





Trojan™ T2-C User Guide

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NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



EC DECLARATION OF CONFORMITY

EMCD 2014/30/EU Original

Manufacturer and authorised to compile the technical file:



Marielundvej 46A, 2. 2730 Herlev Denmark

Hereby declares that machine type:

TROJAN"

T2-C

T2-C digital printer

Is produced in accordance with the following EU directives:

- 2006/42/EC Machinery directive
- EMCD 2014/30/EU directive

Thomas Jensen

Product Director

Herlev

25-1-2018 Date

Dat

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Introduction

Original instructions

These instructions are Trojanlabel's original instructions for the Trojanlabel press (henceforth called the machine or TrojanTwo-Compact press or T2-C press).

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:

Company name: Trojanlabel

Address: Marielundvej 46A 2 sal, 2730 Herlev, Denmark

The machine's designation

The machine's complete designation is Label Press type T2-C.

Machine plate

The machine plate (picture) is situated on the back side of the machine on the middle bottom:



Overview and application

General description

The machine consists of an unwinder/rewinder, label edge sensor, label gap and blackmark sensor, NIP roller, slitter and 4 ink tanks.

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 labels.

The machine must not be used for any other purpose than the purpose mentioned above.

Warning about foreseeable misuse

The T2-C press 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.

Technical specifications

Physical dimensions in inches and millimeters:

- Length 23.8" x Width 22.8" x Height 31.3"
- Length 606 mm x Width 580 mm x Height 795 mm

Weight:

• 132.3 lbs. (60 kg) without ink tanks and label roll

Electrical:

Nominal supply voltage: 100-240V AC

Nominal supply frequency: 50-60hz

Estimated peak consumption: 240W

Full-load current: 3.6 A

Machine power supply:

240 W (48 VDC, 5 A), please see "T2-C_Meanwell_SP-240-SPEC.PDF" for details:

http://www.trojanextranet.com/media/59742/t2-c_meanwell_sp-240-spec.pdf

Operating positions, location, and arrangement

The machine is intended to be used in a light industrial/office environment. The operator operates the machine in a standing or sitting position.

The machine should be placed on a properly leveled worktable or cabinet which is able to handle the T2-C press weight and size. Use spirit level to check leveling.

Note: Improper leveling of the machine might cause print quality issues and shorten the printhead life.

Temperature

Recommend operational temperatures

- Operation: 20° to 30° Celsius at RH 22-80% (non-condensing)
- Storage: -5° to 50° Celsius at RH up to 85%, non-condensing at 65°

If transferring the machine from different temperature conditions, ensure that the machine has time to acclimatize.

Operating Environment

It is important that the machine is placed in a clean environment as possible, with sufficient air conditioning/cleaning. Avoid placing it in an environment with dust and paper debris, as the printhead nozzles are sensitive to this.

Label Materials

The machine requires ink jet coated label materials for optimal print quality; some non-coated materials will also work. Please contact Trojanlabel or your distributor for recommendations of suited materials.

It is imperative to have a local source of material, to ensure a stable production.

Media specifications

- Roll Size: max. 12"(300 mm), inner core diameter 2.99" (76 mm)
- Media Types: Plain Paper, Gloss Paper, Matte Paper and Synthetic pressure-sensitive; Ink jet treatment (coating) recommended.
- Media Thickness 4 pt. /mil to 12 pt. /mil (0.1-0.3 mm) with default print height setting, print height is adjustable for thicker media.
- Label Size/Print Area

Width 1.0" (25.4 mm) to 8.66" (220 mm)

Length 0.59" (15 mm) - 30.0" (762 mm) - 30.0" (762 mm) maximum length can be extended with stitch function.

Print Speed and Resolution

- Printing Technology: Thermal Inkjet
- Resolution and Speed:

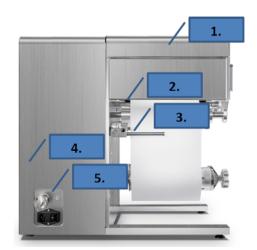
6 ips (9m/min.) at 1600 x 1600 dpi

12 ips (18m/min.) at 1600 x 800 dpi

Overview



#	Description
1	NIP clamp
2	7" Touch screen display
3	Lid to access aerosol filter and slitter knifes
4	Built-in slitter knifes
5	Unwinder
6	Rewinder



#	Description
1	Lid for easy access to gap/blackmark sensor and maintenance

#	Description
2	Sensor for gap/blackmark detection
3	Label edge sensor
4	Waste Ink bottle inside (can be accessed via drawer)
5	Easy installation (Ethernet and power outlet 100-240V AC - 50/60 Hz)

2

Setting up the T2-C press

Physical setup

The T2-C press is packed in a wooden crate and shipped strapped on top of a wooden pallet (total weight of the package including the crate is around 80kg). After opening the wooden crate the machine must be lifted out from the crate. The approximate weight of the machine is 132.3 lbs. (60 kg). Therefore it is advised to lift the machine out of the box with multiple persons to avoid injury.

The machine should be placed on a properly leveled worktable or cabinet which is able to handle the T2-C press' weight and size. Footprint: Length 23.8" (606mm) x Width 22.8" (580mm) x Height 31.3" (795mm). The machine is standing on 4 height adjustable feet. In case it is not possible to set the worktable to level, then each foot's height can be adjusted by turning the foot clockwise (lifting the machine) or turning the foot counter-clockwise (lowering the machine). Make sure the machine is standing stable and legs are adjusted so that the machine is horizontally level. Check leveling using a spirit leveler.

Warning: Improper leveling of the machine might cause print quality issues and shorten the printhead life.

Remove any zip ties and other remaining packaging materials, such as bags covering the ink tank connectors. Open the lids and make sure that the luers for the ink tubes are tightened to avoid ink leakage.



Cabling (network and power supply)

The machine has two cable inlets:

- 1) Power supply
- 2) Ethernet

Only the power supply cable is necessary for powering up the machine. The network cable is necessary for sending new print jobs to the T2-C press and for remote support/software updates.



#	Description
1	Ethernet port
2	Power on/off switch
3	Power supply

Note: Ethernet cable is not included in the T2-C press package. It is recommended to use Cat5, Cat5e or Cat6 Ethernet cable versions to connect the T2-C press to the local network and/or to the Internet.

Power on

Visible safety check

Before powering on the machine, visibly ensure that no foreign objects are interfering with the print engine module and web-path.

Power on process

- 1 Press the physical power switch on the left side of the T2-C press, switching it from 0 to 1. Turning the main power switch on starts the TrojanControl software on the touch screen and also starts the print engine.
- 2 Release the Emergency Stop (ER) button in case it is pressed down. To release the ER button, the button has to be twisted clockwise. As long as the ER button is pressed down, the servo motors for the Unwinder, Rewinder, and NIP are powered off for safety reasons. It is advised to press the ER button whenever the operator wants to perform any actions on the web path system other than threading the label material or splicing and installing a new label roll.



3 The machine is fully functional when the TrojanTwo tab is visible in the TrojanControl software. In the right side status bar the System State field is online, and Media Path State is ready.

System State: **Online**Error State: **NA**Print State: **NA**

Web State: Ready

Note: System state can only be online if all ink tanks are installed and the printhead is also installed and primed with ink. See "Installing ink tanks and the printhead" on page 20.

Note: Web state can only be ready if the label material is loaded in the unwinder and rewinder and tension for the label web is calibrated. See "Loading the label material" on page 29.

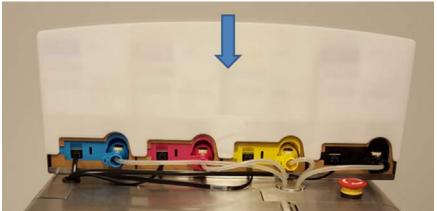
Installing ink tanks and the printhead

Installing the ink tanks

The T2-C press uses CMYK ink tanks. Each contains 2 liters of ink when opened. Every T2-C ink tank is QA chip protected ensuring that only genuine Trojanlabel ink tanks can be used.

The tray for the ink tanks is situated on top of the machine. The ink tanks are installed from left to right in CMYK order.





Connect the black QA chip reader cables.

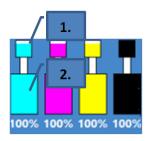
Connect one QA chip reader cable to each ink tank. It does not matter which QA chip reader cable is connected to which ink tank. However, the length of these cables are made to best fit to the closest ink tank.

2 Connect the matching ink tube connector to each ink tank. The particular ink tube connector's color is matched to the corresponding ink tank. Once the connector is pushed onto the matching slot on the ink tank, the connector clicks into the right position.

Warning: Do not mix up the colors! Each ink tube connector has to be connected to the matching colored ink tank. Mixing up the ink tube connectors (if the yellow connector is connected to the black ink tank, for example) will contaminate the inks in the system and leads to significant financial damage because the contaminated ink is wasted.

3 Put the white plastic protector cap on top of the ink tanks.

When a 2 liter ink tank is connected, the proper ink level is displayed in percentages in status bar on the touch screen. Reservoir ink tank levels (1) and 2 liter ink tank levels (2) are displayed.



During operation, the ink used for printing comes from the built in reservoir ink tanks. The reservoir tanks have ink level sensors and refilling of these reservoir ink tanks is done from the 2 liter ink tanks directly. This refilling process is performed automatically by the system when ink level drops under a certain limit for the particular reservoir ink tank.

During the first time installation when the ink system is empty, after installing the 2L ink tanks, the system automatically starts filling up the reservoir ink tanks (located inside the machine) with ink. This is done one by one in CMYK order and the process is displayed on the screen where the movement of the ink is indicated between 2L ink tank and reservoir ink tank.

The reservoir ink tanks have the capacity of 200ml and all 4 reservoir ink tanks are around half full when the process is finished.

The amount of ink used to fill the reservoir ink tanks and tubes for the first time is not registered back to the QA chip of the 2L ink tanks (ink consumption is measured based on the ink going through the printhead nozzles), therefore for the first set of ink it is likely that the 2L ink tanks will run out of ink physically when still around 5% ink level is displayed on the screen. This is normal and this around 5% ink is not wasted but used to fill the ink system. From the second ink set, the ink level % calculation is normal and ink tanks run out of ink according to the ink level % displayed on the screen.

Note: T2-C 2L ink tanks are not refillable and shall be treated as hazardous waste when empty.

Unpacking the printhead

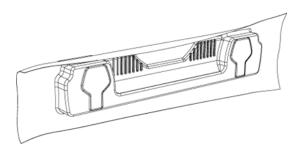
Caution: DO NOT touch the printhead cartridge's ink couplings, nozzle surface or the electrical contacts when installing the printhead cartridge. Hold the printhead cartridge ONLY by the handles.

Caution: DO NOT unpack the printhead cartridge until the machine is ready for installation. Once unwrapped, delay in installing the printhead can compromise print quality due to dehydration.

Caution: DO NOT place an unwrapped printhead on any surface before installing. Protect the printhead at all times from dust, fibers, dirt and other contaminants.

Important: Do not throw away the printhead packaging. The white box has the serial number, part number and manufacturing date of the printhead. Also it is recommended to store printheads which are currently not installed in the original packaging.

1 Open the end of the printhead package outer box and slide out the foil bag.



Inspect the integrity of the foil vacuum sealing. The foil bag should be formed tightly to the contours of the printhead cartridge as shown above. If the foil is loose to any degree then the seal has been compromised.

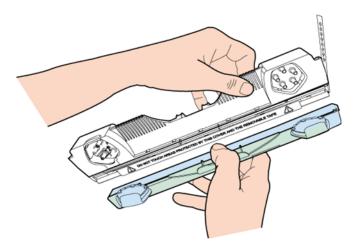
Note: If a poor seal is suspected, DO NOT USE the printhead. Report the issue to your supplier.

2 Carefully rip the foil packaging open at the notch. Use scissors if your foil bag does not have a notch or you are finding it difficult to tear the bag.

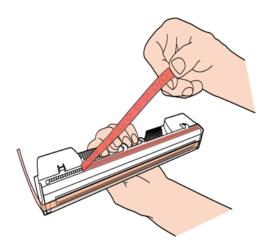


3 Remove the printhead from the foil bag.

- 4 Remove the orange protective plastic cover from the printhead cartridge. Holding the printhead cartridge by the handle:
 - a) Release the flaps covering the ink ports.
 - b) Release the clip retaining the cover near the center of the printhead cartridge.
 - c) Carefully remove the protective cover.

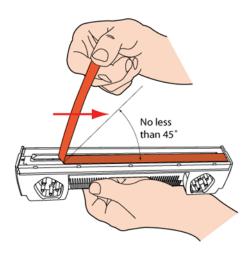


5 Remove the protective strip from the electrical contacts. While holding the printhead cartridge by the handle with one hand, grasp the pull tab with the other hand and, slowly and carefully, peel back the plastic strip covering the electrical contacts.



Note: Dispose of the removed strip immediately and do not allow the removed strip to contact the electrical contacts.

6 Remove the protective strip from the printhead nozzles. While holding the printhead cartridge by the handle with one hand, grasp the pull tab with the other hand and slowly and carefully peel back the plastic strip covering the printhead nozzles. Maintain an angle of no less than 45° with the printhead surface when pulling on the strip.

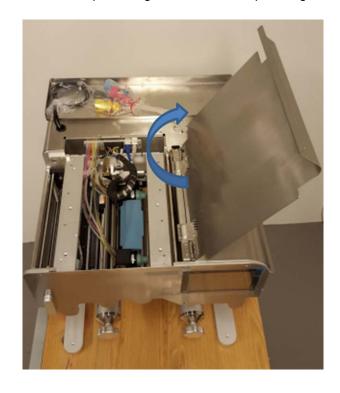


Note: Dispose of the removed strip immediately and do not allow the removed strip to contact the electrical contacts or the printhead nozzles.

