TrojanLabel®

T3-OPX

USER GUIDE

AstroNova®

T3-OPX User Guide

Part Number 22834701-EN-E
Revision 2.4
3/2024

TrojanLabel, An AstroNova™ Company

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Declaration of Conformity

Declaration de Conformité
Ubereinstimmungserklärung
Dichiarazione di Conformità

ID	DoC-22834701
Manufacturer's name and address Nom et adresse du fabricant Hersteller Nome del costruttore	AstroNova, Inc. 600 East Greenwich Avenue West Warwick, RI 02893 USA
Brand Name(s) Nom(s) de marque(s) Markenname(n) Nome/i dei marchi	TrojanLabel®
Model No. Modele No. Model Nr. Modello No.	Digital Over-Printer type T3-OPX
Description of Products Description des produits Produktbeschreibungen Descrizione dei Prodotti	Digital Over-Printer
Standards to which conformity is declared Standards auquel la conformité appartient Normen für welche Übereinstimmung erklärt wird Norme per le quali si dichiara la conformità	IEC 62368-1:2014 (2nd Ed) Audio/video, information and communication technology equipment - Safety requirements CISPR 35:2016 Ed.1.0 Electromagnetic compatibility of multimedia equipment - Immunity requirements CISPR 32:2015 Electromagnetic Compatibility of Multimedia Equipment IEC 61000-3-2 Ed 5:2018 Electromagnetic compatibility (EMC) Limits for harmonic current emissions IEC 61000-3-3 Ed 3.1:2017 Electromagnetic compatibility (EMC) Limitation of voltage changes
Application of Council Directives Application des Decisions du Conseil Anwendbar fur die Richtlinien Applicazione delle Direttive del Comitato	2014/30/EU 2014/35/EU

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directive and Standard.
Je, Soussigné, déclare que l'équipment spécifié ci-dessus est en conformité avec la directive et le standard ci-dessus.
Ich, der unterzeichnende erkläre hiermit, daß das oben beschriebene Gerät den vorgenannten Richtlinien und Normen entspricht.
Il sottoscritto dichiara che l'apparecchio sopra specificato è conforme alle Direttive e Norme sopra specificate.

Benjamin W. Casper Corporate Quality and Regulatory Compliance Manager AstroNova, Inc. CE Label First Affixed Date: 21	 Date of issue: 3/25/2021 Place of issue: West Warwick, RI

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GERMANY - Waldstraße 70, D-63128 Dietzenbach, Tel. +49 (0) 6074 31 025-00, Fax: +49 (0) 6074 31 025-99
UNITED KINGDOM - Westacott Way, Maidenhead Berkshire, SL6 3RT Tel: +44 (0)1628 668836, Fax: +44 (0)1628 664994

Declaration of Conformity
Declaration de Conformité
Ubereinstimmungserklärung
Dichiarazione di Conformità

ID	DoC-22834701-MT
Manufacturer's name and address Nom et adresse du fabricant Hersteller Nome del costruttore	AstroNova, Inc. 600 East Greenwich Avenue West Warwick, RI 02893 USA
Brand Name(s) Nom(s) de marque(s) Markenname(n) Nome/i dei marchi	TrojanLabel®
Model No. Modele No. Model Nr. Modello No.	Digital Over-Printer type T3-OPX Conveyor belt MTx (1 or 2)
Description of Products Description des produits Produktbeschreibungen Descrizione dei Prodotti	Digital Over-Printer with conveyor belt
Standards to which conformity is declared Standards auquel la conformité appartient Normen für welche Übereinstimmung erklärt wird Norme per le quali si dichiara la conformità	IEC 62368-1:2014 (2nd Ed) Audio/video, information and communication technology equipment - Safety requirements CISPR 35:2016 Ed.1.0 Electromagnetic compatibility of multimedia equipment - Immunity requirements CISPR 32:2015 Electromagnetic Compatibility of Multimedia Equipment IEC 61000-3-2 Ed 5:2018 Electromagnetic compatibility (EMC) Limits for harmonic current emissions IEC 61000-3-3 Ed 3.1:2017 Electromagnetic compatibility (EMC) Limitation of voltage changes Motor-Operated Appliances [UL 73:2011 Ed.10 +R:08Aug2018] Motor-Operated Appliances (Household And Commercial) [CSA C22.2#68:2018 Ed.8] Electrical Standard For Industrial Machinery [NFPA 79:2017 Ed.2018] IEC 60204-1 (Fifth Edition) + A1:2008 CFR Title 47 Part 15 Subpart B (2020) ISED ICES-003 Issue 6 Published 2016 Updated 2019
Application of Council Directives Application des Decisions du Conseil Anwendbar fur die Richtlinien Applicazione delle Direttive del Comitato	2014/30/EU 2014/35/EU 2006/42/CE

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Benjamin W. Casper Corporate Quality and Regulatory Compliance Manager AstroNova, Inc. CE Label First Affixed Date: 21	 Date of issue: 4/23/2021 Place of issue: West Warwick, RI

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Contents

1 Introduction

Original instructions

These instructions are original instructions made by TrojanLabel for the TrojanLabel digital over-printer T3-OPX.

Purpose

The purpose of these instructions is to ensure correct installation, use, handling and maintenance of the machine.

Accessibility

The instructions are to be kept in a location known to the staff and must be easily accessible for the operators and maintenance personnel.

Knowledge

It is the duty of the employer (the owner of the machine) to ensure that anyone who is to operate, service, maintain, or repair the machine have read the instructions. As a minimum, they should have read the part(s) relevant for their work. In addition, anyone who is to operate, service, maintain, or repair the machine is under obligation to look for information in the instructions themselves.

General Information

Manufacturer

The machine has been manufactured by:

AstroNova, Inc.

600 East Greenwich Avenue

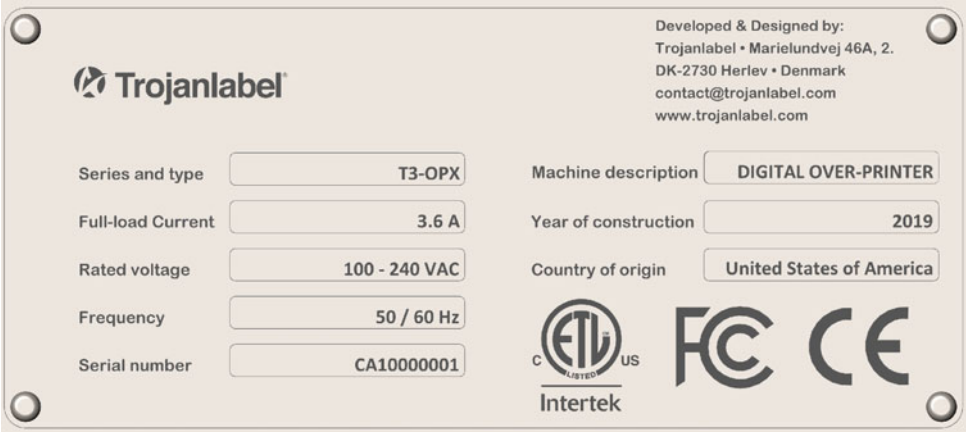
West Warwick, RI 02893 USA

The machine's designation

The machine's complete designation is Digital Over-Printer type T3-OPX.

Machine plate

The machine plate is situated on the back side of the machine at the lower left corner:



Overview and application

General description

The machine consists of a metal cabinet, ink delivery system, service door, print engine, embedded PC, touchscreen, media sensor, printhead, and four ink cartridges.

If any changes or alterations are made to the machine, these changes or alterations must be reflected in these instructions as necessary.

The machine's purpose and intended use

Application: The machine is only to be used to print on materials which meet the material specification requirements. The machine must not be used for any other purpose than the purpose mentioned above.

Warning about foreseeable misuse

The T3-OPX may not be used with inks not endorsed by TrojanLabel. All inks purchased from TrojanLabel or from official TrojanLabel distributors worldwide are endorsed by TrojanLabel.

Warning symbols

Crush warnings

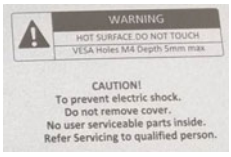
There are crush warning stickers placed on the front and back side of the unit, as the unit can move down towards the table.

Front:

Back:

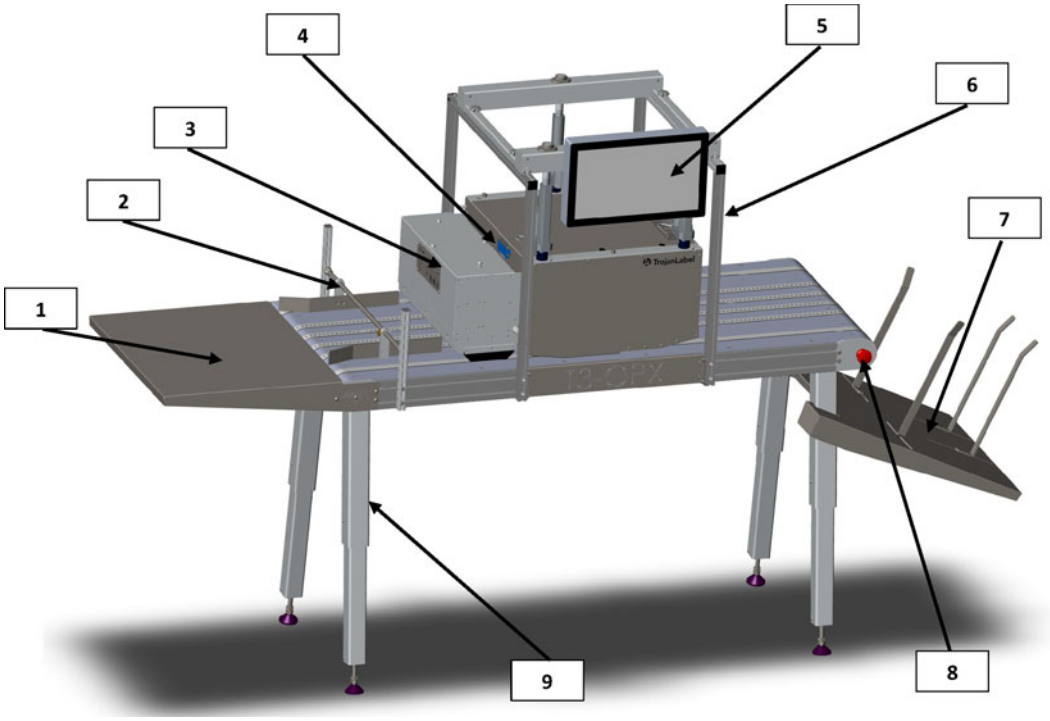
Touchscreen warnings

Warning stickers and engravements on the back side of the touchscreen, indicating the depth of the VESA holes (5mm), that the screen can become hot on the back side, and the user should never open the cover of the screen, as this may only be serviced by an experienced and product trained technician.



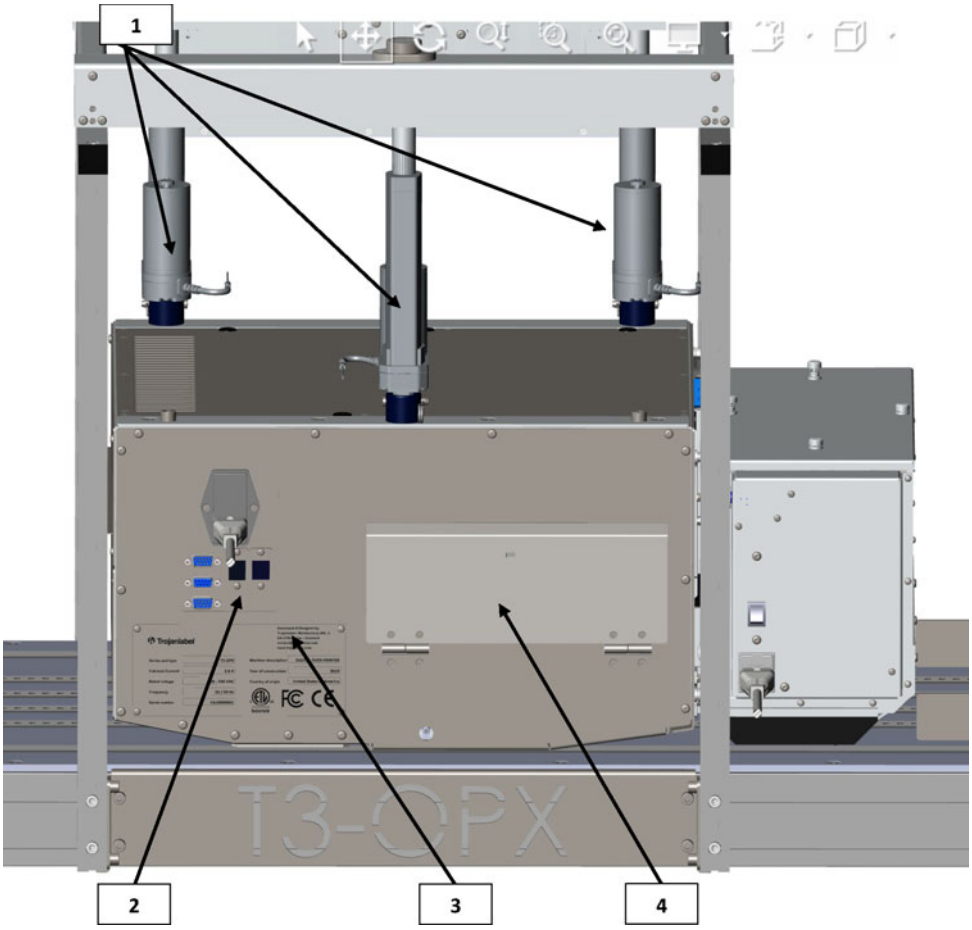
2 T3-OPX physical overview

Front view



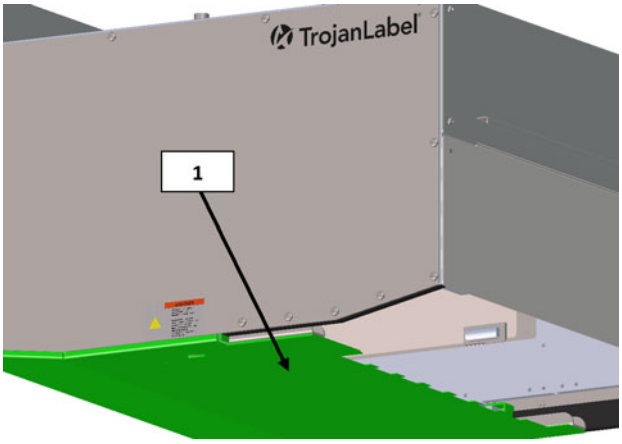
#	Description
1	Feeder table (optional)
2	Media guides
3	Vacuum unit (optional)
4	Edge sensor
5	Touchscreen
6	Bracket
7	Catch tray
8	Table emergency stop
9	Adjustable legs

Back view



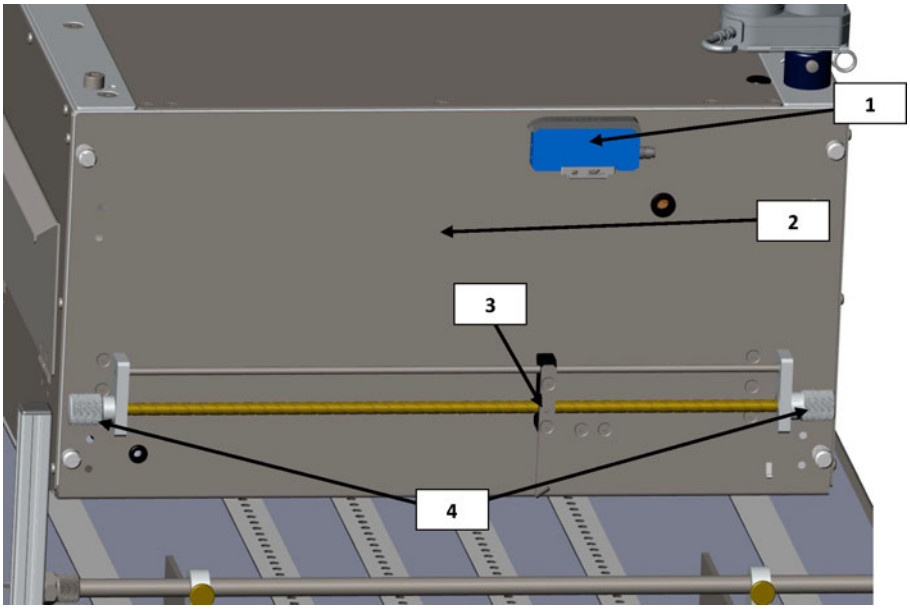
#	Description
1	Height controllers (three)
2	Inlets
3	Serial plate
4	Ink lid

Bottom view



#	Description
1	Pressure/Crash plate - Used to detect the media height and protect the printhead.

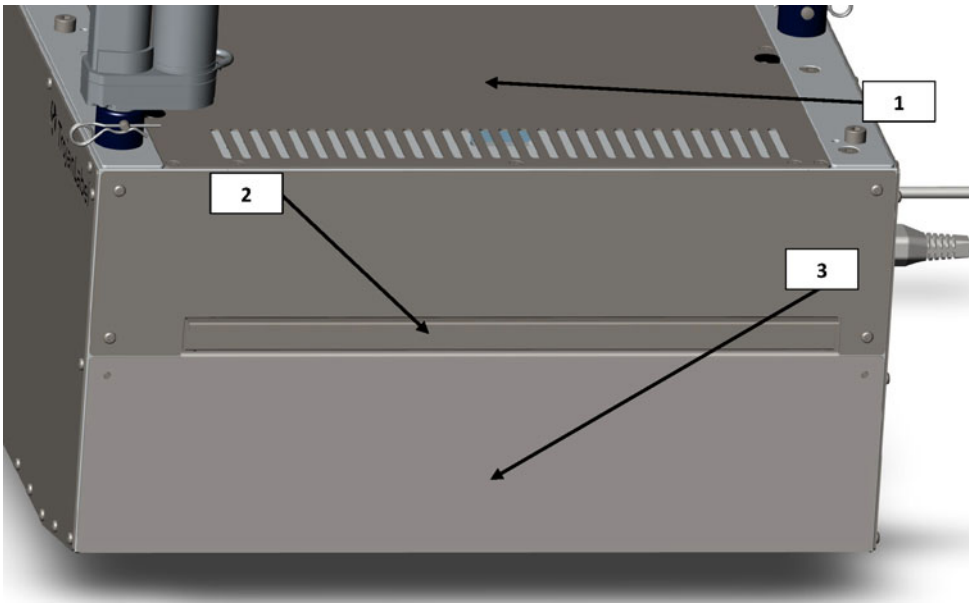
Media entry side (feeder side) view



#	Description
1	Edge sensor
2	Service door - Provides access to the print engine and service tray.

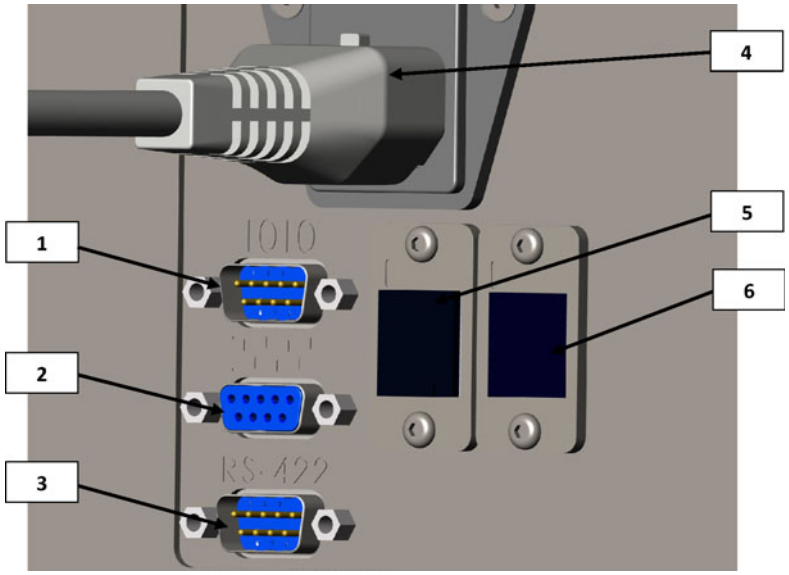
#	Description
3	Edge sensor reflective light emitter
4	Knobs to move sensor

Media exit side view



#	Description
1	Aerosol filter (replaceable)
2	Top lid - Provides access to electronic components.
3	Front plate - Removable to access the printhead area.

Connectors



#	Description
1	IO serial port (e.g. for the feeder)
2	Encoder serial port
3	Table communications port
4	Power inlet
5	Network (Ethernet)
6	USB port

3 T3-OPX installation

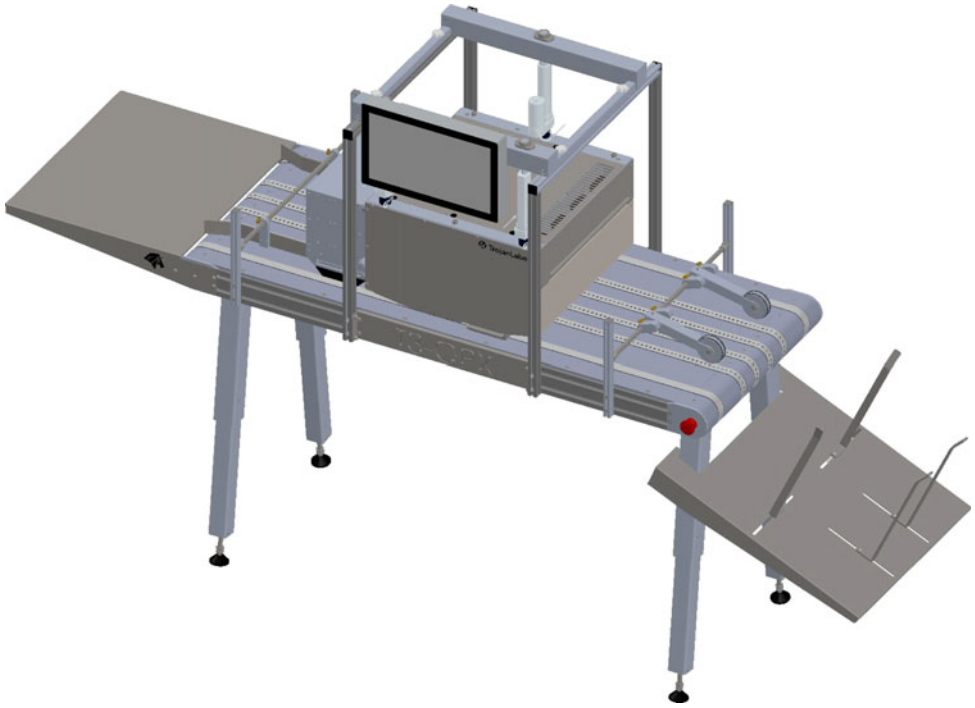
Installation overview

This chapter describes how to install the T3-OPX using the standard bracket and height control actuators on one of the two TrojanLabel mail tables (MT1 or MT2).

The operation of the mail tables is identical. Only the dimensions of the mail tables separates them.

- MT1 is 600mm wide and 1500mm long (excluding feeder and catch trays)
- MT2 is 1000mm wide and 2000mm long (excluding feeder and catch trays)

The image below shows the T3-OPX installed on the MT1.

