

# User's Guide

## 305 DW/405 DW/505 DW/505 DW XP

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► **IMPORTANT**

Please keep this manual with other equipment documentation for future reference.

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**GLUNZ & JENSEN** 

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# About this manual

This manual applies to the Flexo Processor **305 DW/405 DW/505 DW/505 DW XP**.

Always read the separate Safety Instruction Manual part No 21741 before operating the equipment.

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# General information

## Intended use of this manual




This manual describes the common use procedures of the equipment. It is intended for the daily user and should be kept with the equipment for reference at all times.

## Reservations

- This manual was written and illustrated using the best possible information available at the time of publication.
- Any differences between this manual and the equipment reflect improvements introduced after the publication of the manual.
- Changes, technical inaccuracies and typographic errors will be corrected in subsequent editions.
- As a part of our policy of continuous improvement, we reserve the right to alter design and specifications without further notice.

## Notes, Cautions and Warnings!

Notes, cautions, and warnings in this manual are used and categorized as described below:

Symbol	Meaning	Explanation
	<b>NOTE</b>	The operator should observe and/or act according to the information in order to obtain the best possible function of the equipment.
	<b>CAUTION</b>	The operator must observe and/or act according to the information in order to avoid any mechanical or electrical damage to the equipment.
	<b>WARNING</b>	The operator must observe and/or act according to the information in order to avoid any personal injury.

# The equipment

## Unintended use of the equipment

Glunz & Jensen does not take any responsibility for any damage or accidents caused by unintended use of the equipment.

It is absolutely prohibited to make any modifications, electrical or mechanical, of the equipment. If however this prohibition is disregarded, Glunz & Jensen's warranty will no longer apply.

## Intended use of the equipment

Development and/or processing of flexographic plates as specified in **Technical Specifications** in the Service Manual.

This equipment is a part of a full range dedicated for the treatment of flexographic printing plates. This range includes exposure, processor, dryer and light finisher.

## Installation



**WARNING:** The equipment must be installed in restricted access locations only.

- Never install the equipment in explosive environments.
- It is the responsibility of the owner and operator(s) of the equipment that the installation is made in accordance with local regulations, and by engineers authorized to carry out electrical, compressed air and HVAC installations.
- The manufacturer cannot be held responsible for any damage caused by incorrect installation of the equipment.
- Installation, service and repair must be performed only by service technicians who are trained in servicing the equipment. The installation procedure is described in the chapter 'Installation' in the Service Manual.

## Service assistance

If help is needed to correct any problem with the equipment, please contact your local supplier.

# Daily use

## General

This equipment is designed to

- wash

of flexographic printing plates.

The operator interface is made by a color touch screen which ensures a very easy control.

## Safety warnings

**Any maintenance, servicing or adjustments must only be carried out by suitably skilled or properly instructed/supervised personnel. Guards, other than the top covers must NOT be removed by anyone other than an authorized and trained service engineer.**

**To use this equipment safely, it is necessary that operators and maintenance people follow the safety instructions and safety cautions and warnings specified in the manuals.**

**For the safety of operators, the equipment is fitted with interlock switches for the opening of the specific section during the operation, and for removing the rear panels of the equipment. If any of the interlocks are not installed or closed, the equipment or a specific section of the equipment will not operate. If an interlock is activated during operation, the equipment or a specific section of the equipment stops immediately.**

**The equipment is fitted with emergency switch(s) which allows the operators to stop the equipment in case of emergency. This emergency switch cut off the power supply of the entire equipment. Make sure that the risk or the problem has been eliminated before restoring the power on the equipment. To release the emergency switch, turn it clockwise. The equipment has to be restarted following the "Initial operation of the equipment" on the next page.**

**Flexographic printing plates are considered articles by e.g. OSHA (CFR1910.1200). An article does not require a Material Safety Data Sheet. However, unexposed plates contain material that may cause skin irritation or allergic skin reactions and sensitization in susceptible persons.**



**WARNING:** For handling the plates use a safety gloves.

## Initial operation of the equipment



**CAUTION:** Make sure that the cooler tank is filled with proper cooling liquid and the main tank is filled with solvent before turning the machine on. See Service manual for more details.



**NOTE:** Make sure the room temperature is between 17°C (63°F) and 28°C (82°F) and relative humidity between 20 and 80.



**NOTE:** Before turning the equipment on make sure that the working area around the equipment is clean and free for easy movement. All the covers must to be closed.



