CDI CRYSTAL TOUCH 20.1

USER MANUAL



31.08.2021

ESKO

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1 First Start-up of the Software

When the CDI is restarted, the interface will wait for the System-Service to start.

If this takes too long, the "Service" button can be used to access a different interface so that TeamViewer can be started for ESKO Service.

Once System-Service is connected, the axes of the CDI must be calibrated. Click on "OK" to start the process.





The process may take several minutes.



If this takes too long, the "Service" button can be used to access a different interface so that TeamViewer can be started for ESKO Service.

2 Operation of the CDI Crystal Touch Software

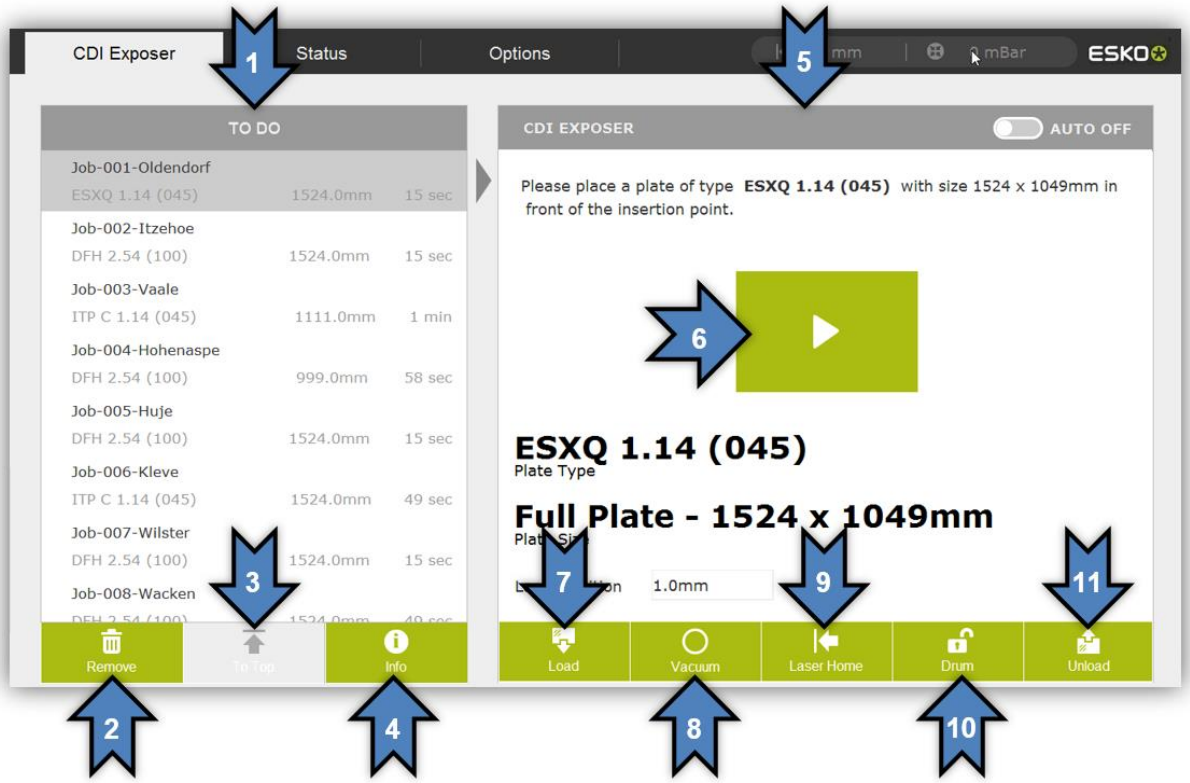
"CDI Crystal Touch" is a user interface for touch-sensitive screens. The user interface is intentionally kept simple.

The enqueuing of new jobs is performed from a PlatePrep, a Digital Flexo Suite or the Device Manager.

This software is designed for a touch-sensitive screen.

2.1 The user interface

The software starts in the "CDI Exposer" view.



The exposure jobs can be found in the "TO DO" list (1). Selected jobs can be deleted (2) or moved upwards (3). A summary of the selected job can be opened by using the "Info" button (4).

The uppermost job "Job-001-Oldendorf" is displayed in the "CDI EXPOSER" section (5) and can be started with the Start button (6).

A plate can be loaded onto or unloaded from the drum with "Load" (7) and "Unload" (11).

If the plate is loaded manually, (8) can be used to switch the drum vacuum on or off.

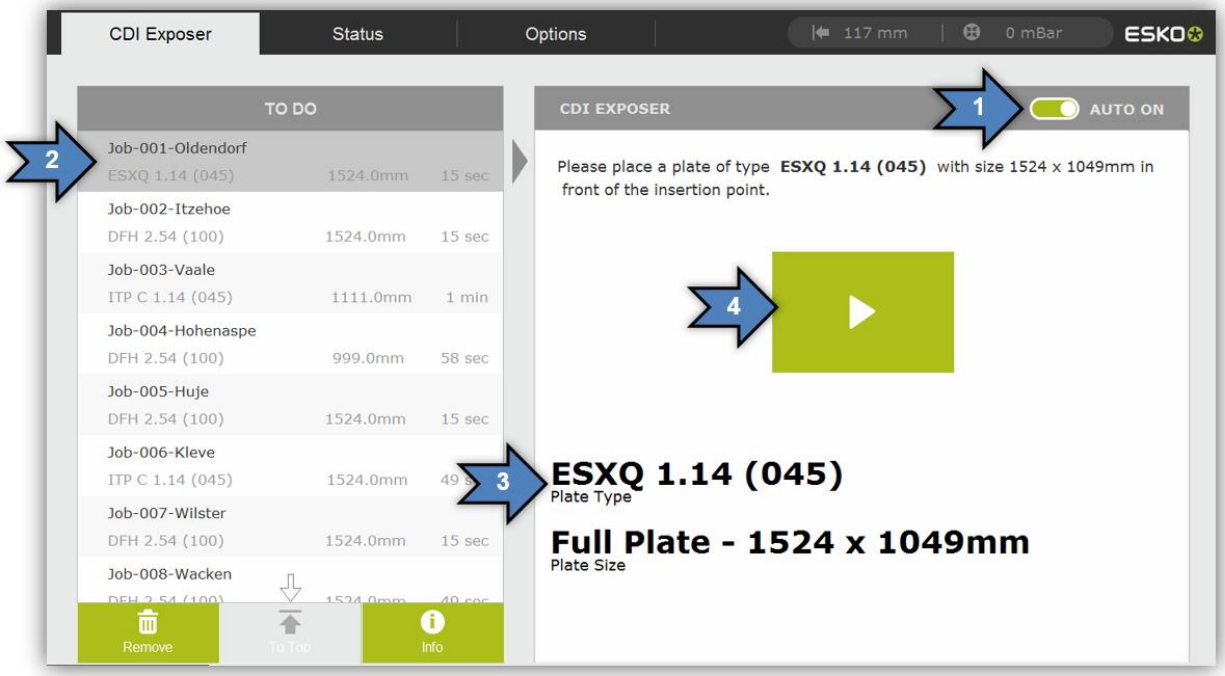
The position of the laser can be moved to a pre-set value with "Laser Home" (9).

To mask thick partial plates, the drum can be fixed with "Drum" (10) and released again.

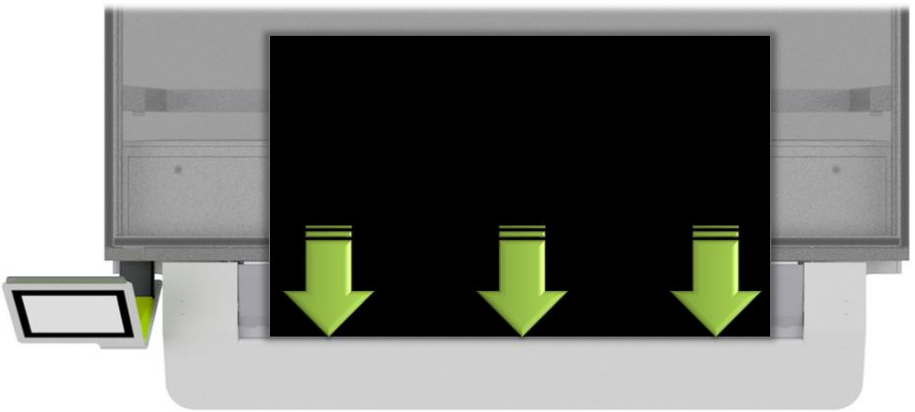
2.2 Automatically starting a job

1 Automatic mode switch-on with "AUTO ON" (1).

2 The first job (2) in the "TO DO" list is used.



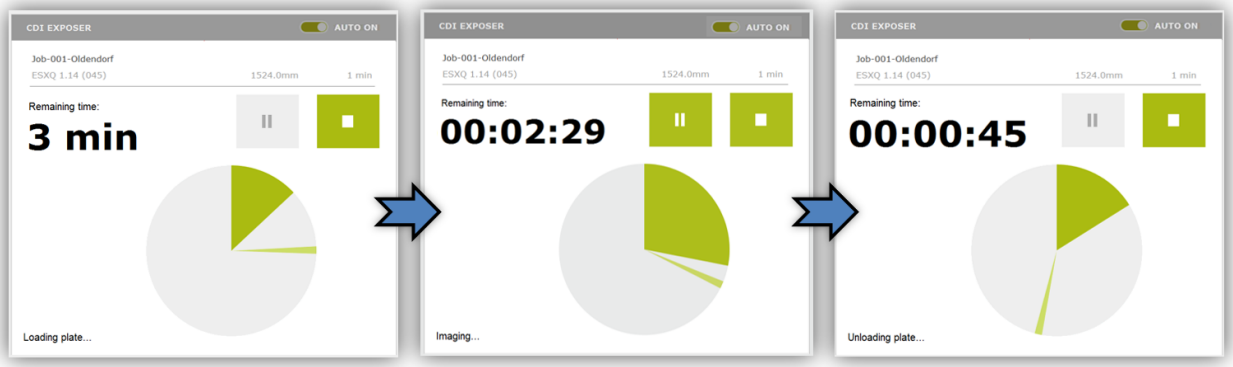
3 Place the desired plate (3) on the loading edge of the cover.



4 Start the job with the Start button (4).

5 The plate is fed in automatically, exposed and ejected again automatically.

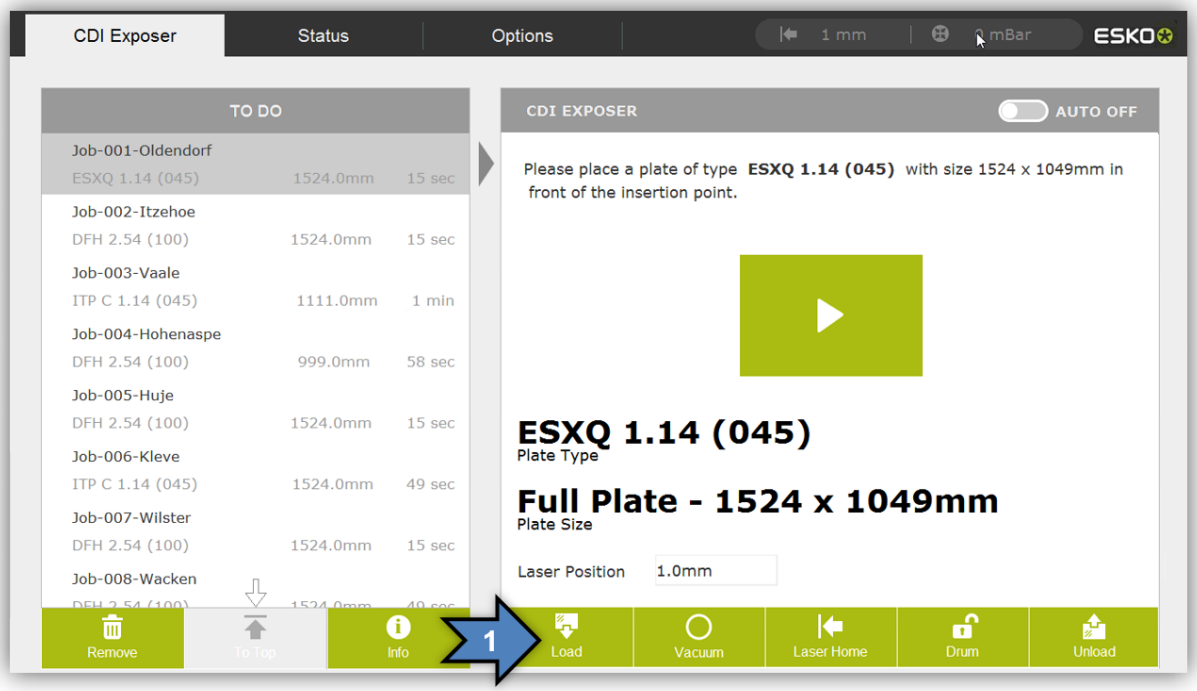
6 The active job is removed from the "TO DO" list.



