also fill in the times for wake-up and shutdown.
8. Click on [Ok].

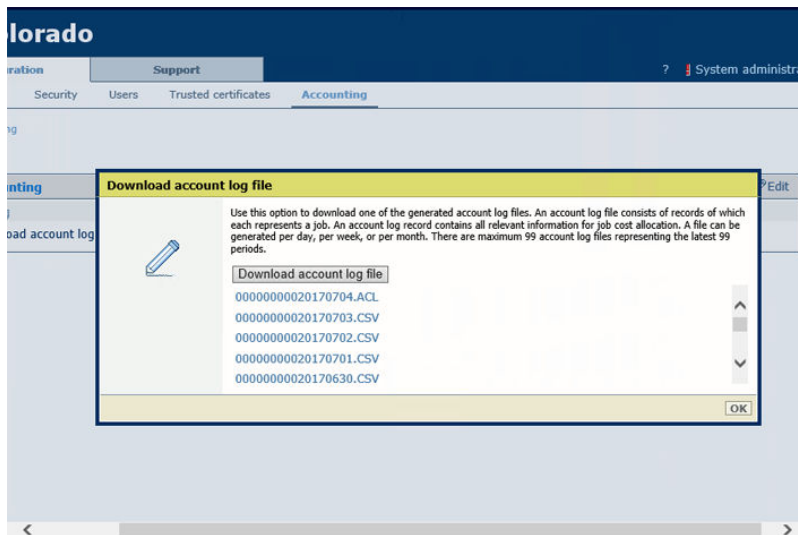
# Download an account log file

## Introduction

For every job that is finished a record is added to the account log file. You can download the file via the settings editor to check the properties and counters of your job.


## On account log files

- A job is considered finished when it is completed successfully, it is canceled or deleted.
- There is one active account log file (.ACL). The active account log file starts at 00:00 hours and is active for one day, then the file becomes inactive.
- There can be multiple inactive account log files (.CSV). The inactive account log files are completed files. There can be up to 99 inactive account log files. When there are more the oldest files are deleted.





## Procedure

1. Open the settings editor.
2. Click on [Configuration] → [Accounting].
3. Click on [Download account log file]. Log in as a System administrator. A window opens with one or more log files listed.
4. Click on the preferred file. The file is downloaded automatically. Click on any of the other files to download more.
5. You can read the file as follows:

Field	Description
documentid	The job ID that is specified by the RIP. The ID stays the same when a job is printed multiple times
jobid	Unique job ID that is generated by the controller each time a new job is created.
	 <b>NOTE</b> In case of controller reinstallation, software error, or power failure it cannot be guaranteed that the ID is unique.



Field	Description
jobtype	The value AP (Automatic Print Jobs) is used for all jobs from the RIP, so the value is always AP.
jobname	The name of the job specified in the RIP.
printmode	The name of the print mode that was used in the job.
startdate	<yyyy><mm><dd> The date the printer starts printing the job.
starttime	<hh>:<min>:<ss> The time the printer starts printing the job.
activetime	<num>:<min>:<ss> The total time the job is active and printing. This time includes autonomous maintenance actions. Note that the time needed for warming up before the printer is ready and the time spend waiting for the operator, e.g. to solve an error, is not included. Time in hours, minutes, seconds, where hours can exceed 24.
idletime	<num>:<min>:<ss> The total time an active job is waiting for operator interaction, e.g. solving an error or loading media. Time in hours, minutes, seconds, where hours can exceed 24.
readydate	<yyyy><mm><dd> The date a job is completed successfully, canceled or deleted.
readytime	<hh>:<min>:<ss> The time a job is completed successfully, canceled or deleted.
accountid	This field is always empty.
noffinished-sets	<p>&lt;num&gt; The number of times the bitmap, as received by the RIP, has been printed.</p> <p> <b>NOTE</b> This number can be lower than 'copiesrequested' as the user can cancel or delete a job.</p>
result	<p>'Done', 'Abrt', 'Stop', 'Deleted'. The state in which the job was completed.</p> <ul style="list-style-type: none"> <li>• 'Done': when the job was completed successfully.</li> <li>• 'Abrt': when the job was started, but aborted by the operator or controller due to an error.</li> <li>• 'Stop': when the job was started, but stopped or paused by the operator.</li> <li>• 'Deleted': when the job was deleted before it was printed.</li> </ul>
reception-date	<yyyy><mm><dd> The date the printer controller completely received the job from the RIP.
reception-time	<hh>:<min>:<ss> The time the printer controller completely received the job from the RIP.
operator-note	Note information specified in the RIP.
copies requested	<num> The number of copies requested by the RIP.
mediatypeid	The media type ID specified in the RIP that is used to communicate to the printer which media it has to use.
mediatype	The name of the media type that is displayed on the operator panel.
mediawidth	<num> in 0.1 mm (0.004 inch). The width of the media on which the job is printed.

Field	Description
media lengthused	<num> in 0.1 mm (0.004 inch). The length of the media that is used for the job. Media that is used for calibrations or maintenance actions is not included.
printedarea	<p>&lt;num&gt; in 1 mm<sup>2</sup> (0.004 inch<sup>2</sup>). Area of the media that is covered by images. This includes white pixels, and excludes any empty space surrounding the images.</p> <p> <b>NOTE</b> When the RIP nests images, the empty space is considered part of the image and included in the 'printedarea'.</p>
inkcolorcyan	<num> in 1 ul. The total amount of cyan ink used.
inkcolor magenta	<num> in 1 ul. The total amount of magenta ink used.
inkcolor yellow	<num> in 1 ul. The total amount of yellow ink used.
inkcolor black	<num> in 1 ul. The total amount of black ink used.

# Install software upgrades with On Remote Service

## Introduction

You can download and install software upgrades when they are available for your printer. The back office uses On Remote Service communication to release software upgrades.



### NOTE

If you have entered your email address in the settings editor you will receive a notification email when an upgrade becomes available. To add the email address in the settings editor, see [Configure a mail server for password recovery and notifications on page 255](#).

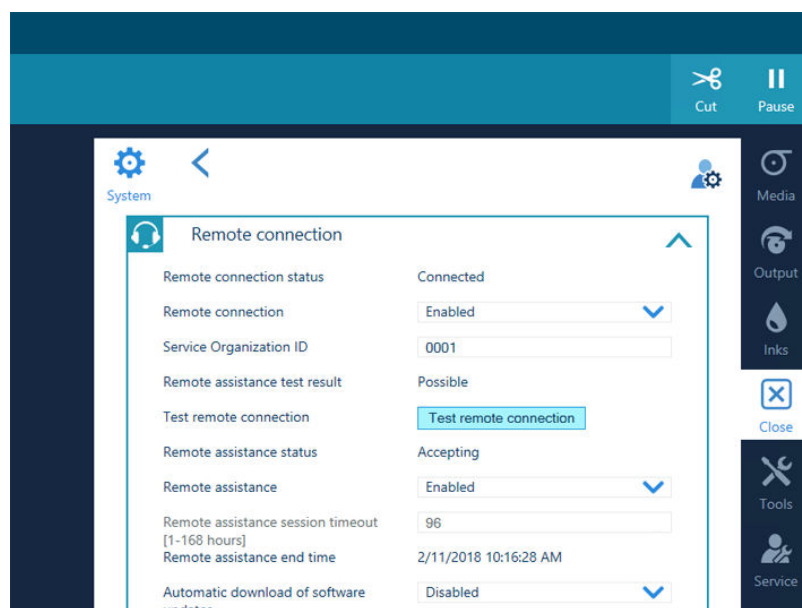
This procedure is also explained in a separate maintenance procedure video, click "[here](#)" to visit.

## Before you begin

- It is highly recommended to perform the installation at non-working hours.
- Make sure the printer is not printing and there is no media on the platen.
- Before you install software upgrades, On Remote Service communication must be enabled and working. For more information, see [Configure remote assistance on page 248](#).
- The download and installation of software updates are started via the settings editor. Do not close your browser until the installation is finished.

## Procedure

1. On the operator panel, tap on the [System] icon on the right.
2. Tap on [Remote services]→[Remote connection].



3. Make sure:
  - [Remote connection] is enabled.
  - [Remote connection status] is connected.



### NOTE

A proxy may be required to access the internet and make use of Remote services. When required, make sure the proxy settings are configured correctly. For more information, see [Configure the network on page 246](#).

- [Automatic download of software updates] is disabled.
4. Open the settings editor.
  5. Click on [Support] → [Software updates].
  6. When a new version becomes visible in the [Available PRISMAsync and operating system updates from On Remote Service] section, check the box in front of the version number. Then, click on the [Download] icon above.  
Once the download starts, a progress bar appears.



**NOTE**

This process can take quite some time depending on the internet speed, around 1 hour. Wait until the progress shows "-" and the [Install] icon above is no longer greyed out.

The screenshot shows the 'Colorado' printer settings interface. The 'Support' tab is active, and the 'Software updates' sub-tab is selected. A message at the top states: 'Use the functions to download, install, reinstall or uninstall software updates. The printer can automatically download PRISMAsync updates from a remote server.' Below this, there are three sections: 'Available PRISMAsync updates', 'Installed PRISMAsync updates', and 'Operating system updates'. The 'Available PRISMAsync updates' section shows a table with one entry: 'X.X.X' with a progress bar showing '-' and a description 'Colorado X.X.X Update'. The 'Install' icon for this entry is active (not greyed out).

7. Click on the [Install] icon. A window opens.
8. Click on [Ok] to start the installation.  
This process can take quite some time, around 30 minutes. Wait until the installation is completed.



**IMPORTANT**

Do not close your browser until the installation is finished.

This screenshot is similar to the previous one, but with an 'Install PRISMAsync update' dialog box open in the foreground. The dialog box contains a message: 'Fill out the fields below. A \* indicates a required field.' It has two input fields: 'Version number' with the value 'X.X.X' and 'Description' with the value 'Colorado X.X.X. Update'. There are 'OK' and 'Cancel' buttons at the bottom right of the dialog box.

9. Click on [Ok]. A new window opens.

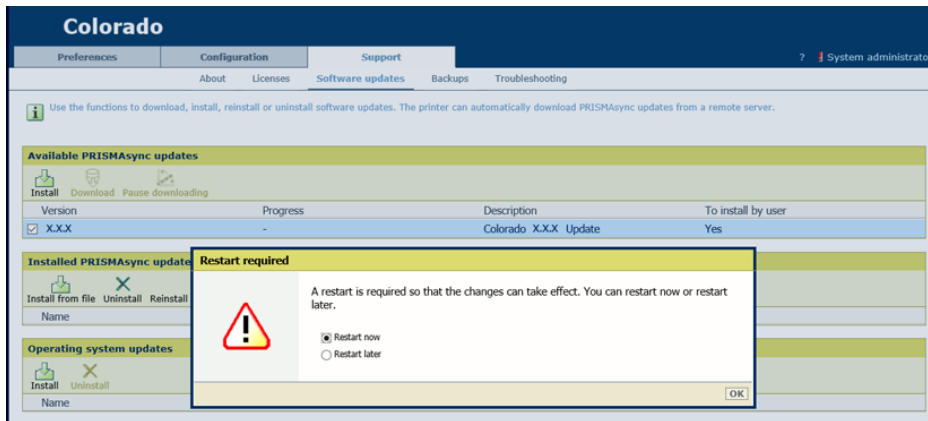


#### IMPORTANT

- Until this step you are still able to use the printer.
- Before you continue to the next step, make sure that the printer is not printing and the platen is not covered with media.

10. Select [Restart now] and click on [Ok].

The system will restart several times. Wait until the installation is completed.



#### NOTE

This process can take quite some time, around 45 minutes.

### After you finish

The printer is ready to print.



#### NOTE

If you do not send print jobs to the printer, the printer will go to standby mode after the specified time.

You can check that the installation of the software update was completed successfully:

- On the operator panel, tap [System]→[About].
- In the settings editor, click on [Support] →[About]→[Version of printer software].

## Move the printer

You should not move the printer. When you want to move the printer, contact your local service representative.