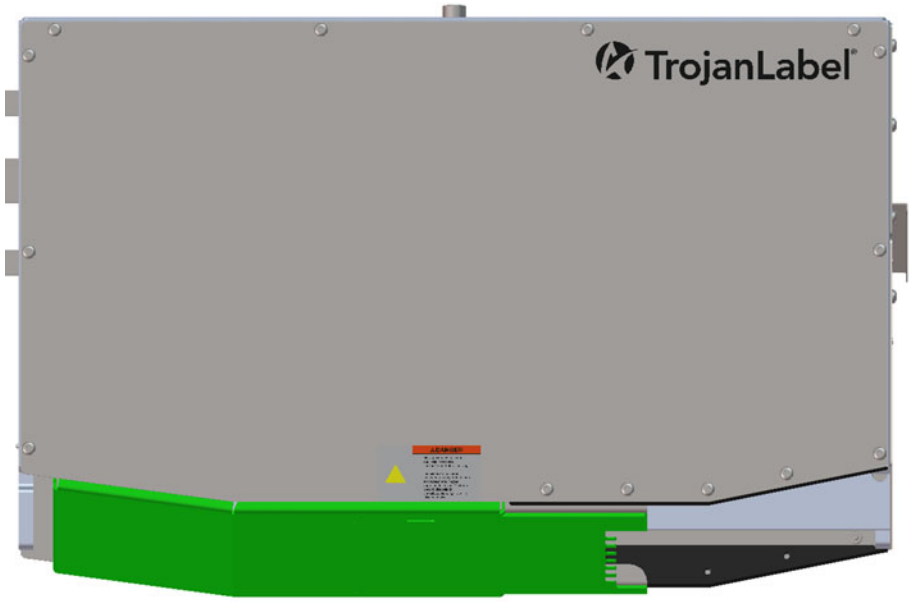


Important precautions

Do not power on the unit before reading this document.

Caution: *The entry plate on the bottom of the T3-OPX printing unit is pressure sensitive. Do not drop the unit on any surface when moving it around before installation.*

The plate marked with green below is the pressure sensitive plate.



Do not place the print unit on any sides other than horizontally. Do not tilt the unit.

Required items

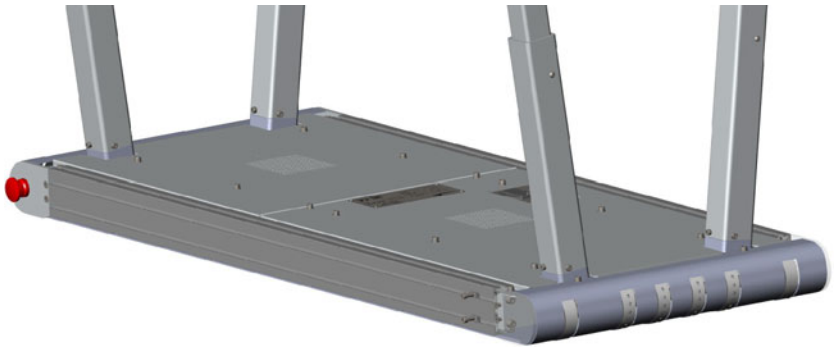
1. Mail table (MT1 or MT2)
2. T3-OPX bracket system (for 600mm or 1000mm wide tables)
3. Allen key set 2.5 - 6mm
4. C-clip pliers

Mail table setup

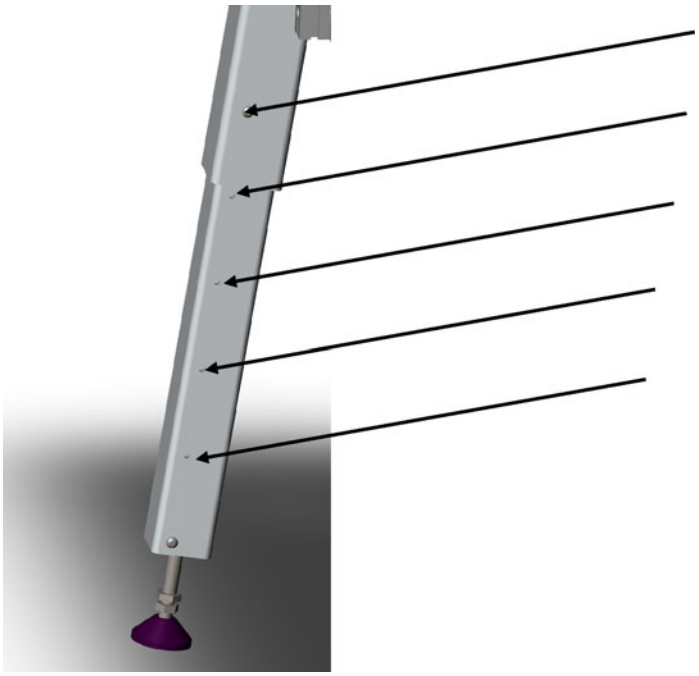
The process is the same for mail table 1 and 2.

Caution: *This step requires heavy lifting, ensure lifting equipment or extra personal is present to move the table (Check local rules and regulations).*

1. Place the table upside down on a mat or similar surface to protect the belts.
2. Mount the table feet.



3. Adjust the table feet to the desired height (5 mounting positions). Use the screws to lock the position.



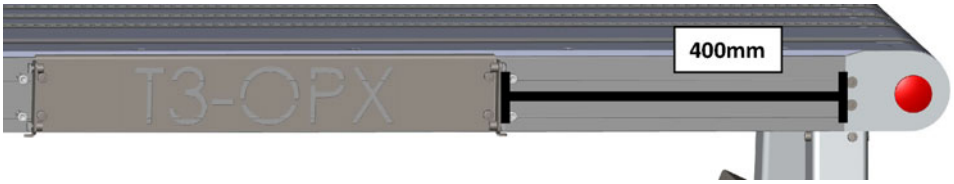
4. Turn the table over on its feet.

Bracket system installation

1. Mount the side brackets on both table sides.

   a. Use four slot nuts from the middle. Leave at least one pair of slot nuts (upper and lower) on each side of the bracket.

   b. Center the brackets 400mm from the emergency stop button plate.



2. Mount the bracket system on the conveyor table.

   a. Install the four corner posts loosely. Do not fully tighten as they will need to be adjusted to the top bracket.

b. Install the top bracket with four screws.

c. Ensure the bracket pairs on each side are positioned relatively correct to the other pair.

3. Carefully place the T3-OPX print unit on a box/surface that will raise the unit 25-35 mm under the bracket system.

   a. Using a raised surface will make it easier to fit the actuators to the top bracket system.

   b. Below is an example of raising the T3-OPX unit, but this can also be a box that can support 20 kg.

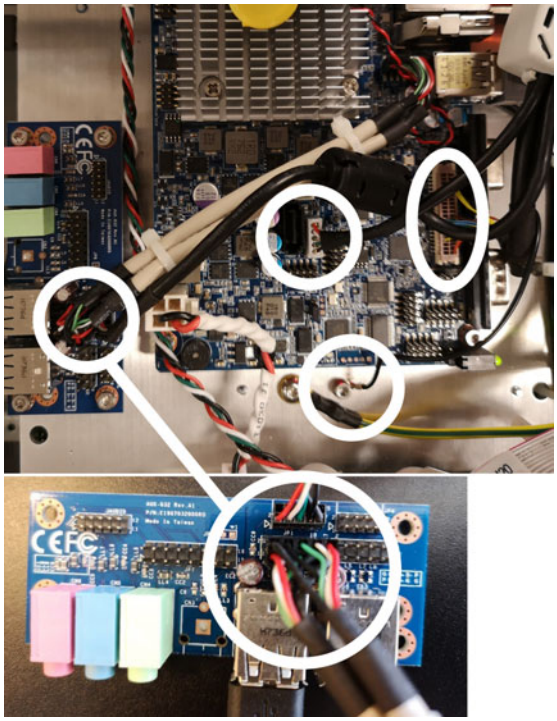
4. Remove the T3-OPX lid.

5. Mount the screen.

   a. Install the screen on the bracket using the 4 screws.

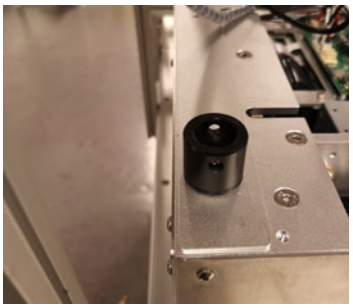
   b. Install the cables on the PC (power, LVDS, mouse, and ground).

      On the touchscreen mouse connection, notice the red cable must align with the white triangle.

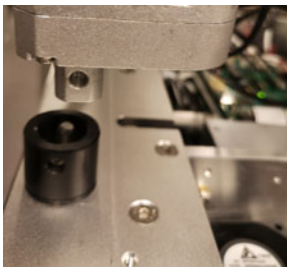


6. Mount the actuators on the T3-OPX unit.

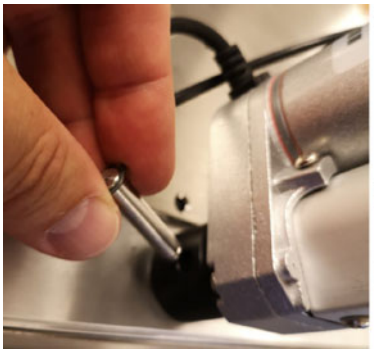
   a. Push each actuator into place in the corresponding black plastic holder (closest to where the actuator cable enters the unit).

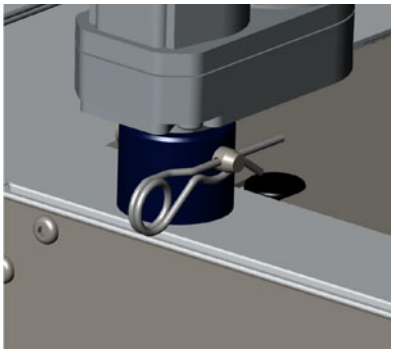


b. Notice the rotation of the actuator. The “motor” should be facing inwards and the hole at the bottom of the actuator should line up with the black plastic mount.



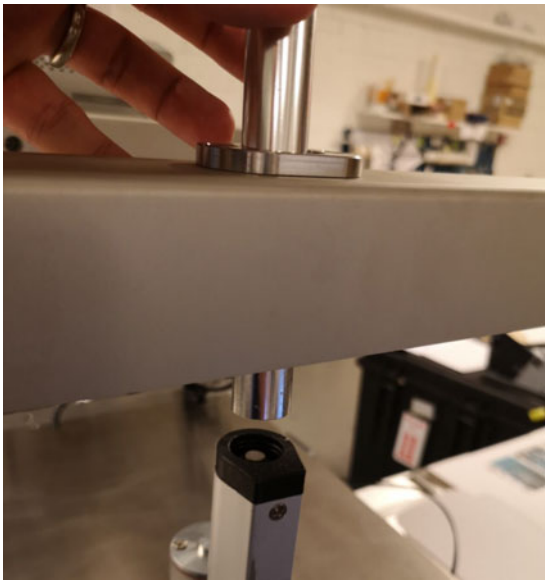
c. Secure the actuator by pushing in the pin. Secure it with the pin on the end.





7. Install the actuators onto the bracket system.

a. Place the three metal actuator rods in the top bracket.



b. Move the T3-OPX unit so each metal rod can fit into each actuator.

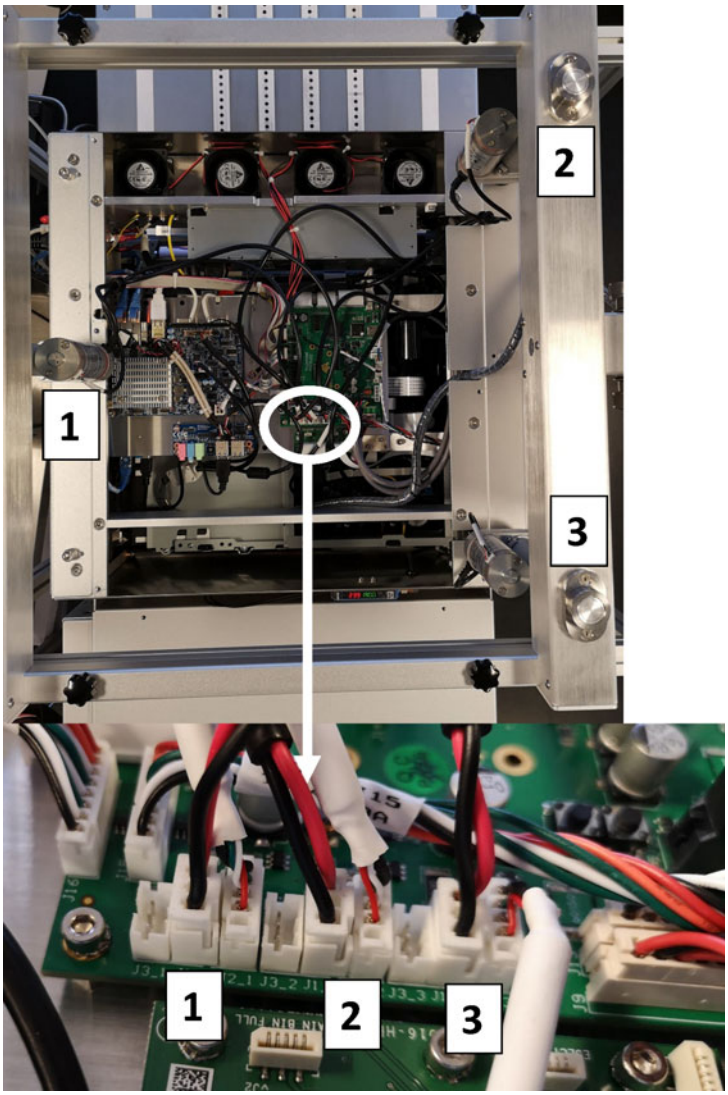
c. Push the metal rod into the actuator. There may be some resistance pushing it through the plastic fitting at the top.

d. Screw the metal rod in place. Depending on the padded surface the system is resting on, the metal rod will most likely hover slightly over the top bracket. This is normal and a part of the safety system.

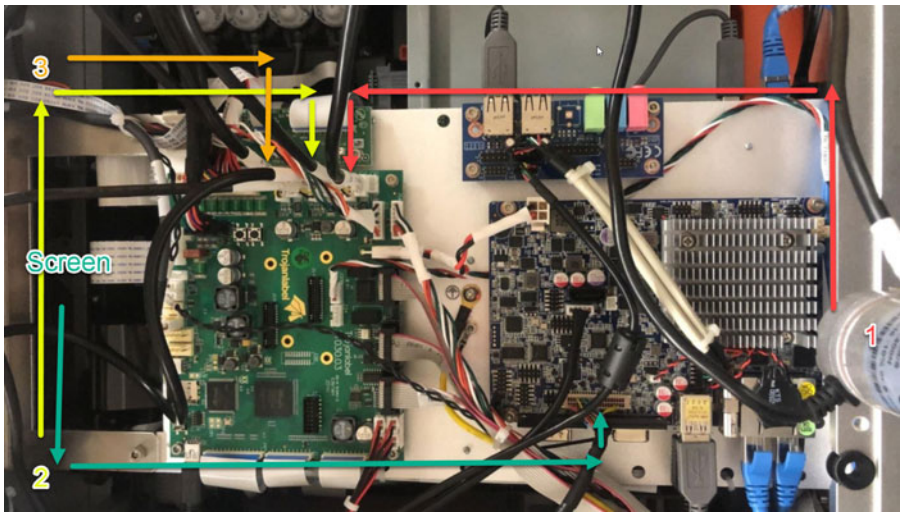
Caution: *The rods should be hand tight only. Do not use an Allen key for installation as the actuator can be damaged from over tightening.*

e. Carefully remove the padding under the T3-OPX print unit. Ensure that the printer doesn't drop hard.

8. Connect the actuator cables. It is important that they are connected as shown below.



Note: *Actuator and screen harnesses shall be routed as below image. Failure to do so may result in system failures. Actuator 1 = red, actuator 2 = blue, actuator 3 = orange, and the screen = green.*



9. Mount the lid on the T3-OPX.

Connect encoder and table controls (Trojan MT1 and MT2)

This procedure requires the two serial cables included with the table.

1. Connect the encoder serial cable.
2. Connect the table communication cable.

Remove service tray plastic protectors

Remove the orange plastic protectors. These ensure the service tray does not shift position during transportation.

1. Open the service door.
2. Remove the two plastic protectors.

Connect T3-OPX power supply cord and network cables

This procedure requires the power supply cord (with grounding) and network cable.

Warning: *Always use the supplied power supply cord connected to a grounded power outlet.*

1. Connect the power supply cord to the printer power inlet. *See "Connectors" on page 16.*
2. Connect the power supply cord plug to the power source outlet.

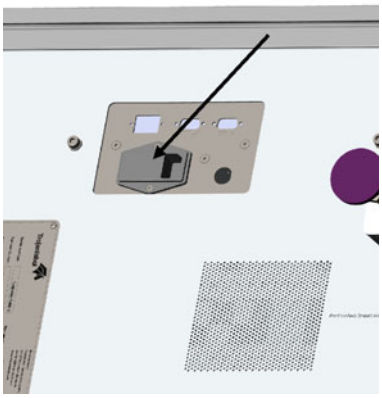
3. Connect the network cable to the network inlet.

Connect the MT1 or MT2 power supply cord

This procedure requires the power supply cord (with grounding).

Warning: *Always use the supplied power supply cord connected to a grounded power outlet.*

1. Connect the power supply cord to the Mail Table power inlet.



2. Connect the power supply cord plug to the power source outlet.

Powering on

Safety check

Before powering on the T3-OPX, visibly ensure that no foreign objects are interfering with the print engine module.

Warning: *Always use the supplied power supply cord connected to a grounded power outlet.*

Power on process

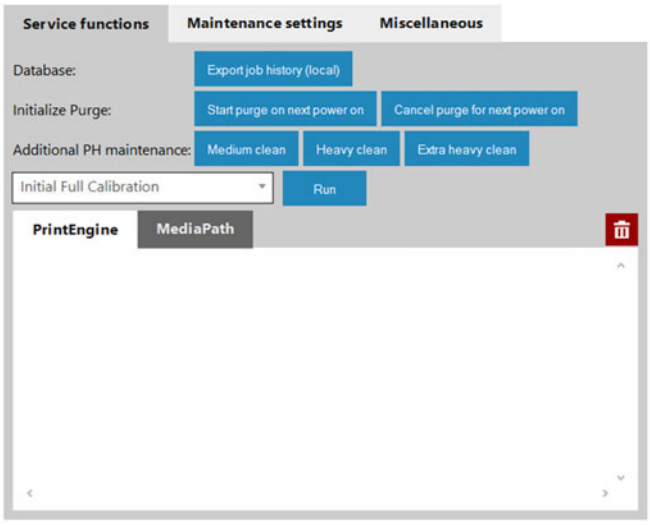
Turn on the power via the power inlet switch on both T3-OPX and mail table (MT1/MT2).

Calibrate the table position and level the unit

Calibrate the table position for the unit to determine the zero height position of the table and also ensure the unit is aligned to the table (x/y tilt).

1. Open the service menu.
2. Select **Initial Full Calibration** and press **Run**.

3. Wait for the process to finish. This process requires several minutes.



Installing ink cartridges

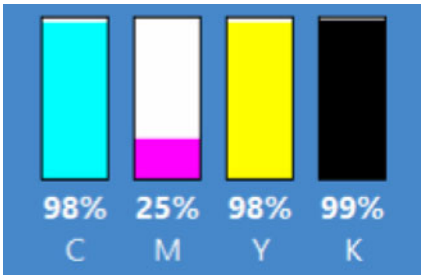
Warning: *For safety, keep ink cartridges out of the reach of children. If ink is accidentally ingested, contact a physician immediately.*

Note: *If the ink door is opened during printing, the printing will stop. This will not harm the machine.*

1. Open the ink door on the back of the unit.
2. Remove the orange plastic protectors.
3. Slide in the ink cartridge, nozzle end first, label side up. Push the cartridge in all the way.

   You will feel slight resistance near the end of this process as the nozzle engages the ink needles inside the printer. Repeat this step for each color.
4. Close the ink door.
5. Confirm that the inks are recognized in the status bar on the touchscreen. An example is illustrated below.

   a. This example only applies after the unit has been purged.



   b. If the unit is in the “mfg mode” state, which is the normal state for first time power on, then the indicators will be blank.

Start up/purge cartridges

Always use a new set of ink cartridges for purging.

If the cartridges have been slightly used (98-99%), they may possibly work. But we always recommend a completely fresh set of cartridges.

Replacing an empty cartridge

When replacing an empty cartridge, a new or used cartridge can be used. A used cartridge can be used only if it has not been marked as used in more than three previous printers.

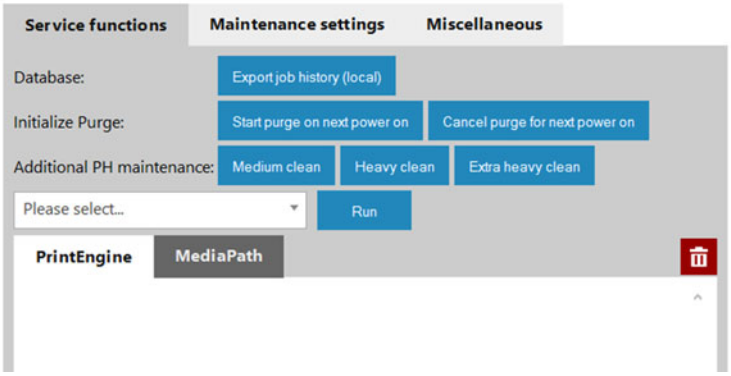
Note: *The cartridge is marked as used only after it is installed in a printer and that printer prints while the supply is in.*

Purging the unit

The print engine must be purged to completely remove the shipping fluids. The fluids will be dispensed through the printhead and into a spittoon that is supplied with the print unit. The process will take approximately 20 minutes.

The process will require the operator to place the spittoon in the correct position under the printhead. The purge height will be automatically set by the process. Once all is in place, the unit is set in a special purge mode, which will require the operator to restart the unit (full power cycle).

1. Check the following prerequisites.
   - Spittoon with absorption filter
   - Inserted inks
   - If using the TrojanLabel mail table, ensure the print height controls have been initialized and the table position has been calibrated. *See "Calibrate the table position and level the unit" on page 27.*
2. Open the service menu.
3. Select **Start purge on next power on**.



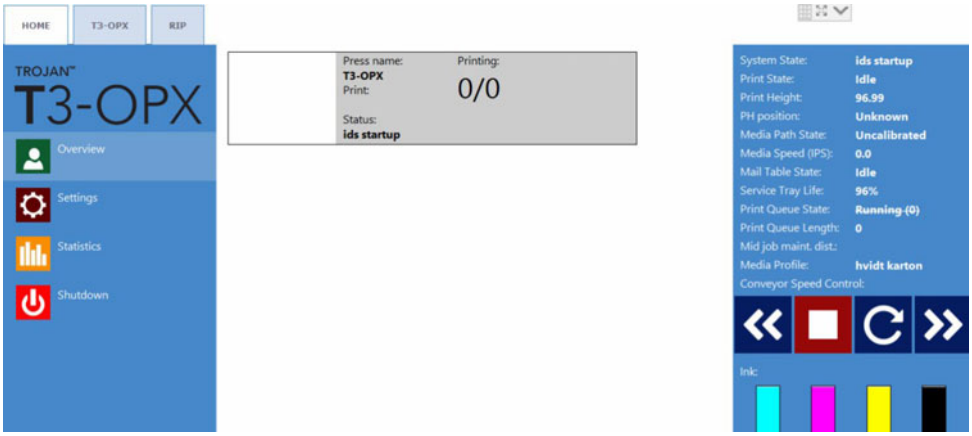
4. Confirm the process initiation.