2.3 Automatically loading a plate

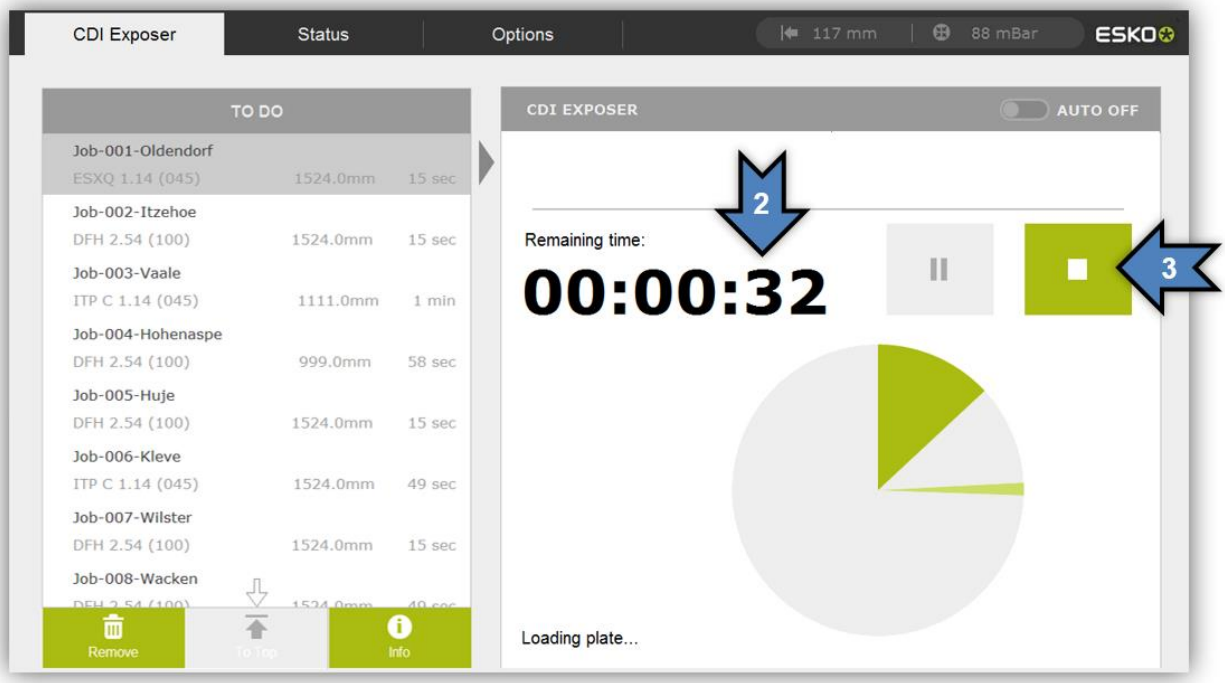
1 Place the desired plate on the loading edge of the cover.

2 Load the plate with "Load" (1).



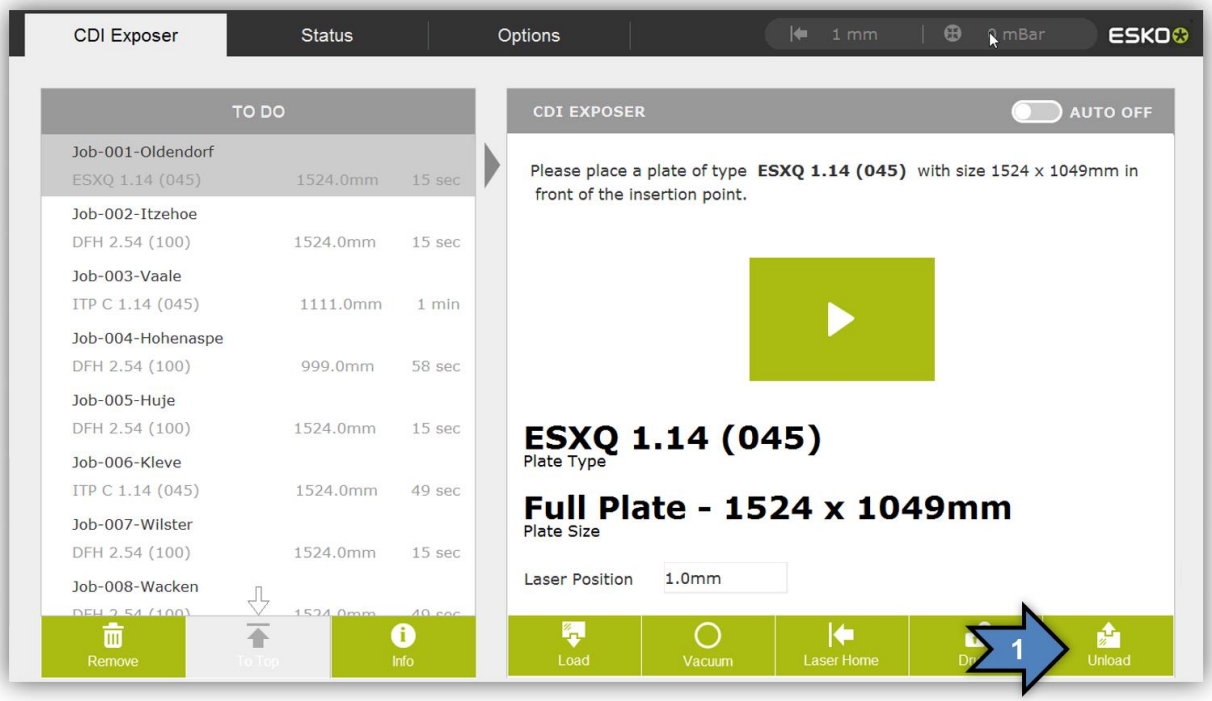
3 An estimation of the loading time is displayed (2).

4 The loading process can be interrupted with Stop (3).

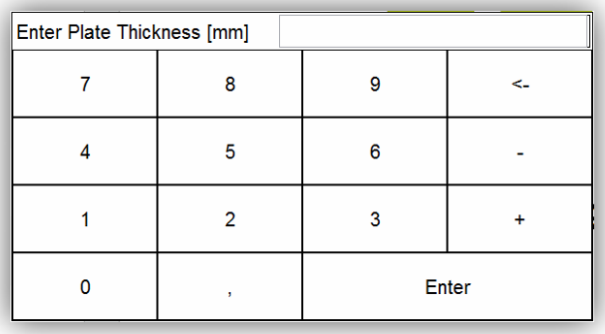


2.4 Automatically unloading a plate

1 Unload the plate with "Unload" (1).

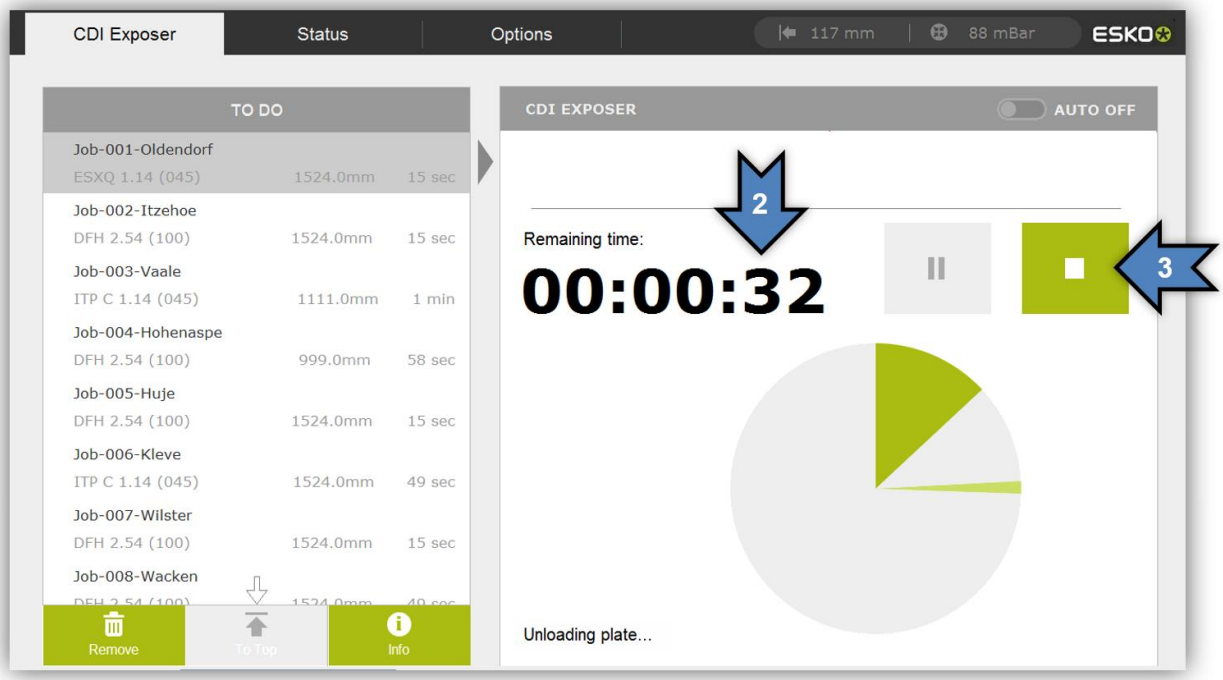


3 In some cases, the plate thickness may need to be entered manually.



4 An estimation of the unloading time is displayed (2).

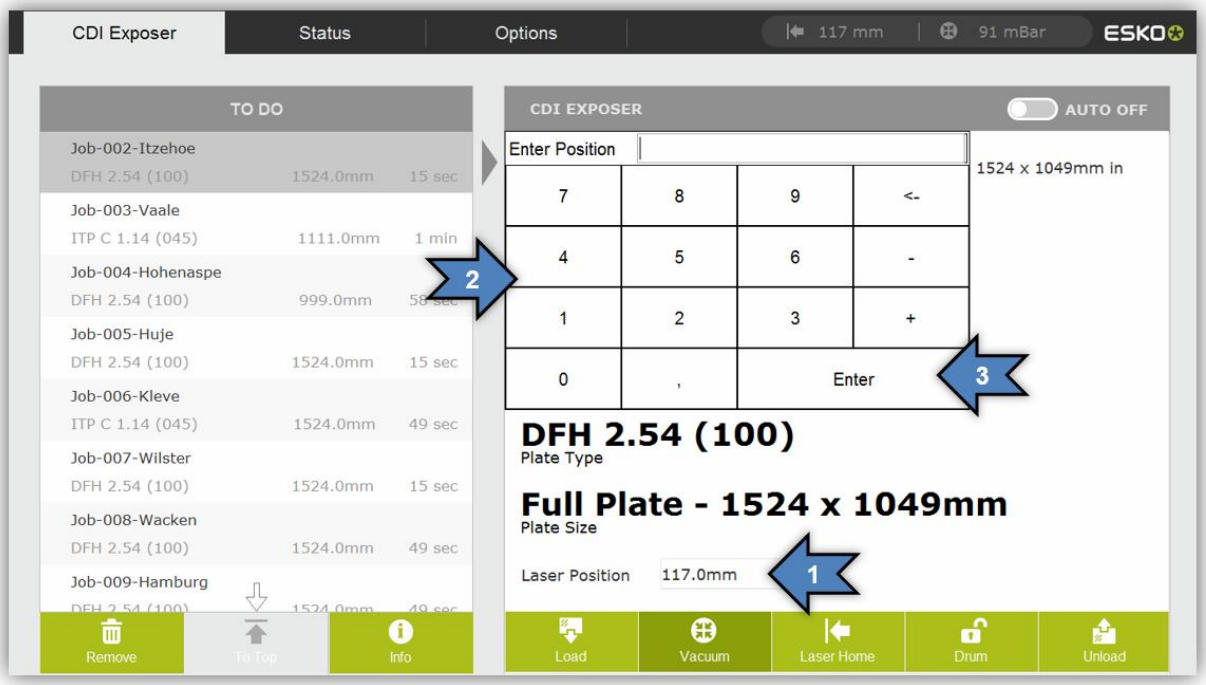
5 The unloading process can be interrupted with Stop (3).