**NOTE:** Check all the required supplies and connections, as power cable and all the hoses are connected properly. Check if there are any leaks of liquid.



**NOTE:** Check that the emergency stop button is released. If it is not, release it by turning it clockwise.

- Turn on the main switch located at the front of the machine (right side).
- The unit is now displaying the standby screen.



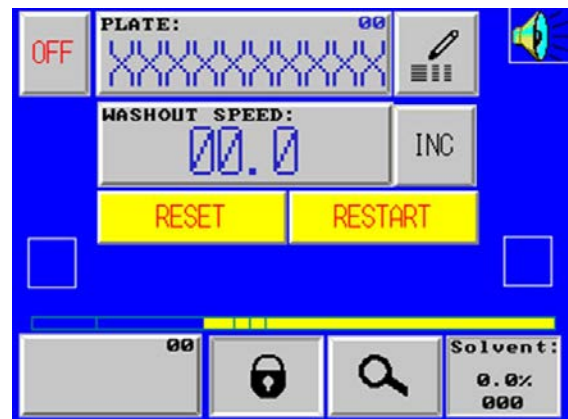
- To switch on the unit press "ON/OFF" button located below the control panel of the unit.
- Then two different screens can be displayed.



The processor is running an automatic cleaning cycle at the switch on.

This screen disappears as soon as the cleaning cycle is finished.

To cancel the cleaning cycle at the switch on press the "PERFORMING CLEANING CYCLE. PRESS TO STOP." button and confirm.



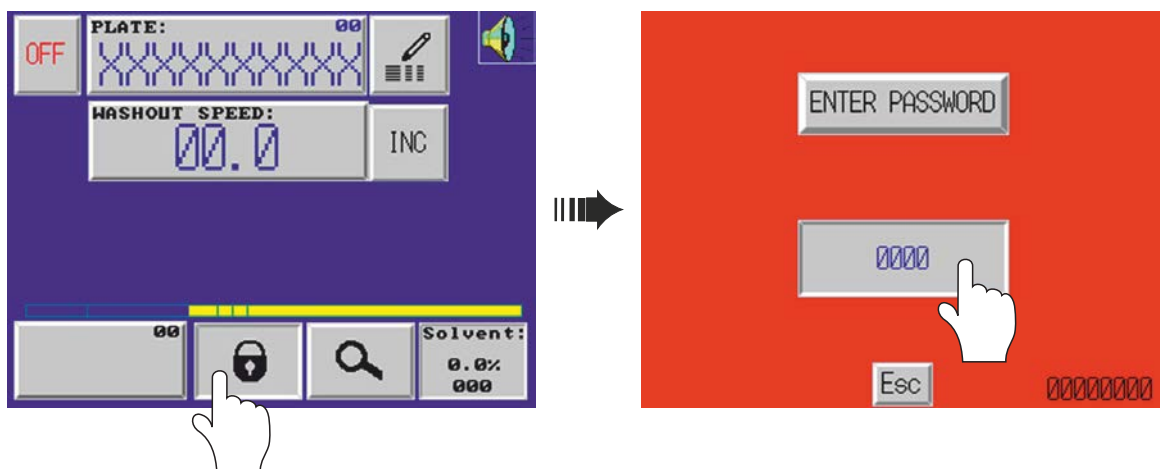
The processor has been stopped with at least one plate in process.


Press the "RESET" button and confirm to reset all ongoing cycles.

Press the "RESTART" button and confirm to restart the processor at the same status as at the power off. This gives the possibility to continue the process of a plate remaining in the unit.

## Processor configuration

The user has the possibility to access different menus by typing a password.



Password	Function
<b>1309</b>	Allows access to machine user settings.
<b>1212</b>	Unlocks access to plate parameters.
<b>1313</b>	Locks access to plate parameters. The  button will disappear.

## Machine setup

By entering password "1309" following screen will be displayed. From this screen it is possible to change the rinse timing and solvent temperature.

% DEVICE CALIBRATION:			ESC
Min:	0.1%	90	
Max:	3.4%	3100	0000
% DRAINING & FILLING :	3.01	% WAITING TIME:	2min
% Max :	4.0%		
Solvent T° Setpoint:		32	
Fresh solvent pulse ON:	2.0s	OFF:	40mm
T° IN °C	SPEED IN mm/min		N


Display	Description
ESC	Allows to exit this screen and to return to the main screen.
N	Allows to switch to the next page.
% Max:	By pressing this button it is possible to set maximum solid content for operation. <i>Factory settings – 4.0%</i>
Solvent T° Setpoint:	By pressing this button it is possible to set temperature of solvent (this depends on used solvent). <i>Factory settings – 32 [°C]</i>
T° IN °C	By pressing this button it is possible to choose temperature unit – [°C] or [°F]. <i>Factory settings – °C</i>
SPEED IN mm/min	By pressing this button it is possible to choose speed unit – [mm/min] or [Inches/min]. <i>Factory settings – mm/min</i>



**WARNING:** All other functions available from this screen can be used by Service Technician or trained and skilled people only. Incorrect manipulation may result in poor plate quality, damage of the processor or personal injury.