## Turn the printer on and off

### Introduction

The printing system is powered on by the service technician at installation. You can turn the printer on or off via the button on the media output side.



### Procedure

1. Move to the media output side and locate the on/off button under the operator panel.
2. Push the button

The printer is switched on or off. The system is kept in standby mode, so power to the system is never cut.



#### NOTE

Before you turn off the printer make sure:

- The printer is not busy.
- There is no media on the platen.
- The printer is in a state where maintenance is possible.

# General troubleshooting

## Stop the printer

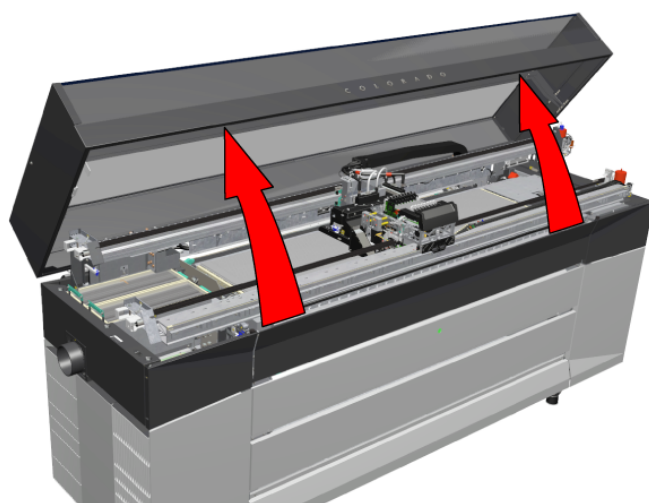
### Introduction

In case of problems or a dangerous situation you can stop the printer immediately.



#### IMPORTANT

Opening the top cover during operations, can result in uncured ink. Only perform this action when absolutely necessary.



### Procedure

1. Move to the media input side.
2. Open the top cover.  
Power is cut to the engine, the printer immediately stops all operations.

### After you finish

Opening the top cover can cause a paper crash and result in uncured ink. You can solve the situation yourself. For more information, see [Remove media from the paper path on page 296](#).

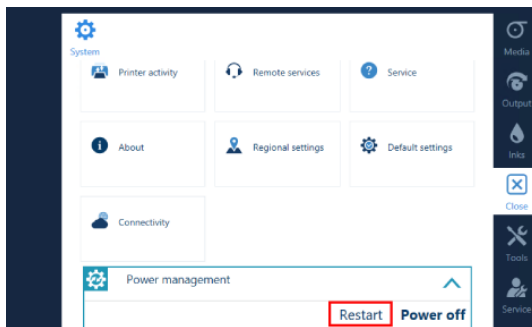


# Restart the printer

## Introduction

You can restart the printer via the operator panel.

You might be asked to restart the system to activate settings, or in case of a software issue it might help to restart the system.



## Procedure

1. On the operator panel, tap the [System] icon on the right.
2. Tap on [Power management].
3. Tap on [Restart].
4. The printer will start up automatically.

# Remove all jobs

## Introduction

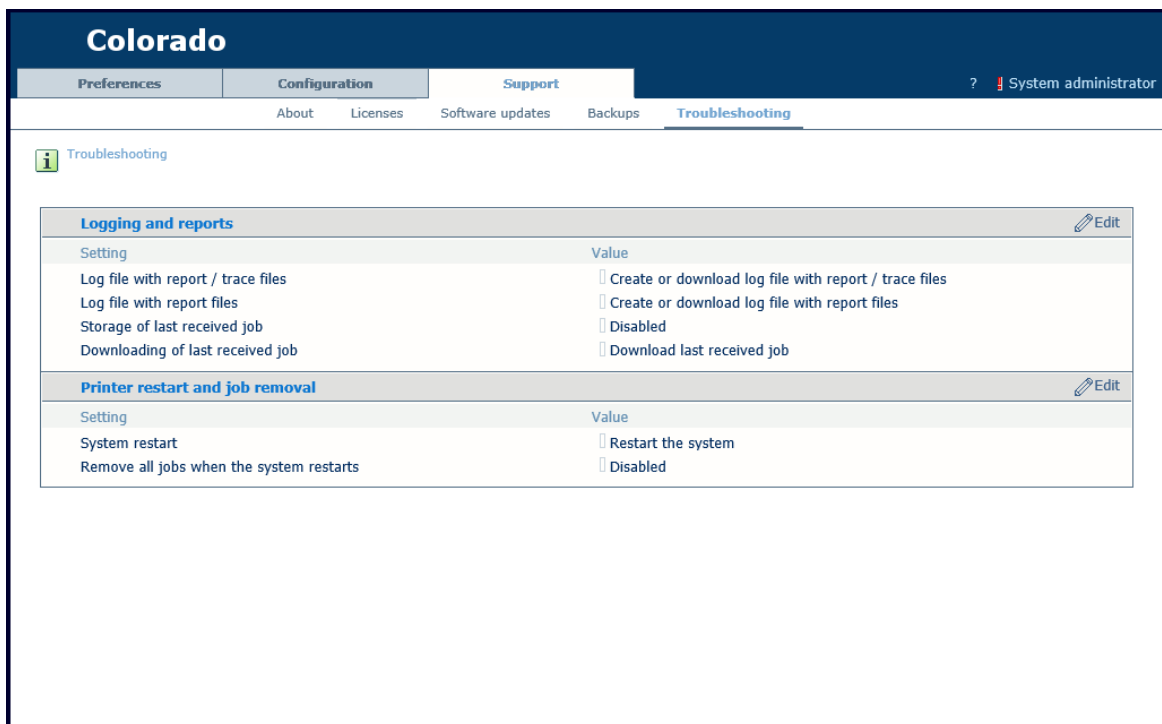
You can delete all jobs from the queue via the settings editor.

## When to do

When you cannot delete a job in the queue or you want to clear all jobs at once in the system, follow the procedure below. The printer removes all jobs at the next restart of the printer.

## Procedure

1. Open the settings editor.
2. Click on [Support]→[Troubleshooting] .



3. Click on the value next to [Remove all jobs when the system restarts].
4. Select [Enabled].
5. Click on [Ok].
6. Restart the printer. For more information see [Restart the printer on page 289](#).

## After you finish

When the problem is not solved, contact your IT administrator.

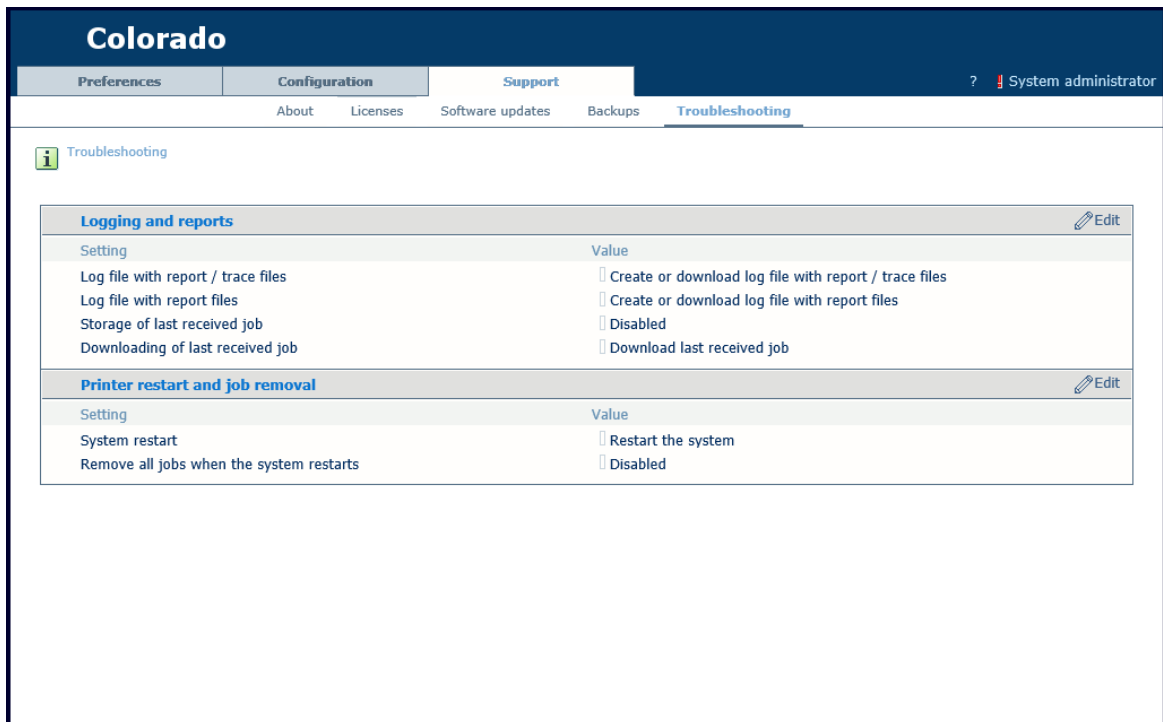
# Download data log files

## Introduction

When your local Service representative requests it, you can download the data log files of your printer via the settings editor.

## Procedure

1. Open the settings editor.
2. Click on [Support]→[Troubleshooting].



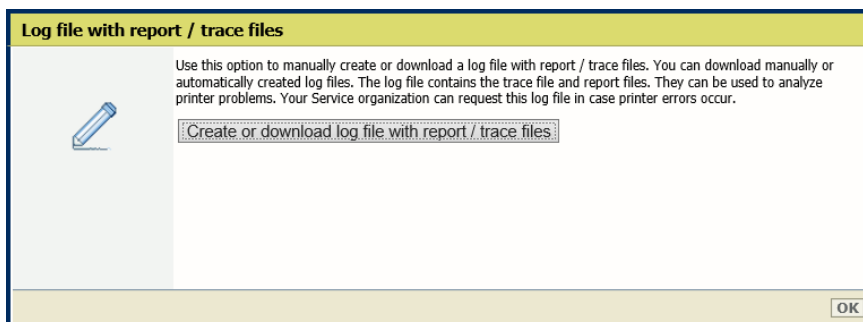
3. Click on [Create or download log file with report / trace files]. A window opens.



### NOTE

You have to log in as System administrator to change some settings. For more information, see [Log in as a System administrator on page 249](#).

4. Click on the [Create or download log file with report / trace files] button. A ZIP file is created.





**NOTE**

The creation of the ZIP file can take quite some time, up to 30 minutes. You can click on [Ok] to close the window and click again on [Create or download log file with report / trace files] to check at any moment if the ZIP file is available.

5. Click on the file to download it. Save the file.
6. Click on [Create or download log file with report files]. A window opens.
7. Click on the [Create or download log file with report files] button. A ZIP file is created.
8. Click on the file to download it. Save the file.
9. Send the set of files to your local Service representative.