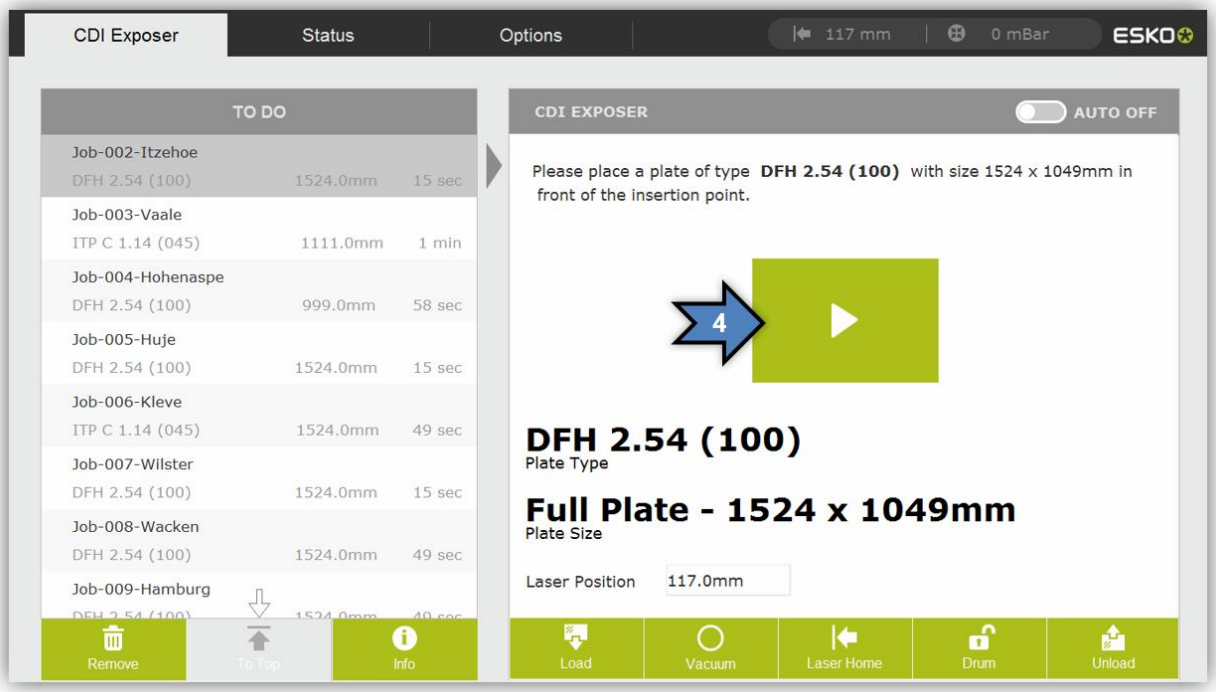
2.5 Manually starting a job

1 Fit the plate manually or with the automatic loading function.

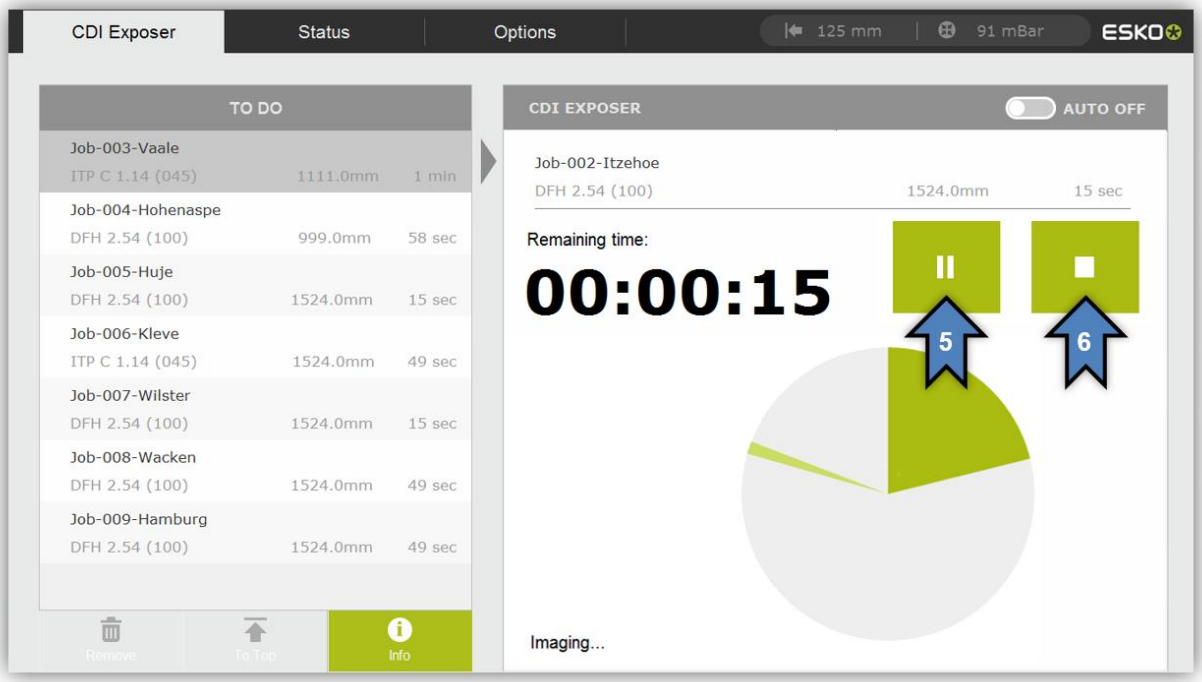
2 The starting position of the drum is changed by tapping the current position "Laser Position" (1). The new position is entered (2) and confirmed with "Enter" (3).



3 Start the job with the Start button (4).



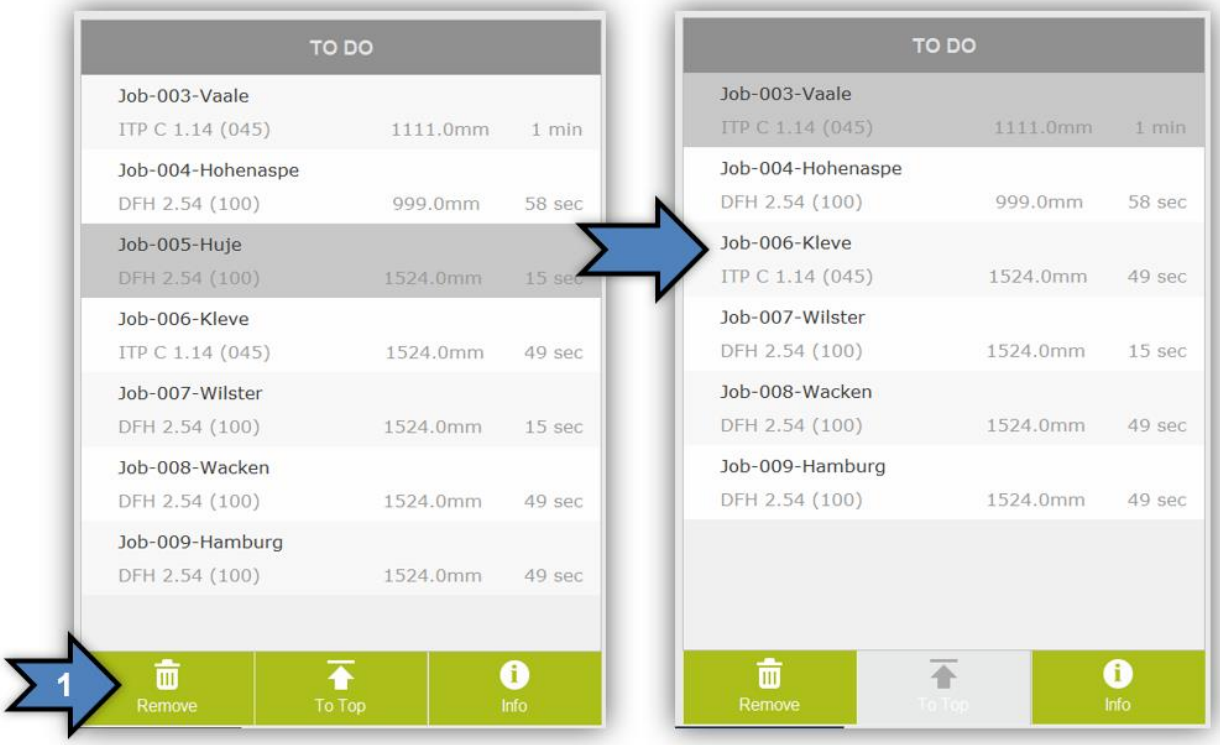
4 The job can be paused (5) or cancelled (6).



2.6 Deleting the job

1 Select the desired job.

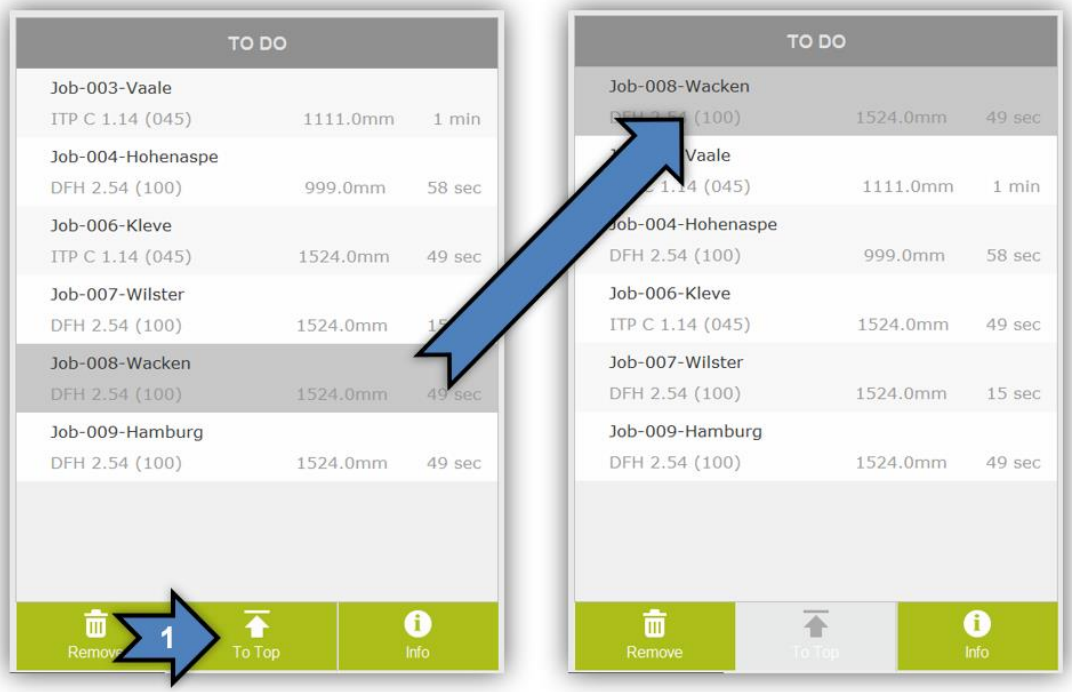
2 "Remove" (1) deletes the job.



2.7 Re-ordering the job

1 Select the desired job.

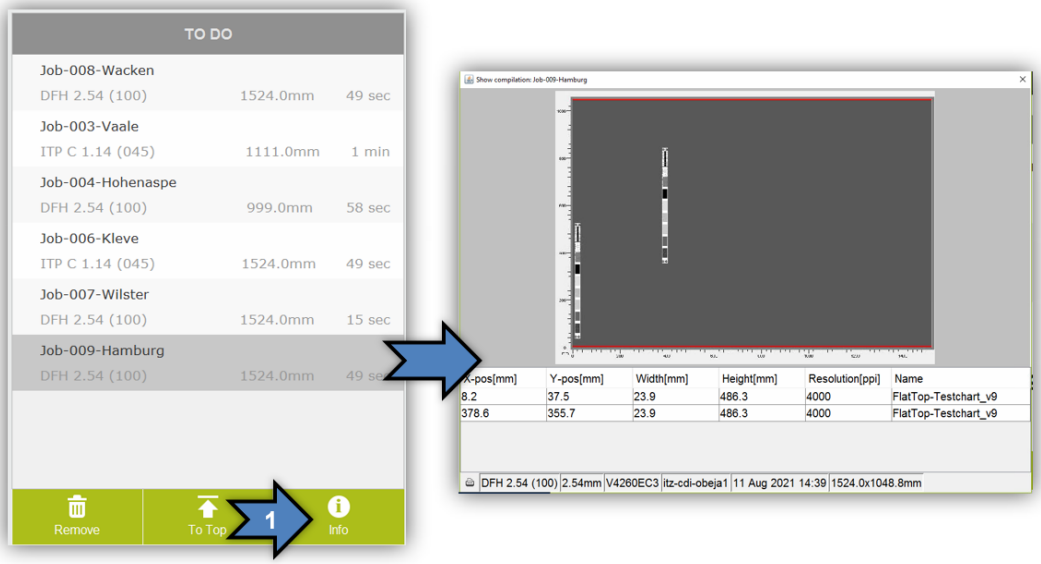
2 "To Top" (1) moves the job to the first position.



2.8 Displaying the information for a job

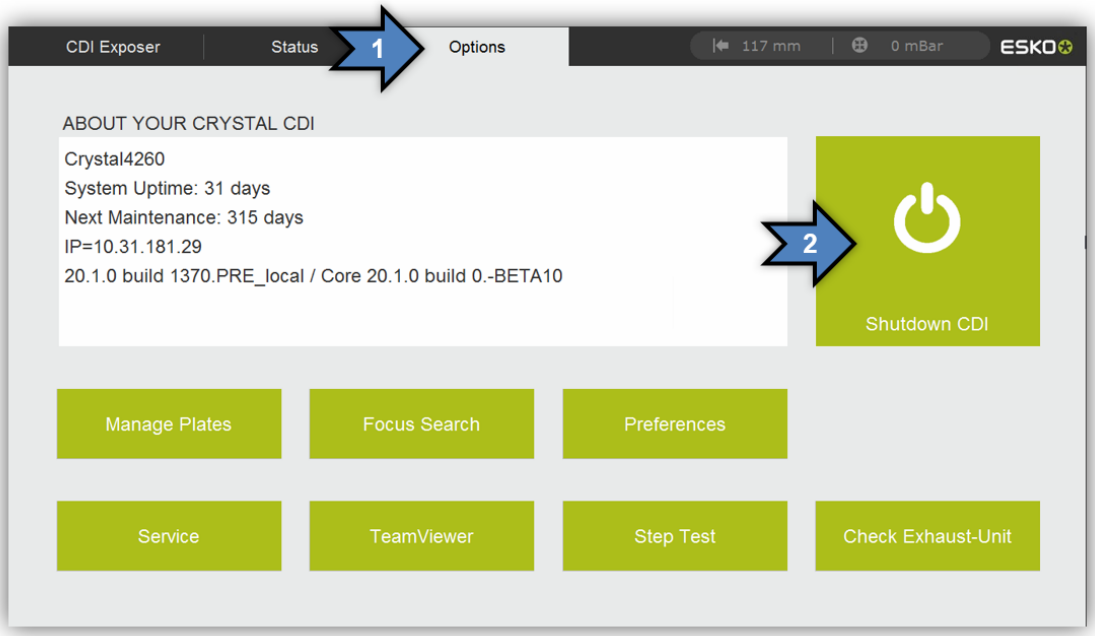
1 Select the desired job.