## Plate settings

It is possible to store 25 plates (channels 0 - 24) with their washout speed and time (depending on the model).

- By pressing the  button following plate parameters screen is displayed (this button is available on the main screen as well as on the plate selection screen).



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These models can run only incremental mode.



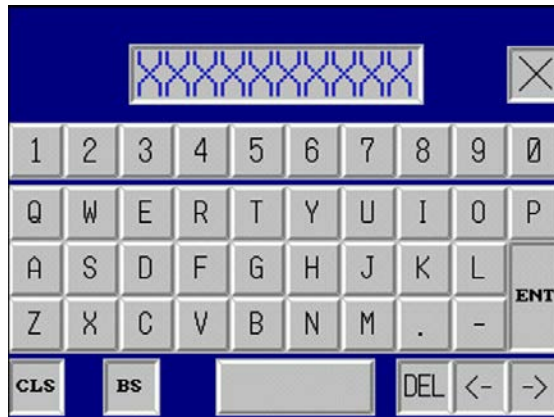
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This model can run both incremental and batch mode. By running incremental mode it is used the washout speed and by running batch mode it is used the washout time.

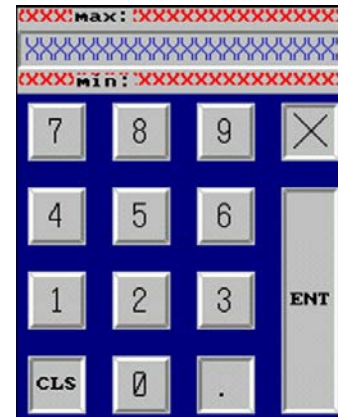
By pressing "INC" button it can be chosen incremental or batch mode.

- For each stored channel it is possible to modify the name of the plate as well as the dedicated parameters.
- It is possible to scroll up or down the channels by pressing "+" or "-".
- When the required channel is displayed, press the "PLATE TYPE:" field to change the plate name or one of the dedicated parameters.
- Then an alphanumeric keyboard or a numeric keyboard will appear.

Alphanumeric keyboard



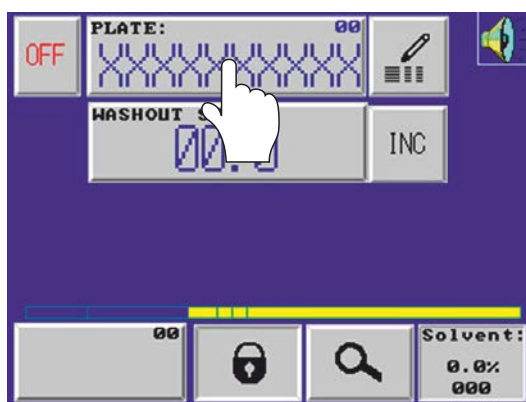
Numeric Keyboard



**NOTE:** Always confirm the input by pressing "ENT" button, after typing in a new value. Not doing this may result in corrupted values memorization.

## Plate selection


- Press the "PLATE:" field on the main screen to access the plate selection screen.



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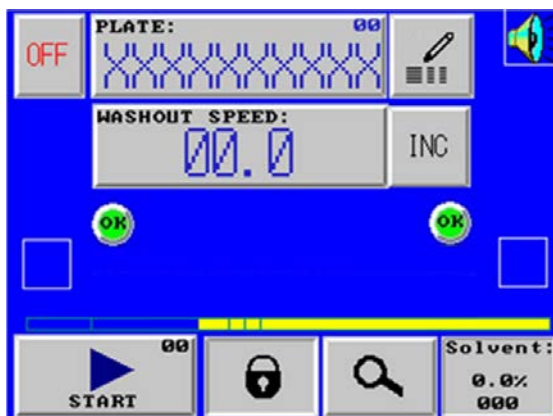


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- To select the plate to process, scroll up or down until required plate name is displayed. Press required plate name to highlight it. Then it is possible to check the plate parameters on the right side of the screen to ensure that the correct plate is selected.
- If the plate parameters are not correct, press the  button to access to the plate parameters screen.
- When the correct plate with the correct parameters is selected, press "x" to turn back to the main screen. The parameters are automatically transferred in the concerned section and the processor is now ready to start a process cycle.