Installing the printhead

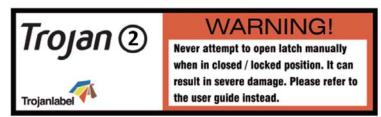
Important: The printhead can only be filled with ink when the reservoir ink tanks are filled. For the first time installation, the printhead can only be primed when filling the reservoir tanks procedure is completed.

1 Open the top lid on the T2-C press to gain access to the print engine.



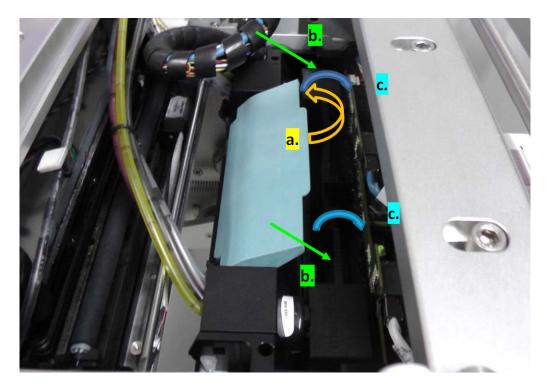
2 Press the Release Printhead button in the TrojanTwo tab > Maintenance menu to open the printhead latch.





Note: The above warning label can be found on the printhead latch. Trying to open the blue plastic latch manually by the handle will most likely break the latch. Breaking the latch is considered as improper usage and therefore replacement is out of warranty. Breaking the latch also causes the machine to be non-operational until the broken part is replaced.

- 3 Insert the printhead by the handle into the cradle.
 - a) Open the printhead latch all the way up.
 - b) Insert the printhead into the cradle by the handles.
 - c) Pull the printhead backwards until it snaps into the proper place standing upright.



4 Close the printhead latch.



5 Press the **Install Printhead** button in the **TrojanTwo tab > Maintenance** menu to start priming the printhead with ink.



Printhead priming takes about 3-5 minutes and the system state becomes online when the process is finished and the machine is ready for printing.

System State: Online

Note: Do not throw away the blue rubber dock protector caps (included with the T2-C press). These prevent ink leaking from the revolvers during transportation or when there is no printhead installed.



4

Loading the label material

There are two common methods of threading the machine: threading from scratch, i.e. there is no material present in the machine, or using the currently installed material to thread the machine.

Unwinder and rewinder roll direction

Rolling direction unwinder - Ink jet coating on the inside or outside

Regardless of the threading procedure, you must insert the label roll on the unwinder core according to the ink jet coated side (coated side must be up for printing).

1 Outside - Printing on the outside of the label roll

If the ink jet coating is on the outside of the material, which is the most common, place the roll so the end of the material is facing clockwise.



Important: Ensure Media Settings > Unwinder or Rewinder label position states: Outside



2 Inside - Printing on the inside of the label roll

If the ink jet coating is on the inside of the material, then place the roll so the end of the material is facing counter-clockwise.



Important: Ensure Media Settings > Unwinder or Rewinder label position states: Inside



Rolling direction rewinder

The rewinder can place the label material on the outside or inside of the roll. The criteria are the same as for the unwinder, please refer to the above for placement and direction and update the Media settings to reflect this.

Threading the label material from scratch

1 Press the Release Web button in the TrojanTwo tab > Handling menu.



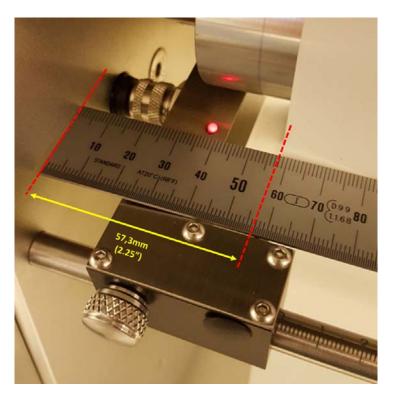
2 Make sure that the NIP clamp is in the open position.



- 3 Place the chosen label material roll on the unwinder shaft. See "Rolling direction unwinder Ink jet coating on the inside or outside" on page 29.
- 4 Press the **Reset Sidesteer Position** button in the **TrojanTwo tab > Handling** menu to set the unwinder core horizontal position to the default position.

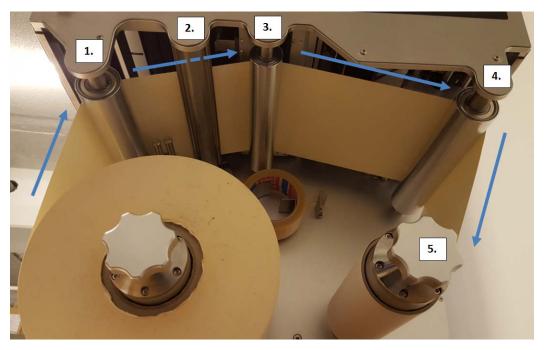


5 Adjust the left edge of the media roll to be 57.3mm (2.25") from the wall. This ensures that the media left edge will be at the same position as the left edge of the printhead nozzles (where the printing zone begins).



Note: It does not have to be exactly 57.3mm as that is difficult to measure exactly with an ordinary ruler. The best way is to set it around 57mm from the wall. The label edge sensor will make the position correction later, once it is set. See "Adjusting the label edge sensor" on page 35.

Thread the label material over the first metal roll (1), then between the NIP clamps (2), then over the metal roll under the printhead (3), then over the last metal roll (4) and fix it with adhesive tape to an empty paper core on the rewinder shaft (5).



Media going through between the NIP clamps:



7 Close the NIP clamp.



8 Press the Calibrate Web button in the TrojanTwo tab > Handling menu.



9 Tension calibration is completed when **Web State** becomes ready in the right side status bar on the touchscreen.

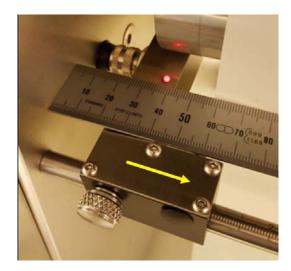
System State: Online
Error State: NA
Print State: NA
Web State: Ready
Maint State: No
Maint Error: No

Adjusting the label edge sensor

- The label edge sensor is for adjusting the left edge of the media physically throughout the whole web path for the best rollup performance.
- Adjusting the sensor can be done manually by physically moving the sensor. Moving the sensor has an immediate effect on the label roll position.
- As a starting position for the sensor, it is advised to align the sensor to the 0 position on the metric scale at the axis where the sensor can be moved.
- Further adjustments can be done even during printing as if needed.
- 1 Press the **Reset Sidesteer Position** button in the **TrojanTwo tab > Handling** menu after a new media roll has been threaded.



2 Adjust the label edge sensor's bracket to be exactly at the 0 position on the metric scale at the axis where the sensor can be moved.



Note: When moving the sensor, the manual knob that locks the sensor's position has to be released.

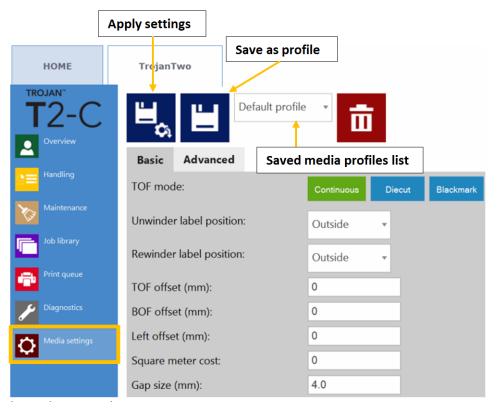
Calibrate tension for the label web

It is assumed that the label rolls are placed correctly and the machine is threaded with media.

1 Web state is currently: 'Not calibrated':

Web State:
Not calibrated

2 Go to the **TrojanTwo tab > Media Settings** menu and select the correct Media Profile that fits the paper or create a profile that matches the material and print job.



- 3 Press the apply settings button.
- 4 Go to the **TrojanTwo tab > Handling** menu and press the **Calibrate web** button.



5 The calibration is finished when the "Web State" status reads "Ready".

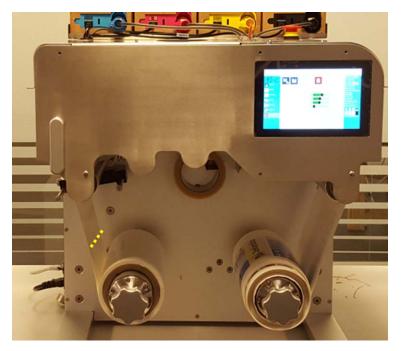


Splicing and changing the label roll

1 Go to the **TrojanTwo tab > Handling** menu and press the **Release Web** button to release the tension for the label roll.



2 Cut the media above the unwinder shaft somewhere close to the unwinder.



- 3 Load the new media roll onto the Unwinder shaft. See "Rolling direction unwinder Ink jet coating on the inside or outside" on page 29.
- 4 Use the built in adhesive tape dispenser to stick the new media roll to the media that is still threaded via the web path.



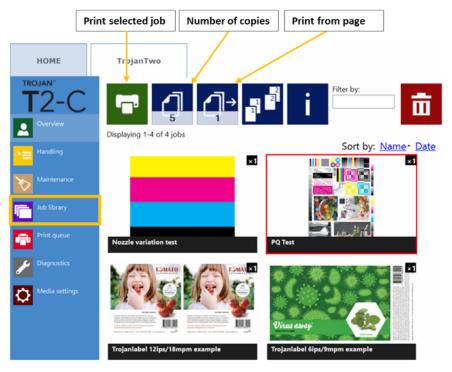
Note: Adhesive tape is not included in T2-C package.

5 Go to the **TrojanTwo tab > Handling** menu and press the **Calibrate Web** button to calibrate tension for the media.



Select and queue print / start print job

1 Select Job Library. See "Job Library menu" on page 81.



- 2 Select a job by pressing the image. The selection is indicated with a red box around the selection.
- 3 Choose the number of copies or the starting page number to print, by pressing the Number of Copies button or the Print from Page button (printing job from a certain page number).
- 4 Send the print to queue by pressing the green print button.

If the Print Queue is paused, press the resume button on the overview screen. If the queue is active the print job will start immediately, and the print job progress is displayed in the Overview screen, which is automatically displayed when starting a print.



Print queue is paused. Press Resume Print Queue button to start printing.



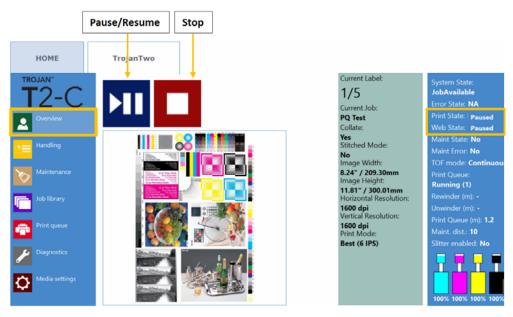
Print job in progress in overview menu.

6

Pause, resume, or stop a print job

Pausing, resuming, and stopping print jobs is done from the **TrojanTwo tab > Overview** menu.

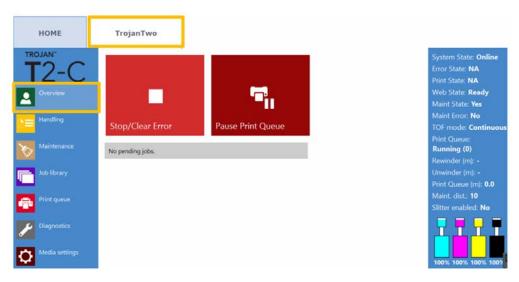
• Pause: Press the Pause/Resume button. Print state will change to "Paused".



 Resume of paused job: Press the Pause/Resume button once more. Print state will change to "Printing".



• Stop: Press the stop button. Print state will change to "NA" and the current print job is canceled and removed from the print queue.



Note: NA = Not Available

7

Moving the label web

It is possible to move the label web forwards and backwards at two speeds. In the **TrojanTwo tab > Handling** menu, select the speed and direction by selecting one of the four directional/speed buttons highlighted below. When a directional button is pressed, the four buttons are replaced with one single stop button. Pressing the button will stop the web moving. See "Handling menu" on page 77.



Setting the speed for moving the web:

The movement speed of Forward/Backward Web and Fast Forward/Fast Backward Web buttons can be set by the user in the **HOME > Settings > Printing Preferences** menu:



Web move speed can be set to 1,3,6,9 inches per second (IPS) and web fast move speed can be set to 9,12,15,18 IPS.

8

Printing modes

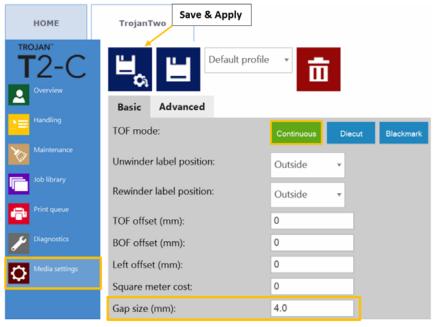
The T2-C press supports three printing modes: Continuous, Diecut, or Blackmark, depending on the format of the applied label material.

Continuous printing mode

- In continuous label material format, the label roll has no pre-cut gaps or pre-printed registration marks (black marks) between the labels.
- To set the T2-C press to continuous printing mode, go to TrojanTwo tab > Media settings
 menu and select the Continuous button in the TOF mode field. Then press the Save and
 Apply button to apply the setting changes.

Note: TOF = Top of Form. The top of form algorithm describes how to detect the top of the next label.

- The currently active TOF mode is displayed in green.
- In continuous mode the label gap/blackmark sensor is not used.
- The gap between the labels can be set in the **TrojanTwo tab > Media Settings** menu.