2 "Info" (1) opens a new window displaying detailed information.



2.9 Shutting down the CDI

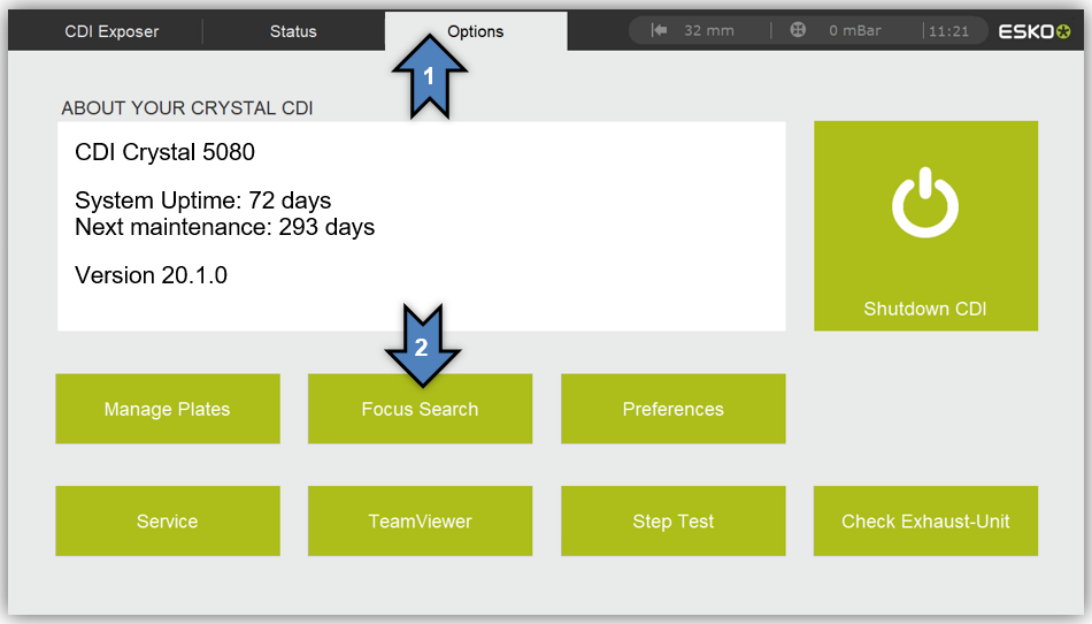
Tap the "Shutdown CDI" button under "Options" (1). Please wait for Windows to shut down completely before pressing the main switch on the CDI.

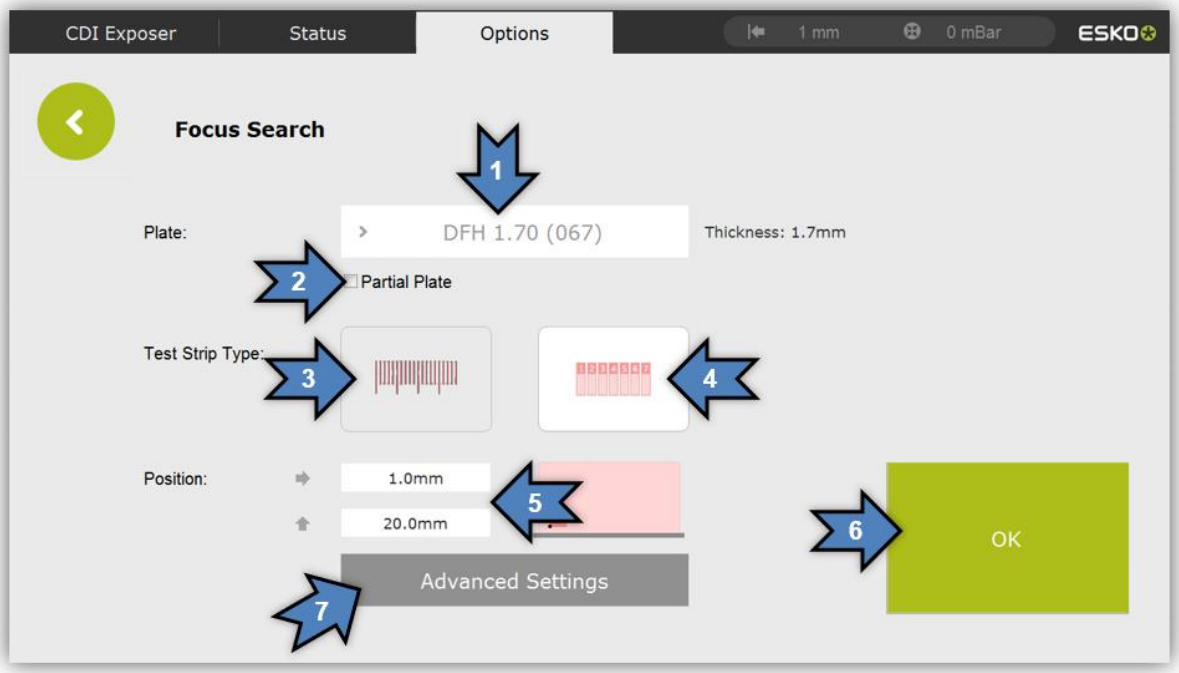


3 Focus Search

1 Switch to the options menu (1).

2 "Focus Search" (2) opens a new window for the focus search.





3 Select the plate (1). In the case of partial plates, activate the "Partial Plate" option (2).

4 Select the focus search type. The left-hand option is the regular focus search (3). Simple focus search (4) is used with the right-hand field.

5 Adjust the position, if necessary (5).

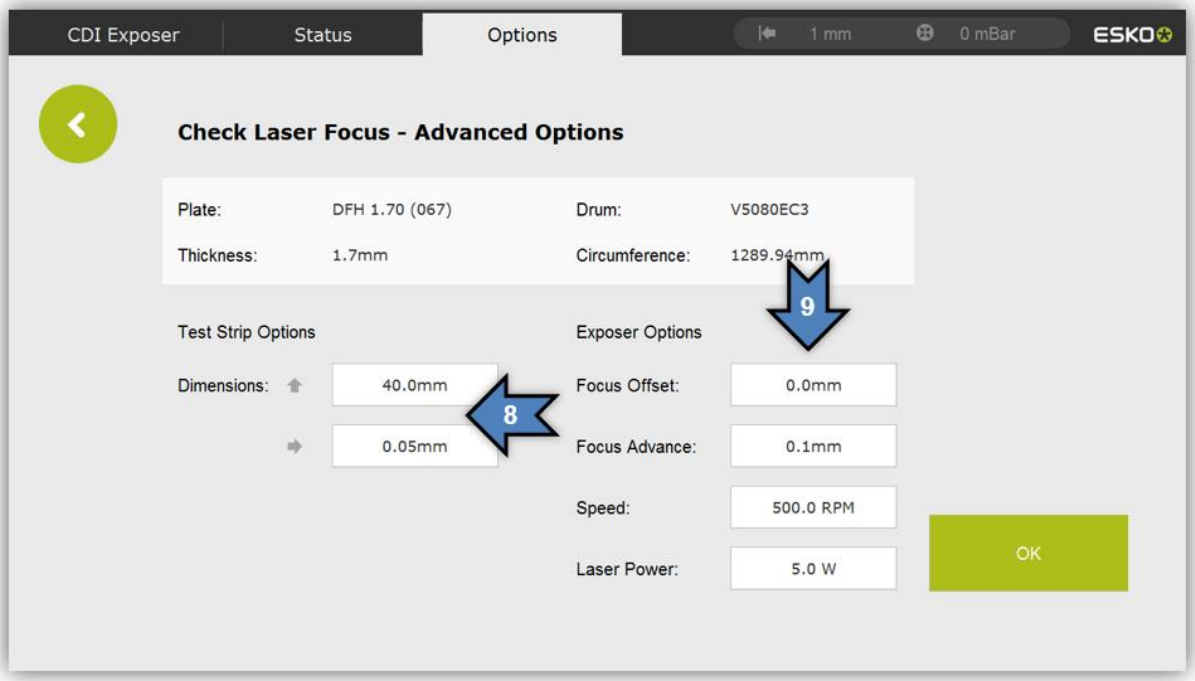
6. Tap "OK" (6) to enqueue the focus search as a job.

7 The focus search is performed as a manual job.
Please see the respective section.

8 "Advanced Settings" (7) opens an additional window containing advanced settings.

3.1 Advanced settings

If "Advanced Settings" (7) has been tapped, a new window with various focus search parameters will be shown.



With regular focus search, the lines found under *"Dimensions"* (8) can be used to adjust the height and the distance between the lines.

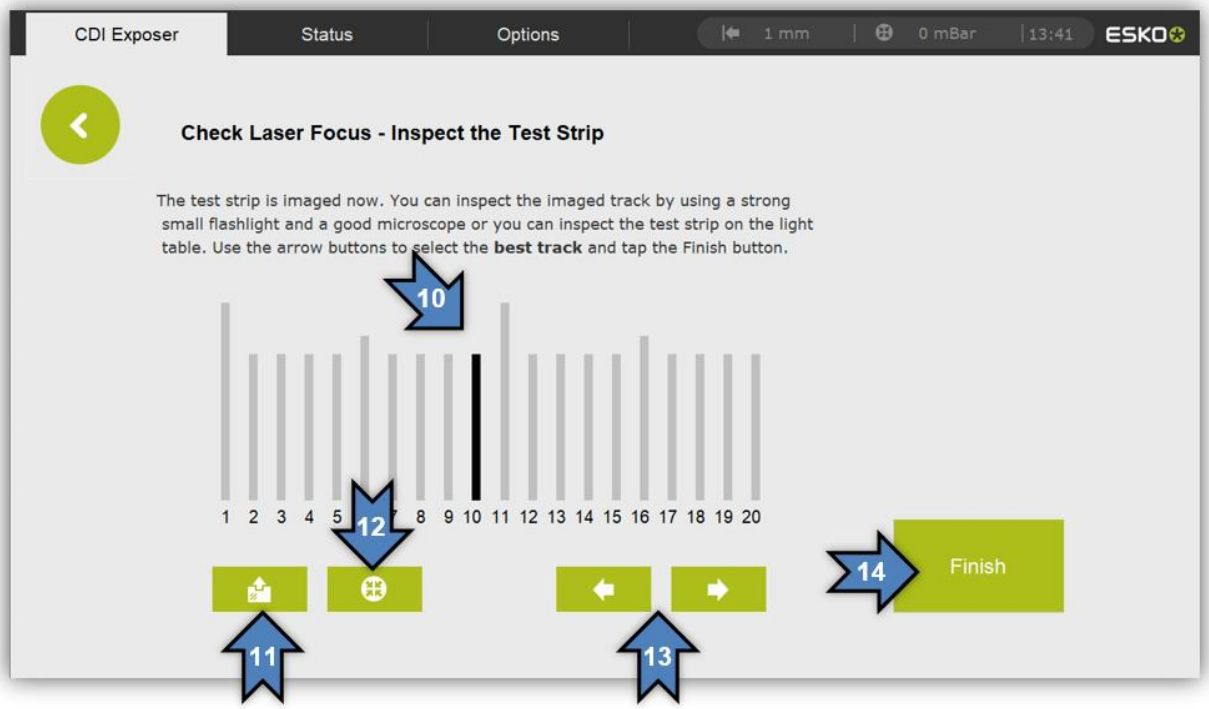
The start value of the focus search can be adjusted in the *"Exposer Options"* (9) under *"Focus Offset:"*. For each exposed line the focus will be changed. The focus distance between each line can be modified under *"Focus Advance:"*.

"Speed" changes the speed of the exposure. It must be noted that for partial plates, this speed value must not exceed the permissible partial plate speed. Excessive RPMs will cause errors.

The output power of the laser is adjusted under *"Laser Power"*. Normally, these values won't have to be adjusted.

3.2 Evaluation of the regular focus search

In the regular focus search, lines with different foci are being exposed. Once exposure has concluded, a new window will open showing the best focus:



The thinnest line on the plate is always the one being selected (10).

ATTENTION: Some microscopes show a mirrored image!

The plate can be taken off the drum for evaluation (11). The vacuum is switched on and off with the button (12).