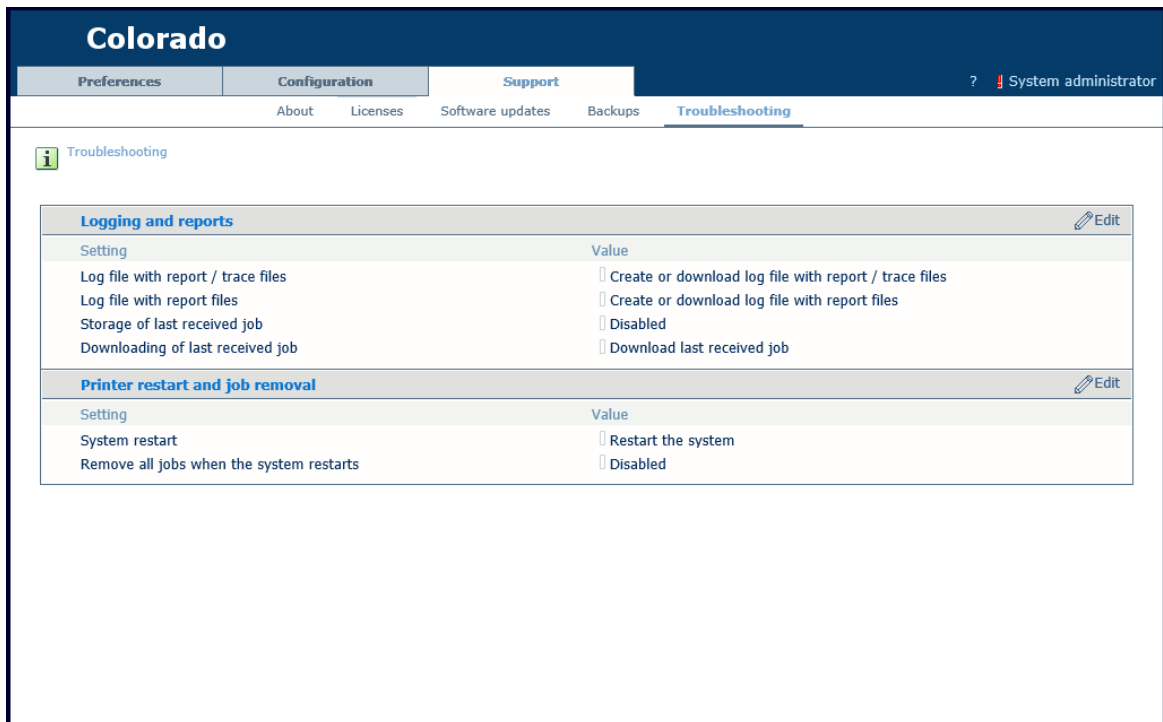
## Download the last received job file

### Introduction

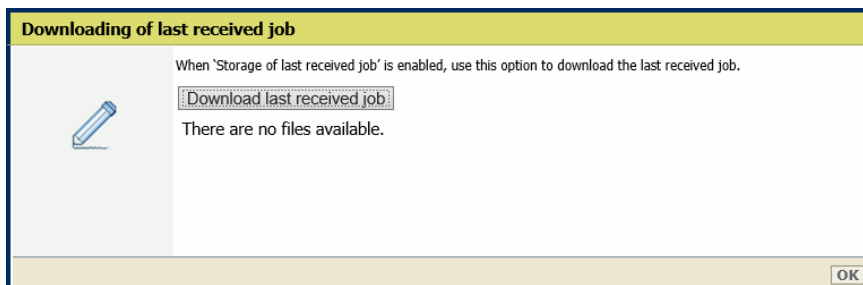
When you have problems with a print job and your local Service representative requests it, you can download the print file of this job via the settings editor.

### Procedure

1. Open the settings editor.
2. Click on [Support]→[Troubleshooting].



3. Click on the value next to [Storage of last received job]. A window opens.
4. Select [Enabled] and click on [Ok].
5. Submit again your job from the RIP.
6. Click on the value next to [Download last received job]. A window opens.



7. Click on the [Download last received job] button.  
A file is created from the last job that was completely received from the RIP.
8. Click on the file named 'Saved\_Last\_Job.print' to download it. Save the file.
9. Send the file to your local Service representative.

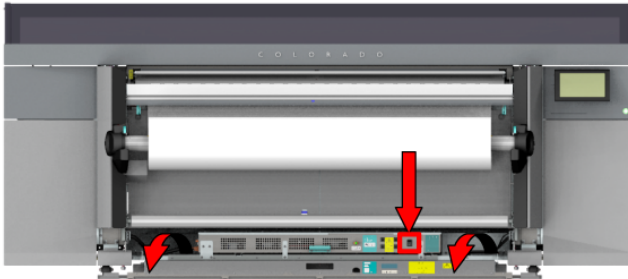
### After you finish

After you downloaded the file, make sure to disable again the setting [Storage of last received job].

## Turn the printer on after a power cut

### Introduction

When power has been cut to the machine, you have to power the machine on. The machine has to be on to keep the printer in optimal condition.



### Procedure

1. Move to the media output side.
2. Pull to open the cover under the roll winder.
3. Switch the power switch to the 'off' position.
4. Wait 1 minute.
5. Switch the power switch to the 'on' position.

## Remove media from the paper path

### Introduction

In case of a media jam or a carriage crash you can remove the media from the paper path.

### Before you begin

- Wear the Colorado 1650 prescribed Microflex gloves for handling ink.
- Use a knife that is sharp enough to cut the media.



#### CAUTION

- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**

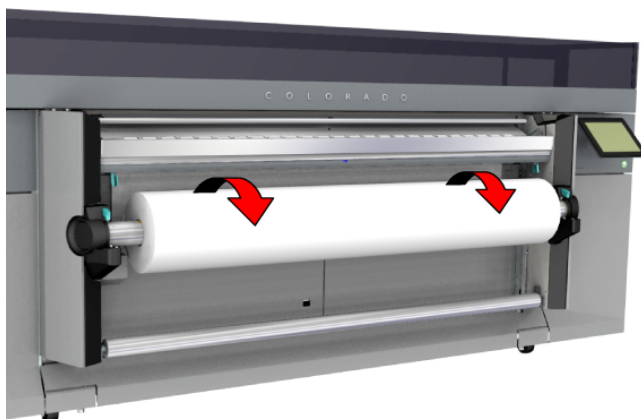


#### IMPORTANT

Watch out with uncured ink. Strictly follow the steps below, to make sure you do not pull media with uncured ink through the system.

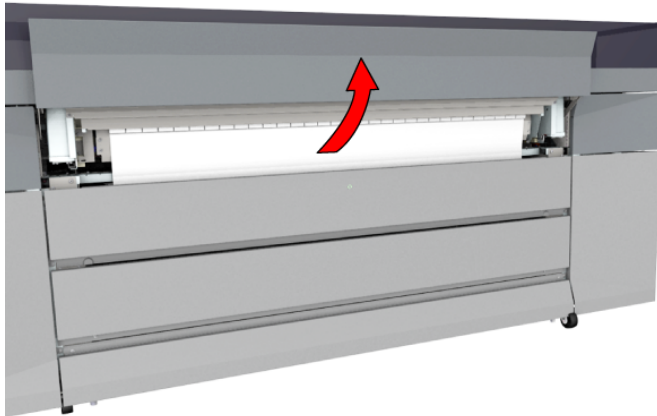
### Procedure

1. Locate the winder on the media output side of the printer. If present, take the tension bar out. You can lift the tension bar up by manually winding the take-up media roll.

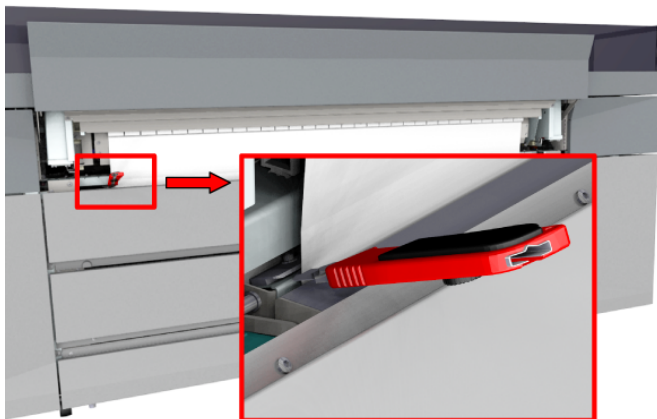




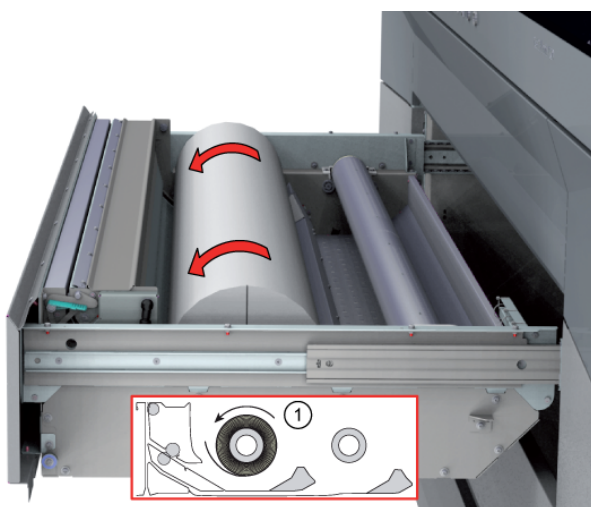
2. Go to the media input side and open the media cover.



3. Take the knife and cut the media in the cutting guide.



4. Close the media cover.
5. Pull firmly to open the media drawer.
6. Use both hands to turn the media roll backwards (1) and remove the media from the metal paper guide.



## Remove media from the paper path

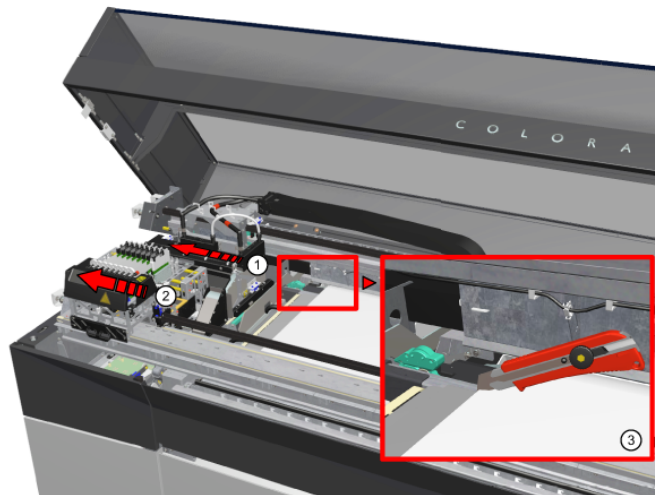
---

7. Close the media drawer.
8. Put on the Colorado 1650 approved gloves.
9. Open the top cover.
10. Carefully push the curing carriage to the left over the filters (1).
11. Carefully push the printhead carriage to the left in manual maintenance position (2).

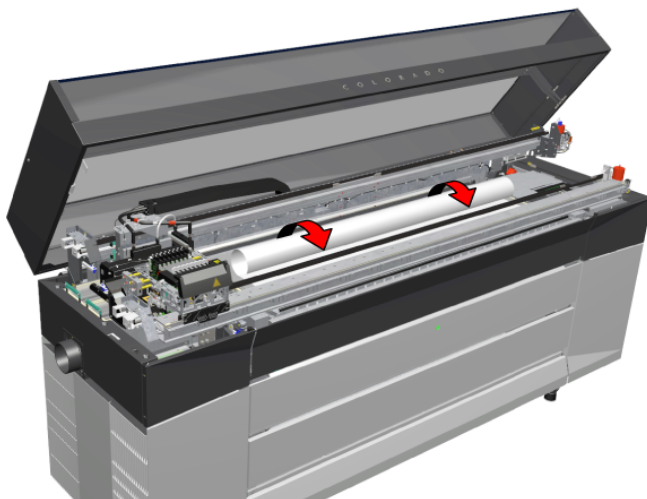


### IMPORTANT

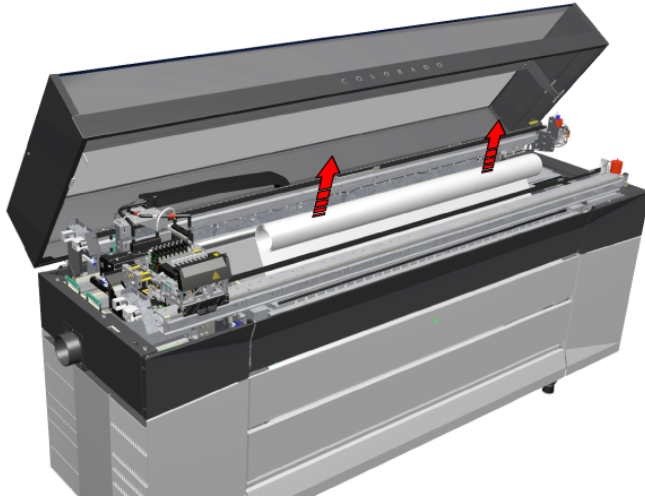
Touch the printhead carriage on the covered area only, otherwise you can damage the printheads.



12. Take the knife and cut the media in the cutting guide (3).
13. Fold the media towards you, from output side to input side, until the transport pinch.