Because of inter-page actions the printed labels require:

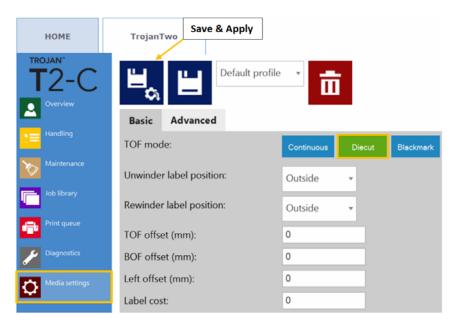
- Minimum 3 mm gap at 6 IPS mode (recommended gap is 4mm)
- Minimum 3 mm gap at 12 IPS mode (recommended gap is 4mm)
- Maximum gap size is 65 mm

Important: Setting label gap outside the minimum and maximum range can result in label skipping or high label gaps.

Die-cut printing mode

- In diecut label material, the labels are pre-cut into shape prior to printing and there are label gaps between the labels.
- To set the T2-C press to Diecut printing mode, go to TrojanTwo tab > Media Settings
 menu and select the Diecut button in the TOF mode field. Then press the Save and Apply
 button to apply the setting changes.

Note: TOF = Top of Form. The top of form algorithm describes how to detect the top of the next label.



• In Diecut mode the built in label gap/blackmark sensor has to be calibrated to each applied label material.

Calibrating the label gap sensor



 AUTOSET - Simply put the gap in view and push and hold the AUTOSET button for 1 second. The AUTOSET LED will remain on when the setup is complete. If the setup is not adequate, the AUTOSET and Output LEDs will flash 3 times. This may indicate a backing material that is too dense to penetrate.

• **UP/DN Adjustments** - The Label Eye sensor has the ability to adjust the setup incrementally. Simply momentarily tap the AUTOSET (UP) button, or LT/DK (DN) button to adjust the sensor to a more stable and repeatable setting. This feature is used when the AUTOSET does not provide the optimum setting initially.

Example: If the label backing material is inconsistent, or the label material has more translucent areas coming into view, then the sensor may need to be adjusted slightly for this rare occasion. Having the ability to fine tune the sensor for changing conditions provides a solution that is easy to implement and simple to understand.

- **Light/Dark** Push the LT/DK button to change output from Dark On to Light On. Output LED turns on when label is in view, or output LED turns on when gap is in view.
- 1 Cut a piece from the liner only (peel off the label from top) and put the piece of liner under the dot at the middle of the LABEL EYE™ text on the sensor, where the small dot indicates the exact position of the sensor beam.
- 2 Keeping the piece of liner under the sensor beam, press and hold the AUTOSET button on the sensor until only the green AUTOSET LED is lit constantly (the red output and the green autoset LEDs will start flashing first and then the red LED goes off and the green LED stays lit if calibration is successful).
- 3 Check detection by moving a label (not gap) into the sensor beam. If sensor is properly calibrated, then the red output indicator LED will go on indicating that the sensor can differentiate between gap and label. When only a label gap (liner) is under the sensor, then only the green autoset LED is lit.
- 4 Repeat the calibration in case you do not see the same result as described in point 3 above.



Label eye sensor for detecting label gaps and black marks. Sensor can be moved manually along the 2 rods (indicated with yellow arrow on picture above).

Because of inter-page actions the printed labels require:

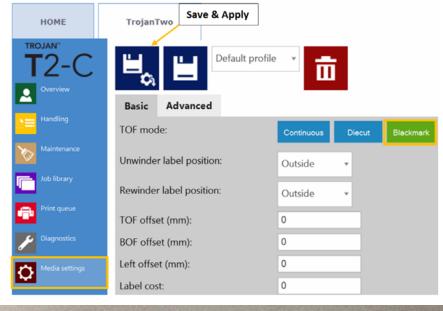
- Minimum 3 mm gap at 6 IPS mode (recommended gap is 4mm)
- Minimum 3 mm gap at 12 IPS mode (recommended gap is 4mm)
- Maximum gap size is 65 mm

Important: Setting the label gap outside the minimum and maximum range can result in label skipping or high label gaps.

Blackmark printing mode

- In blackmark label material, the label material has pre-printed registration marks, so called 'blackmarks' on the label material (can be on front or back side of the label roll).
- To set the T2-C press to Blackmark printing mode, go to TrojanTwo tab > Media Settings
 menu and select the Blackmark button in the TOF mode field. Then press the Save and
 Apply button to apply the setting changes.

Note: TOF = Top of Form. The top of form algorithm describes how to detect the top of the next label.





Example of blackmark label material. Registration marks can be on the front or back side of the label roll.

Calibrating the label gap/blackmark sensor



- AUTOSET Simply put the gap in view and push and hold the AUTOSET button for 1 second. The AUTOSET LED will remain on when the setup is complete. If the setup is not adequate, the AUTOSET and Output LEDs will flash 3 times. This may indicate a backing material that is too dense to penetrate.
- UP/DN Adjustments The Label Eye sensor has the ability to adjust the setup
 incrementally. Simply momentarily tap the AUTOSET (UP) button, or LT/DK (DN) button to
 adjust the sensor to a more stable and repeatable setting. This feature is used when the
 AUTOSET does not provide the optimum setting initially.
 - Example: If the label backing material is inconsistent, or the label material has more translucent areas coming into view, then the sensor may need to be adjusted slightly for this rare occasion. Having the ability to fine tune the sensor for changing conditions provides a solution that is easy to implement and simple to understand.
- **Light/Dark** Push the LT/DK button to change output from Dark On to Light On. Output turns on when the label is in view, or output turns on when the gap is in view.
- 1 Cut a piece from the label material which has a blackmark on it. Then put the blackmark exactly under the middle of the LABEL EYE™ text on the sensor, where the small dot indicates the exact position of the sensor beam.
- 2 Keeping the blackmark under the sensor beam, press and hold the AUTOSET button on the sensor until only the green AUTOSET LED is lit constantly (the red output and the green autoset LEDs will start flashing first and then the red LED goes off and the green LED stays lit if calibration is successful).
- 3 Check detection by moving a label (not blackmark) into the sensor beam. If sensor is properly calibrated, then the red output indicator LED will go on indicating that the sensor can differentiate between blackmark and label. When the blackmark is under the sensor, then only the green autoset LED is lit.

4 Repeat the calibration in case you do not see the same result as described in point 3 above.



Label eye sensor for detecting label gaps and black marks. Sensor can be moved manually along the 2 rods (indicated with yellow arrow on picture above).

Requirements for the format of the blackmarks are the same as for label gaps as blackmarks practically act as label gaps. Due to inter-page actions the printed labels require:

- Minimum 3 mm high blackmarks at 6 IPS mode (height measured according to print direction and recommended blackmark height is 4 mm)
- Minimum 3 mm high blackmarks at 12 IPS mode (height measured according to print direction and recommended blackmark height is 4 mm)

Gap size and speeds

The minimum gap size and print speed have a dependency due to the image processing in the printhead. Therefore, we recommend these minimum gap size settings:

Print speed	Minimum gap size
6 inches per second / 9 meters per minute	3 mm (0.118")
12 inches per second / 18 meters per minute	3 mm (0.118")

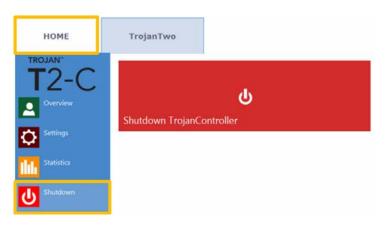
Note: The complexity of the image may also influence this. A very simple bar code image may allow for shortened gap sizes.

The T2-C press will display an error in the 'Error'-field: 'Missed TOF or datapath underrun' if this occurs.

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Shutting down the T2-C press

- 1 Go to the **HOME** tab.
- 2 Press the Shutdown menu.
- 3 Press the big red **Shutdown TrojanController** button.
- 4 Confirm by selecting OK.
- **5** Green info button is displayed. There is no need to press **OK** on that button.
- 6 The machine is shut down when the screen goes blank.



7 Turn off the power switch to the 0 position.

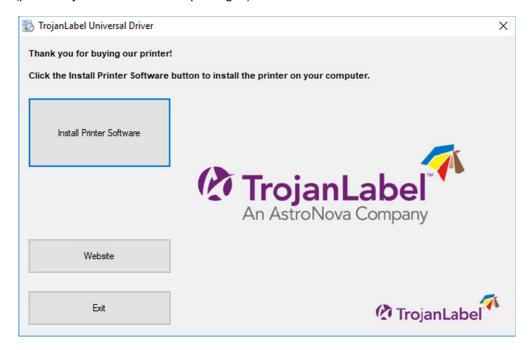


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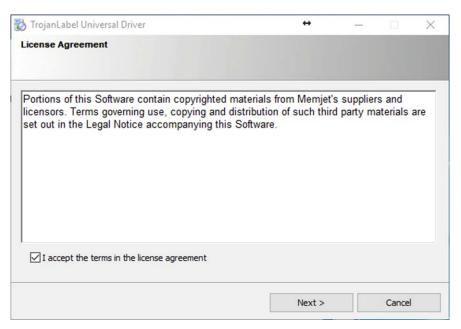
Driver installation and features

Driver installation

- The TrojanLabel Universal Driver can be found on the USB stick supplied with the T2-C package.
- Open the TrojanLabel Universal Driver installer on the user's PC, run **WinSetup.exe** (preferably with administrator privileges) and choose **Install Printer Software**.

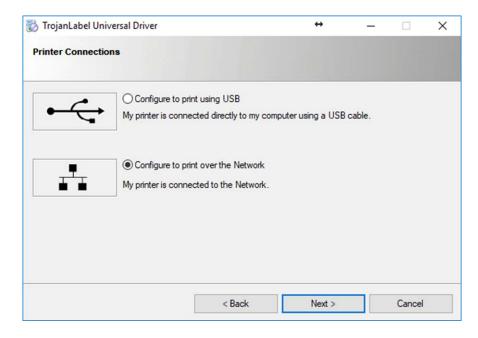


 Select the I accept the terms in the license agreement checkbox and press the Next button to continue.

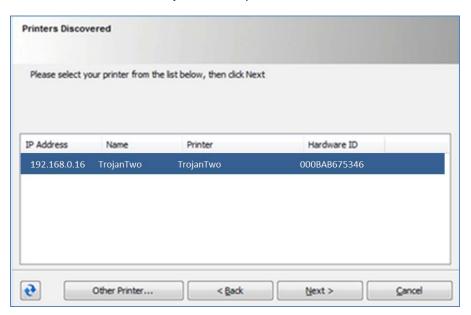


• Select Configure to print over the Network.

Note: USB printing is not supported for the T2-C press.

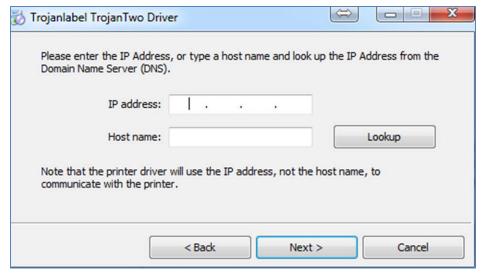


 During the setup process, the installer will detect the T2-C press as a TrojanTwo on the network. Select the detected TrojanTwo and press the Next button to continue installation.



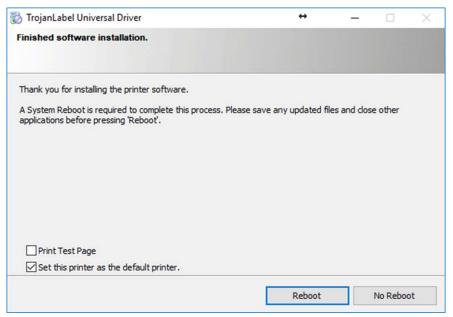
 Depending on Local Network policy there might be occasions when the auto detection of the T2-C press is not working. In this case type the IP address of the machine manually.

Note: The current IP address of the T2-C press can be checked on the touchscreen in the **HOME > Settings > Network** menu.



- You might be asked a couple of times (depending on the Microsoft Windows OS version)
 to give permission to proceed with setup. Press Yes or Unblock each time and wait until
 the progress bar finishes the installation.
- When the installation is finished you might need to restart your PC to make sure that the installation process made all necessary changes in your operating system.
- Print a test page (test page is the regular Microsoft Windows test page set to A4 size sheet).
 Unselect if you do not want to print this out.

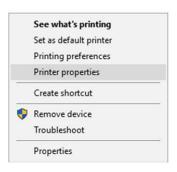
Set this printer as the default printer (the T2-C press can be set as the default printer on the
particular PC meaning that the T2-C will be on the top of the printer list when printing is
selected).



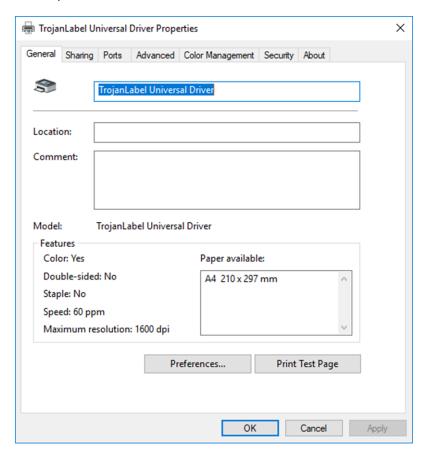
After the driver setup is completed, it is advised to rename the printer device in the driver properties to reflect the model number in case multiple Trojanlabel products are used on the same network.

- Go to Control Panel > All Control Panel Items > Devices and Printers in windows.
- Press right click on TrojanLabel Universal Driver device and select Printer properties...





 Select the TrojanLabel Universal Driver field and rename to Trojanlabel TrojanTwo-Compact:





Installation completed.

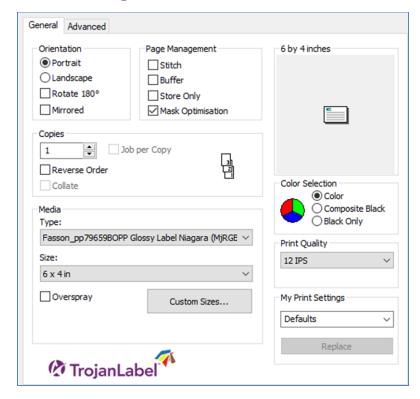
Driver features and functions

• The driver is compatible with Windows XP, Windows Vista, Windows 7, Windows 8, and Windows 10 (both 32bit and 64bit versions).