   The purge will deplete 300-350ml of shipping fluid. It will require the spittoon placed under the printhead. After pressing OK, the print unit will be moved to the purge height and purge will start on next power on. The operation cannot be undone once accepted.

5. Success

   Purge process initialized successfully. Place spittoon under the printhead, then power off the printer unit by switching off the main PSU. Purge will automatically start on next power on.

   If the unit failed to move to the purge height, check if the height control has been initialized in the handling menu. The process will use the “purge height” in the settings menu.



Calibrate the printhead (optional)

The printhead calibration routines consist of 3 parts.

1. Nozzle alignment - *See “Nozzle alignment” on page 31.*
2. Color density - *See “Color density” on page 33.*
3. Nozzle health - *See “Nozzle health alignment” on page 33.*

All parts require printing and scanning the result. The print unit will calibrate the nozzles and ink drop based on the scans. Below is an overview of the Diagnostics menu:

Prerequisites

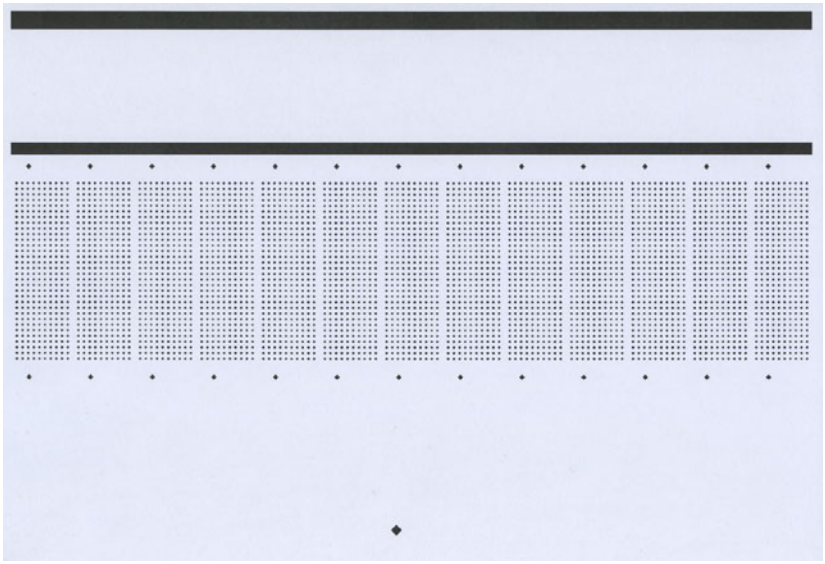
- 1 x scanner (EPSON v600)
- High grade ColorLok paper (Minimum A4), 160 grs (or heavier)

- Print height is calibrated to the high grade paper height
- Media entry sensor is calibrated to the high grade paper

Nozzle alignment

1. Open the **Diagnostics** menu.
2. Press **Print Nozzle Alignment Plot**.
3. Place the paper on the table.
4. Press **Print Nozzle Alignment chart**.
5. Examine the print.

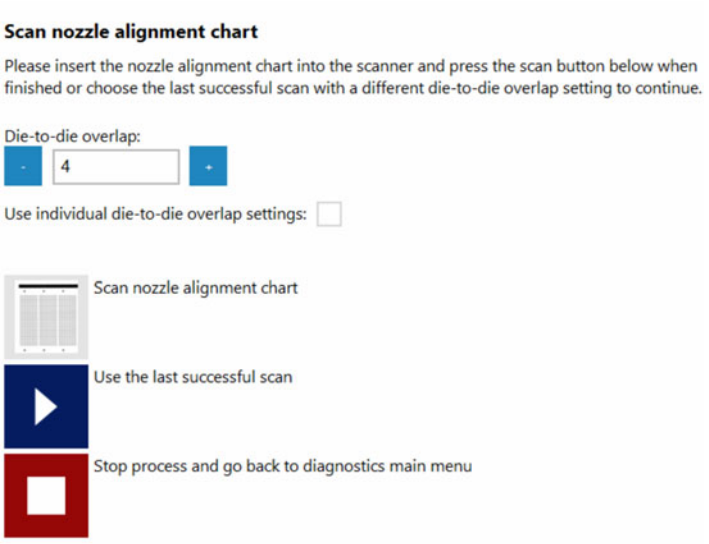
- If the print appears as shown below, press **Go back to the diagnostics main menu**.



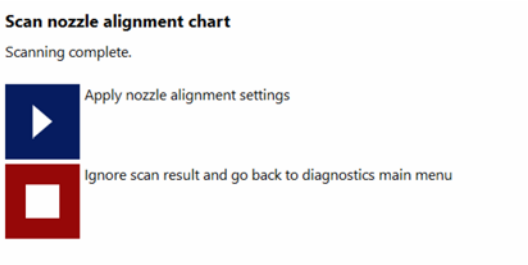
- If the print does not appear as shown, reprint the chart.

6. Press **Scan the nozzle alignment chart**.
7. Set Die-to-die overlap to 0.

   This feature is explained in “Printing on uneven surfaces (die-to-die overlap feature)” on page 74.
8. Press **Scan nozzle alignment chart**.



9. If successful, then apply the settings.



Color density

1. Open the **Diagnostics** menu.
2. Press **Print Density charts**.
3. Repeat the steps below for each color (CMYK).
   a. Place the paper on the table.
   b. Press **Print density chart for C, M, Y or K color**.
   c. Scan the result.
4. If successful, then apply the settings.

Nozzle health alignment

The nozzle health alignment determines the current state of the nozzles and will show non-printing nozzles. Scanning the printed output will enable the printer to some extent cover the missing nozzles. However, please note that there are no guarantees that it will eliminate issues with missing nozzles.

1. Open the **Diagnostics** menu.
2. Press **Print Nozzle health plot**.
3. Place the paper on the table.
4. Press **Print Nozzle health plot - ODD**.
   a. Scan the result.
   b. If successful, then apply the settings.
5. Place the paper on the table.
6. Press **Print Nozzle health plot - EVEN**.
   a. Scan the result.
   b. If successful, then apply the settings.

Media cleaner installation (VAC)

This section describes the process for installing the media cleaner (vacuum unit).

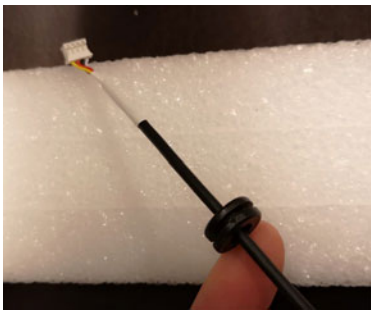
Note: *This procedure requires lifting of the vacuum unit during mounting. Ensure lifting equipment or extra personal is present (check local rules and regulations).*

Part number: 43162000

Description: VAC MEDIA CLEANER T3-OPX

1. Power off the unit.
2. Mount the control cable (TC04058).
    a. Remove the top lid of the print unit.
    b. Open the back door.
    c. Remove the plastic grommet with a hard-plastic tool or similar to avoid damaging the grommet or scratch the back door plate.

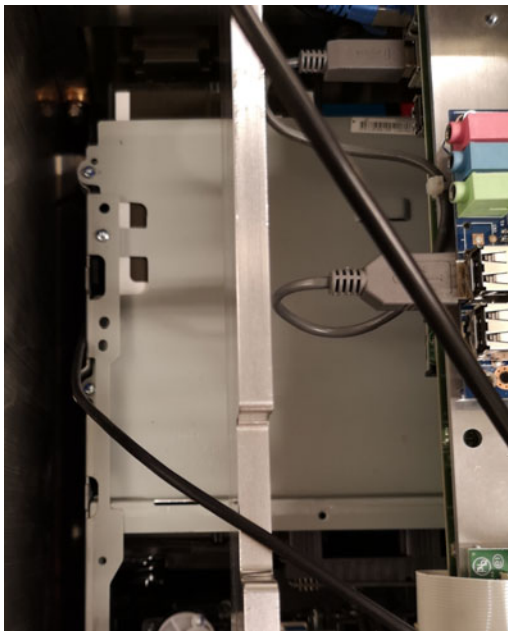
    d. Pull the control cable through the grommet.



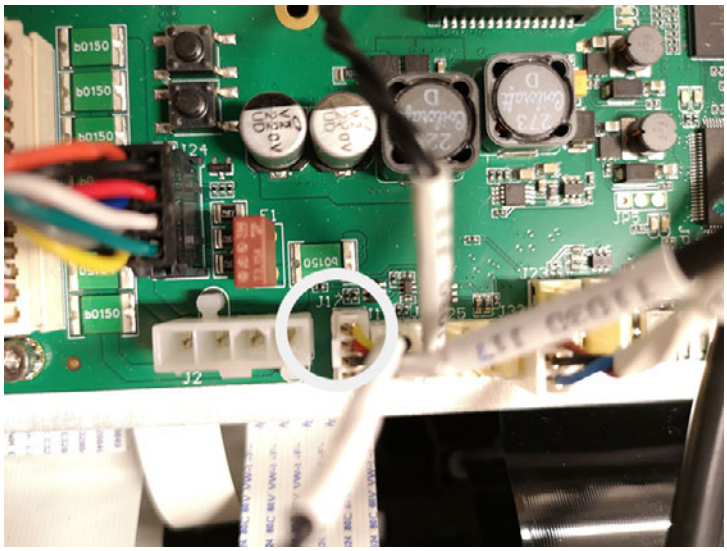
e. Pull the cable through the back door hole and fix the grommet back into position using the same tool described above.

Note that the cable connector should be inserted sideways through the hole.

Make sure the cable is pulled over the cross bracket inside the print unit.



f. Mount the cable in J17 on the T1030 board.



3. Mount the Vacuum unit onto the back door.

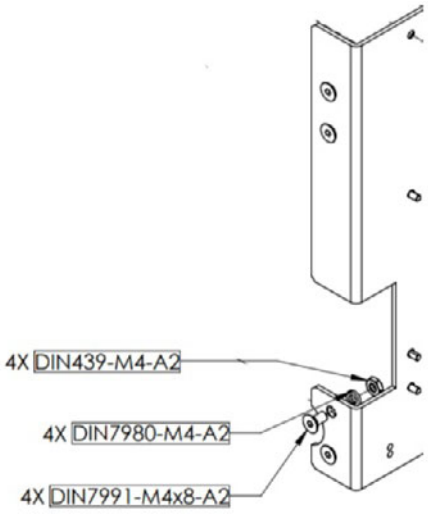
   a. The unit is mounted using the following supplied items:

      8 screws (DIN7991-M4X8-A2)

      8 bolts

      Washers (M4)

      4 in each side



   b. Mount the screws from the inside of the back door, two at the bottom and two at the top, four on each side. Secure with washer and bolt.

c. Insert the jack connector from the control cable (TC04058) and power cord.

4. Close the back door and secure with the pre-mounted screws.
5. Power on the unit.
6. Update settings.ini.
7. Under the meadiapath section, enable the vac unit by setting vacinst to 1.

```
;Enable Vacuum unit
vacinst=1
```

8. Restart the unit.

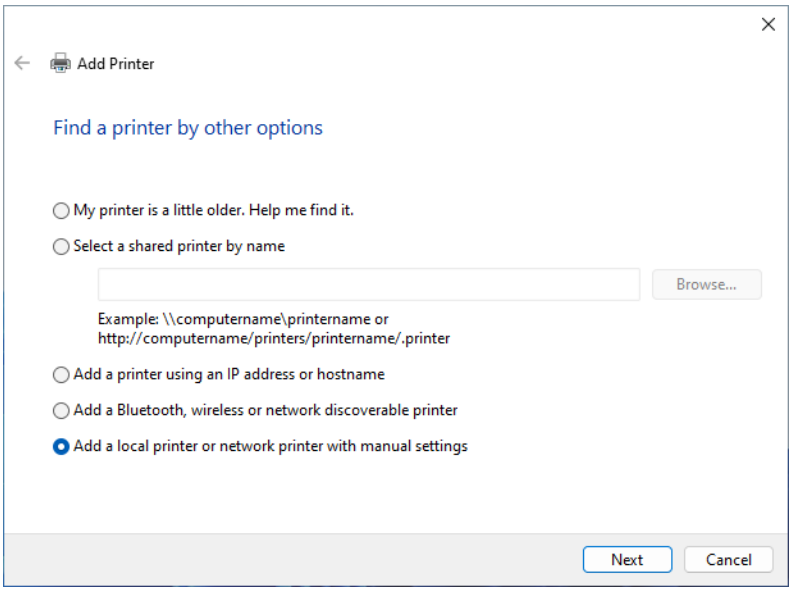
Installing the Printer Driver

The printer driver software allows your computer to communicate with the printer. Use the following instructions to install the printer driver.

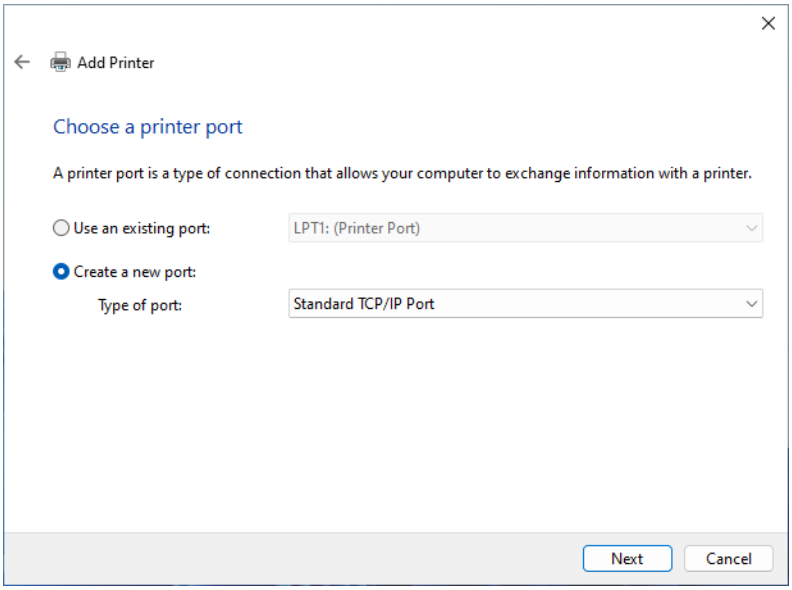
Note: *Installation details may vary depending on your version of Windows.*

1. The driver files are provided in a zip file. Unzip the driver files to a temporary location on your PC.
2. In Windows, choose the **Search** icon on the taskbar. Type “Printers” in the search box. Then choose **Printers & scanners** from the search results.
   - In Windows 11, next to **Add a printer or scanner**, choose **Add device**. When **The printer that I want isn’t listed** appears, choose **Add manually**.
   - In Windows 10, choose **Add a printer or scanner**. When **The printer that I want isn’t listed** appears, choose that option.

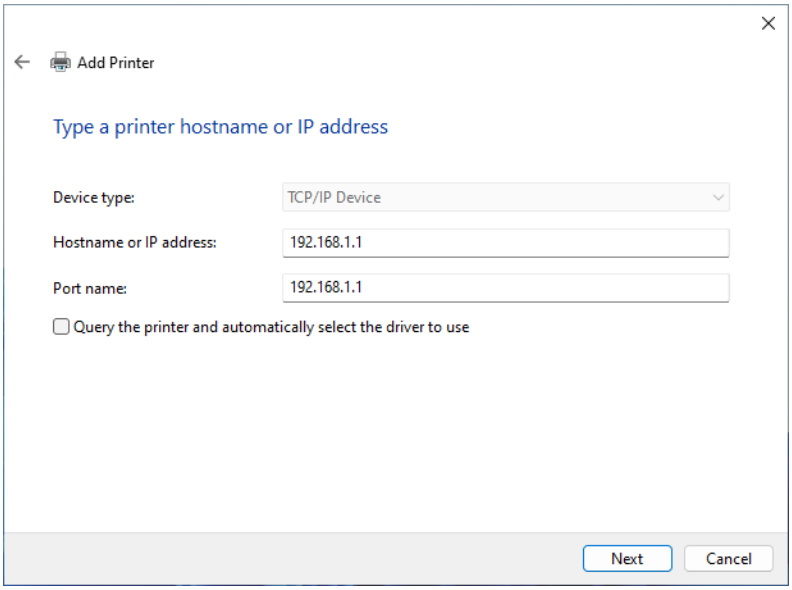
3. In the next screen, select **Add a local or network printer with manual settings**. Then select **Next**.



4. In the next screen, select **Create a new port**. Select **Standard TCP/IP Port** from the list. Then select **Next**.

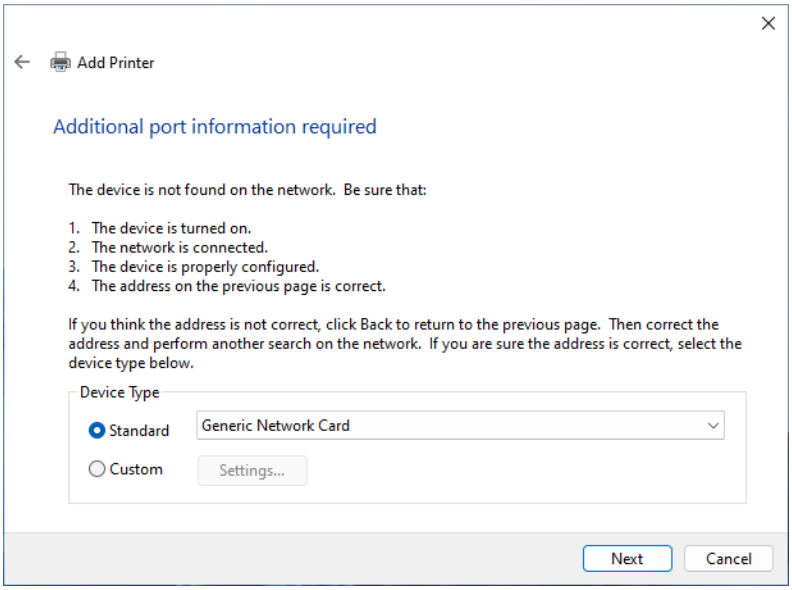


5. In the next screen, enter the **IP address** of the printer. Leave the **Port name** as automatically created. Make sure the **Query the printer...** option is deselected. Then select **Next**.



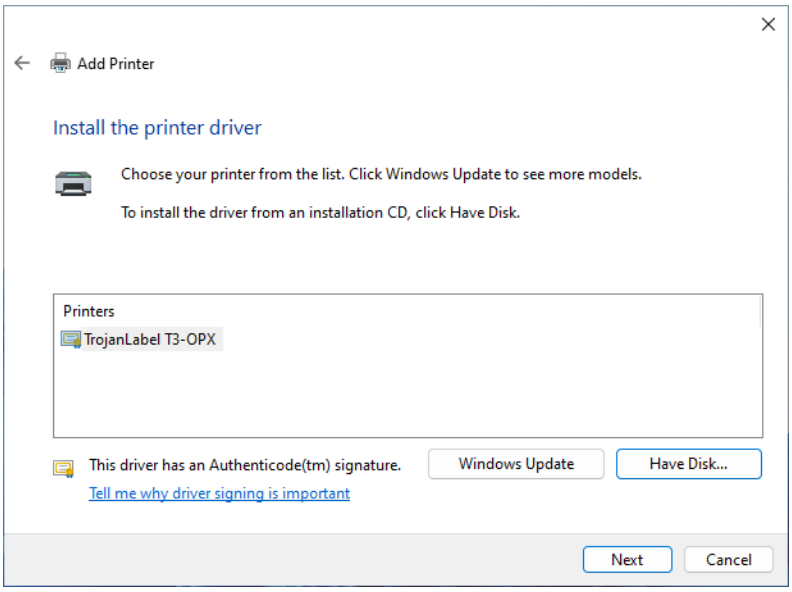
Windows will detect the TCP/IP port. Windows will then prompt you for additional port information.

6. Select **Standard** device type and **Generic Network Card**. Then select **Next**.



7. In the next screen, select **Have Disk**. Then browse to and select the *.inf file for the driver.

8. In the next screen, select the **TrojanLabel T3-OPX** printer model. Then select **Next**.



9. In the next screen, enter the name of the printer as it will appear in Windows. Then select **Next**.

10. In the next screen, choose whether to share the printer on the network. Then select **Next**.

    Windows will finish installing the driver. The printer will be ready to use when the installation is complete.

11. By default, port number 9100 will be assigned. If necessary, you can change the port number to control Job Library printing. *See "Changing the Port Number" on page 40.*

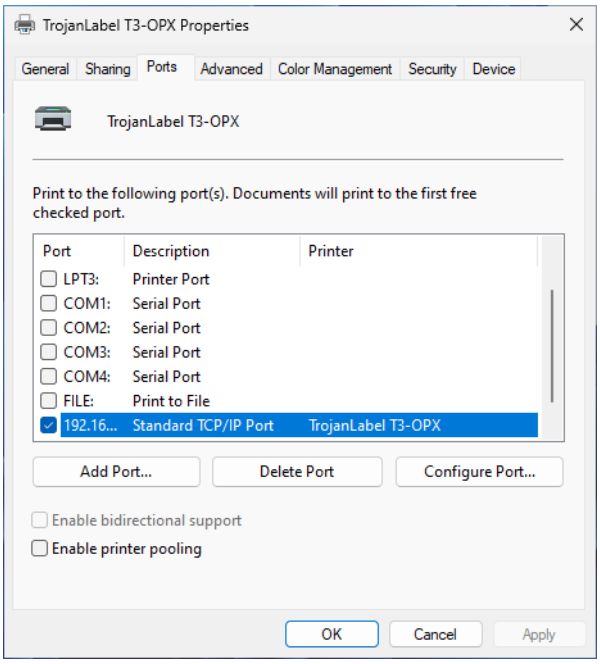
Changing the Port Number

By default, port number 9100 will be assigned. If necessary, you can change the port number to control Job Library printing. The following options are supported.

- Printing jobs and storing them in the T3-OPX Job Library.
- Storing jobs in the T3-OPX Job Library without printing them.

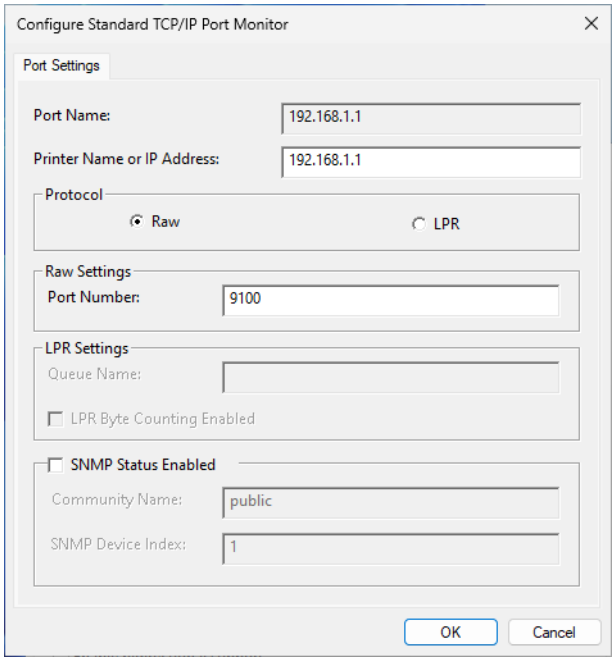
1. In Windows, choose the **Search** icon on the taskbar. Type "Printers" in the search box. Then choose **Printers & scanners** from the search results. Select the **TrojanLabel T3-OPX** printer.
    - In Windows 11, choose **Printer Properties**.
    - In Windows 10, choose **Manage** and then **Printer Properties**.