## Starting washout cycle

- Check that all plate parameters are correct.
- Open the entrance cover.
- Place the transport bar on the entrance table and ensure that it is well engaged in the locking devices located on each side (two "OK" signs on the screen).



- Fix the plate on the middle of the transport bar to allow the plate length sensor (located in the middle of the entrance section) to detect the plate properly.
- Close the entrance cover.
- Press the "START" button to start the process cycle. This button is then flashing green till the plate is completely entered in the processor.

## Processing plate after plate

It is possible to run several plates in the same time in the processor if the washout speeds are the same. In this case, place the plate on the transport bar on the entrance and press the "START" button. The processor will automatically feed the plate in as soon as possible.

If the washout speed of the plates is different, place the plate on the transport bar on the entrance and press the "START" button. The processor will automatically feed the plate in as soon as the previous plate is out of the cleaning section.



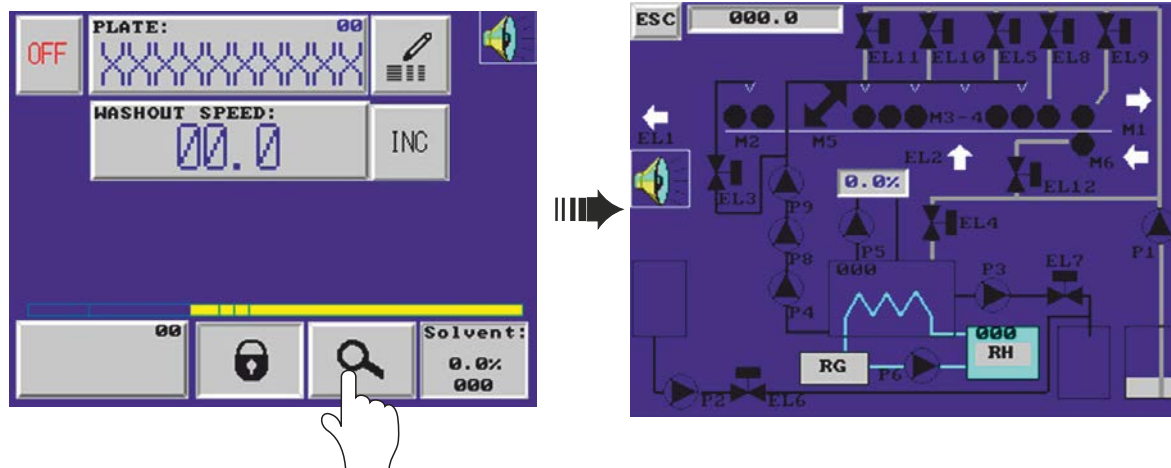
**NOTE:** The processor can process a maximum of 3 plates in the same time.



**NOTE:** The sensor which measure the length of the plate is located in the middle of the processor. Make sure that plate is placed in front of this sensor.

## Process visualisation

During a washout it is possible to visualize the functions that are active by pressing a magnifier sign button. All functions running are colored in green.



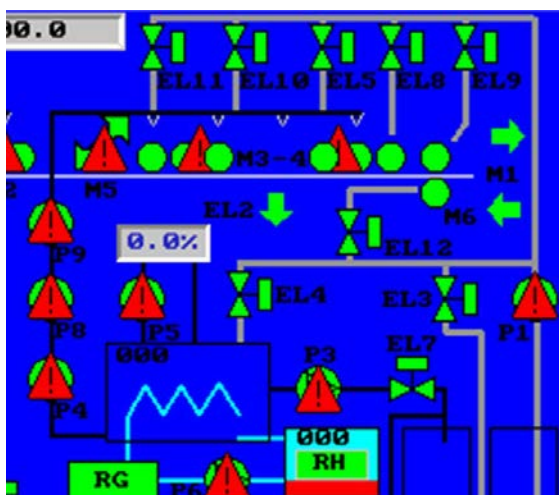
## Alarms

Two different kinds of alarm can appear on the screen:

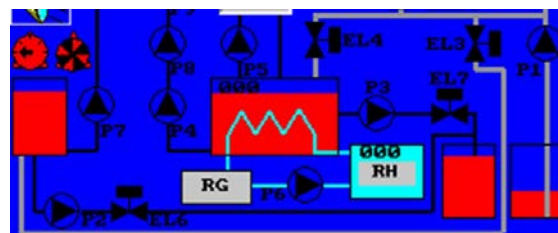
- Process alarm – with flashing the  sign and intermittent sound.
- Service alarm – with flashing the  sign.