14. Hold the folded media and pull the media from the transport pinch.



15. Dispose the media as chemical waste.
16. When the platen is polluted with ink, clean it. For more information, see [Clean the platen on page 187](#).
17. Dispose the gloves as chemical waste.
18. Close the top cover.
19. On the media output side, manually wind the media on the take-up media roll and tape it.
20. Start automatic maintenance on the operator panel. For more information, see [Start automatic maintenance on page 169](#).

## Replace a drive gear on a media shaft

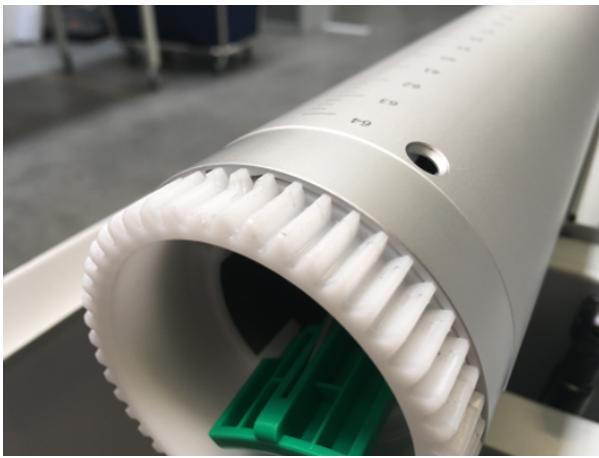
### Introduction

You can replace a drive gear on a media shaft without service assistance.

### When to do

When the teeth of a drive gear are damaged, you can replace one or both drive gears of your media shaft. The procedure below can be used either on the feed media shaft or the take-up media shaft.

When the metal shaft itself is damaged, you have to replace the complete media shaft. You can request a new part from your local representative.



### Before you begin

Use Colorado 1650 prescribed:

- Screwdriver (Torx-20)
- Drive gear



#### NOTE

For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).



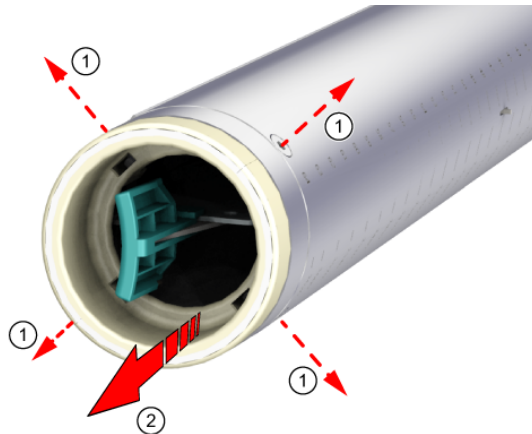
#### CAUTION

- **Watch your fingers when you handle the media roll.**
- **Lifting heavy media, 25 kg (55 lb) or more, has to be done by at least two people or with the help of external lifting tools.**

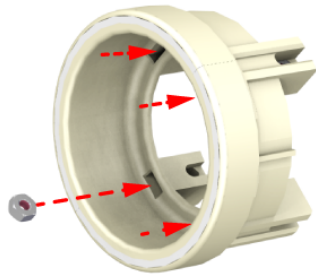
### Procedure

1. Move to the media input side or the media output side of the printer.
2. When a media roll is loaded on the media shaft, first unload the media roll.  
For more information, see [Cut and unload media on page 145](#).
3. Take out the media shaft.
4. Locate the damaged drive gear at the end of the media shaft.

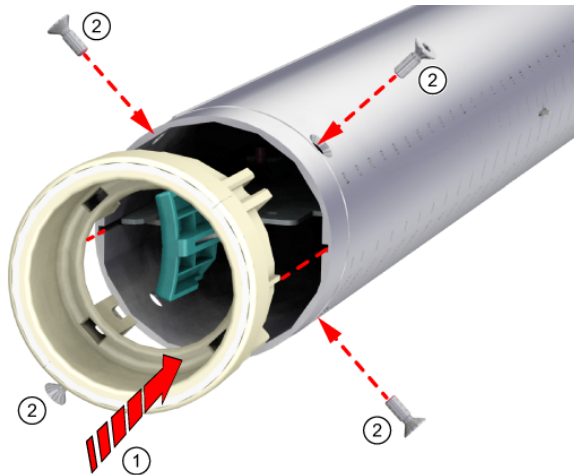
5. Unscrew the four screws of the drive gear (1) with the Torx-20.



6. Remove the drive gear (2) carefully to not lose any of the hex nuts inside the media shaft.
7. Take out the four hex nuts from the slots.
8. Take a new drive gear and insert the four hex nuts in the slots.



9. Place the new drive gear into position on the media shaft (1). Make sure you align the drive gear with the markers inside the shaft.



10. Fasten the four screws (2), hand tight.
11. When you want to replace the second drive gear of the media shaft, repeat steps 4 to 10.
12. The media shaft is now ready for use.  
You can load either a media roll or a take-up roll core. Then, place the media shaft back in the media drawer or on the roll winder.  
For more information, see [Load a media roll \(position 1\) on page 85](#) or [Load a take-up roll core onto the roll winder on page 118](#).

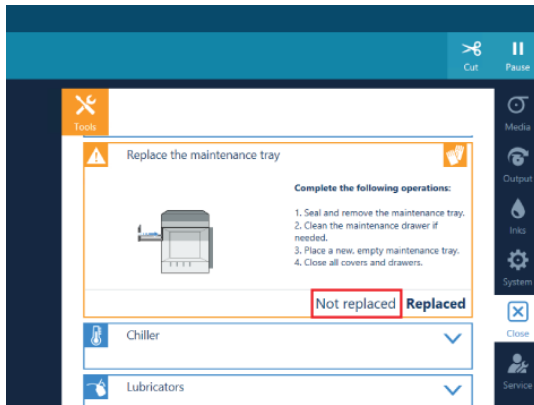
## Cancel the replacement of a maintenance tray

### Introduction

When you open the maintenance drawer the operator panel displays a message that you have to replace the maintenance tray. When you did this by accident, and you do not have to replace the maintenance tray you can cancel the replacement.

### Procedure

1. The operator panel displays a message you must start the maintenance tray replacement procedure. Tap on [OK].  
The [Tools] icon turns red.
2. Tap on the [Tools] icon.
3. Go to [Maintenance tray].
4. Tap on [Replace].  
A new window opens.
5. Tap on [Not replaced].



The replacement procedure is canceled, the counters will not be reset.

## Solve specific quality problems

Before you try to solve specific quality problems, make sure you have already checked and tried the general workflow for maintaining and improving quality.

For more information, see [General workflow for improving quality on page 236](#).



### NOTE

Note that only advanced users or application specialists should edit media profiles or tune the media settings to solve specific quality problems. When in doubt contact your local support organization.

## Zebra banding

### Introduction

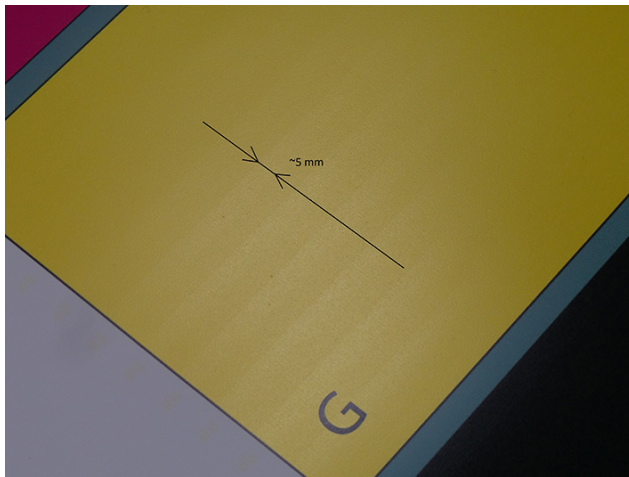
Problem description	Cause	Action
Uniform within swath, but varies left-right and alternates between swaths for speciality default or for a robust quality or robust 2 strategy?		Try a different media type (faster spreading) or switch to strategy "a" or a slower print mode. See <a href="#">Change the media settings on page 74</a> .
Zebra banding in Glossy modes.		Try a different media type (faster spreading) or higher printer platen temperature. See <a href="#">Change the media settings on page 74</a> .

Solve zebra banding on your print. Banding that is a disturbance in the gloss of the print in the carriage direction, repeated every swath. Follow the procedure below. You can stop at any time in the procedure when the problem is solved.

### Procedure

1. Change the media type.
2. Switch to strategy "a".
3. Tune the [Printer platen temperature] in the RIP. [Change the media settings on page 74](#).  
When you print in [Speciality] print mode and you see a defined zebra-like pattern per swath of 5mm (gloss-matte-gloss-matte), decrease the [Printer platen temperature] with steps of 2 degrees.





4. Select a slower print mode. [Select a print mode on page 83.](#)

**After you finish**

When the problem is not solved, contact your application specialist or local Service representative.

# Gradient banding

## Introduction

Problem description		Cause	Action
Gradient/variation within the swath?			Try a print strategy of type "b".
			Try a slower print mode.
	For the glossy high quality mode		Robust 1 can also be better than default.
	Only for glossy & high coverage areas?		See wrinkle in topic <a href="#">Wrinkles on page 312</a> .

Solve gradient banding on your print. Banding that is a disturbance in the gloss of the print in the media step direction, repeated every swath. Follow the procedure below. You can stop at any time in the procedure when the problem is solved.

## Procedure

1. Swith to strategy "b".
2. Select a slower print mode. [Select a print mode on page 83](#).

## After you finish

When the problem is not solved, contact your application specialist or local Service representative.

## Lines at swath boundary

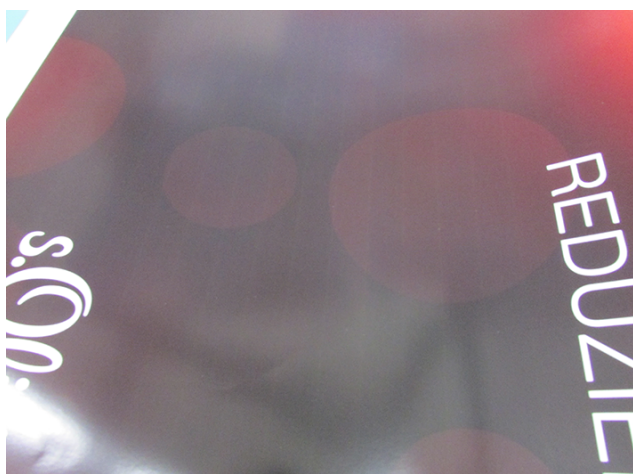
### Introduction

Swath boundary. Two adjoining swaths/passes of the printhead must be positioned without overlap (dark lines), or gap (white lines).



Problem description		Cause	Action
OD lines occur at the swath boundary. OD of the lines usually varies over the print (from left to right or from line to line).	Usually worse during 1 <sup>st</sup> meter. The way it varies is useful in determining the cause of the problem. If the suggested solutions do not help.		Perform a media calibration.
May be accompanied by OD/Gloss differences between swaths (these are uniform within the swath), or even a generally reduced OD in case of a fixed, large paper step error.			
Very sharp line(s), no OD variation over print and only for a single mono-color (and its corresponding mixed colors)?		This is caused by a nozzle failure at swath boundary and not due to paper step.	Run maintenance + nozzle optimization.
For some (fast) print mode-medium combinations gloss/OD swath boundary lines will always be present.	Independent from paper step errors, though paper step optimization may reduce visibility.	Roll core gear is damaged or worn out. Order new and replace.	Manual optimization of the paper step correction may reduce visibility, see <a href="#">Change the media settings on page 74</a> . Switch to a slower print mode or a more robust strategy, see <a href="#">Select a print mode on page 83</a> .

Follow the procedure below. You can stop at any time in the procedure when the problem is solved.