2. Select the **Ports** tab in the TrojanLabel T3-OPX Properties window.



Select **Configure Port**.

3. On the next screen, you can set the port number to the following options.
   - **9100** - Directly prints the job and stores it to the T3-OPX Job Library.
   - **9106** - Stores the job to the T3-OPX Job Library only.

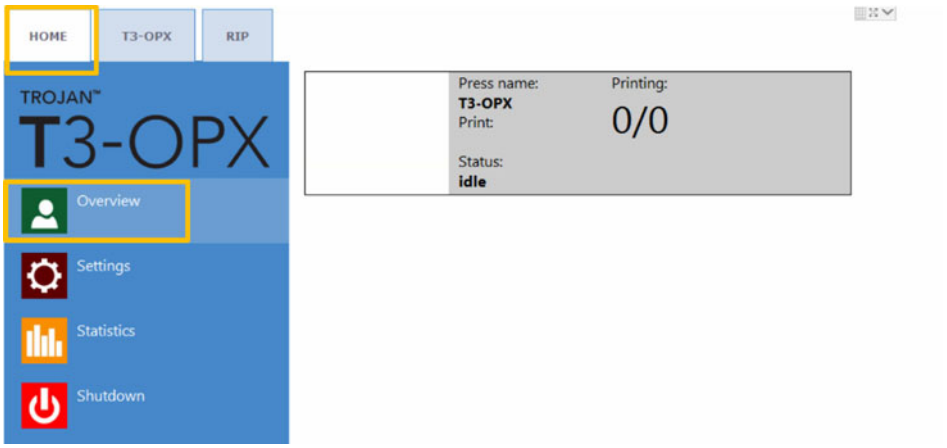


Select **OK** to save any changes to the port number. Close any remaining screens.

4 General settings (HOME tab)

Overview menu

Information from currently printed job, including:



- Preview image of the label which is being printed at the moment
- Label counter
- Name of the print job in the Job Library

Settings menu

- **Service ID:** A unique ID for each T3-OPX press. Based on the service ID, the Trojan-Label support team can access the Trojan Control remotely via the Internet and provide technical support.
- **Actual software version:** Version number of the Trojan Control interface (GUI) currently running on the machine.
- TrojanLabel technicians or the local TrojanLabel distributor fills out the owner and distributor contact information field at installation. This field is not editable for end users.

Consumables button

- **Ink cartridge price (K)** Insert price of one black (K) cartridge in local currency. This is used for ink cost calculation.

  Note: *The ink price displayed in the above screen is for illustration only.*

- **Ink cartridge price (CMY)** Insert price of one CMY (they are priced identically) cartridge in local currency. This is used for ink cost calculation.

  Note: *The ink price displayed in the above screen is for illustration only.*

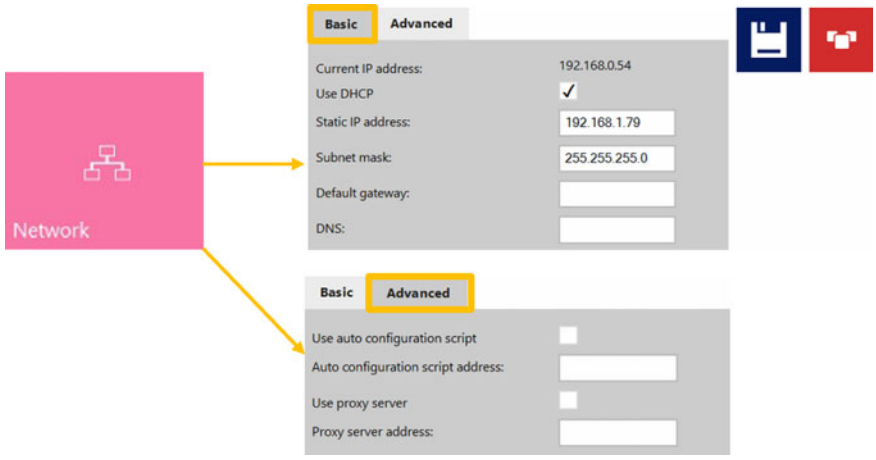
- **Print unit price** when entered is also included in cost calculation in statistics menu.
- **Printhead life time** is theoretical value given in milliliters, which is used in combination with the Print unit price, to calculate the wear cost of the print unit for the particular job. The value entered here represents the printed ink volume until a planned printhead change.

  An expected amortization is also calculated with the cost/label calculation.

- **Currency** Insert the currency of the above costs. This is for display only, no conversions are made based on the input.

Important: *Press the blue Save button to apply the changes.*

Network button



- Select **Use DHCP** checkbox to acquire IP address for the T3-OPX from the local network (as long as DHCP mode is selected, the T3-OPX ignores any static IP settings).
- **Current IP address** field displays the current IP address of the T3-OPX on the local network.
- Uncheck **Use DHCP** checkbox when local network policy recommends using static IP address.
- **Red button: Restart Trojan Control and Print Engine** button is for re-initializing the software and also restarting the print engine.

  Note: *Use only if user interface becomes unresponsive to restart print engine and software.*
- **Advanced tab:** enables usage of Auto configuration scripts or Proxy Server whenever the local network policy requires these for network/Internet connection.

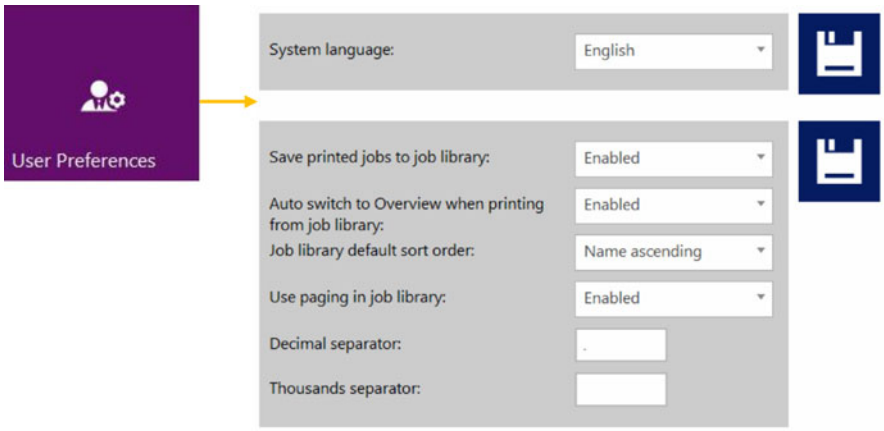
Important: *Press the blue Save button to apply the changes.*

Updater button

- By default for system updates the **Alternative update URL** field has to be empty.
- Press green **Download** button to download updates if available.

Important: *Press the blue Save button to apply the changes.*

User Preferences button



- **System language:** Select the desired language from the list.

  Press blue Save button next to scroll-down menu to apply selected language.
- **Save printed jobs to job library:**

  Enabled: The print job is stored and available for reprinting from the job library.

  Disabled: The print jobs sent after disabling this option are not stored in the job library, however jobs that already are in the library will remain and be available for printing.
- **Auto switch to Overview when printing from job library:**

  Enabled: When printing from the job library the screen switches to overview mode.

  Disabled: When printing from the job library the screen remains in job library view.

- **Use paging in job library:**

  Enabled: Enables paging with finger swipe and with scroll bar in Job Library.

  Disabled: Disables swiping and scroll bar in Job Library.

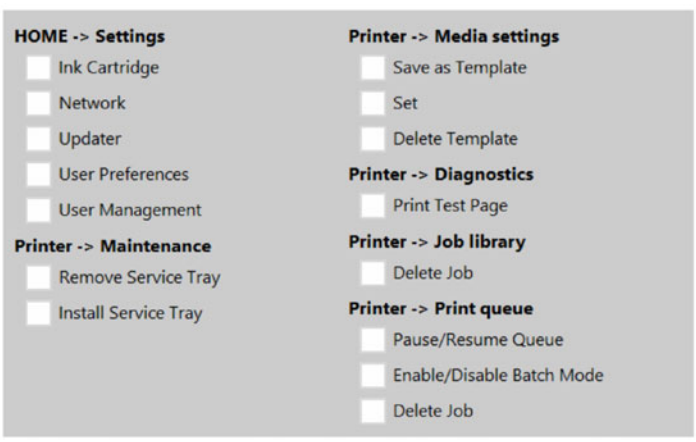
- **Decimal separator:** User can define separator for displaying decimals in the user interface.
- **Thousands separator:** User can define separator for displaying thousands in the user interface.

User Management button

- By default user management is not enabled, therefore every function of the T3-OPX is accessible without user authentication.
- **Enable user management checkbox:** When selected and activated, then user authentication is required for accessing specific functions in TrojanControl software. A user with 'User Management' rights (like the built in 'admin' user) can

create user accounts and can assign rights for each user to access certain functions in Trojan Control software.

Icon	Description
	Add new user
	Save new user settings / save changes in existing user account
	Delete user from list

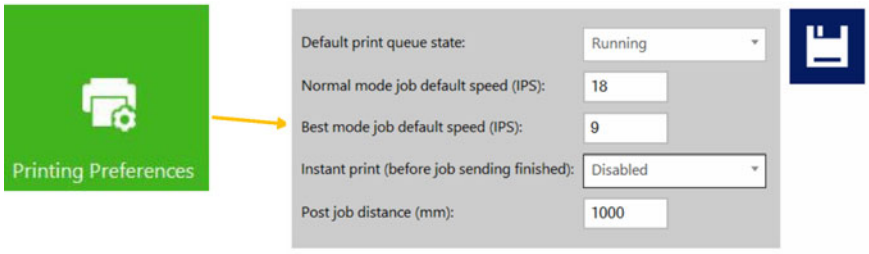


Important: *The default password for the* ***admin*** *user is* ***123****.*

Note: *Passwords can only contain numbers.*

Warning: Do not lock yourself out! *At least one user must have* ***User Management*** *rights otherwise there is no way to add or change properties of other users. If you end up locked out please contact TrojanLabel support who can restore the default user settings.*

Printing Preferences button



- **Default print queue state:**

  Running: (Default) Print jobs are queued progressively as they are sent and processed in FIFO (first in first out) system. The queue can be managed from the Print queue menu.

  Paused: The print queue is paused when machine starts.

- **Normal mode job default speed (IPS):** defines the default speed of jobs transferred with the normal mode setting (usually 300 dpi)
- **Best mode job default speed (IPS):** defines the default speed of jobs transferred with the best mode setting (usually 600dpi)

  Note: *IPS = Inches per Second.*

- **Instant print (before job sending finished):**

  Disabled: (Default) The printer must fully receive job data prior to starting printing.

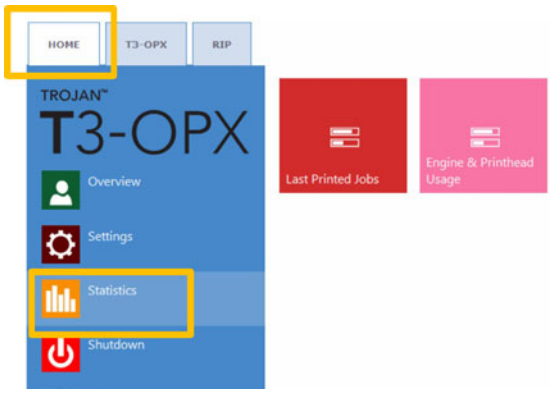
  Enabled: The printer will start printing as soon as sufficient job data is received.

  Data starvation is a condition where jobs are being printed faster than they can be received by the printer. At times, the printer does not have any data to print. If this occurs, the job will be canceled. Reducing the print speed will help prevent data starvation.

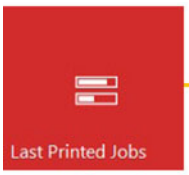
  Print jobs cannot be sent directly to the job library when instant print is enabled. Once an instant print job completes successfully, the job will be added to the job library.

- **Post Job Distance (mm):** The table will advance this distance after a job has ended.

Statistics menu



Last Printed Jobs button

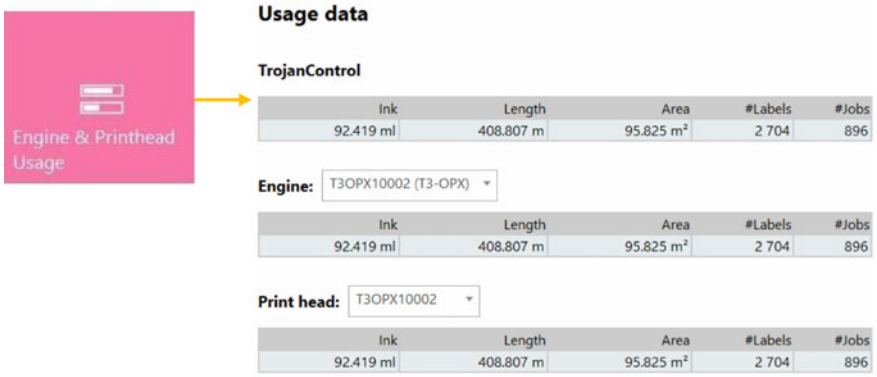


Job ID/Name	Pages	Mode	Printed Ink (nL)	Cost/label (ink)	Cost/label (ink + PH)	Cost/label (ink + PH + media)
20150427_081659_10	10	Best(6IPS)	1 262 000	0.0480€*	0.0480€*	0.0739€*
20150425_121817_6	1	Normal(12IPS)	39 000	0.0148€	0.0148€	0.0248€
20150425_121806_5	1	Normal(12IPS)	21 000	0.0080€	0.0080€	0.0179€
SILOIL	1	Best(6IPS)	11 000	0.0042€	0.0042€	0.0103€
20150427_081927_16	1	Best(6IPS)	60 000	0.0228€	0.0228€	0.0526€
20150427_081833_14	1	Best(6IPS)	55 000	0.0209€	0.0209€	0.0398€
20150427_081817_13	1	Best(6IPS)	135 000	0.0513€	0.0513€	0.0741€
20150427_081759_12	1	Best(6IPS)	46 000	0.0175€	0.0175€	0.0255€
20150427_081735_11	1	Best(6IPS)	89 000	0.0338€	0.0338€	0.0581€
20150427_081659_10	1	Best(6IPS)	93 000	0.0353€	0.0353€	0.0613€

- Statistics list for the last 30 printed jobs (contains: number of pages, print speed, ink consumption, ink cost/label calculation, ink + printhead cost/label, ink + media + printhead cost/label calculation).
- **Cost/label (ink only) calculation** is the cost/1 label in the actual print job based on ink tank price given at **HOME > Settings > Consumables** menu.
- **Cost/label (ink + PH) calculation** is the cost/1 label in the actual print job based on ink tank price and printhead price given at **HOME > Settings > Consumables** menu. Print head cost is added.
- **Cost/label (ink + PH + media) calculation** is the cost/1 label in the actual print job based on ink tank price and printhead price given at **HOME > Settings > Consumables** menu and in addition media price given at **T3-OPX tab > Media settings** menu.
- **Job ID/Name** is the name of the actual print job in the job library (unique name can be specified instead of random numbers in job library).

Note: *Prices marked by * contain estimated cost of maintenances as well (pre-, mid-, post job maintenance). Prices without * mark are pure printing cost of 1 label without maintenance cost added (for printing samples without maintenance).*

Engine & Printhead Usage button



- **TrojanControl:** Total statistics for the T3-OPX for ink usage, printed length, printed area, number of labels and printed jobs.
- **Engine:** Total statistics and history for print engine(s). If there is a print engine replacement, all serial numbers will be registered and statistics for each print engine can be compared.

- **Print head:** Total statistics and history for all the printheads which have been inserted into the T3-OPX. All print unit serial numbers will be registered and statistics for each printhead can be compared.

  Note: *A printhead must print at least 1 page to be able to register the usage statistics. A freshly installed printhead that has not printed any pages is displayed as an empty record.*

  Note: *Printhead usage data is the total usage in the particular T3-OPXs. Does not include usage history from usage data on other T3-OPX presses if the particular printhead has been used in multiple machines.*

Shutdown

- Shuts down the T3-OPX completely.

  When shutting down the unit it is advised to wait with turning the power switch off until the shutdown process is finished. There is a message on the display when the shutdown process is initiated to indicate that the shutdown process is still going on.

  When shutdown process is finished (the screen turns blank) it is advised to turn the physical power switch off. The power switch is located at the back of the T3-OPX press.

Caution: *Always wait until the shutdown process finishes before shutting down the power supply! Otherwise the Maintenance Module inside the machine might end up in the wrong position and cannot protect the printhead from dehydration. Dehydration of nozzles in the printhead may result in print quality defects. Shutdown process may take 1-2 minutes.*

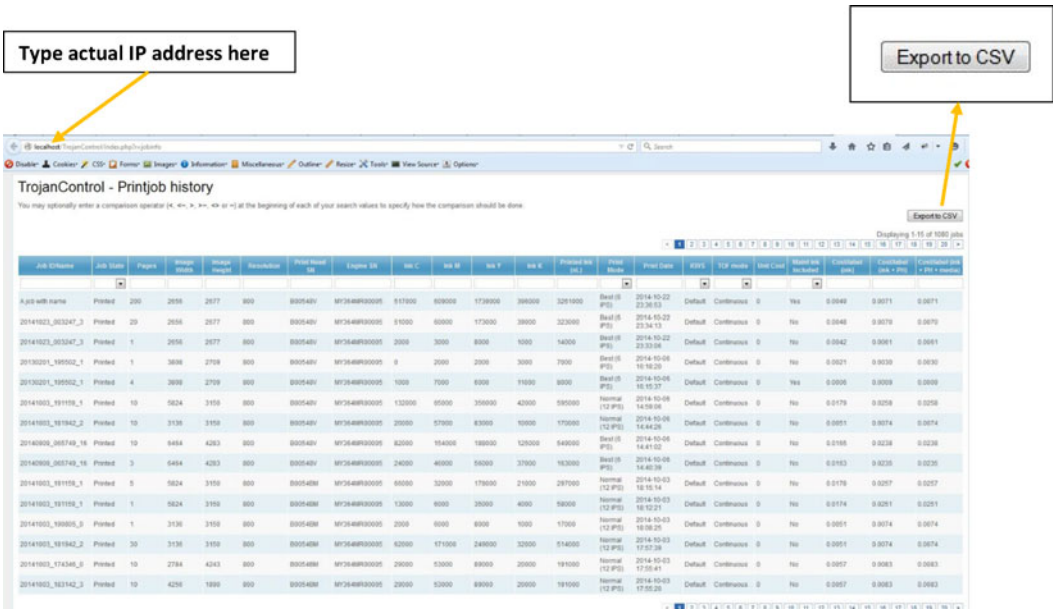
Exporting statistics data to a CSV file / viewing statistics from a browser

Statistics data from **HOME > Statistics** menu can be exported and saved into a CSV file from a user PC which is connected to the same network as the T3-OPX.

- Actual IP address of the T3-OPX can be set or acquired from **HOME > Settings > Network** menu.

Note: *The IP address shown above is an example only. The actual IP address is local network dependent.*

- Type the actual IP address of the T3-OPX into a browser at a user PC:



- Press **Export to CSV** button on page to save the statistics into a CSV file.

Job ID/Name	Job State	Pages	Image Width	Image Height	Resolution	Print Head SN	Engine SN	Ink C	Ink M	Ink Y	Ink K
A job with name	Printed	200	2656	2677	800	B00548V	MY364MR00005	517000	609000	1739000	396000
20141023_003247_3	Printed	20	2656	2677	800	B00548V	MY364MR00005	51000	60000	173000	39000
20141023_003247_3	Printed	1	2656	2677	800	B00548V	MY364MR00005	2000	3000	8000	1000
20130201_195502_1	Printed	1	3808	2709	800	B00548V	MY364MR00005	0	2000	2000	3000
20130201_195502_1	Printed	4	3808	2709	800	B00548V	MY364MR00005	1000	7000	6000	11000

Note: *Ink consumption is more detailed in this view and displayed for each used base color (CMYK) and in total as well.*

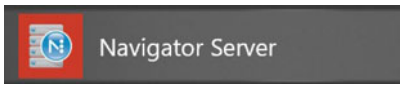
5 Transferring print jobs to the T3-OPX using the Xitron RIP

Starting the Xitron RIP server

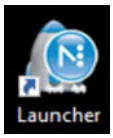
To transfer jobs using the Xitron RIP it is required that the RIP server is running. Note the server does not have to run on the same PC as the client.

This can be done two ways on the RIP server PC:

1. Click the Windows start menu, open Navigator, then click **Navigator Server**.



2. Double click **Launcher** on the desktop.



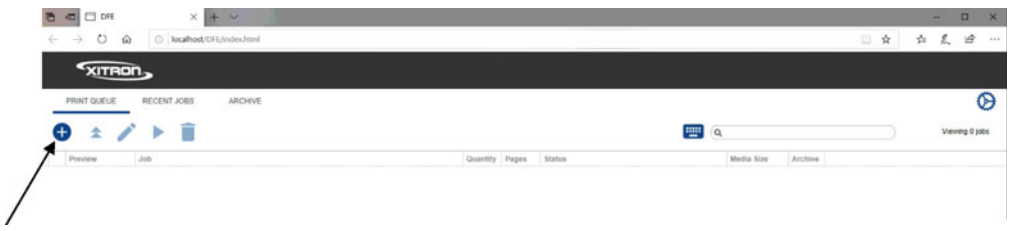
Transferring a job from the web client

The recommended browser is Google Chrome.

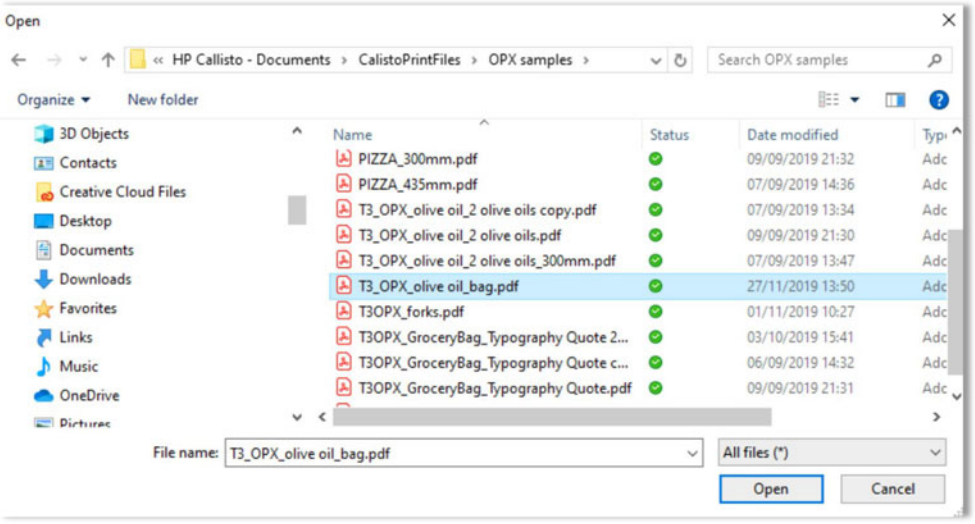
1. Start the Navigator Digital Front End (DFE).
   a. Click the Windows start menu, open Navigator, then click **DFE**.

   b. Double click **DFE** on the desktop.

