Topsetter P/PF 102

Operation

Edition November 2001
Order No. 5829801

HEIDELBERG

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Heidelberger Druckmaschinen AG assumes no responsibility for information and descriptions as far as third-party products are concerned.

The performance / speed specifications and other technical specifications concerning the application possibilities of our products are not guaranteed contractual properties in the legal sense.

If any problems occur with the product described in this manual, please contact the agency which is responsible for you.

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Printed in Germany.

Technical Remarks on Safety

The unit conforms with the safety requirements of the standards mentioned in the *Technical Data* chapter.

Correct Usage

The Topsetter P/PF 102 is a laser imagesetter for the exposure of offset printing plates. It should only be used for this purpose in accordance with the user documentation.
Do not use the unit as a place to store objects and fluids.
Ventilation slits must not be covered up.

General Information

The Topsetter P/PF 102 may only be installed by authorized service personnel. The ambient conditions must be observed.

Warning: Unauthorized opening of housing components and improper repairs not expressly described in the operating manual, could expose the user to considerable danger.

Servicing work may only be performed by authorized specialist personnel. The relevant accident prevention regulations must be observed at all times.

Non-observance of safety regulations can lead to the loss of accident insurance cover.

Main switch with Emergency Stop function

The **main switch** (red rotary switch) is used to de-energize the Topsetter P/PF 102.

The main switch (red rotary switch) disconnects both poles of the Topsetter P/PF 102 **and** the SCL P/PF 102/ MCL P/PF 102 Autoloader from the mains. In the event of an emergency, this main switch is used as an Emergency Stop switch for the Topsetter P/PF 102 **and** the SCL P/PF 102/MCL P/PF 102 Autoloader.

Unit plugs and sockets of the house installation must be easily accessible so that, in the event of an emergency, the unit must be **completely** isolated from the mains by operating the main switch or pulling out the power plug.

Never plug in or remove the power cable with wet hands and only get hold of it at the plug. A damaged power cable can cause leakage current and electric shocks. Protect the power cable against damage. Never place any heavy objects upon it and never squash it.

Laser Safety

The Laser imagesetter is a class 1 laser device.

This means that the invisible laser beam in the unit is shielded by expansion cover shields.

If used as directed, the user is never exposed to danger from the laser beam.

The laser systems used in the Topsetter P/PF 102 correspond to class 4 (> 500 mW).
Companies which carry out servicing must appoint a laser protection officer in accordance with the Accident Prevention Regulations of the Professional Trade Association.

Servicing may only be carried out by Heidelberg personnel who have been trained by appropriate laser protection officers for this purpose.

Service and Maintenance

Service work may only be carried out by persons authorized by Heidelberg.
The relevant accident prevention regulations must be observed at all times.

Warning: Under no circumstances remove covers or other housing components except in the case of the procedures specified in the *Service and Maintenance* and *Trouble Shooting* chapters. When doing so, keep to the stipulated sequence of operations.

Otherwise, there is a danger that the powerful invisible laser beam could cause injury to eyes and skin or even a fatal electric shock.

Warning: If operating devices or aligning devices other than those mentioned here are used, or if other work procedures are carried out, there is a risk of dangerous radiation exposure from the invisible laser beam.

When carrying out work as described in the customer documentation, the user must always adhere to the operating process stipulated. Protection from the invisible laser beam is guaranteed by covers or safety loops.
The use of laser protection glasses is not foreseen, as correct operation eliminates the need for them.

Safety Loop

The output device is equipped with a safety loop as a safety measure. If the safety loop is interrupted, e.g. by opening the rear panel, all mechanical movements are stopped and the laser beam is switched off in the exposure head.

The safety system should, under no circumstances be bypassed as this can lead to eye or skin injuries due to the invisible, powerful laser beam, crushing due to the optic carriage or injuries due to electric shock.

EMC Notes

Warning: This unit is a class A device. It can cause radio interference in residential quarters. In this case, a demand can be made on the owner to take appropriate measures to remedy this.

About This Documentation

This documentation is intended as a reference work for the operator during training courses and in operation.

Note: It must be kept in a safe place for future use, right up to the point of disposal of the unit.

Prerequisites

The operator, having attended a training course, should be familiar with the Topsetter P/PF 102.

Further documentation

You will find further information in the following documentation:

- SCL P/PF 102 Autoloader - Operation
- MCL P/PF 102 Autoloader - Operation
- Meta Dimension - User's Guide

Symbols and Styles

The following typographical conventions are used in this manual:

- References to other chapters and sections are blue (on the screen) and underlined.

  Example:
  See section Symbols and Styles.

- *Italics* are used to indicate menus, names of functions, hardware conditions, switch settings, and system messages.

  Example:
  Move the switch to *off*.

- Menus, functions and sub-functions are separated with a ">".

  Example:
  Choose *File* > *Open...*

- A plus sign is used to indicate keys that have to be pressed at the same time.

  Example:
  Press Alt+A.

- "↳" in front of a word indicates that it is explained in the Glossary.

Important information

Important information in the text is marked by symbols which indicate the following:

Warning: Contains information that must be taken into consideration to protect the user from injury.

Attention: Contains information that must be taken into consideration to prevent damage to hardware or software.

Note: Contains important general or supplementary information about a specific topic.

Prerequisites: This text contains requirements which must be fulfilled before the steps which follow can be performed.

Influence of Magnetic Fields on the Monitors

Strong magnetic fields may influence your monitor screen (for example, they might make the edges of the screen unsteady or images flicker). This could be caused by the 50 Hz magnetic field coming from the power cables routed along your floors or in the wall.

The following corrective measures are recommended, taking into account the safety regulations for working at monitors in offices:

- Place the monitor at a different location.
- Shield the source (e.g. shield the cable duct).
- Change the routing of the power supply cable.
- Shield the monitor by means of a metal cover.

Any comments on this documentation?

We would like to know if our documentation meets your requirements.

- Can you find the information you are looking for? (and quickly enough?)
- Does this documentation help you to solve any problems which might occur?

- Where do you think there is room for improvement? ...

If you would like to make some comments on the documentation, please feel free to send these to us at the following e-mail address:

documentation.prepress@de.heidelberg.com

It would help us if you could write your comments in English or German.

Important!
Please do not use this e-mail address for improvement suggestions for the product Topsetter P/PF 102, only for tips, corrections, criticism and suggestions with regard to the corresponding documentation. If you have comments which you would like to make on the improvement or enhancement of our products, please forward these to us using the *Problem Report for Customers and Service Technicians*.

To order documentation, please contact the Heidelberg agency which is responsible for you.

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Description of the Unit and its Functions

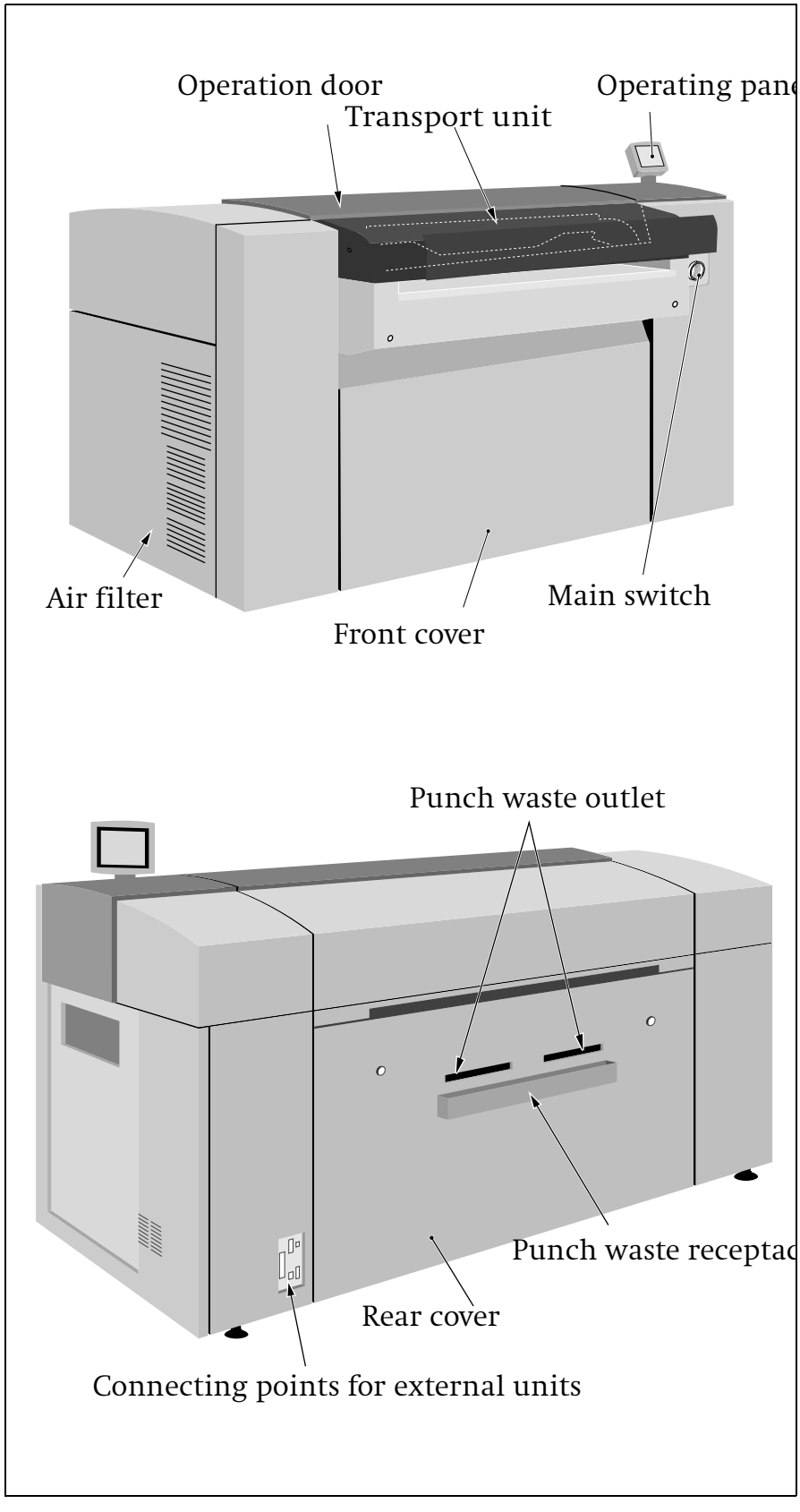
The Topsetter P/PF 102 is a high-speed, PostScript™-compatible, computer-to-plate imaging device.

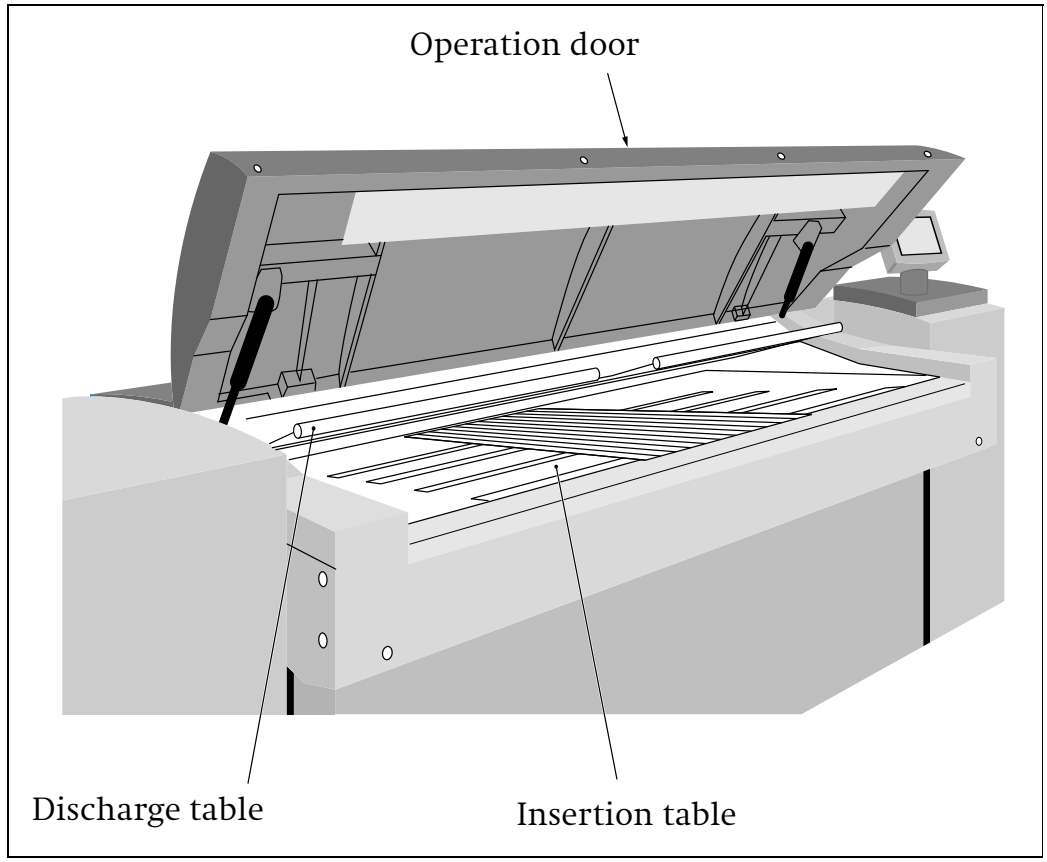
It exposes thermal printing plates in daylight operation.

The Topsetter P/PF 102 receives raster data from the RIP for imaging onto printing plates. The printing plates are placed manually on the insertion table, or loaded automatically by the P/PF 102 Single Cassette Loader or the P/PF 102 Multi Cassette Loader. The Topsetter P/PF 102 automatically loads the printing plate onto the drum, images it, and then transports it on the discharge table, or if an online processor is connected, directly via the conveyor, to the processor.

The Topsetter P/PF 102 system consists of the following components:

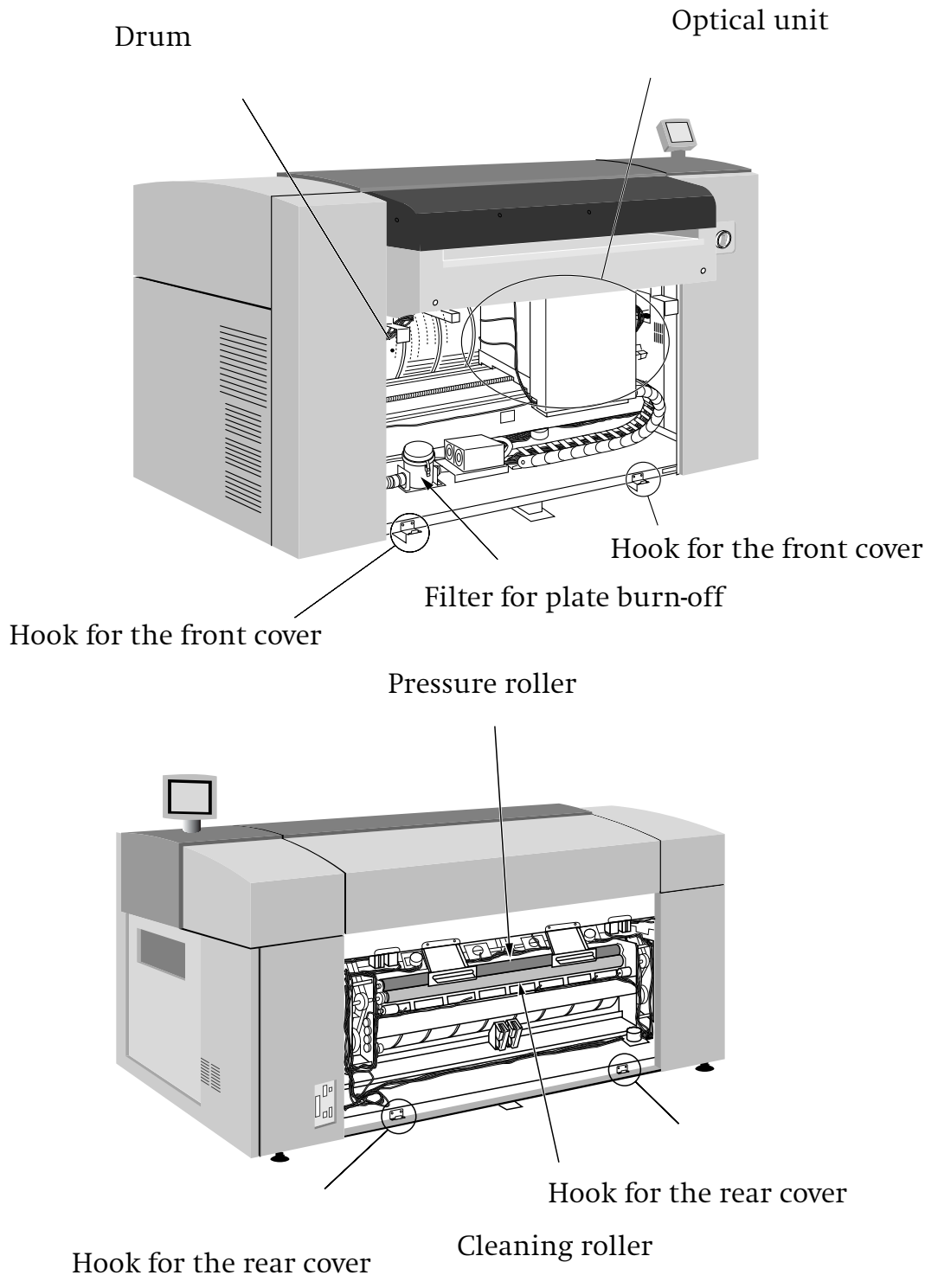
- Workstation with raster box (for further information refer to *Delta Technology - User's Guide).*
- Output device with blower


Operation door
Transport unit
Operating pane
Air filter
Front cover
Main switch
Punch waste outlet
Punch waste receptac
Rear cover
Connecting points for external units



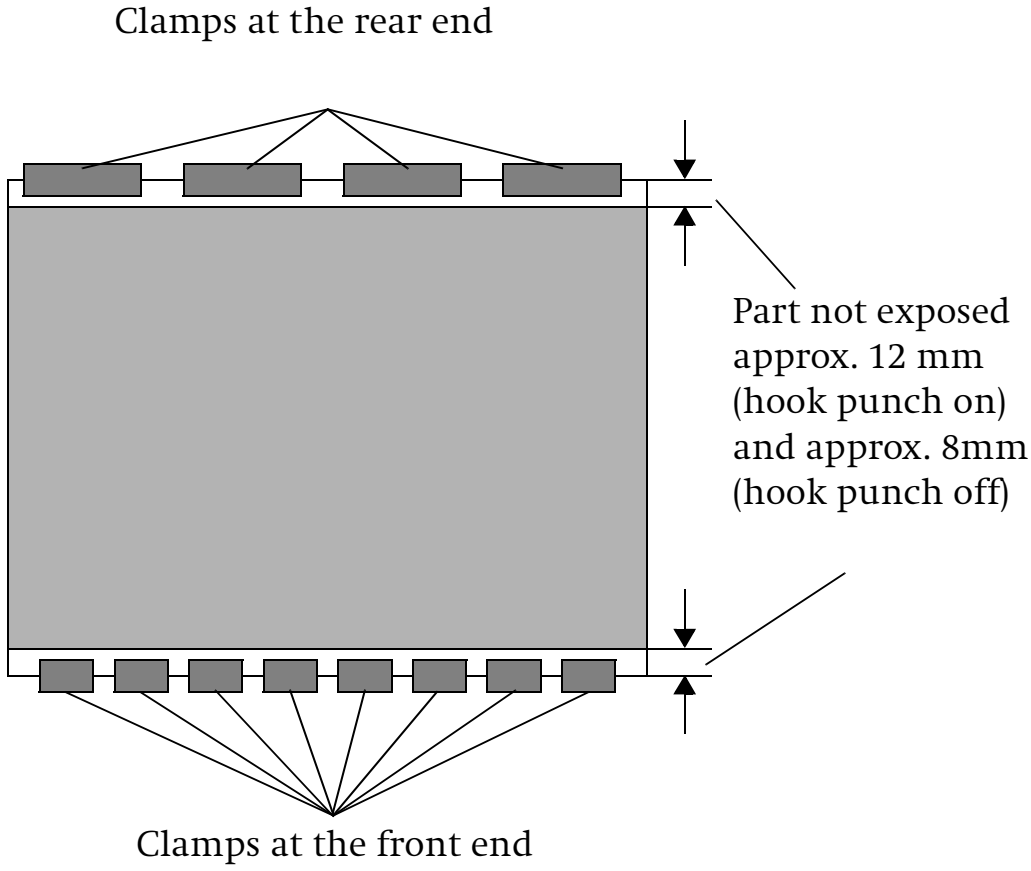
Warning: The operation and safety labels are located in various places on the inside and outside of the device. Failure to pay attention to these labels can lead to personal injury and damage to the device.

Open front and back



Effective exposure area

Clamps are used to hold the printing plate on the drum of the Topsetter P/PF 102. The effective exposure area of the printing plate is thus reduced by approx. 12 mm at both the front and rear ends.

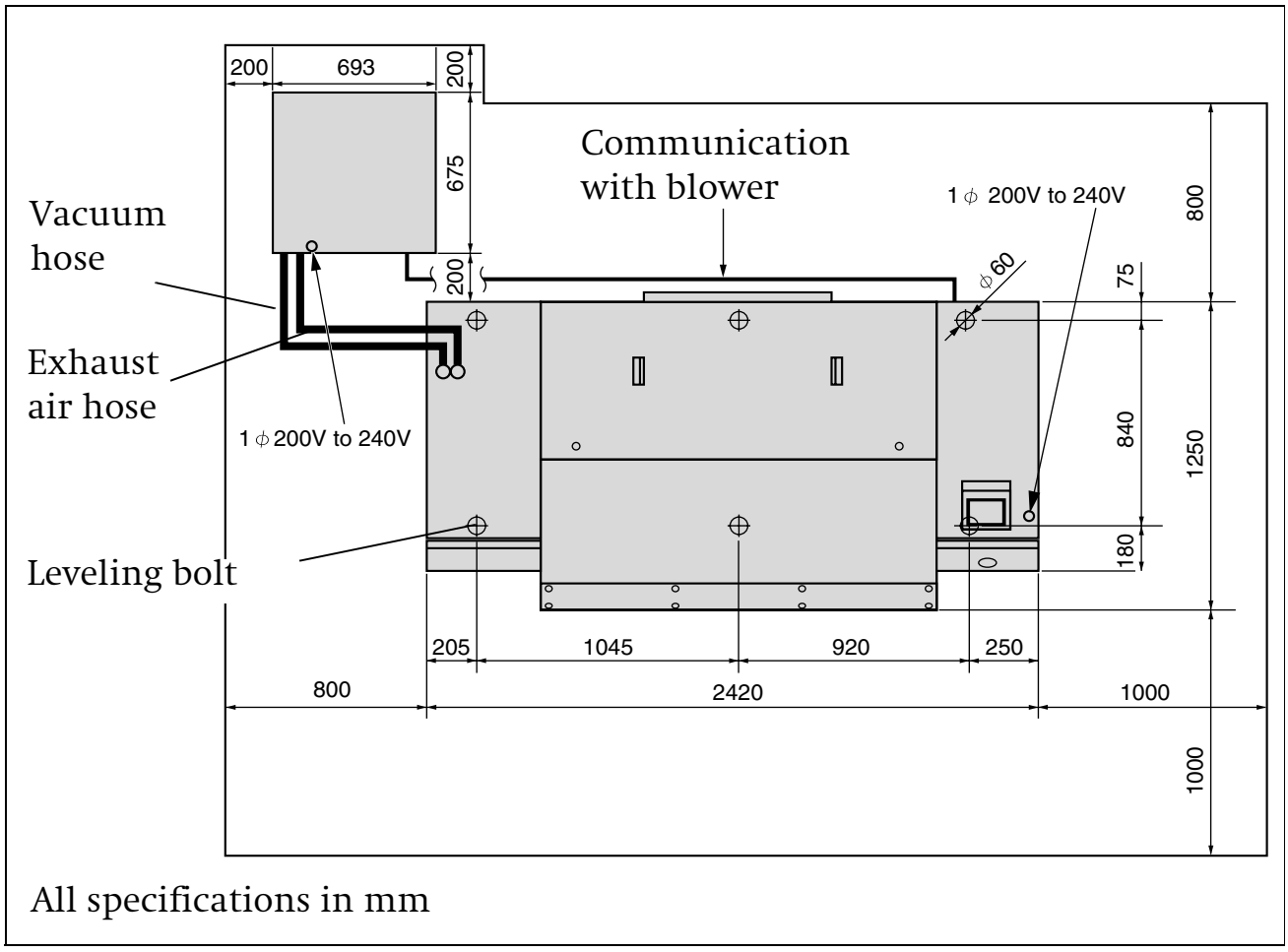


Installing the unit

The Topsetter P/PF 102 may **only** be installed by authorized Service personnel. The ambient conditions must be observed.

The floor at the installation site must be even and firm.

When the unit is installed, a sufficient distance to walls and other objects must be kept to ensure proper ventilation and good access for servicing.
Minimum distances - see the graphic below:



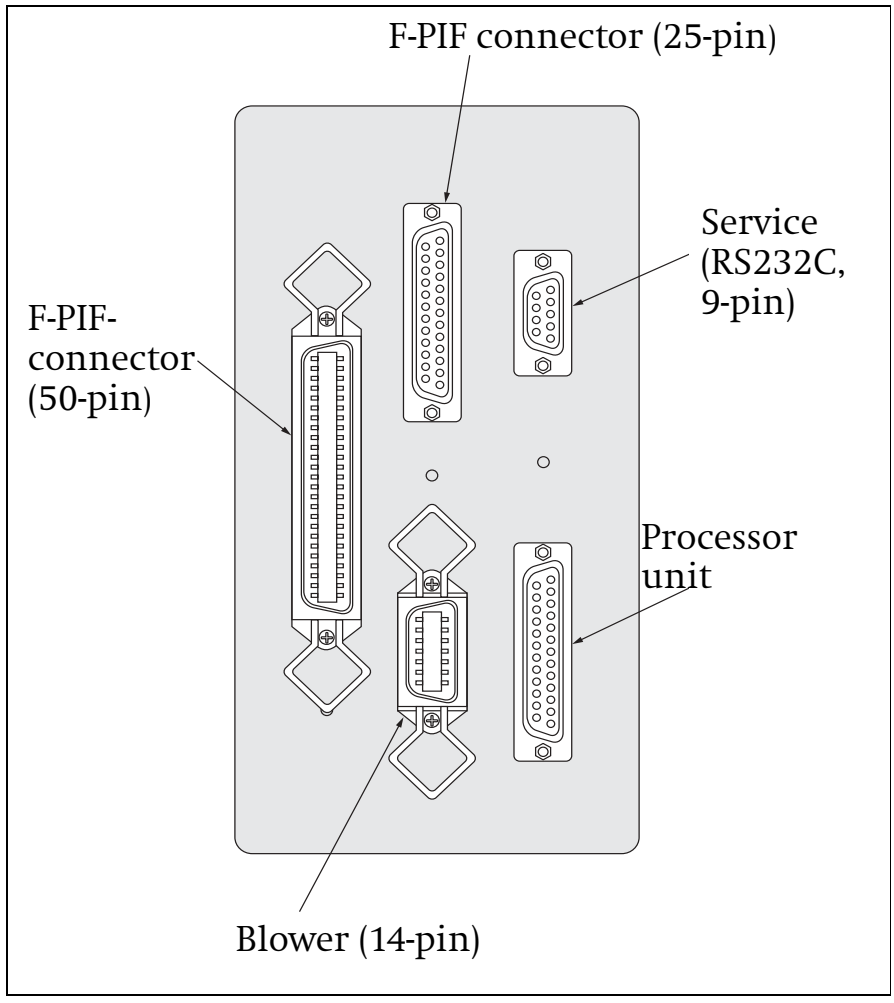
All specifications in mm

The unit should not be installed in the vicinity of air-conditioning equipment and must be protected from moisture and direct sunlight.

Note: The initial installation is performed by Service personnel. This includes lifting the unit off the pallet and removing the transport safeguards.

Connecting the unit

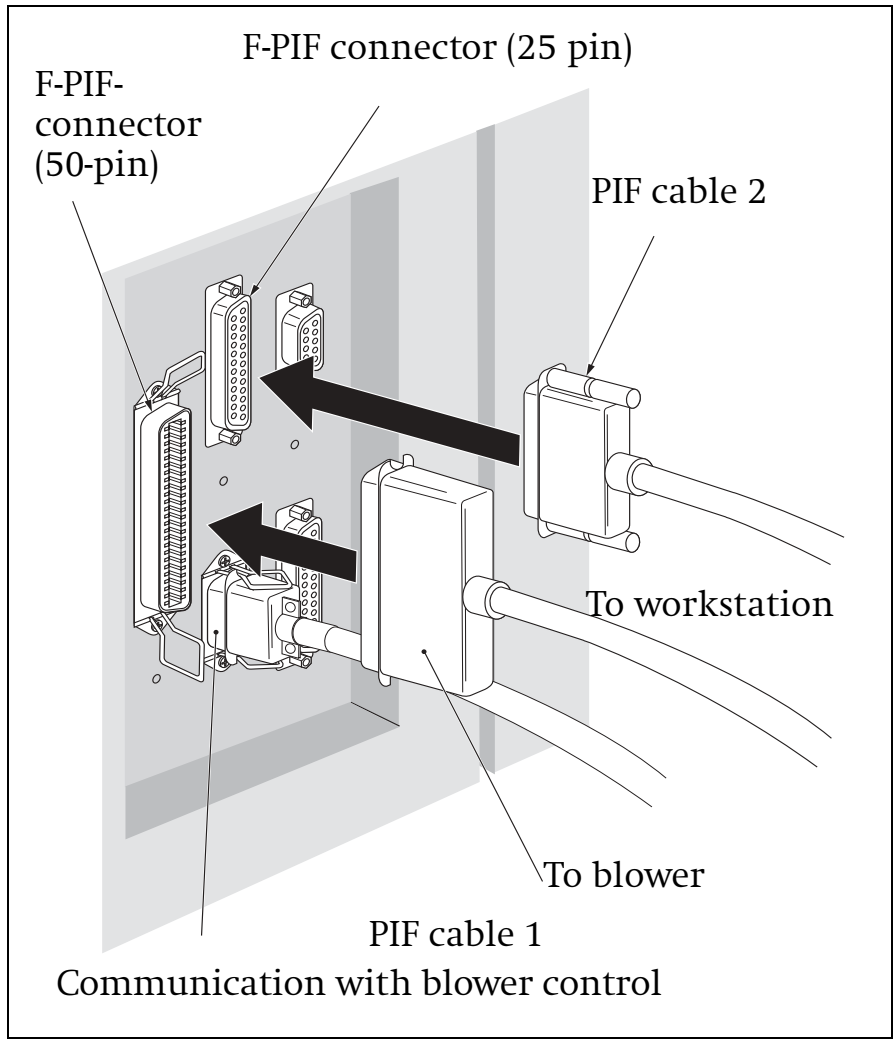
Warning: Connect the cables with the power off. Do not connect the power cables from other devices until you have first connected the connecting cables. This protects you against potentially fatal electric shocks, should a short circuit occur in one of the devices and it also protects the electronics from failure due to voltage impulses when potential differences occur.



Only use shielded data cables in keeping with the radio interference suppression regulations.

All the connection points on the Topsetter P/PF 102 are located at the back of the unit.

All notes on connecting the unit to the power supply also apply to the blower, which is connected separately.



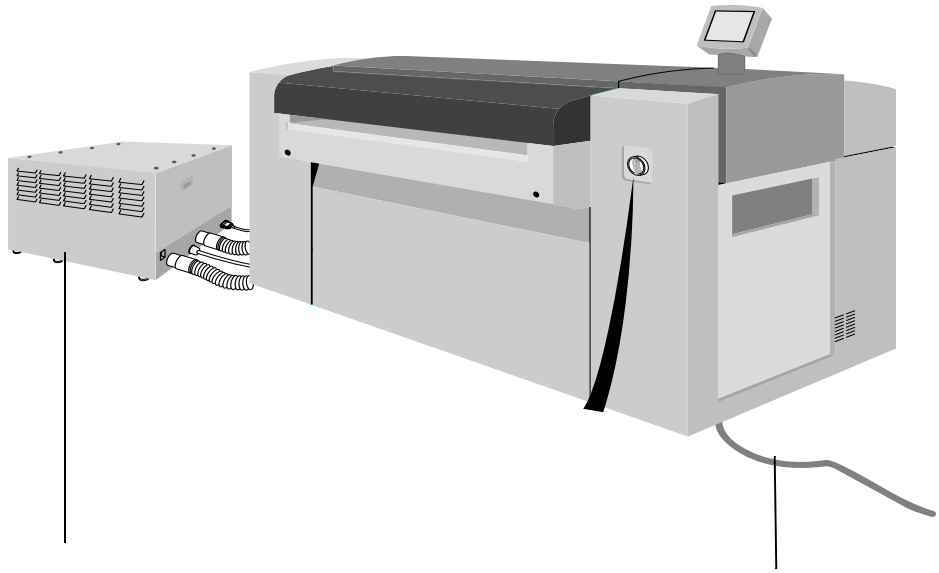
Power connection

The power connection of the Topsetter P/PF 102 and the blower is established by means of the power cables with a 3-pin plug, which must be designed for 200 V - 230 V AC. The respective national regulations must be observed if power cables are used that were not supplied by Heidelberger Druckmaschinen AG or if plugs are modified.

The unit may only be operated if a protective earth conductor is connected.

In the USA and Canada, power supply cables must at least comply with type SJT.

For the power connection locations see the following graphic:



Separate power connection, blower

Power connection, Topsetter

The power supply is fed directly to all power supply units. The input power range of the power supply units and the consumers are configured accordingly.

Warning: Unit plugs and sockets of the house installation must be easily accessible as, in the event of an emergency or if service work is being carried out on the laser, the unit must be completely isolated from the mains by operating the main switch **or** disconnecting the mains plug. The in-house installation socket-outlet must be at least 60 cm above the ground.

Warning: The device is switched off at both poles with the main switch and is then de-energized, except for the power cable connection up to the switch.

When connecting to 200 V - 240 V alternating current use the following table to select your cable.

Plug Type	Country	Mains voltage	Regulations	Cable Type
	Europe 250 V / 32A	200 - 240 V	IEC 83	<HAR> H05VV-F 3 x 2.5 mm² Blower: 3 x 1.5 mm²
	Line  IEC 309 Type B			

The service department should ensure that a standard plug is used in compliance with national requirements and that a protective earth conductor is connected.

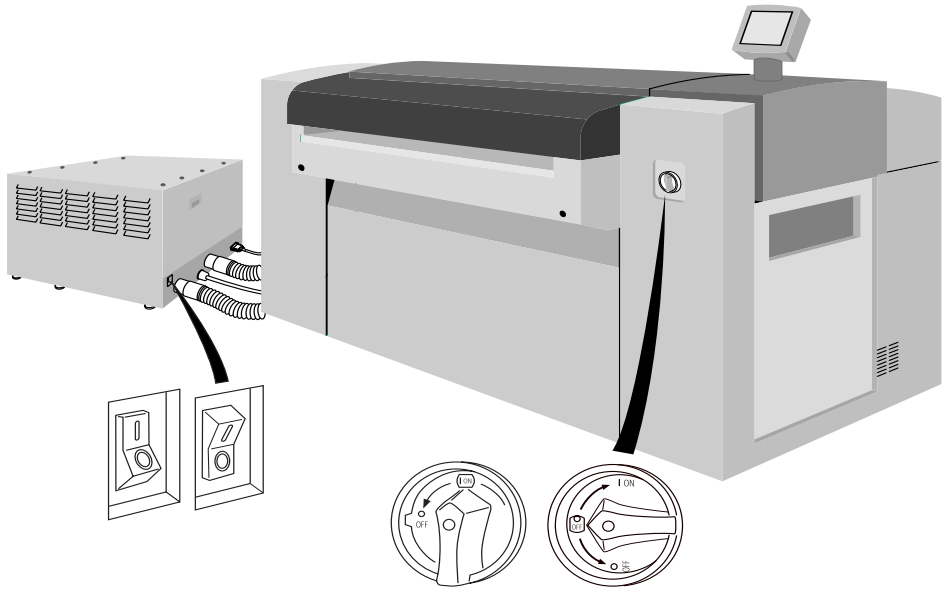
Switching on the unit

Prerequisites:

- All peripheral devices, with the exception of the workstation, are switched on.
- All doors and covers on the unit are closed.

Operation:

1. Set the On/Off switch on the blower to I.
2. Turn the main switch of the Topsetter P/PF 102 clockwise to I.

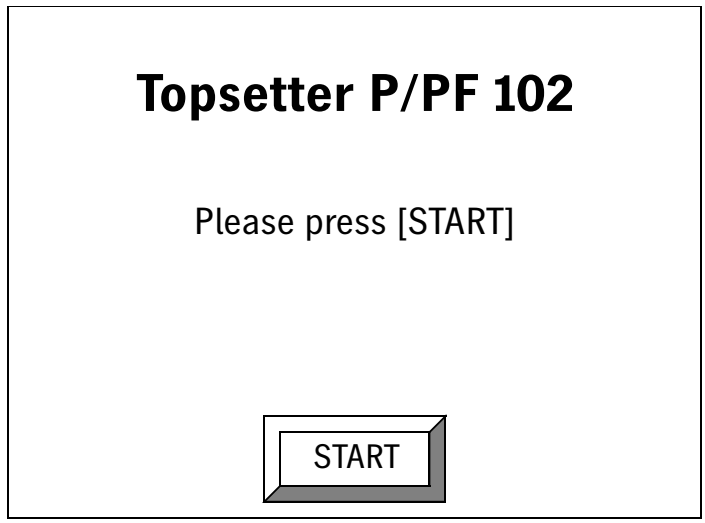


On/Off switch, blower Main switch, Topsetter

A memory check is carried out after switching on the unit.

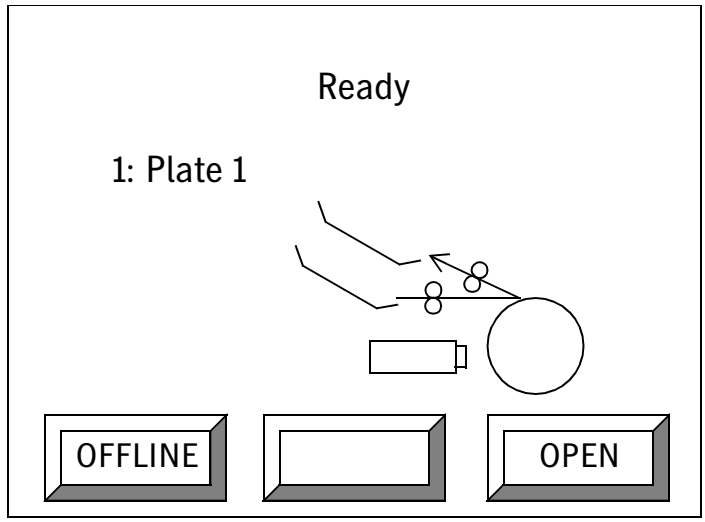
Note: If an error is detected during the memory check, a message will appear on the display.

When the memory check ends, the *START* button appears on the operating panel.



3. Press the *START* button. The Topsetter P/PF 102 is initialized. The following screen appears on the operating panel.

4. After initialization, the *Online* (*Ready*) screen appears.



5. Switch the workstation on.

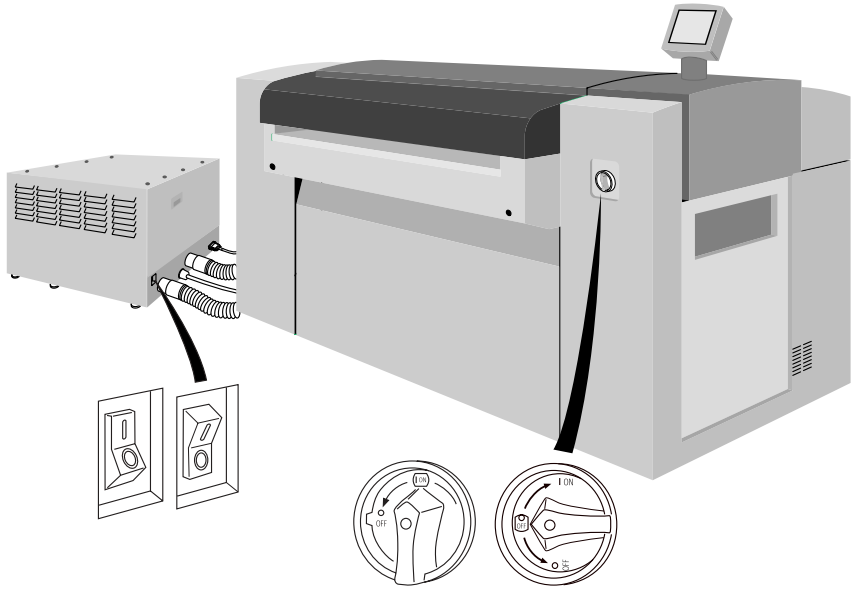
Switching the unit off

Prerequisites:

- The workstation is switched off.