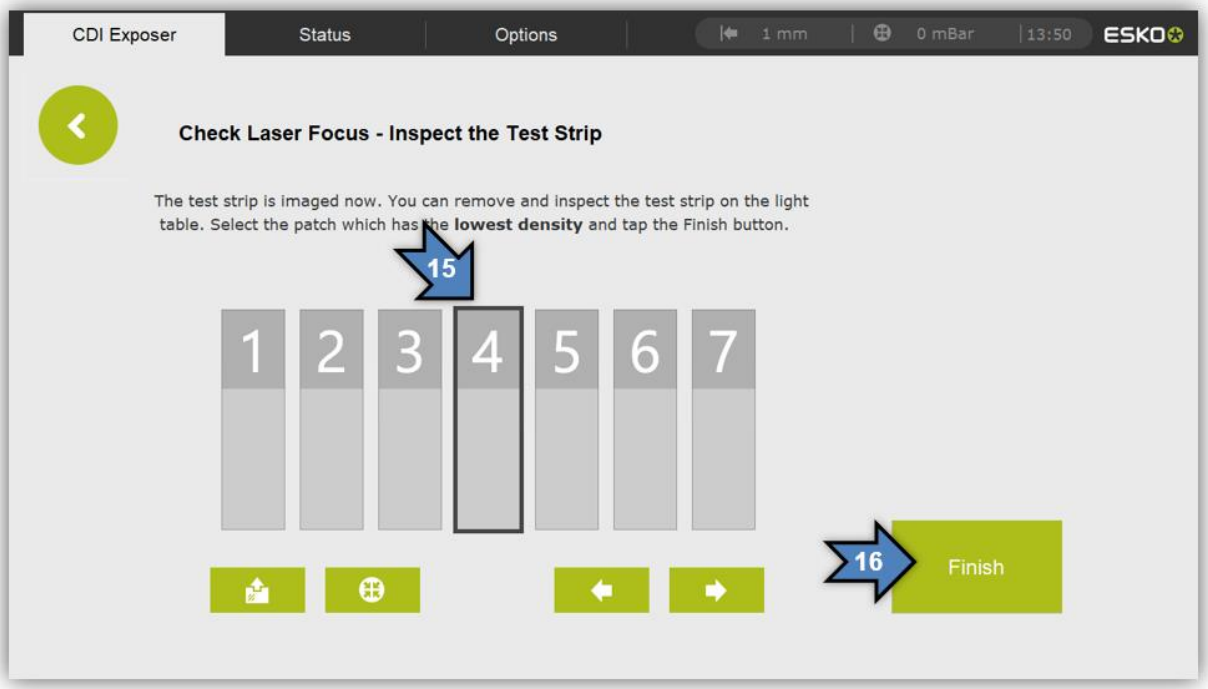
The black line above the numbers (10) indicates the current selection. It can be changed by using the left-right buttons (13), in order to select the thinnest line.

Line number 10 is the current focus!

"Finish" (14) ends the selection process and the focus is saved.

3.3 Evaluation of the simple focus search

The simple focus search with Pixel-Boost exposes seven test fields (15):



Information on operating the buttons is provided in the previous section.

To identify the focus, the plate is taken off the drum. The fields are measures using a densitometer.

The field with the lowest density is selected and the new focus is saved with *"Finish"* (16).

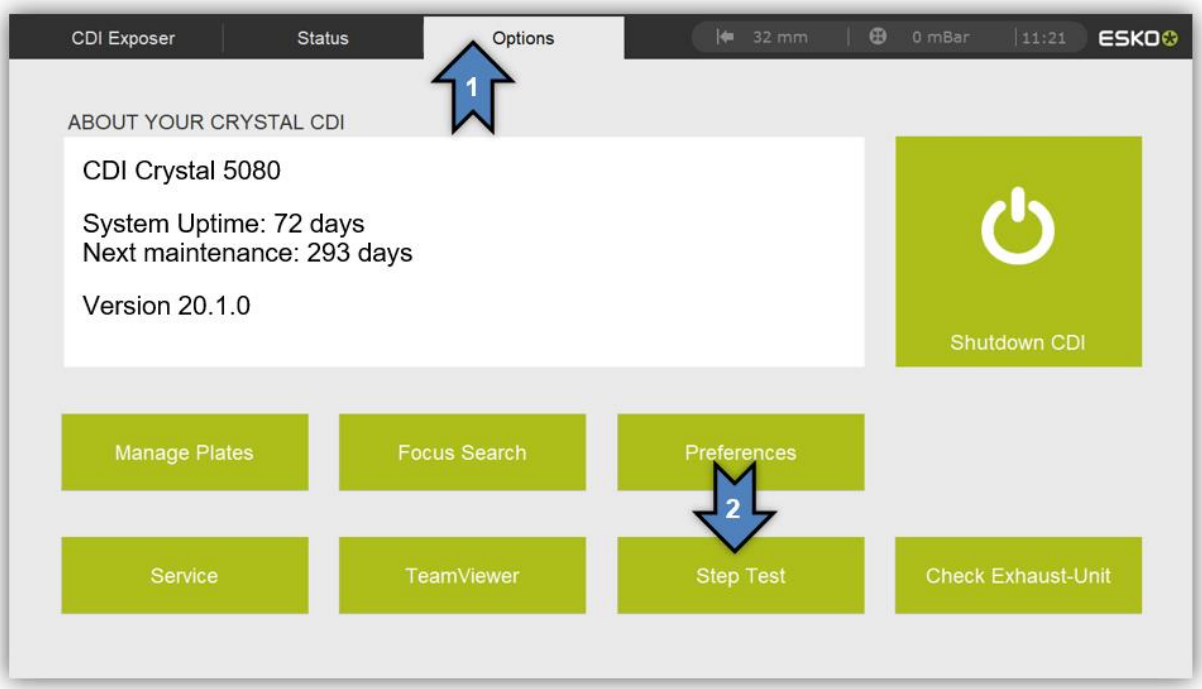
Field number 4 is the current focus!

4 Adjusting the Pixel-Boost parameters

The "Pixel-Boost" parameters must be set and tested for each plate.

First, the desired test job is lined up in the CDI Exposer. This job must be sent with the "Pixel+" option activated.

This job is enqueued accordingly with "Step-Test" (1) under "Options".



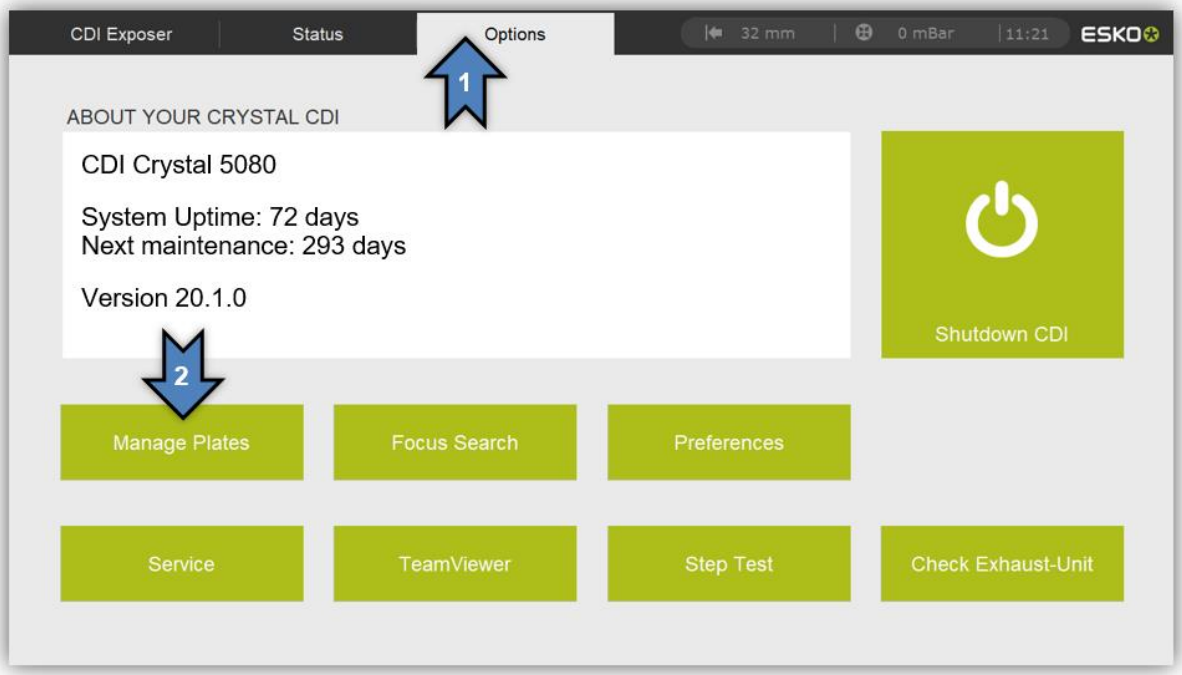
The same image is repeatedly produced but with different "Pixel-Boost" values. Later on, it will be determined which "Pixel Boost" parameter delivers the desired results.

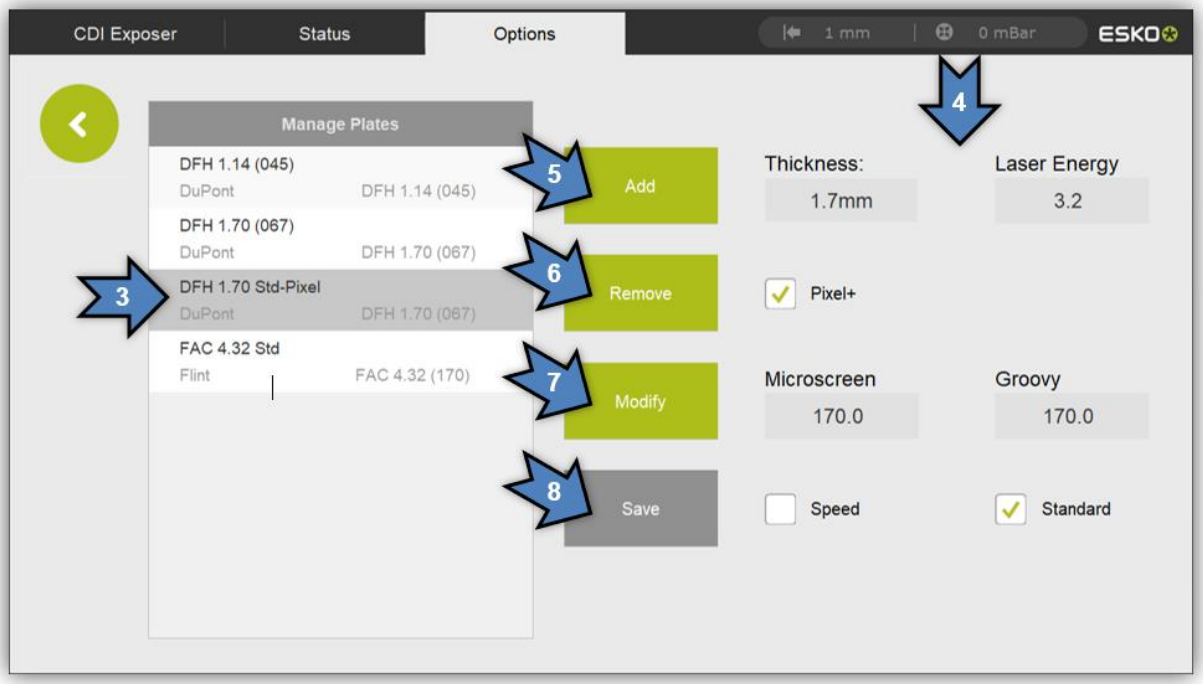
This value can now be modified in the plate list.

5 Managing the plate list

1 Go to the options menu.

2 "Manage Plates" opens a new window.





In this view, all installed plates are displayed on the left (3). The parameters for the selected plate are displayed on the right (4).

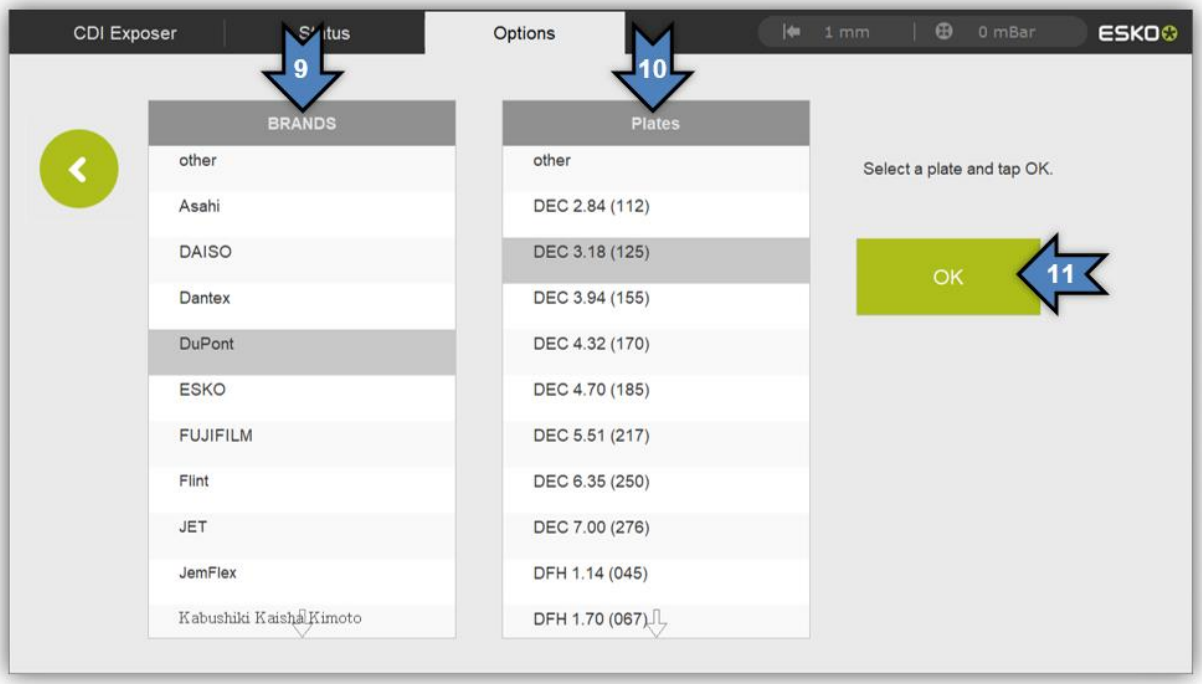
The *"Add"* button (5) is used to add a new plate from the database. A new window opens.