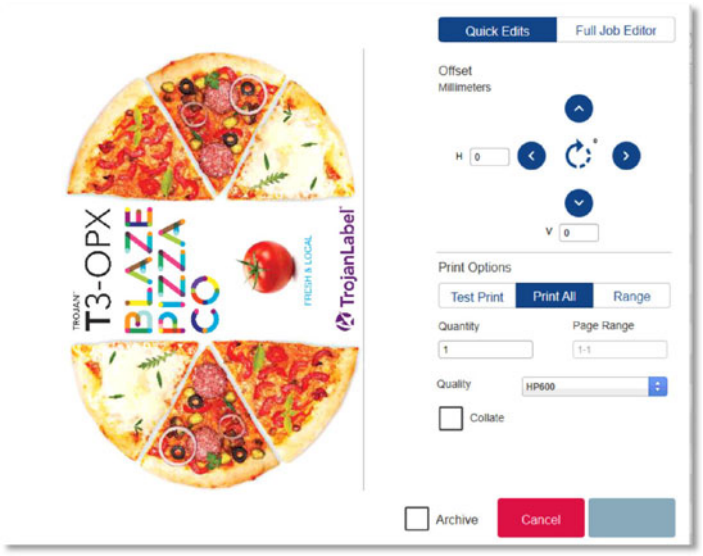
2. Locate and press the **add job** button on the web interface.



3. Navigate to your file in the pop-up window.

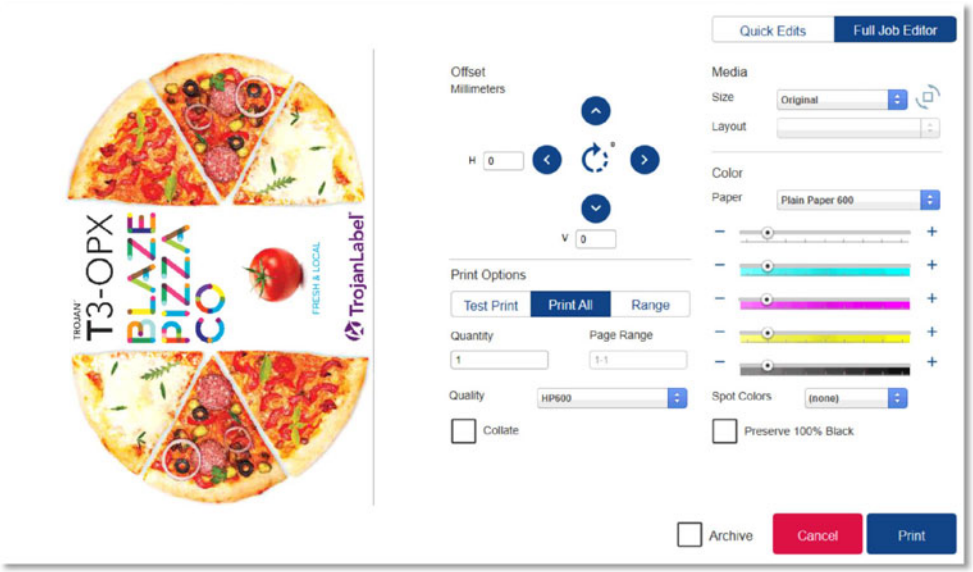


4. Select your file, then select the OPEN button. After the file is uploaded the QUICK EDITS screen is opened. In this screen you can make various changes such as rotations, print range, collation, etc.



You can also select the FULL JOB EDITOR at the top right.

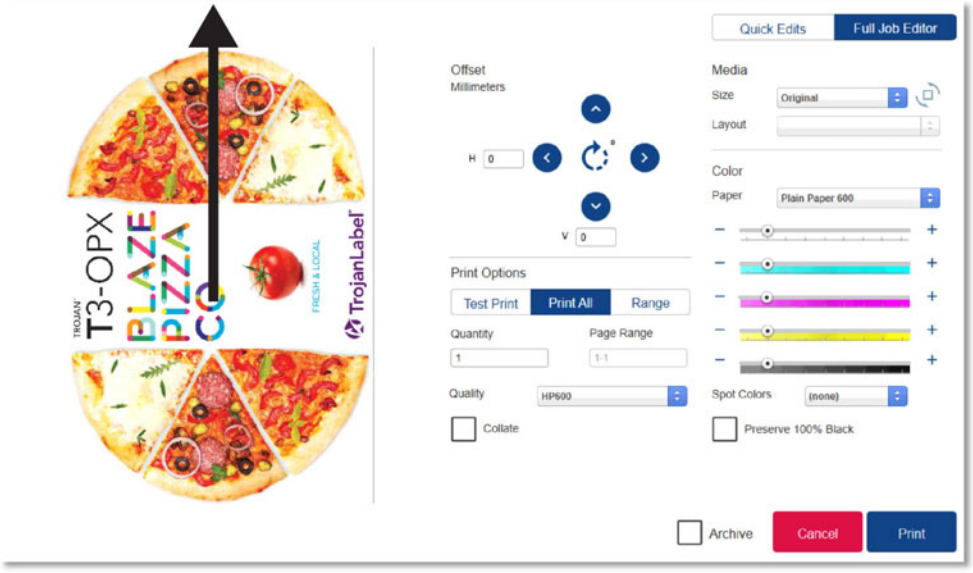
5. In the Full Job Editor screen you can do the same changes as the QUICK JOB EDITOR as well as changing the Paper Profile, Overall Color Changes and Spot Color Adjustments. When you have made any necessary changes, select **Print** and your file will be sent to the printer.



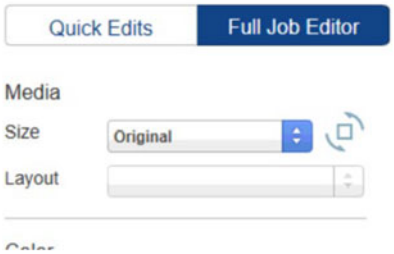
6. Press **Print** to send the job to job library on the T3-OPX.

Print direction

The print direction is up, and the top edge will be printed first:



Media size

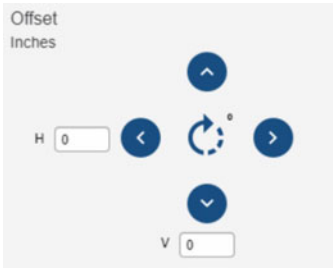


To use the offsetting (moving) and rotation, it is important that the Media size is adjusted to fit the new dimensions.

When a job is loaded the media size will automatically be set the dimension of the job, including any white space. This is indicated by the size being set to “Original”.

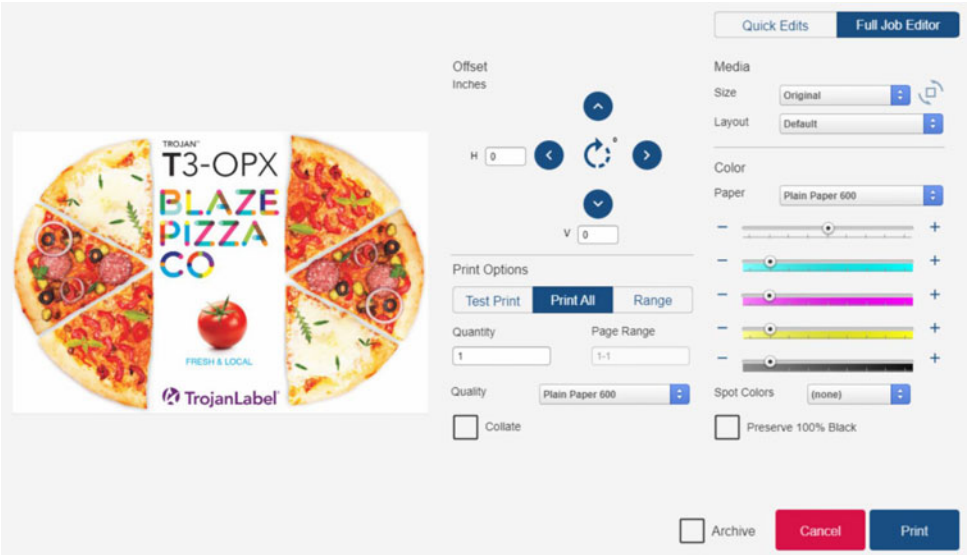
It is easy to see if an image needs a new media size when rotating or offsetting, as the image will be truncated if it doesn't fit.

Rotation



Rotation is done using the rotation button in the center of the controls.

Below is an example of the pizza artwork being rotated. If settings are set to original rotation will be possible without having to modify the media size.



Offsetting

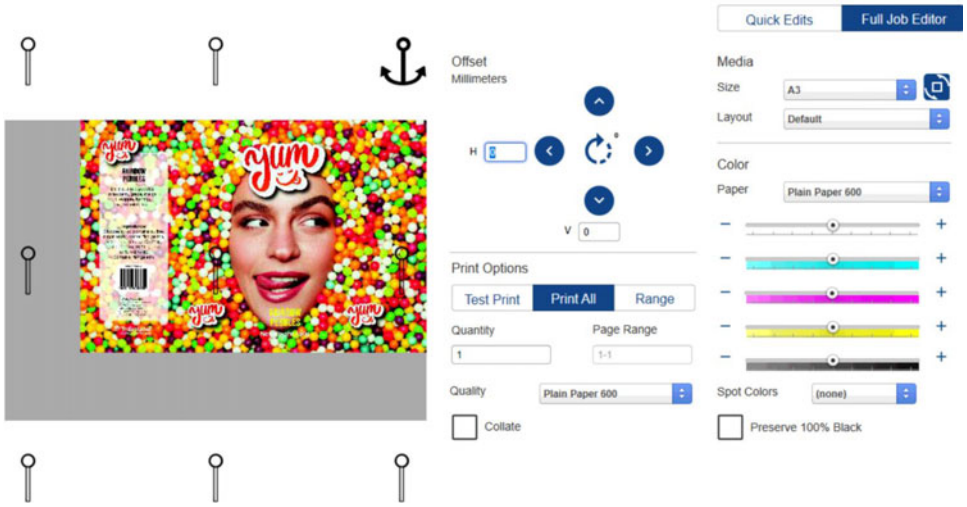
A print job is per definition centered, so you need to move the artwork using the offset buttons and adjusting the “media size” to fit it differently. Alternatively align the media differently.

Use the buttons to offset the artwork, the units (inches or mm) are decided by the locale of the PC. This is managed in the language settings of the PC.

It is not possible to use the offset button to move the media, without adjusting the media size too. Unless you just want to truncate the artwork, as this is what effectively will do.

To move an image to the far right:

1. Select A3 as Media size.
2. Use the rotate button, for landscape.
3. Click on the image to activate the anchor points.
4. Click the top right to place it.



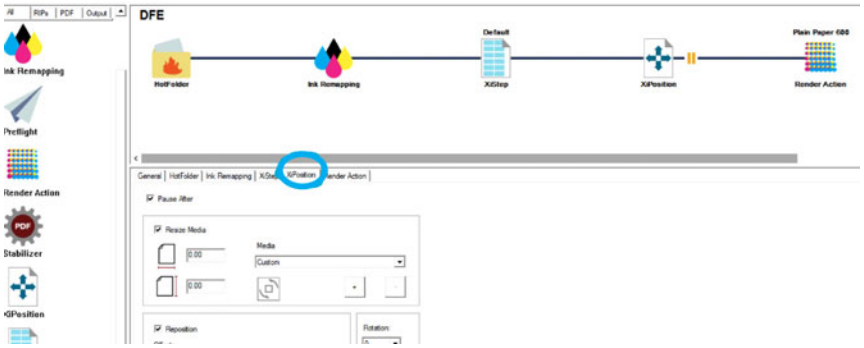
If the standard Media Sizes are not fit for the artwork, then create a custom media size.

Creating custom media sizes

1. Close the DFE browser.
2. To create a custom media size, open the Navigator client. it is placed on the Navigator folder in the Windows start menu.

3. Right click the DFE workflow (it should be the only one), and select **Edit Workflow**.
4. Go to the XiPosition (blue circle).
5. Set the width and height.

6. Click + button and give the Media size a new name.

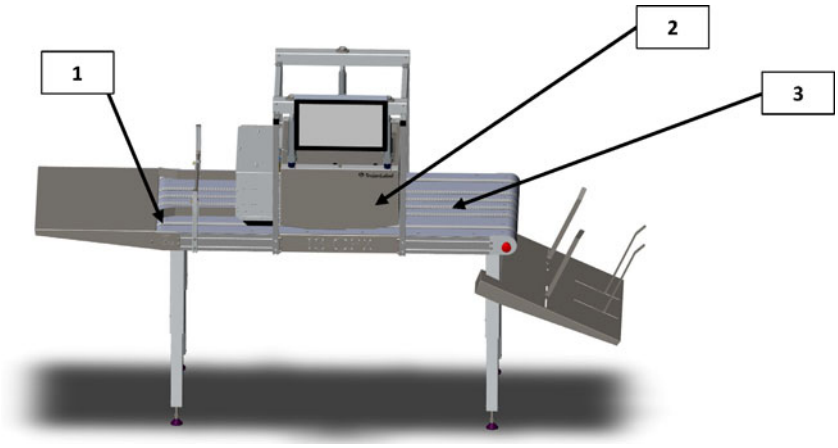


7. Open the DFE in the browser again
8. Select the new Media in the size drop down.

6 Printing a job from the Job Library

The two most common menus that the operator will use when printing jobs:

Job Library and Media Settings. *See "Media settings overview" on page 67.*



#	Description
1	Feeding side
2	Print unit
3	Exit side

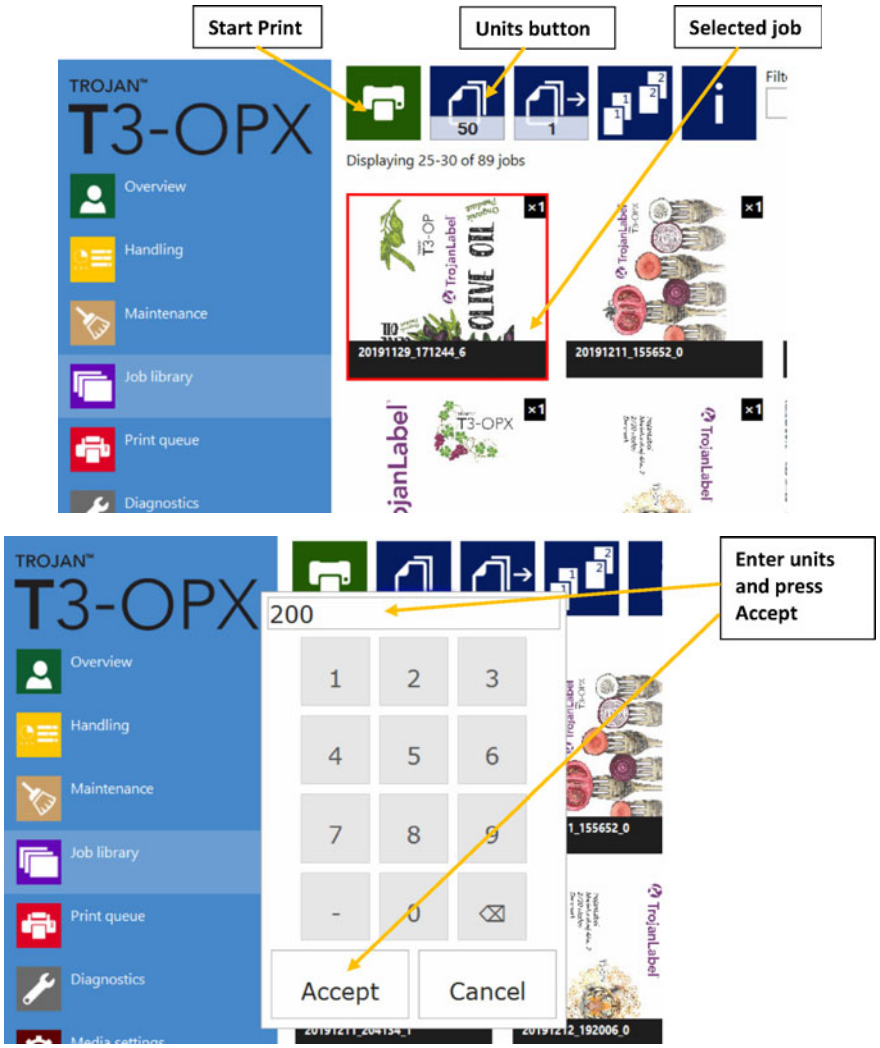
Note: *All jobs are centered by default. Use the RIP to move the print or position the media accordingly.*

1. Select or create the **media profile** in menu: media settings. *See "Automatically calibrating the job/media height" on page 72.*

   This will ensure that the job has the correct print height relative to the media and edge sensor is set.

2. Place the media to print on the **feeding side** (see above) of the print unit.
3. Go to the **Job Library**.
4. Select the print job (indicated by a red square).

5. Enter the number of units to print, by clicking the units button.

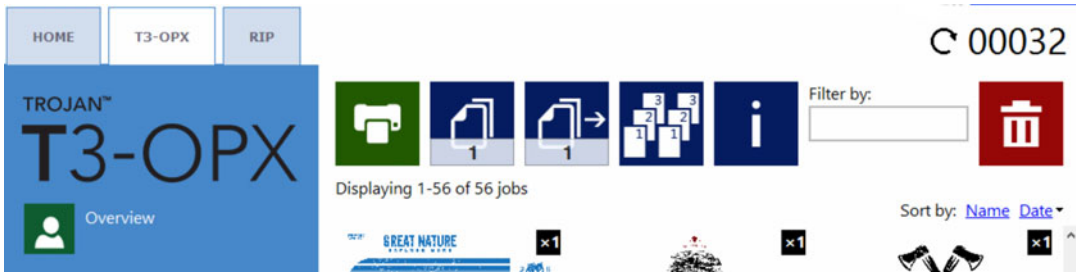


6. Press the green print button.
7. Feed the media.

7 Operation menus

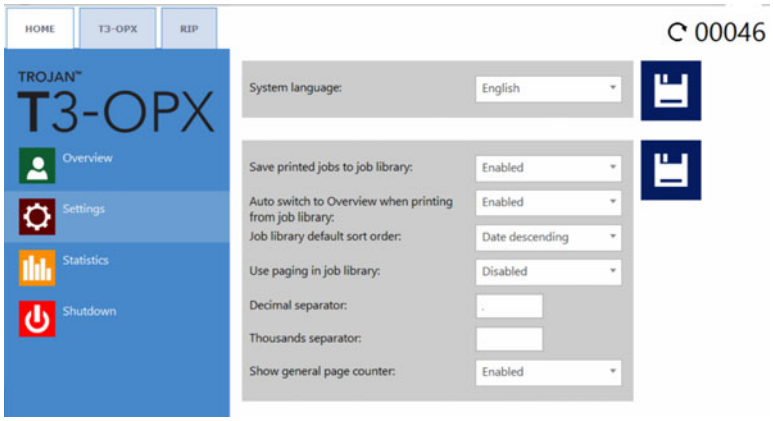
General counter

The general counter is an accumulative counter that counts each page printed for all jobs printed, until it is reset by pressing the circular button. The counter is also reset when the unit is turned off. It is not reset, if the screen goes into sleep mode.



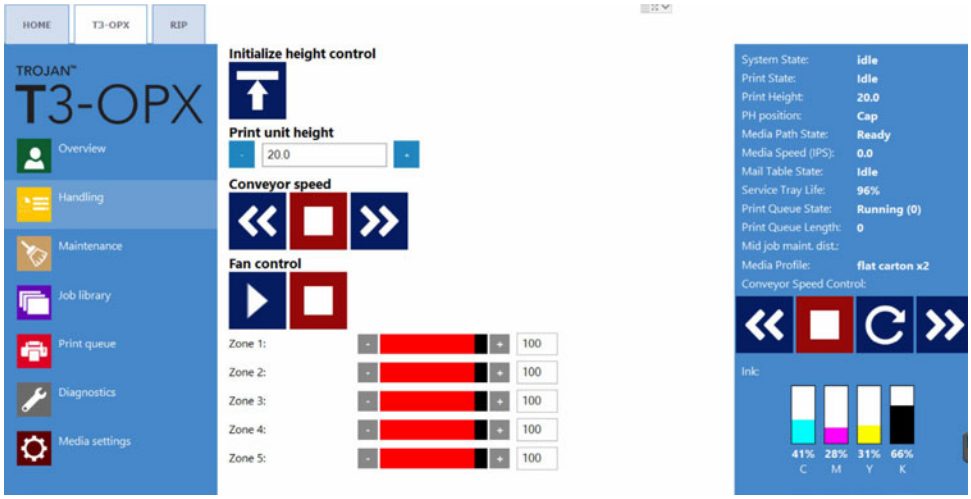
Enable/Disable the general counter

To Enable/Disable the general counter, go to the HOME tab and select **Settings > User Preferences**. Locate **Show general page counter**, then select the desired option and press save.



Handling overview

The **Handling** menu is used for moving the print unit up or down, moving the mail table and adjusting/testing the vacuum fans when printing.



Initialize height control

Press the button for the unit to initialize the height controllers. When the unit is powered on the initial **Media Path State** status will be “Uncalibrated” and the unit can not move up or down.

When pressing the button the height controllers will move to the top position and the Media path state will change to “Ready”.

Print unit height

Use the -/+ buttons to move the unit up or down on increments of 0.2 mm.

Enter a value and the unit will move to the position.

Conveyor speed (MT1 and MT2 controls)

Icon	Description
	Moves the table belts forward. Each push will increase the speed by 1 IPS (please note that there will be some latency, so rapid consecutive presses will not be registered).
	Moves the table belts backward. Each push will increase the speed by 1 IPS (please note that there will be some latency, so rapid consecutive presses will not be registered).
	Stops the belts.

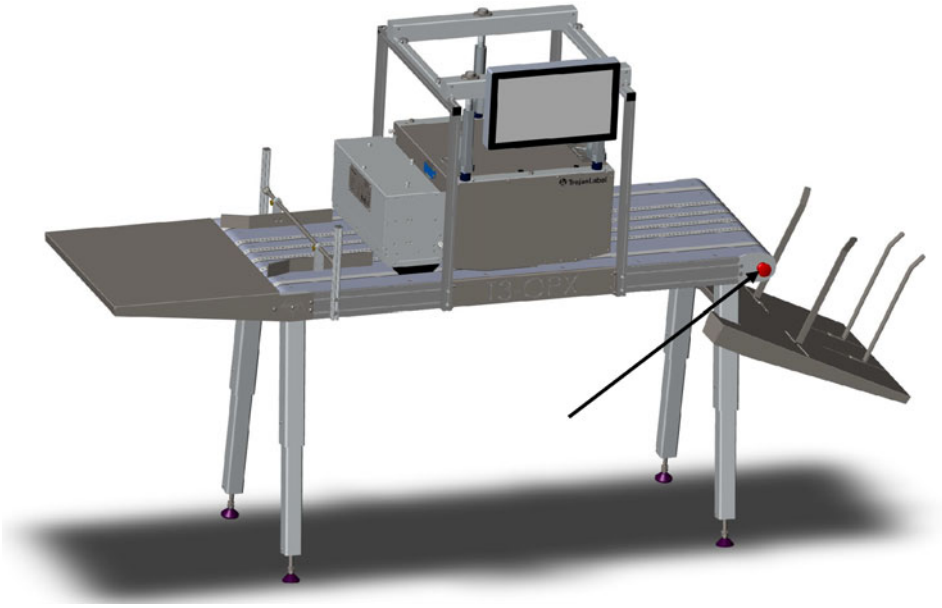
Fan control (MT1 and MT2 controls)

Icon	Description
	Use the start button to test the fans.
	Use the stop button to stop the fans.