[3] Lines at swath boundary



## Procedure

1. Clean the platen and buffer plate, see [Clean the platen on page 187](#) and [Clean the buffer plate on page 190](#).
2. Check if the media quality is ok. If not, try a different media.  
Check if the [Media thickness] setting in the RIP is correct.
3. Perform a media calibration. [Calibrate the media on page 116](#). A media calibration will minimize the darker or lighter lines in 1st meter (40") of the print caused by the media step.
4. Make sure that the [Automatic advance correction] setting in the RIP is enabled. Use enhanced markers. [Change the media settings on page 74](#).
5. When you are printing in [High quality] print mode, several print modes offer multiple print strategies, that may reduce specific artefacts. Change the [Print strategy] setting. [Change the media settings on page 74](#).
6. Check the vacuum settings, see [Change the media settings on page 74](#).
7. Perform manual or periodic maintenance with [Advanced automatic nozzle optimization].
8. Select a higher quality print mode. [Select a print mode on page 83](#).

**After you finish**

When the problem is not solved, contact your application specialist or local Service representative.

# Lines within swaths

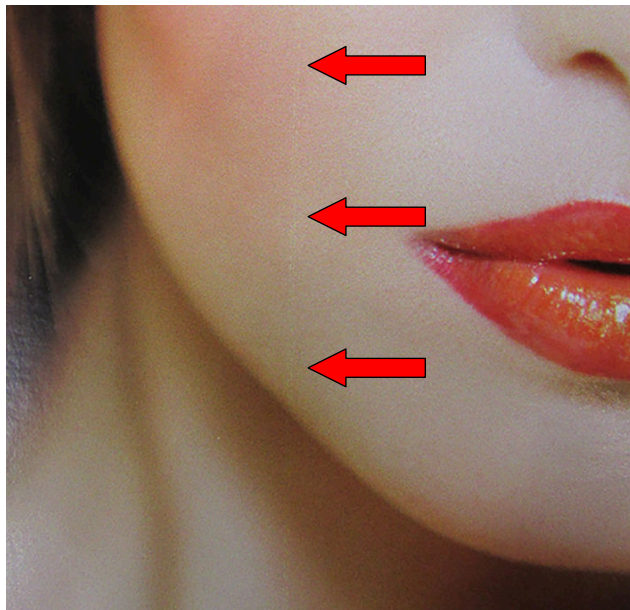
## Introduction

Problem description		Cause	Action
Sharp OD/gloss lines for a single mono-color and its corresponding mixed colors.	A single light line (doesn't repeat in next swath)?	Detected too late for compensation in that swath.	Cannot be solved (a slower print mode will reduce the problem).
	A light line that repeats in multiple swaths, high quality mode or better.	Probably undetected nozzle failure or side shooter.	Run maintenance + nozzle optimization.
Dark/light/gloss lines (single mono-color/not at swath boundary)		Probably compensated nozzle failure, but still (somewhat) visible.	Run maintenance + nozzle optimization (to prevent the nozzle failure).
			Try a different print mode/strategy (to reduce visibility)
Many lines or a thin band, doesn't go away after manual maintenance			Run printhead diagnostic (?) test chart and call service

Follow the procedure below. You can stop at any time in the procedure when the problem is solved.

## Procedure

1. Perform automatic maintenance with nozzle optimization and manual maintenance. See [Start automatic maintenance on page 169](#) and [Start manual maintenance on page 171](#).



[4] Lines due to nozzle failure

2. Perform media calibration. [Calibrate the media on page 116](#).
3. Check if the [Media thickness] setting in the RIP is correct. [Change the media settings on page 74](#)
4. Select a higher quality print mode. [Select a print mode on page 83](#).

### **After you finish**

When the problem is not solved, contact your application specialist or local Service representative.

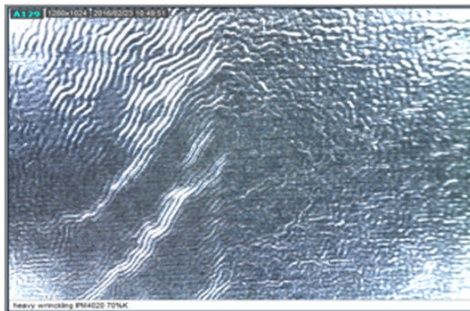
## Wrinkles

### Introduction

Gradient banding within swath for glossy print modes. Only for high coverage mixed colors.

Solve wrinkles on your print. Wrinkles show as rough repeating patterns especially in black. Follow the procedure below. You can stop at any time in the procedure when the problem is solved.

### Wrinkles



### Procedure

1. Increase the smart ink limit value to +1 in print mode settings (in the RIP) [Select a print mode on page 83](#).
2. Adjust the profile: reduce ink limit in color profile (mainly black) (media verification profile).
3. Select a slower print mode.

### After you finish

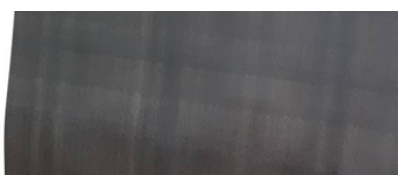
When the problem is not solved, contact your application specialist or local Service representative.



## Vertical banding

### Introduction

Problem description		Cause	Action
Sharp lines or bands.	Matching the roller positions.	Some media are very sensitive to mechanical deformation.	Try different medium
More gradual variation, some periodicity		Selected print mode is too fast.	Select a slower print mode see <a href="#">Select a print mode on page 83</a> .
		Mechanical problem.	Check the carriage guidance, bearings or lubricators.
		Media step problem.	Check media step control, see <a href="#">Change the media settings on page 74</a> .



[5] Periodic vertical banding

## Micro-uniformity/graininess

### Introduction

Solve micro-uniformity, for example graininess, mottle and small repeating structures on your print. Visibility non-uniform distributed ink drops on your print. The reason for this can be incorrect alignment or coalescence. Follow the procedure below. You can stop at any time in the procedure when the problem is solved.

Shortcuts into different solution directions

Do you see or experience...	Solution
a poor grain in the 1 <sup>st</sup> swath?	Perform manual maintenance.
many, tiny, gloss and OD spots?	Problem is media related.

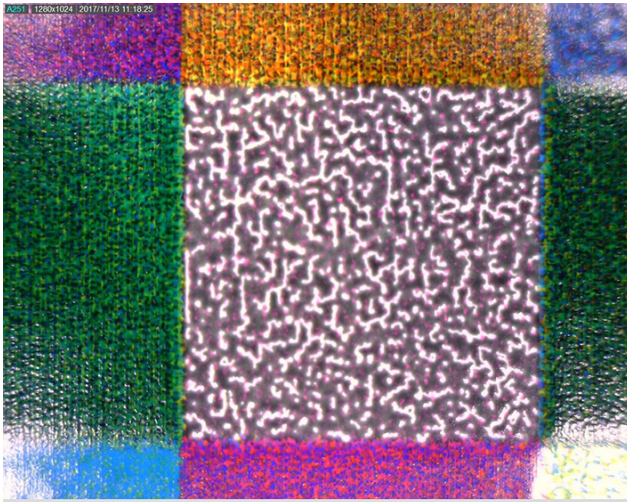
### Graininess



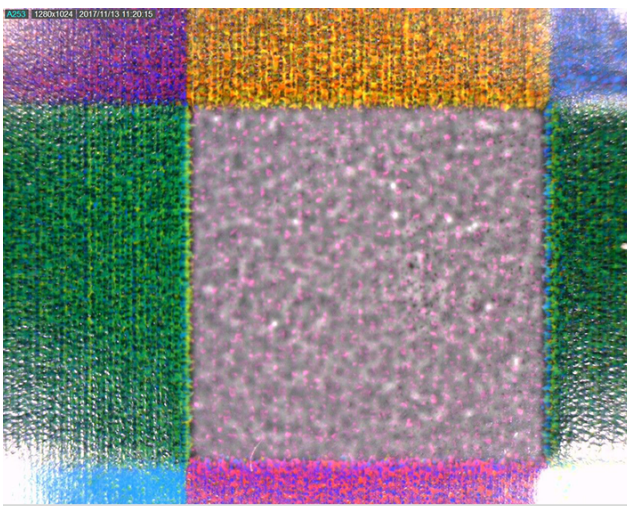
### Procedure

1. Check if the media settings in the RIP related to the media used are correct, e.g. [Media thickness]. [Change the media settings on page 74.](#)
2. Change the Media step correction. [Change the media settings on page 74.](#)
3. Perform printhead calibration. [Calibrate the printhead on page 241.](#)
4. Perform printhead carriage calibration. [Calibrate the printhead carriage on page 243.](#)

5. When you see coalescence in the print, decrease the [Printer platen temperature]. *Change the media settings on page 74.*



[6] With coalescence results in graininess



[7] Without coalescence no graininess visible

6. Select a different print strategy or a higher quality print mode. *Change the media settings on page 74* or *Select a print mode on page 83.*

### After you finish

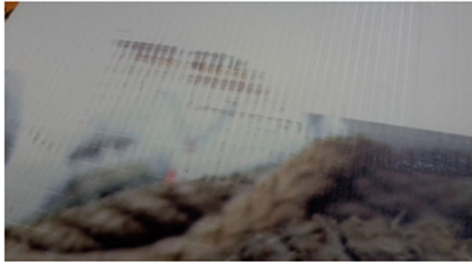
When the problem is not solved, contact your application specialist or local Service representative.

## Media touches

### Introduction

Prevent media touches from happening. When the media touches the printhead or printhead carriage, the print gets pollutes or smudged. Follow the procedure below. You can stop at any time in the procedure when the problem is solved.

### Media touches



### Procedure

1. Check if the media type you loaded is also the media type you selected on the operator panel. Make sure the two are correct.
2. Check if the [Media thickness ] setting in the RIP is correct. The media thickness determines the carriage height. This value represents the total thickness of the media, e.g. for self-adhesive vinyl, PVC including the liner. For more information, see [Change the media settings on page 74](#).
3. Make sure the media is not damaged or curled.
4. Make sure the media and the printer are not stored in a humid place. Check that the humidity is not too high.
5. Make sure the correct winding option is selected in the RIP. You can print and wind with a tension bar or a locked tension bar. [Print and wind with a tension bar on page 124](#), [Print and wind with a locked tension bar on page 128](#).
6. Set the [Carriage elevation] setting in the RIP to [Highest].
7. Check if it is a media handling issue. For more information see, [Solve specific media transport problems on page 317](#).
8. Try a different media type.

### After you finish

When the problem is not solved, contact your application specialist or local Service representative.

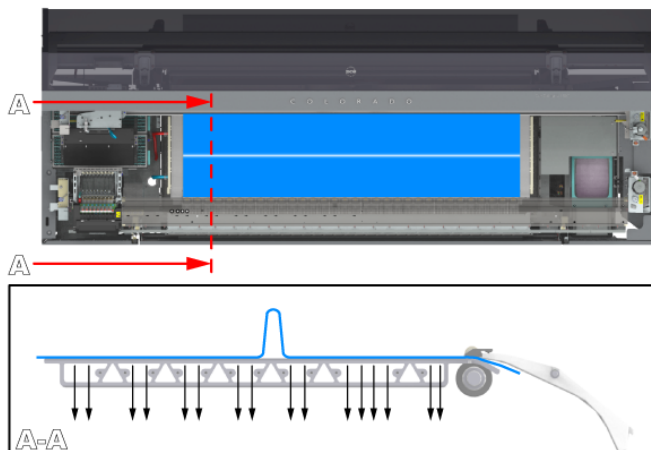
## Solve specific media transport problems

Next to specific quality problems resulting in artefacts, you can also see media touches or a lower print quality caused by media transport problems. Problems in media transport can usually be observed through the top cover when you watch the media being transported over the platen. Identify the problem and solve it step by step.

### Bulging media

#### Introduction

Solve media touches or print quality artefacts caused by the bulging of media. When media experiences too much resistance when moving over the printer platen, the media can start to bulge. A tapping sound from the media on the printer platen at every step can indicate the problem. Many times you can also see the media moving like a caterpillar across the printer platen. Follow the procedure below. You can stop at any time in the procedure when the problem is solved.



#### Procedure

1. Make sure the printer platen is clean. [Clean the platen on page 187.](#)
2. Decrease the [Vacuum power] settings in the RIP. First, decrease the vacuum power with steps of 10% until a minimum value of 10% for zones D and E. If this is not sufficient decrease the vacuum power with steps of 10% until a minimum value of 30% for zones B and C. Do not decrease the vacuum power of zone A.