To identify which process alarm is on, press the flashing sign to display the dynamic synoptic screen.

A graphic alarm sign indicates the type of alarm (please refer to following examples):



If problem occurs on a circuit breaker for the pumps or motors, the process alarm sign is flashing on the motor or the pump.






If levels problem occurs on the different solvent tanks, the level sign is flashing and indicating a problem in a tank (low or high level).



**NOTE:** It is possible to stop the buzzer by pressing the buzzer icon. The buzzer will automatically restart if another alarm occurs.

## Specific alarms

In addition to the motor/pump alarm and level alarms, specific alarm can be displayed:

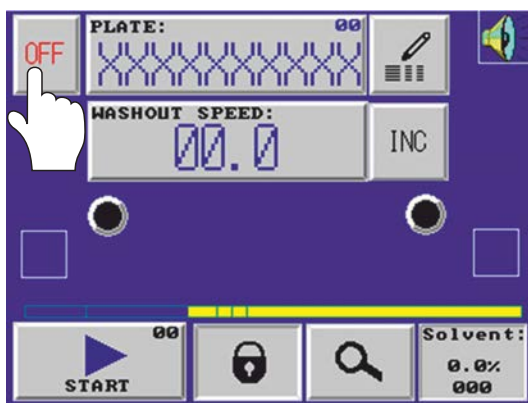
Symbol	Description
	One of the top panels is open.
	Compressed air is too low.
	Exhaust of the processor is too low.



**NOTE:** It is possible to stop the buzzer by pressing a speaker sign. The buzzer will automatically restart if another alarm occurs.

## Switching off

In order to allow the processor to perform the cleaning cycle when the processor is switched off, please use the "OFF" button located on the main screen. Press it and confirm in order to start the cleaning cycle. When finished, the processor will switch off automatically.



**NOTE:** The cleaning cycle performs the cleaning of all the brushes using fresh solvent.

# Maintenance

The equipment is equipped with emergency switch which allows the operator to stop the equipment in case of an emergency. These emergency switches cut off the power supply of the entire equipment, except power supply of the controls (relays, touch screen, etc.), phase controller and exhaust blower of washout section.



**WARNING:** Make sure that the risk or the problem has been eliminated before restoring the power on the equipment.

To release the emergency switch, turn it clockwise. The equipment has to be restarted following the "Initial operation of the equipment" in the User's Manual.



**CAUTION:** Prior to switch off the equipment, it is required to close the top covers.

## Safety interlocks

For the safety of operators, the equipment is equipped with interlock switches and sensors on the opening of drawers and covers during operation, solvent overheating and safety level switches.

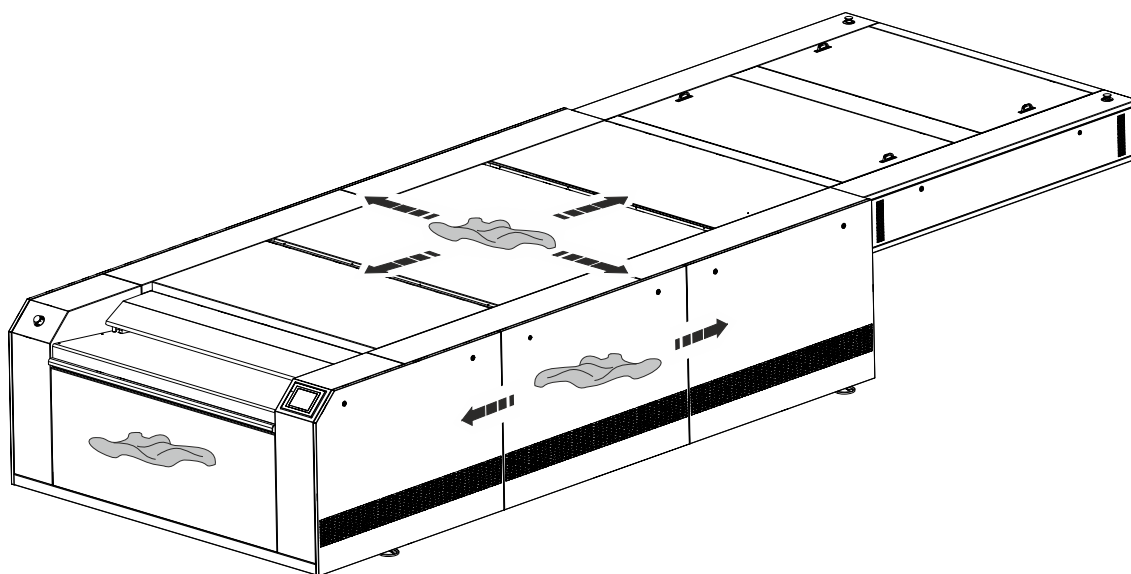
If any of the interlocks are not installed, the equipment or a specific section of the equipment will not operate.