Operation:

1. Switch the main switch to 0.



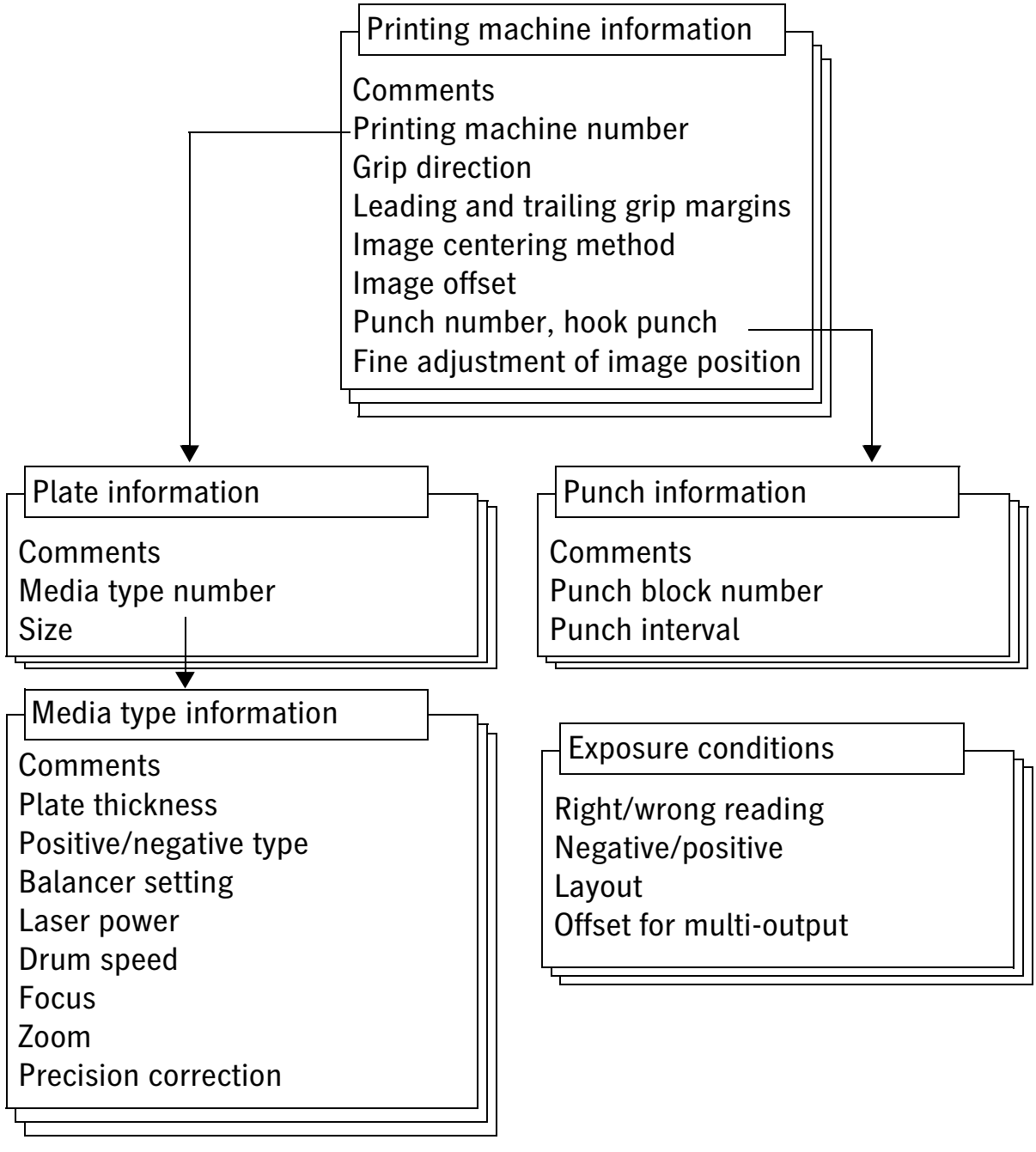
On/Off switch, blower Main switch, Topsetter P/PF

2. After switching the Topsetter P/PF 102 off, switch off all the peripheral units (conveyor, etc.).

Warning: The blower has a separate mains supply. It is disconnected by pulling out the power plug.

Overview of information settings

The information settings in the Topsetter P/PF 102 have the following configurations. This information must be set before a printing plate can be loaded into the Topsetter P/PF 102.



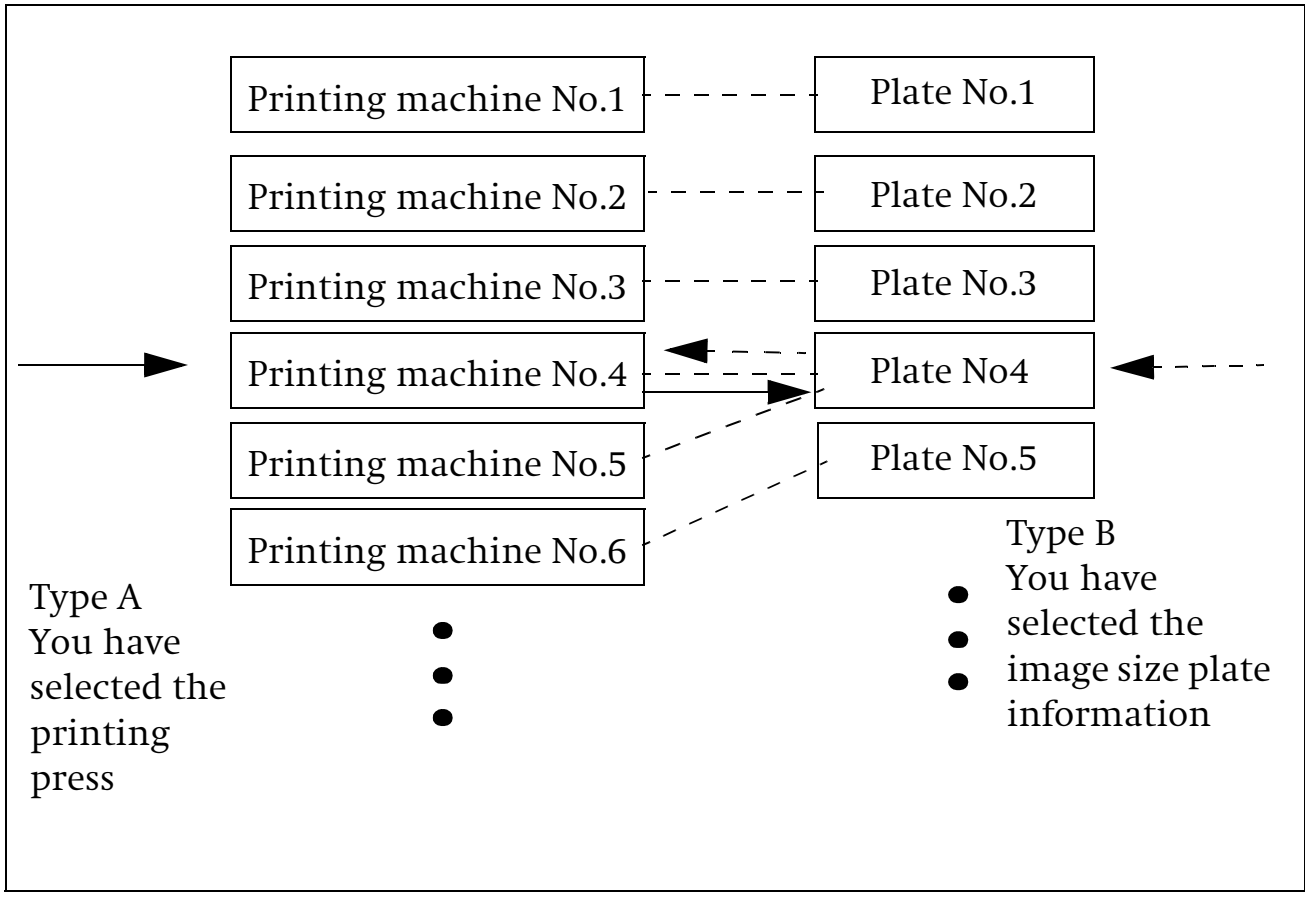
- Media type information
  The following information can be set here: Printing plate manufacturer, media type number, plate thickness. Fifteen media types can be stored. In addition to these types (Nos. 1 through 15) that can be registered, there are also fifteen additional types (Nos. 31 through 50) that have been preset, and these can be copied to Nos. 1 through 15.
- Plate information
  The plate size and plate number can be set here. Fifteen settings can be stored.
- Printing machine information
  The following settings can be made here: Printing machine number, grip direction, centering and punch information. Fifteen settings can be stored.
- Punch information
  The punch type can be stored here. Nine settings can be stored. A service technician sets the punch number and punch interval when an optional punch is installed.
- Exposure conditions
  Only one setting can be stored. This settings is effective regardless of the printing machine information selected.

Note: Set the information in the following order:

- Media type information,
- Plate information,
- Printing machine information and
- Exposure conditions.

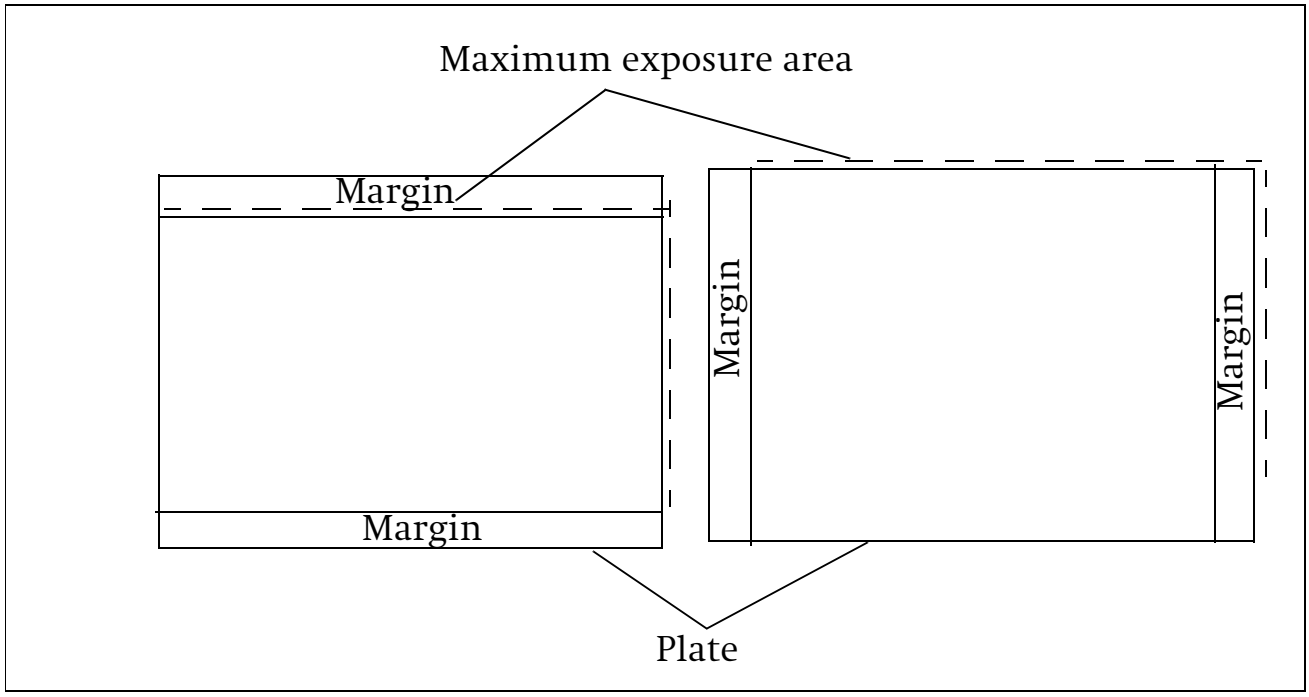
When you output data from the workstation to the Topsetter P/PF 102, the plate data set in the printing machine information when the plate was loaded is automatically selected. Output takes place according to the conditions set in the printing machine information.

Possible output sizes



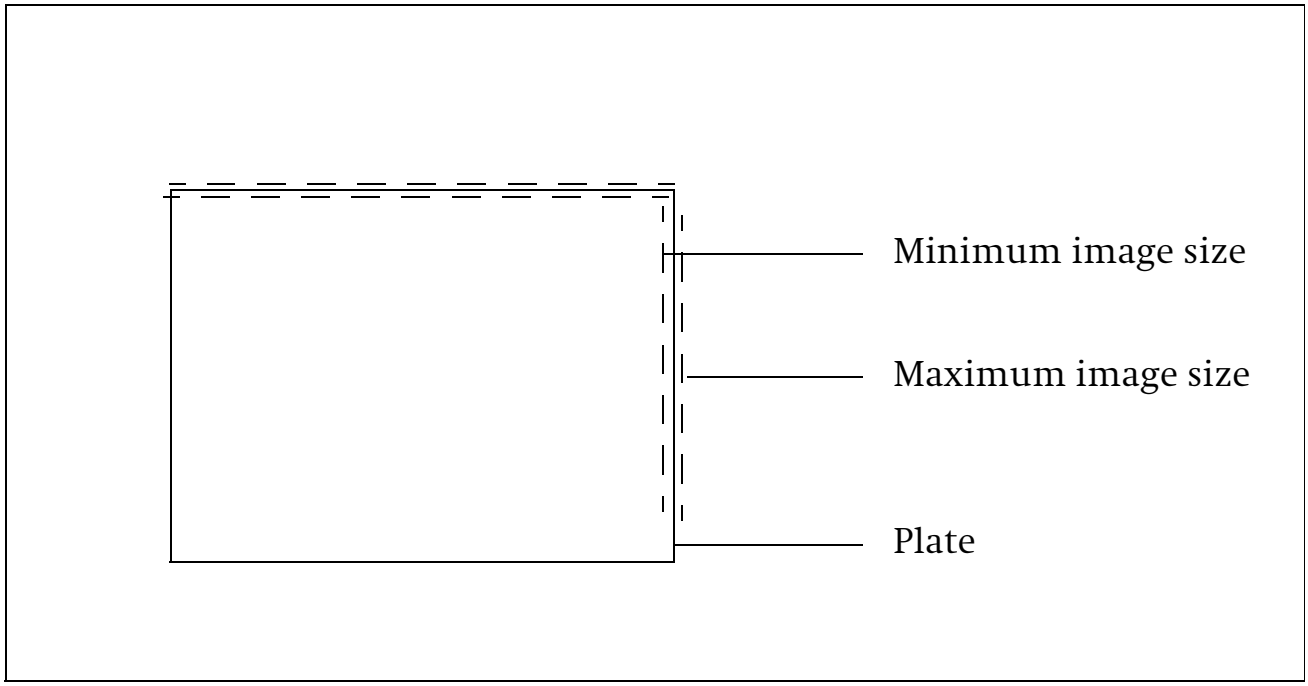
Type A

You can create (simulate) up to 15 printing presses and configure them individually. When you activate the number of a printing press, the corresponding data, e.g. the plate size, is displayed. In this case the following output size is possible: Plate size minus margin.



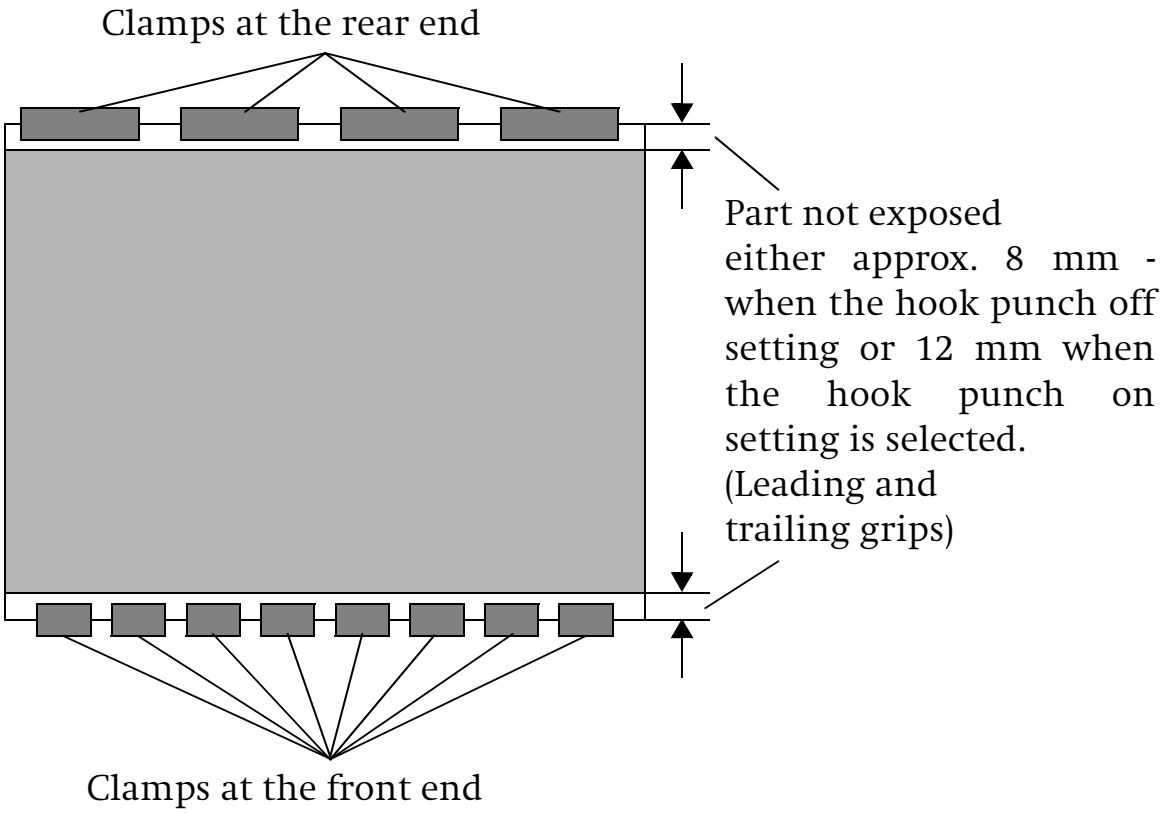
Type B

You can use the entire plate. The printing press with the settings and information corresponding to the output image size is selected. However, if two different printing presses could match the plate size (image output size) specified, the printing press with the lower number is selected. Here, different settings must have been made here, however, namely that the margin was set to 0 (zero).



Actual exposure area

When the printing plate has been loaded into the Topsetter P/PF 102, the plate is held by clamps. Therefore, not the whole of the plate can be exposed. The exposure area can be altered by selecting the hook punch on or off setting.



If you wish to use Type B, you must keep this actual exposure area in mind, since the image size would be outside the actual exposure area.

Loading a printing plate

Prerequisites:

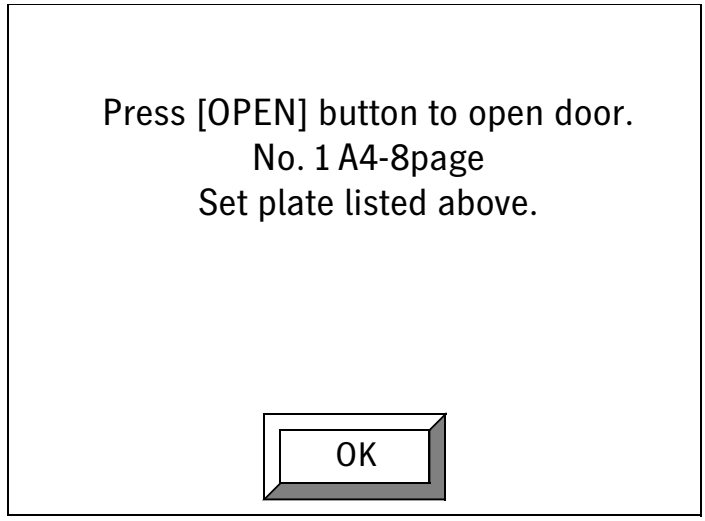
- The Topsetter P/PF 102 is switched on and initialized.
- The online mode is displayed on the operating panel.

There are three different methods for loading a printing plate:

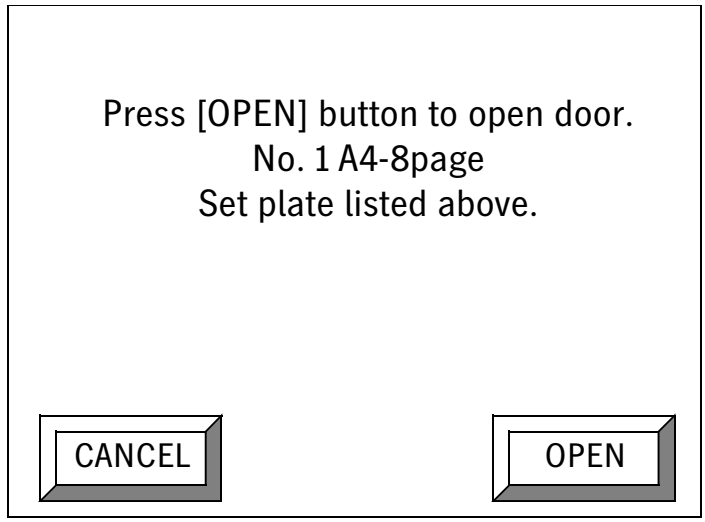
- Loading a printing plate upon request: The workstation sends a request for loading a plate and the plate is then loaded.
- Loading the printing plate before a request is sent: A printing plate is loaded and then the exposure of the printing plate is started from the workstation.
- Loading the next printing plate while exposure is in progress: A new printing plate is loaded while exposure is in progress.

Loading a printing plate upon request

1. Start the exposure from the workstation. The Topsetter P/PF 102 operation panel shows the following screen and an acoustic signal is given:



2. Press the *OK* button to switch the signal off. The following screen appears:



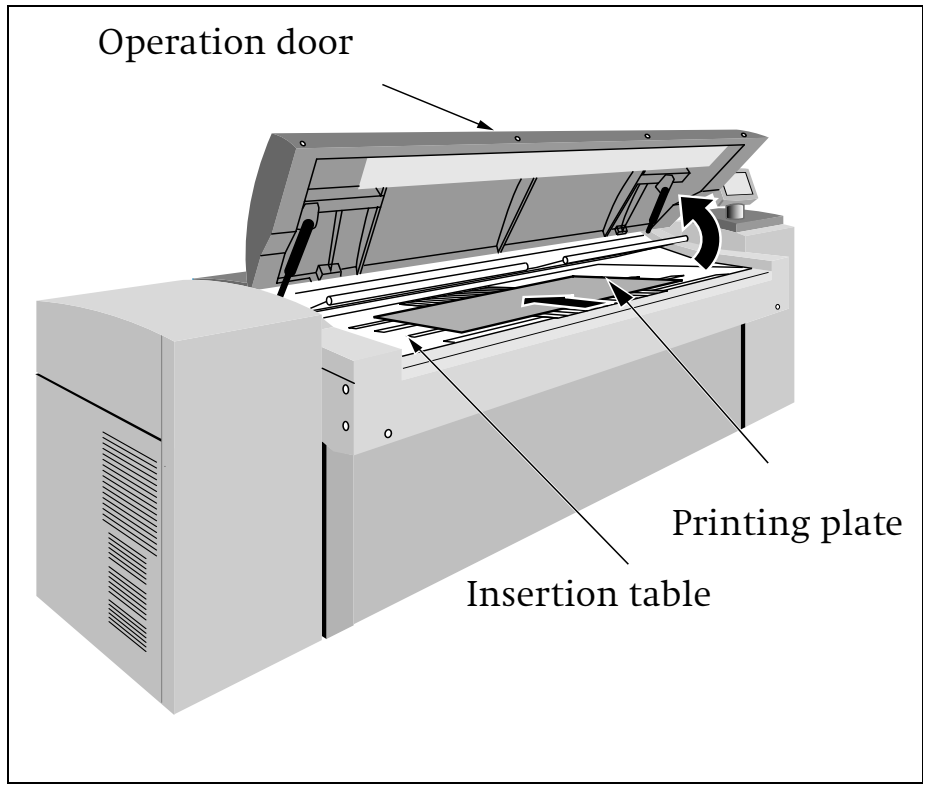
3. Press the *OPEN* button and open the operation door.

Warning: Printing plate edges can be sharp. Failure to wear protective gloves can result in injuries to your hands.

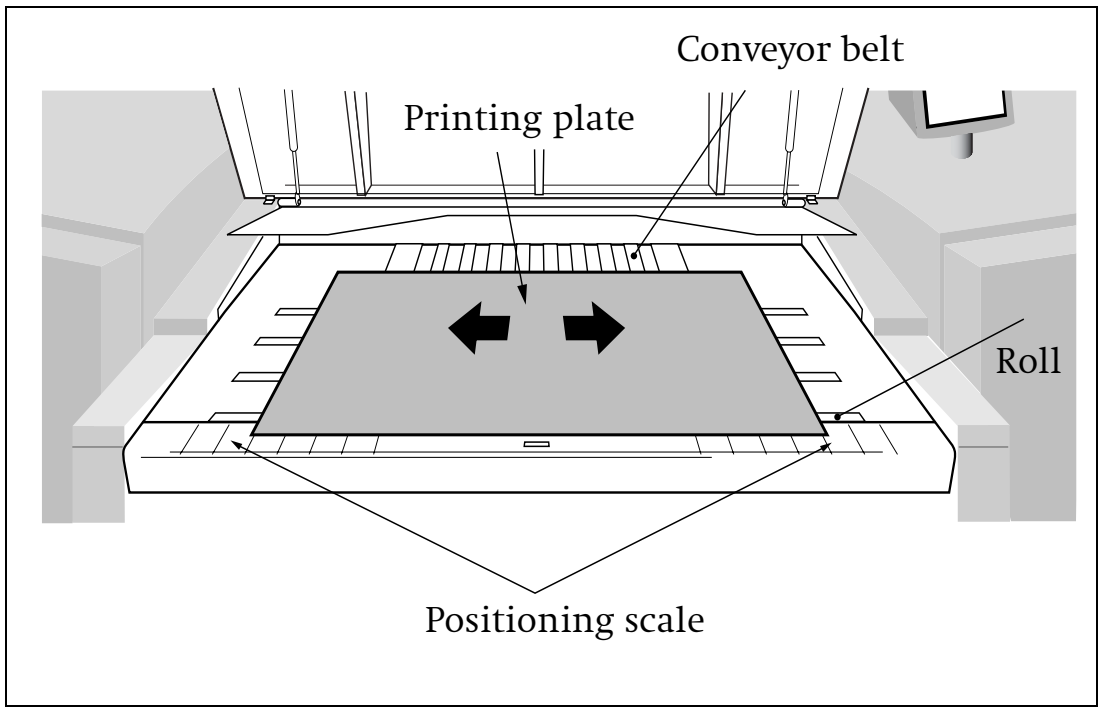
4. Put on protective gloves.
5. Take a printing plate from the packaging.
6. Remove all slip sheets or packaging materials which may adhere to the plate.

Warning: Carefully remove all slip sheets or packing materials from both sides of the printing plate before loading it into the Topsetter P/PF 102. The laser beam could ignite the material and cause a fire in the Topsetter P/PF 102.

7. Place the requested printing plate on the insertion table.



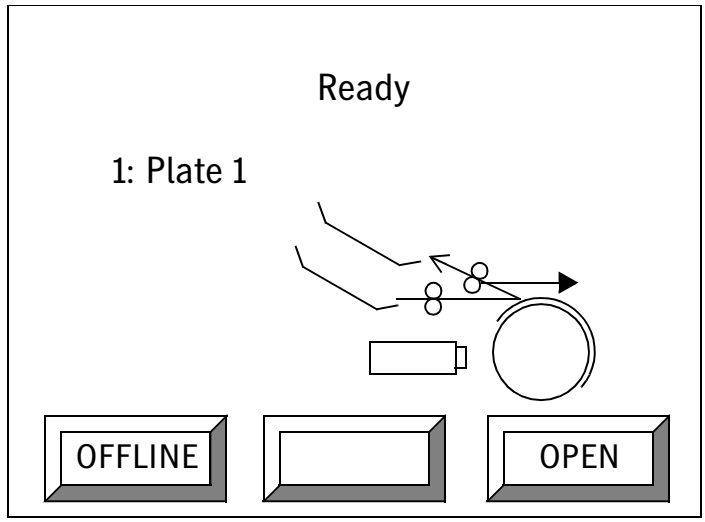
8. Position the printing plate at the center of the insertion table. Use the positioning scale as an aid.



9. Close the operation door until it locks. When the door is closed, the printing plate is loaded and exposure commences.
10. When exposure is completed, the printing plate is ejected onto the discharge table and the operation door opens.
11. Remove the exposed printing plate from the discharge table.

Notes on using an online processor

When output to an online processor is selected, the *Online* screen will appear as shown below:



When output to the online processor is selected, the connected conveyor, the online processor and the stacker must all be operational or the following message will appear during initialization:

Ex600 or Ex601: Either the conveyor, processor, or stacker is not turned on or is in the busy status or is in error status.

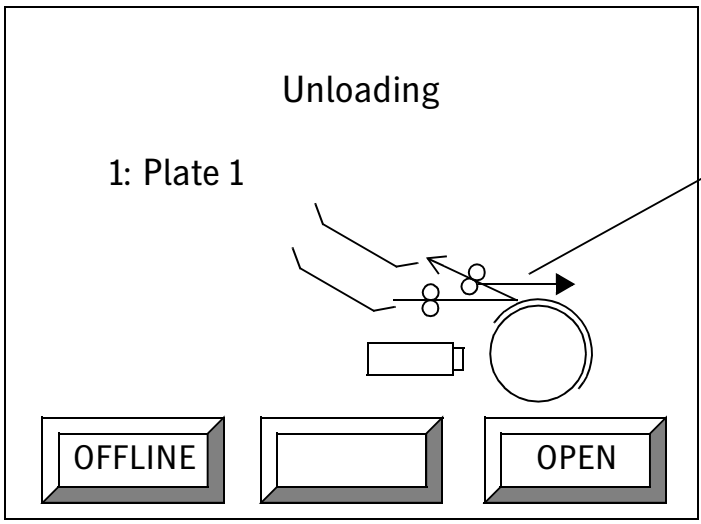
During transportation, an acoustic signal is given once a second until the printing plate has left the conveyor. When the acoustic signal is given, do not open the cover of the conveyor or the online processor and do not carry out any further output procedures, see section Setting the exposure conditions, page 4–48 and section Unloading, page 4–60.

For the procedures for using the online processor, refer to the user documentation for the online processor.

Switching off the signal during printing plate output

You can set the unit so that the buzzer will not sound during printing plate output. For more information, see section Switching the buzzer (signal) on/off during plate transport, page 4–108.

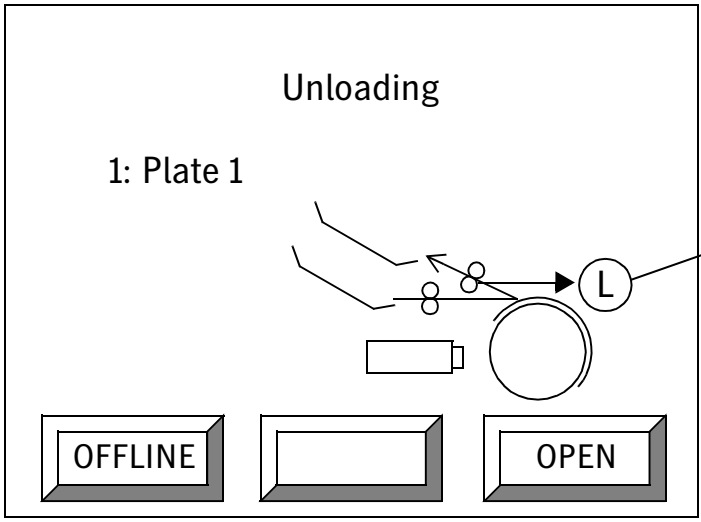
Attention: If the signal is off, make sure that the arrow in the *Online* screen does not flash when you are loading a printing plate into the conveyor.



This arrow flashes when a printing plate is output to the online processor.

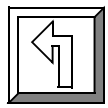
Displaying the printing plate output direction

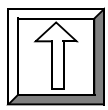
When a printing plate is output to the conveyor and different output directions can be selected, the direction of output is displayed in the *Online* screen. For more information, see section Selecting the printing plate output direction, page 4–13.

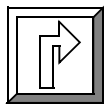


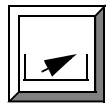
The specified output direction is displayed here.

Specified output direction:


L: when left is set.


S: when straight is set.


R: when right is set.


E: when manual output is set.

Loading the printing plate before a request is sent

A printing plate can also be loaded before a request is sent from the workstation. However, if the data of the loaded printing plate (size, punch, etc.) differs from the subsequent request, the printing plate will have to be unloaded and the correct one loaded, refer to section Loading a printing plate upon request, page 3–12.

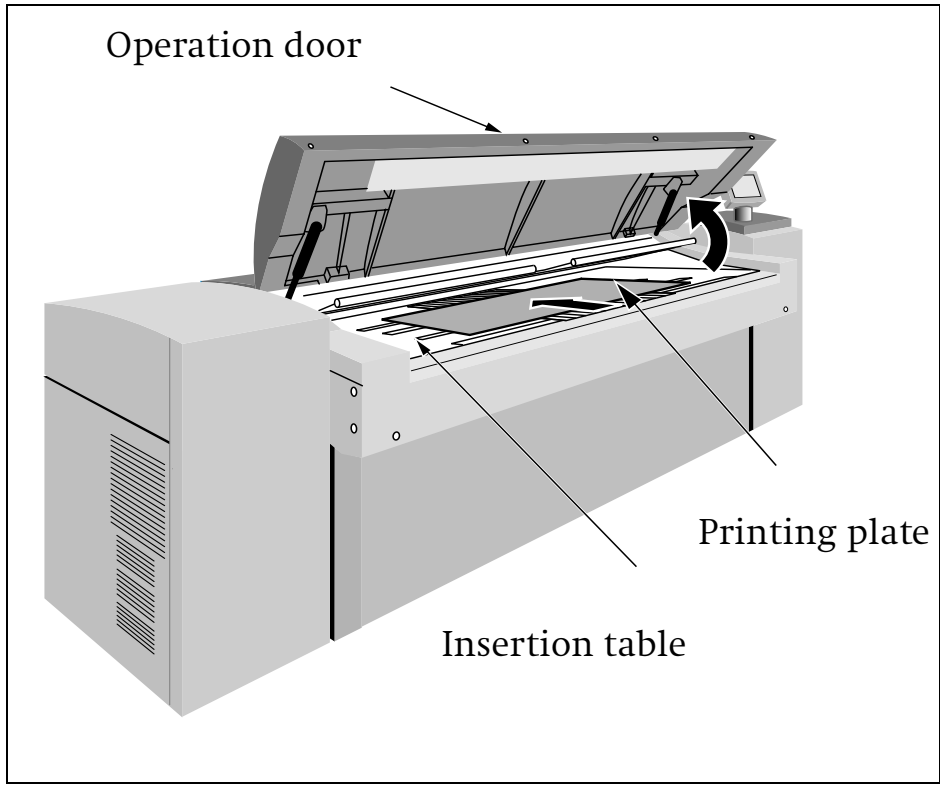
1. Press the *OPEN* button in the *Online (Ready)* screen.

Warning: Printing plate edges can be sharp. Failure to wear protective gloves can result in injuries to your hands.

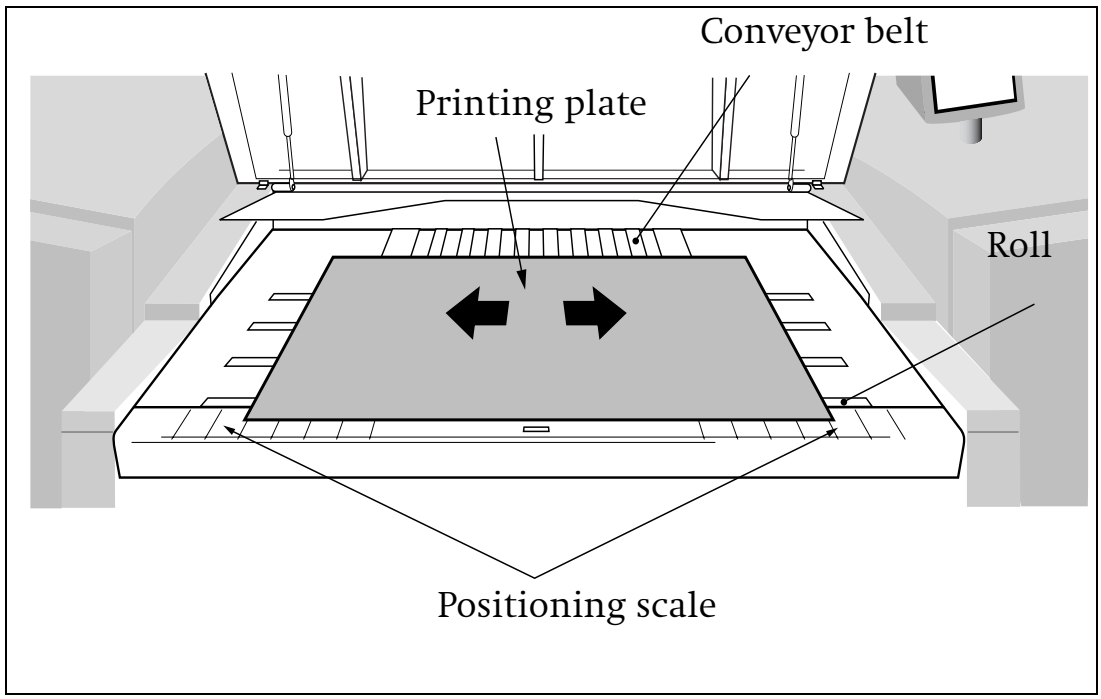
2. Put on protective gloves.
3. Take a printing plate from the packaging.
4. Remove all slip sheets or packaging materials which may adhere to the plate.

Warning: Carefully remove all slip sheets or packaging materials from both sides of the printing plate before loading it into the Topsetter P/PF 102. The laser beam could ignite the material and cause a fire in the Topsetter P/PF 102.

5. Place the printing plate on the insertion table.

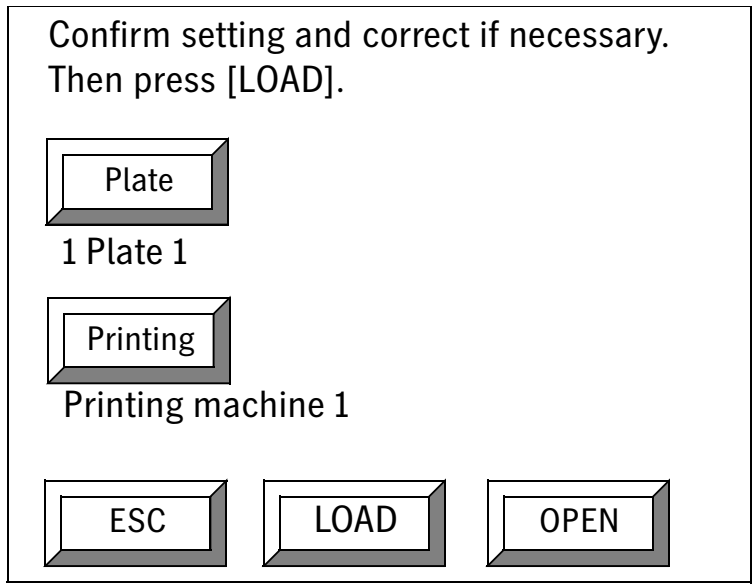


6. Position the printing plate at the center of the insertion table. Use the positioning scale as an aid.



7. Close the operation door until it locks.
8. Check the printing plate and printing machine data on the operating panel. If they match, press the*LOAD* button. The printing plate is loaded.
9. If the printing plate data on the operating panel differs from the plate to be inserted, press the *Plate* button. The printing plate selection screen appears.
10. Select the plate data that match the inserted plate, and then press the *OK* button.
11. If you wish to change the printing machine data, press the *Printing* button. The screen for selecting the printing machine data then appears.