For each step you decrease and have changed the setting: reload the media before you continue printing. Observe the media movement on the platen first, before you decrease the vacuum power again. [Change the media settings on page 74.](#)



#### NOTE

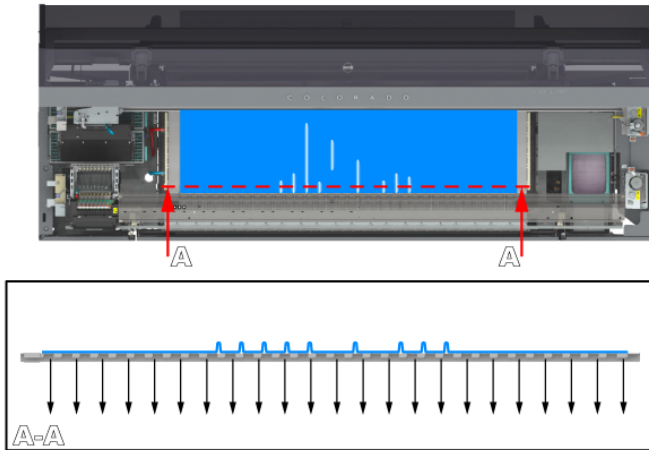
When you decrease the [Vacuum power] too much, media can come loose from the printer platen resulting in media touches as well.

3. Perform media calibration. [Calibrate the media on page 116.](#)
4. When the problem remains, use a different media.

# Wrinkling media

## Introduction

Solve media touches or print quality artefacts caused by the wrinkling of media in the transport direction. When you are using a weaker media such as textile or canvas which is not fed in the printer correctly or you are using a media type that is humid-sensitive, the media can start to wrinkle on the platen in the transport direction. Follow the procedure below. You can stop at any time in the procedure when the problem is solved.



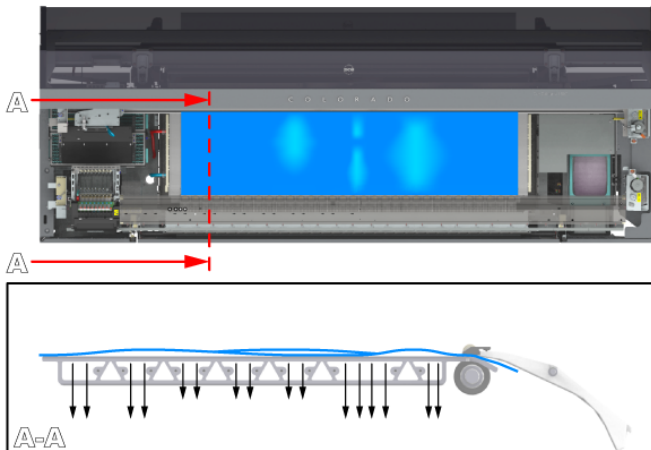
## Procedure

1. When you see the wrinkling of media in the first meters of the print (incident based, after period of inactivity):
  1. The wrinkling is caused by humidity or moisture. Enable the [Moist sensitivity] setting in the RIP. [Change the media settings on page 74.](#)
2. When you see the wrinkling of media in the first meters of the print (structurally):
  1. Set the [Carriage elevation] setting in the RIP to [Highest]. [Change the media settings on page 74.](#)
  2. Increase the [Vacuum power] settings in the RIP. Increase with steps of 10%. For each step you increase and have changed the setting; reload the media before you continue printing. Observe the media movement on the platen first, before you increase the vacuum power again. [Change the media settings on page 74.](#)
  3. When you have set the [Vacuum power] setting correctly, set the [Carriage elevation] setting in the RIP back to [Automatic]. [Change the media settings on page 74.](#)
  4. Perform media calibration. [Calibrate the media on page 116.](#)
3. When you see the wrinkling of media after 1 to 3 meters:
  1. Load the media roll on position 1. [Load a media roll \(position 1\) on page 85.](#)
  2. Feed the media manually.
  3. Manually cut the leading edge of the media.
4. Use a different media type.

## Waves in media

### Introduction

Solve media touches or print quality artefacts caused by waves in the media. When media is weak and or of a relatively narrow media width (<1000mm) the vacuum suction can be too low and the media will start to move over the platen in a wave motion. Follow the procedure below. You can stop at any time in the procedure when the problem is solved.



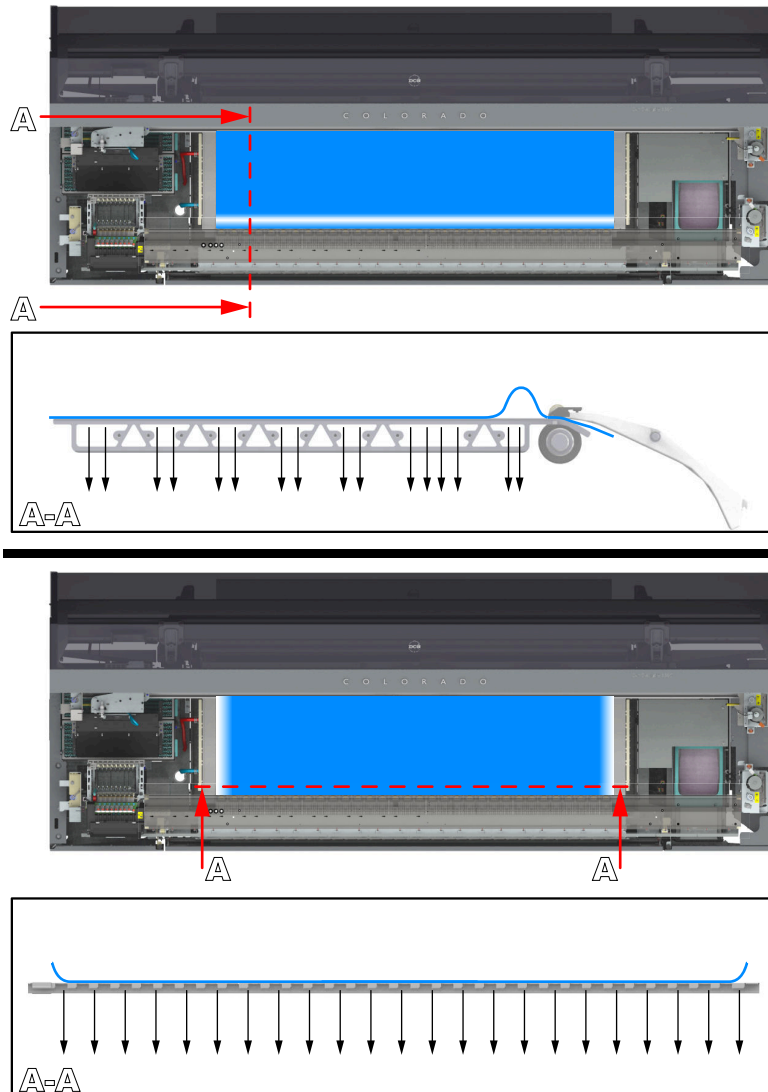
### Procedure

1. Increase the [Vacuum power] settings in the RIP. Increase with steps of 10%. For each step you increase and have changed the setting: reload the media before you continue printing. Observe the media movement on the platen first, before you increase the vacuum power again. *Change the media settings on page 74.*
2. Perform media calibration. *Calibrate the media on page 116.*
3. Use a different media type.

## Curling media

### Introduction

Solve media touches or print quality artefacts caused by the curling of media. When you are using a stiff media at the leading edge of the roll, the media can get a leading edge curl. When you are using a multi-layer based media with high ink coverage at the side edge or a media stored in high humidity, the media can get a side-edge curl. Follow the procedure below. You can stop at any time in the procedure when the problem is solved.



### Procedure

1. Increase the [Vacuum power] settings in the RIP. Increase with steps of 10%. For each step you increase and have changed the setting: reload the media before you continue printing. Observe the media movement on the platen first, before you increase the vacuum power again. [Change the media settings on page 74.](#)
2. Perform media calibration. [Calibrate the media on page 116.](#)
3. Set the [Carriage elevation] setting in the RIP to [Highest]. [Change the media settings on page 74.](#)



4. Use a different media type.

## Drifting media

### Introduction

Solve printing over the side edges of the media caused by the drifting of media. When media is not rolled up evenly on the core or the media is not fed in the printer correctly, the media will drift on the platen. When the media drifts, the printer can print over the side edges of the media and on the printer platen. Follow the procedure below. You can stop at any time in the procedure when the problem is solved.

### Procedure

1. Make sure the printer platen is clean. [Clean the platen on page 187](#).
2. Load the media roll again and make sure the media has a straight cut leading edge feeding into the machine. [Load a media roll \(position 1\) on page 85](#).

## Slipping media during calibration

### Introduction

When you are calibrating a smoother or weaker media, the media can start to slip on the platen resulting in an inaccurate calibration. Misalignment observed on the calibration prints can indicate the problem. Follow the procedure below to improve media transportation during the calibration process. You can stop at any time in the procedure when the problem is solved.

### Procedure

1. Remove the media from the paper path. [Remove media from the paper path on page 296.](#)
2. Make sure the printer platen is clean. [Clean the platen on page 187.](#)
3. Decrease the [Vacuum power] settings in the RIP:
  1. First, define an additional leading strip of 40 cm. Then, decrease the vacuum power with steps of 10% until a minimum value of 30% for zones D and E.
  2. If this is not sufficient decrease the vacuum power with steps of 10% until a minimum value of 30% for zones B and C.  
Do not decrease the vacuum power of zone A.



#### NOTE

When you decrease the [Vacuum power] too much, media can come loose from the printer platen resulting in media touches as well.

4. Reload and perform media calibration. [Calibrate the media on page 116.](#)
5. Observe the calibration prints before you decrease the vacuum power again. [Change the media settings on page 74.](#)  
For each step you decrease and have changed the setting: reload and calibrate the media again.
6. When the problem remains, use tight winding for this media. [Print and wind with a tension bar on page 124.](#)

# Clean pollution on the printer

## Guidelines for cleaning uncured ink

### Introduction

When the system is polluted with uncured ink you have to clean it. In order to work safe, follow the described guidelines.

Various parts in the printer can get polluted. Check all these parts when the system has been polluted by uncured ink.

### Cleaning materials

When you have to clean uncured ink, use the Colorado 1650 prescribed maintenance materials. Order the materials via your local representative:

- Microflex gloves for handling ink
- Lint free cloths
- Swabs
- Cleaning liquid (IPA)



#### NOTE

For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).



#### CAUTION

- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**



#### IMPORTANT

This cleaning liquid (IPA) is not used for cleaning the matrix plate, wiper and clean wall, maintenance drawer and heated parts of the maintenance station.

### Procedure

When you clean, follow the procedure:

Step	Action
1	Make sure the printer is not printing and there is no media on the platen.
2	Put on the gloves.
3	Clean the part with the lint free cloths or swabs. Use as many as necessary.
4	If necessary, dampen the cloth or swab with the prescribed cleaning liquid and clean it again.
5	If necessary, wipe with a dry cloth and let the liquid evaporate.
6	Dispose the gloves and other maintenance materials as chemical waste according to local regulations.

For part specific descriptions, see [Clean the media cover on page 325](#), [Clean the platen on page 187](#), [Clean the guide plate and replace the foams and roller assy on page 327](#).

## Clean the media cover

### Introduction

When the printer is polluting your media with for example uncured ink or glue, check the media cover. In case of pollution, you can clean the media cover.

### Before you begin

Use Colorado 1650 prescribed:

- Microflex gloves for handling ink
- Lint free cloths
- Cleaning liquid (IPA)



#### NOTE

For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).