Important: T2-C driver is not compatible with MAC, Linux, and Android operating systems.

- The T2-C press can print from any software which is able to print from Microsoft Windows environment.
- Handles ICM color profiles (provided by Trojanlabel).

General driver settings



Orientation

Adopts software settings (from Adobe Reader, for example).

- Portrait/Landscape: orientation modes.
- Rotate 180°/Mirrored: these are the only rotation options in this driver.

Note: If the artwork has to be rotated by a different angle than 180°, then this can only be done in the design software.

Copies

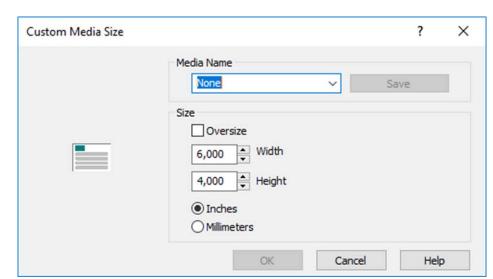
Number of copies times the number of pages in the actual print job.

My Print Settings

Can create and load driver profiles from settings.

Media

Type: List of available color profiles.



Size: Predefined size from the list or custom size.

- Media Name: Save custom size into the profile list.
- **Oversize:** Full bleed printing = oversizing the image by 1mm over the edges when printed. Aspect ratio is locked.
- Overspray: Overspray printed image over the label size by 0.5mm. Does not preserve aspect ratio.

Color Selection

- Color mode (uses CMYK ink to mix colors on labels)
- Composite Black (uses CMYK to mix black color on labels)
- Black Only (uses only black ink for printing black color on labels)

Print speed

- 6 IPS (resolution 1600 x 1600 dpi)
- 12 IPS (resolution 1600 x 800 dpi)

Page Management

• **Stitching:** Stitching images together make one continuous image. This mode is for exceeding the maximum printable label length which is 762mm.

The maximum printable label length is 762mm. If 762mm label height is not enough, then stitching is the workaround option. In practice, create a multi-page PDF where the long image is cut into pieces. This way if stitching option is on, the TrojanTwo press will stick all images from the multi-page PDF together and print it out as one continuous image without gaps between pages.

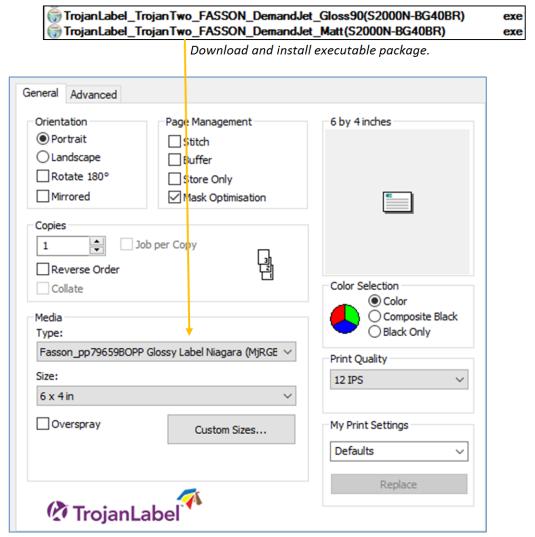
Note: The PAUSE function only works at the mid job maintenance distance in stitch mode. Mid job maintenance distance is set in the **TrojanTwo tab > Media Settings > Advanced** menu. The reason for this is that a stitch job practically counts as 1 page for the firmware no matter how many pages are being stitched.

- **Buffer:** Buffers the whole print job into the user PC's memory before sending it to the TrojanTwo press. This can be useful when the hardware of the user PC (where the driver is installed) is not powerful enough to generate the print stream in real time. Especially for large print jobs with variable data.
- **Store only:** Sends and stores the selected print job into the T2-C press Job Library without actually printing. The stored job can be printed later from the Job Library menu in the T2-C touch screen.
- Mask Optimisation: Mask Optimisation is a facility that switches between two different
 methods of image processing, affecting how an image is processed and printed. By
 default, Mask Optimization is selected to make sure that it optimizes the image
 processing for the majority of the printing applications used by the end users. However,
 for some users (particularly those using FlexMail), printing artifacts appear in the
 output. If this happens, the user should deselect 'Mask Optimisation' to correct this
 issue.

Integrating additional color profiles

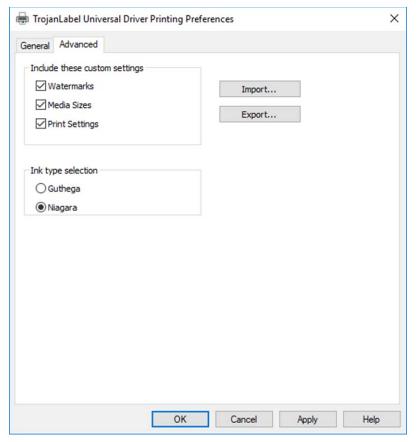
- Color profiling is done on demand by Trojanlabel.
- Color profile installer packages are available at official Trojanlabel distributors or from Trojanlabel.

Installing additional color profiles



Installed color profiles are available in media type list after installation.

Advanced settings



• Import/Export buttons: Can import or export media sizes and print settings between driver installations. The export feature can save all media sizes and print settings profiles into a file. The import feature can import media sizes list and print settings profiles from a file that is exported from another driver installation.

Ink type selection:

Niagara (by default)

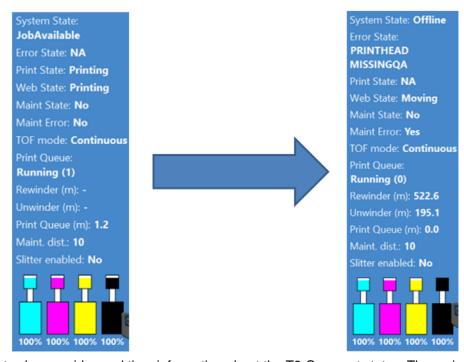
Guthega

Important: All T2-C presses are running on Niagara type inks. Guthega is a different type of ink and must not be selected for T2-C installations. As this is a universal driver, selecting Guthega ink is for other Trojanlabel products which are running on Guthega type inks (like QL240, T2 and T3 etc.).

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User Interface (UI)

Right side status bar



The status bar provides real time information about the T2-C current status. The main points are:

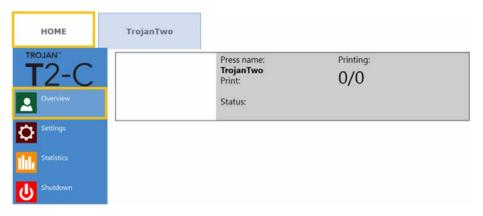
- System State: The machine is only ready to print if the system state is 'ONLINE'. Other system statuses can be 'JobAvailable' (when print job(s) are loaded to the print queue), 'Maintenance Busy' (when the printer is doing maintenance) or 'Offline' (if no printhead is installed or if there is an error state).
- **Error state:** Displays a certain error message if there is an error state. See "Troubleshooting" on page 117. NA = Not Available if there is no error state.
- **Print state:** 'NA' if the T2-C is in the idle state, 'Printing' if the T2-C is printing and 'Pause' if current print job is paused.
- Web state: Displays the current status of the web path system. It is 'Ready' when tension
 is calibrated and web path system is ready to print, 'Not Calibrated' when tension is not
 calibrated, 'Moving' when the label web is moving, 'Printing' when machine is printing and
 'Paused' if the current print job is being paused or mid job maintenance is occurring during
 printing.
- Maint state: 'Yes' when there is maintenance occurring or 'No' when there is no ongoing maintenance.
- Maint error: 'Yes' when there is an error with the maintenance or 'No' if there is no problem.

- **TOF mode:** Displays current TOF mode set in the **TrojanTwo tab > Media Settings** menu. Can be 'Continuous', 'Diecut' or 'Blackmark'.
- **Print queue:** Displays the current print queue status. Can be 'Running (x)' or 'Paused (x)' where x is the number of jobs pending in the print queue.
- Rewinder (m): displays the length of the label material in meters currently on the rewinder.
- Unwinder (m): Displays the length of the label material in meters currently on the unwinder.
- Print queue (m): Displays the total length of the print job(s) pending in the print queue.
- Maint. dist.: Displays the mid job maintenance distance set in the TrojanTwo tab > Media
 Settings > Advanced menu.
- Slitter enabled: 'Yes' if slitter option is enabled, 'No' if slitter option is disabled. Slitter can be enabled/disabled in the **TrojanTwo tab > Media Settings > Advanced** menu but only if the current TOF mode is set to Diecut. See "Using the built in slitter for the T2-C press" on page 95.
- **Ink levels:** Displays ink levels in ink tanks and reservoir ink tanks. Also indicates movement of the ink when reservoir tanks are being refilled from the ink tanks.

General settings (HOME tab)

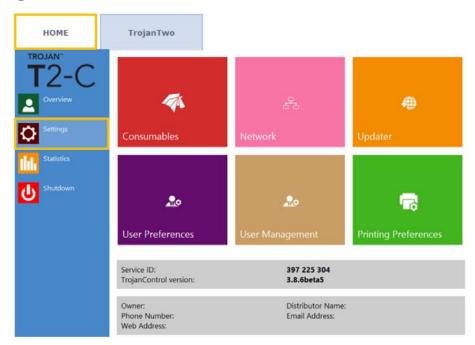
Overview menu

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 T2-C press. Based on the service ID, the Trojanlabel 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 is the base of ink cost/label calculation in the statistics menu. See "Statistics menu" on page 72. The actual price of a 2 Liter ink tank should be typed here.

Note: The ink price displayed above is for illustration only. Actual prices can vary in different regions and based on selected business models.

• **Print head price** when entered is also included in cost/label calculation in the statistics menu. See "Statistics menu" on page 72.

Print head life time is theoretical value given in milliliters, which can be included in
cost/label calculation as well. The value entered here represents the printed ink volume
until a planned printhead change.

Example: Planning to print 3000 ml ink with the currently installed printhead. This way an expected amortization is also calculated with the cost/label calculation.

Important: Every time when you change a setting press the blue 'Save' button to apply the changes.

Network Button



- Select Use DHCP checkbox to acquire IP address for the T2-C press from the local network (as long as DHCP mode is selected, the T2-C press ignores any static IP settings).
- Current IP address field displays the current IP address of the T2-C press on the local network
- Uncheck Use DHCP checkbox when local network policy recommends using a 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: Every time you change a setting press the blue **Save** button to apply the changes.

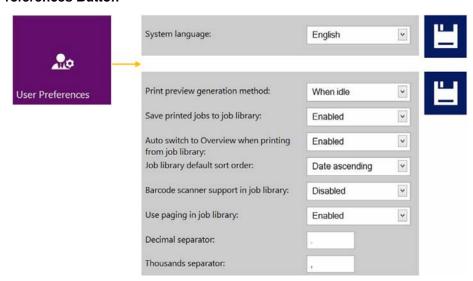
Updater Button



- By default for system updates the Alternative update URL field has to be empty. See "Updating software and firmware" on page 91.
- Press the green **Download** button to download updates if available.

Important: Every time you change a setting 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.

Print preview generation method:

When idle (default): Creates one preview thumbnail image from the first image in the actual print job when the print job arrives, then the job is printed out. Previews for subsequent labels are created later in the background when the system is in the idle state.

Instantly: Creates preview images from all images in the actual print job when the print job arrives, then sends the job to print when finished with image creation.

Never: No preview.

The preview is available in the Job Library. See "Job Library menu" on page 81.

Warning: When preview generation is set to **Instantly**, it greatly increases the transfer time of large print jobs due to generating a preview image for every page in real time. This is demanding for the CPU and can also cause Data Path Underrun errors when large variable data jobs are sent.

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 have already been 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.

• Barcode scanner support in job library: Enabled/disabled.

When barcode scanner support is enabled, the search filter in Job Library menu will be active and only accepts input from a connected Barcode scanner (the virtual keyboard is disabled on screen) when searching for job names. See "Job Library menu" on page 81.

Note: Rename print jobs to match with barcode input to make this function work.

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.

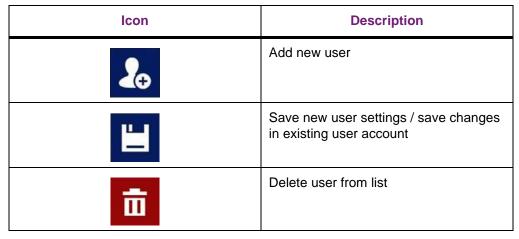
- Decimal separator: User can define separator for displaying decimals in the user interface.
- Thousands separator: User can define separator for displaying thousands in the user interface.

User Management button



 By default user management is not enabled, therefore every function of the T2-C press 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.







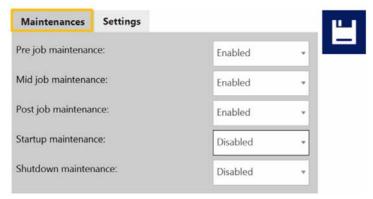
Important: The default password for the admin user is 123.

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





Maintenances tab

• Pre job maintenance: Enabled/Disabled.

When disabled there is no printhead maintenance before printing.

Mid job maintenance: Enabled/Disabled.

When disabled there is no printhead maintenance during print jobs.

Post job maintenance: Enabled/Disabled.

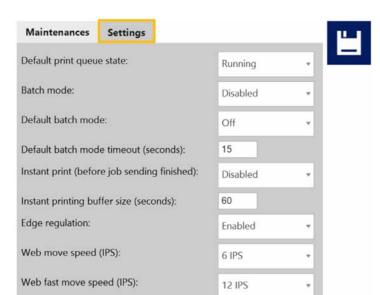
When disabled there is no printhead maintenance after print jobs.