12. Select the printing machine data that corresponds to the printing plate and then press the *LOAD* button.



Note: To change the printing plate data or printing machine data selection, the new data must be registered. For further information, see section Setting the printing plate, page 4–22 and section Setting the printing machine information, page 4–29.

Loading the printing plate while exposure is in progress

Separate insertion and discharge tables are used for loading and unloading printing plates. It is thus possible to place the next printing plate on the insertion table while exposure is in progress.

When exposure is completed and the exposed printing plate is unloaded to the discharge table, the next printing plate is loaded and waits for exposure instructions from the workstation.

This optimizes the productivity of the Topsetter P/PF 102.

Operation:

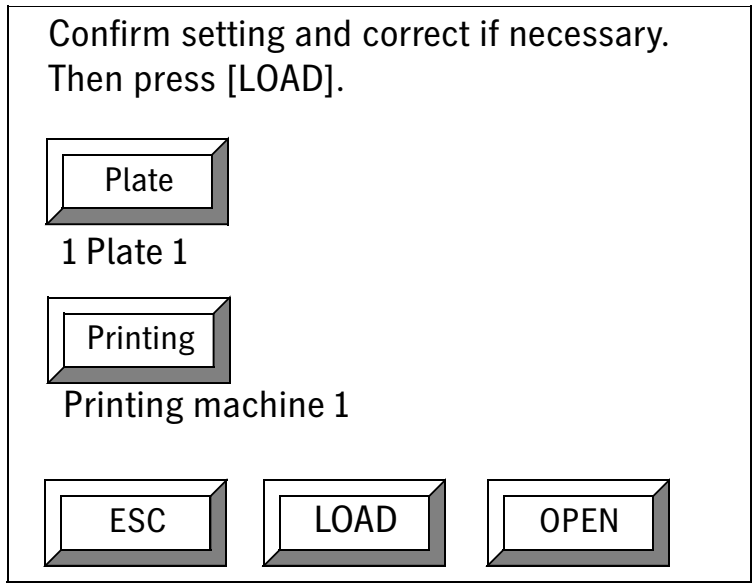
Warning: Printing plate edges can be sharp. Failure to wear protective gloves can result in injuries to your hands.

1. Put on protective gloves.
2. Take a printing plate from the packaging.
3. Remove all slip sheets or packaging materials which may adhere to the plate.

Warning: Carefully remove all slip sheets or packaging materials from both sides of the printing plate before loading it into the Topsetter P/PF 102. The laser beam could ignite the material and cause a fire in the Topsetter P/PF 102.

4. When the printing plate has been loaded onto the insertion table, the *OPEN* button will appear on the *Online (Ready)* screen. Press the *OPEN* button.
5. Position the printing plate at the center of the insertion table. Use the guide lines as an aid.
6. Close the operation door.

7. Check the printing plate and printing machine data on the operating panel. If they match, press the*LOAD* button. The printing plate is loaded.
8. If the printing plate data on the operating panel differs from the plate to be inserted, press the *Plate* button. The *Plate selection* screen appears.
9. Select the plate data that match the inserted plate, and then press the *OK* button.
10. If you wish to change the printing machine data, press the *Printing* button. The screen for selecting the printing machine data then appears.
11. Select the printing machine data that corresponds to the printing plate and then press the *LOAD* button.



12. The loaded printing plate remains on the insertion table until exposure of the previous plate has been completed, including any punching that may be necessary.
13. When exposure of the previous printing plate has been completed, it is transported to the discharge table and the next plate is loaded. When loading is

completed, the operation door opens, an acoustic signal is given and the following screen appears on the operating panel:

14. Press the *OK* button to switch off the signal and then remove the exposed printing plate from the discharge table and close the operation door.
15. If another printing plate is to be loaded, repeat this procedure from step 2. If no more plates are to be loaded, close the operation door.

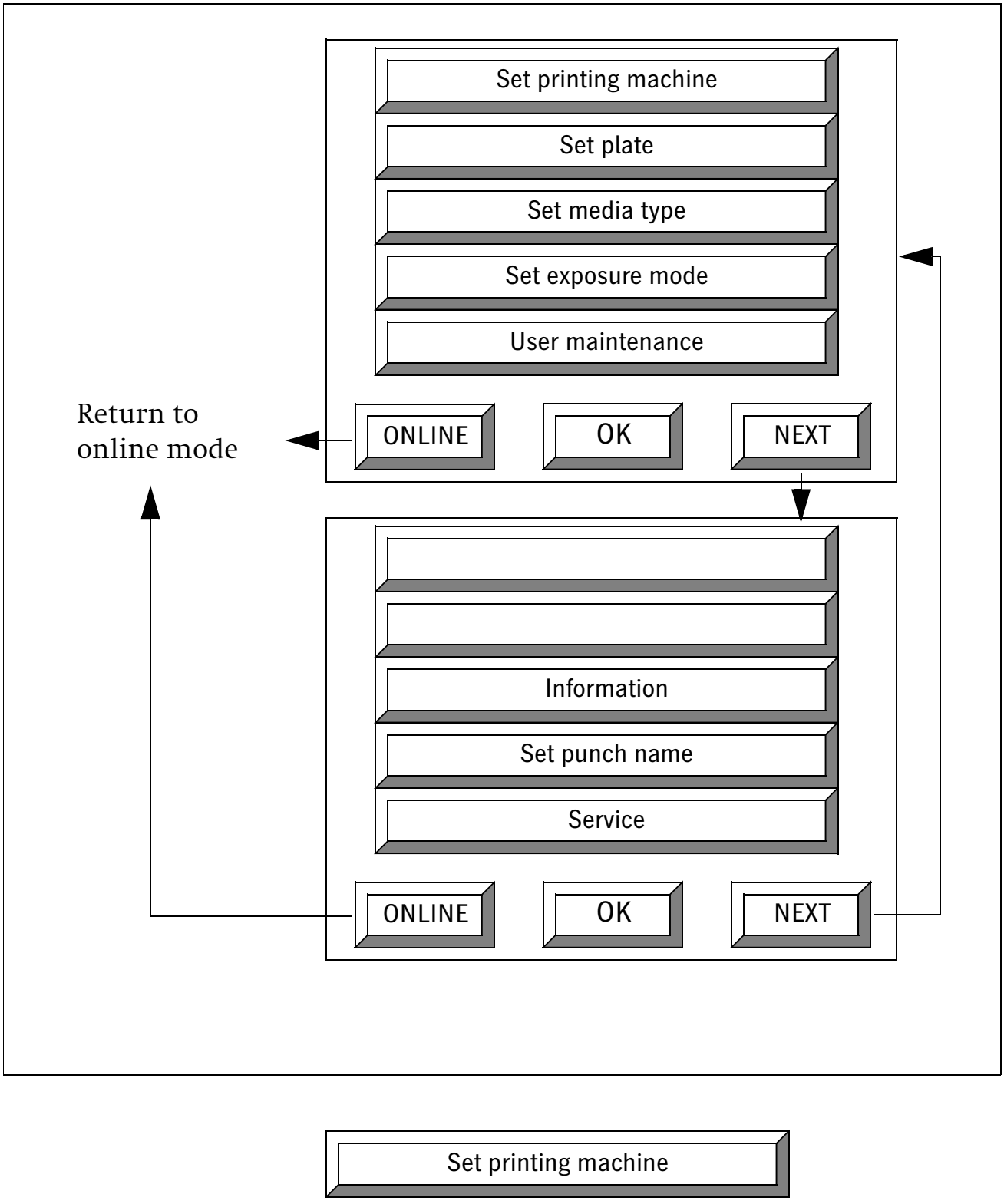
Offline mode

The Offline mode can be used for making various settings for theTopsetter P/PF 102, such as the printing machine settings, output parameters or test exposure settings.

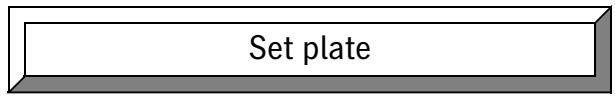
To access the offline mode, press the *OFFLINE* button on the *Online (Ready)* screen.

Note: Make the settings in the following order:

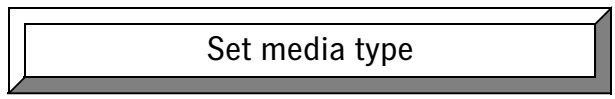
- Media type (set media type)
- Plate parameters (set plate)
- Printing machine parameters (set printing machine)
- Exposure parameters (set exposure mode)


Set printing machine
Set plate
Set media type
Set exposure mode
User maintenance
Return to online mode
ONLINE
OK
NEXT
Information
Set punch name
Service
ONLINE
OK
NEXT
Set printing machine

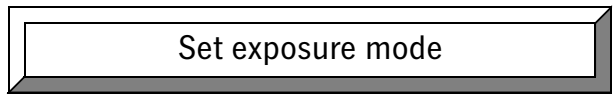
Setting the printing machine information, refer to section Setting the printing machine information, page 4–29.



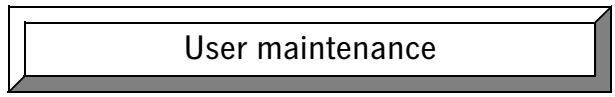
Setting the printing plate information, refer to section Setting the printing plate, page 4–22.



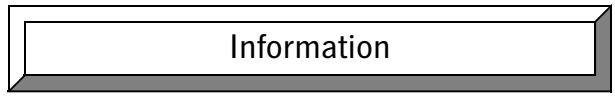
Setting the media type, refer to section Setting the media type, page 4–5.



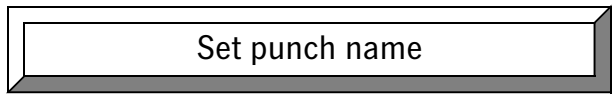
Setting the exposure conditions, including right/wrong reading (mirror), positive/negative, and layout settings, refer to section Setting the exposure conditions, page 4–48.



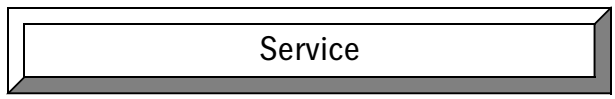
Settings for loading/unloading printing plates, test exposures, and other user settings, refer to section User maintenance mode, page 4–54.



Screens for the software version or the error log, refer to section Information screen, page 4–109.



If an optional punch is installed, the name of the punch can be registered or changed here, refer to section Setting the punch name, page 4–112.



This button can only be used by Service.

Setting the media type

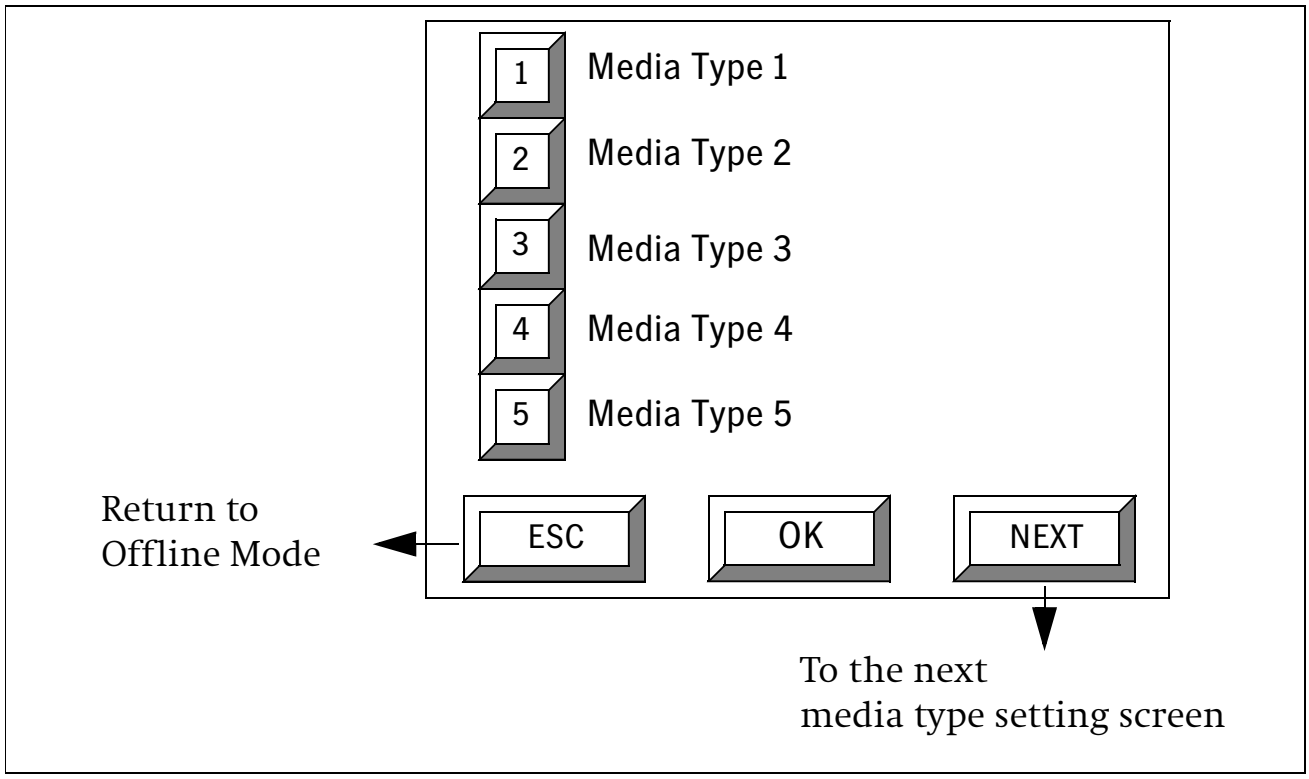
More than 15 different media parameters can be set.

The procedure for setting this information is as follows:

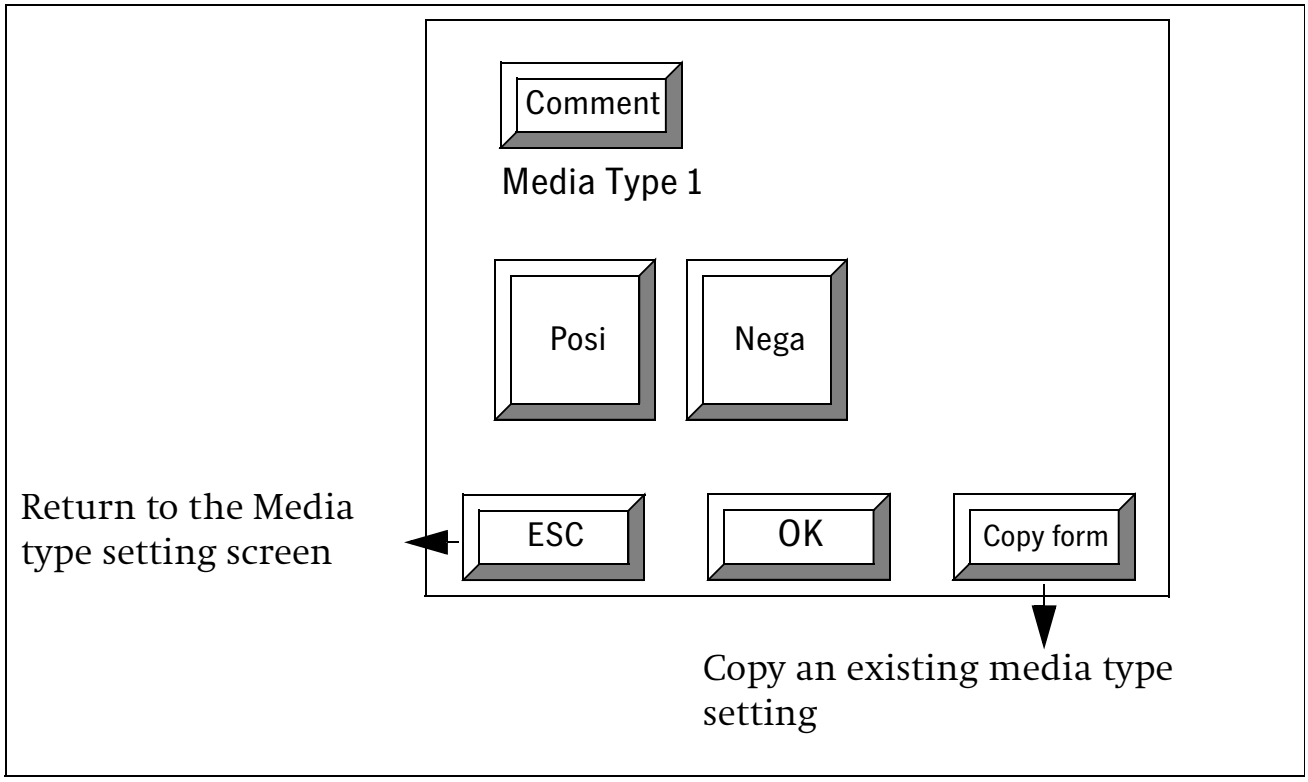
- Select a media type number.
- (Copy preset media type information.)
- Enter comment and select negative or positive.
- Set the plate thickness and the balancer constant.
- Select the laser power and the drum speed.
- Set the focus value.
- Set the zoom value and the absolute precision correction value.

Selecting the media type number (example: Media type number 1)

1. Select *Set media type* on the *OFFLINE* screen and press *OK*. The *Media type setting* screen appears:



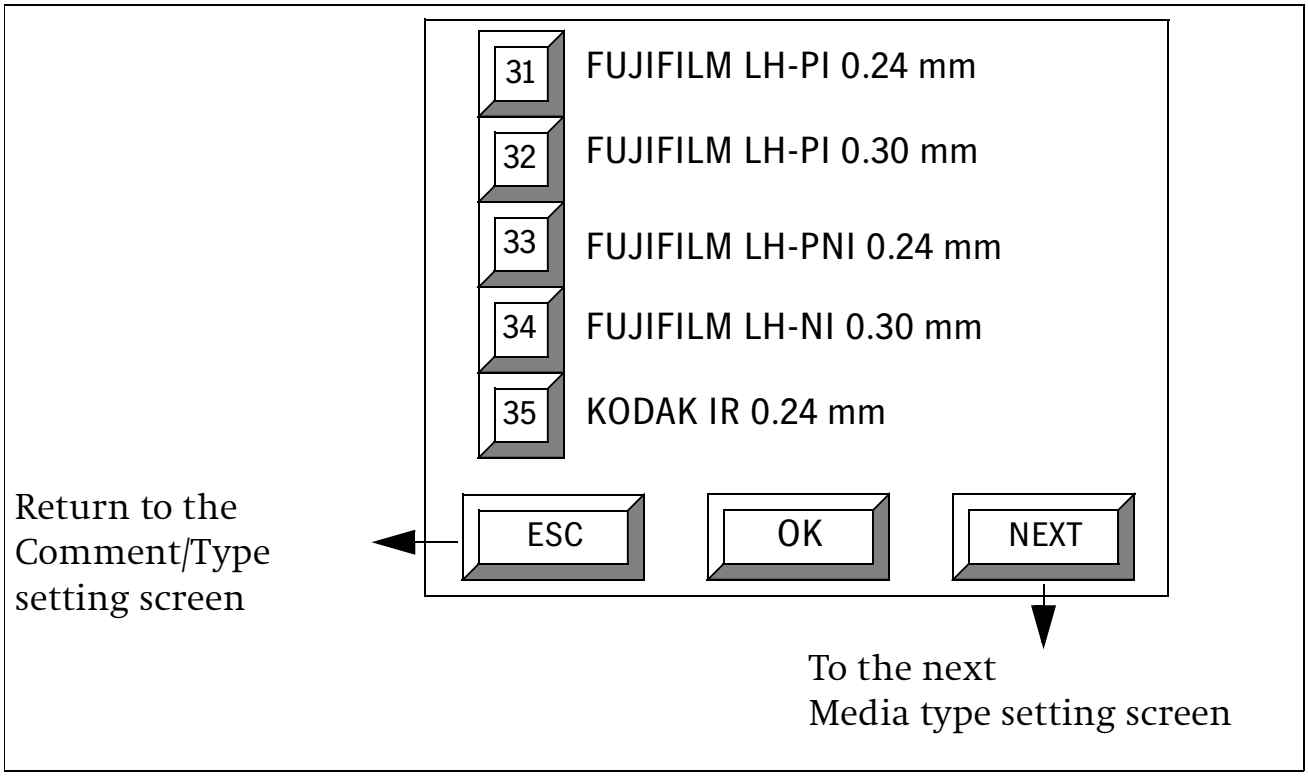
2. Select *1* and press the *OK* button to display the *Comment/Type setting* screen.



Copying an existing plate type setting

If you only intend to change a few settings, skip the following procedure and go to *Entering Comments and Selecting Negative/Positive Type*, see section Entering comments and selecting positive/negative, page 4–10

1. To register a new type, press the *Copy from* button on the *Comment/Type setting* screen. The following screen appears:



2. Press the *NEXT* button. If the parameters (manufacturer, model number, and thickness) in one of the media types 31 to 45 is the same as the media you intend to use, press that number to select it.

STOP

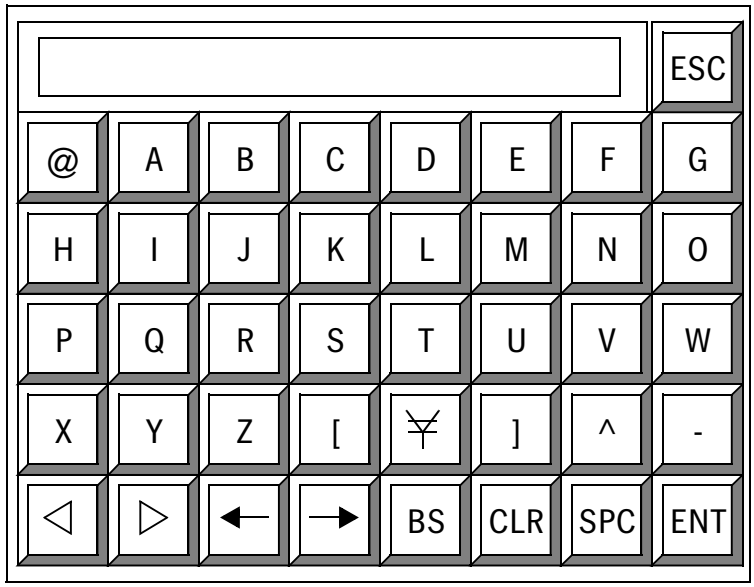
Attention: If the manufacturer and model number are the same but the thickness is different, you will have to register the media type information individually.

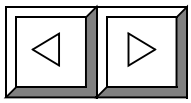
3. Press the *OK* button. The selected media type information will be copied to media type 1 and you will return to the *Comment/Type setting* screen.
4. Press the *OK* button several times until the screen shown in *Zoom value and absolute precision correction value setting* screen appears, and save the media type 1 information.

Attention: If the media type settings you wish to use are not preset in one of the types 31 to 45, contact Heidelberg Support.

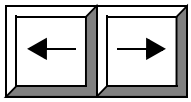
Entering comments and selecting positive/negative

1. Press the Comment button in the *Comment/Type setting* screen. The screen for entering the comment appears. Enter a comment and press the *ENT* button. You will return to the *Comment/Type setting* screen, and the entered comment will appear below the *Comment* button.

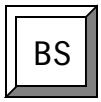




Changeover for upper/lower case letters and symbols/ numbers

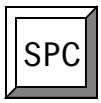


Moves the cursor to the input position

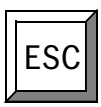


Deletes the character to the left of the cursor

Deletes the comment which has been entered

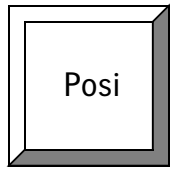


Enters a space

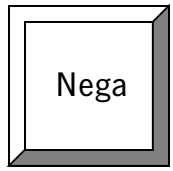


Return to the *Comment/Type setting* screen

2. Select negative or positive in the *Comment/Type setting* screen and press the *OK* button. You will move to the *Plate thickness and balancer constant setting* screen.



Positive printing plate: ink will not adhere to exposed parts of the plate.

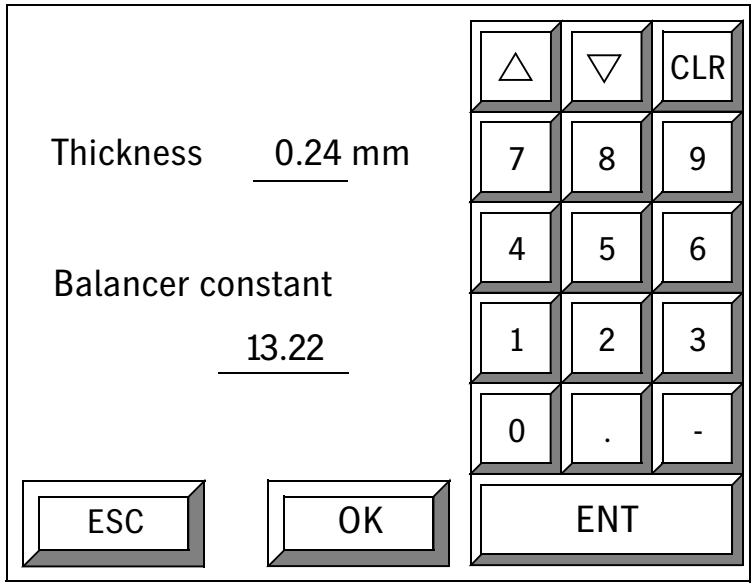


Negative printing plate: ink adheres to exposed parts of the plate.

Note: When a positive plate is exposed, the section outside the image is burned out.

Setting the plate thickness and balancer constant

1. Enter the plate thickness and press the *ENT* button. The balancer constant will be highlighted.
2. Enter the balancer constant and press the *ENT* button.



△ ▽ These keys move the cursor from Thickness to Balancer Constant and vice versa

ESC Return to the *Comment/Type setting* screen

3. Press the *OK* button. The display changes to the *Laser power and drum rpm setting* screen.

STOP Attention: Be sure to enter the correct balancer constant. If exposure takes place using an incorrect balancer constant, the machine will vibrate and exposure will not be performed properly.
The balancer constant for aluminum printing plates lies within the following ranges:

14.5 to 16.5 mm for printing plates with a thickness of 0.20 mm

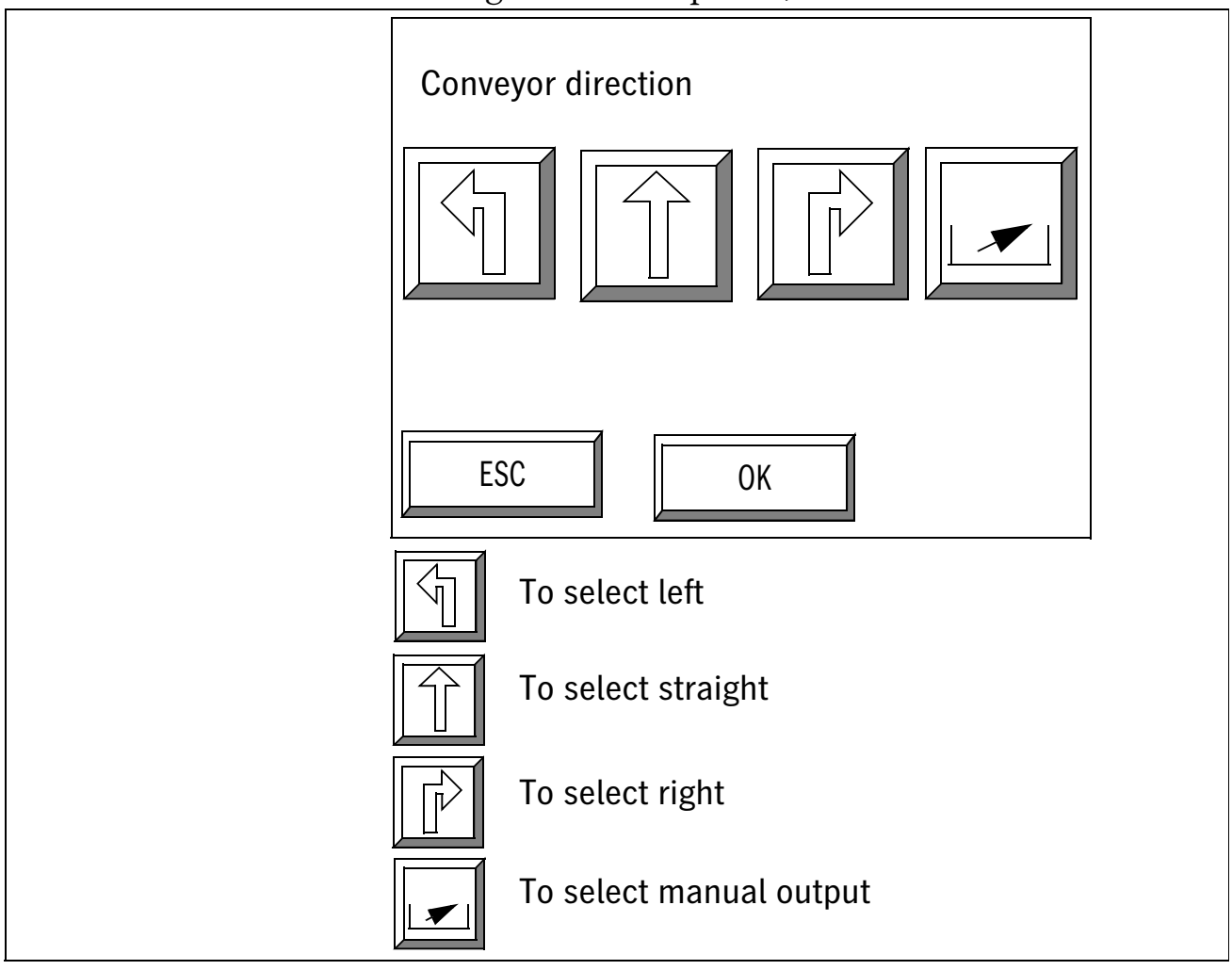
12.0 to 13.5 mm for printing plates with a thickness of 0.24 mm

9.9 to 11.0 mm for printing plates with a thickness of 0.30 mm

Selecting the printing plate output direction

If you have connected a conveyor with different output directions to the Topsetter P/PF 102, you can select the output direction. Three output directions are available: left, right and straight.

Note: If you have not connected a conveyor, these settings are not required, of course.



You can only set the direction in which a stacker or processor has been connected as the output direction.

If you select another output direction, a fault message will be displayed.

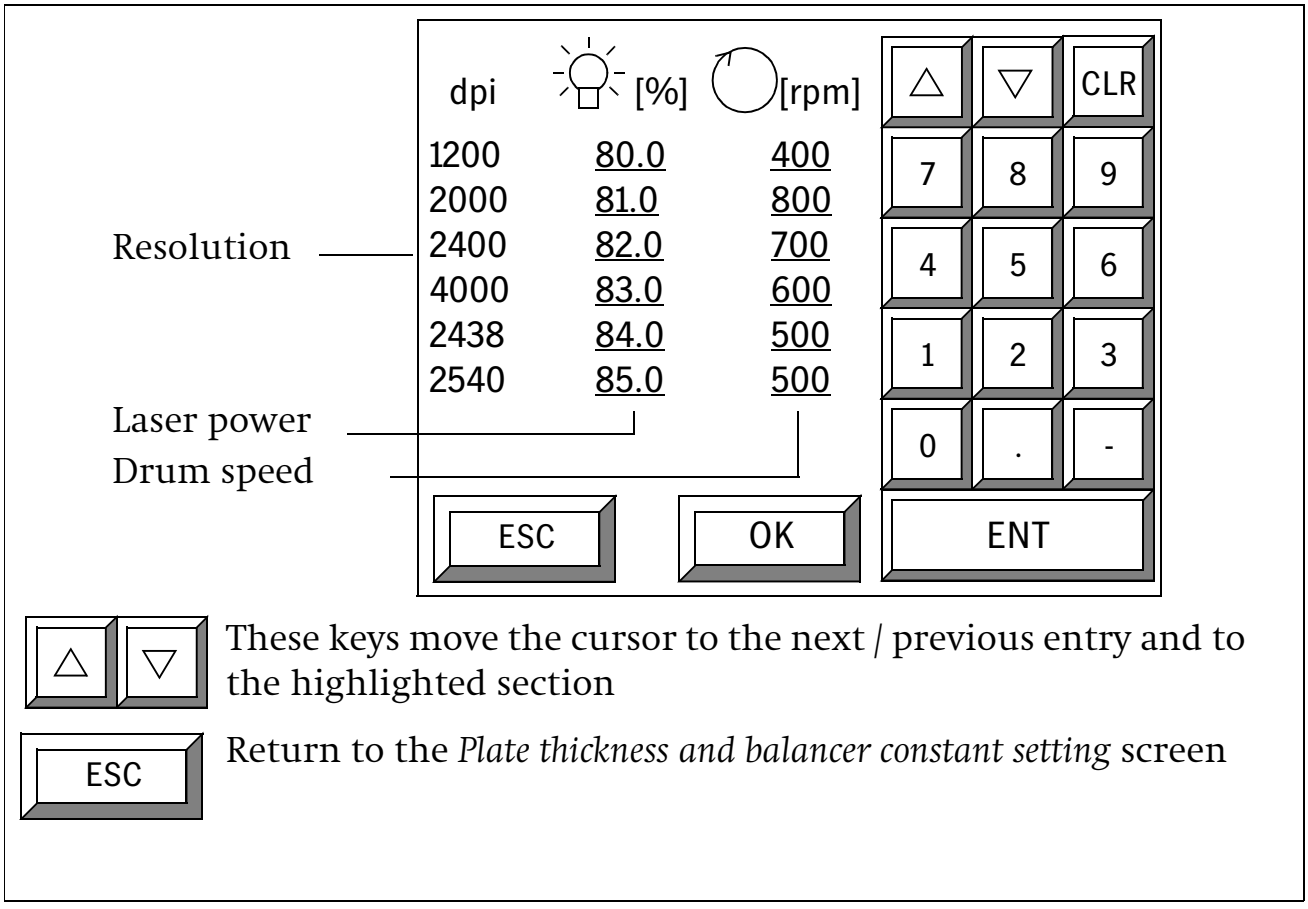
Note: The output direction of the icon with the arrow is the default value.

1. Select the desired output direction and press the *OK* button. The display changes to the *Laser power and drum rpm setting* screen.

Setting the laser power and drum rpm

1. Enter the laser power and drum speed for each resolution. Refer to the table below.

Prerequisite	Maximum drum speed	Laser power and drum speed during exposure
Resolution at 2000 dpi or 4000 dpi	600 rpm	Values in screen 1
If one of the following conditions is met: - Hook punch set to Off - Width of the plate does not exceed 650mm - Length of the plate does not exceed 550 mm	600 rpm	Values in screen 2
If none of the above conditions is met	Maximum speed	Values in screen 1



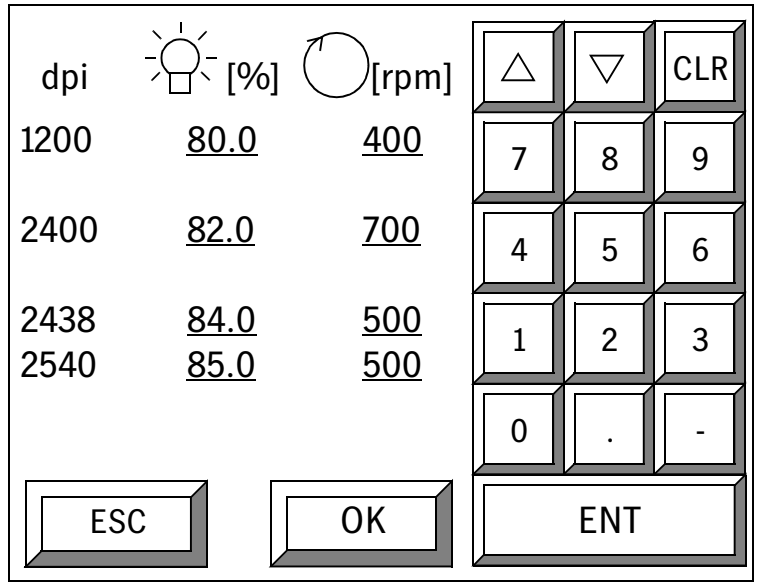
These keys move the cursor to the next / previous entry and to the highlighted section

ESC

Return to the *Plate thickness and balancer constant setting* screen

The highlighted value changes every time the *Ent* button is pressed.

Note: If there is a problem with the light intensity and/or the drum speed, perform a test exposure (see section Test exposure, page 4–61) and enter these values here.

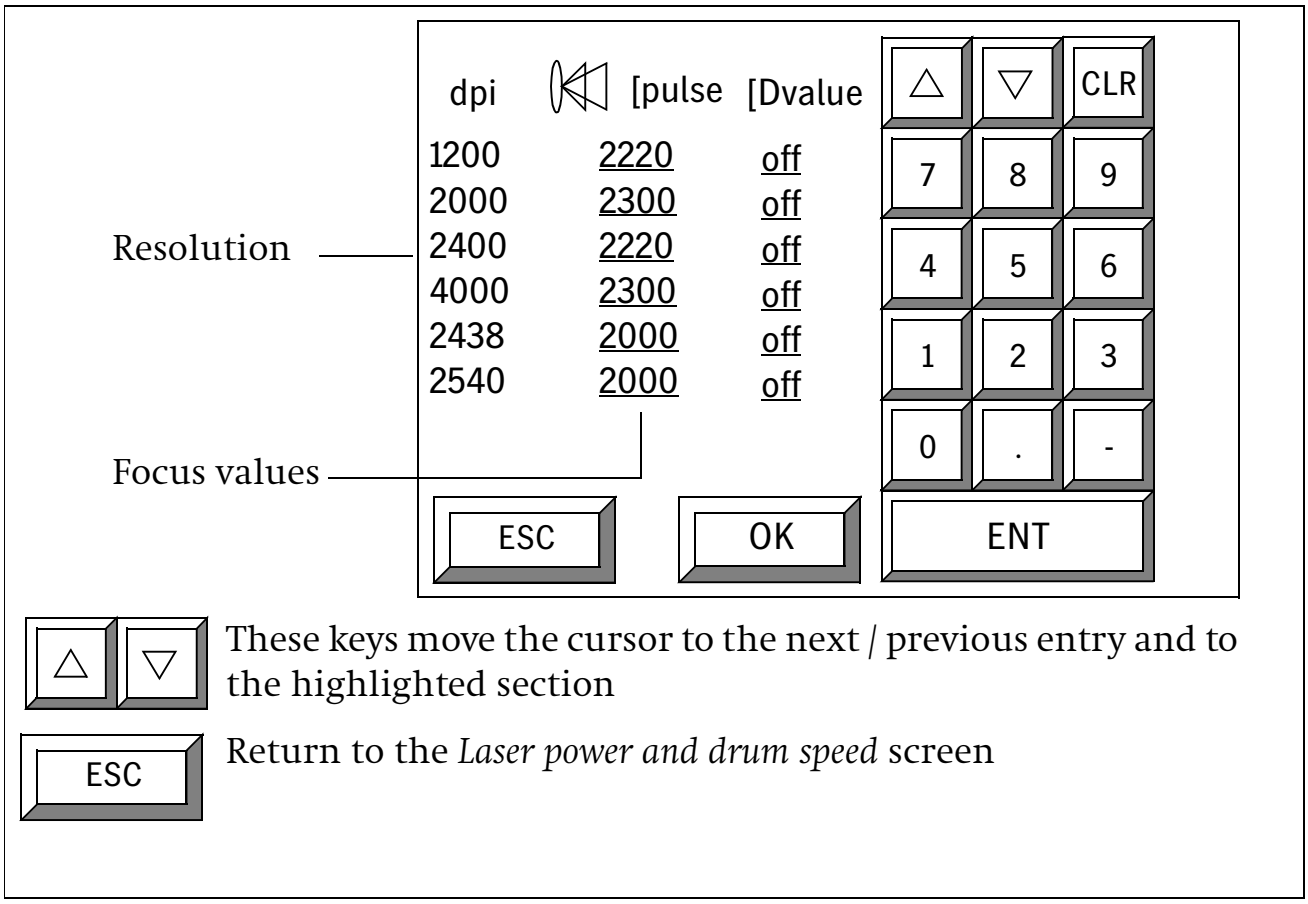


Values in screen 2

2. Press the *OK* button. You will move to the *Focus setting* screen.

Setting the focus values and the D value

1. Enter the focus value for each resolution and press the *ENT* button.



2. Press the button for the D value and select the D value for each resolution. The display changes as follows every time the button is pressed: off–>+1–>+2–>+3–>-3-->-2–>-1–>off–>+1.....

3. Press the *OK* button. The *Zoom value and absolute precision correction value* screen appears.

Note: To check the focus value settings, perform a test exposure .