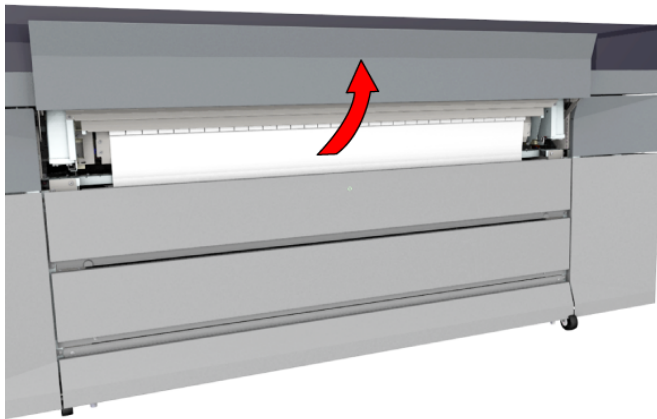


#### CAUTION

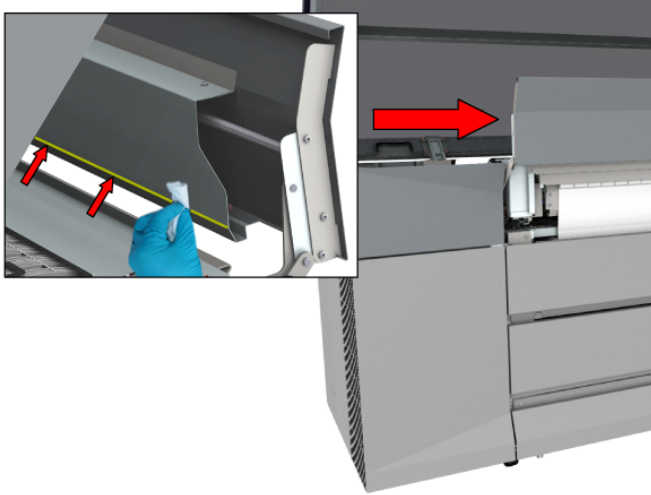
- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**

### Procedure

1. Put on the Colorado 1650 approved gloves.
2. Go to the media input side and open the media cover.



3. Inspect if the media cover is polluted on the inside.



4. Take a lint free cloth and clean the media cover.
5. Dampen the cloth with the cleaning liquid to remove any remaining ink.



**IMPORTANT**

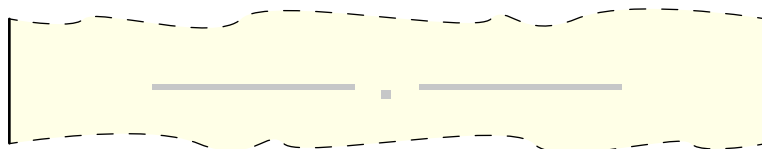
Use the prescribed cleaning liquid. Do not use any other cleaners.

6. Dispose the gloves, cloths and pin as chemical waste according to local regulations.
7. Close the media cover.

## Clean the guide plate and replace the foams and roller assy

### Introduction

When you see your print is polluted with a clear ink stamp coming from the guide plate, you must clean the guide plate and replace the foams and roller assy.



### Before you begin

Use Colorado 1650 prescribed:

- Microflex gloves for handling ink
- Lint free cloths and swabs
- Cleaning liquid (IPA)



#### NOTE

For information on the prescribed maintenance materials, see [List of Colorado 1650 maintenance materials on page 232](#).



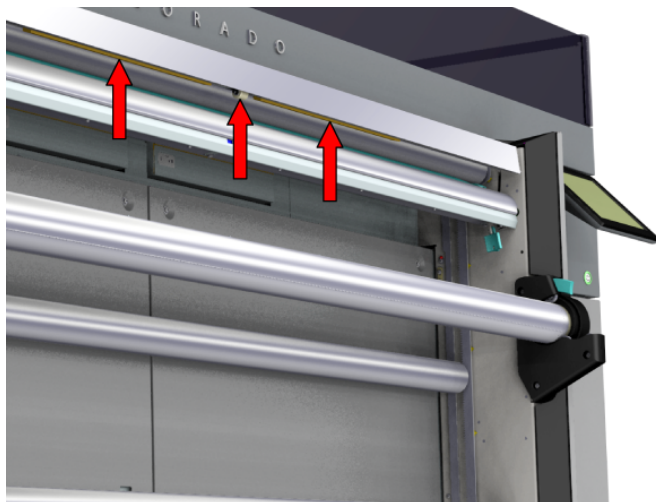
#### CAUTION

- **Wear the prescribed gloves when contact with ink or maintenance materials is possible. Gloves should always overlap sleeves. Follow the Safety Data Sheets (SDS) guidelines carefully in order to ensure maximum safety.**

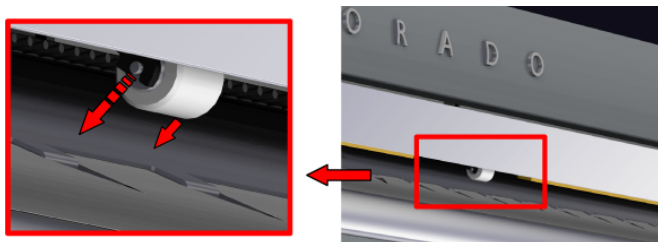
### Procedure

1. Make sure the printer is not printing and the guide plate is in open position.
2. Remove the media before you replace the foams and roller assy. For more information, see [Remove media from the paper path on page 296](#)
3. Put on the Colorado 1650 approved gloves.

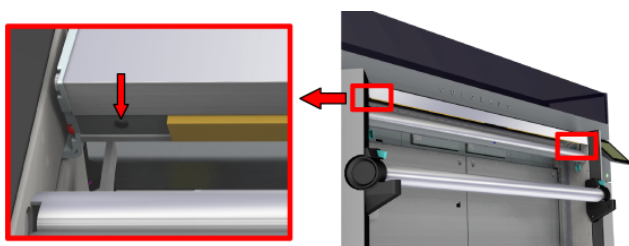
4. Go to the media output side and locate the guide plate with the roller assy and foams.



5. Locate the roller assy under the guide plate.



6. Pull to take out the roller.
7. Locate the foam left of the roller assy. A pin is placed at the left end of the foam.



8. Pull the pin and plug out with your fingers.
9. Locate the foam right of the roller assy. A pin is placed at the right end of the foam.
10. Pull the pin and plug out with your fingers.
11. Slide both foams towards the middle to remove them.
12. Dispose the roller assy, foams, pins and plugs as chemical waste according to local regulations.
13. Take a lint free cloth and clean any residue ink left on the guide plate.  
If necessary, dampen the cloth with the cleaning liquid to remove any remaining ink.



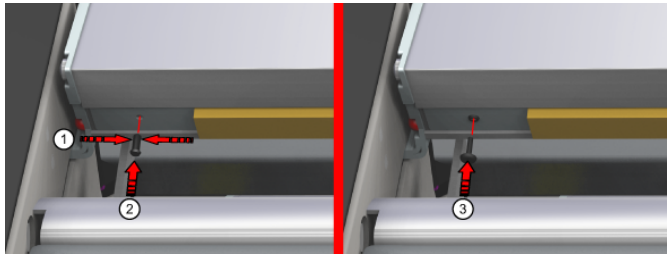
**IMPORTANT**

Use the prescribed cleaning liquid. Do not use any other cleaners.

14. Dispose the gloves and cloth as chemical waste according to local regulations.
15. Take the new foams and slide them in place.



- 16.** On the left end, push in a new plug and push in a new pin.

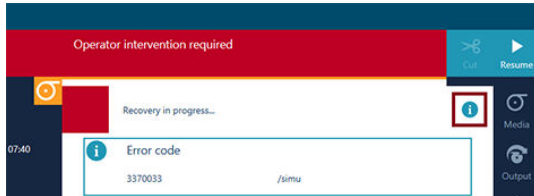


- 17.** On the right end, push in a new plug and push in a new pin.  
**18.** Push and click a new roller assy in place.

# Error codes overview

## Introduction

When an error occurs you will see an information icon on the operator panel. Click on the icon to find information on the error.



In the table below you find the most common error codes.

Num ber	Error code	Message	Action
1	5713	Cannot read markers for media step control	<ul style="list-style-type: none"> <li>• Clean the M&amp;C scanner, see <a href="#">Clean the M&amp;C scanner on page 184</a>.</li> <li>• Use the advanced black markers.</li> <li>• Clean the media or use different media.</li> </ul>
2	1701 1702 1705 5709	Carriage position error	<ul style="list-style-type: none"> <li>• Clean the platen and the buffer plate, see <a href="#">Clean the platen on page 187</a> and <a href="#">Clean the buffer plate on page 190</a>.</li> <li>• Check the fan settings.</li> <li>• Use uncurled or undamaged media.</li> <li>• Use the correct winding mode.</li> <li>• Use recommended media and profiles from Canon media guide website.</li> <li>• Make sure media is not damaged or curled.</li> <li>• Make sure the media can be transported well.</li> </ul>
3	15725 127010 8	Too late at XMS_MEDIA_SE (15B11)	<ul style="list-style-type: none"> <li>• Make sure the media is not damaged or curled.</li> <li>• Make sure the media can be transported well and is not too weak, slippery or sticky.</li> <li>• Use a media that is reflective enough.</li> </ul>
4	15729	Too late free at XMS_MEDIA_SE (15B11)	<ul style="list-style-type: none"> <li>• Make sure the media is not damaged or curled.</li> <li>• Make sure the media can be transported well and is not too weak, slippery or sticky.</li> <li>• Use a media that is reflective enough. ▶</li> </ul>

Number	Error code	Message	Action
5	25701	Wrong media width detected	Media width does not match the measured width, please change the media width.
6	7703	Maintenance tray not detected	<ul style="list-style-type: none"> <li>Place maintenance tray in correct position.</li> <li>Check maintenance chapter, see <a href="#">Maintain the printer on page 192</a>.</li> </ul>
7	21752	Ink aging PH detected	<p>Automatic maintenance cannot be performed while the system is in error. To prevent damage to the printhead heating is switched off. Try to prevent the printer being in an error state for too long (e.g. overnight). When the error situation is resolved the printheads will automatically warm up again.</p>
8	16731 16733	Knife position error	<ul style="list-style-type: none"> <li>Make sure you use a cuttable media</li> <li>If the knife is damaged, replace knife, see <a href="#">Replace the knife on page 204</a>.</li> <li>Check if there are no obstructions in knife path.</li> </ul>
9	24704	Open during run	Do not open the media drawer when the led is off.



# **Chapter 10**

## **Regulation Notices**

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### **Grounding (Finland; FI, Norway; NO, Sweden; SE and Denmark; DK)**

- FI: Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan.
- NO: Apparatet må tilkoples jordet stikkontakt.
- SE: Apparatens skall anslutas till jordat uttag.
- DK: Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.

Translation: The machine must be connected to a grounded power outlet.

### **Radio Interference suppression (all countries except USA)**

- Warning (CISPR22): This equipment is compliant with Class A. In a residential environment this equipment may cause radio interference.
- Warning (CISPR32/EN55032): This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference.
- Warning (CISPR11/EN55011): Operation of this equipment in a residential environment could cause radio interference.

### **Flicker (EEA including Switzerland)**

- This equipment may only be connected to mains connections with an impedance at 50 Hz of  $Z_{sys} = 0.305 \text{ Ohm}$  or less. In case it is observed that this equipment causes 'light flicker' to the environment, contact the supply authority in order to verify if the mains network has lower impedance than the one specified above.

### **FCC (USA)**

- 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 Documentation, 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.
- Uses of shielded cables are required to comply with Class A limits in Subpart B of Part 15 of the FCC Rules.
- This equipment contains a certified modular transmitter. The transmitter's FCC ID label is located near the power rating label. The modular transmitter is located in the ink supply unit and can only be accessed by a service technician.

### **ICES/NMB; Interference-causing equipment (Canada)**

- CAN ICES-3 (A)/NMB-3(A)

### **Conformity declaration for Radio Equipment Directive; RED (EEA including Switzerland)**

- Hereby Canon Production Printing declares that the printer is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU (RED). The product is CE-marked to show conformance with applicable legal requirements.

### **Conformity declaration for Radio Law (Japan)**

This end device contains a radio device which is already approved by MIC **AC-17014** for Radio Law

---

### Conformity declaration for Radio devices (USA and Canada)

- This equipment contains a certified modular transmitter. The modular transmitter is located in the **ink supply unit** and can only be accessed by a service technician.



- The transmitter's FCC ID is **2AGNM**, the IC ID is **22117**.

### Conformity declaration for Federal Telecommunications Law (Mexico)

This end device contains an RFID module which is already approved by IFETEL (RCPOCOC16-1941) for Federal Telecommunications Law.