Use the Zone (1-5) controls to individually set the fan speed from 0 to 100.

Physical emergency stop button

The emergency stop placement on the mail table:



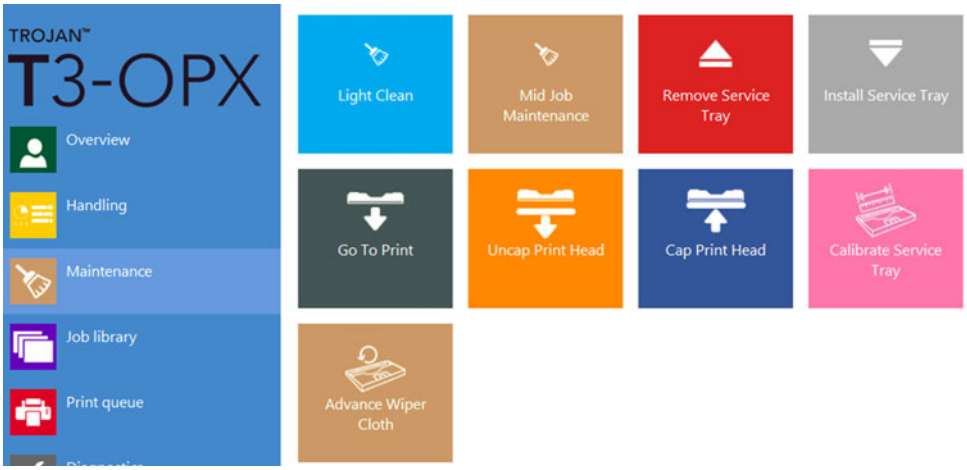
Pressing the emergency stop button will:

- Stop the table
- Stop the height controllers

The emergency stop can be released by twisting the emergency stop button.

Maintenance overview

The maintenance menu controls the printhead maintenance functions, which include cleaning, replacing the service tray, testing print position, and printhead capping.



Light Clean

The **Light Clean** option will make a quick wipe of the printhead and activate the nozzles by spitting. This is useful if dust or aerosol has accumulated on the nozzle area of the printhead during print.

Mid Job Clean (Recommended first option for cleaning)

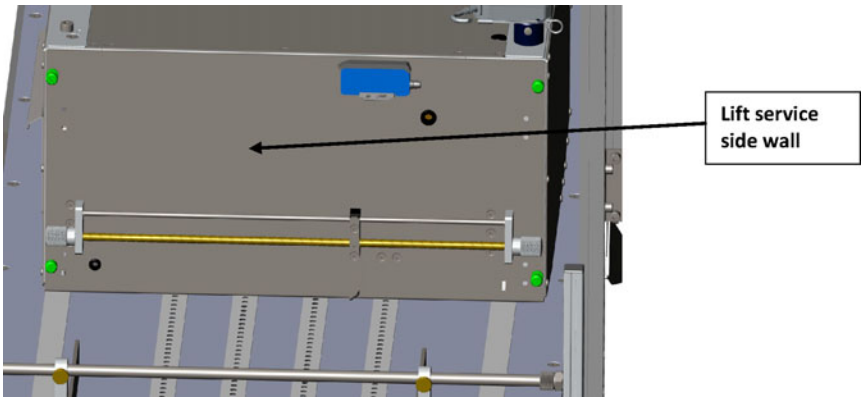
The **Mid Job Clean** option will make a cleaning that is exactly the same as the mid job cleaning under production.

Remove Service Tray

Remove service tray is used to replace the service tray when the whole wiper cloth has been used. This is indicated when the **Service Tray Life** (in the status column) reaches 0%.

Important: *Before pressing the button, open the service side of the unit by removing the 4 finger screws (indicated by green) and lifting it up.*

If the Vacuum unit is installed, this can be left on, as the gas dampers can hold the weight of the VAC unit.



Press the **Remove service tray** button and wait for the service tray to retract. Pull out the service tray and replace it with a fresh tray.

Notice the printhead will be uncapped during this process, so have the replacement tray ready before starting this process.

Install Service Tray

When the service tray is re-inserted, press **Install service tray**. The service tray will move into position and cap the printhead. The **Service tray life** status should be 99-100% for a new tray.

Go to Print

Pressing this button will uncap and move the printhead into the print position, directly over the crash plate. Use this function if you suspect that the printhead is not lining up directly over the crash plate. It is important that the print position is over the crash plate, as this ensures that the printhead is as close to the media as possible.

Uncap Print Head

This function will retract the service tray and expose the printhead. This can be useful if you want to manually wipe the printhead. The printhead will be uncapped for 60 seconds and then automatically capped again.

Important: *Only use a clean lint-free cloth and DI water. Wipe gently across the surface.*

Cap Print Head

This function will cap the printhead by moving the service tray back in to the idle position.

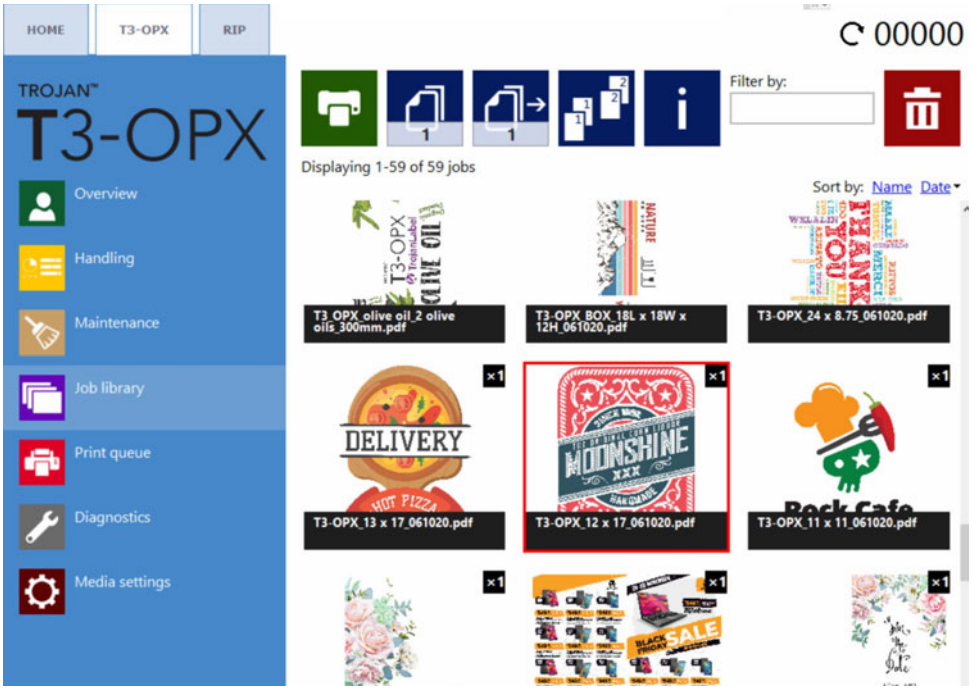
Calibrate Service Tray

Press **Calibrate Service Tray** to restore service tray life to 100% (if the service tray is new).

Important: *Use only if the service tray has been replaced with a new one.*

Job Library

The Job library is where the jobs sent from the RIP are placed. The jobs are named by the RIP, which typically is the pdf filename. The job library size is limited to space of the hard drive (SSD) of the unit, typically 25-50 GB. This will allow hundreds of jobs.



A job can be selected by tapping it and the selected job is highlighted by a red square.

Page navigation

You can navigate the jobs by using the page buttons or you can swipe on the touchscreen (or use the scroll bar). The page or scroll navigation is selected at **HOME > Settings > User Preferences** menu. *See "Printing Preferences button" on page 46.*

Filter by

Use the "Filter by" text box to find one or more jobs that contains the typed letters/words. To go back to normal, simply clear the contents of the text box.

Button layout

Icon	Description
	Print selected print job.

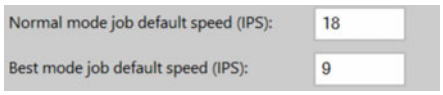
Icon	Description
	Number of copies. Note that if the job is a multi-page job then this is the number of copies of the multi-page job. For example, if the job contains 1000 pages, then this example will produce 5 x 1000 pages.
	Print from a certain page number (ONLY works for multi-page jobs). Example: A job contains 1000 pages, but the user wants to print from page 560 to 1000. The value 560 should be set for the print from certain page number field.
	Collate options. Describes how the different pages will be printed out within one print job when printing a multi-page file: 1 Copies of a page are printed one after the other within a print job. 2 Copies of pages are printed in sequential order within a print job.
	Information from selected print job.
	Deleting the selected print job.

Information display

Icon	Description
	Cost/label calculation button. Pressing this button will print the job and calculate the pure ink consumption and cost. The ink cost is based on the cartridge pricing set in **HOME > Settings > Consumables** menu and the estimated ink consumption for 1 print. Do not use for multi-page jobs, as all pages will be counted. The result will update the Costs Per Label (ink only) and Ink Consumption (ul):
	Save changes. Press the save button when name of the print job or the Custom Print Speed is set.

Custom Print speed (IPS):

Choose a different print speed than the default speed settings. The default speed is based on the resolution and the default speeds are set in **HOME > Settings > Printing preferences**.



300 dpi corresponds to Normal Mode

600 dpi corresponds to Best Mode

Important: *Printing 600dpi jobs at high speed will require larger print gaps, so this can be a problem for production.*

Print queue

Print jobs are queued progressively as they are sent and processed in a FIFO (first in first out) system. The queue can be managed from the Print queue menu.

The currently printed job in the queue cannot be deleted, this must be stopped from the **Overview** Menu.

Icon	Description
	Queue is paused, press to resume.
	Queue is running, press to pause. Note this does not pause the currently printed job.
	Information from selected print job.
	Deleting the selected print job.

- While print queue is paused, the print jobs are pending in the queue and printing only starts when the queue is resumed.
- The current print queue status (if running or paused) is also displayed always at the right side status bar.
- The number in parenthesis indicates the number of print jobs pending in the print queue.

Media settings overview

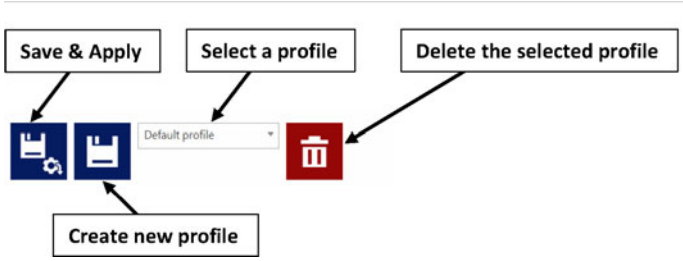
The **Media settings** menu point is the key for printing, and a profile must be actively set before printing a job. The media settings controls the print height and where the artwork is placed on the media relative to the detected edge of the media.

The Media settings has a profile control section and three tabs to manage the properties of the selected profile.

Profile control section

Media profiles are the base of a print job. The media profile is the configuration of either a print job or/and the media being printed on, such as pre-setting the height of the media and where the artwork is positioned on the media. For example the TOF (Top of form, the distance from the leading edge of the media).

Media profiles are created in the media settings and one of the most powerful features is the automatic height calibration. This section will explain how to create and manage media profiles.



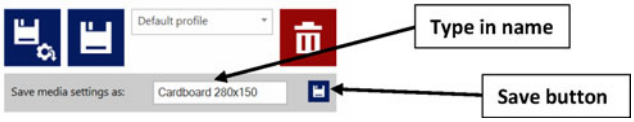
Save & Apply

Saves the properties to the current selected profile and applies the settings.

Create a new profile

Save properties to a new media profile. Type in the name of the new profile and press the small save button.

Note: *It only saves the profile. They are not applied until the apply button is saved.*



Select a profile

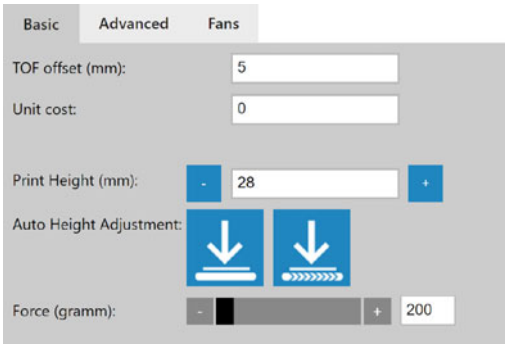
Select a media profile from the drop-down list.

Delete the selected profile

Deletes the media profile, when confirming the deletion pop up.

Basic tab

This is where the typical settings are managed.



TOF offset (mm):

Set the distance from the edge of the material (registered by the edge sensor) to the position of the printed artwork.

Unit Cost:

Cost of the media (one unit, for example a box, paper bag etc.). Currency is set in the **HOME > Consumables** menu.

Print height (mm):

Distance between the table and the printhead crash plate. Set the value in millimeters.

The print unit is not physically moved until the apply settings button is pressed

Auto height adjustment:

Caution: *The unit will move down automatically. Please remove any unwanted items from the belt.*

Important: *Center the print unit in the middle of the table for optimal Calibration results.*

The auto adjustment will use the “weight” specified in the Force setting below to apply pressure and use the force feedback to set the height. Once the height is determined, the Print height field updated. There are two options for auto height adjustment:

- Adjust height button

Start automatic height adjustment of the media placed under the pressure plate.

- Move and adjust height button

Moves the media placed on the conveyor belts on the entry side under the pressure plate, then starts the automatic height adjustment. When complete the media will be moved back to the starting position. Requirement: The entry sensor must be able to register the media.

Force (gramm):

Set the Force in grams. The value determines the lowering force of the pressure plate. Maximum force is 20.000 grams (20 kg). Typical values:

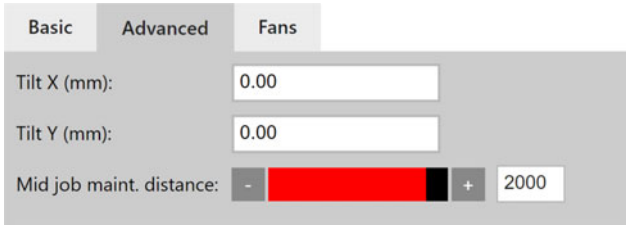
Cardboard: 1000-2000

Egg carton: 200

Bubble wrap envelopes: 500

Envelope: 1000

Advanced tab



Tilt X (mm)

Set the tilt across the printhead in millimeters (+/- 5mm). Useful if the material is slightly higher in one of the sides (bag handles for example).

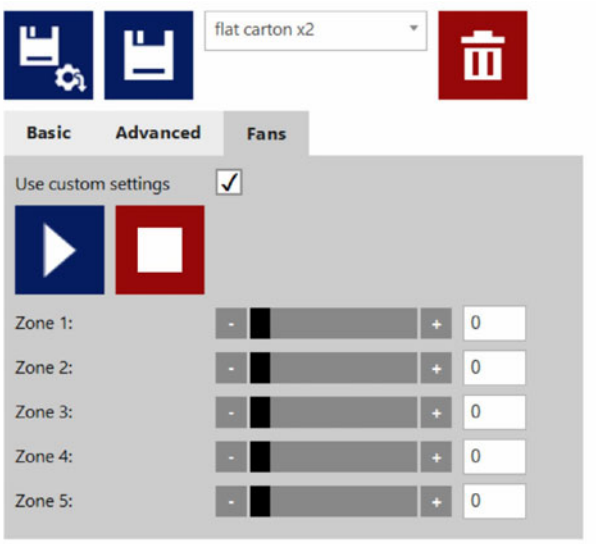
Tilt Y (mm)

Set the directional tilt in millimeters (+/- 5mm).

Mid Job maint. Distance

Set the number of units that the system will print before stopping and performing mid-job maintenance. The counter is reset after each job.

Fans tab



The general setting of the mail table vacuum fans are managed in the **Handling** menu, however these settings can be overridden by checking the **Use custom settings** box.

The start, stop, and zone controls are not visible until the **Use custom settings** box is checked. When it is checked use the start and stop button to test the fan settings in Zone 1-5. These settings are then saved to the media profile and used when printing with the profile.

Setting up a media (job) profile in media settings

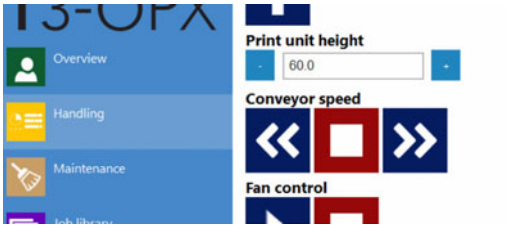
Media profiles are the base of a print job. The media profile is the configuration of either a print job or/and the media being printed on, such as pre-setting the height of the media and where the artwork is positioned on the media. For example the TOF (Top of form, the distance from the leading edge of the media).

8 Automatically calibrating the job/media height

The T3-OPX can automatically adjust the height controllers to the media that the operator wants to print on. The height can then be saved to a media profile.

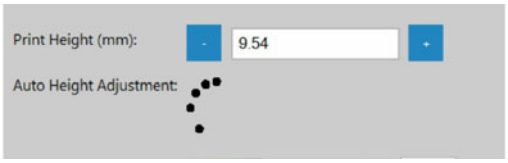
Using the fully automated height adjustment process

1. Select the media to print on.
2. Test that the media is detected by the edge sensor.
   a. Go to **Handling** and possibly adjust the **Print unit height** to ensure that the print engine is placed high enough for the media to enter the print zone under the print unit.



   b. Move the media under the edge sensor manually or by placing it on the feeding side of the belt(s) and then starting the belts.
   c. Validate that the edge sensor registers the media and it is higher than the preset threshold.
3. Place the media on the feeding side of the belt again.
4. Go to the **Basic** tab in **Media Settings**.
5. Adjust the Force to the material.
6. Start automatic height adjustment of the media by pressing the **move and adjust** button:

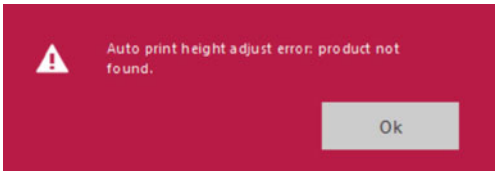
   a. The adjustment process is indicated by dots circulating instead of the buttons.



   b. The media is moved under the print engine.
   c. The height is adjusted.
   d. The media is moved back to the feeding zone.
   e. The **Print Height (mm)** is updated with the new value and adjustments buttons are visible again.

Additional information

1. The Height Controllers will move up to 20mm when pressing the **Move and Adjust Height** button if the current print height is physically less than 20mm.
2. Setting the force too high can crush the material.
3. If the edge sensor does not detect the material, then the belt will stop and return the media and display an error “Auto print height adjust error: product not found”.



9 Printing on uneven surfaces (die-to-die overlap feature)

When printing on uneven surfaces it can be useful to use the die-to-die overlap feature. This feature will enable to the operator to move the print unit further from the media.

We recommend only doing this using an existing successful scan of the nozzle alignment plot. This is indicated with the button “Use last successful scan” in the scan nozzle alignment process.

The feature will allow -8 and 7 nozzles of modification to the alignment. Positive values will push the lines together and negative values move them apart.

- Positive values should be used when white lines appear (too far from the media, which is the typical challenge).
- Negative values should be used when darker lines appear (too close to the media).

The die-to-die overlap feature allows the operator to control the die lines that are positioned with approximately 20mm separation.

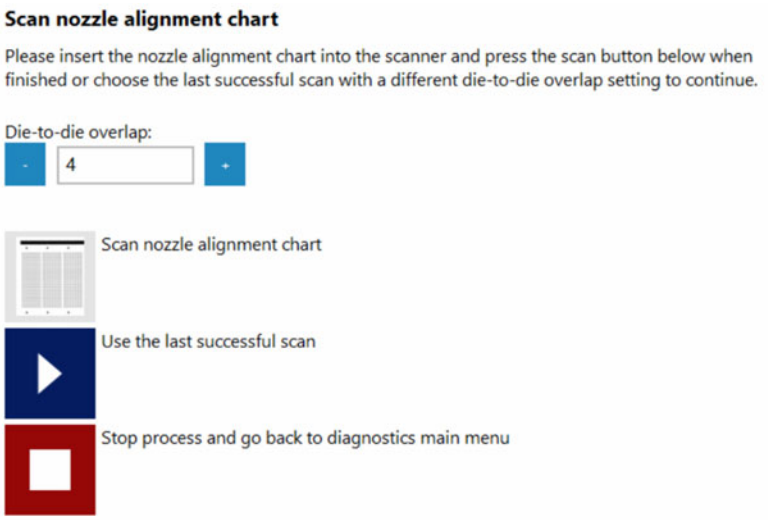
If the printhead is too far from the media the die lines will be visible as white lines. The recommendation is to get closer to the media, but if this is not possible (for example if the handles from a paper bag are interfering with the transport), then the solution could be to adjust the die-to-die overlap.

For example, a die-to-die value of 4, will typically allow a 2mm higher print height.

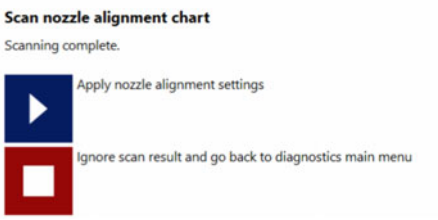
It is recommended to set the print height in the media settings first to ensure consistency in the process.

Process of adjusting the die-to-die overlap

1. Go to T3-OPX Diagnostics tab.
2. Select **Scan Nozzle alignment plot**
3. Insert the die-to-die overlap value (-8 to 7).
4. Select **Use the last successful scan** and wait for the process to finish.



5. Select **Apply nozzle alignment settings**.



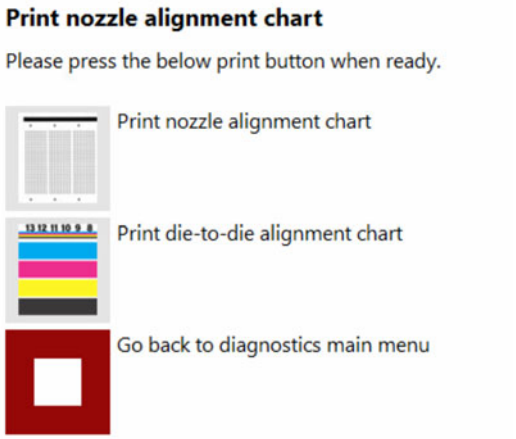
6. The process is complete. Remember to insert the value of 0 when restoring the alignment.