Changing the focus value by 1 shifts the focus 1µm. The higher the focus value, the closer the focus point moves toward the drum.

Example: The focus value of a printing plate with a thickness of 0.24 mm is 2000; the focus value of a 0.30 mm printing plate is 1940.
(0.30 - 0.24 = 60µm, gives 2000 - 60 = 1940)

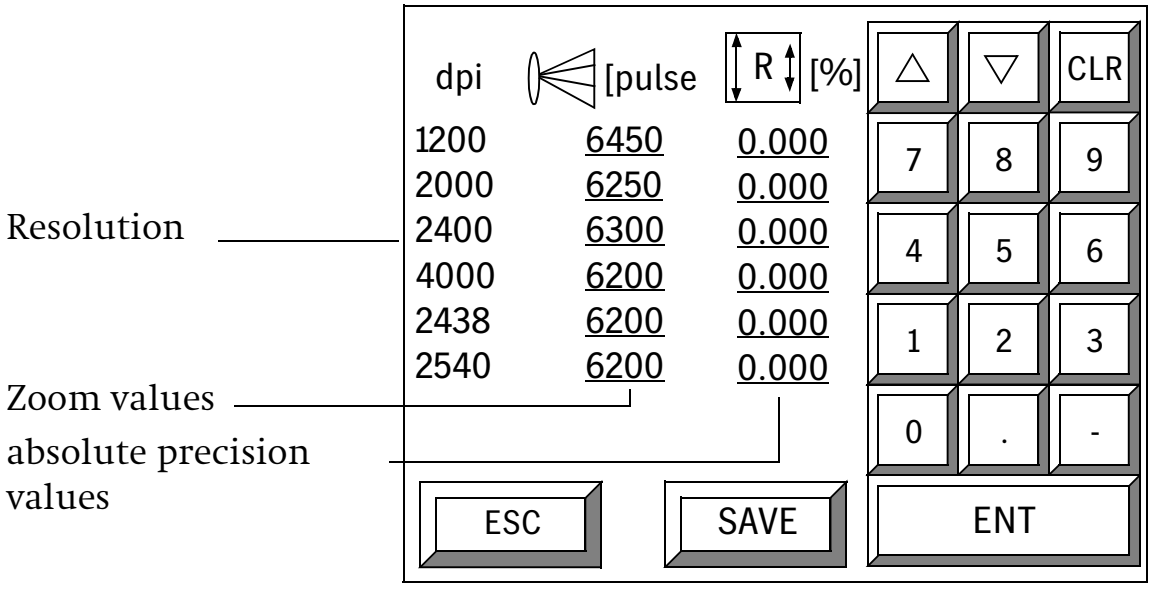
When you enter the D value, which depends on the printing plate type, you will achieve the best image quality for the relevant printing plate.

Setting the zoom value and the absolute precision correction value

Set the zoom value and the absolute precision correction value for each resolution.

Note: The absolute precision correction value is a correction of the length of the primary scanning direction. For example, if this value is initially 0 and an image is exposed that is 800 mm in the primary scanning direction, but the exposed image is actually 799 mm, entering a correction value of
(800 - 799)/800 x 100 = 0.125 (%)
will cause the correct length to be exposed.

1. The highlighted value switches between the zoom values and the absolute precision correction values each time you press the *ENT* button.
   Enter each value and press the *ENT* button.

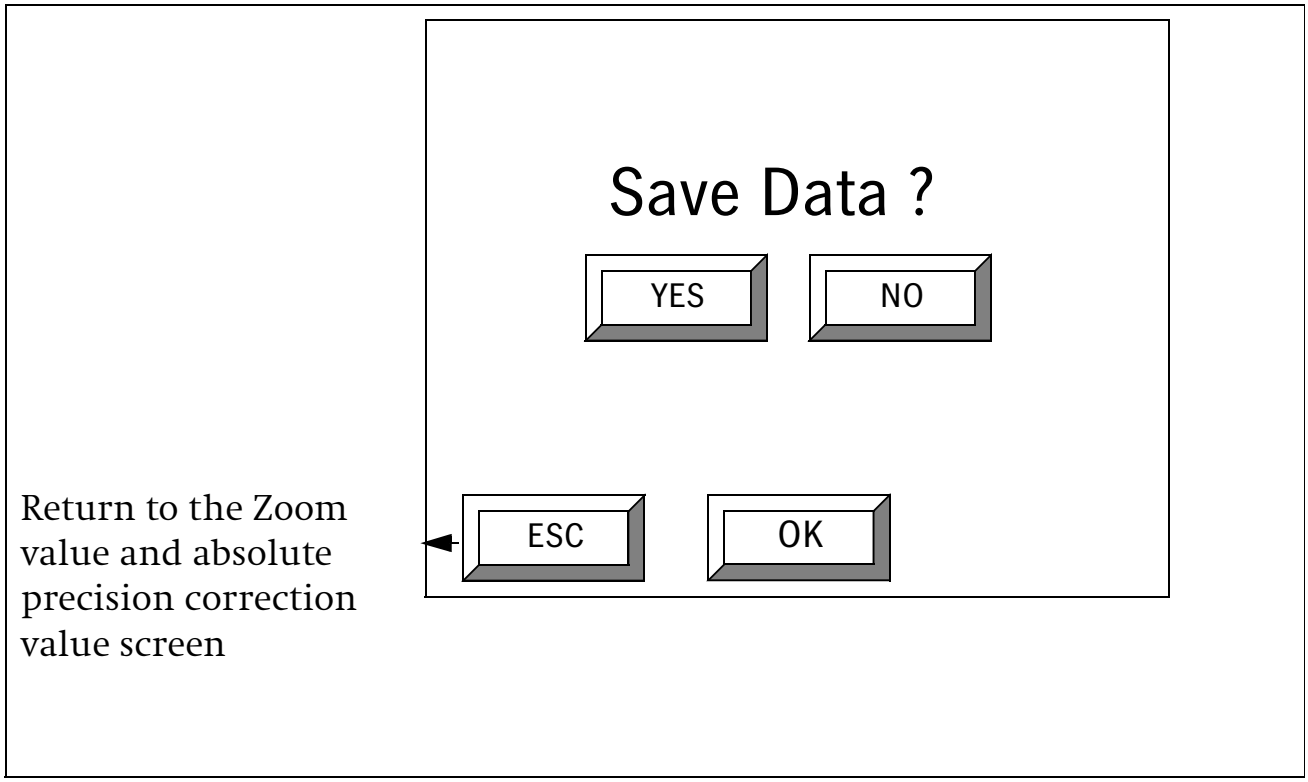


These keys move the cursor to the next / previous entry and to the highlighted section

ESC Return to the *Focus setting* screen

Note: To check the zoom value and absolute precision correction value settings, perform a test exposure

2. Press the *SAVE* button; a confirmation screen appears.



3. Press the *YES* button and then the *OK* button to save all of the set data as one media type.
   If you want to cancel the data save, press the *NO* button and then the *OK* button.

Setting the printing plate

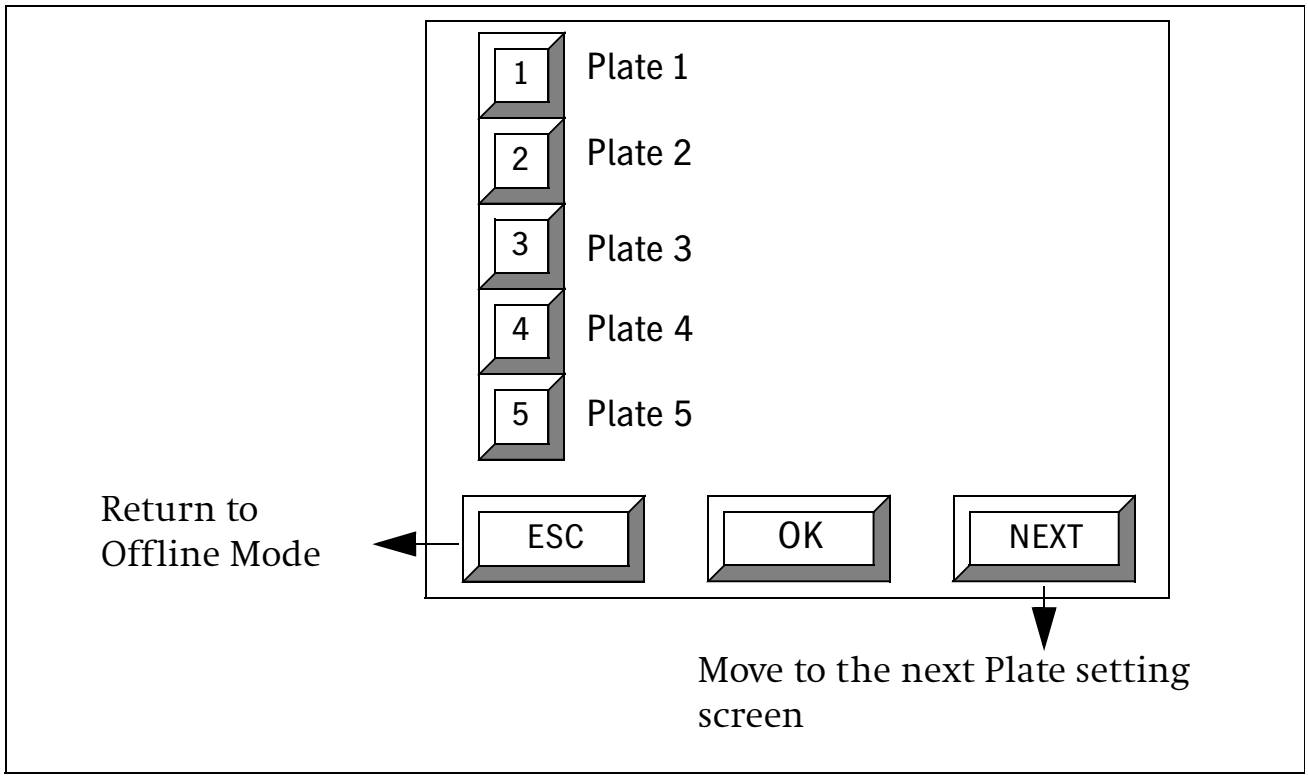
As many as 15 types of printing plate information can be stored. The procedure for setting this information is as follows:

- Select a plate number.
- Enter comments and select the media (plate) type.
- Set the plate size.

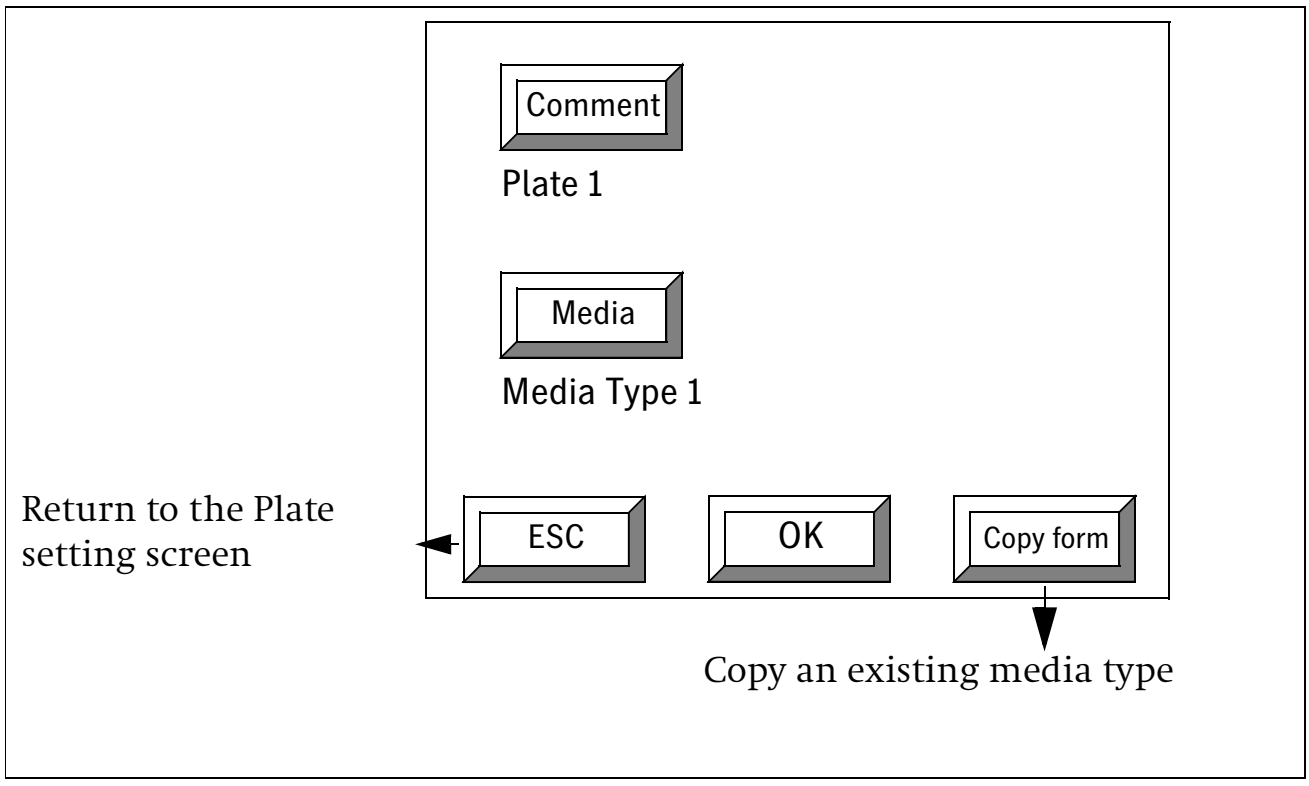
The following example explains how to set the information for plate 1.

Selecting a plate number

1. Press *Set plate* and then the *OK* button on the *Offline* screen. The *Plate setting* screen appears.



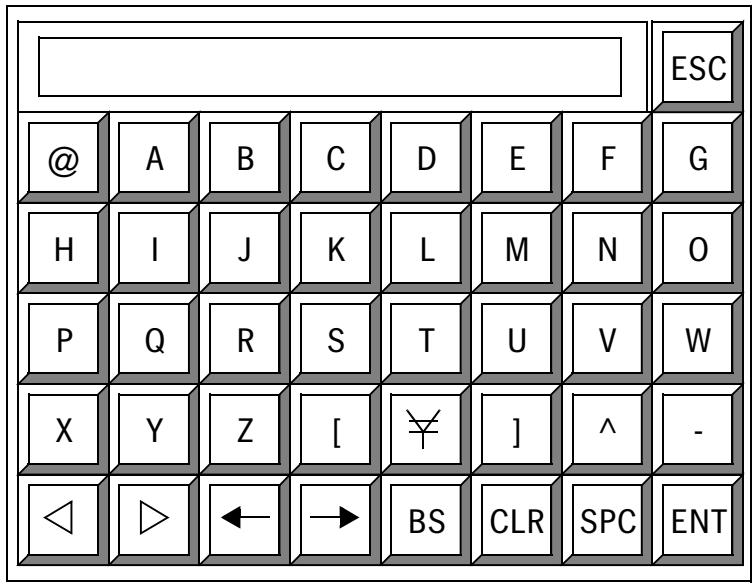
2. Select *1* and then press the *OK* button. The screen for setting the comment and media type appears.

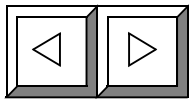


Entering comments and selecting the media type

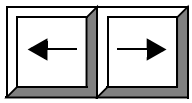
1. Press the *Comment* button on the *Comment/Media type setting* screen. The *Comment entry* screen appears.

2. Enter a comment and press the *ENT* button. The *Comment/Media type* screen then appears, and the comment entered appears under the *Comment* button.

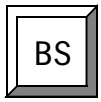




Changeover for upper/lower case letters and symbols/ numbers

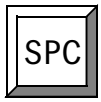


Moves the cursor to the input position

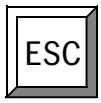


Deletes the character to the left of the cursor

Deletes the comment which has been entered



Enters a space



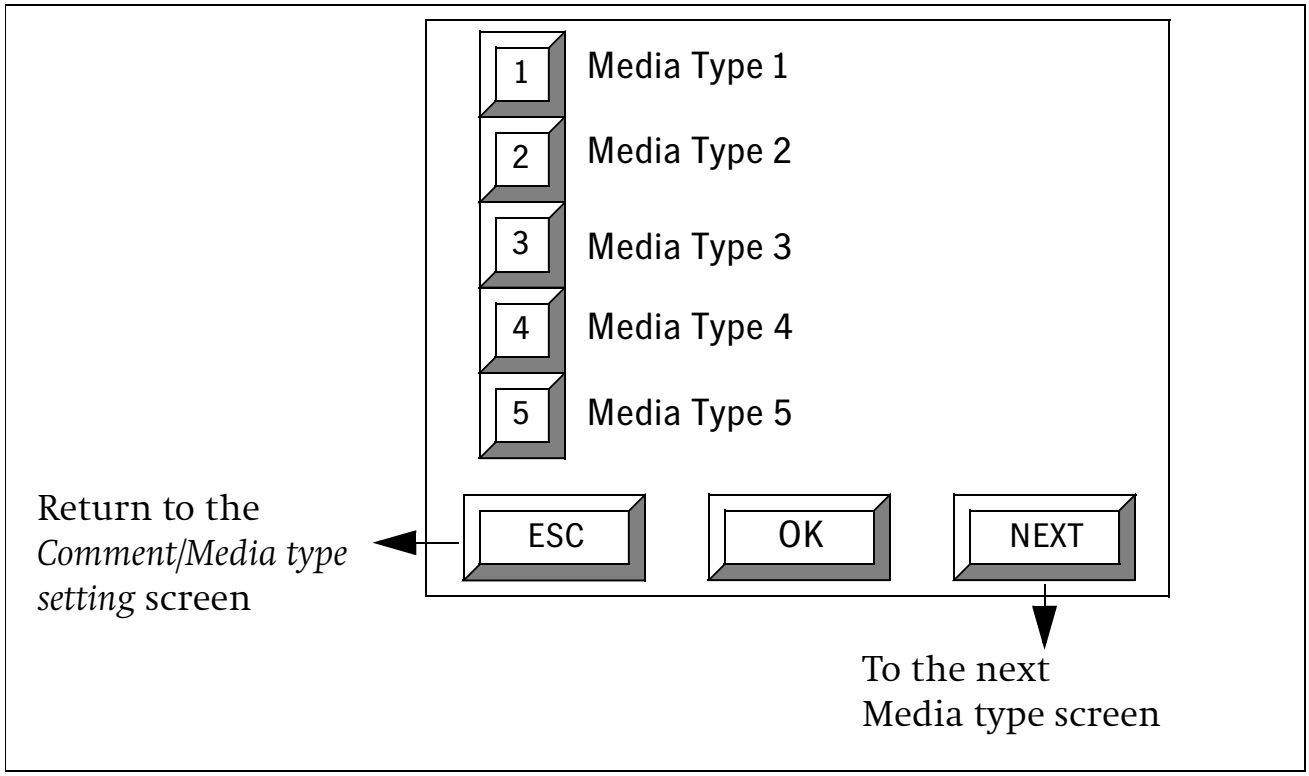
Return to the *Comment/Media type setting* screen

Attention: The comment entered here will appear in the screen that requests you to set a plate and the screen that requests you to select a plate to be set. We recommend that you enter the name of the plate, its size and thickness (and the media type name when using several media types), for example:

Kodak 1030*790 0,3 mm

Kodak 1030*790 0,3 mm TRIAL

3. Press the *Media* button. The *Media type selection* screen appears.



4. Select a media type from among the registered media types and press the *OK* button. Plate 1 will be assigned to the selected media type, and you will return to the *Comment/Media type setting* screen.

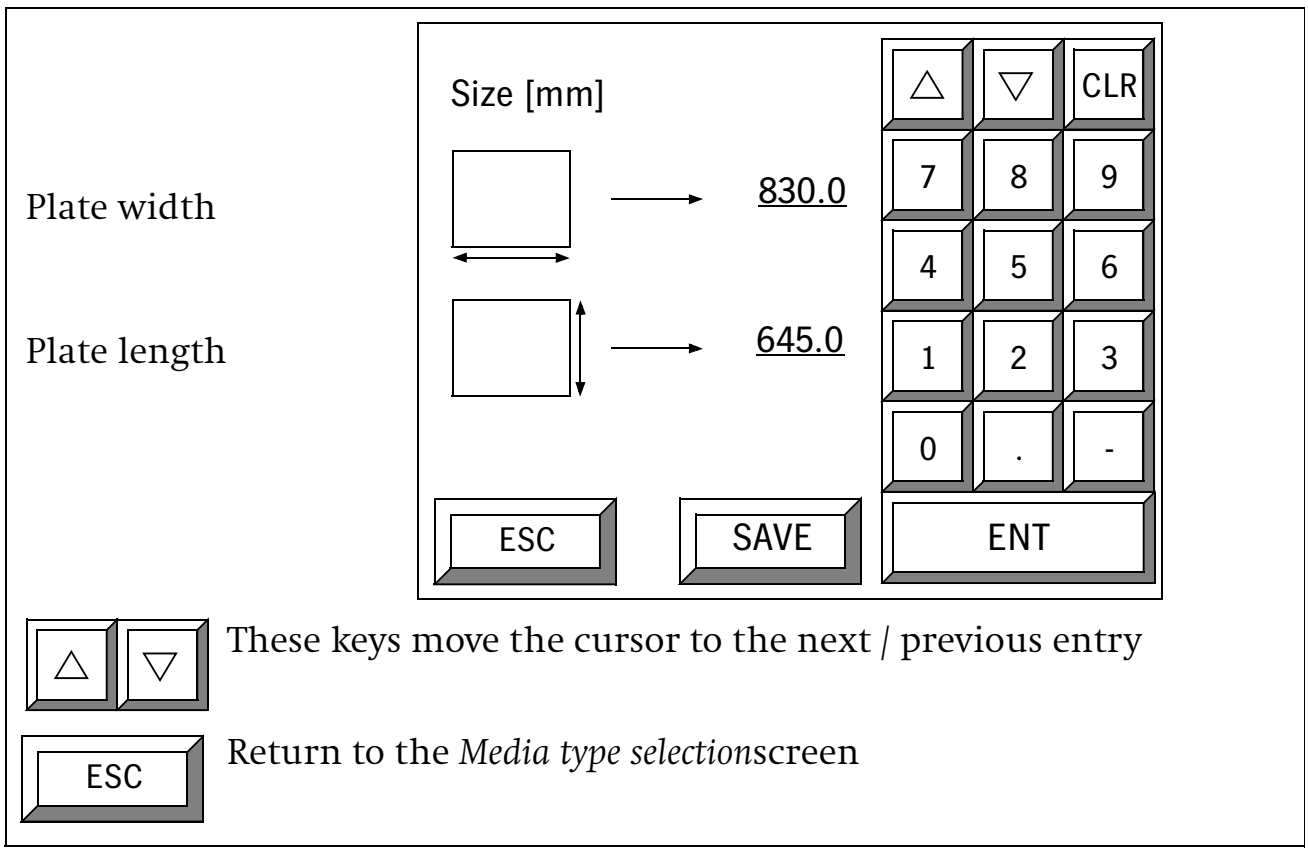
5. When finished, press the *OK* button in the *Comment/ Media type setting* screen. The *plate size setting* screen appears.

Setting the printing plate size

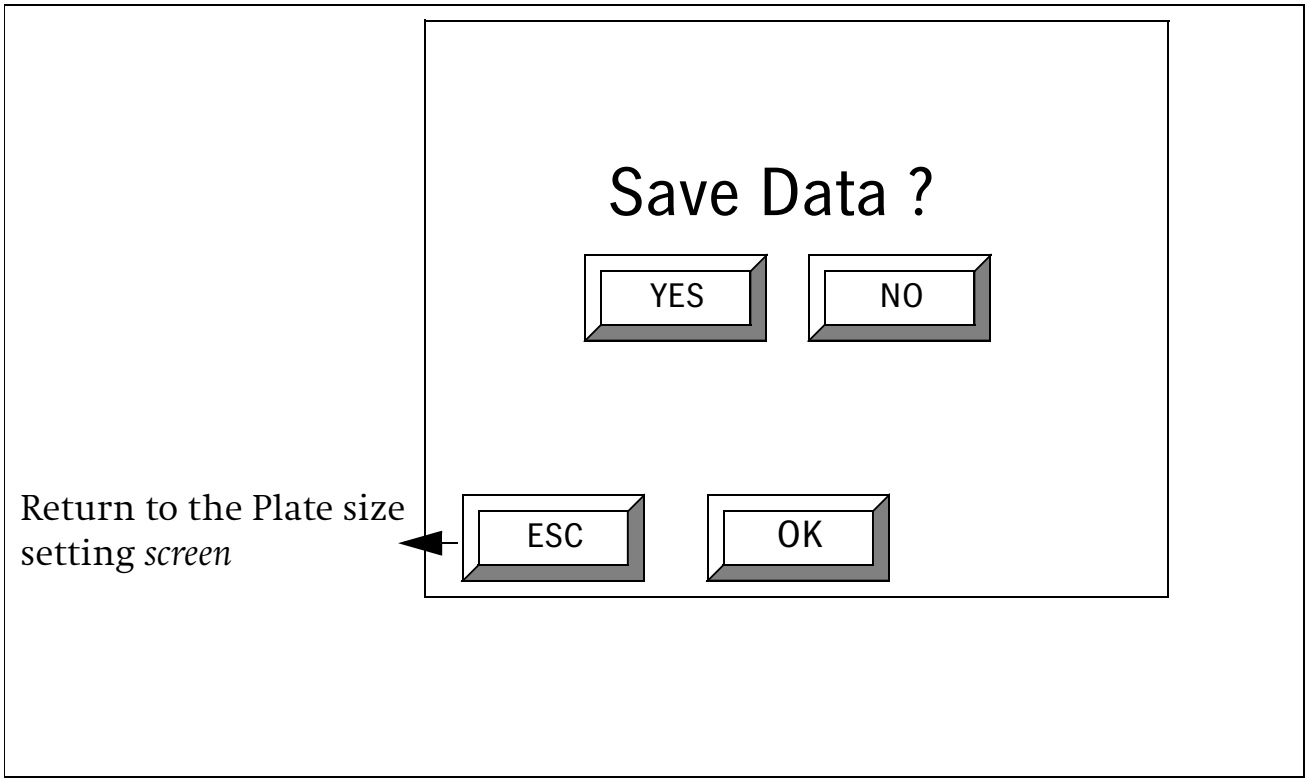
The size to be set is the total area including the print area and the leading and trailing grip settings.

Note: The maximum plate size that can be set is 1160 x 940 mm.
The minimum plate size that can be set is 370 x 500 mm.

1. Enter the plate width and then press the *ENT* button. The highlighted setting switches to the plate length.
2. Enter the plate length and then press the *ENT* button.



3. Press the *SAVE* button; a confirmation screen appears.



4. Press the *YES* button and then the *OK* button to save all of the set information as one media type 1.
   If you want to cancel the data save, press the *NO* button and then the *OK* button.

Setting the printing machine information

When outputting a plate with the Topsetter P/PF 102, output conditions such as the media type, leading grip margin, trailing grip margin, and image centering can be associated and saved as the printing machine information.

Up to 15 different printing machine information types can be stored.

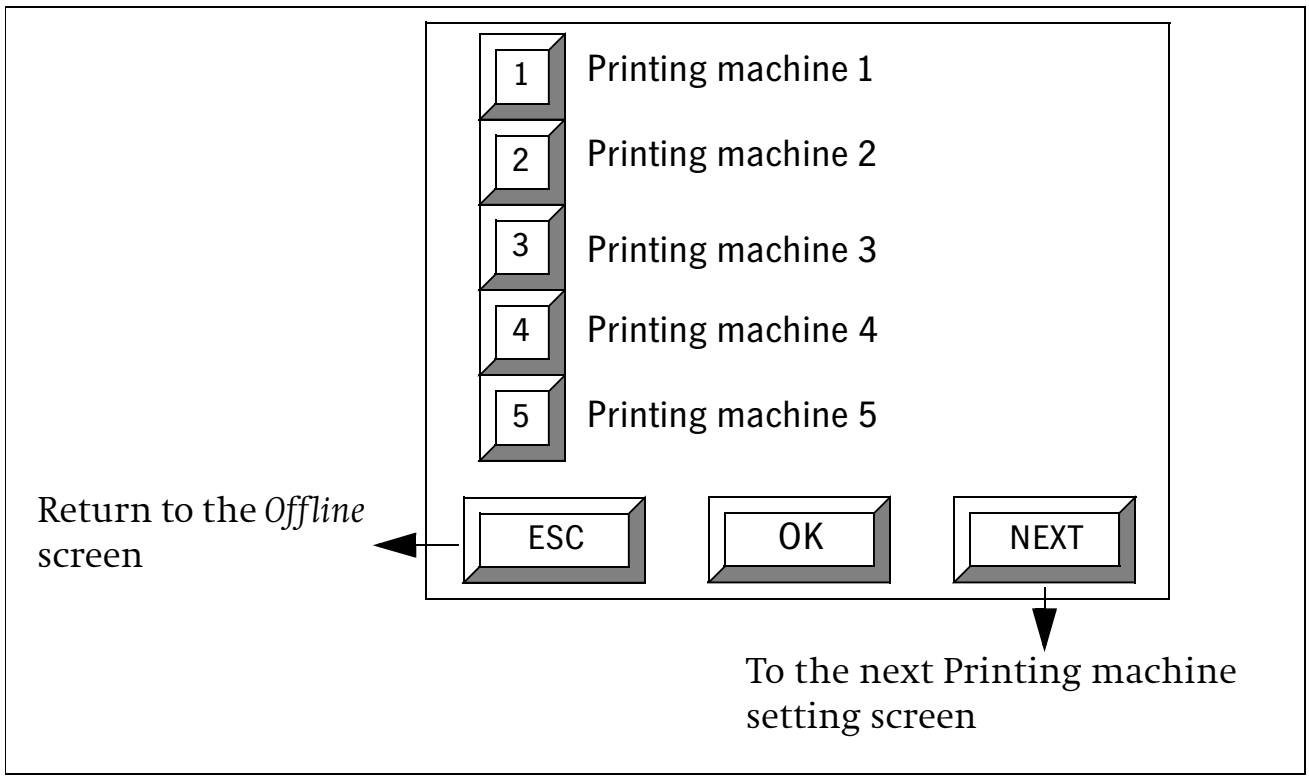
The procedure for setting this information is as follows:

- Select a printing machine number.
- Enter comments and select the plate.
- Select the grip direction.
- Set the leading and trailing grip margins.
- Set the image centering method.
- Set the image position offset.
- Set the punch.
- Fine adjustment of image position.

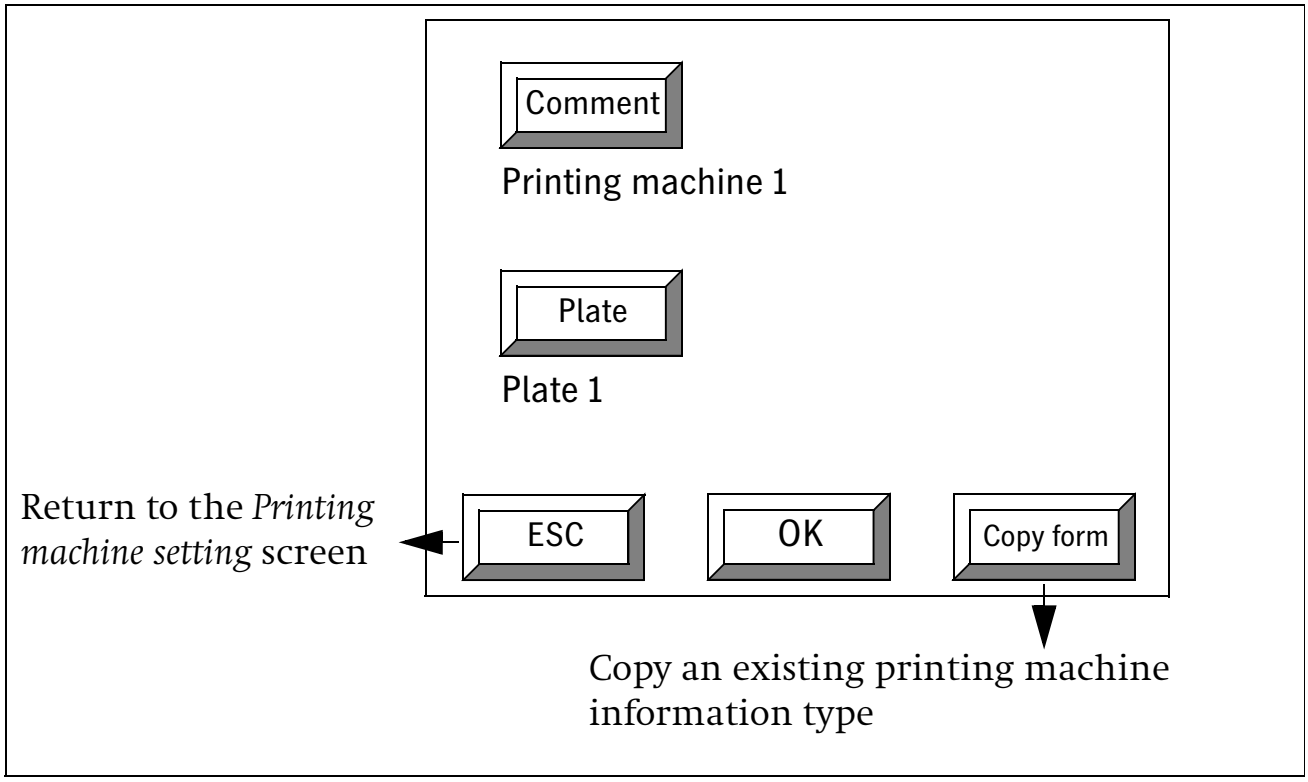
The procedure for setting the information is explained in the following using printing machine 1 as an example.

Selecting the printing machine number

1. Press *Set printing machine* and then press the *OK* button in the *Offline* screen. The *Printing machine setting* screen appears.



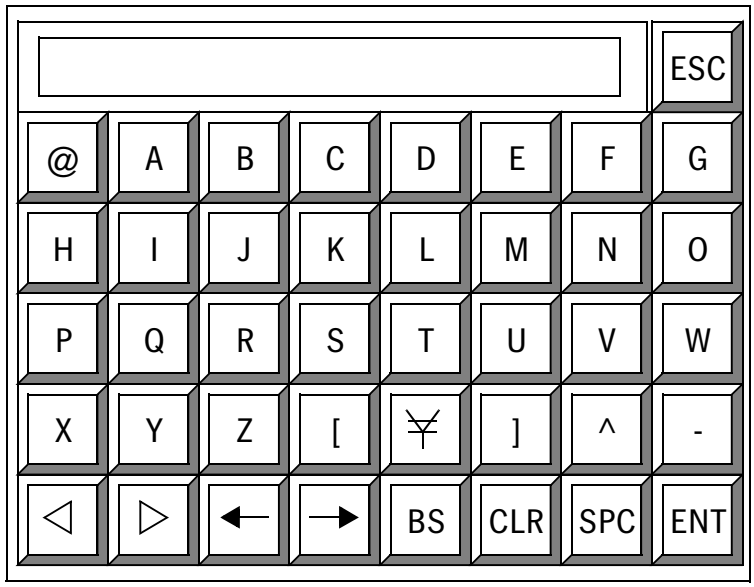
2. Select *1* and then press the *OK* button. The screen for setting the comment and printing plate appears.

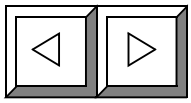


Entering comments and selecting the printing plate

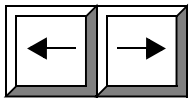
1. Press the *Comment* button on the *Comment/Plate setting* screen. The *Comment entry* screen appears.

2. Enter a comment and press the *ENT* button. You will return to the *Comment/Plate setting* screen and the entered comment appears under the *Comment* button.

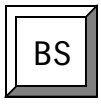




Changeover for upper/lower case letters and symbols/ numbers

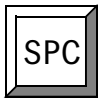


Moves the cursor to the input position

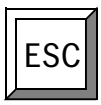


Deletes the character to the left of the cursor

Deletes the comment which has been entered

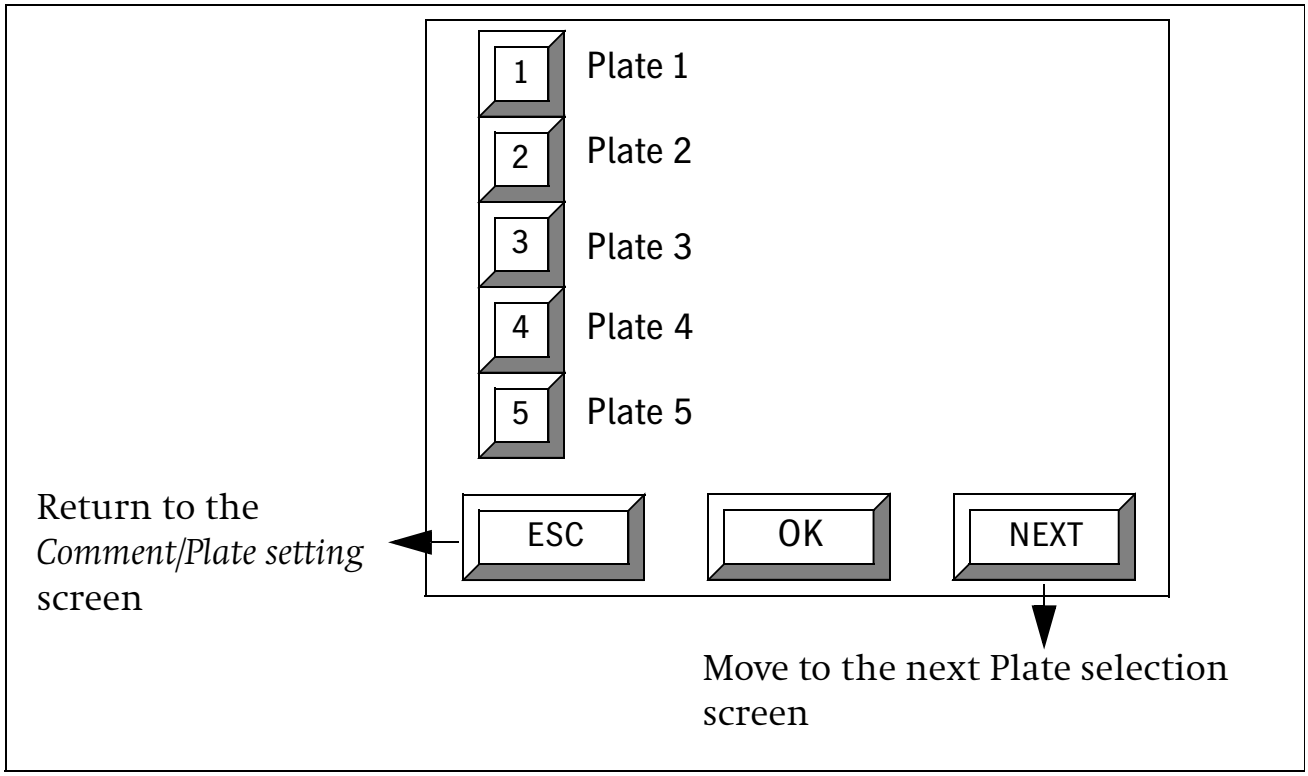


Enters a space



Return to the *Comment/Plate setting* screen

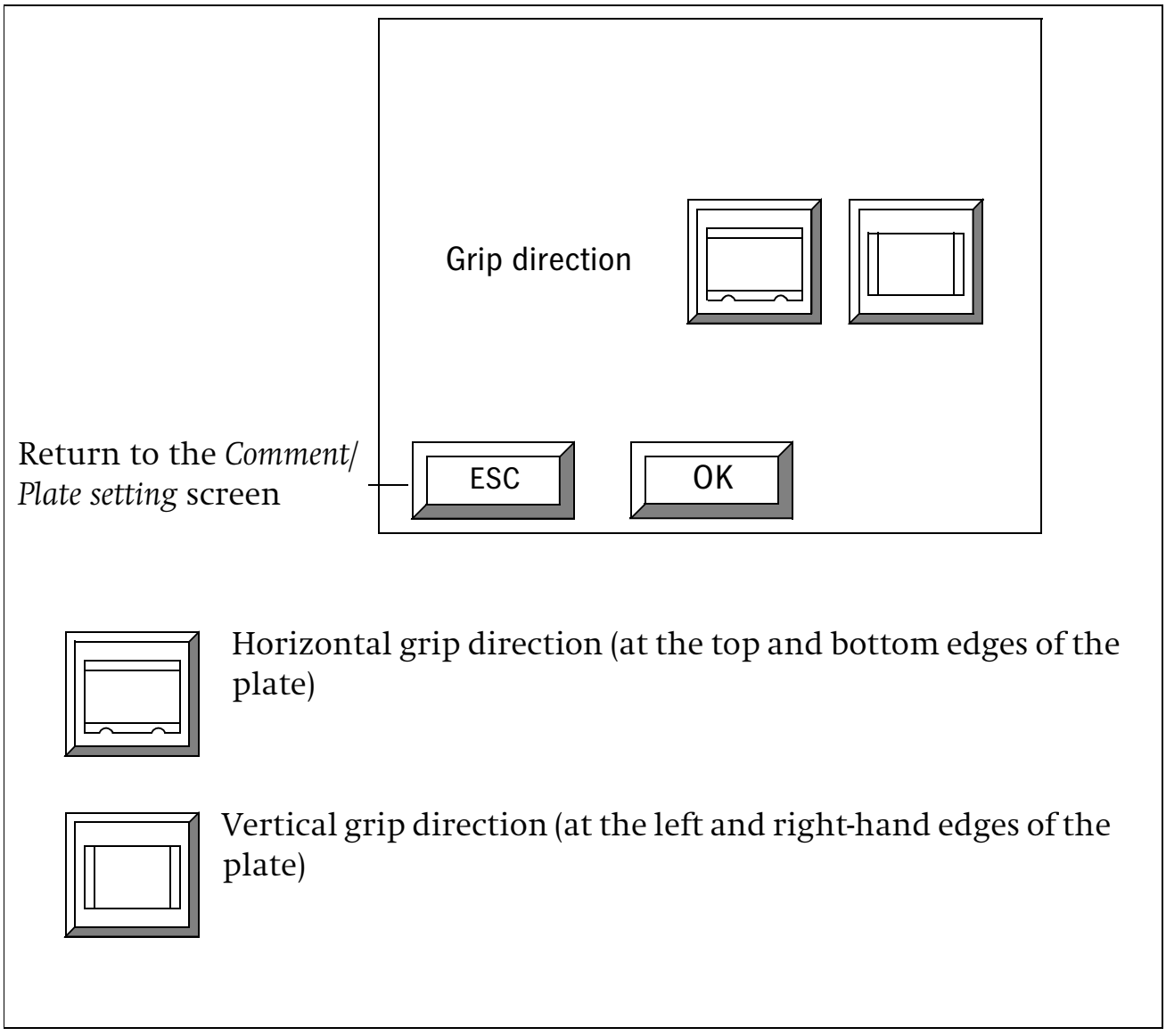
3. Press the *Plate* button. The *Plate selection* screen appears.