"*Remove*" (6) removes the currently selected plate.

The parameters for the currently selected plate can be modified as soon as they have been released with the *"Modify"* button (7). The changes are saved by pressing "Save" (8).

5.1 Adding a New Plate

Pressing the *"Add"* button (5) opens a new window containing the plate database:

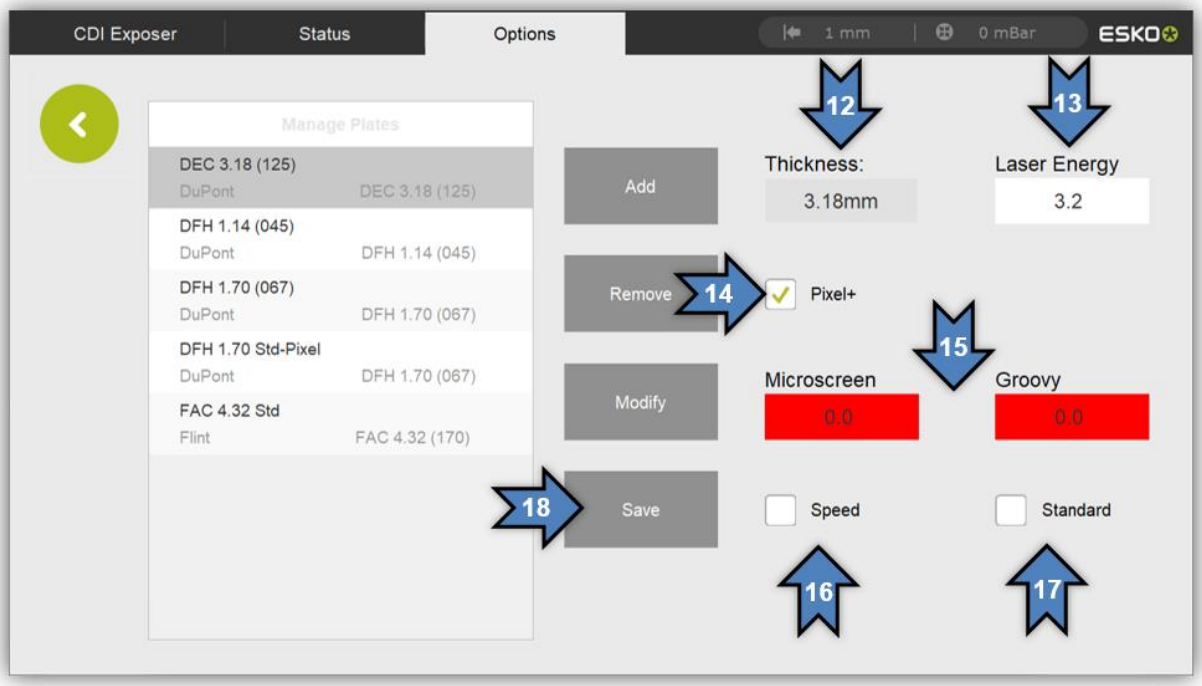


The plate manufacturers are displayed in the *"Brands"* column (9). After selecting the desired manufacturer, the available plates are displayed in the *"Plates"* column (10).

If the plate is not listed in the database, it is either already installed or not yet available. *"other"* may be selected for new plate manufacturers or plates. The requisite performance should be requested from the plate manufacturer or Esko in advance.

"OK" (11) opens a keyboard so that the name of the plate can be amended:

The parameters must be adapted after entering the plate name:



The plate thickness *"Thickness"* (12) can only be changed to "other" in the case of unknown plates.

In the case of known plates from the database, the *"Laser Energy"* (13) will be pre-set, but may be adjusted to the production environment.

The Pixel Boost for jobs with 4000 ppi is activated with the "Pixel+" option (14).

When *"Pixel+"* is activated, valid values must be entered into the "Microscreen" and "Groovy" fields (15). If invalid values are entered, the fields will be highlighted red. In that case, it will not be possible to save.

"Standard" (17) uses the CDI's normal exposure method to help minimise moiré.

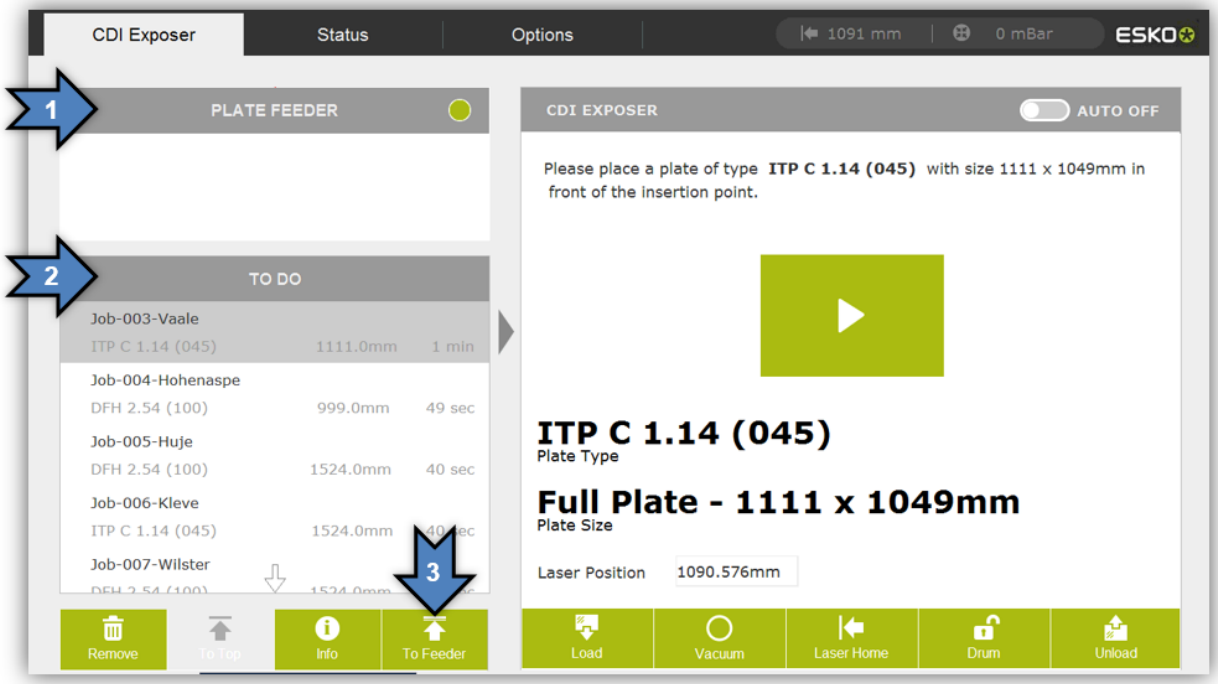
For Optics 100v2 machines, the "Speed" option (16) can also be switched on. The reduces the speed for 2400 ppi and 2540 ppi jobs by using a different exposure method.

6 Operation of the CDI Crystal Touch Software with Plate Feeder

The "Plate Feeder" (PF-S) can be used in conjunction with the "Plate Handler" and the "XPS" (CDI Crystal 4260, CDI Crystal 5080-v2 and CDI Crystal 4835-v2).

6.1 The user interface with Plate Feeder

The user interface changes slightly as the "Plate Feeder" (1) adds an additional loading level.

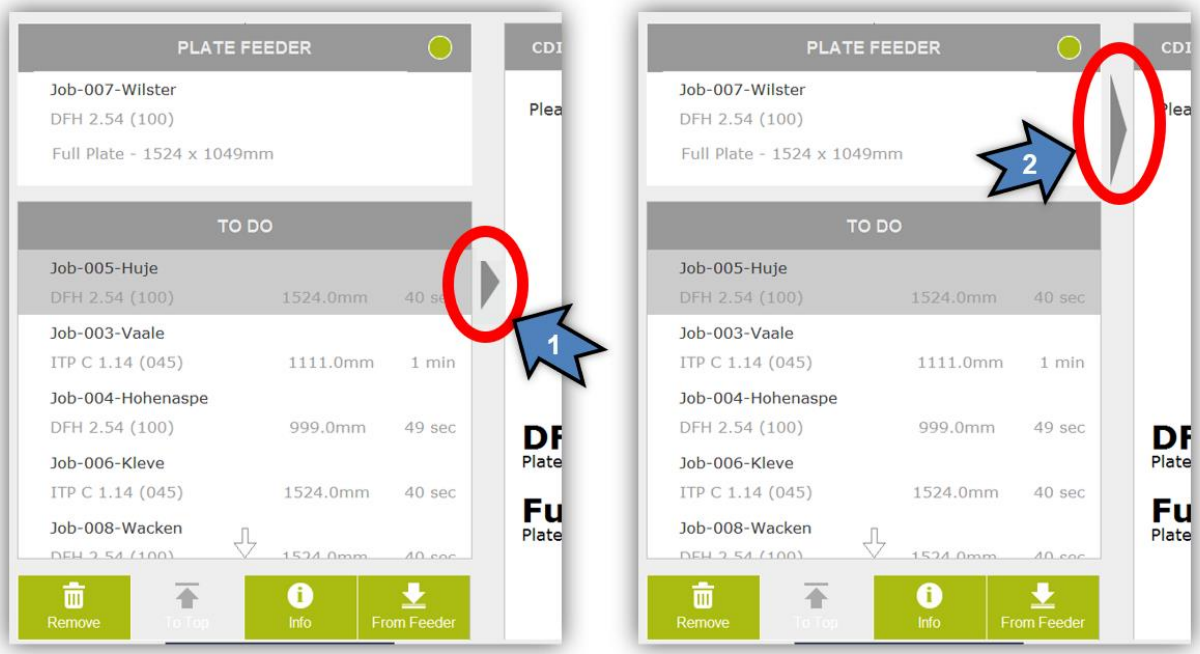


Jobs from the "To Do" list (2) are always loaded from the loading edge of the CDI.

Jobs that need to be loaded from the "Plate Feeder" (1) must be reserved for this level with "To Feeder" (3).

6.2 Selecting the loading level

The grey arrow next to the job shows the level from which the job is loaded.



When the "Plate Feeder" has been coupled and a plate has been correctly positioned to the sensors, a plate can be loaded from this level (1).

If there is a plate on the loading edge of the CDI and the sensors are triggered, it is only possible to load from the CDI loading level (2).

6.3 Automatically starting a job from the "Plate Feeder"

The "Plate Feeder" must be coupled and a plate positioned.

If a job was reserved for this level beforehand (see previous section), pressing Start transports the plate from "Plate Feeder" to the CDI with the aid of the "Plate Handler".

The plate is loaded automatically and exposed before being transported to the XPS.

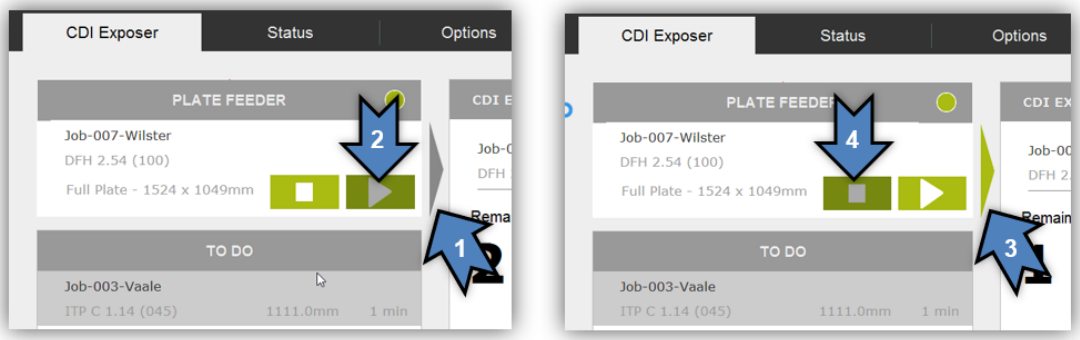
Jobs without UV are transported to the XPS, but not exposed with UV.

6.4 Parallel operation with the "Plate Feeder"

In the event of ongoing exposure, the next job can be reserved for the "Plate Feeder". When the current job has been transported to the XPS, the plate is loaded from the "Plate Feeder".