### Conformity declaration for Telecommunications (Hong Kong)

This end device contains an RFID module which is already approved by ISM (HKCA1035, issue 7) for the Communications Authority. Certificate No.: HK0011801838.

### Conformity declaration for Telecommunications (Malaysia)

This end device contains an RFID module which is already approved by MCMC MTSFB (TC T007:2014) for Communications and Multimedia Act. Approval No.: RCCV/24A/0418/S(18-1613).

### Conformity declaration for Telecommunications (Singapore)

This end device contains an RFID module which is registered with the Info-communications Media Development Authority under regulation 20(6) of the Telecommunications (Dealers) Regulations (Cap 323, Rg 6) (the "Dealers Regulations") and approved for sale in Singapore. Telecommunications (Amendment) Act 2011 (No. 19 of 2011).

**Complies with  
IDA Standards  
DB00671**

### Conformity declaration for Telecommunication (Indonesia)

This end device contains an RFID module which is certified by the ministry of communications and information technology, directorate general of resources and equipment for post and information technology, the republic of Indonesia. Telecommunication Law No.36 of 1999.

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### VCCI (Japan)

- **Class A ITE (CISPR22)**

*Class A ITE (CISPR22)*

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。



VCCI-A

Translation: This is a Class A product based on the standard of the VCCI Council. If this equipment is used in a domestic environment, radio interference may occur, in which case the user may be required to take corrective actions.

### EAC (Eurasian Economic Union; EEU)



The following information about this product can be found on the rear side of the machine:

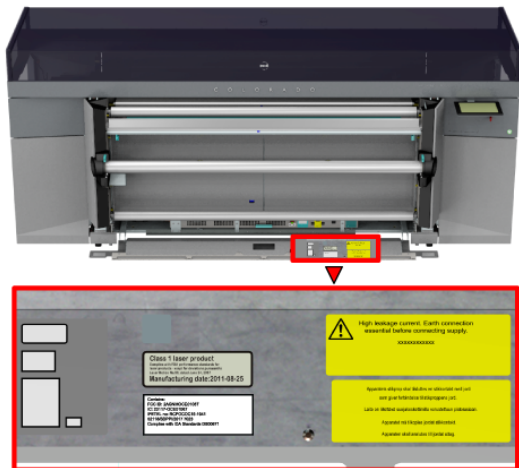
Model number  
Mains specifications  
Manufacturer  
Country of origin  
Production date <YYYY-MM-DD>  
EAC marking

### Laser Safety (All countries)

- **Laser safety**

This is a digital machine which operates using a laser. There is no possibility of danger from the laser provided the machine is operated according to the instructions in this User Documentation. Since radiation emitted by the laser is completely confined within protective housing, the laser beam cannot escape from the machine during any phase of user operation. This machine is certified as a Class 1 laser product according to IEC60825-1 2014: the machine does not produce hazardous laser radiation.





- **CDRH regulations**

This machine is certified as a Class 1 Laser product under Radiation Performance Standard according to the Food, Drug and Cosmetic Act of 1990. Compliance is mandatory for Laser products marketed in the United States and is reported to the Centre for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration of the U.S. Department of Health and Human Services (DHHS). This means that the device does not produce hazardous laser radiation. The related label indicates compliance with the CDRH regulations and must be attached to laser products marketed in the United States.

**CAUTION**

Use of controls, adjustments or performance of procedures other than those specified in this User Documentation may result in hazardous radiation exposure. This is a semiconductor laser. The maximum power of the laser diode is **0.78 mW**.

**Lamps (All countries)**

This product may contain lamps that are only intended for use in combination with and for this specific product (and related equipment) and such lamps are not intended for use in other applications.

**Battery labeling (EEA including Switzerland)**

- This product contains a battery. Please do not remove the battery. If the battery needs replacement, this should be done only by skilled service technicians who are aware of the removal instructions provided by Canon Production Printing.
- This product contains a battery or batteries. It (They) is (are) located in (a) printed circuit board(s) that is (are) essential for the continuous error-free functioning of the product. The battery or batteries should be removed only by skilled service technicians who are aware of the removal instructions provided by Canon Production Printing.



Location	Battery capacity [mAh]	Contains
Internal controller	200	Lithium

- Caution: Canon Production Printing does not accept any liability for any damage or consequences, if the batteries are removed by persons other than Canon Production Printing service personnel.

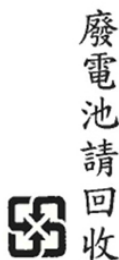
### Battery labeling (United Kingdom; England, Scotland and Wales)

- This product contains a battery. Please do not remove the battery. If the battery needs replacement, this should be done only by skilled service technicians who are aware of the removal instructions provided by Canon Production Printing.
- This symbol indicates that the batteries and accumulators used in this product are to be disposed of separately from your household waste in accordance with the UK Waste Batteries and Accumulators Regulations.



If a chemical symbol is printed beneath the symbol shown above, in accordance with the Regulation, this indicates that a heavy metal (Hg = Mercury, Cd = Cadmium, Pb = Lead) is present in this battery or accumulator at a concentration above an applicable threshold specified in the Regulation. Batteries and accumulators must not be disposed of as unsorted municipal waste. Users of batteries and accumulators must use the available collection framework for the return, recycling and treatment of batteries and accumulators. If your Canon Production Printing product contains non-removable batteries, the entire product is already covered by the UK Waste Electrical and Electronic Equipment Regulations and should be handed over to an authorized collection site for WEEE. The collection site will then take the appropriate measures for the recycling and treatment of the product, including the batteries. Customer participation in the collection and recycling of batteries and accumulators is important to minimize any potential effects of batteries and accumulators on the environment and human health due to substances used in batteries and accumulators. In the UK, there are separate collection and recycling schemes for batteries and accumulators. To find out more about recycling schemes for batteries and accumulators available in your area, please contact your local city office, waste authority or waste disposal facility. For more information regarding the return and recycling of waste batteries and accumulators, please visit: ["http://www.canon-europe.com/sustainability/approach"](http://www.canon-europe.com/sustainability/approach)

## Battery labeling (Taiwan)



Translation: Waste batteries, please recycle.

## End of Life: Eurasian Economic Union (EEU)

Russia and Belarus	
Утилизация продукции	Данную продукцию следует утилизировать должным образом, в соответствии с действующим национальным и местным законодательством.
Kazakhstan	
Өнімді қәдеге жарату	Бұл өнім Сіздің ұлттық және жергілікті заңнамаларыңызға сәйкес қәдеге жаратылуы тиіс.
Armenia	
Այրանքի շնչն չացնել	Այս ապրանքը պետք է նշանակված հատուկ կայաններում ընթացակարգի ներդրումը անհրաժեշտ է:
Kyrgyzstan	
Таштандыны иштетүү	Бул өнүм сиздин улуттук жана жергиликтүү мыйзамдарына ылайык тиешелүү түрдө кылуу керек.

Translation: Recycling of product; This product should be disposed of appropriately, according to your national and local legislation.

## End of Life; WEEE (EEA including Switzerland)

This symbol indicates that this product is not to be disposed of with your household waste, according to the WEEE Directive (2012/19/EU) and your national law. This product should be handed over to a designated collection point, e.g., on an authorized one-for-one basis when you buy a new similar product or to an authorized collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority, approved WEEE scheme or your household waste disposal service. For more information regarding return and recycling of WEEE products, please visit: "<http://www.canon-europe.com/sustainability>". Reference: Directive 2012/19/EU.



### End of Life; WEEE (United Kingdom)

This symbol indicates that this product is not to be disposed of with your household waste, according to the UK Waste Electrical and Electronic Equipment Regulations. This product should be handed over to a designated collection point, e.g., on an authorized one-for-one basis when you buy a new similar product or to an authorized collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority, approved WEEE scheme or your household waste disposal service. For more information regarding return and recycling of WEEE products, please visit: "<http://www.canon-europe.com/sustainability>".



### End of Life; WEEE (India)

This product is not to be disposed of with your household waste, according to the E-Waste (Management) Rules, 2016. This product should be handed over to a designated collection point, e.g., to an authorized collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information regarding return and recycling of WEEE products, please visit "<https://in.canon/en/consumer/web/e-waste>" or write to us at [cipl.ewaste@canon.co.in](mailto:cipl.ewaste@canon.co.in). Also, this product complies with the "E-Waste (Management) Rules, 2016" and prohibits use of lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers in concentrations exceeding 0.1 % by weight and 0.01 % by weight for Cadmium, except for the exemptions set in Schedule II of the Rule.



### End of Life; Handling of disposal of parts (Japan)

廃棄物の取り扱いについて

使用済みの消耗品と消耗部品は、法令・条例に従って、産業廃棄物としてお客様が処理処分をお願い致します。

Translation: Handling of disposals. Used consumables and expendables must be discarded by the customer as industrial waste in accordance with the laws as well the regulations of local government.

### RoHS (China)

The Environmental Protection Use Period (EPUP) applicable for the machine designated for deliveries to the Peoples Republic of China is 20 years. This EPUP, which does not include consumables or expendables, does not affect any warranty that is provided for the system and may not be construed or interpreted as a separate guarantee for the machine.



### RoHS (Vietnam)

Products sold in Vietnam market comply with following Circular and Decision - "Circular No. 30/1011/TT-BCT dated August 10, 2011 of the Ministry of Industry and Trade stipulating temporarily the permissible content limitation of some toxic chemicals in the electronic, electrical products" - Decision No.4693/QD-BCT correcting Circular 30/2011/TT-BCT.

For the statement on Canon Marketing Vietnam website, please see the last paragraph on the web page of the following URL: "<http://www.canon.com.vn/personal/web/company/about/>".

### REACH compliance (EEA including Switzerland)

- REACH regulation (EC No 1907/2006) article 33 requires information to be communicated to customers/end users about the presence of SVHC substances included in the REACH candidate list when such substances are above the threshold of 0.1% in articles. If such information has to be communicated it can be found on "<https://www.canon-europe.com/sustainability/approach/>".

Under normal conditions of use, there will be no exposure and no special measures are required for safe use.

---

### Acoustic noise emission (All countries)

- Sound pressure (LpA = **66 dB(A)**) is used to characterize the sound level that will be experienced at operator position and is defined as the dynamic variation of the static pressure of air measured in force per unit area. Sound pressure is normally represented in decibels [dB]. Typical values are a sound pressure level of 0 dB, which is the average threshold of human hearing, and 60 to 70 dB for normal conversation, 110 dB at an extremely loud music concert, and 150 dB for the noise of a jet engine at close range.

### Recycled paper (All countries)

The use of recycled paper also benefits the environment. The Colorado 1650 is designed to use recycled paper, including chlorine free paper, which complies with the requirements of EN12281:2002.

### Glanzgrad bei Peripheriegeräten (Germany)

Das Gerät ist nicht für die Benutzung im unmittelbaren Gesichtsfeld am Bildschirmarbeitsplatz vorgesehen. Um störende Reflexionen am Bildschirmarbeitsplatz zu vermeiden darf dieses Produkt nicht im unmittelbaren Gesichtsfeld platziert werden.

Translation: The equipment is not intended for use within the direct visual field of a workplace equipped with a monitor screen. In order to avoid annoying reflections at the workplace (monitor screen), this product must not be placed within the direct visual field of monitor screens.

### Operating environment (All countries)

- The environmental requirements for correct operation of the machine are as follows:
  - Operating temperature (T): **18 °C (64.4 °F) to 30 °C (86 °F)**
  - Recommended operating temperature (T): 20 °C (68 °F) to 27 °C (80.6 °F)
  - Relative Humidity (RH): **20% to 80%**
  - Recommended relative Humidity (RH): 30% to 60% (non condensing)
  - Operating altitude: below **2000 m**

### Deployment area: below 2000 m altitude and non-tropical climate conditions (China)



仅适用于海拔2000m及以下地区安全使用

Translation: Can only be safely used lower than 2000 meters altitude.



仅适用于非热带气候条件下安全使用

Translation: Can only be safely used in non-tropical climate conditions.

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