4. Select the desired plate from the registered plates and then press the *OK* button. The plate will be associated with printing machine 1 and you will return to the *Comment/Plate setting* screen.
5. Press the *OK* button in the *Comment/Plate setting* screen. The Grip direction setting screen will appear.

Setting the grip direction

1. Set the desired grip direction in the *Grip direction setting*screen.

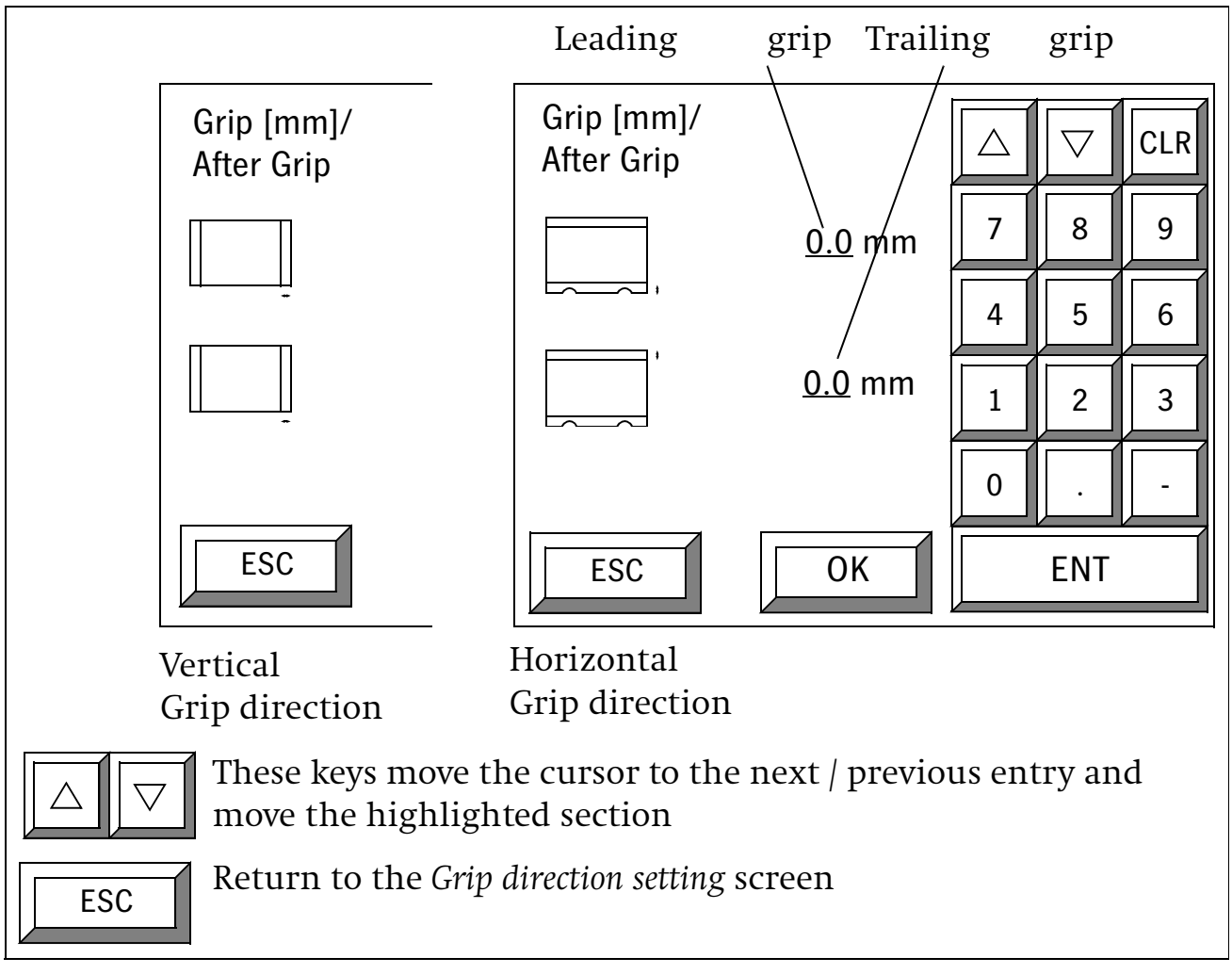


2. Press the *OK* button. The *Leading and trailing grip setting* screen appears.

Setting the leading and trailing grip margins

Set the leading and trailing grip margins (the length from the edge of the plate to the print area). The positions of the leading and trailing grip margins will differ depending on the grip direction setting, see section Setting the grip direction, page 4–34.

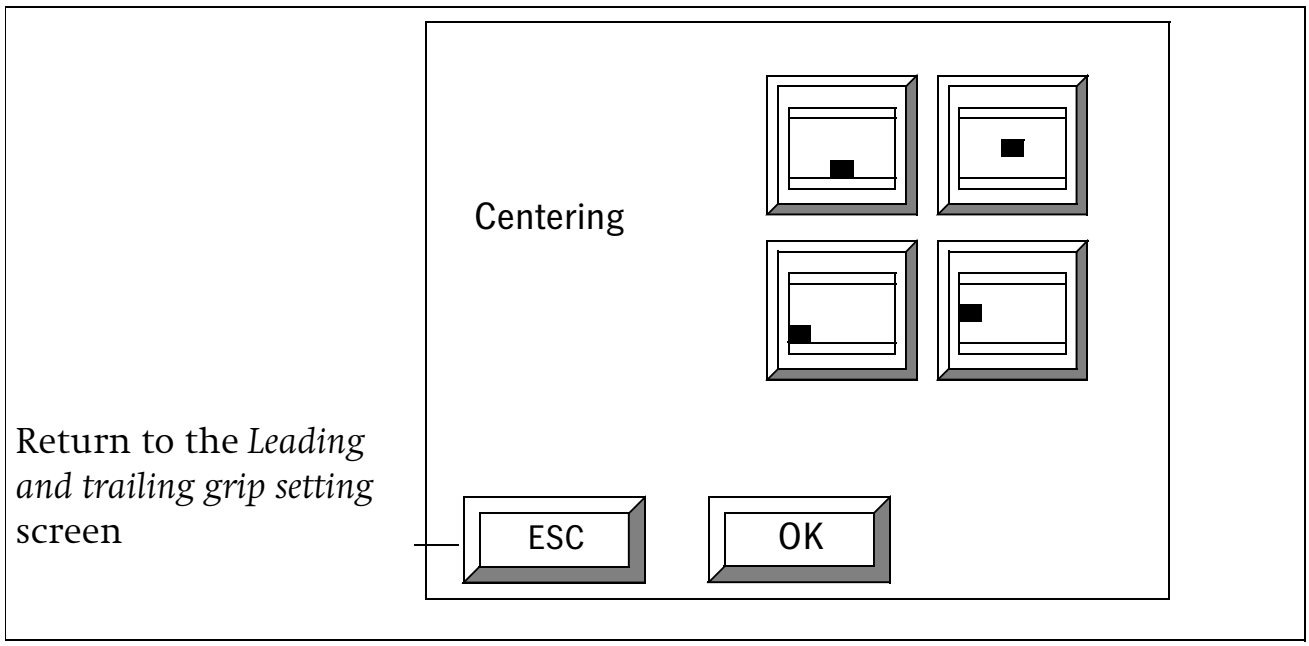
1. Enter the leading grip margin and then press the *ENT* button. The area for setting the trailing grip margin will then be highlighted.
2. Enter the trailing grip margin and then press the *ENT* button.



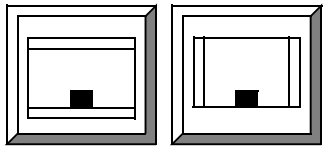
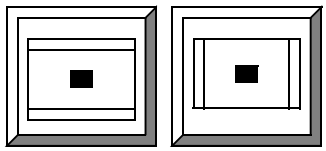
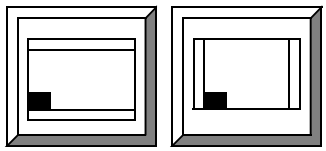
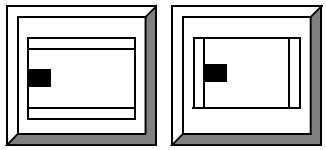
3. Press the *OK* button. The *Image centering setting* screen will appear.

Setting the image centering method

The image centering function is used to center the image data in the center of the print area minus the leading and trailing grip margins.
The following screen illustration assumes that the grip direction has been set to horizontal gripping.



1. Select the desired centering method and then press the *OK* button. The *Image offset setting* screen will appear.

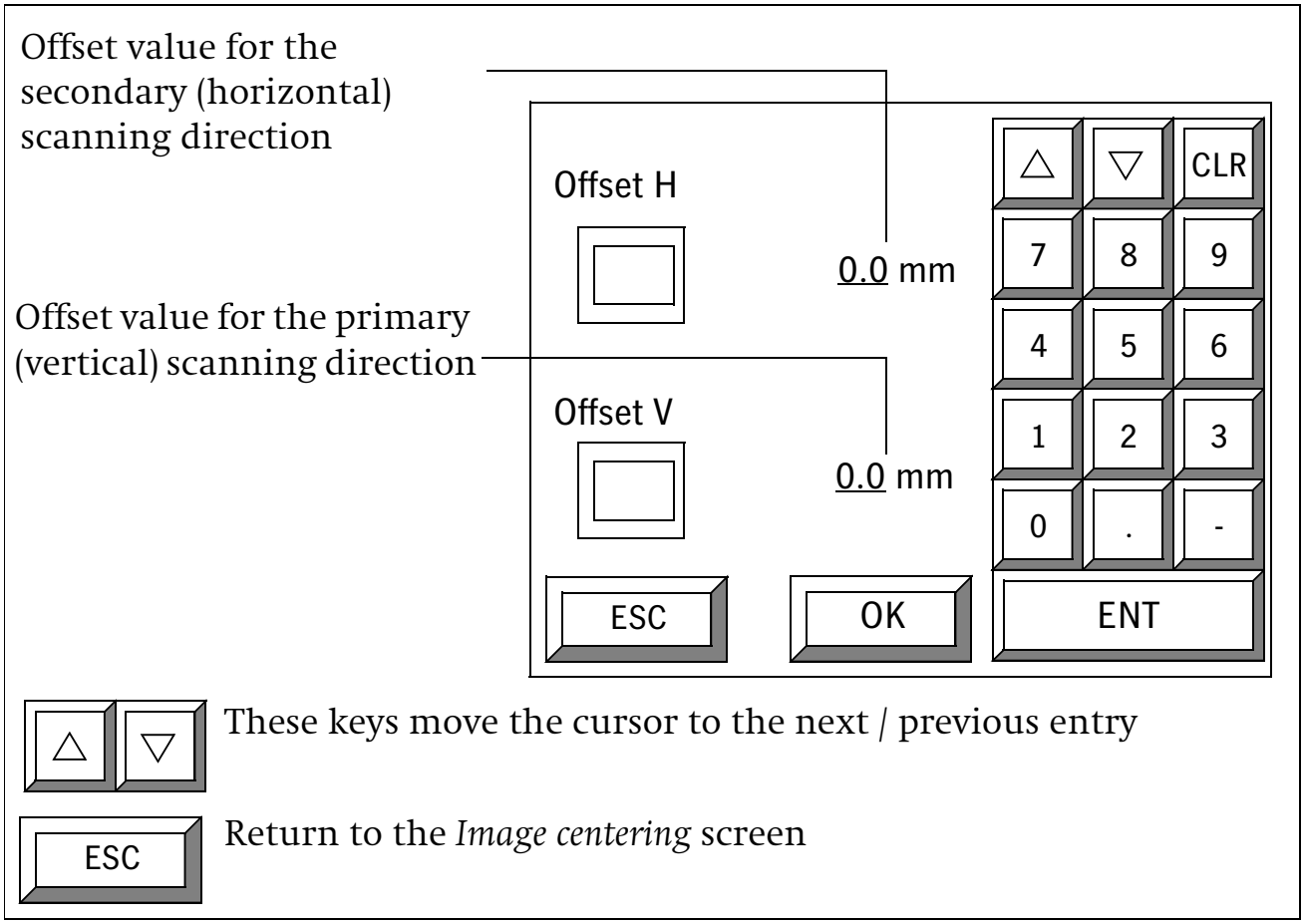
	Primary scanning direction (vertical):	Centering: OFF
	Secondary scanning dir. (horizontal):	Centering: ON
	Primary scanning direction (vertical):	Centering: ON
	Secondary scanning dir. (horizontal):	Centering: ON
	Primary scanning direction (vertical):	Centering: OFF
	Secondary scanning dir. (horizontal):	Centering: OFF
	Primary scanning direction (vertical):	Centering: ON
	Secondary scanning dir. (horizontal):	Centering: OFF

Setting the image offset

If centering in either or both of the scanning directions was set to OFF, the offset value for the non-centered scanning direction can be adjusted.
The following explanation assumes that centering in both the primary and secondary scanning directions has been set to OFF.

1. Enter the offset value for the secondary (horizontal) scanning direction and then press the *ENT* button. The highlighted area switches to the offset setting for the primary (vertical) scanning direction.

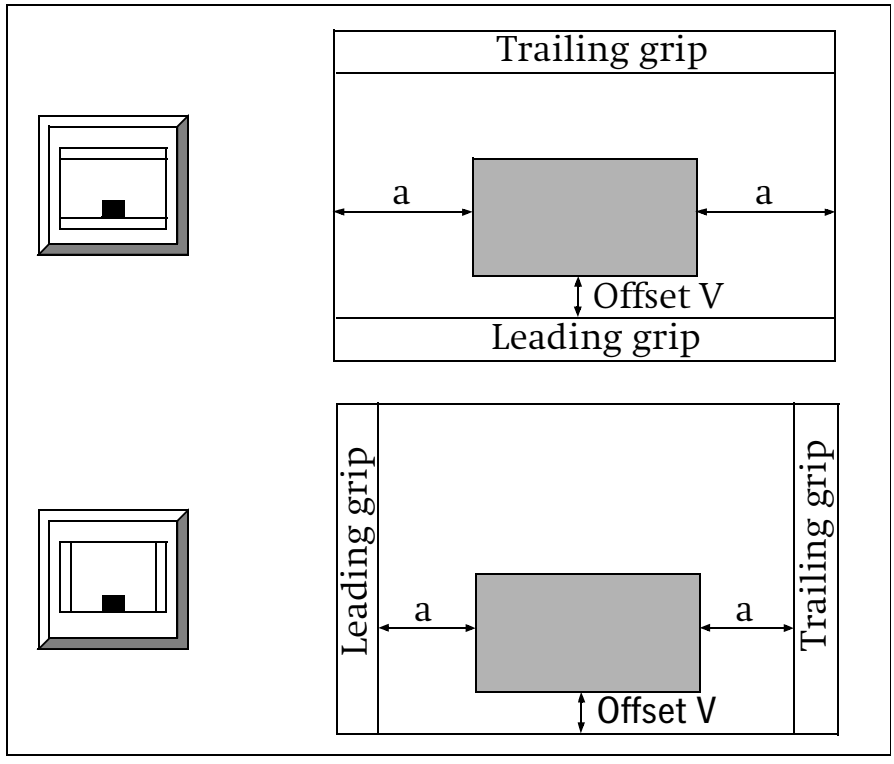
2. Enter the offset value for the primary (vertical) scanning direction and then press the *ENT* button.

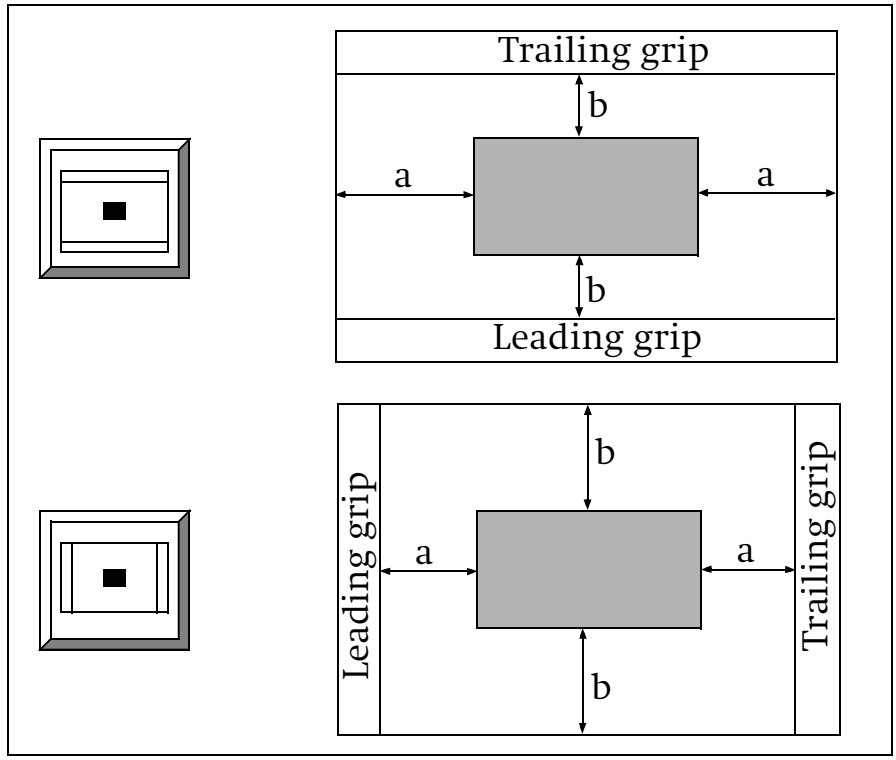


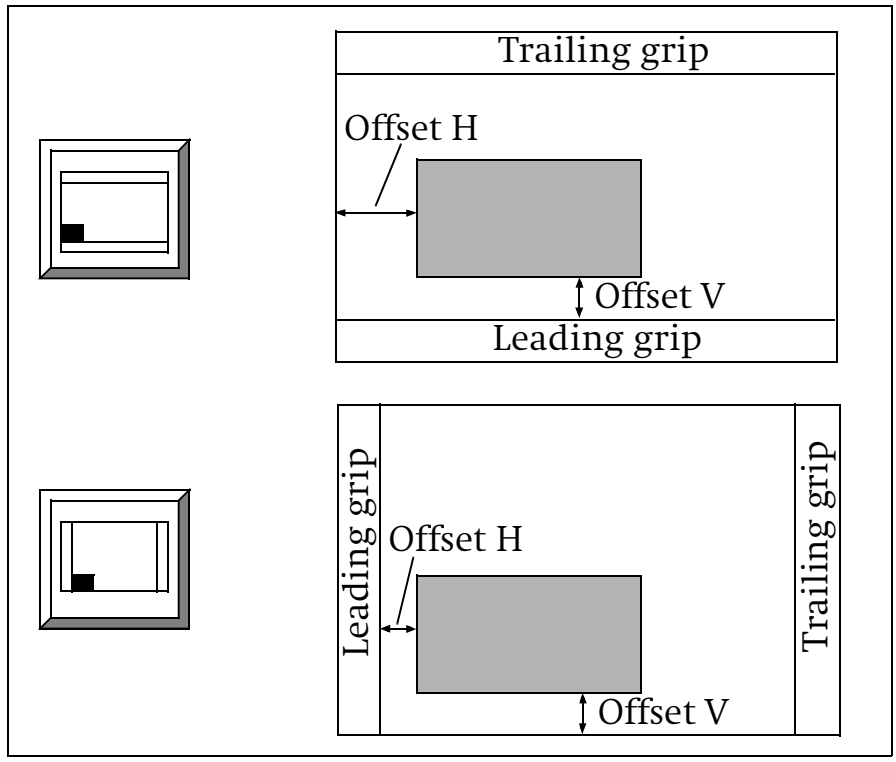
3. Press the *OK* button. The *Punch setting* screen will appear.

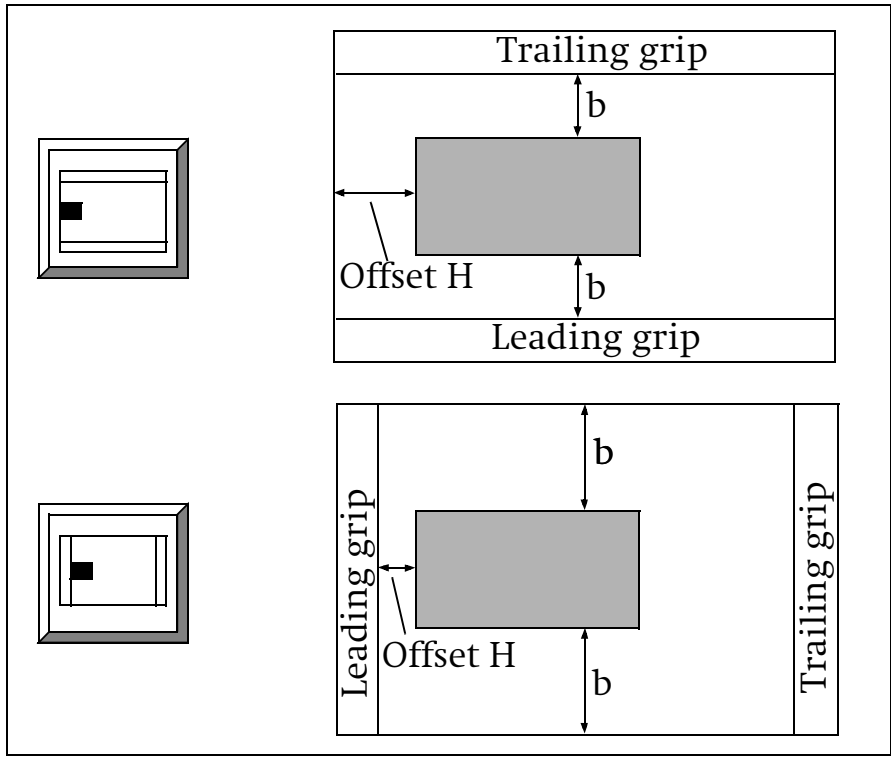
Note: If image centering is set to ON for the primary (vertical) scanning direction and OFF for the secondary (horizontal) scanning direction, an offset value can only be set for the secondary scanning direction. Likewise, if image centering is set to OFF for the primary (vertical) scanning direction and ON for the secondary (horizontal) scanning direction, an offset value can only be set for the primary scanning direction. If image centering is set to ON for both scanning directions, the *Image offset setting* screen will not appear.

The following diagrams show the relation of the image centering and offset value settings to the image output position.

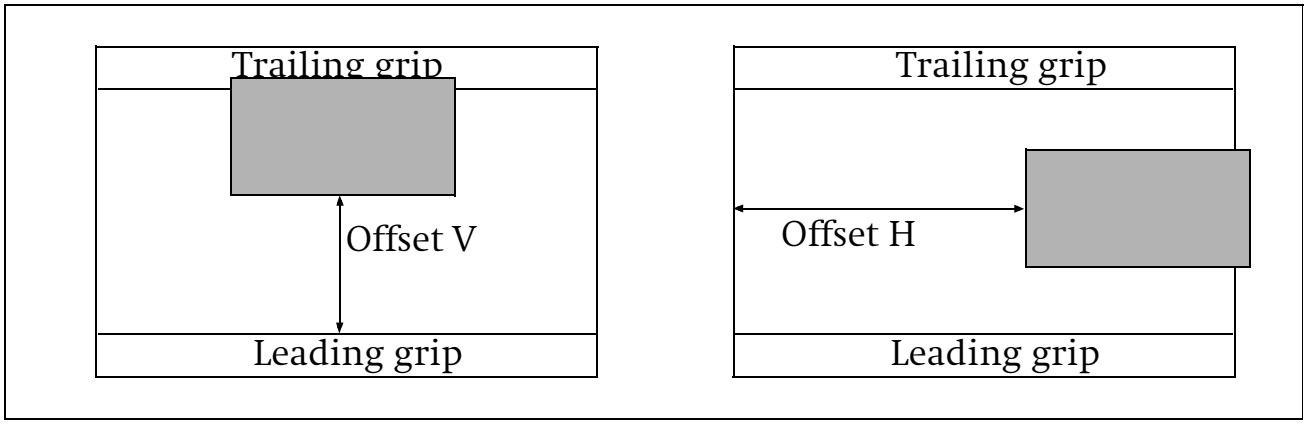



Trailing grip
b
a
a
b
Leading grip
b
Leading grip
a
a
Trailing grip
b


Trailing grip
Offset H
Offset V
Leading grip
Leading grip
Offset H
Trailing grip
Offset V



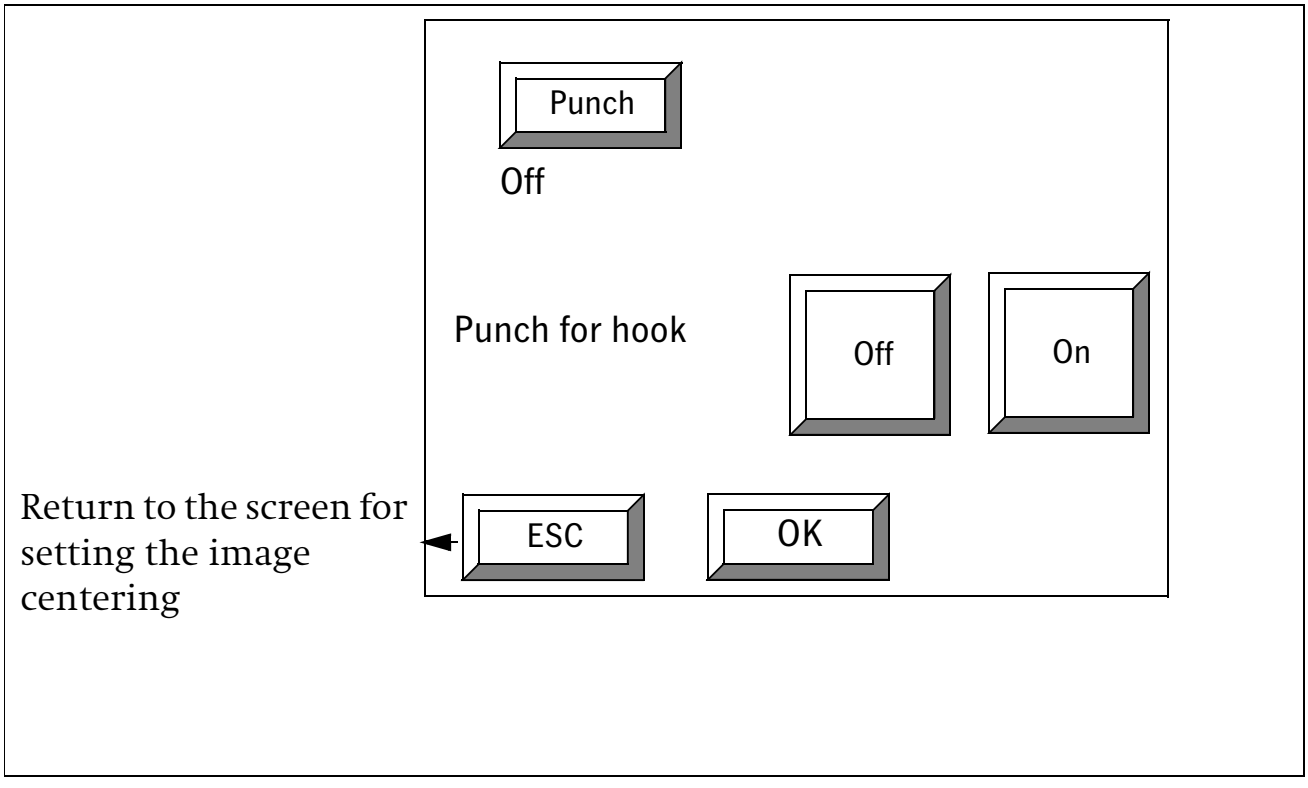
Attention: When an image is output from the workstation, an error will occur if the image is moved by an offset setting to the point that it extends beyond the plate size.
Example:



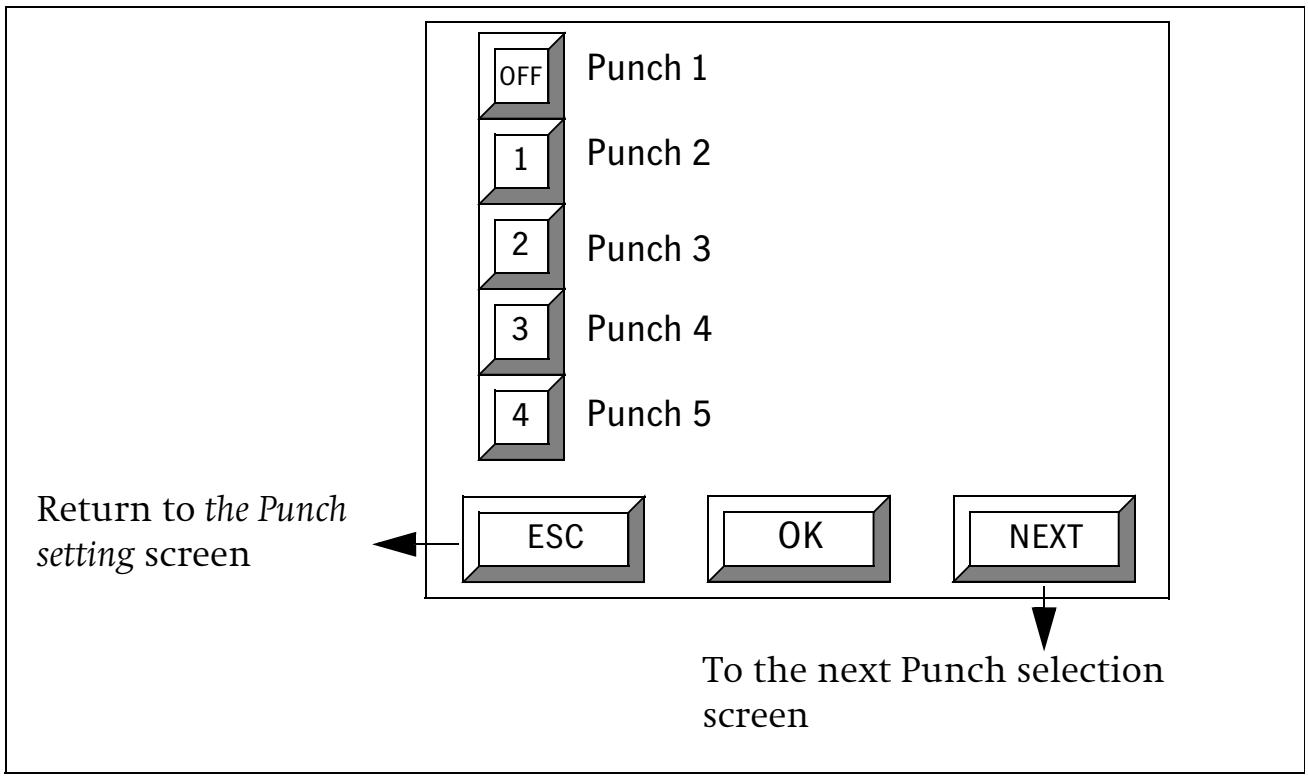
Attention: If multi-output has been selected in the exposure condition settings, the settings for image centering in the secondary scanning direction and image offset in the secondary scanning direction will be ignored.

Setting the punch

Set the punch type and punch for the drum positioning pins.



1. Press the *Punch* button to move to the *Punch selection* screen.



2. Select the desired punch type from the registered punch types and then press the *OK* button. The punch type will be linked to printing machine 1, and you will return to the *Punch setting* screen.

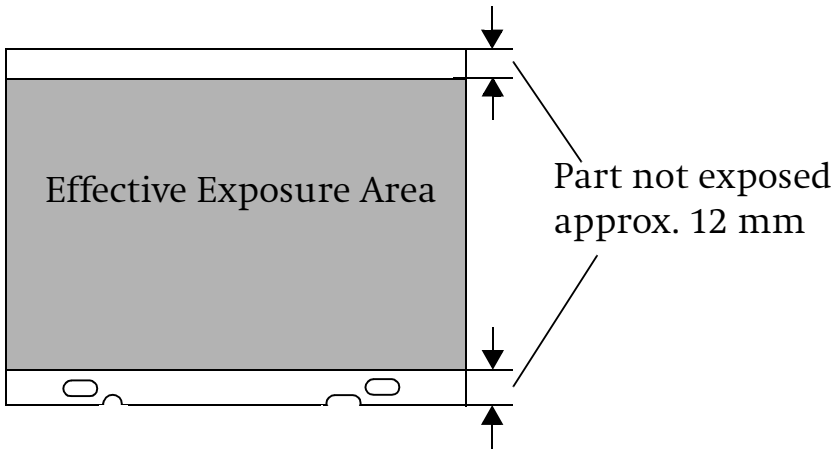
Note: If *OFF is selected, the plate will not be punched.*

Note: For the procedure for registering punch types, see section Setting the punch name, page 4–112.

3. Select whether the punch for the drum positioning pins is to punch or not. Your selection determines the effective exposure area and the drum speed.

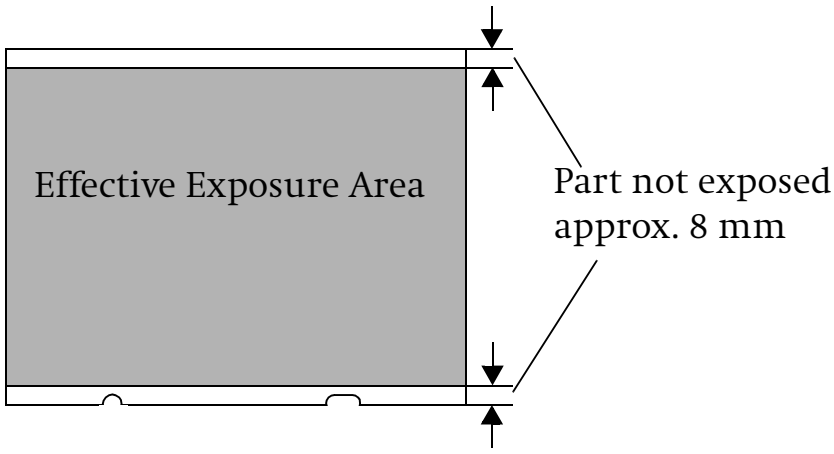
On

The punch for the drum positioning pins punches. The effective exposure area is shown in the diagram below. If the printing plate width is 650 mm or more and the printing plate length is 550 mm or more, the maximum drum speed is set. The drum speed is set to 600 rpm if these conditions are not met.



Off

The punch for the drum positioning pins does not punch. The effective exposure area is shown in the diagram below.The maximum drum speed is set to 600 rpm, irrespective of the printing plate size.



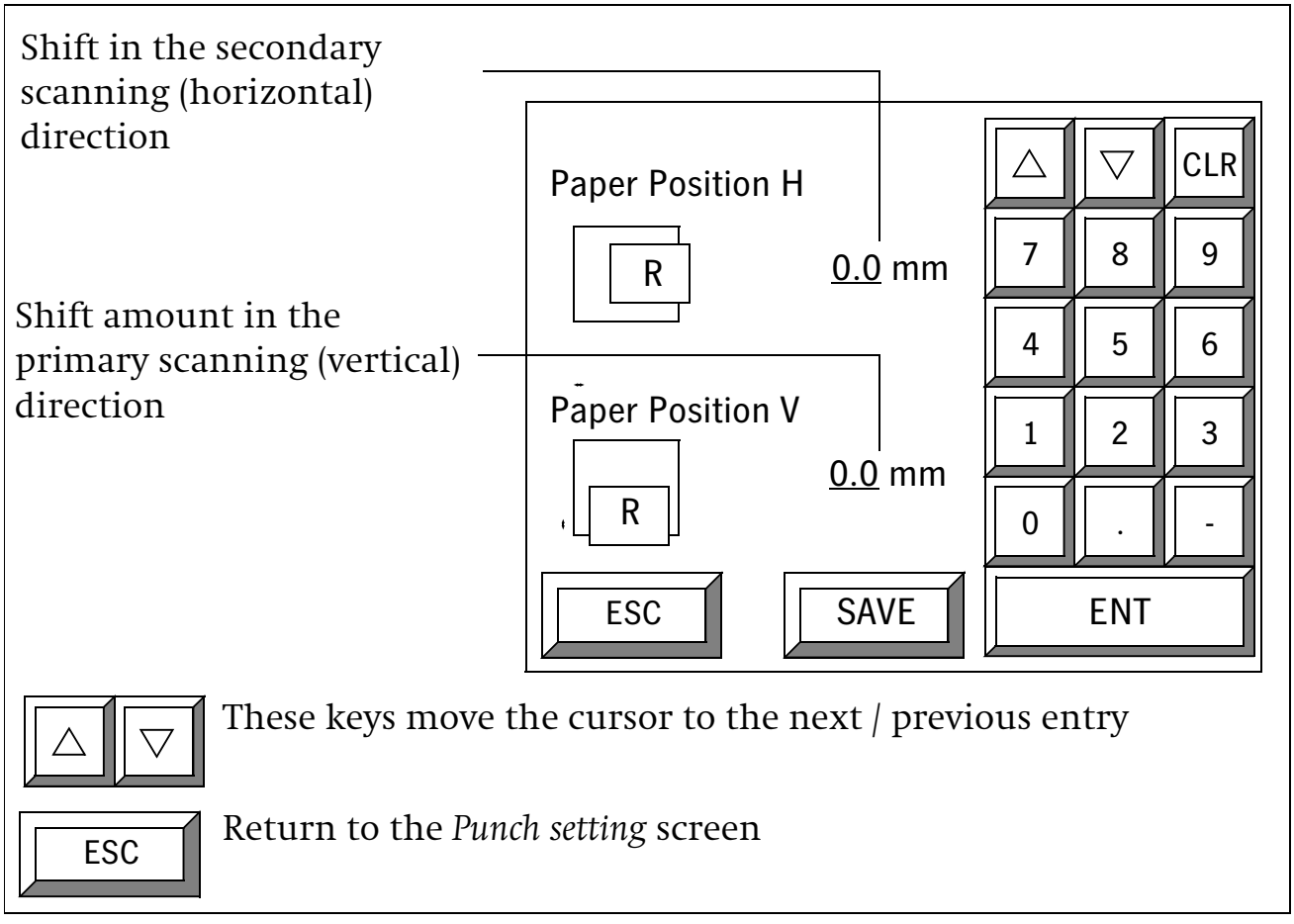
Note: See also section Actual exposure area, page 3–10 andsection Setting the laser power and drum rpm, page 4–15.