1 The arrow (1) indicates the correct loading level from the "Plate Feeder".

2 The Start button (2) starts the job as soon as the CDI is free.

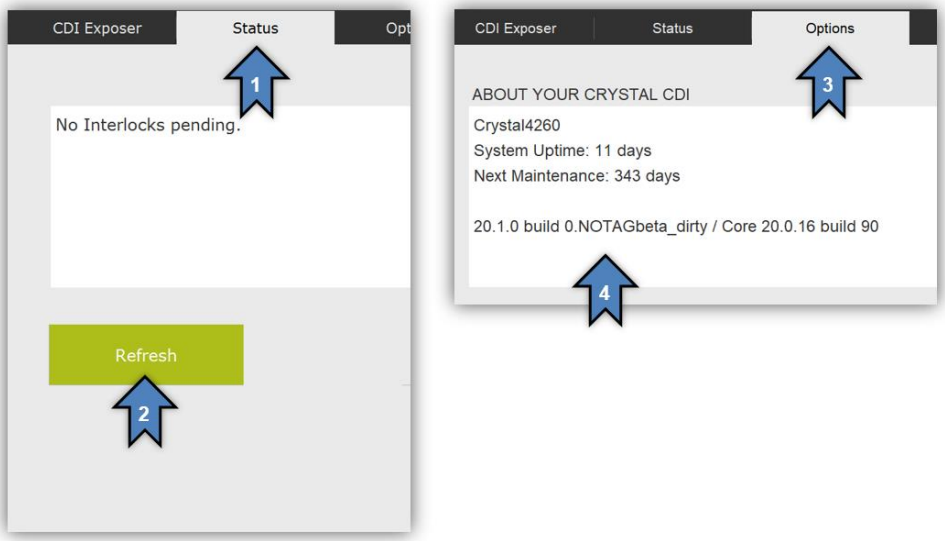


3 The arrow now flashes green (3) to indicate the waiting job.

4 This process can be cancelled with the Stop button (4).

7 Machine status and data

The machine status is shown under "Status". In the event of an error, this display will blink in red. Once the error has been corrected, the display must be refreshed with "Refresh" (2).

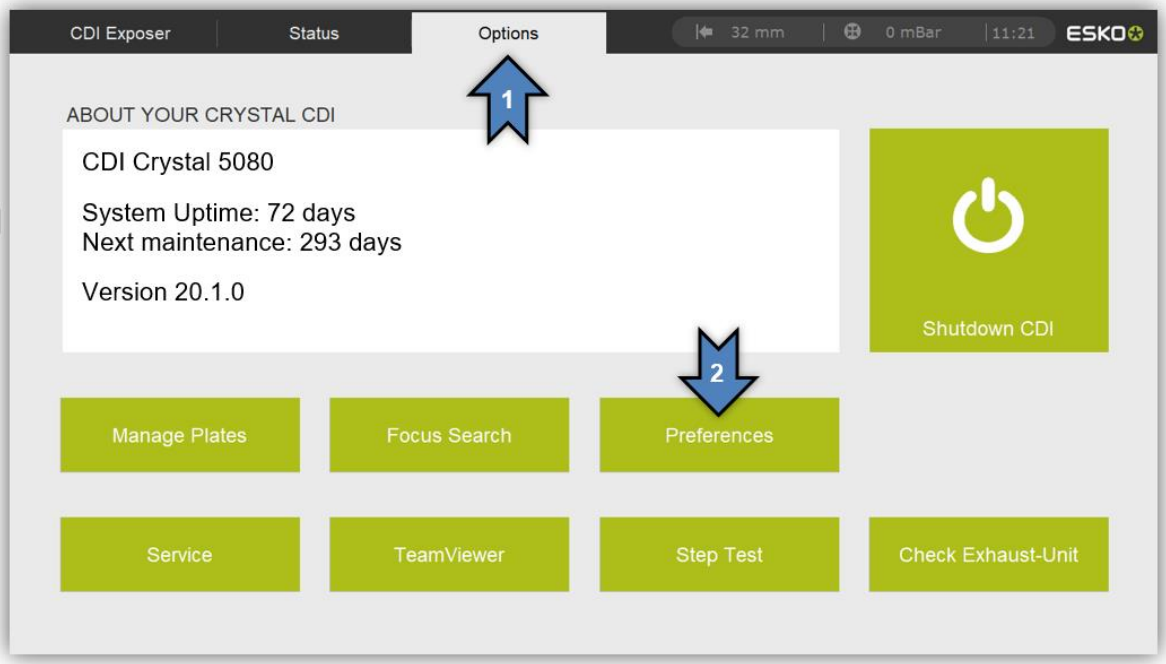


"About your Crystal CDI" (4) under "Options" (3) shows the machine data and software version.

In addition, the uptime of the CDI ("System Uptime") and the remaining days until the next maintenance ("Next Maintenance") are also displayed.

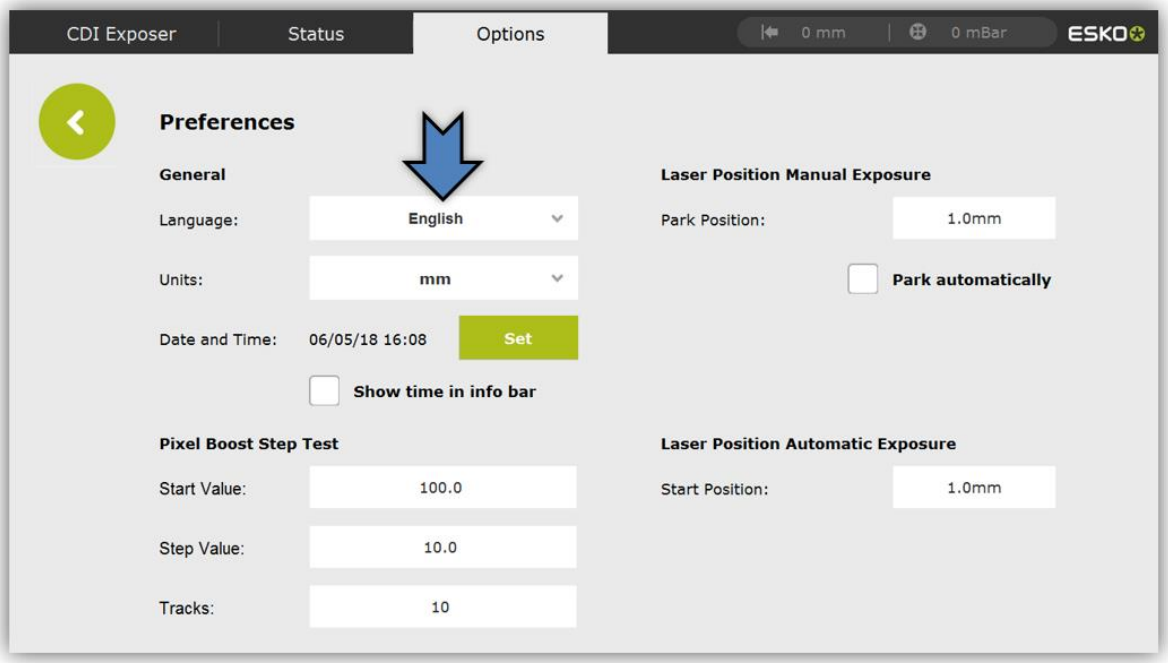
8 Changing the basic settings

Basic settings such as language, units and time are changed under "Options" (1) and "Preferences" (2). These settings usually only need to be implemented once after commissioning.



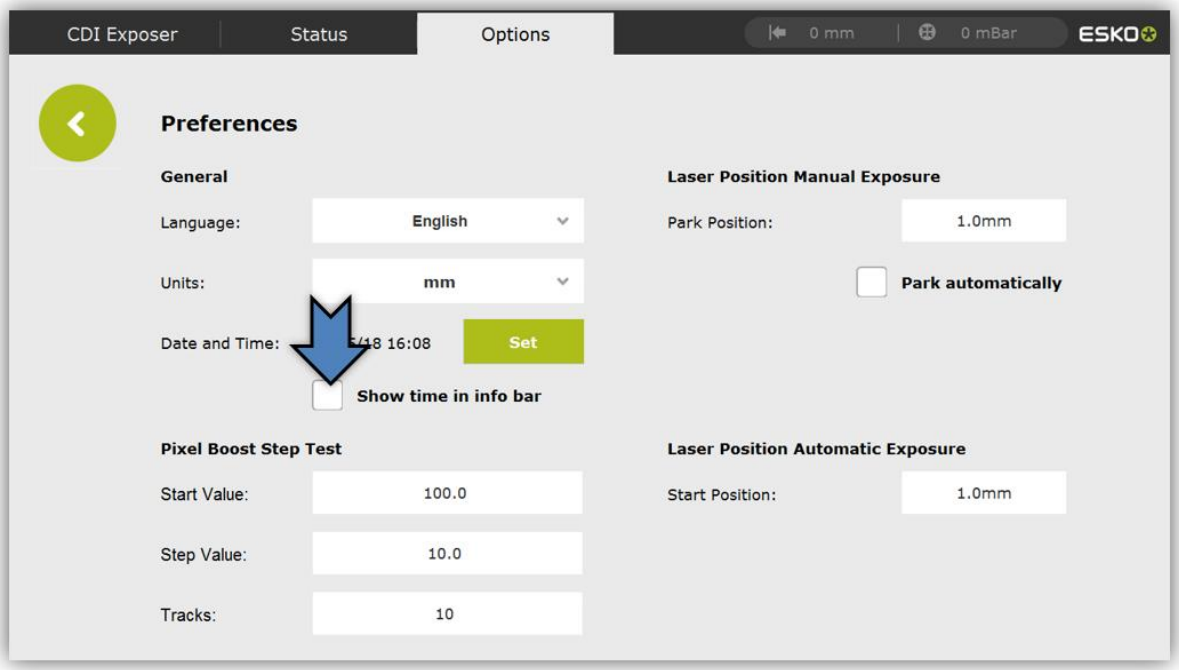
8.1 Change language

1 Select "Preferences" and select the "Language".



8.2 Show time

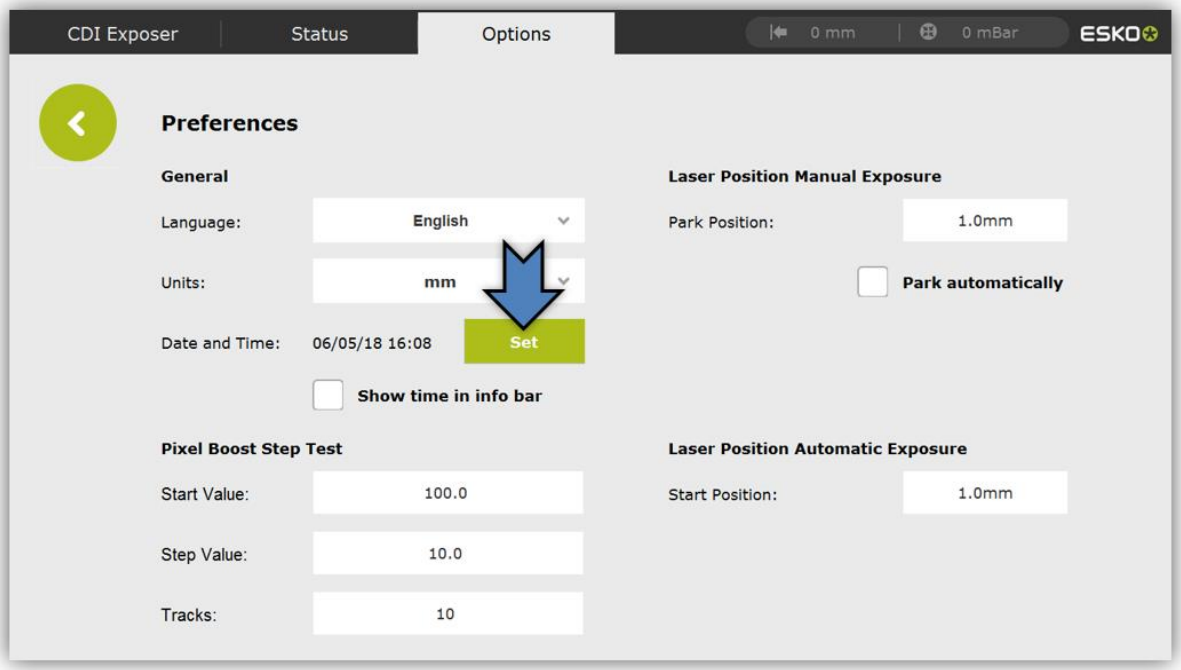
1 Select "Preferences" and activate "Show time in info bar".