   Note: *The functionality involves updating the actual nozzle alignment within the printhead. This means that the feature requires a recalibration of the nozzle alignment every time and is therefore not a part of the Media Profile (in media settings). Consequently, adjusting the die-to-die overlap will affect all media profiles.*

Individual die-to-die alignment

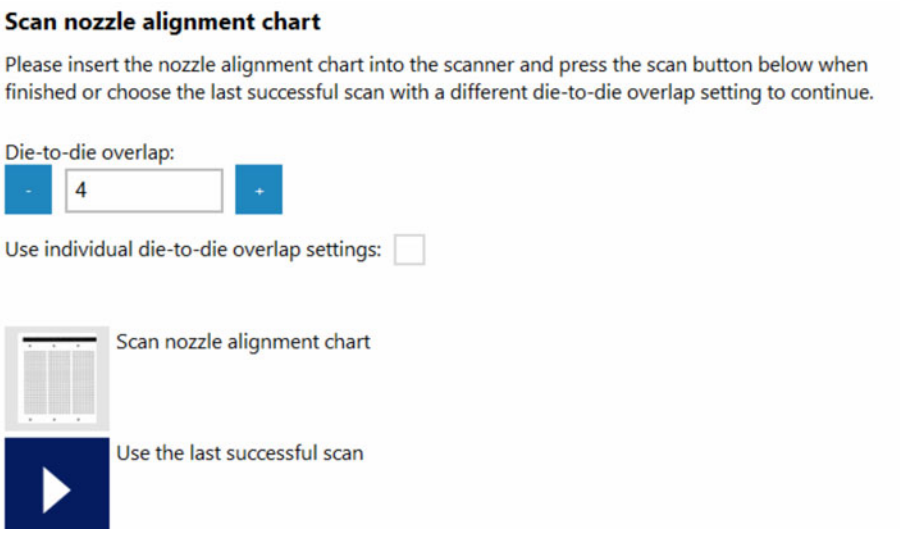
To adjust the individual die-to-die overlaps, select **Use individual die-to-die overlap settings**. It is recommended to print the “die-to-die alignment chart” to evaluate if this is needed. Note that the print is the full width of the print bar, so if the media is not as wide, it is recommended to put a piece of paper underneath to avoid printing directly on the table and belts.

1. Ensure the nozzle alignment chart is printed and successfully scanned.
2. Print the “die-to-die alignment chart” (**Diagnostics > Print Nozzle Alignment Plot**).

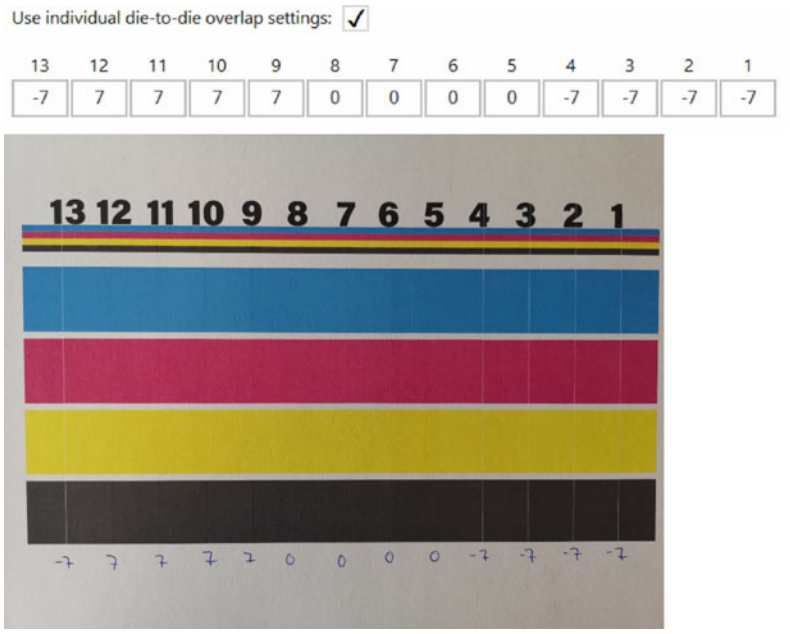


3. Evaluate the chart. The printed chart displays a number for each overlap.

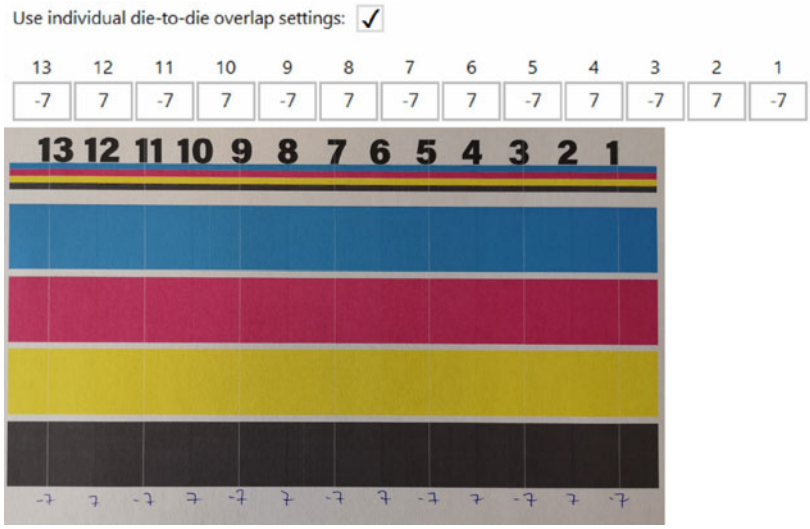
4. Apply the settings by checking the **Use individual die-to-die overlap setting** (**Diagnostics > Scan Nozzle Alignment Plot**).



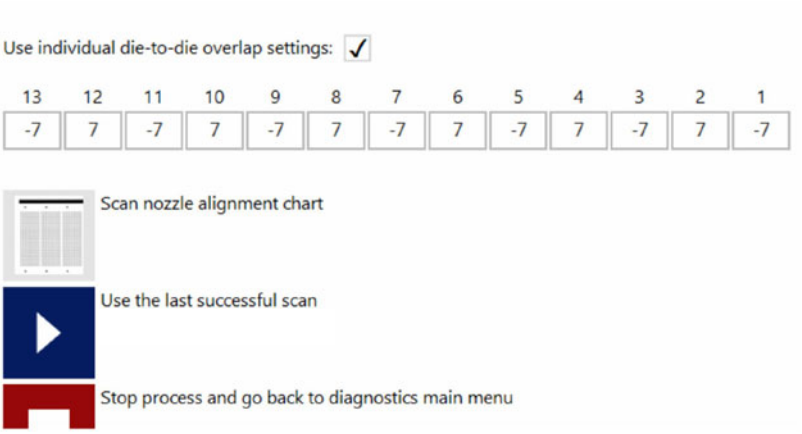
5. Adjust the values individually. Examples below show the effect of using the extreme values:



Or:



6. Apply the settings using the **Use the last successful scan** button.



7. Print the chart again or test an actual print job with the new settings.

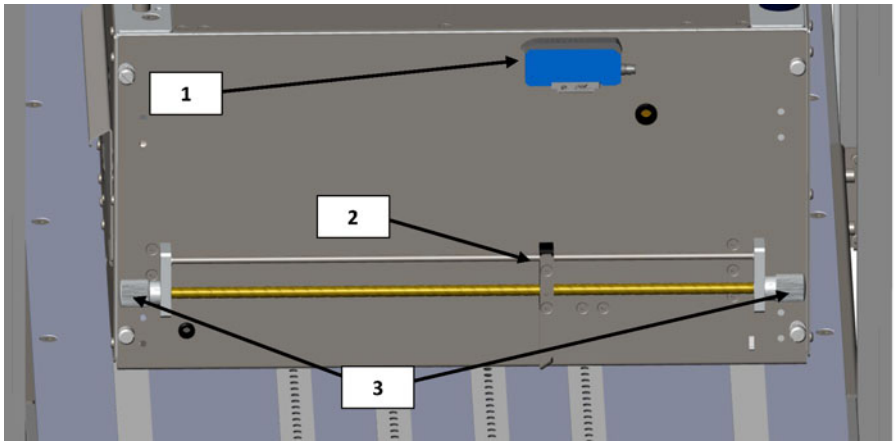
Remove the die-to-die alignment

Set the general or all individual values to zero and press **Use the last successful scan** button.

10 Edge sensor (TOF control)

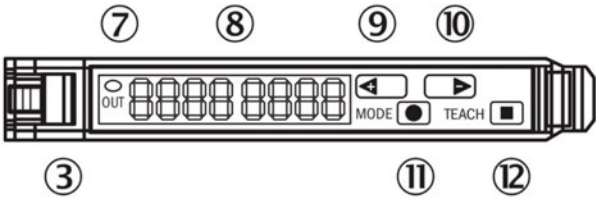
The edge sensor is used to detect the edge of the material moving under the print unit.

The edge sensor can be moved by twisting the knobs on each side of the rod. The sensor can be moved across the width of the print unit, but DO NOT place the sensor over a belt, as this will interfere with the edge registrations.



#	Description
1	Sensor controller
2	Edge sensor reflective light emitter
3	Knobs to move sensor

Sensor overview



#	Description
3	Locking the fiber-optic cables
7	LED indicator orange, lights up when switching output is active
8	Numeric display 2 x 4-digit, green: switching threshold, operating mode, red: actual value, Teach-in and function parameter

#	Description
9	step pushbutton > (manual switching threshold: higher/next function parameter)
10	step pushbutton < (manual switching threshold: lower/previous function parameter)
11	Mode/Enter-button
12	Teach-in button

Adjusting the sensor to the media

1. Move the print unit to a height position where the media can pass underneath. It does not need to 100% set to the height but within 10mm above the media.
2. Adjust the sensor to ensure that the switching threshold is not activated. This means that the green value (switching threshold), should be less than the actual value. Use the step buttons (9) and (10) to adjust the value. Remember that the sensor should not be over the belts, but over the black surface on the table.
3. Place the media under the sensor. The led indicator (7) should light up orange. When the media is removed then the led indicator shall switch off. Use the step buttons to adjust the sensitivity up or down. The threshold value is instantly saved.

11 User replaceable parts

This chapter describes all parts that can replaced by the operator excluding ink cartridge replacement which is explained earlier. *See "Installing ink cartridges" on page 28.*

Ink cartridge part numbers

Part number	Description
27610001	High Yield Cyan Ink Cartridge (~16,000 pages)
27610002	High Yield Magenta Ink Cartridge (~16,000 pages)
27610003	High Yield Yellow Ink Cartridge (~16,000 pages)
27610004	High Yield Black Ink Cartridge (~20,000 pages)

Service tray replacement

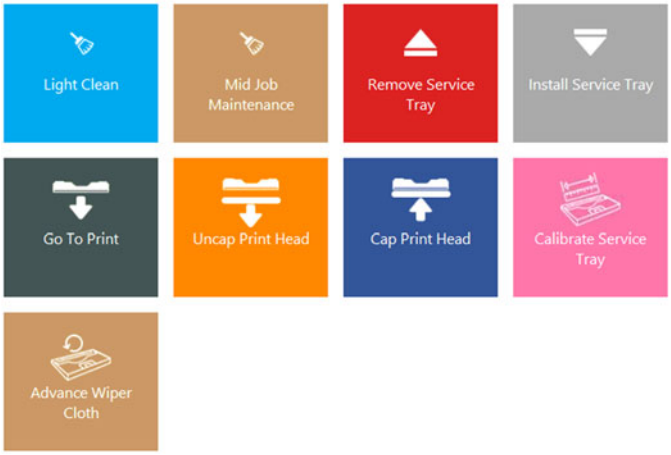
When the end of Service tray life has been reached, which is indicated by the Service tray life in the status menu display "0%", replace the service tray.

Part Number	Description
15141290	T3-OPX SERVICE TRAY 

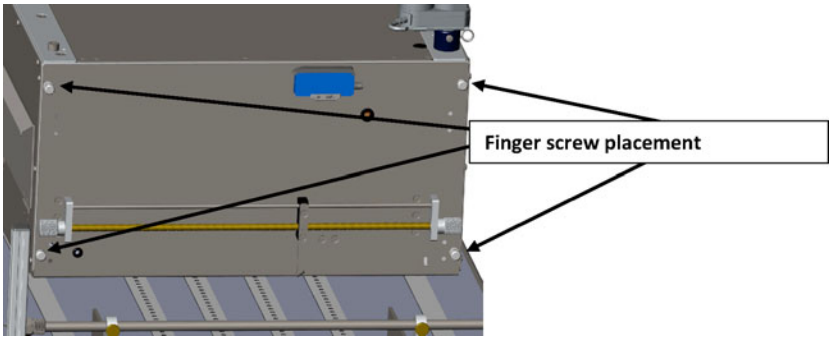
Caution: *This process will leave the printhead uncapped for a short period. Please keep this time to a minimum by reading the complete process before initiating the steps.*

Service tray replacement process

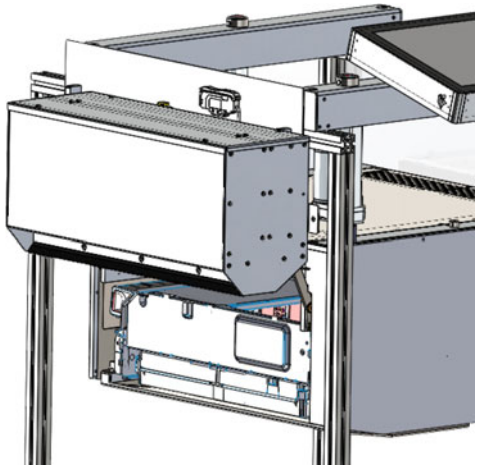
1. Unpack the new service tray.
2. Ensure the unit is not printing.
3. Go to the **T3-OPX** tab.
4. Select **Maintenance**.
5. Press **Remove Service Tray**.



6. Open the service door on the feeding side of the unit by removing the four finger screws. Leave the optional Vacuum unit on.



7. Lift up the service door until it stops. The gas pumps will maintain the position. It can carry the weight of the optional Vacuum unit.



8. Wait for the service tray to be pushed to the end.
9. Pull the service tray out.
10. Install the service tray by pressing it back into position of the edge of the print module.
11. Press **Install Service Tray**.
12. Wait for the service tray to position itself under the printhead. It will move back and forth a couple of times.
13. Press **Calibrate Service Tray** to restore service tray life to 100% (if the service tray is new).

Moving the service tray manually

It is possible to move the service tray manually in both directions. This procedure requires a Torx T20 screwdriver.

1. Go to the back side of the unit.
2. Locate the hole under the ink doors.

3. Insert the Torx screwdriver and locate the service tray screw (should be straight in).

   Warning: *Moving the service tray will uncap the printhead. Be careful with this operation.*

Fuse power inlet replacement

The fuse in the power inlet can be replaced by the operator.

Part Number	Description
15140120	FUSE T3.15A 

Fuse replacement process

Warning: *Remove power cord cable before continuing.*

1. Open the fuse lid on the power inlet carefully using a flat head screw driver. The lid is marked with a white sticker and a description (T3.15A).

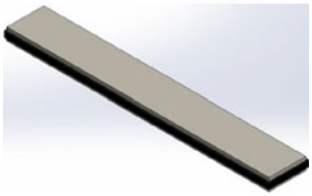
2. Remove the fuse.

3. Insert the replacement fuse.

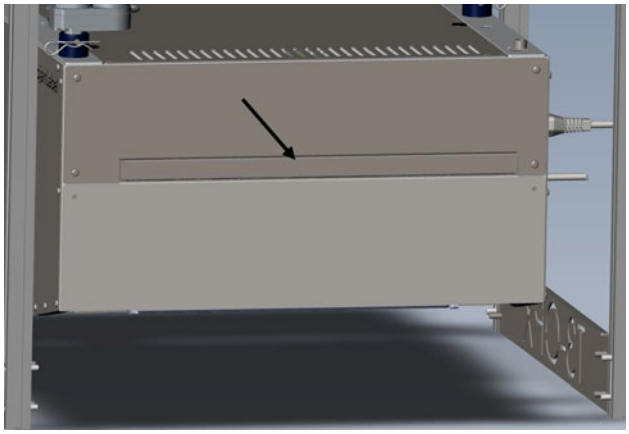
Aerosol filter replacement

The aerosol filter absorbs fine ink particles that are not absorbed by the media when printing. Although the filter is effective, some particles will still end up in the print zone, on the printhead, table and side walls.

The filter can be replaced during printing, but this is not recommended.

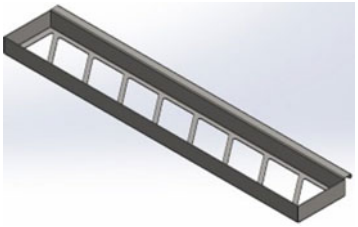
Part Number	Description
27760660	T3-OPX AEROSOL FILTER 

The aerosol filter is placed on the media exit side.



Aerosol filter replacement process

1. Remove the aerosol filter drawer by pulling the handle.



2. Remove the filter in the drawer.
3. Insert a fresh filter.
4. Insert the aerosol filter drawer.

12 RIP installation (XITRON)

Software requirements and recommendations

Minimum requirements

- Windows 10 Professional 64-bit
- 250+ GB Hard drive
- 3 GHz Dual/Quad Core Processor Core i5 or i7 recommended
- 8 GB RAM
- 100/1000 Ethernet Network Interface

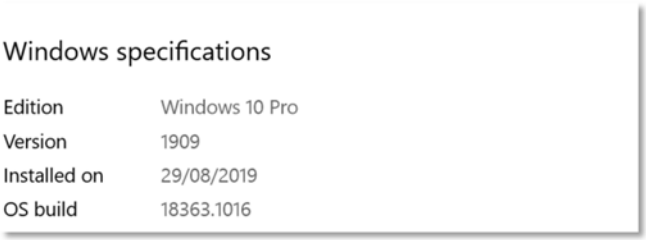
Additional information

- Download the latest version of the RIP. *See "Installation process" on page 87.*
- Full local administrator rights (very important)
- Remove any applications that potentially have conflicting requirements, such as using the same port (port 80) or hotfolders. Typically this could be other RIPs.
- Recommendations:
  - Disable anti virus program during the install (optional, but should be explored if there are issues with the install). Xitron generally does not have an issue with Windows Security etc.
  - Use the recommended location (folder) for the installation. Typically in root C:
- Windows Version

  There is currently an issue with the LDK runtime in Version 2004. If the unit needs to be installed on version 2004, then download the this fix and install prior to the RIP installation.

  https://supportportal.thalesgroup.com/csm?sys_kb_id=61fb0ee1dbd2e78cfe0aff3dbf9619ab&id=kb_article_view&sysparm_rank=2&sysparm_tsqueryId=412e9cfc1b879850f12064606e4bcb93&sysparm_article=KB0018320

  To check the Windows version, right click Windows start logo and select System, find the section below and check Edition and Version. Example of Windows Specifications:



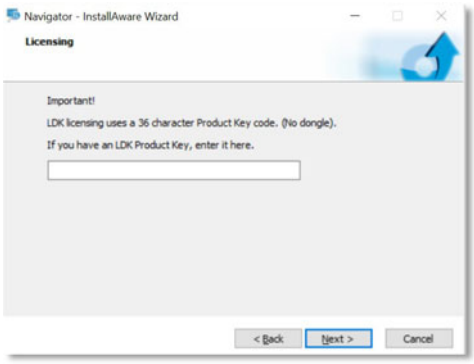
Installation process

1. Plug in the USB dongle. A 36-digit code is delivered with the dongle.
2. Please uninstall existing copies before installing this version.
3. Download the latest version of the RIP from the website.

   (http://trojanextranet.com/External/RIP/NavigatorT3OPX.zip)
4. Be sure to unzip the entire folder before running the installer.

   a. Install both the RIP server and client on the PC by double clicking the NavigatorHHRInstaller.exe file.

   b. Enter the 36 digit code.



   c. It is recommended to use the default directories when prompted for location.

   d. Type in the IP address of the T3-OPX when prompted for it. To find the IP address, see “Settings menu” on page 42.
5. After the installation please validate the following.

   a. Open File Explorer and browse to "%appdata%\Xitron\HPPW". Open the HPPW.ini file. The relevant line should look as follows.

   IPAddress=<ip address of the printer>

   IPPort = 9106

   b. Typical example of the full hppw.ini file:

```
[General]
RESTCalls = 0
PoolSizeMB = 32
IPAddress = 192.168.0.193
IPPort = 9106
```

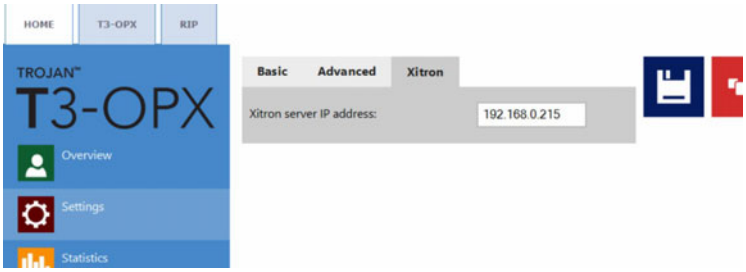
6. Start the server and client by double clicking the “Launcher” on the desktop.

Link TrojanControl

Insert the IP address of the RIP server in the TrojanControl. This will enable features:

- Show thumbnails in the Job Library
- Enable the RIP client tab

1. Go to **HOME > Settings > Network**.
2. Click on the Xitron tab. Insert the IP address of the RIP server.



Installing just the client

To install just a client on a PC in the same network as the RIP server and printer, run the following file:

1. NavigatorHHRClientInstaller.exe

Debugging the RIP settings

One useful tool Xitron offers is the PostFlight tool. This can be used to inform Xitron of all the settings of the RIP server.

This file is typically found here: C:\Navigator\User Resources\Utilities\Postflight\Postflight.exe

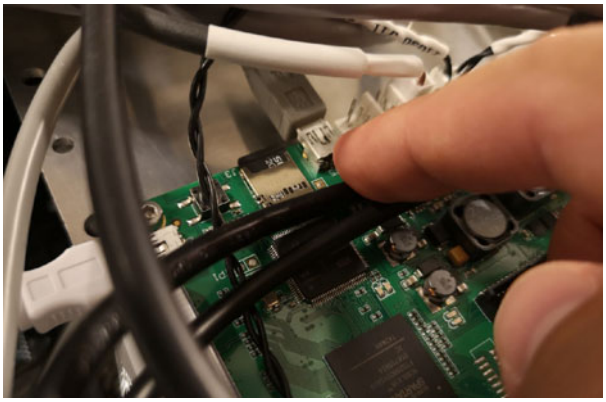
It is a tool that gathers data from the machine including multiple logs from various points in the system that can help identify an issue.

After it runs it generates an HTML page that opens with a browser containing a variety of data. Save that HTML file for technical support purposes.

13 Debugging connections

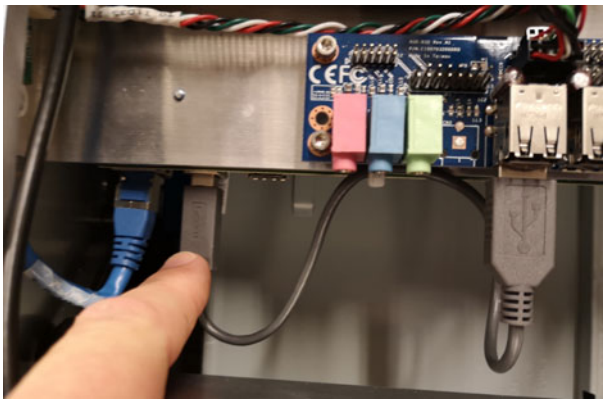
1. To debug the webpath board connect an external PC to the T1030 board (the new webpath).

   a. Use a USB to USB Mini cable to connect.