4. When punch selection is completed, press the *OK* button. The *Image position fine adjustment* screen appears.

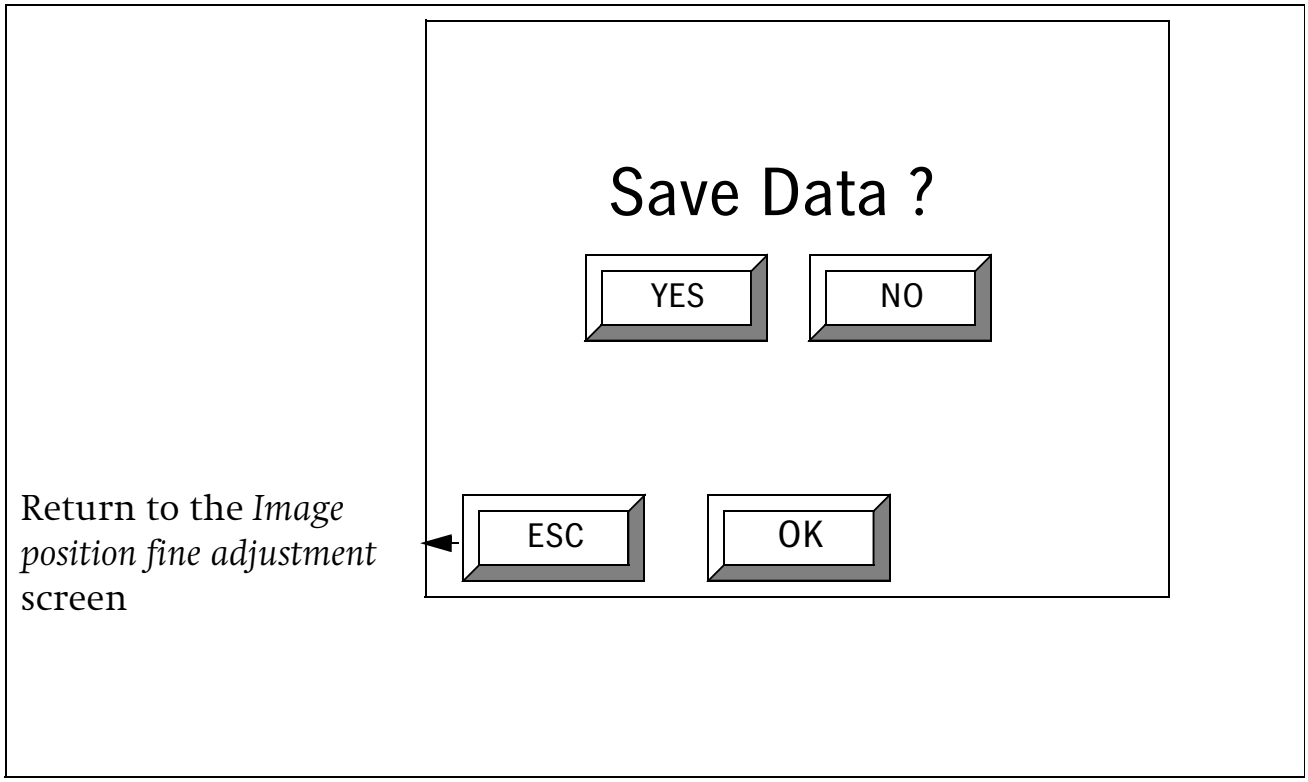
Fine adjustment of the image position

Perform a fine adjustment (shifting the print area) of the image output position on the plate.

1. Enter the desired shift in the secondary scanning (horizontal) direction and then press the *ENT* button. The highlighted area switches to the setting for the primary scanning direction.
2. Enter the desired shift amount in the primary scanning (vertical) direction and then press the *ENT* button.



3. Press the *SAVE* button; a confirmation screen appears.

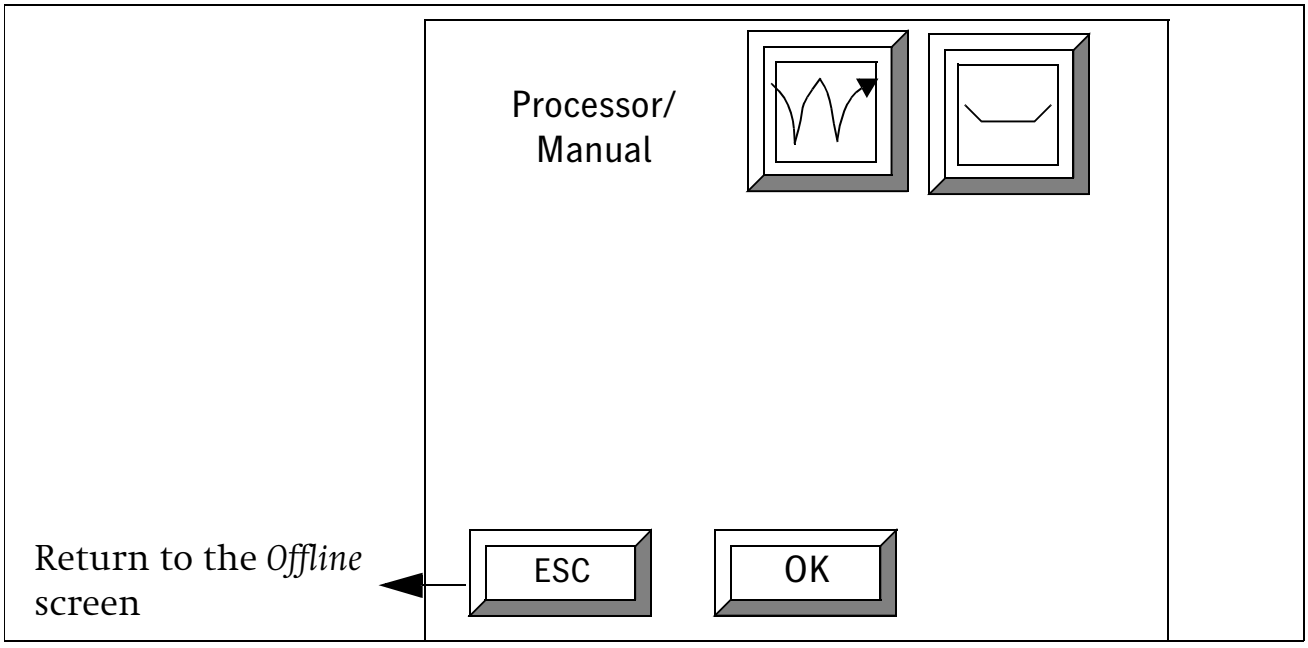


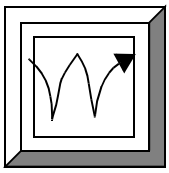
4. Press the *YES* button and then the *OK* button to save all the data set for printing machine 1.
   If you want to cancel the data save, press the *NO* button and then the *OK* button.

Setting the exposure conditions

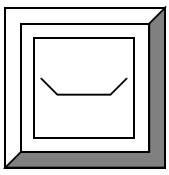
Set the exposure conditions for right/wrong reading, positive/negative output and for the layout method.

1. Press the *Set exposure mode* button on the *Offline* screen and then press the *OK* button. The *Output method selection* screen appears.



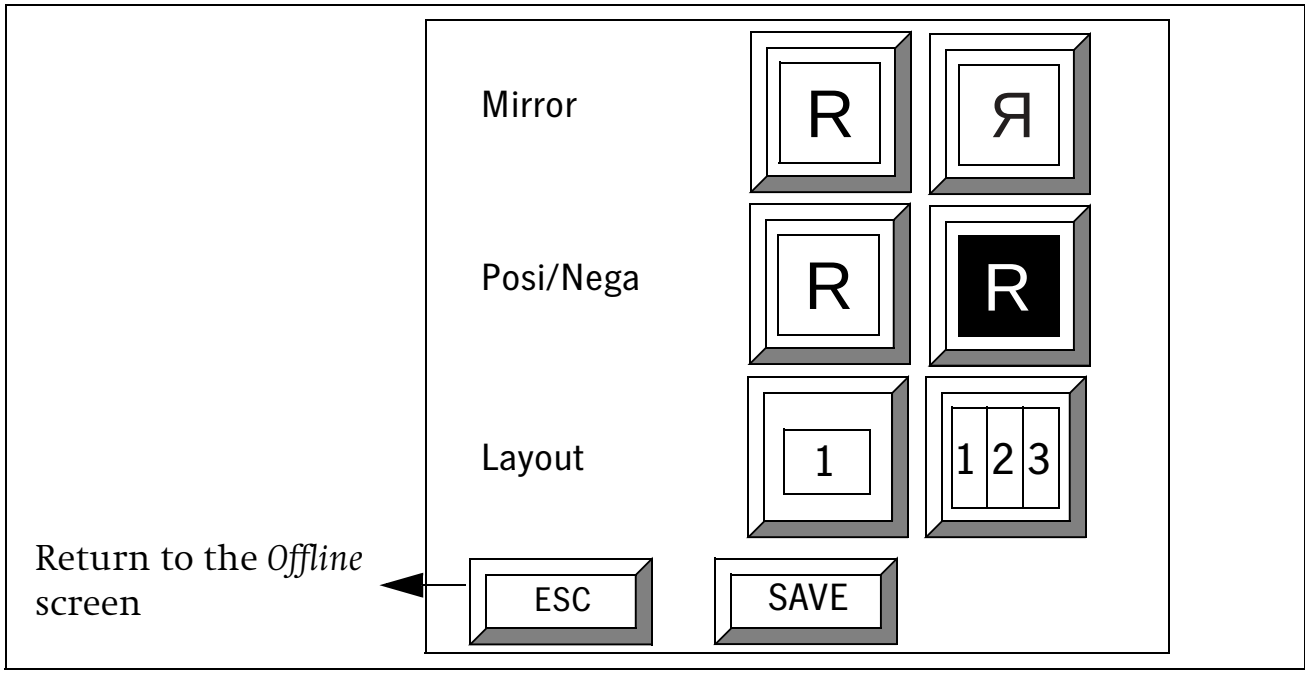


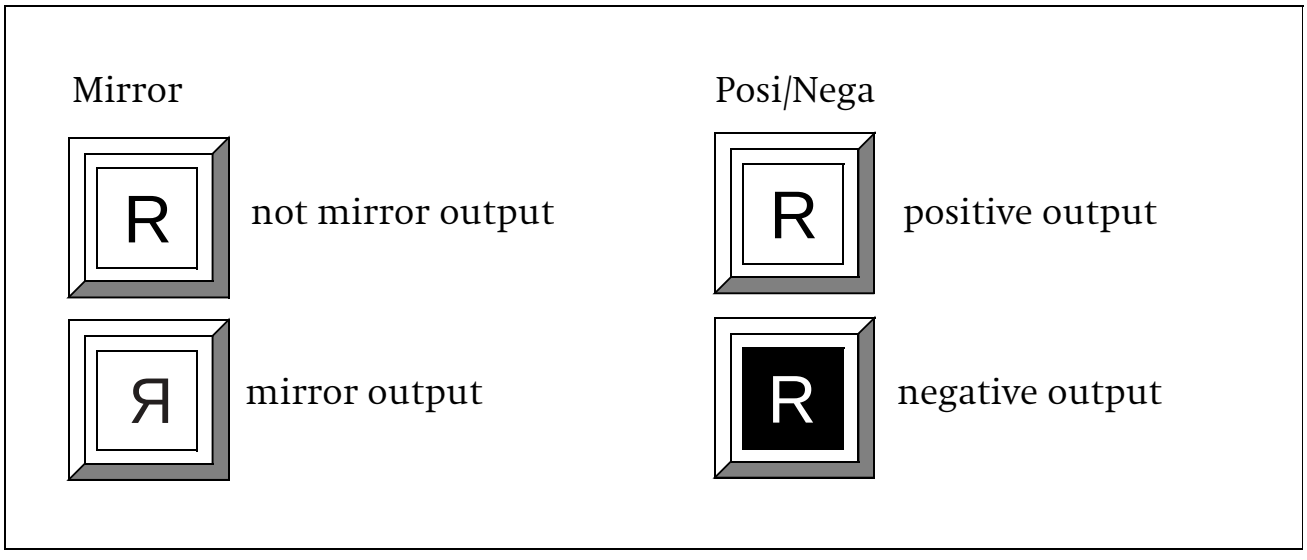
The exposed plate is discharged at the rear of the unit (if an online processor is connected, the plate will pass through the online processor).



The exposed plate is ejected at the discharge table.

2. Select the ejection method and press the *OK* button. The *Exposure condition setting* screen will appear.

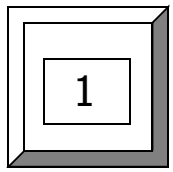




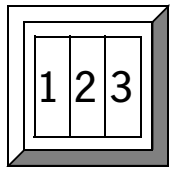
Note: Normally "Posi" is selected and the workstation outputs a positive image. The Topsetter P/PF 102 checks whether the media type is set to positive or negative and then adjusts exposure so that a positive image is output.

If the image output from the workstation is a negative image, select "Nega" in the *Exposure condition setting* screen.

Layout



Output a single image
(output one image on one plate)

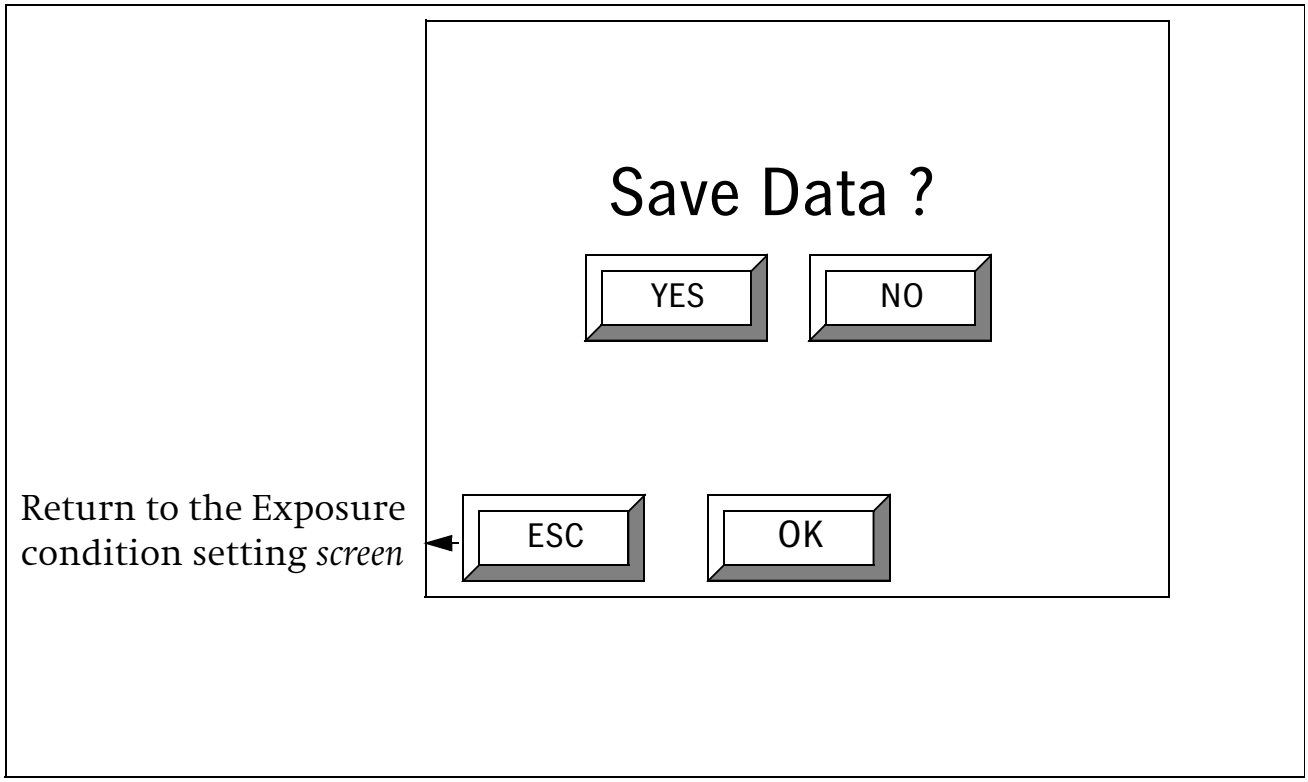


Output multiple images
(output several images on one plate)

Note: Normally single output is used. Use multi-output for the following situations:

- When you want to output the same image several times to one plate while changing exposure conditions such as the laser power each time after exposure is completed.
- When you want to output several images to one plate without pagination.

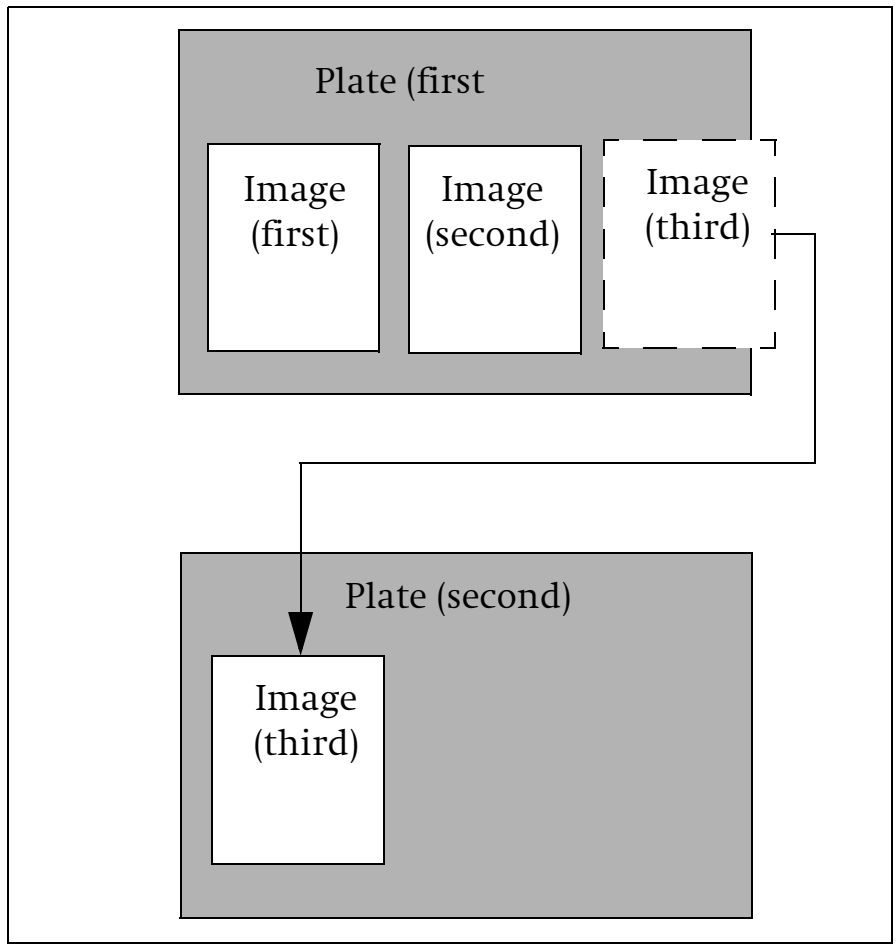
3. Press the *SAVE* button; a confirmation screen appears.



4. Press the *YES* button and then the *OK* button to save all the data set for printing machine 1.
   If you want to cancel the data save, press the *NO* button and then the *OK* button.

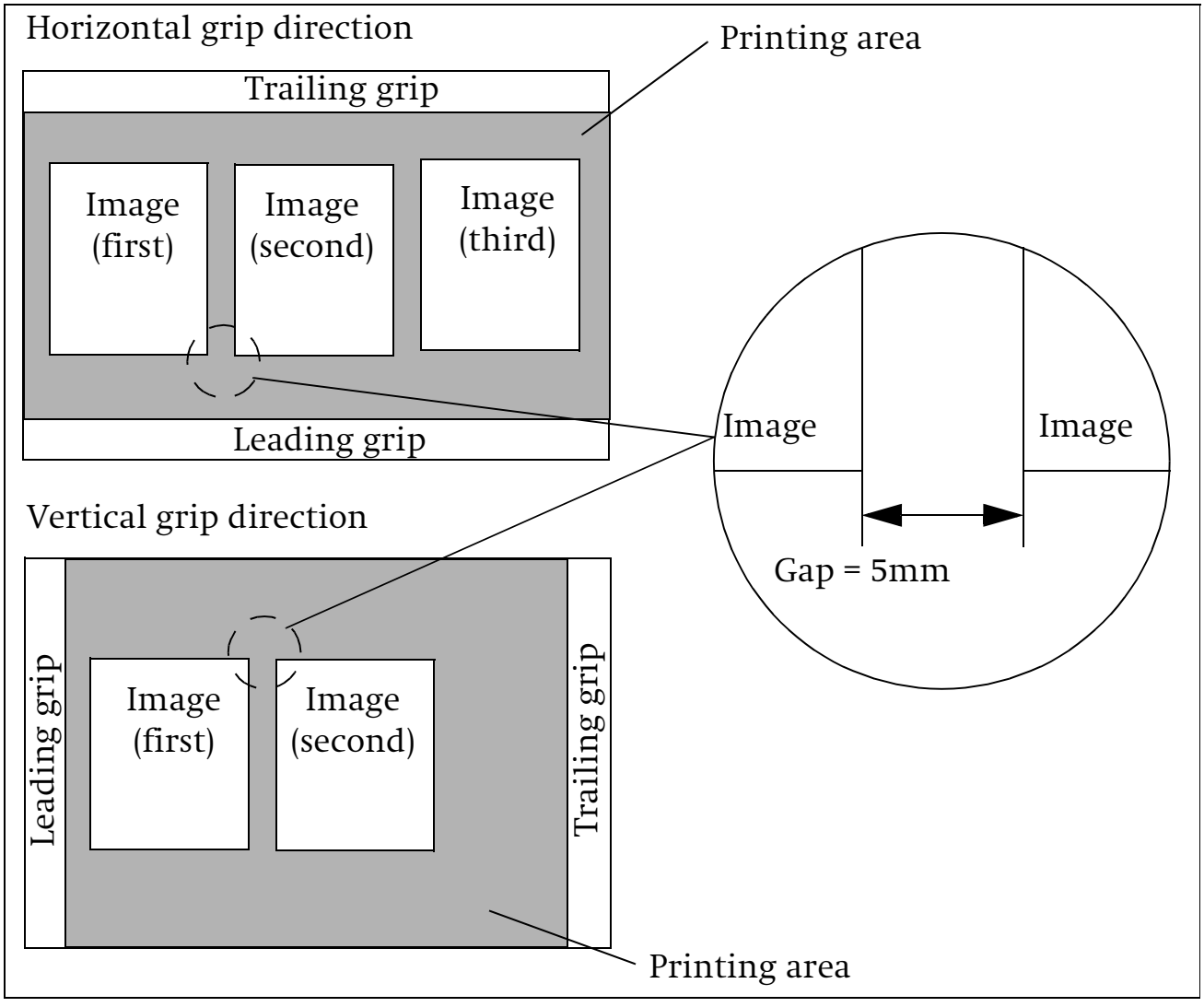
Multi-output

If the length of the subsequent image to be exposed is longer in the feed direction than the available exposure area (length of the plate), the plate will be output.



If centering in the secondary scanning direction is set to ON in the printing machine settings, exposure of the first image will begin at a position 5 mm from the

edge of the plate (or the leading grip). A 5 mm gap is automatically inserted between each image.



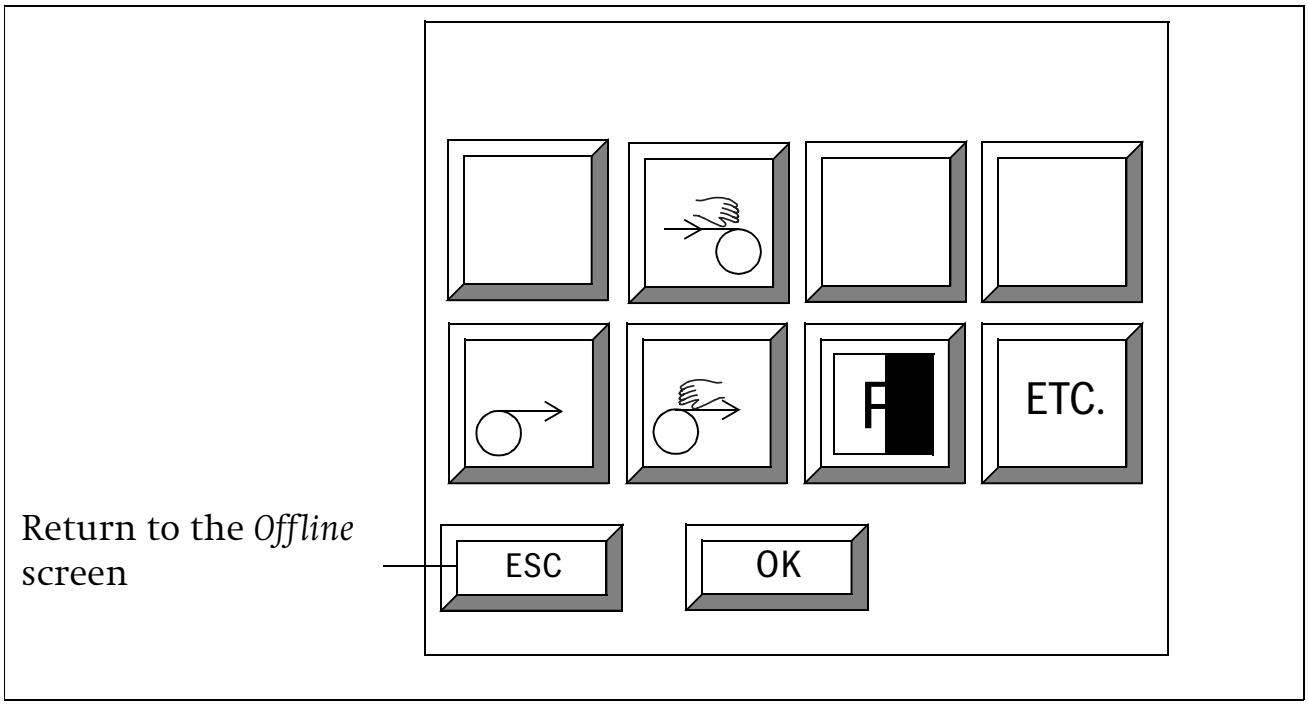
Note: When performing multi-output using a positive-type plate, the gap between images is 5 mm, and the gap from the edge of the last image to the edge of the plate is burned out. The burn-out after the last image, which follows the last image, is carried out before unloading the printing plate.

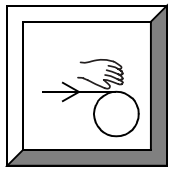
User maintenance mode

This mode allows the user to

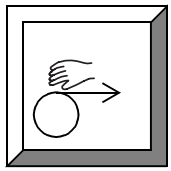
- load and unload plates,
- perform a test exposure to determine the optimum exposure conditions for a plate,
- set the date and time and
- select the language used on the operating panel.

1. Select *User maintenance* and then press the *OK* button in the *Offline* screen. The *User maintenance mode* screen appears.

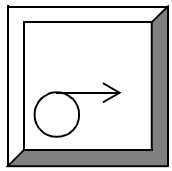




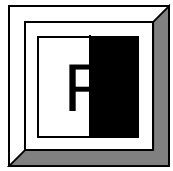
Manual loading:
Select this mode to load a plate manually, see section Manual loading, page 4–56.



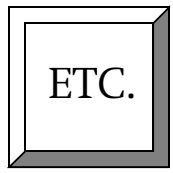
Manual unloading
Select this mode to unload a plate manually, see section Manual unloading, page 4–59.



Unloading:
Select this mode to unload a plate through the online processor, see section Unloading, page 4–60. This icon is only displayed if an online processor is connected.



Test Exposure
Select this mode to perform a test exposure, see section Test exposure, page 4–61.

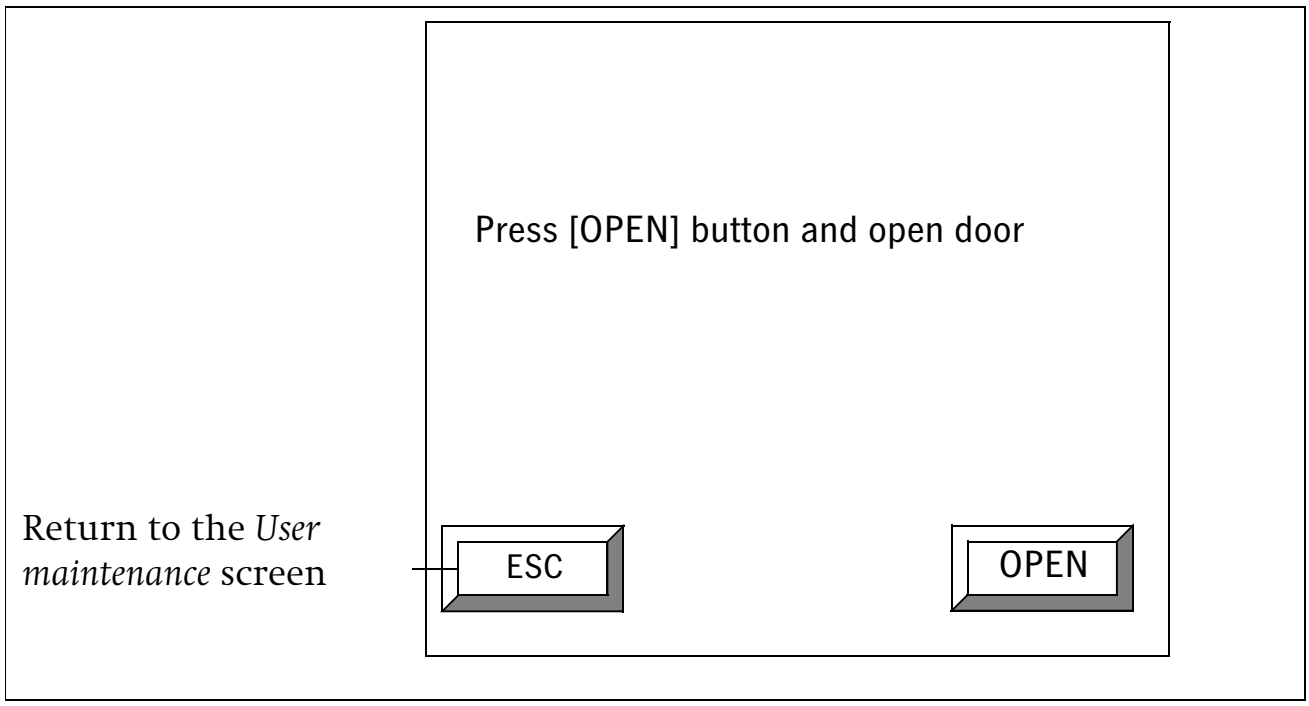


User settings
Select this mode to set other user parameters, see section User settings, page 4–83.

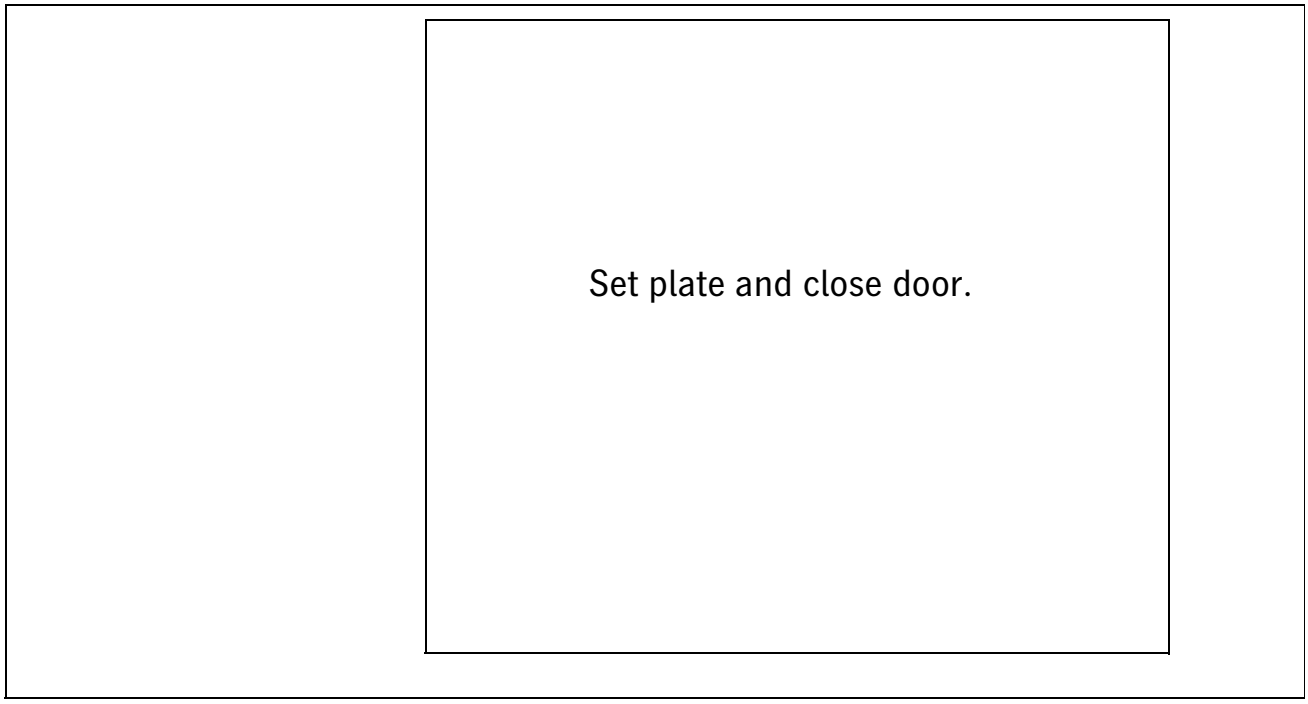
Manual loading

When performing a test exposure, the printing plate must be loaded manually. Once the printed plate has been loaded, the drum balancer is automatically adjusted. The test exposure can then be performed.

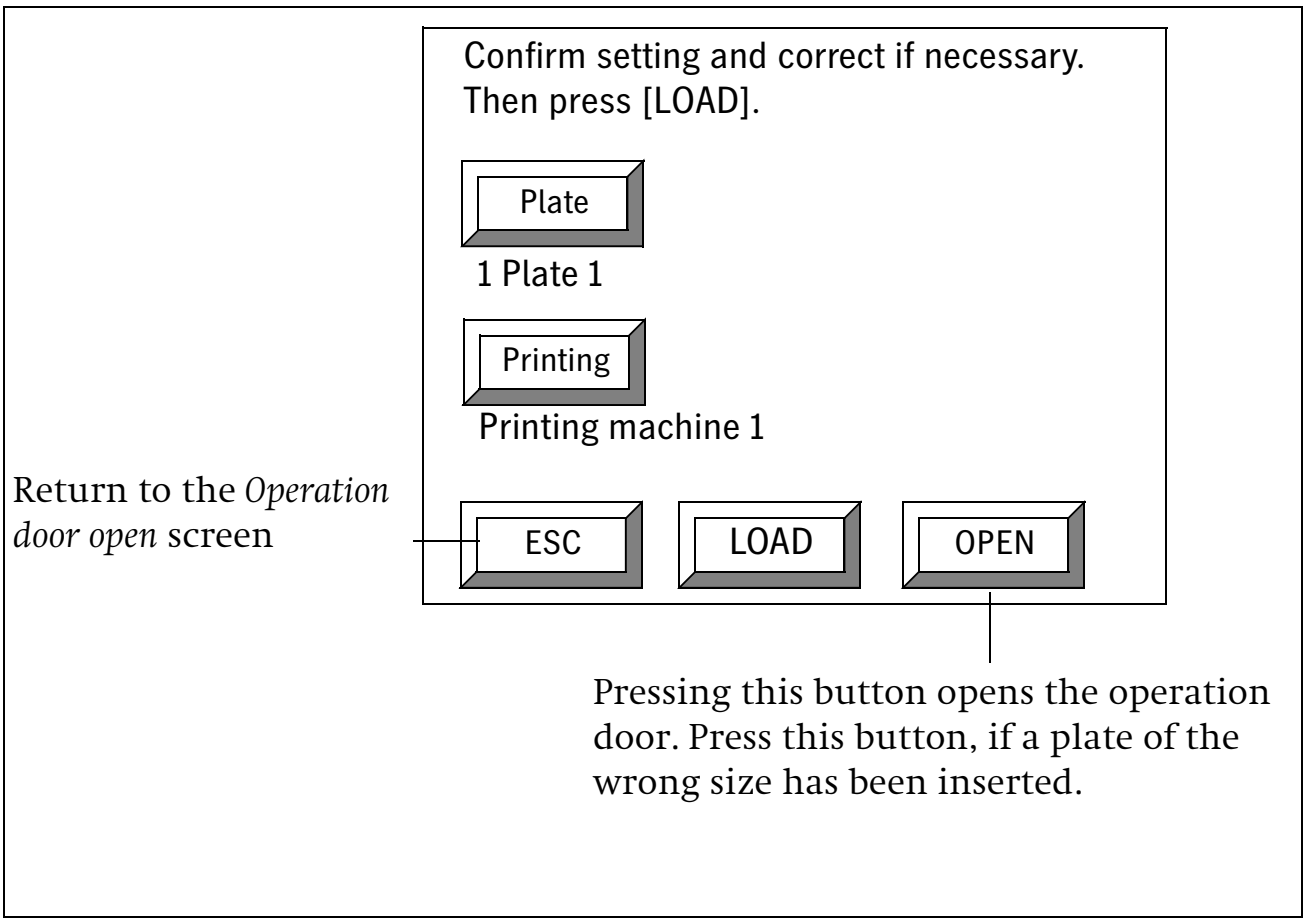
1. Select *Manual loading* in the *User maintenance mode* screen and press the *OK* button.
2. When the following screen appears, press the *OPEN* button.



3. The operation door opens automatically. Insert a printing plate and close the operation door by hand until it locks.



4. Check the information shown in the Plate loading screen and then press *LOAD*. If necessary, press the *Plate* button or the *Printing* button to change the plate or printing machine information.



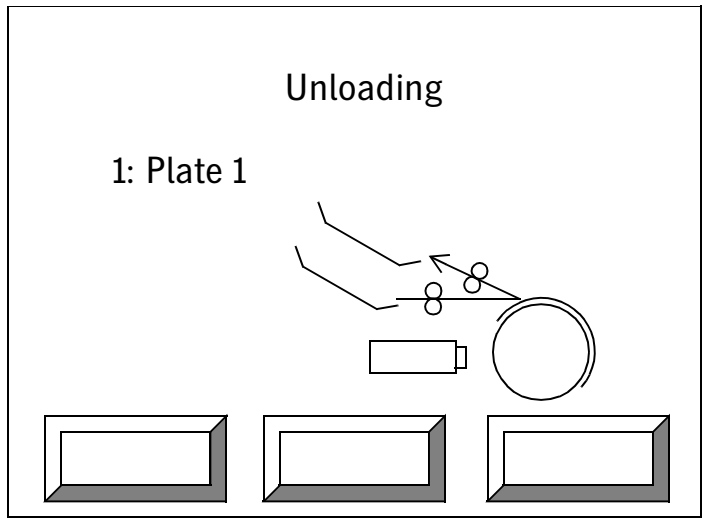
Note: To change the printing machine information or the plate information, the new information to be set must be stored beforehand. See section Setting the printing machine information, page 4–29 and section Setting the printing plate, page 4–22.

5. When the plate is loaded, the Topsetter P/PF 102 automatically adjusts the drum balancer. When adjustment ends, the *User maintenance mode* screen automatically reappears.

Manual unloading

When the test exposure has been completed, the printing plate must be unloaded.

1. Select *Manual unloading* in the *User maintenance mode* screen and then press the *OK* button. The printing plate is then unloaded.



2. When the printing plate has been unloaded, the operation door opens automatically. Remove the plate. The *User maintenance mode* screen reappears.

Note: If a positive-type plate is exposed when multi-output is set, burn-out is executed before the plate is unloaded.

Unloading

This function unloads an exposed printing plate through the online processor.

Note: If a positive-type plate is exposed when multi-output is set, burn-out is executed before the plate is unloaded.