Following a restart of the CDI, the time is shown at the top right

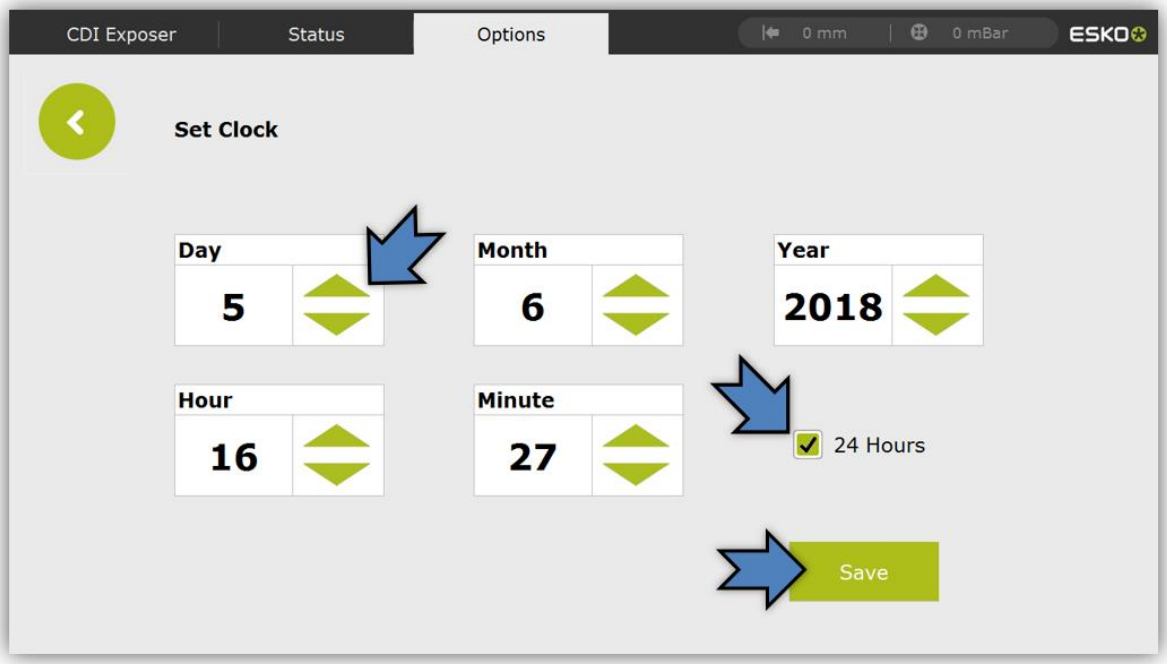
8.3 Set date and time

1 Select "Preferences" and confirm with the "Set" button.



2 The values are changed with the arrows to the right of the number

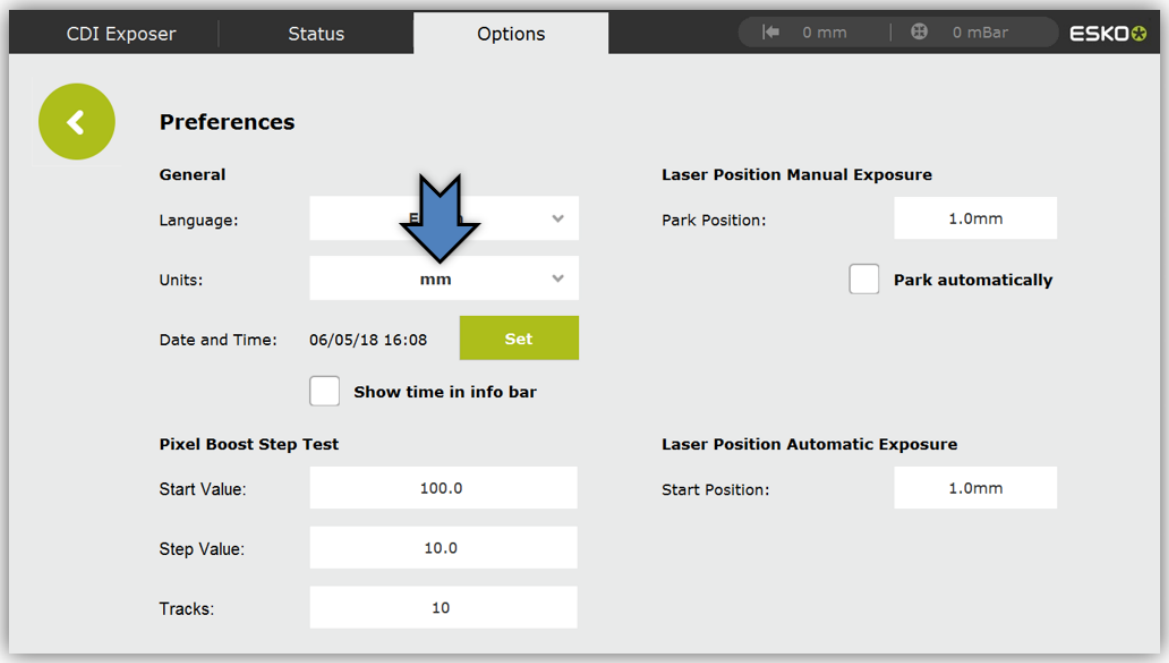
3 "24 Hours" switches between 12 hour and 24 hour display



4 The values are accepted and changed in the operating system with "Save"

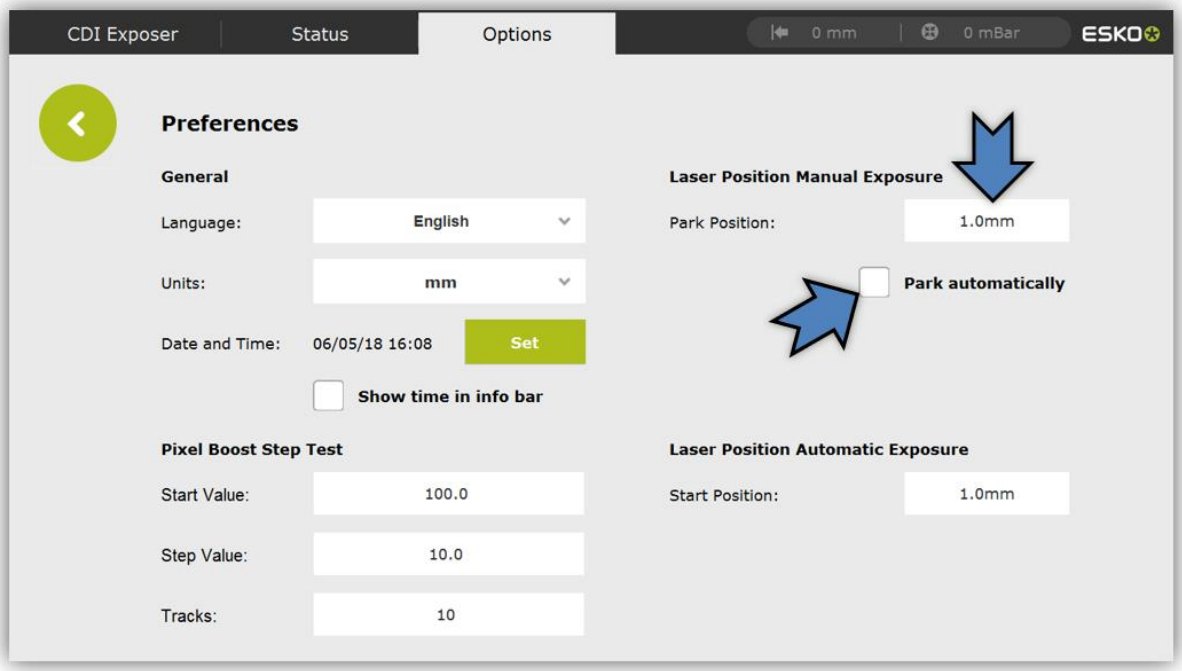
8.4 Switch units (inch/mm)

1 Select "Preferences" and select the unit under "Units".



8.5 Changing the laser park position

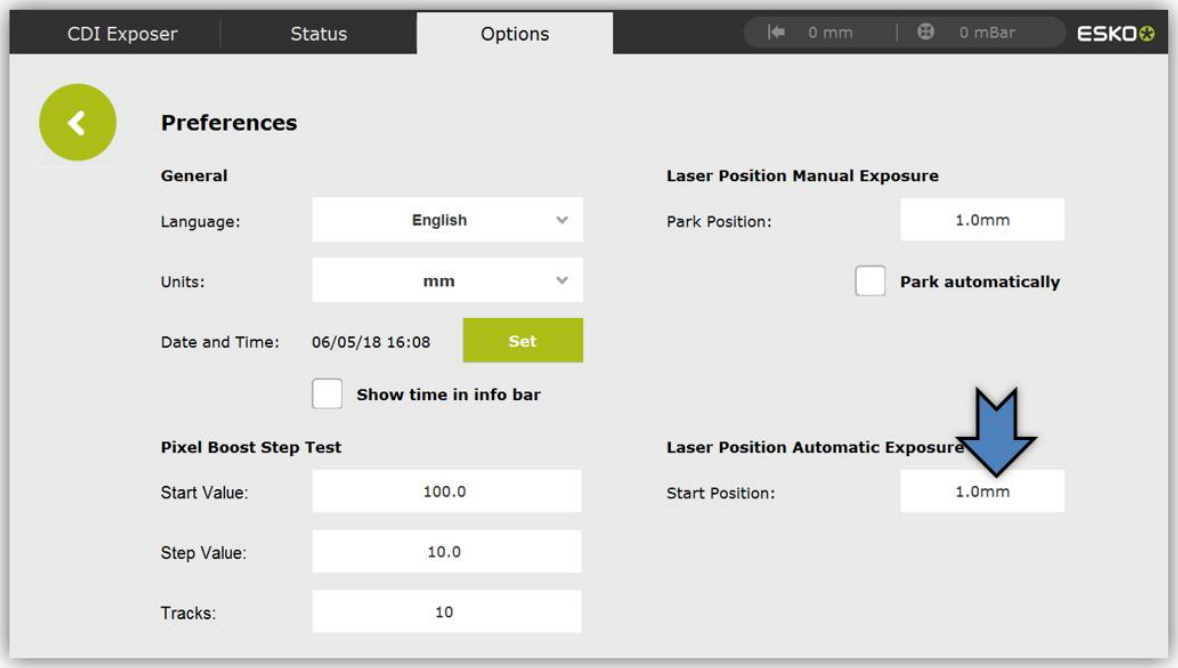
1 Select "Preferences" and set the park position of the laser head.



2 If "Park automatically" is activated, the laser head returns after each exposure.

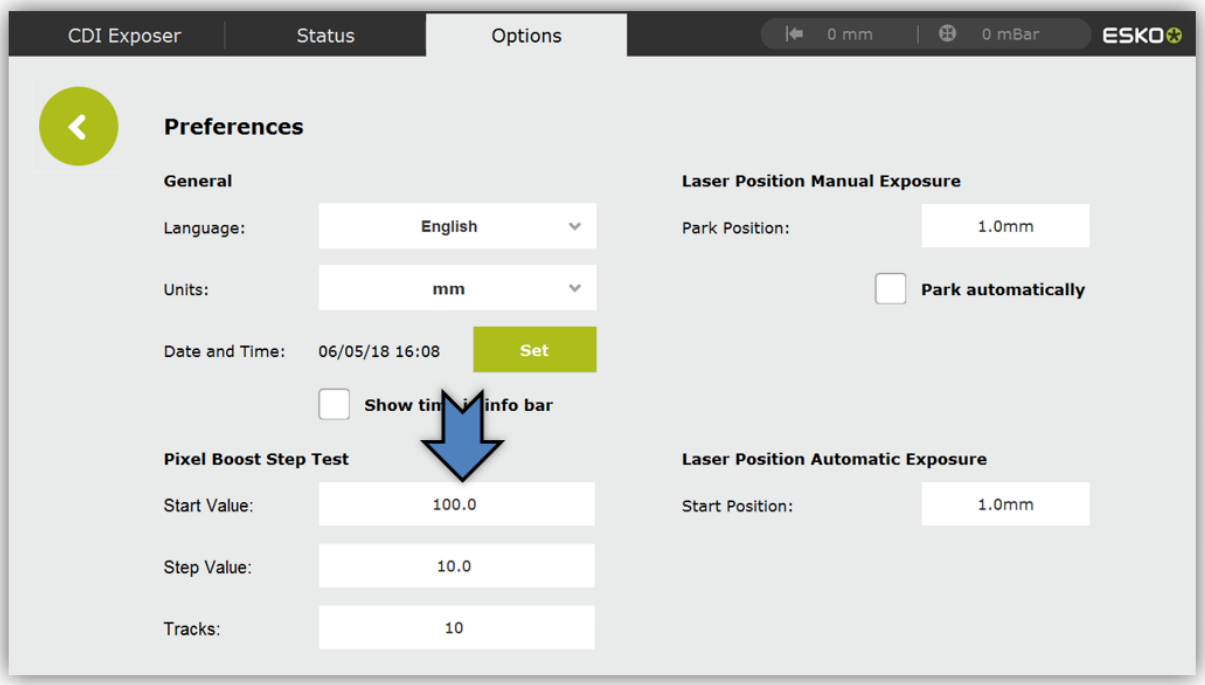
8.6 Changing the laser position for the automatic process

1 Select "Preferences" and set the start position for automatic jobs.



8.7 Changing the Pixel-Boost values for the "Step Test"

1 Select "Preferences"



2 Enter the "Start Value", the increase of Pixel-Boost value between the individual images with "Step Value" and the number of images with "Tracks".

9 Support

Contact information can be found on www.esko.com.

If necessary, the support team can connect to CDI via "Teamviewer". The device requires an internet connection to do this.

The user must open "Teamviewer" to allow Esko to access the device through the remote access software.

1 Go to the options menu.

2 Go to "TeamViewer" to open the Teamviewer app

It can take a while for the software to open.

3 As soon as "Teamviewer" appears, share the service "ID" and "Password" with the support team.