• Startup maintenance: Enabled/Disabled.

When disabled there is no print ead maintenance when the machine starts up.

• Shutdown maintenance: Enabled/Disabled.

When disabled there is no printhead maintenance when the machine is shutting down.



Important: Every time you change a setting press the blue **Save** button to apply the changes.

Settings tab

Default print queue state:

Running: (Default) 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. See "Print Queue menu" on page 84.

Paused: The print queue is paused when machine starts.

Default batch mode:

Note: Batch mode means that the T2-C press is waiting for a certain period of time and batches the print jobs sent during the batch mode timeout. Batched print jobs are merged into 1 print job and printed out at once. Batched print jobs show up as 1 print job in statistics.

Off: (default) Batch mode is switched off by default.

On: Batch mode is on.

Default batch mode timeout (seconds):

If batch mode is on, the press is waiting for the print jobs to be sent until the timeout interval expires. All print jobs sent during this timeout period will be merged into 1 print job and printed out at once when the timeout expires.

• Instant print (before job sending finished): Enabled/Disabled.

Note: This function only works when printing from the optional Trojan Print Processor (TPP) software and not from the regular T2-C driver.

When disabled the T2-C press buffers the whole print job which is being sent to the press via the driver before actually starting to print.

When enabled the T2-C press starts printing right after buffering X seconds of print stream (buffering time is set at next menu point).

- **Instant printing buffer size (seconds):** Timer set for buffering when Instant print option is enabled.
- Edge regulation: Enabled/Disabled.

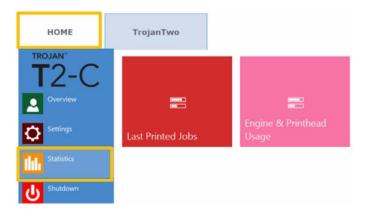
When disabled, the label edge sensor is not used.

Note: Label edge sensor is for physical alignment of the label web. Moving the label edge sensor results in aligning the left edge of the label web physically throughout the paper path for perfect roll up on the rewinder.

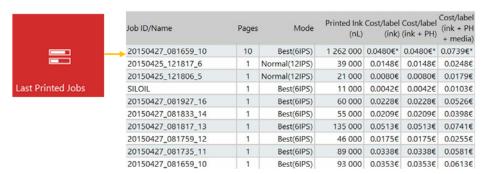
- Web move speed (in IPS): Defines the movement speed when using the Forward/Backward Web buttons in the Handling menu. See "Handling menu" on page 77. Speed can be 1,3,6,9 inches per second (IPS).
- Web fast movement speed (in IPS): Defines the movement speed when using the Fast forward/backward buttons in the Handling menu. See "Handling menu" on page 77. Speed can be 9,12,15,18 inches per second (IPS).

Important: Every time you change a setting press the blue **Save** button to apply the changes.

Statistics menu



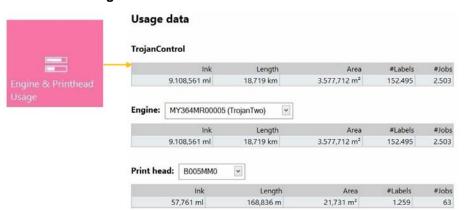
Last Printed Jobs Button



- 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 in the 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 in the 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 in the HOME > Settings > Consumables menu and in addition media price given in the TrojanTwo tab > Media Settings menu. See "Media Settings menu" on page 86.
- **Job ID/Name** is the name of the actual print job in the Job Library. A unique name can be specified instead of random numbers in Job Library. See "Job Library menu" on page 81.

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. See "Maintenance menu" on page 79.



Engine & Printhead Usage Button

- **TrojanControl:** Total statistics for the T2-C press 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 connected to the T2-C press. All connected printhead 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 at the certain T2-C press is displayed as an empty record.

Note: Printhead usage data is the total usage in the particular T2-C press. It does not include usage history from usage data on other T2-C presses if the particular printhead has been used in multiple machines.

Shutdown



Shuts down the T2-C press 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 the 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 TrojanTwo 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. The shutdown process may take 1-2 minutes.

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

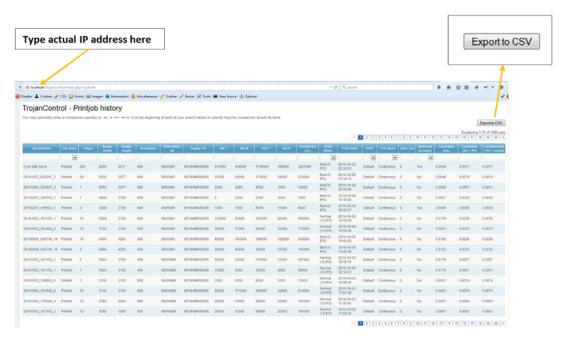
Statistics data from the **HOME > Statistics** menu can be exported and saved into a CSV file from a user PC which is connected to the same network as the T2-C press.

Actual IP address of the T2-C press can be set or acquired in the HOME > Settings > Network menu. See "Settings menu" on page 65.

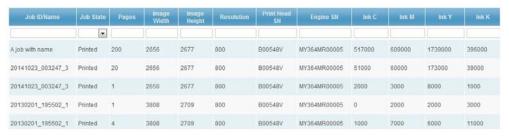
Current IP address: 192.168.0.31

Note: The IP address shown above is an example only. The actual IP address is local network dependent and can always be checked in the **HOME > Settings > Network** menu.

Type the actual IP address of the T2-C press into a browser at a user PC:



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



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

T2-C press handling menus (TrojanTwo tab)

Overview menu



Overview menu when the T2-C press is printing.

Icon	Description
>11	Pause/Resume print job
	Stop/Cancel print job

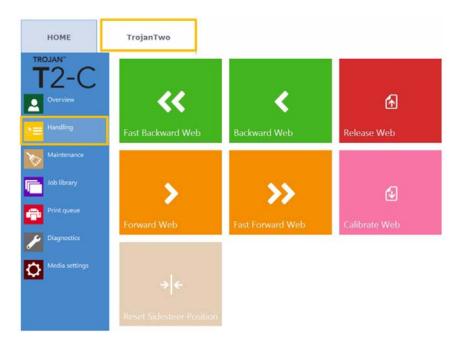
- Information from currently printed job, including:
 - Preview image of the label which is being printed at the moment
 - Label counter
 - Name of print job in Job Library

• Shows Print Queue state and Stop/Clear Error button when machine is in idle mode.



Handling menu

The Handling menu includes all the web path related actions.



Backward/Forward Web Button

Moves the label web backward/forward. The movement speed is defined in the **HOME > Settings > Printing Preferences** menu. See "Settings menu" on page 65.

Fast Backward/Forward Web Button

Moves the label web fast backward/forward. The movement speed is defined in the **HOME** > **Settings** > **User Preferences** menu. See "Settings menu" on page 65.

Note: When using the web moving buttons in the top row, the screen switches to the Stop Web button instead of forward/backward buttons until web movement is stopped.



Release Web Button

Releases tension on the label web, allowing users to change label roll.

Calibrate Web Button

Calibrates and sets proper tension for the label web.

Note: Printing only starts when the web status is Ready (calibrated) in the right status bar. See "Right side status bar" on page 63.

Reset Sidesteer Position Button

Moves the unwinder core to the default horizontal position. This function is needed when a new label roll is loaded onto the unwinder core to align the label edge and label edge sensor to the printhead's left edge. See "Adjusting the label edge sensor" on page 35.

Note: This function is only active when the web state is **Not Calibrated**. Otherwise the button is grayed out and inactive.

Maintenance menu



Wipe Printhead Button

The maintenance module performs printhead wiping 3 times to clean the surface of the printhead.

Light Clean Button

Additional maintenance routine for fixing fine streaks and for cleaning the printhead surface. Takes about a minute. Can be run multiple times. Advised to use when automatic maintenance routines and ink circulations are not enough.

Medium Clean Button

Additional maintenance routine for fixing streaks, spitting ink through the nozzles and for cleaning the printhead surface. Takes about 2-3 minutes. Heavier form of Light Clean. Advised to use when automatic maintenance routines, ink circulations and Light Cleanings are not enough to recover print quality. Usually when medium clean is needed, it is the sign of the particular printhead is getting aged and near the end of life.

Heavy Clean Button

Additional maintenance routine for fixing serious streaks and printhead nozzle dehydration. Heavy cleaning takes about 5 minutes. Only advised to use when Medium clean does not prove to be enough to recover print quality. Heavy cleaning creates a significant amount of waste ink. Usually when heavy cleaning is needed, it is a sign that the installed printhead has reached end of life or the printhead nozzles are heavily dehydrated.

Release Printhead Button

Opens the printhead latch to be able to install/replace the printhead physically.

Insert Printhead Button

Primes the newly inserted printhead with ink.

Note: Priming the printhead with ink may take several minutes.

Note: During first time installation, the printhead priming does not begin until the reservoir tank ink levels are high enough. Pressing the Insert Printhead button might be required 2 times to prime the printhead with ink in this case.

Home Maintenance Module Button

Moves the maintenance module into the home position. Maintenance module slides out from below the printhead. When maintenance module is in the home position it can be inspected/cleaned and the wiper roller, cap module can be replaced.

Warning: It is not advised to keep the maintenance module in the home position for a long period of time as the printhead is not protected and can dehydrate quickly when the maintenance module is not protecting the printhead.

Install Maintenance Module Button

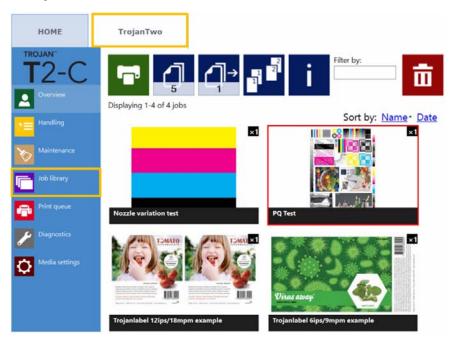
Moves the maintenance module back to the installed position (under the printhead). The printhead is only protected properly when the maintenance module is in this position.

Circulate Ink Button

Circulates ink in the system to purge air bubbles. This function does not create waste ink and can be run as many times as needed. One ink circulation cycle takes a few seconds only.

Note: Ink circulation is a very useful function and can help to get rid of fine streaks generated by air bubbles which might be blocking some printhead nozzles. It takes less time than Light Cleaning.

Job Library menu



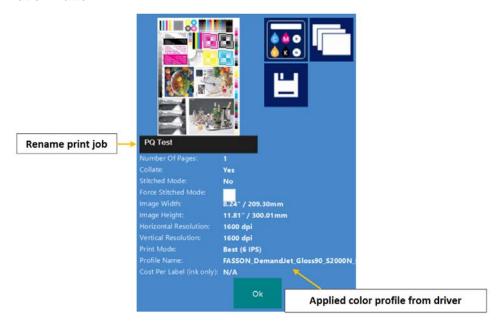
- Stores 30 printed jobs with random job names by default (print streams uploaded from driver).
- **Print jobs can be renamed:** Renamed print jobs are stored beyond the default 30 with random names. Only the drive space is the limit for storing jobs. Renaming can be done in the information window. See picture below.
- Remembers last visited page and job when returning to the Job Library menu.
- Any stored print job can be selected by tapping it and can be printed any time from the Job Library. The selected job is highlighted with red.
- Can swipe on the touchscreen or use the scroll bar for paging when paging is enabled in the HOME > Settings > User Preferences menu. See "Settings menu" on page 65.

Icon	Description
	Print selected print job
5	Number of copies
△ →	Print from a certain page number

Icon	Description
	Collate options
	Describes the printing order when printing a multi-page file:
	Copies of a page are printed one after the other within a print job.
	Copies of pages are printed in sequential order within a print job.
i	Information from selected print job
亩	Delete the selected print job

Example: The number of copies is set to 1000, but the user wants to print from page 560 to 1000. Then the value 560 should be set for the print from certain page number field.

Information Button



Icon	Description
	Pressing this button will simulate printing (actual printing is not required) and calculate the pure ink cost of printing 1 label from the particular print job. The base of the calculation is the ink tank price for a 2L ink tank (from the HOME > Settings > Consumables menu) and the estimated ink consumption for printing 1 label.
	View preview images for the particular print job

- Rename print job: Tap on the black field with the name of the actual print job to rename it. Giving a unique name to a print job ensures that the particular print job will not be deleted until the user wants to delete it. By default the new print jobs will get a random name from the system with the date of sending and a random serial number. Only 30 print jobs can be stored from these randomly named print jobs. The 31st randomly named job will delete the 1st randomly named print job (FIFO system). The reason for this is that it is assumed that until a print job is renamed, it can be very much for testing only. However when renamed, the user confirms that the particular print job is not for testing but to print as a production batch.
- **Applied color profile:** The color profile applied in the driver when the job was sent. See "Driver features and functions" on page 57.

Force Stitch Mode checkbox: Normally Stitch mode can be enabled from the T2-C driver. See "Driver features and functions" on page 57. However enabling the stitch mode checkbox will create a stitch mode job from the actual print job when printed. This function is useful when the job was sent from a RIP software where the stitch mode option is not available.

Note: Press the save button when name of the print job is changed or when the force stitch checkbox is selected to save the changes.

Print Queue menu



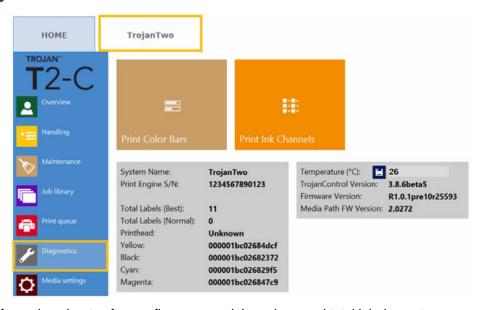
- Print jobs are queued progressively as they are sent and processed in a FIFO (first in first out) system. The queue can be managed from the Print queue menu.
- The print queue is stored even if the T2-C press is restarted.