**CAUTION:** If an interlock is activated during operation, the equipment or a specific section of the equipment stops immediately.

## Cleaning

- Clean the equipment covers from dust and dirt by using a clean damp cloth.



## Cleaning the washout section

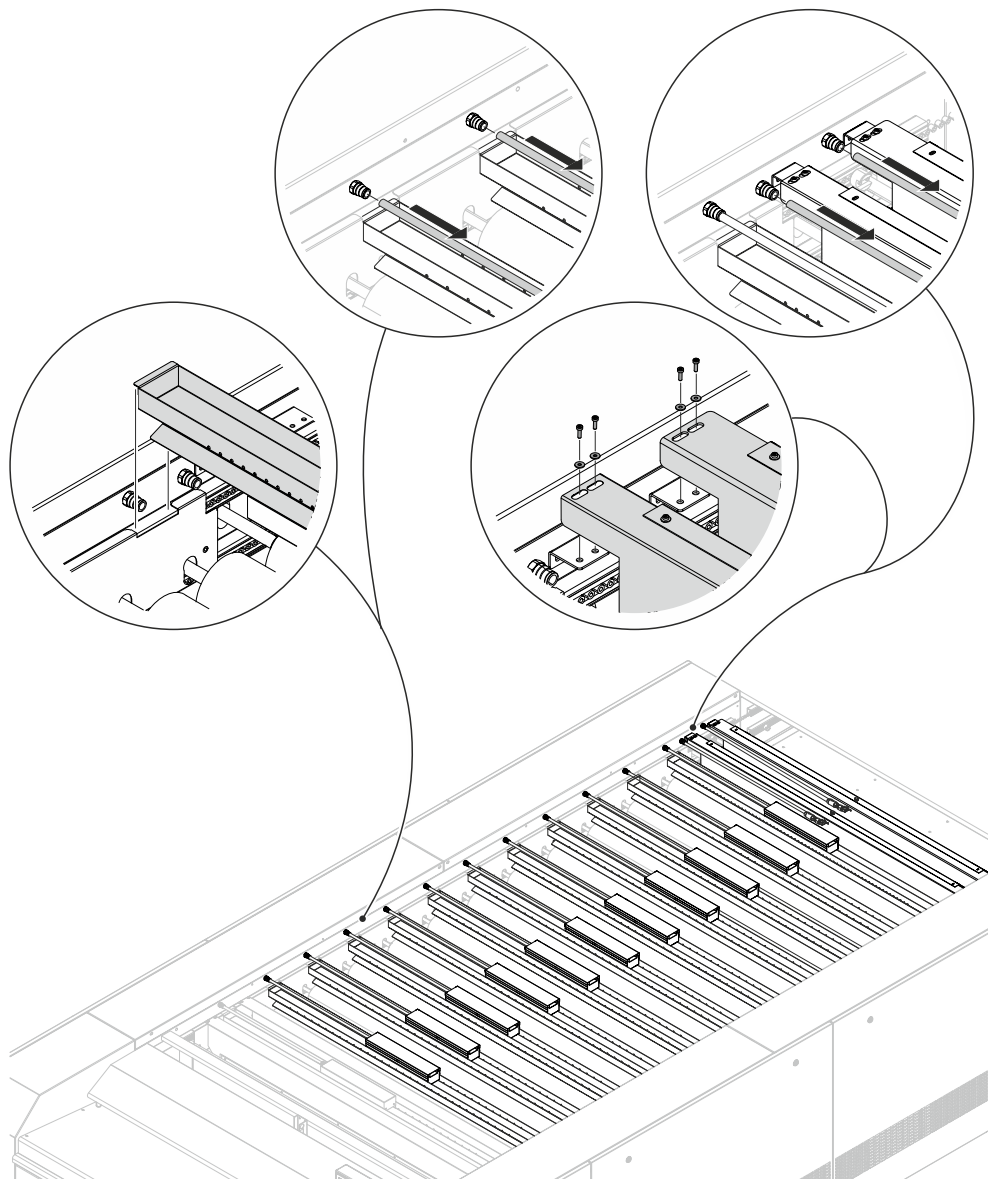


**WARNING:** Please wear appropriate protective clothing (gloves, glasses, and safety shoes) and ensure the adequate ventilation.