2. To connect an external PC to the MPCA.

   a. Use a USB AB cable to connect.



Controls for T1030 (webpath board)

These commands can be run through the webpath, accessed through putty, or directly through teraterm (USB mini connection):

Function	Command	Comment
Move the unit up or down	`dcseekmm <value in mm 0-100>`	0 is the highest position, 100 is the lowest position.
Calibrate actuators	`dcz`	Unit is moved to the top and calibrated (tilt etc)

Function	Command	Comment
Calibrate the table position height and x/y tilt, to create the base settings.	`calall`	
Read the power state of the mpca	`Mpcap`	It will return 1 if the power is on

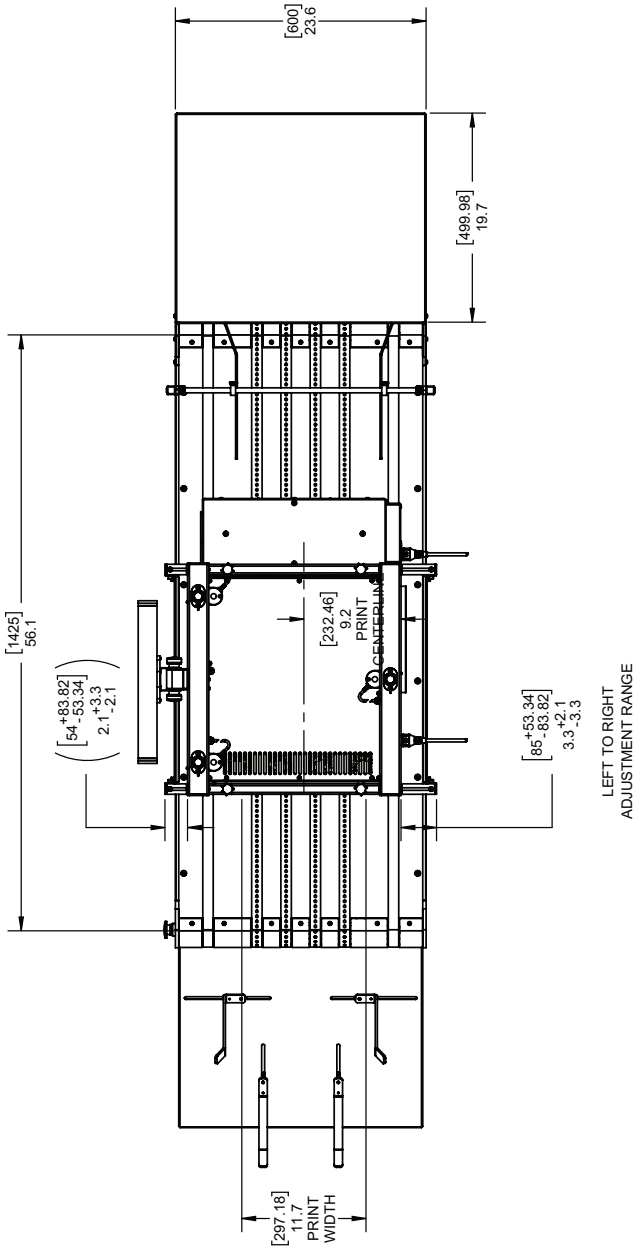
Push the virtual power button of the MPCA	`Mpcap (2 or 0)`	2 the button is pressed, 0 the button is released.
		To switch it on
		`>mpcap 2`
		wait 2 seconds then enter
		`>mpcap 0`

Power control of mpca, fans etc	`V33off <0,1 or blank>`	Blank reads the value 0 power is provided 1 power is cut
Read the weight on of the individual load sensor, there are 4 in total	`Lgram <1,2,3 or 4>`	
Read the total weight on the load sensors	`Lgramt`	No parameters

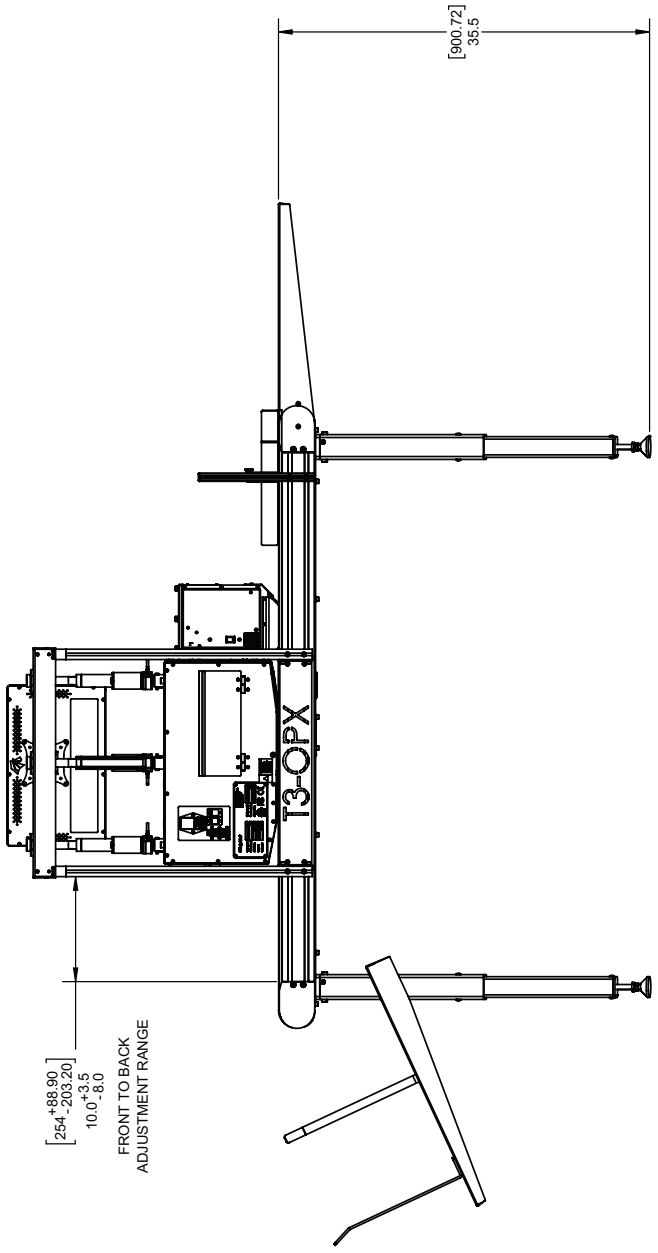
14 Physical Data

MT1 Illustrations

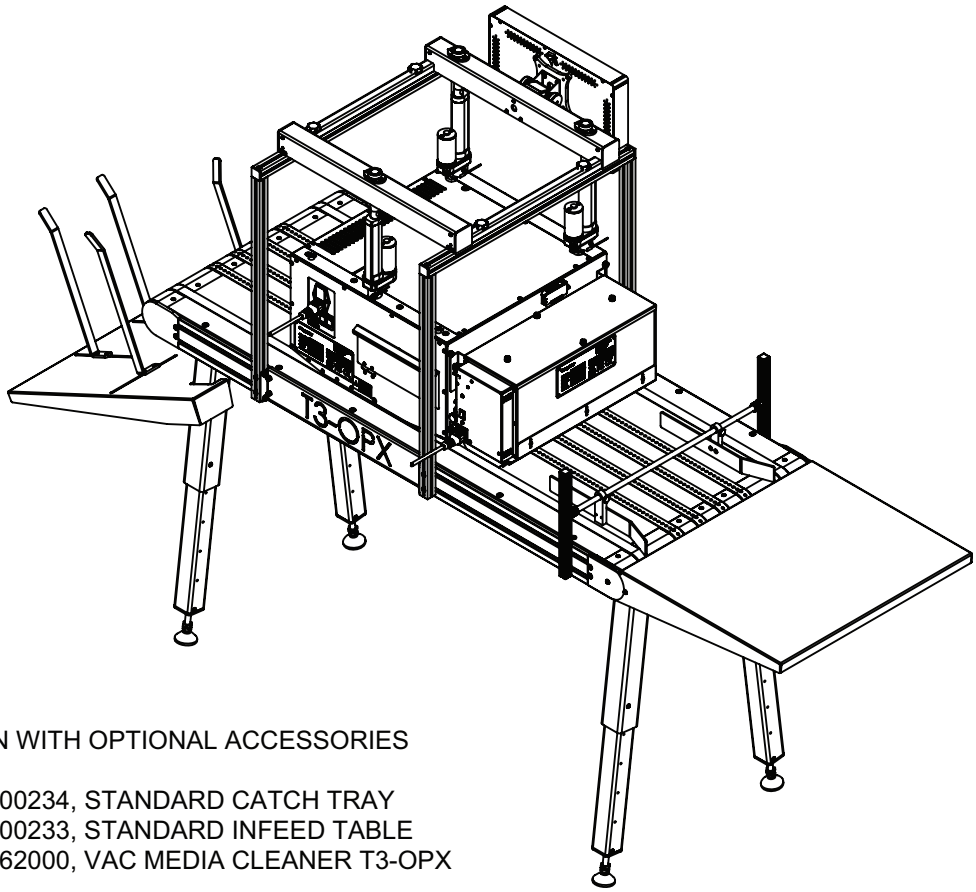
Top View Dimensions



Front View Dimensions



Isometric View

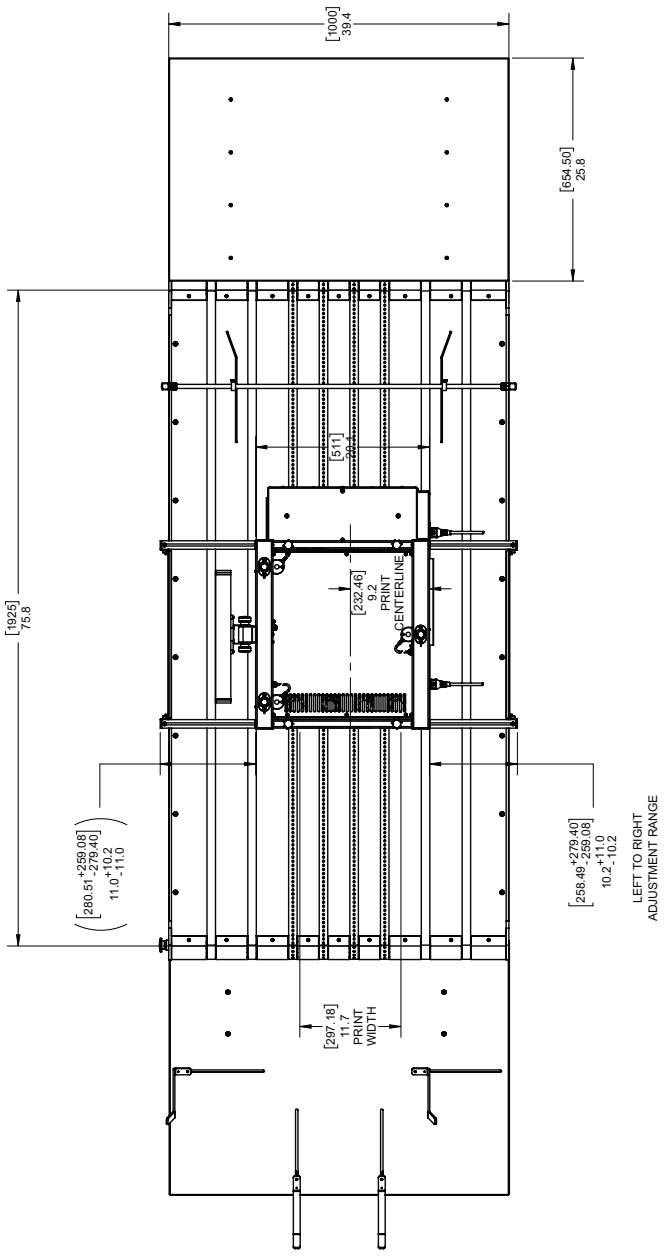


SHOWN WITH OPTIONAL ACCESSORIES

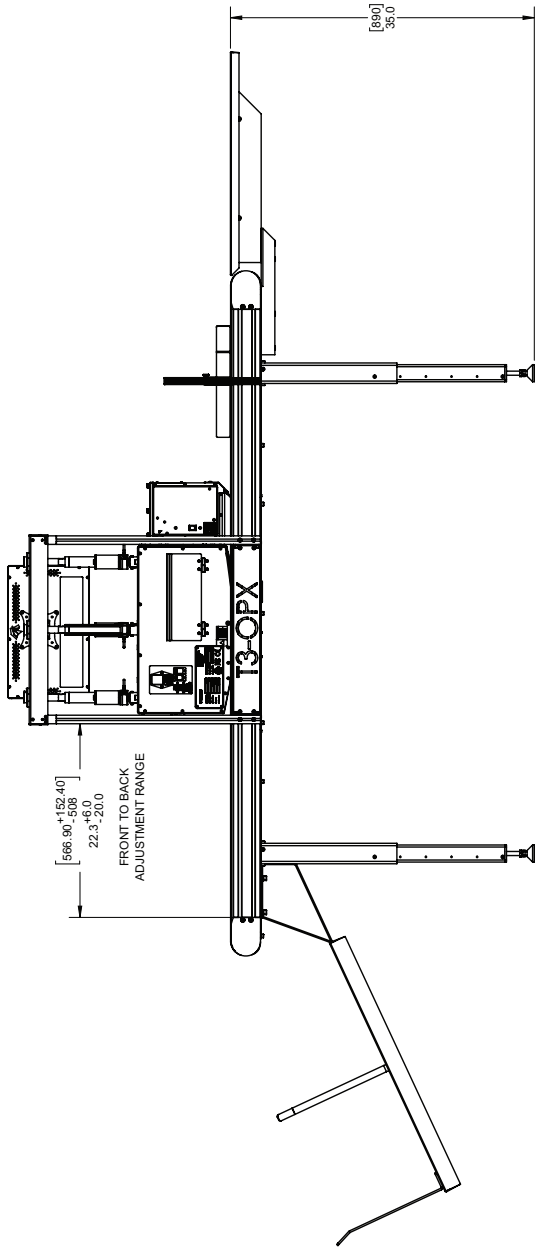
- 10000234, STANDARD CATCH TRAY
- 10000233, STANDARD INFEED TABLE
- 43162000, VAC MEDIA CLEANER T3-OPX

MT2 Illustrations

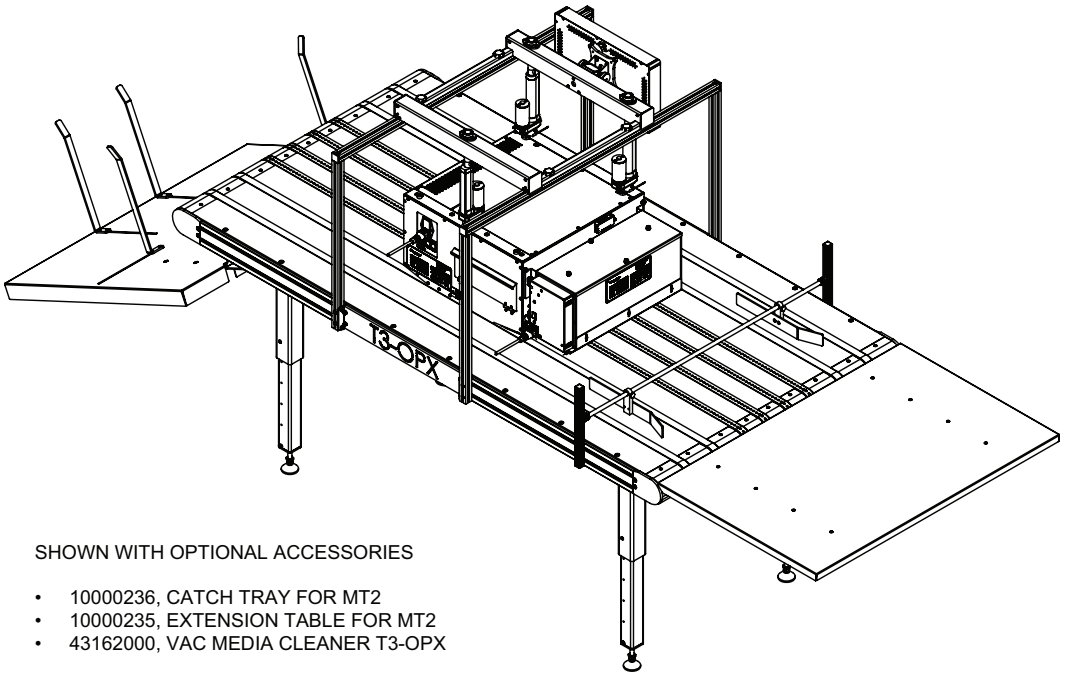
Top View Dimensions



Front View Dimensions



Isometric View



SHOWN WITH OPTIONAL ACCESSORIES

- 10000236, CATCH TRAY FOR MT2
- 10000235, EXTENSION TABLE FOR MT2
- 43162000, VAC MEDIA CLEANER T3-OPX

15 Specifications

T3-OPX Specifications

Operation	
Ink Type	Pigmented ink, 4 Individual CMYK cartridges
Resolution	High Resolution Mode: 1200 x 1200 optimized dpi from 600 x 600 input dpi. Production Mode: 600 x 1200 optimized dpi from 300 x 300 input dpi.
Print speed	Up to 18 ips (27m/min)
Print Area	Width: 11.7" (297mm)
Media Sensors	• Optical TOF sensor, adjustable position • Pressure sensor for height control

Environmental & Physical	
Printer operation	Operation 20° to 30° C (59° to 86° F) Transport -40° to 60° C (-40° to 140° F) Relative humidity 20 to 80% Altitude 0 to 3048 m
Power requirements	100-240V AC - 50/60 (9A power supply)
Power consumption peak	103.2 watts
Print unit dimensions	Width 518 mm Length 516 mm Height 290 mm (excluding height adjustable bracket)
Media cleaning unit dimensions	Width 457.5 mm Length 154 mm Height 261 mm
Touchscreen	15.6"
Print unit weight	20 kg

Environmental & Physical	
Media cleaning unit weight	3.5 kg
Drop detection	Print then scan process, using offline scanner (Epson v600).

Supplies	
Ink Cartridges	CMYK pigmented: C: 238 ml M: 233 ml Y: 225 ml K: 498 ml ISO pages: K: 20.000 pages CMY: 16.000 pages
Maintenance	Replaceable service tray
Ink Type	Pigmented aqueous inks
Average drop volume	10 pl K, 8.5 pl CMY
Nozzle count	59136 (4224 x 14)

Material	
Types	Uncoated Paper, Card board, paper board, wooden boards, paper bags Most porous materials
Width	Depends on transport/installation 600mm (Trojan standard table) 1000mm (Trojan wide table)
Supported image lengths	25.4 mm - 914.4 mm (1 in - 36 in)
Thickness	0 - 95mm (automatic height calibration)

System	
Connectivity	Wired connection (802.3 LAN (10/100/1000) Ethernet port) 2 x serial ports (I/O and encoder) USB for scanner Wired LAN

System	
Software	TrojanControl Software RIP
RIP Server Software requirement	Windows 10, 8 or 7 (64-bit)
RIP Client Software requirement	Chrome browser (Mac OS or Windows)

Resolution

The pen (printhead) native resolution is 1200dpi, so all images are scaled up to 1200dpi after halftoning in the pipeline. The High Res mode fires drops at 1200dpi (nozzle resolution) x1200dpi (media travel axis). The firing pulses are clocked to fire 1200 dots per inch of media travel.

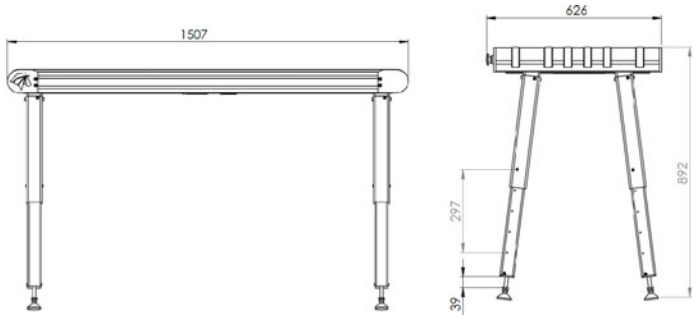
The same is for production and production fast. The images are scaled up to fit the 1200 dpi nozzle axis (pen native res) and then on the media axis the drops are fired at 600dpi.

600x600 dpi (input) “High res mode”, this will be scaled to 1200x1200 dpi (output)

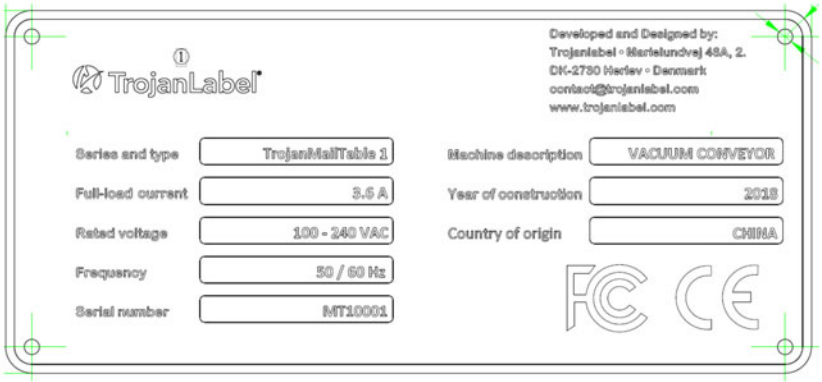
300x300 dpi (input) “Production mode”, this will be scaled to 600x1200 dpi (output)

MailTable 1 (MT1) Specifications

MailTable 1 Standard	
Speed	Up to 18 ips (27m/min)
Power requirements	100-240V AC - 50/60 Hz (2.5A power supply)
Dimensions	Width: 626 mm (incl Emergency stop button) Length: 1507 mm Height: From 892 mm to 595 mm
Support material width	600 mm
Weight	75 kg/ 165 lbs without accessories
Suction	5 fans adjustable speeds
Belts	6

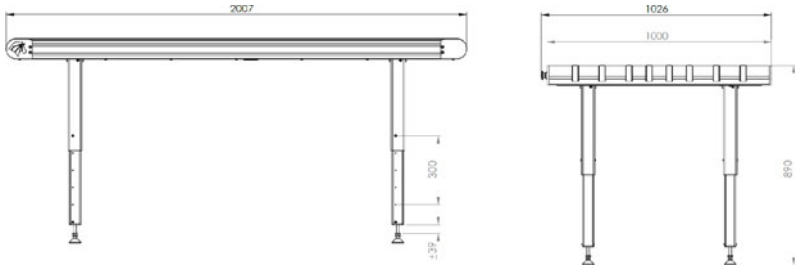


MT1 Machine plate



MailTable 2 (MT2) Specifications

MailTable 1 Wide	
Speed	Up to 18 ips (27m/min)
Power requirements	100-240V AC - 50/60 Hz (2.5A power supply)
Dimensions	Width: 1026 mm (incl Emergency stop) Length: 2007 mm Height: From 890 mm to 590 mm (5 positions)
Support material width	1000 mm
Weight	117 kg/ 258 lbs without accessories
Suction	5 fans adjustable speeds
Belts	8



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