Note: The currently printing job in the queue cannot be deleted.

Icon	Description
	Pause/Resume Print Queue button While a 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 always displayed in right side status bar. Print Queue: Running (0) Print Queue: Paused (2) The number in () indicates the number of print jobs pending in the print queue.

Icon	Description
i	Information button Same as in Job Library. See "Job Library menu" on page 81.
	Batch Mode on/off Batch mode means that all print jobs sent within a defined timeout period will be merged into 1 job and will be printed at once when the timeout expires. The timeout counter begins when batch mode is switched on. When the timer expires, a new print job appears in the print queue and Job Library, which includes all the jobs that were sent during the timeout period. Bath mode timeout: Period of time in seconds while jobs are merged together when batch mode is on.
亩	Delete the selected print job

Diagnostics menu



• Information about software, firmware, serial numbers and total label counter.

• **Temperature:** Adjusting ink temperature to room temperature for the best print quality. The average temperature of the room where the T2-C press is set up is displayed in the temperature field based on the feedback of the built in temperature sensor. Heating the ink right before printing will be adjusted to the environmental temperature. This field is filled automatically based on the temperature sensor but can be overwritten by the user.

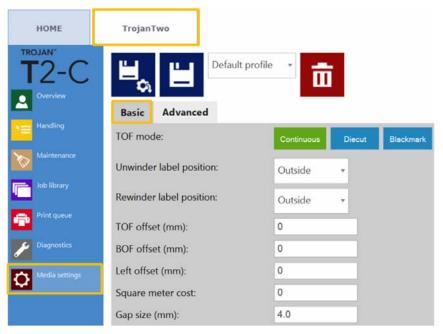
Note: User defined temperature value remains valid only until the next reboot.

- Color Bars: Standard color bars for checking printhead nozzles, mixes CMYK colors (A4 size).
- Ink Channels: Printing a color bar with each ink channel, no ink mixing (CMYK A4 size).

Important: The ink channels test plot is the best diagnostic tool to verify the current state of the printhead nozzles. If there is any blocked/dehydrated nozzle or other nozzle defect, then this can be clearly seen on this diagnostic page.

Media Settings menu

Media Settings Basic



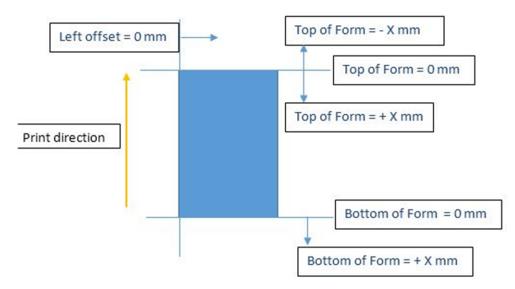
• **TOF mode:** TOF (Top Of Form) has to be set according to the applied label media type: **Continuous** (continuous roll, no gaps between labels).

Diecut (gaps between labels, the labels are pre die-cut on the liner).

Blackmark (pre-printed blackmarks on the media, blackmarks can be outside or inside on the roll).

- **Unwinder label position:** Inside/Outside. Unwinder is rotating according to printing inside or outside of the label roll.
- Rewinder label position: Inside/Outside. Rewinder is rotating according to printing inside or outside of the label roll.

- TOF offset (mm): Top Of From (top of label) can be +/- depending on moving the top of the image up or down on label. NOTE: limits -160mm to +160mm
- BOF offset (mm): Bottom of Form (bottom of label) can be +/- depending on moving the bottom of the image up or down on label. NOTE: limits 0mm to 100mm
- Left offset (mm): Move printed image towards left or right compared to the left edge of the printhead. NOTE: limits -127mm to 222mm



- Square meter/Label cost: Price of one label for die cut material. Square meter price for Continuous and Blackmark label material. Used for total cost/label calculation. See "Statistics menu" on page 72.
- Gap size: Setting the gap size between printed labels.

Note: Maximum gap is 65mm.

Note: Gap size field is only displayed if TOF mode is continuous. In diecut and blackmark modes, the label eye sensor detects the label gaps/blackmarks.



Media settings in blackmark mode.



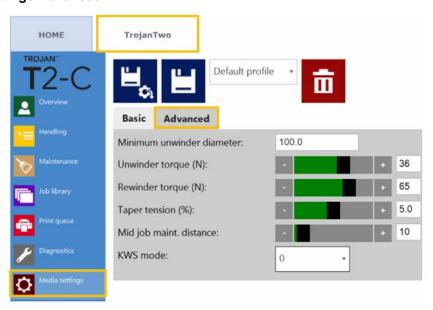
Media settings in diecut mode.

Important: There is a minimum gap required to be able to print in continuous mode! See "Gap size and speeds" on page 50.

Setting the gap size to 0mm in continuous mode will result in an error state. For gapless printing use the stitch mode option. See "Driver features and functions" on page 57.

Icon	Description
ا	Save and apply
	Save settings to a media profile
亩	Delete a media profile
Default profile 🔻	Media profiles list

Media Settings Advanced



- Minimum unwinder diameter (mm): When roll diameter reaches the minimum unwinder diameter value, the printing will be paused and new label roll can be loaded and spliced. This sensor setting is to avoid running out of label material during a print job.
- Unwinder torque (N): Tension for the unwinder. Minimum value is 10, maximum value is 50.
- **Rewinder torque (N):** Tension for the rewinder. Minimum value is 10, maximum value is 85.

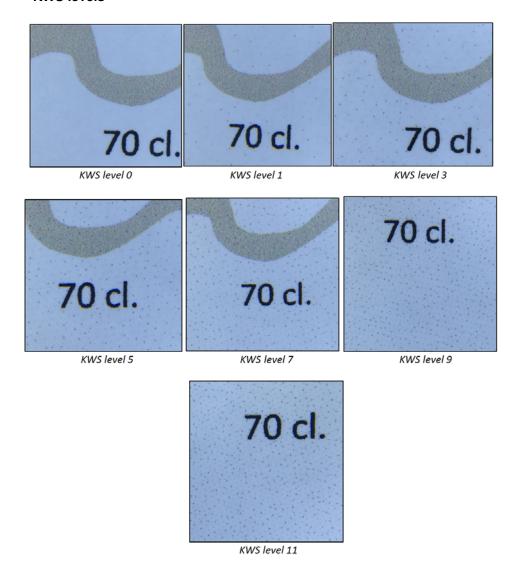
- Taper tension (%): In winding systems, decreasing the unwinder tension while the
 rewinder radius increases is called taper tension control. This makes unwinder tension
 tighter while releasing some tension from the rewinder as the rewinder roll diameter
 increases, thus avoid slipping of the label media. Minimum value is 0%, maximum
 value is 10%. Recommended is 5%.
- Mid job maintenance distance (m): Setting mid-job maintenance frequency in printed linear meters. Mid-job maintenance is a full printhead maintenance during processing a print job to preserve the best print quality.

Note: Actual value is always displayed in the status bar on the screen.

• KWS mode: KWS = Keep Wet Spitting.

KWS is a function to protect the 70,400 printhead nozzles from dehydration. In practice it means that during printing all nozzles fire some ink, even the nozzles which do not take part effectively in printing. As a result, tiny (almost microscopic) dark spots of ink can be seen on printouts, especially when the background of the printed image is light in color. When those tiny spots are not acceptable from a print quality point of view, this function can be reduced or switched off completely.

KWS levels



Warning: The degree of KWS has an effect on printhead life. The higher the KWS level is set the more protection the printhead gets against dehydration of nozzles. ALTHOUGH switching KWS off (0) does not result in loosing warranty for the printhead, it is still advised to enable KWS and set it to a level where the small dots are still acceptable in terms of print quality.

12

Updating software and firmware

Trojanlabel is regularly updating the Trojan Control interface and the firmware for the T2-C press. Each time when a new update is available a newsletter or a technical bulletin is sent out to customers.

- If an Internet connection is available for the T2-C press, then updating is done over the Internet by just pressing the download button and going through the installation process.
- If an Internet connection is not available for T2-C press directly, then an offline update package can be downloaded from our extranet site and updating can be done via the local network.

Updating via the online updater

The updater option can be found in the **HOME > Settings > Updater** menu in the Trojan Control interface. Actual software version can also be checked in the **HOME > Settings** menu.



- 1 Make sure the T2-C press is connected to the Internet.
- 2 Make sure that the Alternative update URL field is empty.

Note: The **Alternate update URL** field is reserved for customized updates and for offline updating.

3 Press the green download button.

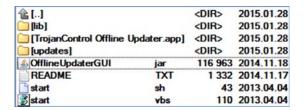
- 4 Installation starts automatically.
- 5 Press the **NEXT** button when asked during the installation.
- 6 Check Trojan Control version number after installation.

Note: The Trojan Control may restart several times during the update process.

7 After updating the Trojan Control interface the updater detects the current firmware version and will start updating the firmware when needed.

Updating via the offline updater

- 1 The actual offline updater package can always be downloaded from the Trojanlabel extranet site or acquired from the official Trojanlabel reseller.
- 2 Copy and unzip the updater package on a user PC which is connected to the same network as the T2-C press.
- 3 Double click on OfflineUpdaterGUI.jar to start the update server.



4 The update server window will open. The window should be left open as long as the update is going on.



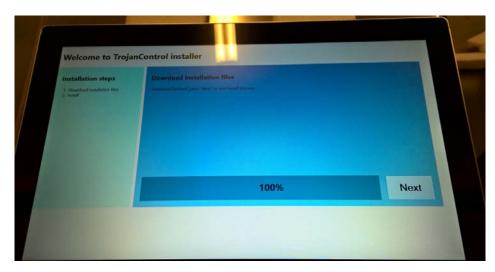
5 The update server will provide an update URL (usually with the IP address of the certain user PC).

Type the update URL into the **HOME > Settings > Alternate update URL** field and press the save button:



- 7 Press the green download button.
- 8 Installation starts automatically.
- 9 Press the NEXT button when asked during the installation.

The update will appear similar to the following illustration of the TrojanTwo update process.



10 Check the Trojan Control version number after installation.

Note: The Trojan Control may restart several times during the update process.

11 After updating the Trojan Control interface the updater detects the current firmware version and will start updating the firmware when needed.

13

Using the built in slitter for the T2-C press

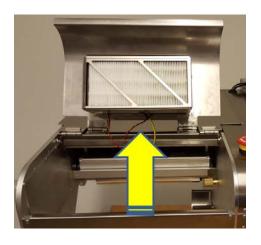
Purpose

The T2-C press has a built in, in-line slitter that works perfectly with die cut label material. Slit up to four (4) rolls, with the three (3) easy to replace oscillating blades that ensure long life time and perfect cuts. The blades can be placed in any position or moved to the side when not in use.

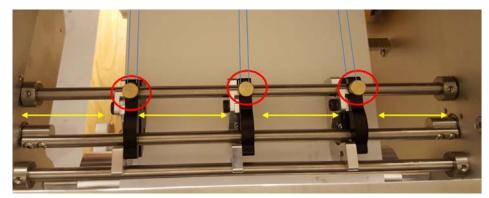
Usage

Important: The built in slitter blades can only be used with pre-diecut label material. Therefore the slitter can only be enabled if TOF mode is set to diecut in the **TrojanTwo tab > Media Settings** menu.

- 1 Thread the diecut label roll throughout the web path of the T2-C press. See "Loading the label material" on page 29.
- 2 Load matching cardboard paper cores onto the rewinder shaft according to how many rolls are to be slit (max. 4).
- 3 Open the back lid all the way up on the T2-C press to gain access to the slitter blades.



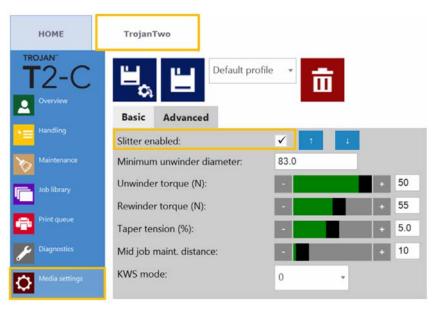
4 Move the slitter blades manually to the position where you want to slit the rolls along the pre-diecut lines on the label roll.



- The blades which are currently not intended to be used can be pulled on the sides.
- Turn the brass knob (marked with a red circle on above picture) clockwise to tighten a blade into position and counter-clockwise to loosen and move it.
- Blue lines indicate the pre-diecut lines where the slitter blades will slit the roll.

Note: On above picture it is a continuous roll loaded, but imagine the blue lines as pre-diecut lines, where only the liner is going under the slitter blades.

5 Enable the slitter blades in **TrojanTwo tab > Media Settings > Advanced** menu by selecting the **Slitter enabled** checkbox and pressing the **Save and Apply** button.



- The slitter blades will move down into the cut position when the **Save and Apply** button is pressed and slitter is enabled. Also 2 additional buttons will appear to be able to move the slitter blades up or down to check the cutting position and adjust blades position up or down if needed.
- 7 Start printing and slitter blades will start cutting as soon as the media starts moving.

8 Disable the slitter blades (blades will move up) when printing is done to be able to remove the finished rolls. Slitter blades can be disabled in TrojanTwo tab > Media Settings > Advanced menu by unselecting the Slitter enabled checkbox and pressing the Save and Apply button.

Caution: Beware of the oscillating blades during printing! Touching the blades during operation can result in serious injury.

Replacing the slitter blades

The blade for the slitter is a consumable and needs to be replaced when the blade wears and edges are no longer sharp.

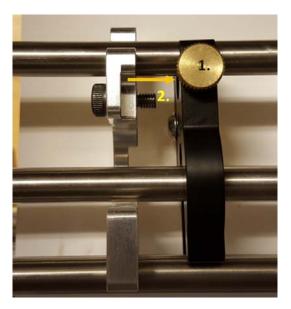
Part number for the slitter blade is: 10000036 Blade set (6 blades), type: LUTZ 0700.0400.