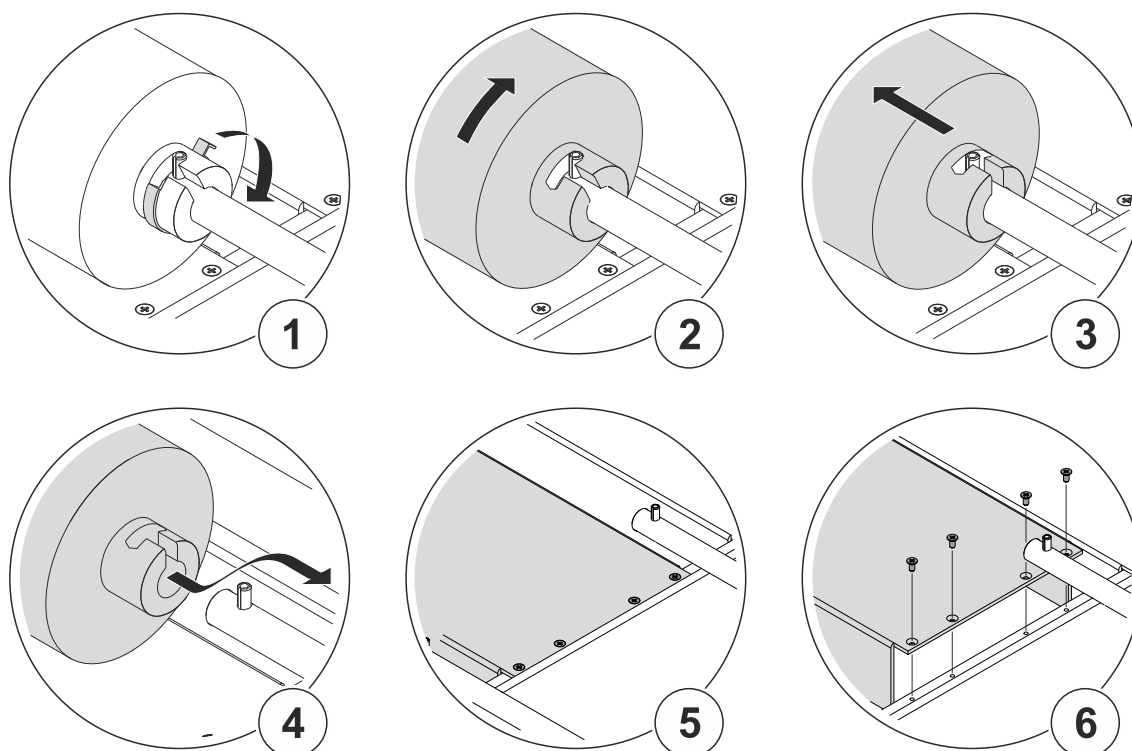
- Open the washout covers and remove the hoses: Push the silicone hose into the fitting and the edge of the fitting backwards simultaneously and then pull the hose out (the same as for air connection).
- Last two wiping brushes only: Loosen the screws and remove the doctor blades.
- The rest of brushes: The solvent tray can be removed without use of any tools.



**NOTE:** Note the position of the solvent trays. The last solvent tray (the one nearest to the processor's exit) has holes on one side only.



- Remove the retainer ring.
- Turn the brush manually to the center position. Pay attention to which position is the brush turned.
- Push the brush out of the shaft, lift it up and take the brush out.
- Unscrew the four cross-head screws on both sides of the base plate and remove it.



- For better cleaning of the tub can be used fresh solvent. The tub is cleaned from back to the front. To start the cleaning of the tub with the fresh solvent follow the steps below:
  - Switch to the Manual functions screen.
  - Press the valve EL12.
  - Press the pump P1.
- In the meantime the main tank has to be drained, follow the steps below:
  - Press the valve EL7.
  - Press the pump P3.



**CAUTION:** The pump in the manual mode is not secured against the running dry. It is necessary to observe the tank and turn off the pump at the right time.