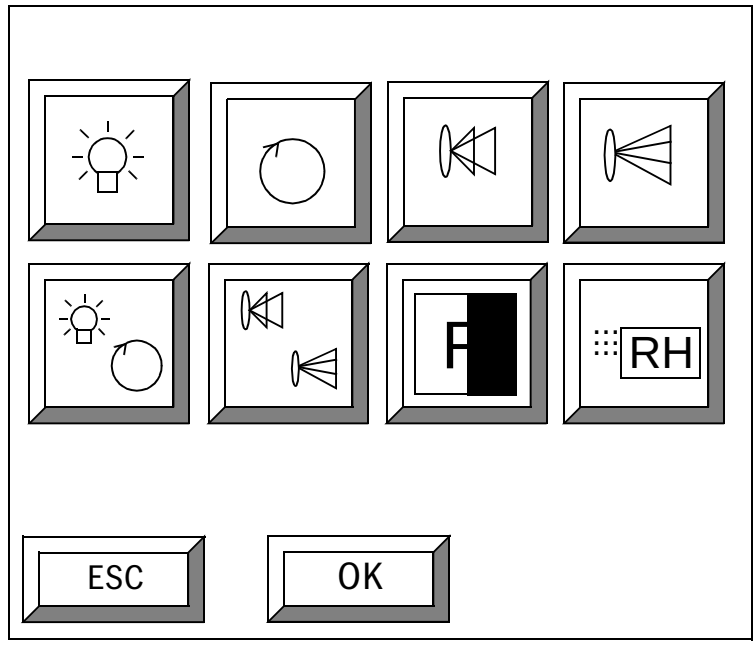
For the procedures for using the online processor, refer to the user documentation for the online processor.

1. Select *Unloading* in the *User maintenance mode* screen and press the *OK* button. The printing plate is unloaded through the online processor. The *User maintenance mode* screen reappears.

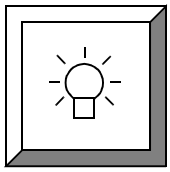
Test exposure

Perform a test exposure to set suitable values for the laser power, drum rpm, focus and zoom for the printing plate which is to be used.

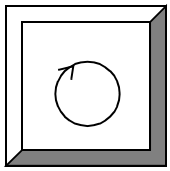
1. Select *Test exposure* in the *User maintenance mode* screen and then press the *OK* button. The *Test exposure selection* screen appears.
2. Select the test exposure you want to perform and then press the *OK* button.



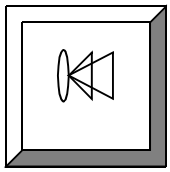
ESC Return to the *User maintenance mode* screen.



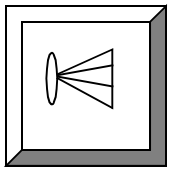
Perform a test exposure to adjust the laser power.



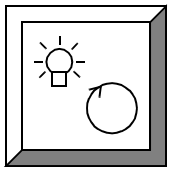
Perform a test exposure to adjust the drum speed.



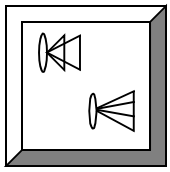
Perform a test exposure to adjust the focus.



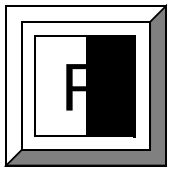
Perform a test exposure to adjust the zoom.



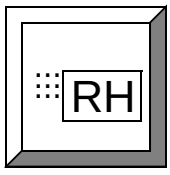
Perform a exposure to simultaneously adjust the laser power and drum speed.



Perform a test exposure to simultaneously adjust the focus and zoom.



Perform a test exposure to adjust the test pattern in the Topsetter P/PF 102.



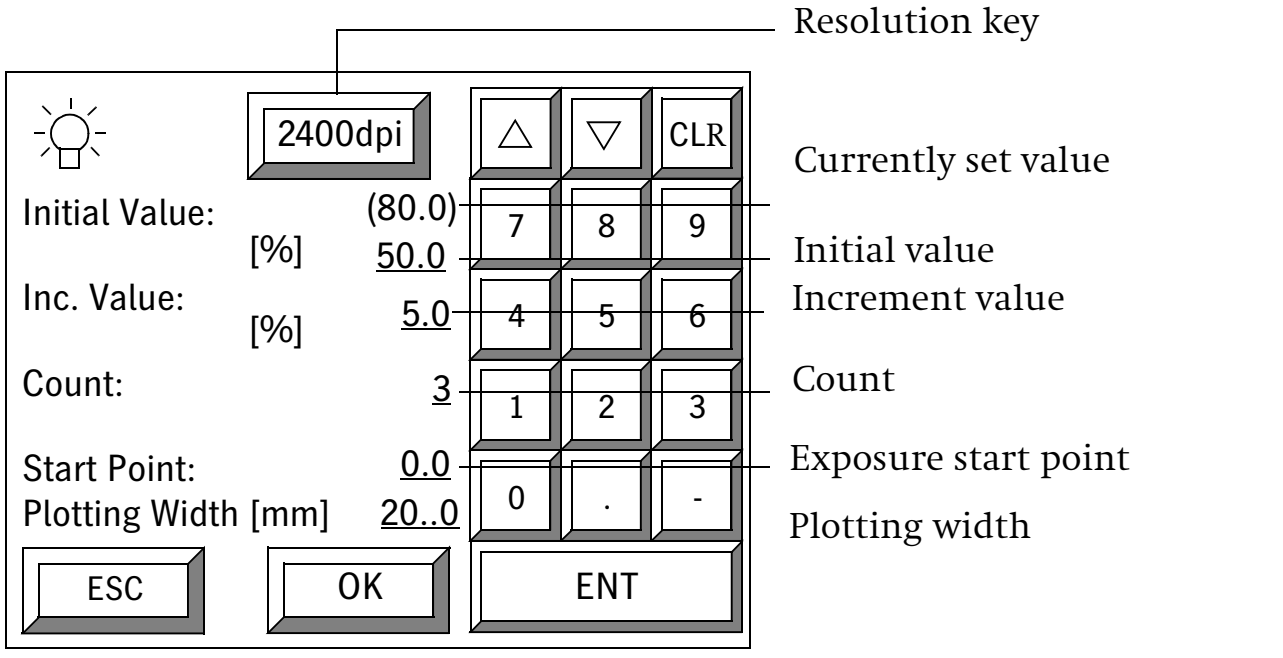
Adjustment mode for Service. The user cannot select this mode.

Attention: Be sure to load the plate manually before performing a test exposure, see section Manual loading, page 4–56.

The settings for the printing machine and exposure conditions are ignored when a test exposure or test pattern exposure is performed. The start position for exposure in the primary scanning direction is approximately 25 mm from the bottom edge of the plate and the end position is approximately 25 mm from the top edge. Both positions are fixed. When a positive-type plate is exposed, burn-out is not performed.

Test exposure for adjusting the laser power, drum speed, focus and zoom.

The procedures for performing test exposures for adjusting the laser power, drum speed, focus value and zoom are identical. The test exposure setting screen for laser power adjustment is used as an example.



Note: In the above screen, the values in parentheses above the initial values show the drum rpm, laser power, focus, and zoom values in the plate information selected when the plate was loaded. Use this value as a reference value when performing the test exposure.

1. Set the resolution for the test exposure. The resolution changes each time the *resolution* button is pressed: 1200 dpi –>2000 dpi –>2400 dpi –>4000 dpi –>2438 dpi –>2540 dpi –>1200 dpi.
2. Enter the initial value and then press the *ENT* button. The highlighted area switches to the increment value setting.

Note: The initial value is the first value for the laser power (or drum speed, focus or zoom) used in the test exposure.

3. Set the increment value. Enter the desired increment value and then press the *ENT* button. The highlighted area switches to the counter setting.

Note: The increment value indicates the amount of change from the initial value. For example, if the laser power increment value is set to 10%, output will take place at increments of 10% from the initial value.

4. Enter the desired count and then press the *ENT* button. The highlighted area switches to the exposure start point setting.

Note: The count indicates the number of times the test exposure has to be carried out. For example, if the initial value of laser power adjustment is 50%, the increment value is 10%, and the count is 5, exposure will take place five times beginning at 50% and incrementing by 10% to 60%, 70%, 80%, and 90%.

5. Enter the exposure start point and press the *ENT* button.
6. Enter a test pattern for the plotting width and press the *ENT* button.

Note: The exposure start point is the distance from the plate edge to the point where the test exposure begins.
This value is updated (moved to the next possible exposure position) each time a test exposure ends.

Attention: When performing a test exposure, the settings for the media type registered in the plate data that is selected when the plate is loaded are used for settings other than the initial value, increment value, and count (in the case of a laser power test exposure, the drum rpm, focus value, and zoom value settings).

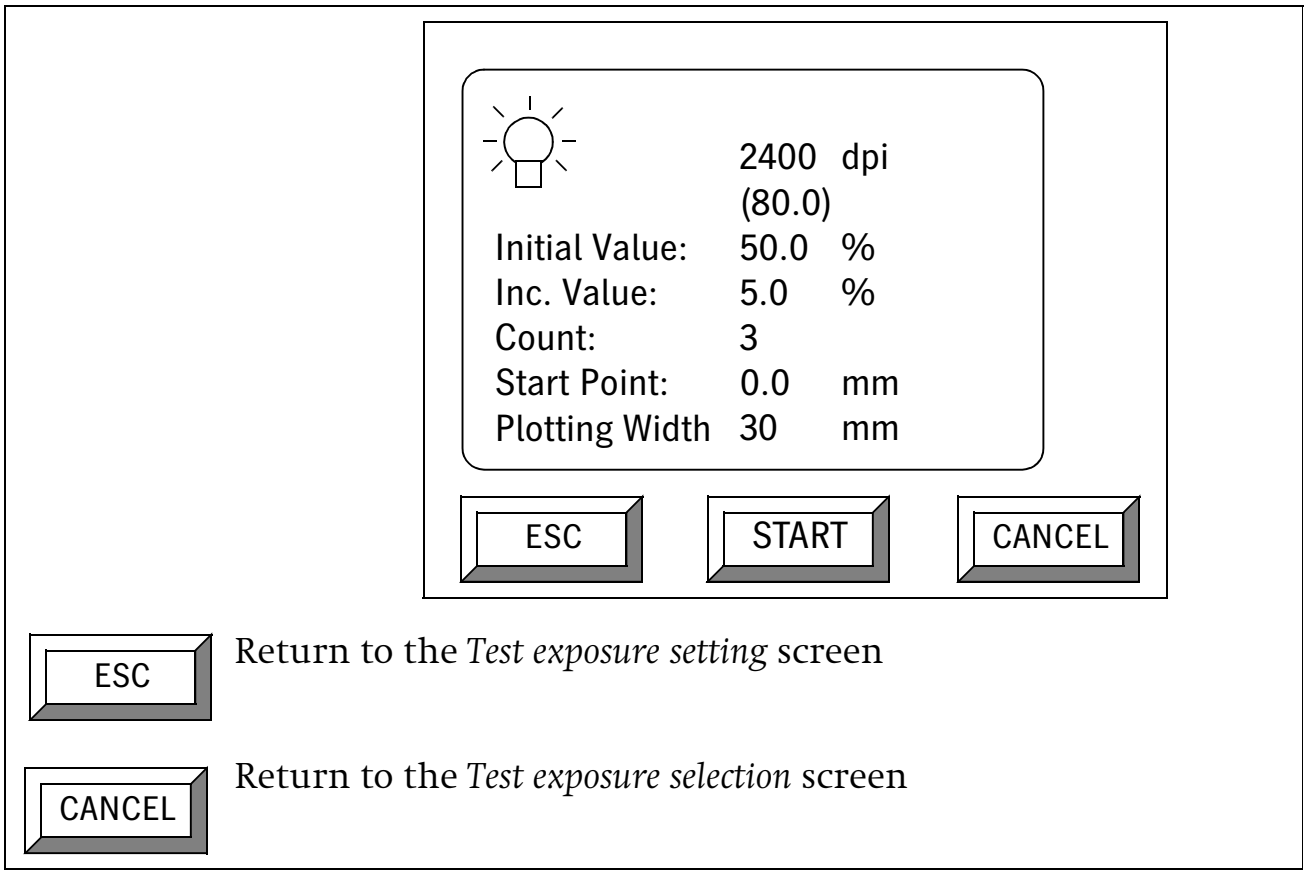
To set the initial value, increment value, count, and exposure start point, refer to the table below and set the values, paying attention to the following points:

- The initial value must be equal to or higher than the minimum limit.
- [Initial value + increment x (count - 1)] must not exceed the maximum limit.

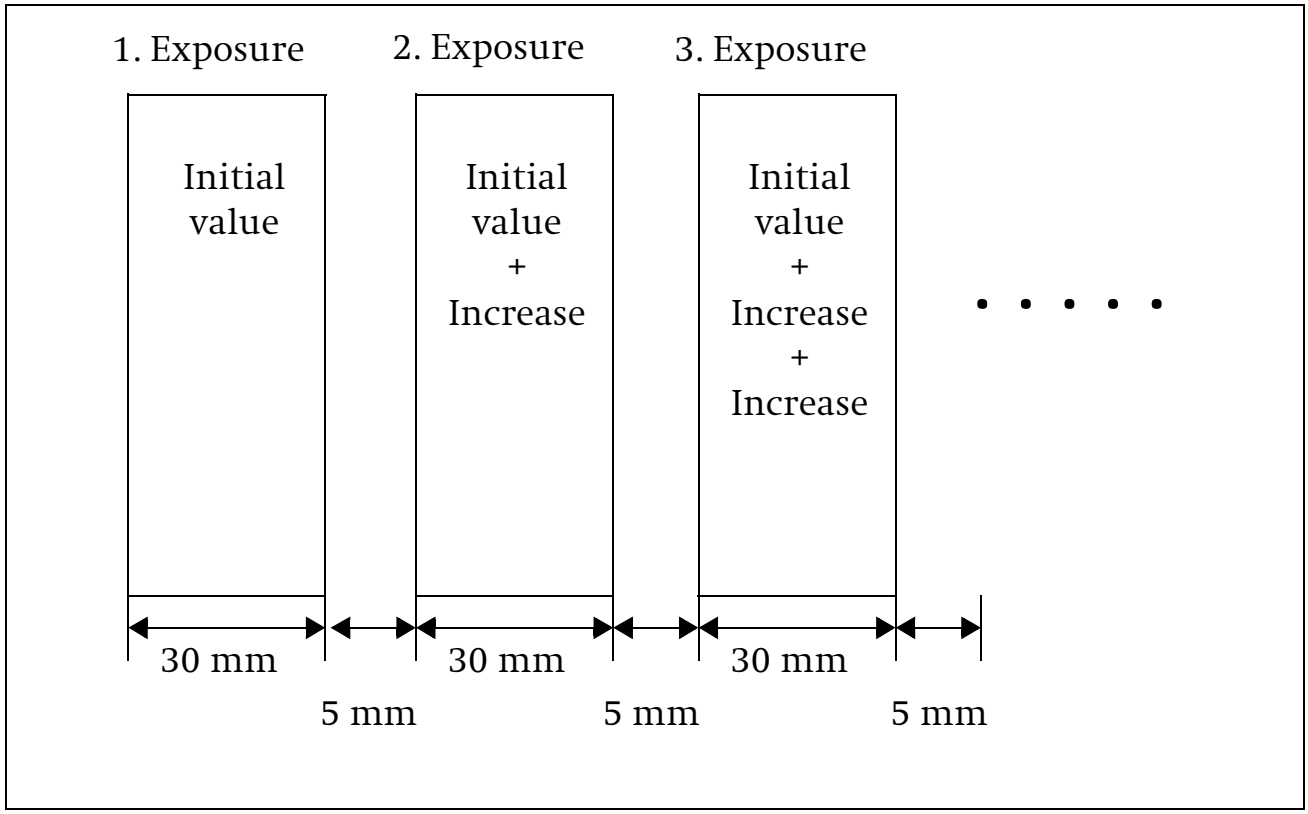
- [Test exposure start point + 35 x (count - 1)] must be equal to or less than the horizontal size of the plate

	Laser power	Drum speed	Focus	Zoom
Lower limit	30%	600 rpm	101 pulses	201 pulses
Upper limit	100%	1000 rpm	6000 pulses	17000 pulses

7. Press the *OK* button. The Test exposure confirmation screen appears.



8. Check the displayed information and then press the *START* button. The test exposure is started. The test exposure exposes over a 30 mm width and automatically inserts a 5 mm gap between exposures.

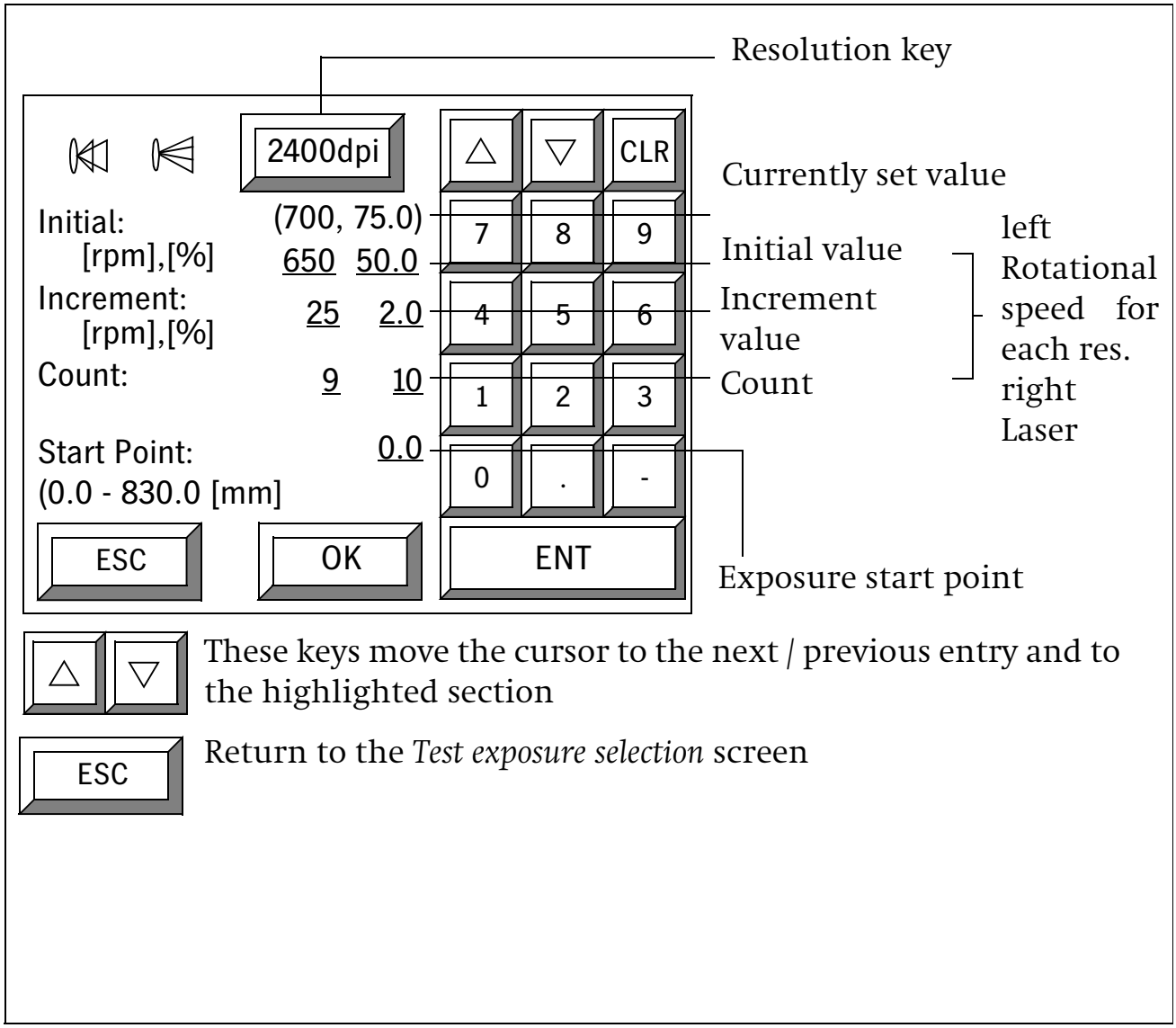


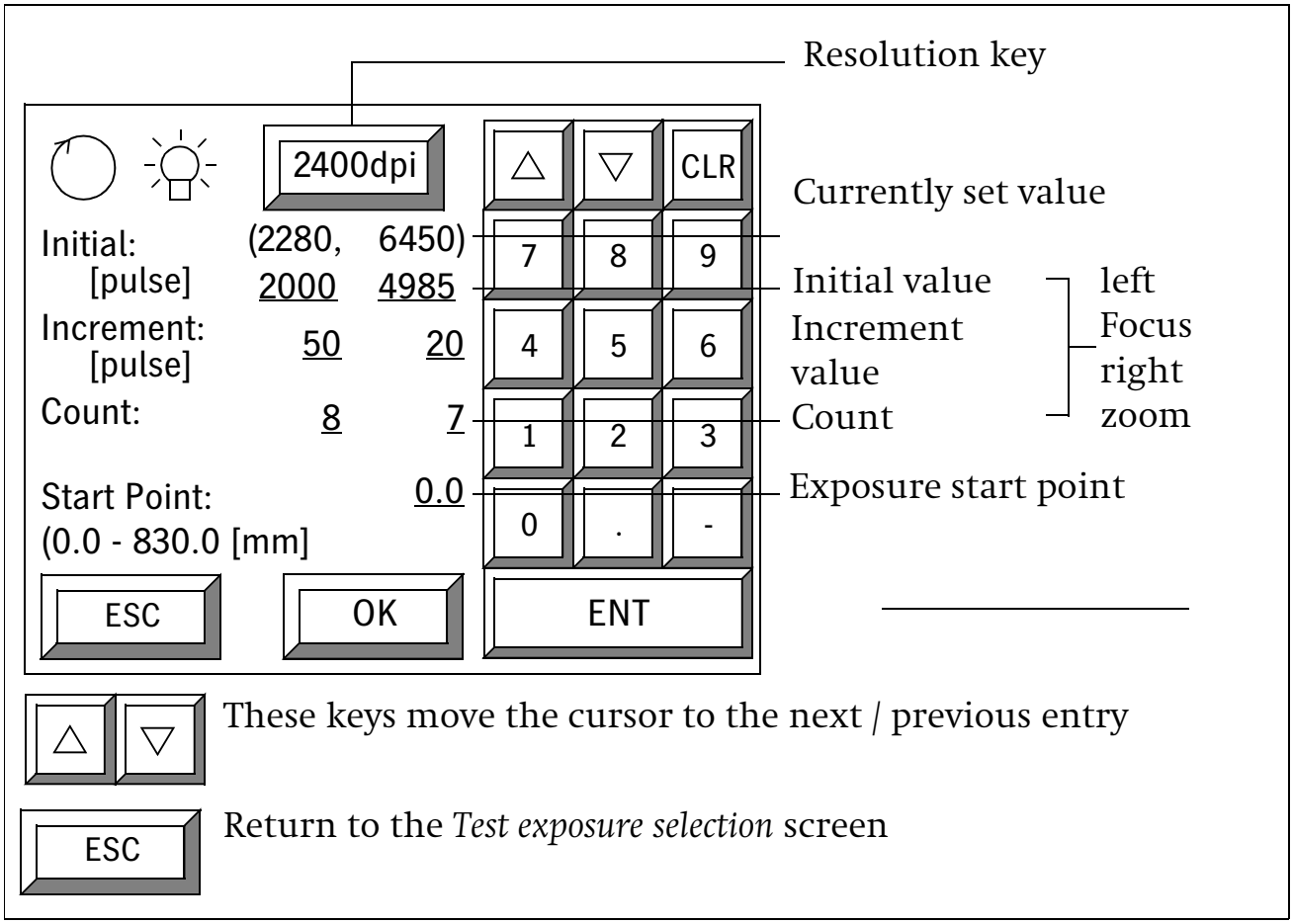
9. When the test exposure is completed, the *Test exposure selection* screen reappears.

Note: When performing a test exposure, we recommend that you begin by performing a rough adjustment using a general initial value and a large increment value. Check the result and then perform a fine adjustment to determine the optimum values. This method enables quick and exact adjustment.

Test exposure for simultaneous adjustment of laser power and drum speed, or focus and zoom

The procedure for performing a test exposure for simultaneously adjusting the laser power and drum speed, or focus and zoom, is explained here.





Note: In the above screen, the values in parentheses above the initial values show the drum rpm, laser power, focus, and zoom values in the plate information selected when the plate was loaded. Use this value as a reference value when performing the test exposure.

1. Set the resolution for the test exposure. The resolution changes each time the *resolution* button is pressed: 1200 dpi –>2000 dpi –>2400 dpi –>4000 dpi –>2438 dpi –>2540 dpi –>1200 dpi.
2. Enter the initial value for the drum rpm (or focus value) and then press the *ENT* button. The highlighted area switches to the right-hand column of the initial value setting.

3. Enter the desired initial laser power (or zoom value) and then press the *ENT* button. The highlighted area switches to the left-hand column of the increment value setting.

Note: The initial value is the first value for the laser power (or drum speed, focus or zoom) used in the test exposure.

4. Set the increment values. Enter the desired increment value for the drum rpm (or focus value) and then press the *ENT* button. The highlighted area switches to the right-hand column of the increment value setting.

5. Enter the desired increment value for the laser power (or zoom value) and then press the *ENT* button. The highlighted area switches to the left-hand column of the counter setting.

Note: The increment value indicates the amount of change from the initial value. For example, if the laser power increment value is set to 10%, output will take place at increments of 10% from the initial value.

6. Enter the desired count for the drum speed (or focus value) and then press the *ENT* button. The highlighted area switches to the right-hand column of the counter setting.

7. Enter the desired count for the laser power (or zoom value) and then press the *ENT* button. The highlighted area switches to the exposure start point setting.

Note: The count indicates the number of times the test exposure has to be carried out.
For example, if the initial value of laser power adjustment is 50%, the increment value is 10%, and the count is 5, exposure will take place five times beginning at 50% and incrementing by 10% to 60%, 70%, 80%, and 90%.

The test exposure for the drum speed is then carried out.
For example, if the initial value for the drum speed is 450 rpm, the increment is 50, and the count is 6, exposure will take place six times beginning at a drum speed of 450 rpm and incrementing by 50 to drum speeds of 500, 550, 600, 650, and 700 rpm.

8. Enter the exposure start point and press the *ENT* button.

Note: The exposure start point is the distance from the plate edge to the point where the test exposure begins.
This value is updated (moved to the next possible exposure position) each time a test exposure ends.

Attention: When performing a test exposure (simultaneous adjustment), the settings for the media type registered in the plate data that is selected when the plate is loaded are used for settings other than the initial value, increment value, and count (in the case of a laser power and drum rpm test exposure, the focus value and zoom value settings).

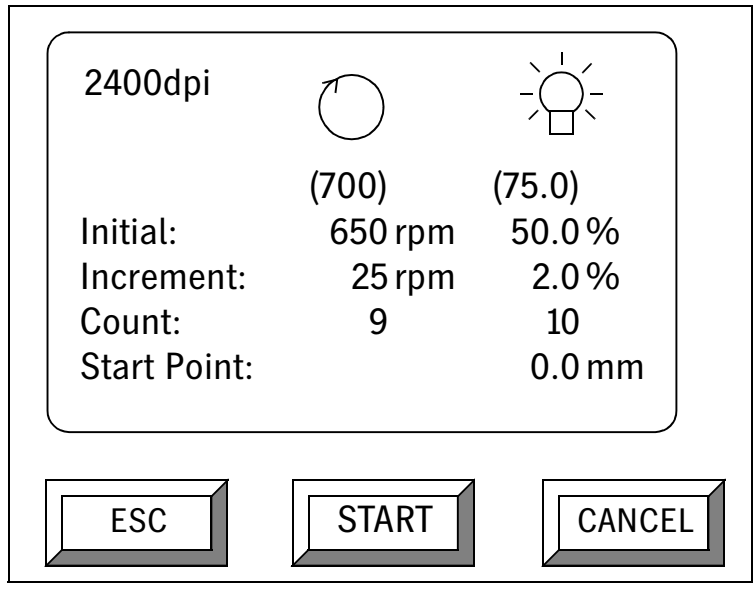
To set the initial value, increment value, count, and exposure start point, refer to the table below and set the values, paying attention to the following points:

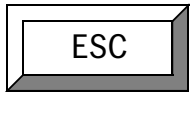
- The initial value must be equal to or higher than the minimum limit.
- [Initial value + increment x (count - 1)] must not exceed the maximum limit.
- [Test exposure start point + 35 x (horizontal count - 1)] must not exceed the horizontal length of the plate.
- [Test exposure start point + 100 x (vertical count - 1)] must not exceed the vertical length of the plate

- 40 mm.

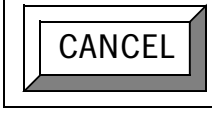
	Laser power	Drum speed	Focus	Zoom
Lower limit	30%	600 rpm	101 pulses	201 pulses
Upper limit	100%	1000 rpm	6000 pulses	17000 pulses

9. Press the *OK* button. The Test exposure confirmation screen appears.





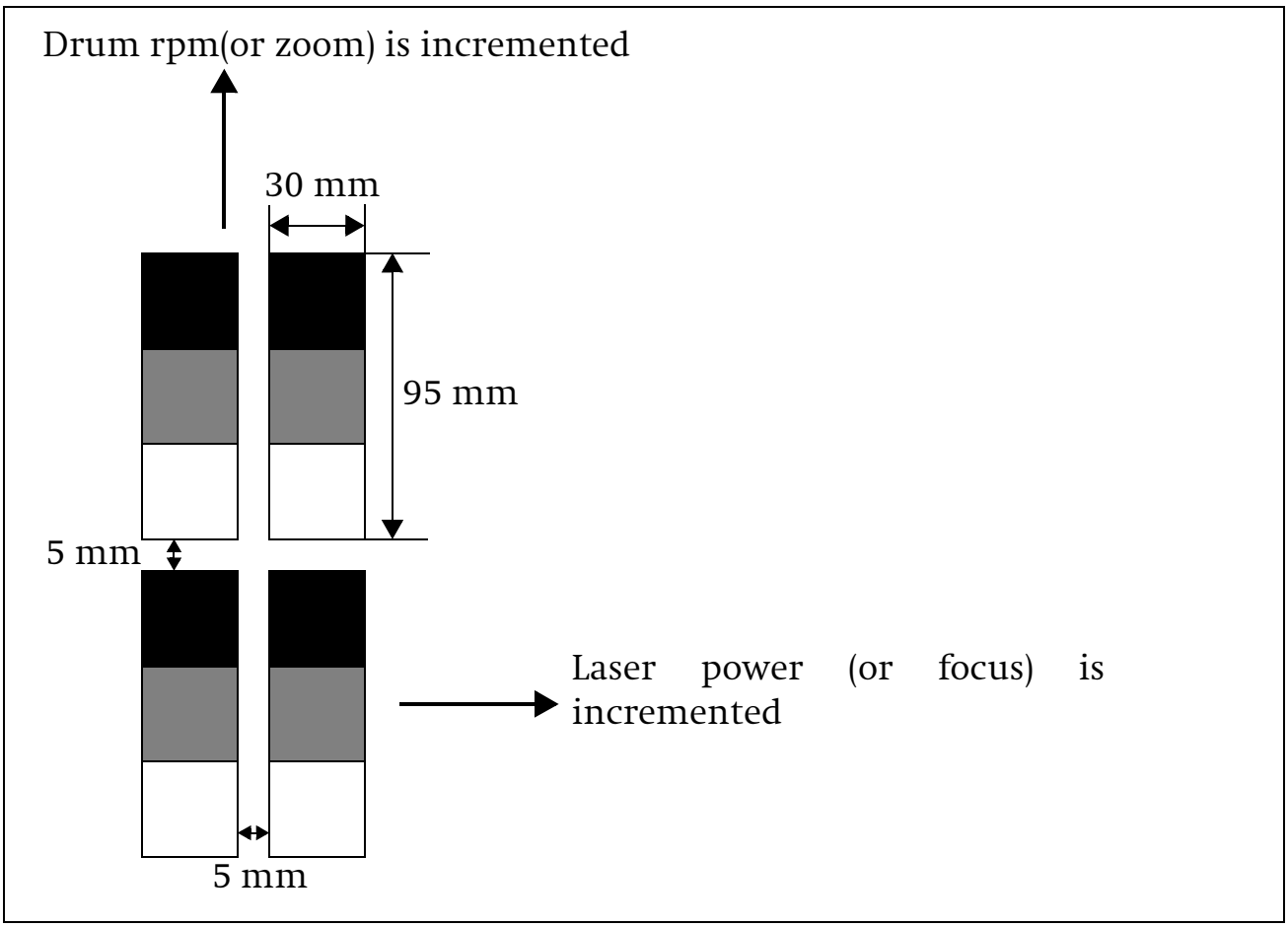
Return to the *Test exposure setting* screen



Return to the *Test exposure selection* screen

10. Check the displayed information and then press the *START* button. The test exposure is started. The test exposure exposes the patterns shown in the following diagram, incrementing the laser power (or focus value) in the secondary scanning direction and

the drum speed (or zoom) in the primary scanning direction.



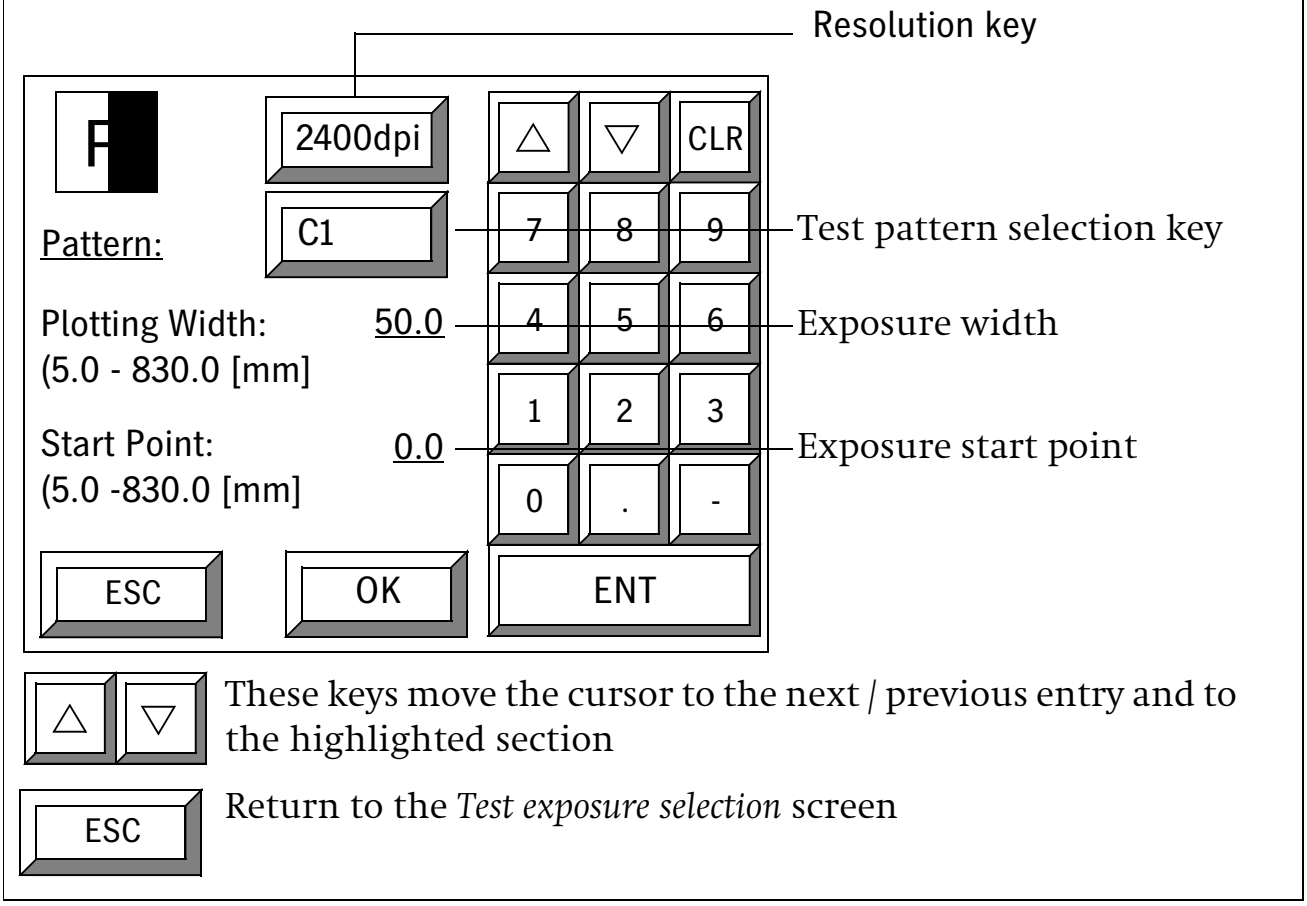
	Laser power Drum speed	Focus / Zoom value Negative plate	Focus / Zoom value Positive Plate
	Dot percentage = 97%	Dot percentage = 100%	Dot percentage = 0%
	Dot percentage = 50%	Dot percentage = 85%	Dot percentage = 85%
	Dot percentage = 3%	C1 pattern	C1 pattern

11. When the test exposure is completed, the *Test exposure selection* screen reappears.

Note: When performing a test exposure, we recommend that you begin by performing a rough adjustment using a general initial value and a large increment value. Check the result and then perform a fine adjustment to determine the optimum values. This method enables quick and exact adjustment.

Exposing a test pattern

The procedure for exposing a test pattern stored in the Topsetter P/PF 102 is explained here. The test exposure setting screen for laser power adjustment is used as an example.



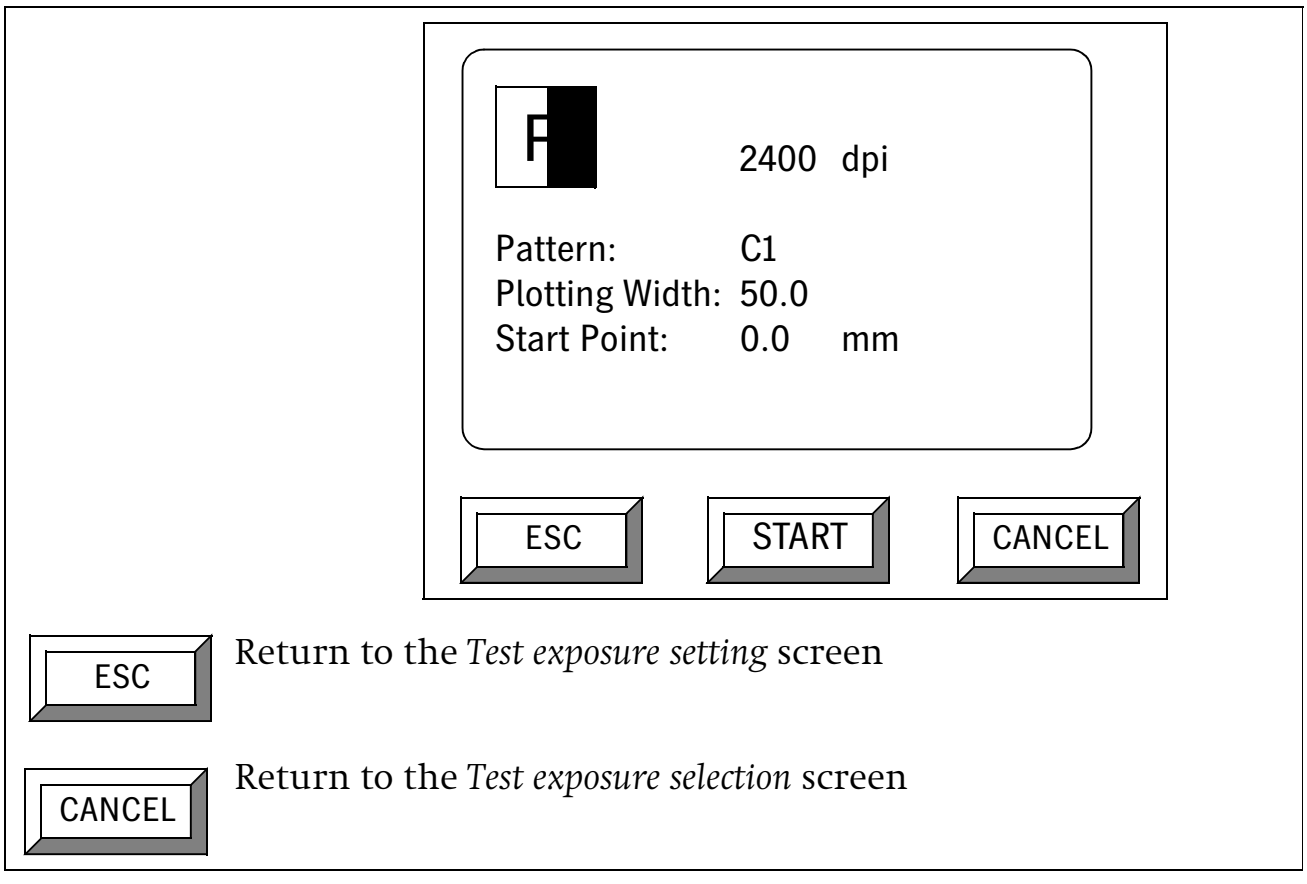
1. Set the resolution for the test exposure. The resolution changes each time the *resolution* button is pressed: 1200 dpi –>2000 dpi –>2400 dpi –>4000 dpi –>2438 dpi –>2540 dpi –>1200 dpi.
2. Select the test pattern. The test pattern changes each time the test pattern selection key is pressed.