- 1 Open the lid on top of T2-C press to gain access to the slitter blades.
- 2 Loosen the screw for the slitter bracket using a hex key size 2.5.



Loosen brass finger screw that fixes the blade holder bracket (1.) and remove the blade holder (2.).



4 Remove the 2 screws that fix the blade onto the blade holder using a hex key size 2.5.





- 5 Take off the old blade and replace with a brand new blade.
- 6 Fix the new blade with the 2 screws (see step 4 above for screws).
- 7 Attach the blade holder bracket back to where it was and fix it with the screw (see step 3 above).
- 8 Replacement is done. Close the lid.

1 1 Maintenance

Regular cleaning/checking tasks

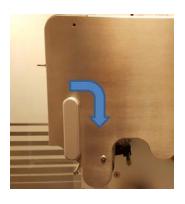
Cleaning the NIP roller

The NIP roll assembly includes a rubber roller (NIP clamp) and a metal roller that the label material is sitting on. Based on weekly visual checking it is recommended to clean these rollers when they look dusty/dirty.

1 Open top left lid on the T2-C press to gain access to the NIP roller and clamp.



2 Open the NIP clamp latch, so the NIP metal and rubber roller can turn freely.



3 Wipe the dust and debris off with a wet lint free cloth from the rubber and metal rollers.



NIP clamp rubber roller marked with an arrow.



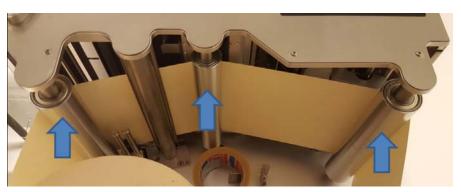
NIP metal roller marked with an arrow.



Use a wet lint-free cloth and roll the NIP roller to wipe off dust from all over the surface.

Cleaning other rollers

Visually inspect all other metal rollers throughout the web path and use a wet lint-free cloth to wipe the ink/dust off from each roller. Remove the label web from the web path if needed to gain access to all rollers.





Wipe each roller using a wet lint-free cloth.

Emptying the waste ink bottle

Maintenance routines which protect the printhead produce some waste ink. This waste ink goes into the waste ink bottle. The waste ink bottle is located inside the machine cabinet and can be accessed through a drawer on the left side of the machine.

Important: It is advised to check the waste ink bottle at least on a weekly basis and empty it regularly. It might need to be checked/emptied more often when printing high volumes.

1 Remove the 2 screws that lock the drawer of the waste ink bottle on the left side of the machine.



Note: The drawer does not have to be locked with the 2 screws during everyday usage. However it is advised to put these screws back during transportation or when the machine is moved to another location in-house.

2 Pull the drawer out to gain access to the waste ink bottle.



3 Unscrew the cap of the waste ink bottle carefully and dispose of the waste ink.

Warning: The ink might be considered as Hazardous Waste in some countries. Make sure you fill the waste ink from the bottle into a separated tank and disposal is done according to the local regulations!

However in other countries, the Trojan ink is not considered as hazardous waste and can be disposed down the drain.

Material Safety Data Sheets (MSDS) for the Trojan ink can be downloaded from the Trojanlabel extranet or acquired from the local partners.

Replacing the wiper roller

The wiper roller (microfiber roller) is a consumable and a wear part. It needs to be replaced when it wears down.

It is advised to change the wiper roller at least after every 6 months.

The wiper roller may need to be replaced in the following situations:

- If the surface of the wiper roller looks shiny and not 'fluffy' anymore, then the wiper roller is worn down and needs replacement.
- If the printhead wiping routines (like wipe printhead or light/medium/heavy clean) do not improve print quality and fine streak(s) remain on the printouts after the routines have been run multiple times.
- If ink puddles remain on the printhead surface after a wipe printhead maintenance.

Part number	Description
10003356	T2 Wiper Roller Gen 2 (Micro Fiber Roller)

Required equipment:

- · Rubber gloves
- · Distilled water
- · Lint-free cloth
- 1 Open the top left side lid on the machine.



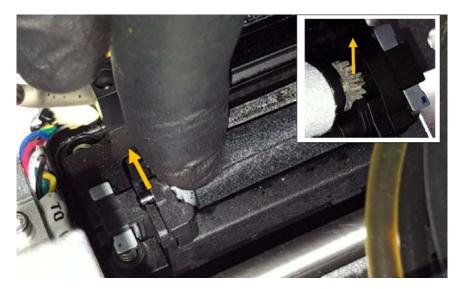
2 Press the **Home Maintenance Module** button in the **TrojanTwo tab > Handling** menu to gain access to the wiper module.



The maintenance module slides out from under the printhead. The wiper roller is indicated below with an arrow.



Detach and remove the used micro fiber roller (MFR).Unclick and pull the micro fiber roller out from under the plastic latch.



On the right side where there is a gear mounted to the micro fiber roller, just lift out the gear from the wiper motor gear house.

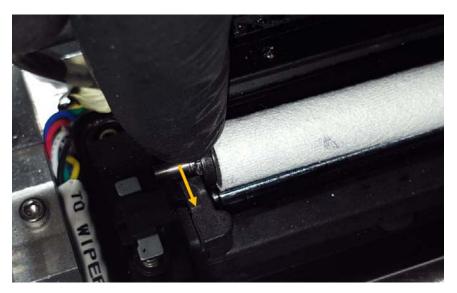


4 Install the new wiper roller

Fit the gear on the right end of the micro fiber roller onto the proper place from above. The gear has to fit to the gear of the wiper motor.



Push the axis of the micro fiber roller under the plastic latch until it clicks onto the right place.



5 Press the **Install Maintenance Module** button in the **TrojanTwo tab > Maintenance** menu to move the maintenance tray back into the proper position where it protects the printhead.



Manual printhead wiping

The manual printhead wipe has 3 functions:

- Cleans the printhead nozzle surface of waste ink, dust, debris and particles.
- Prevents dehydration of the printhead nozzles.
- Forms a wet film layer on the printhead nozzle surface, thus creating a vacuum and helps to prevent air bubbles blocking some nozzles.

It is advised to perform a manual printhead wipe at least once a week.

Warning: Only use distilled or de-ionized water for cleaning the printhead! Never use any chemicals or alcohol for cleaning/wiping the printhead! Chemicals and alcohol will damage the printhead nozzles.

Required equipment:

- · Rubber gloves
- · Distilled water
- Lint-free cloth
- 1 Open the top right side lid on the T2-C press to gain access to the print engine.



2 Press the **Home Maintenance Module** button in the **TrojanTwo tab > Handling** menu to gain access to the printhead from below.



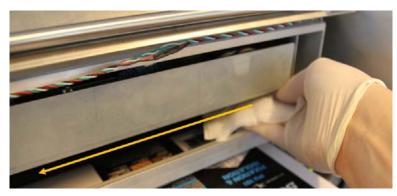
3 Use distilled water and make a piece of lint-free cloth wet.

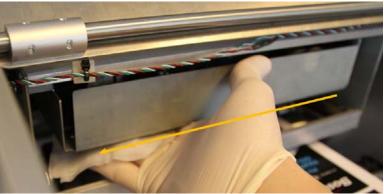


Note: USE LINT-FREE CLOTH ONLY! Using other than lint-free cloth can cause blocked printhead nozzles due to lose fibers or scratch the printhead damaging it physically.

4 Wipe the printhead surface.

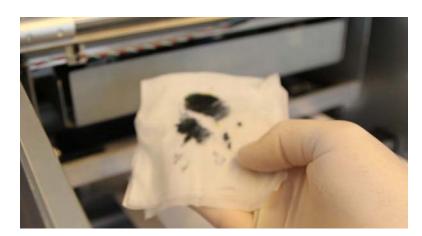
Make a single move from one end to the other.





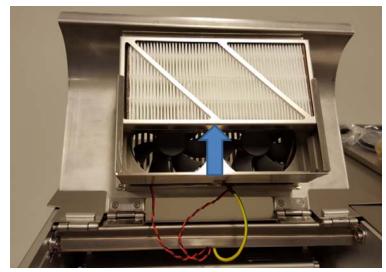
Warning: DO NOT MOVE THE CLOTH BACK AND FORTH!

Always wipe with a single move from one end to the other. Do not apply too much pressure. Just gently wipe the surface of the printhead.



Clean or replace aerosol filter

There are 2 fans that pull the ink aerosol away to a filter from the print area to prevent print quality issues related to aerosol build up. This filter is a consumable and needs to be checked and if necessary cleaned or replaced.



- 1 Open the top right lid to gain access to the filters.
- 2 The filter is in a drawer that can be pulled out upwards.
- 3 To clean the filter, use compressed air to blow it out.
- 4 The filter can also be washed out under the tap, but make sure it is dried before reinstalling it.
- 5 To replace the filter, take it out from the drawer and replace with a clean new filter.

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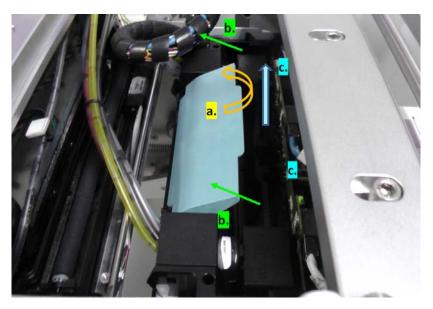
Preparing the T2-C press for transportation

Removing the printhead

1 Press the Release Printhead button in the TrojanTwo tab > Maintenance Maintenance menu.



- 2 The release printhead process removes the ink from the printhead and from the ink tubes around the printhead, and pumps all the ink from this area back to the reservoir ink tanks.
- When the release printhead process is finished, the blue printhead latch will be released and can be opened up all the way (a.), then the printhead has to be pulled towards the latch (b.) and finally it is free to lift out from the machine (c.).



- 4 Only grab the printhead by the handles and nowhere else.
- 5 For transportation, install the blue rubber dock protector caps to avoid ink leaking via the revolver holes.



Storing used or opened printheads

Use a clean, lint-free microfiber cloth moistened (not dripping) with clean DI water to do a single pass cleaning of the nozzles using light to no pressure.

Keep ink coupling in upright position to avoid ink dropping down. Secure the original orange protective printhead cover onto the printhead.



Place a clean moistened lint free cloth into a zipper bag along with the orange covered printhead. Ensure printhead is packaged securely to avoid damage (in box with flat orientation).



Caution: DO NOT touch the printhead cartridge's ink couplings, nozzle surface or the electrical contacts when installing the printhead cartridge. Hold the printhead cartridge ONLY by the handles.

Caution: DO NOT unpack the printhead cartridge until the printer is ready for installation. Once unwrapped, delay in installing the printhead can compromise print quality due to dehydration.

Caution: DO NOT place an unwrapped printhead on any surface before installing. Protect the printhead at all times from dust, fibers, dirt and other contaminants.

Removing the ink from the reservoir ink tanks

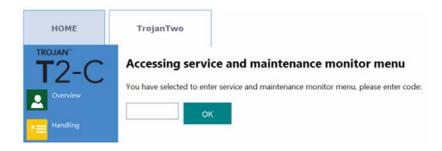
To remove the ink from the reservoir ink tanks, a script must be run from the hidden service menu.

Warning: The hidden service menu is reserved for skilled technicians only! End users are not advised to use other functions in the hidden service menu (unless technical support of Trojanlabel is asking for this) than the empty ink process and empty ink filters process.

1 Go to the TrojanTwo tab and press the touchscreen on the 3 points in sequential order to access the service menu.



2 Default password to service menu is 321.



3 Select 'Empty IR Tanks' script from the upper scroll down list and press 'Run' button to run script.



4 The empty IR tanks process takes about 5 minutes as it is emptying the reservoir ink tanks one by one. Movement of the ink from the reservoir ink tanks to the 2L ink tanks is indicated on the right side status bar where the ink levels are displayed. When there is no more movement indicated on the status bar, then the script is completed.

Removing the ink from the ink filters

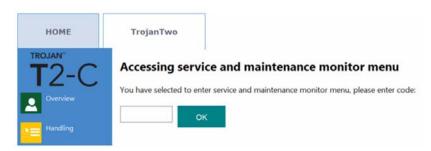
To remove the ink from the ink filters, the same service menu can be used as for emptying the reservoir ink tanks.

Warning: The hidden service menu is reserved for skilled technicians only! End users are not advised to use other functions in the hidden service menu (unless technical support of Trojanlabel is asking for this) than the empty ink process and empty ink filters process.

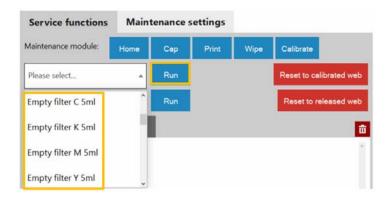
1 Go to the TrojanTwo tab and press the touchscreen on the 3 points in sequential order to access the service menu.



2 Default password to service menu is 321.



3 Select one by one each 'Empty filter CMYK 5ml' script and press 'Run' button after selecting each color.



Note: The empty ink filter script only requires a few seconds. As there is about 15ml ink in every ink filter normally, it is advised to run the ink filter emptying scripts 2-3 times for each color.

Empty and clean the waste ink bottle

Empty the waste ink bottle before transportation. See "Emptying the waste ink bottle" on page 101.

For transportation, it is advised to fix the drawer of the waste ink tray with the 2 screws.

Cleaning of the waste ink bottle can be done simply by washing the waste ink bottle under tap water.

Removing the ink tanks

- 1 Disconnect all the connectors from the ink tanks.
- 2 Use the orange plastic caps that came with the ink tanks to seal the connectors.
- 3 Cover the ink connectors and chip reader cables with a plastic bag and apply zip ties to seal the bags.

4 Transport the ink tanks in a separate box removed from the top of the T2-C press.



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Troubleshooting

This section will help you troubleshoot various error states and scenarios.