- Clean the tub.
- Clean also all dismantled small parts.
- When the cleaning is finished, reinstall all removed parts in reverse order. Make sure the brushes are installed correctly and secured with the retainer ring.



**WARNING:** When installing solvent distribution tray over the last pair of washout brushes, make sure the outlet holes are placed in the direction of the washout section.

## Cleaning the digital section

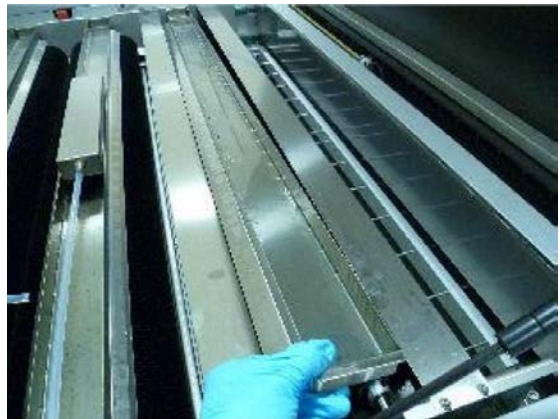


**WARNING:** Please wear appropriate protective clothing (gloves, glasses, and safety shoes) and ensure the adequate ventilation.

- Open the washout covers.
- Remove the hose with the spray box: Push the silicone hose into the fitting and the edge of the fitting backwards simultaneously and then pull the hose out (the same as for air connection).



- Remove the solvent distribution tray.



- Loosen the screws on both sides of the two splash guards.



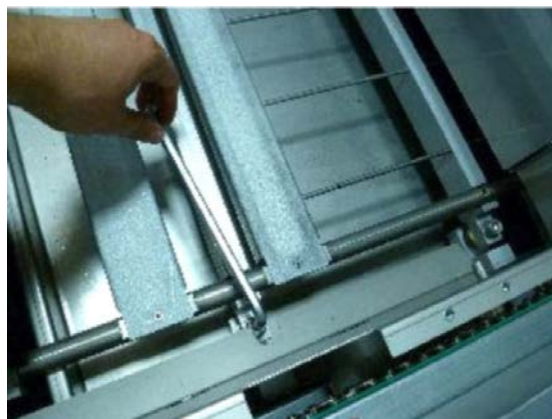
- Lift up and remove the splash guards.



- For better access remove also the input plate.



- Remove brushes according to "Cleaning the washout section" on page 21.
- Remove two spring-loaded screws on both sides.



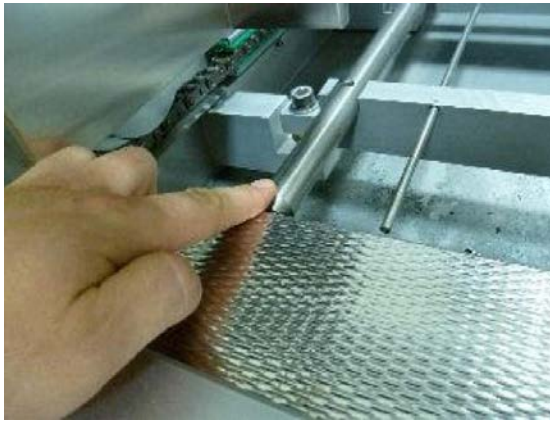
- Now the grid can be removed to the side.
- Clean the digital section.



- Place the four springs and their support plates to the original position.



- Reinstall the grid by reusing the four screws so that the transition on both sides of the grid is smooth. Level difference must be less than 1 – 2 mm.



**NOTE:** Correct washout of the LAMS layer (black digital plate layer) must be verified after adjustment.

- When the cleaning is finished, reinstall all removed parts in reverse order. Make sure the brushes are installed correctly and secured with the retainer ring.

## Cleaning the main tank



**WARNING:** Please wear appropriate protective clothing (gloves, glasses, and safety shoes) and ensure the adequate ventilation.

- Open the plate input table and remove the cover of the main tank.



- Drain the main washout tank:
  - Switch to the *Manual functions* screen.
  - Press the valve **EL7**.
  - Press the pump **P3**.



**CAUTION:** The pump in the manual mode is not secured against the running dry. It is necessary to observe the tank and turn off the pump at the right time.

- When the main tank is empty, clean it with the proper cleaning agents.
- The tank has to be filled up after cleaning:
  - Press the valve **EL4**.
  - Press the pump **P1**.
- Reinstall the main tank cover and close the input table.