Error states

Problem	Solution
Web status display: Error (1).	The initialization of the web-path routine failed during start up, usually due to a time out of the initializing process.
	Press the emergency button, wait 5 seconds and release it again.
	Contact support if problem still exists.
Web status display: Error (1). Is displayed after pressing Calibrate Web.	The label material is loose (core spins or is not firm). Try to reduce tension on the unwinder or fixate the core to the material
	The unwinder and/or rewinder shafts are not tight. Tighten winders by turning the knobs.
Web status display: Error (2), (3) or (4).	Servo motor 2, 3 or 4 failed to calibrate. This is not usual. Press emergency stop to recalibrate. If this happens frequently contact support. Possible reasons:
	 Servo motor NIP (2) and/or servo motor rewinder (3) and/or servo motor unwinder (4) fails to calibrate. Check cabling of the servo motor(s). Servo motor(s) factory calibration parameters are not correct. Flexible coupling for servo motor(s) is loose. Servo motor controller board is damaged. Servo motor is damaged.

Problem	Solution
Web status display: Error (5) - Error - EnableWeb	Unable to calibrate tension for the web path system. Contact support if below cases are not causing the issue.
	Possible reasons:
	 Paper core is not tightened on winder shafts. NIP clamp is open. Too much loose media on winder cores.
Web status display:	When label roll loses tension during print.
Error (6) - Error - Web Broken	Possible reasons:
	 If paper core is not tightened on winder shaft(s). If there is an issue with the unwinder and/or rewinder motor. Tension settings are set too low in the TrojanTwo tab > Media Settings > Advanced menu. Label material breaks (ripping apart due to high tension). Label material runs out during printing. The diameter watch may be set too low in the TrojanTwo tab > Media Settings > Advanced menu. Contact support if it cannot be resolved.
Web status display: Error (7) - (BldcEnableSwitchShorted)	Motor safety switch is shorted. Please contact support. Too high input current for BLDC driver causes emergency board relays to hang.
Web status display: Error (8) - (VarsNotLoad)	Factory calibration variables not loaded. Please contact support.
Web status display:	Incompatible FPGA Version. Please contact support.
Error (9) - (InCompatibleFPGAVersion)	DIDO III II I I I I I I I I I I I I I I
Web status display:	BLDC calibration check failed. Please contact support.
Error (10) - (BldcCalCheckFailed)	
Web status display:	Rotary spi failed. Please contact support.
Error (11) - (RotarySpiFailed)	

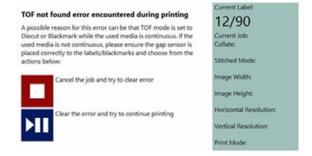
Problem	Solution
Error display: Missed TOF Error	 The gap size may be too short. Adjust "Gap Size" in media settings in case TOF mode is continuous. Make sure label gap/blackmark sensor is properly calibrated in case TOF mode is set to diecut or blackmark. Make sure that the gap between labels is within the supported range.
The bottom of the label looks unfinished, showing a yellow/green line.	This is caused by the image being 'truncated' by the print size. The printhead prints in the order of Y, K, C, K, and M. The reason why a dark green line appears is because the printhead stops printing after Y, K and C are printed. Therefore, the solution is to change the BOF and allow the printhead to print until the full image is printed.
Error display: Data Path Underrun Error	 Make sure preview generation is not set to 'Instantly'. Reduce image complexity. Reduce compression when using the RIP software. Check design of artwork file. Check for overreaching background objects in the printed image such as those over the specified label size.
Error display: PRINTHEAD FAULTY	Communication error with the printhead. One or more segments of the printhead cannot be read. Remove and reinstall current printhead. Try with another printhead. Check RJ45 cables for Printhead communication. Replace with Cat5e or Cat6 cable versions. Contact support.
Error display: Printhead Missing QA	Printhead is not installed physically or printhead QA chip cannot be read. If printhead is installed but not recognized, then check/clean contact pins and reinsert the printhead. If cleaning the contact pins does not solve the issue, then try with another printhead or contact support.

Problem	Solution
Error display: Maintenance Jam	The maintenance tray movement is blocked physically or maintenance tray's position is not calibrated or unknown to the system. Can be due to servo motor failure as well for lifter motor, sled motor, wiper motor, dual pinch valve or pump.
	Use the red button in the HOME > Settings > Network menu to restart the user interface and print engine. When the print engine is starting up it does a maintenance tray calibration.
	Try to move the maintenance tray manually and check if the tray can move freely on the rails. Then use the red button in the HOME > Settings > Network menu to restart the print engine.
	Contact support if it cannot be resolved.
Error display: Bag Out	One or more ink tanks are out of ink. Replace the empty ink tank and press the refresh button on the screen.
One or more ink lines are not filling up with ink	There is excess air introduced into the ink system and causing pressure loss.
	Do a manual wet wipe on the printhead. See "Manual printhead wiping" on page 107.
	Reinsert the printhead.
	Check revolvers (fluidic couplings which connect with the printhead couplings). There might be a loose revolver cap.
	Check ink tubes throughout the ink delivery system for any loose luers, ink leaking, kinked tubes, etc.
	Try with another printhead.
	Run ink circulations from Handling menu.
	Contact support.
The TrojanTwo tab is not displayed on the screen	The printhead is damaged (nozzles are scratched) and ink ingression causes short circuit and pulls down the mainboard of the print engine. This is most likely the print engine mainboard that keeps restarting.
	Solution: Remove the printhead and install another printhead.
	There is a damaged print job in the Job Library which has to be deleted from the file system. Contact support.

Problem	Solution
Machine restarts spontaneously	Most likely the system is pulled down by a USB device or one of the servo motors or due to damaged printhead. Contact support.

Error messages on screen

When an error happens instructions and error messages can appear on the screen. The following example shows a missed TOF error.



Missed TOF (Top of Form)

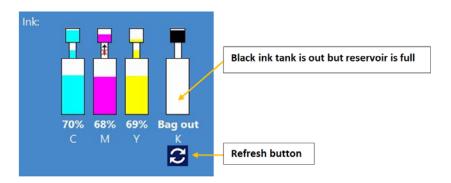
The wrong TOF mode is selected in the Media Settings menu or the gap/blackmark sensor is not calibrated. See "Printing modes" on page 45.

Or the gap size is set 0mm in continuous mode. Make sure that the gap size is set according to the gap size requirements.

Too much TOF and/or BOF offset is set in the Media Settings menu.

Bag Out Error

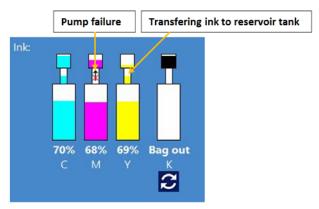
One of the ink tanks ran out of ink during printing. The printing continues as reservoir ink tanks are full. User can hot swap ink tank(s) and press the refresh button on the screen to clear the error message after new ink tank is installed. Ink tank sign is flushing and 'Bag out' message appears in the status bar.



Ink Transfer Failure

A crossed out arrow appears in the status bar. This means that the pump cannot bring the ink up from the ink tank to the reservoir tank. Can be pump motor failure, encoder wheel on motor is dirty, pump stuck, electrical failure, wrong settings for factory parameters, etc. Contact Trojanlabel support when this happens.

Note: When the pump is transferring ink from the ink tanks to the reservoirs, the ink movement is simulated on the screen between the large ink tank and the smaller reservoir tank status bar.



Running out of Disc Space

A new print job is sent to the machine but free disc space on the hard drive reaches the 1 GB limit. For example, the amount of print jobs stored in the Job Library occupies most of the disc space. Then the actual print job is paused and a warning sign appears on the upper right corner on the screen until enough disc space is freed up. Extra disc space can be gained by deleting some print jobs from the Job Library. When disc space is enough to continue the actual print job, then the warning sign disappears and the print job continues.



Receiving print job



Spare parts

Consumables

Part Number	Description
20010006	Printhead LL2X
30010031	2L Ink Tank Trojan Niagara Cyan
30010032	2L Ink Tank Trojan Niagara Magenta
30010033	2L Ink Tank Trojan Niagara Yellow
30010034	2L Ink Tank Trojan Niagara Black
10003356	T2 Wiper Roller Gen 2 (Micro Fiber Roller)
10000036	Slitter blade set (6 blades)
LIGONG-FILTER-1 MK23	Aerosol filter

Print engine

Part Number	Description
10004022	MPCA TROJAN
10004024	MPCA TROJAN, VOLUME PRESS
10003074	Assy DPCA with Holder
10003075	Pen Driver PCA
10003076	T2 Assy Cartridge Locator
10002078	Assy Dock Fluidic Pump Side (Revolver - closest to ink connectors)
10002079	Assy Dock Fluidic Valve Side (Revolver - Farthest from ink connectors)
10002014	Lever Latch (Plastic PH cover)
10002015	Lever Latch Spring (10 pieces)

Part Number	Description
10003077	T2 Dual Pinch Valve
10003078	T2 Peristaltic Pump w/ Holder
10003346	T2 Maintenance Cradle
10003079	T2 Assy Lifter Motor with Cover
10003615	Assy Sled Motor with Cover
10002080	T2 Gear Cam Lift
10003357	T2 Module Wiper Transfer Gen 2
T2ENGINE	Complete Engine (Trojanlabel)

Circuit boards

Part Number	Description
T2-ECM	Embedded PC Motherboard
T1021	Web path controller board and BLDC drive
T1006.02	Step driver
T1008.02	Edge Sensor
T1010.01	QA Board
T1011.01	Connector PCA
T1012.07	Ink Board version T1012.07 or later.
T1017.02	Reservoir Sensor board
T1021	Web path and BLCD drive
T1014	Temp sensor
ER Contact	ER contact

Tubes, cables, and other parts

Part Number	Description
T_SP-240-48	Power Supply Unit
T2-Powerinlet	Power inlet switch
T2-Fuse	Fuse 5x20mm Glass, F2A 250V for Power inlet switch
T2C-Fuse Set	Set of Fuses. Consist of:
	1 x 1A 125V
	1 x 3.15A 125V
Emergency Stop	ER Stop button
T2-Ethernet Connector	Ethernet Connector
T2-LERC10	Black mark and gap sensor
T2-waste ink bottle	Waste Ink bottle
FBS25PTFE022H	Reservoir Tank Filter
T2-8089-0300-1-QQB-N	Ink Filter
T2-Reservoir	Reservoir Ink Tank
SSP_1401_0C	Ink Connector
FTLL230-6005	Female Luer Thread Style to 200 Series
MTLL230-6005	Male Luer Integral Lock Ring to 200 Series
FCLBFFM-001	Stopcock valve
TL-LP4-6005	Luer Cap
TXL60-5MM3.2MM-CYCYAN	CYAN INK TUBE (2.68m per unit)
TXL60-5MM3.2MM-MAMAGENTA	MAGENTA INK TUBE (2.5m per unit)
TXL60-5MM3.2MM-YWYELLOW	YELLOW INK TUBE (2.58m per unit)
TXL60-5MM3.2MM-B1SMOKE	SMOKE INK TUBE
TXL60-5MM3.2MM-B2NATURAL (Clear)	CLEAR INK TUBE
T2-I001	Ink Supply Tube with Coupling Grande Cyan

Part Number	Description
T2-I002	Ink Supply Tube with Coupling Grande Magenta
T2-I003	Ink Supply Tube with Coupling Grande Yellow
T2-I004	Ink Supply Tube with Coupling Grande Black
TL-LT878-6005	Elbow connector
Kamoer Pump KPP-B08 DA CO	Ink pump for reservoir tanks
SMP_1408_0C	Ink Connector front cover
AS6030AP-04-06E10-01C	Unwinder/Rewinder BLDC motor
60BLS90A-440-E10-03C	NIP BLCD motor
T2-23H2A7415-01BC	Step motor for sidesteer and slitter
ASA-1405-0C	Step Motor Assembly for Unwinder/Rewinder
ATSPP026	ATSPP026 sidesteer sensor and cable from T1021 J25 to Sidesteer Sensor
T2C Slitter Stop Plate	T2C Slitter Stop Plate
Belt2-8	Transmission belt
Belt3-9	Transmission belt
Belt1-135	Transmission belt
Belt2-1	Transmission belt
SP-M010	Magnet holder for step motors
Eclipse N813	Magnet for step motors
ASA_1120_0C EXPAND	Shaft for winders
27740620	Rubber NIP roller
DIN_653_M4_10_NI_3D	Finger screw for edge and media sensor
T2-S002	NIP clamp spring
MM007-	MM springs

Part Number	Description
T2C Slitter Return Spring	Spring for slitter blades
Fan 92x92x25	Vent fan for aerosol filter
GanterGriff_GN839-30M8x16	T2-C legs
27741390	Rubber spacer for winder shafts (inner ø 76mm)
USB-A to USB-miniB 0.5m	Mini USB to USB A cableT1021 to PC
USB-A to USB-B Angle 0.5m	USB A to B cable from MPCA to Industrial PC
TTL-232R-3V3-AJ	TTL-232R-3V3-AJ cable from MPCA to Industrial PC
ATCAM007-50076A	ATCAM007-50076A cable from T1011 to PPCA
ATCA2CM007-50076B	ATCA2CM007-50076B cable from MPCA to T1011
ATCAM007-50077A	ATCAM007-50077A cable from T1011 to PPCA
ATCA2CM007-50077B	ATCA2CM007-50077B cable from MPCA to T1011
ATCAM007-50078	ATCAM007-50078 cable from DPCA P1 to MPCA P2006
E17146506000R	Screen Interface cable including LVDS, backlight and ground
E17161108300R	Touch Interface cable
ATCA2C02038	ATCA2C02038 cable from T1021 J32 to Gap sensor

Note: The complete spare parts list is available in a separate document and can be acquired from Trojanlabel or from official Trojanlabel partners. The above part lists only contain the most common spare parts for reference to help in ordering if necessary. Before ordering any spare parts, please contact your Trojanlabel distributor or technical support.

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