Note: For the test patterns, refer to table at the end of this section.

3. Enter the exposure width of the test pattern and then press the *ENT* button.
4. Enter the exposure start point and press the *ENT* button.

Note: The exposure start point is the distance from the plate edge to the point where the test exposure begins.
This value is updated (moved to the next possible exposure position) each time a test exposure ends.

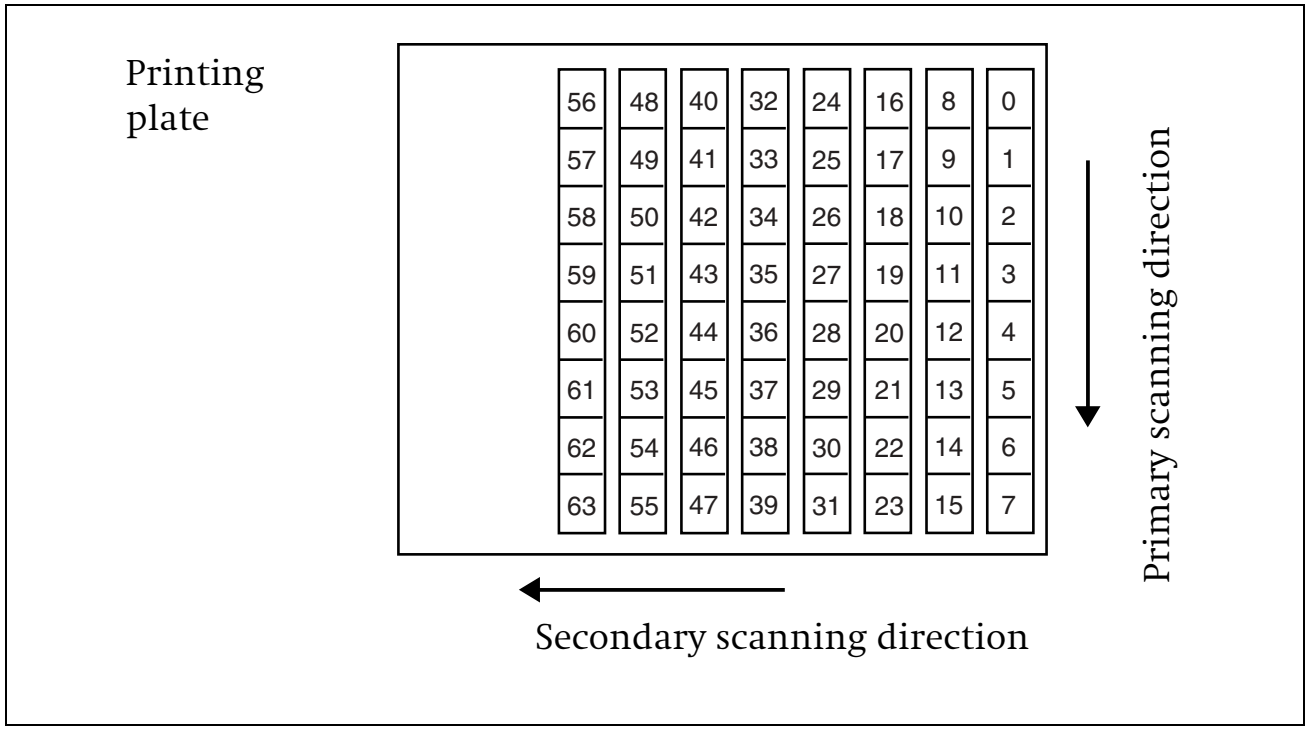
5. Press the *OK* button. The Test exposure confirmation screen appears.

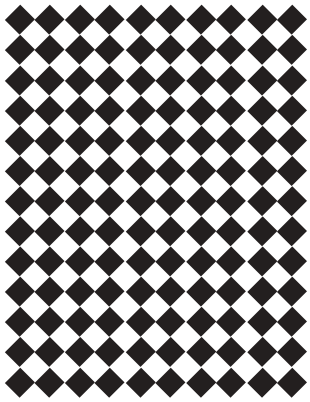


6. Check the displayed information and then press the *START* button. The test pattern exposure is started.
7. When the test exposure is completed, the *Test exposure selection* screen reappears.

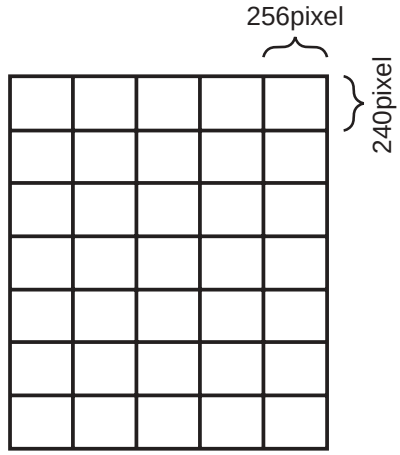
Pattern name	Dot	Screen Angle	Line number/ pitch	Remarks
Dot 0%	0%	45°	4000 dpi 250 lpi 2400 dpi 150 lpi 2000 dpi 125 lpi 1200 dpi 75 lpi	Pseudo dots
Dot 3%	3%			
Dot 50%	50%			
Dot 85%	85%			
Dot 97%	97%			
Dot 100%	100%			
Grid			4000dpi: 1.63x1.52mm 2400dpi 2.71x254mm 2400dpi 3.25x3.05mm 2400dpi 5.42x5.08mm	Grid pattern
Hor L&S 1			Horizontal: 1 line - 1 space	Lines and spaces (the laser diode channels are different for A and B in vertical direction.
Hor L&S 2			Horizontal: 2 lines - 2 spaces	
Ver L&S 1A			Vertical: 1 line - 1 space (A)	
Ver L&S 2A			Vertical: 2 lines - 2 spaces (A)	
Ver L&S 1B			Vertical: 1 line - 1 space (B)	
Ver L&S 2B			Vertical: 2 lines - 2 spaces (B)	
Z1	Continuous exposure of Z1 pattern.			
C1	Continuous exposure of C1 pattern.			

Pattern name	Dot	Screen Angle	Line number/ pitch	Remarks
D1	Continuous exposure of D1 pattern.			
24,0,15%	15%	0°	2400 dpi 175 lpi	Pseudo dots
24,0,50%	50%			
24,0,85%	85%			
24,45,15%	15%	45°		
24,45,50%	50%			
24, 45, 85%	85%			
40,0,15%	15%	0°	4000 dpi 200 lpi	Pseudo dots
40,0,50%	50%			
40,0,85%	85%			
40,45,15%	15%	45°		
40,45,50%	50%			
40,45,85%	85%			
CH0-63	To check the laser power balance of each laser channel (Ch0 to Ch63), an area is exposed with each channel.			

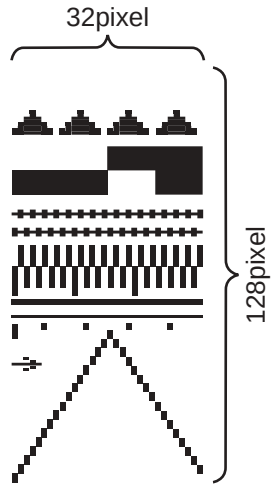

Printing plate
56 48 40 32 24 16 8 0
57 49 41 33 25 17 9 1
58 50 42 34 26 18 10 2
59 51 43 35 27 19 11 3
60 52 44 36 28 20 12 4
61 53 45 37 29 21 13 5
62 54 46 38 30 22 14 6
63 55 47 39 31 23 15 7
Primary scanning direction
Secondary scanning direction



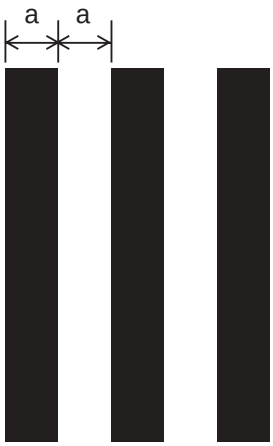
Pseudo dots



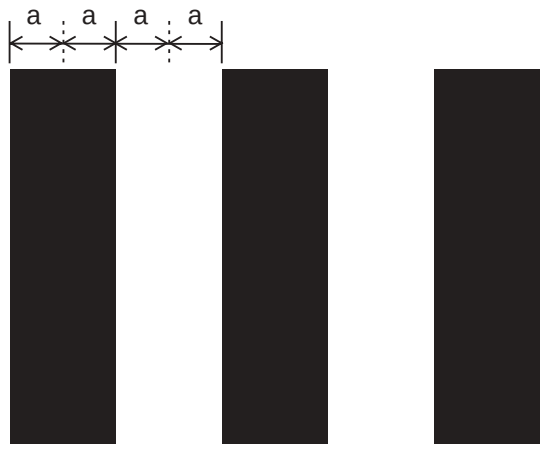
Grid pattern



C1 pattern

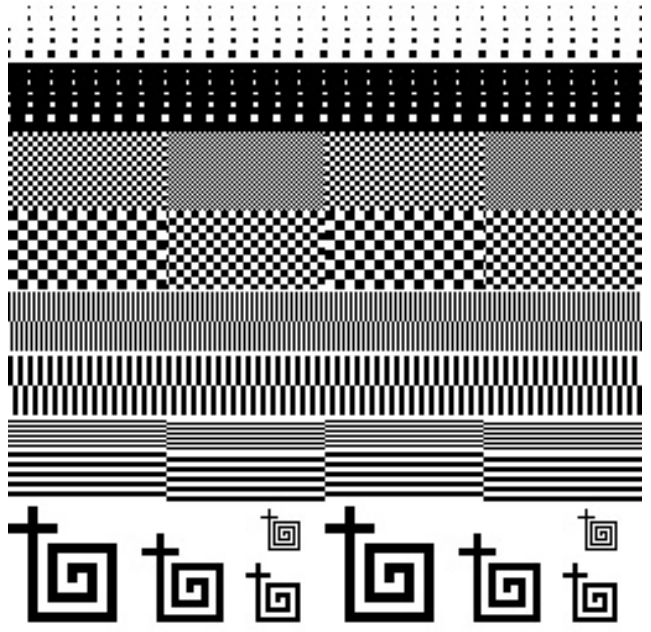


Lines and spaces (1 line, 1 space)



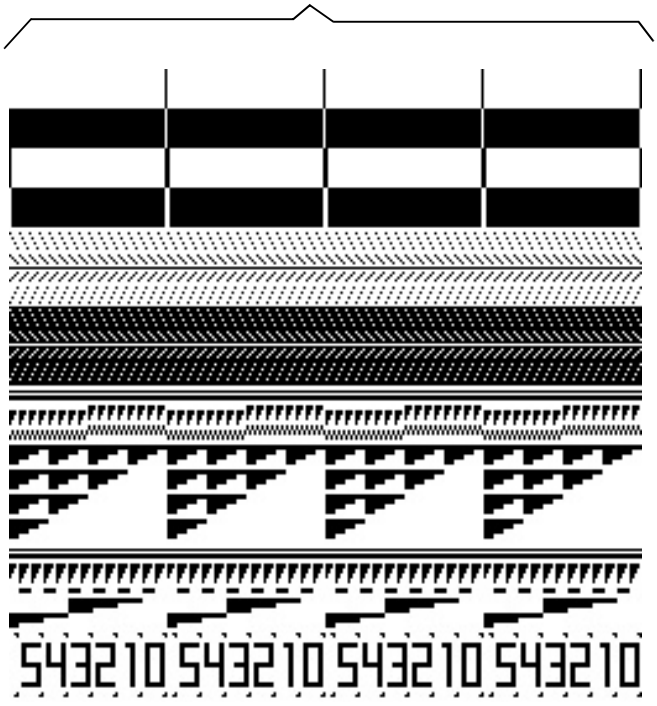
Lines and spaces (2 lines, 2 spaces)

256 pixels



D1 pattern

256 pixels



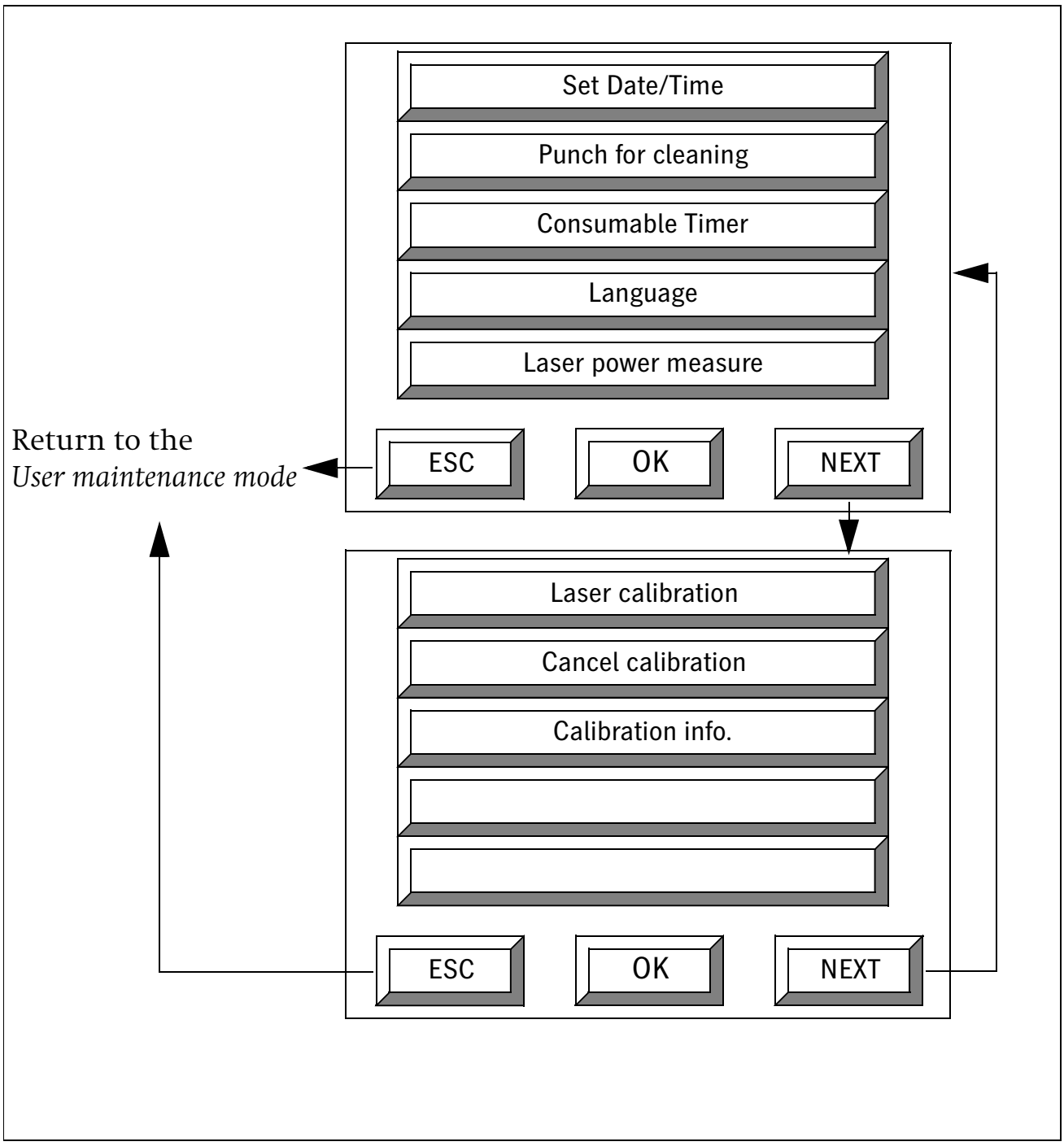
Z1 pattern

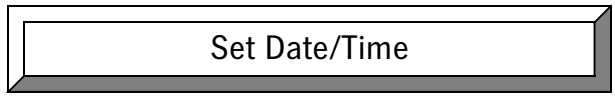
User settings

The user settings are used to set the date, time, display language and other parameters of the Topsetter P/PF 102.

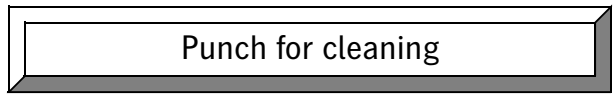
1. Select *User settings* in the *User maintenance mode* screen and then press the *OK* button. The *User setting selection* screen appears.

2. Select the desired setting and then press the *OK* button.

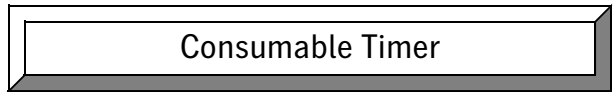




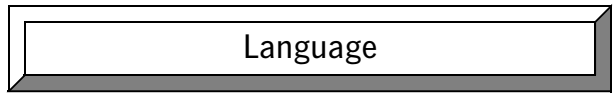
Set the date and time.



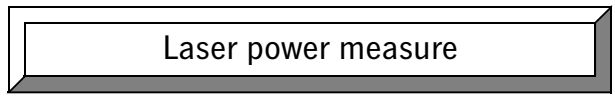
This activates empty punching to clean the inside of the punches.



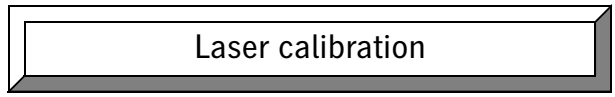
Check the running time of the Topsetter P/PF 102 and set the timers for the consumables.



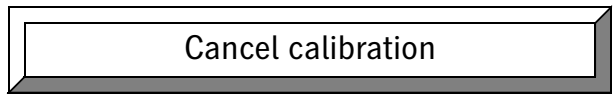
Set the language used on the operating panel.



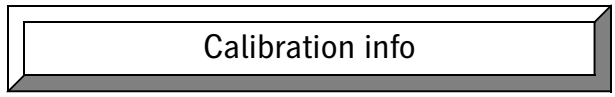
This measures the intensity of the exposure head's laser.



Calibrate the laser in the exposure head.



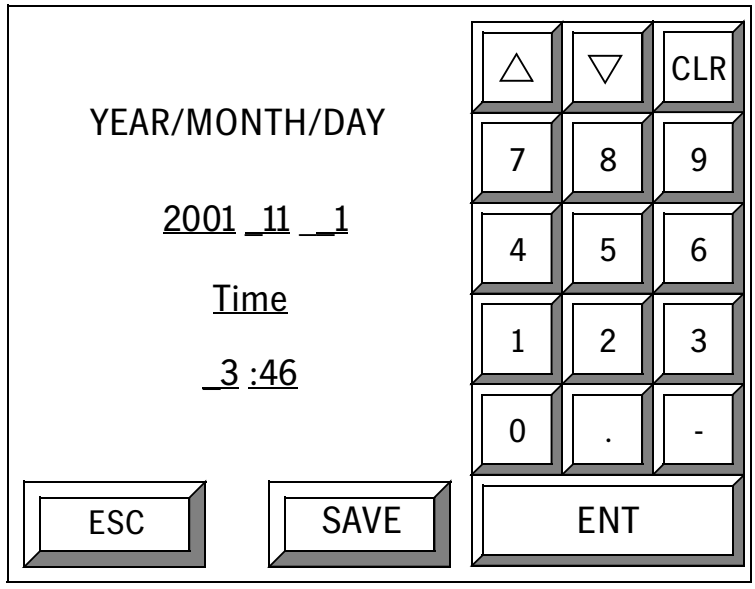
This cancels the laser calibration and returns the laser to its original state.

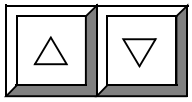


This checks the calibration state of the laser exposure head.

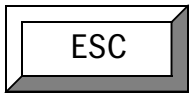
Setting the date and time

1. Select *Set date/Time* in the *User setting selection* screen and then press the *OK* button. The *Date and time setting* screen appears.





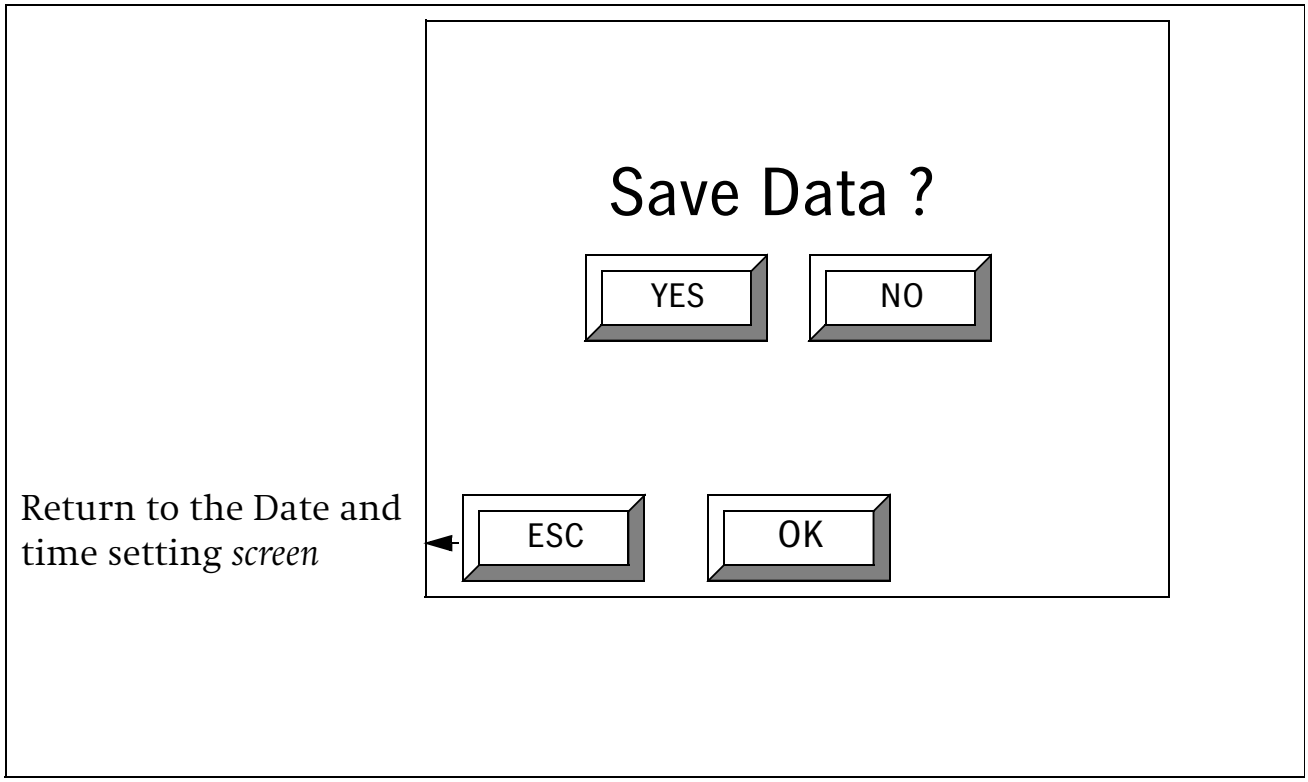
These keys move the cursor to the next / previous entry



Return to the *User setting selection* screen.

2. Press the *ENT* button to move the highlight to the setting you wish to change. Enter the date and/or time and then press the *ENT* button.

3. Press the *SAVE* button; a confirmation screen appears.



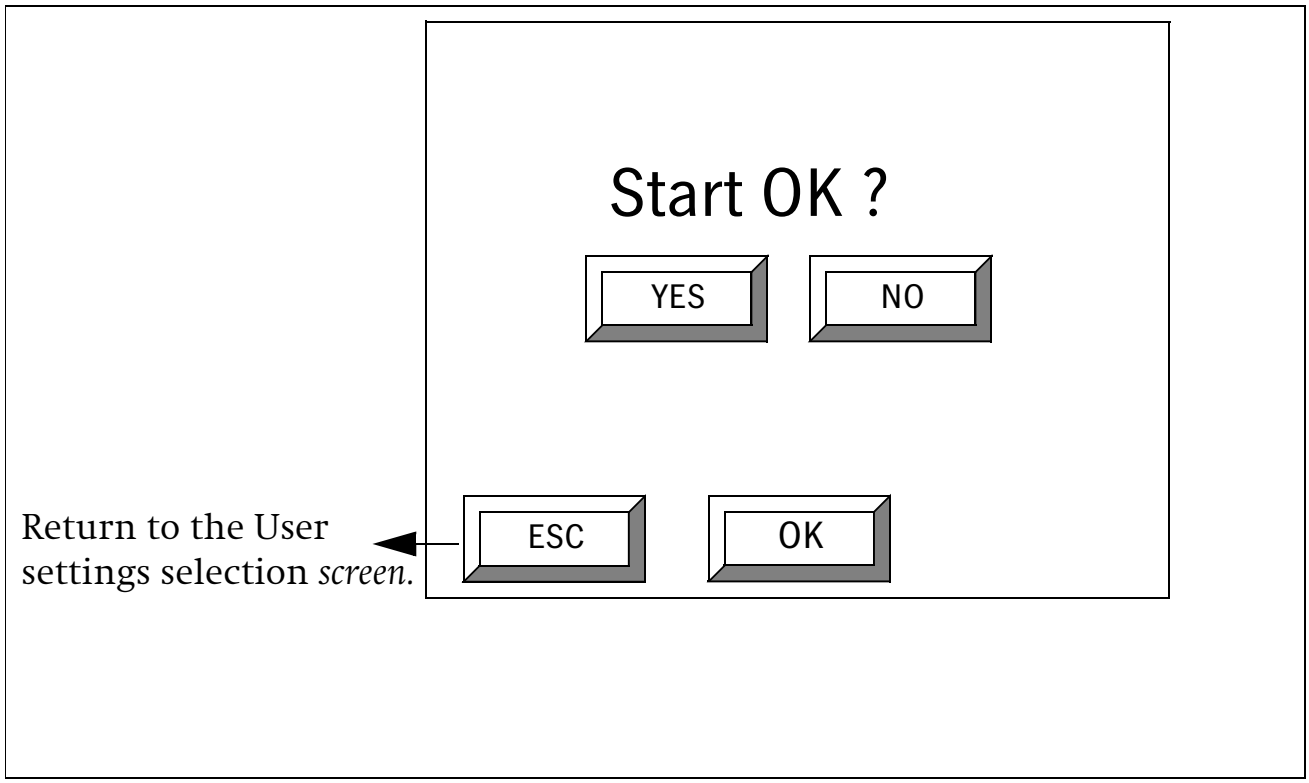
4. Press the *YES* button and then the *OK* button to save the data. The user setting selection screen reappears. If you want to cancel the data save, press the *NO* button and then the *OK* button.

Note: Note that an incorrect setting will not affect image output.

Punch for cleaning

This activates empty punching to clean the inside of the punches.

1. Select *Punch for cleaning* in the *User setting selection* screen and press the *OK* button. The *Punch for cleaning* screen appears.

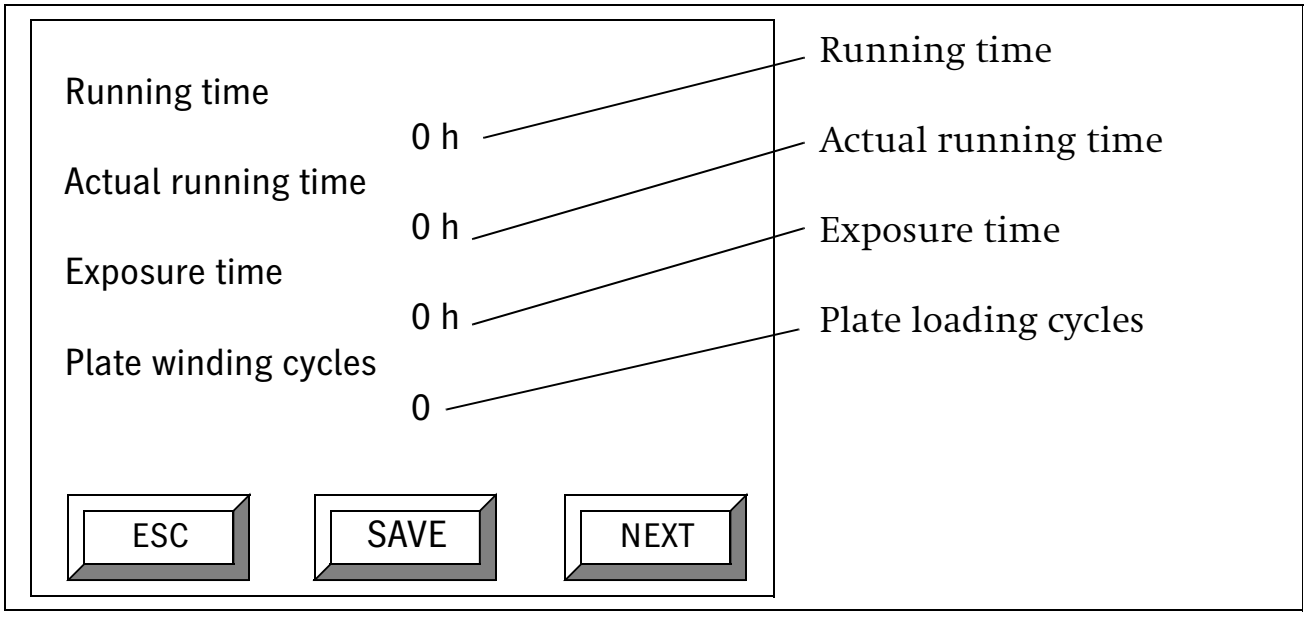


2. Press the *YES* button and then press the *OK* button to activate punching.
3. Press the *NO* button and then press the *OK* button to return to the *User maintenance mode* screen.

Checking the running time and setting the timers for consumables

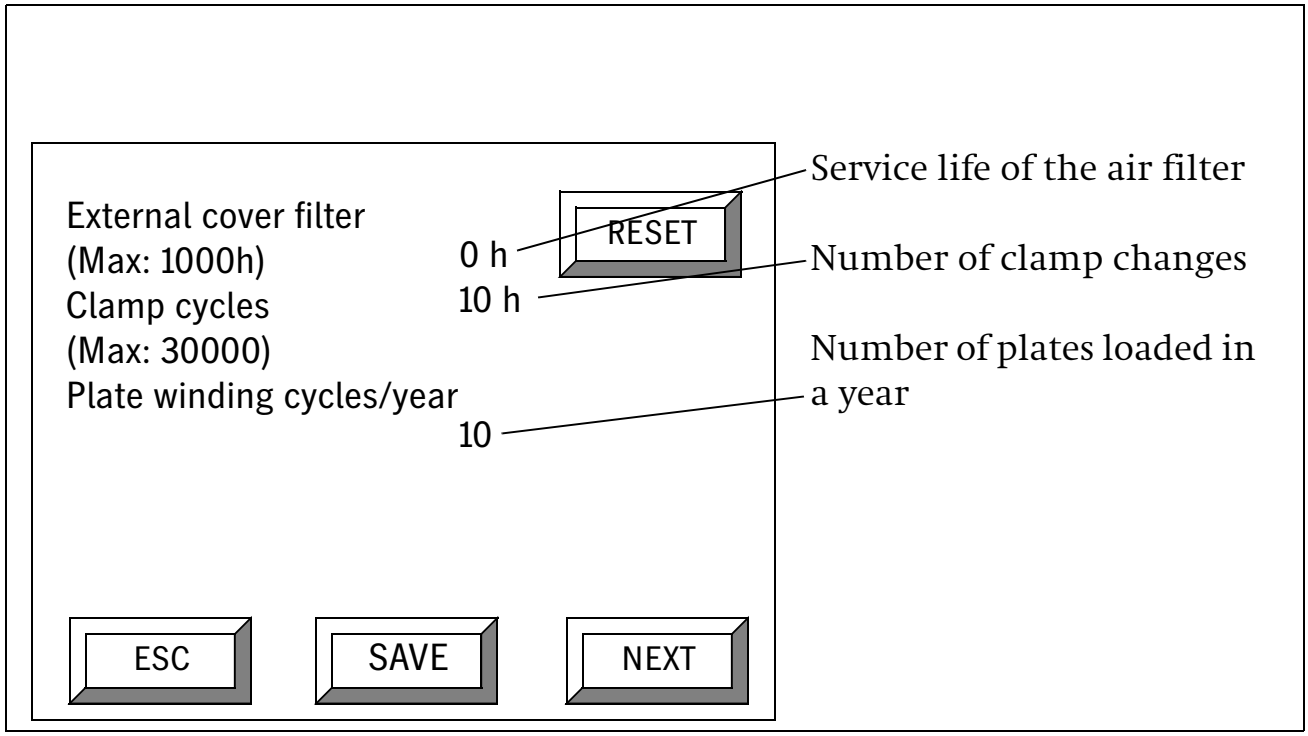
Here you can check the running time of the Topsetter P/PF 102 and the number of exposures performed and set the consumable timers for replacement of consumables.

1. Select *Consumable timer* in the *User setting selection* screen and then press the *OK* button. The *Consumable timer setting* screen appears.



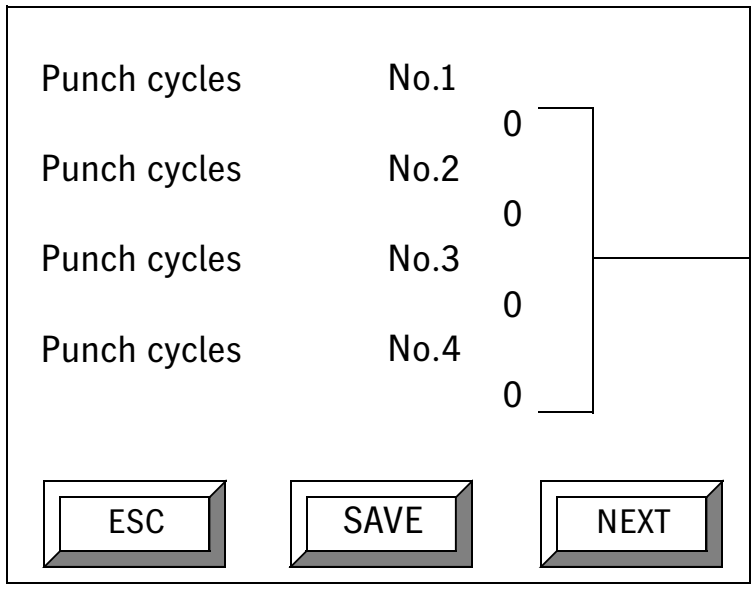
- Running time:
  The total running time of the Topsetter P/PF 102.
- Actual running time:
  The time it has actually been in operation (loading and unloading plates and exposing).
- Exposure time:
  The overall time exposure has been performed.
- Plate loading cycles:
  The number of printing plates which have been loaded.

2. Press the *NEXT* button. The following screen appears:



- External cover filter:
  When the running time reaches the maximum time (1000 hours), a message appears telling you to replace the external cover filter. After replacing the external cover filter, press the *RESET* button to reset the usage time to ”0 h."
- Clamp cycles:
  After replacing the clamps, the number of printing plates loaded is displayed.
- Plate winding cycles/year:
  This counter counts the number of plates loaded in a year.

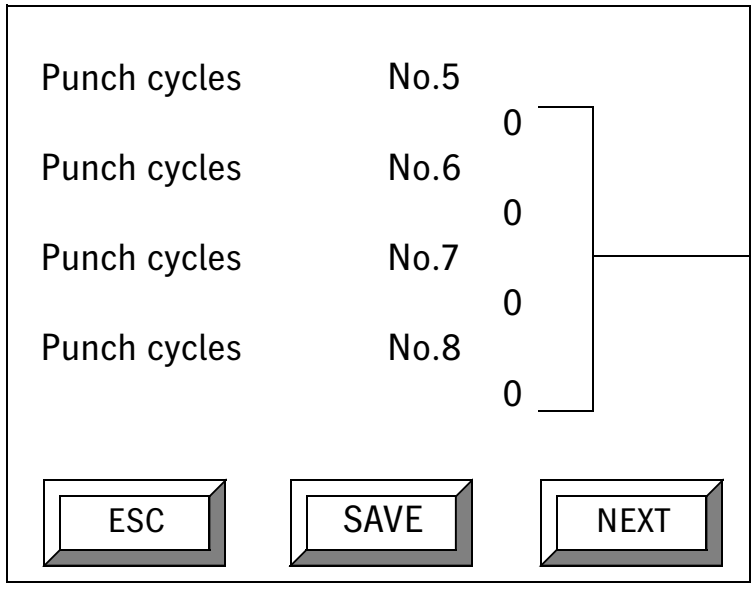
3. Press the *NEXT* button. The following screen appears:



Punch cycles of each punch block

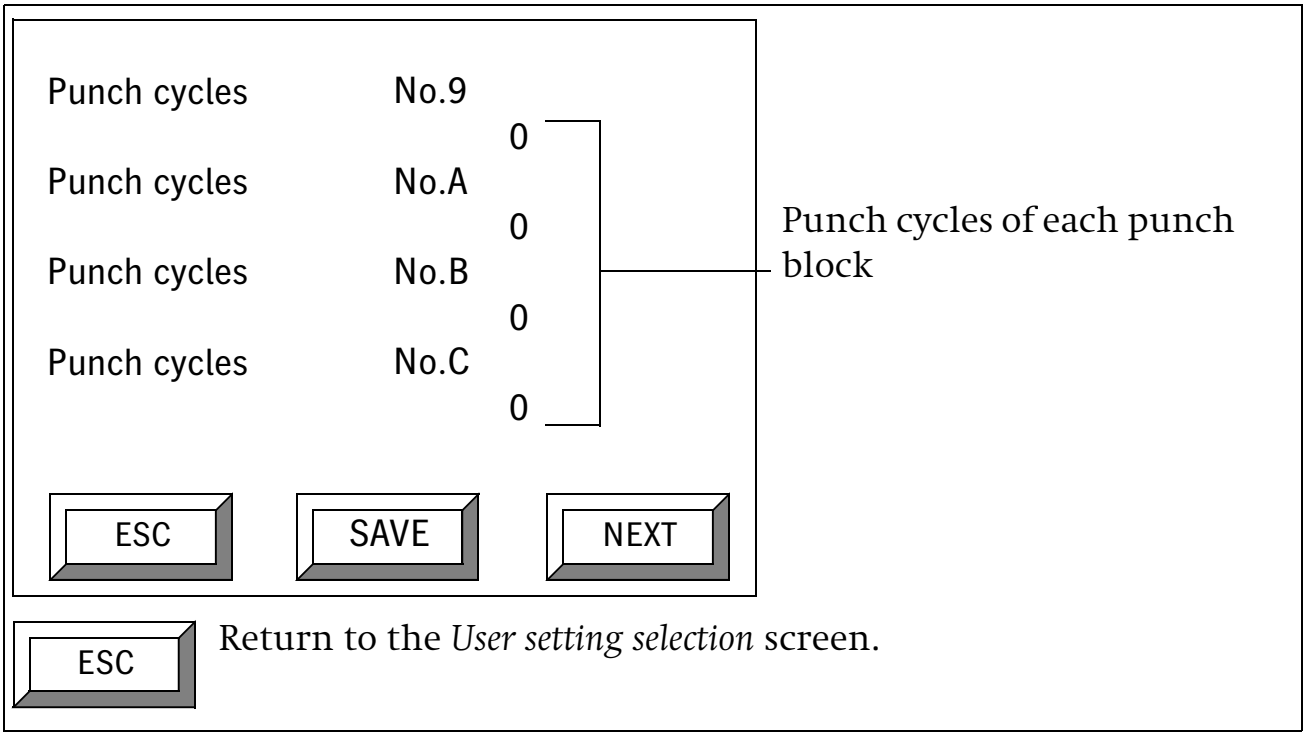
ESC Return to the *User setting selection* screen.

- Punch cycles: the number of punch cycles of each punch block is displayed.



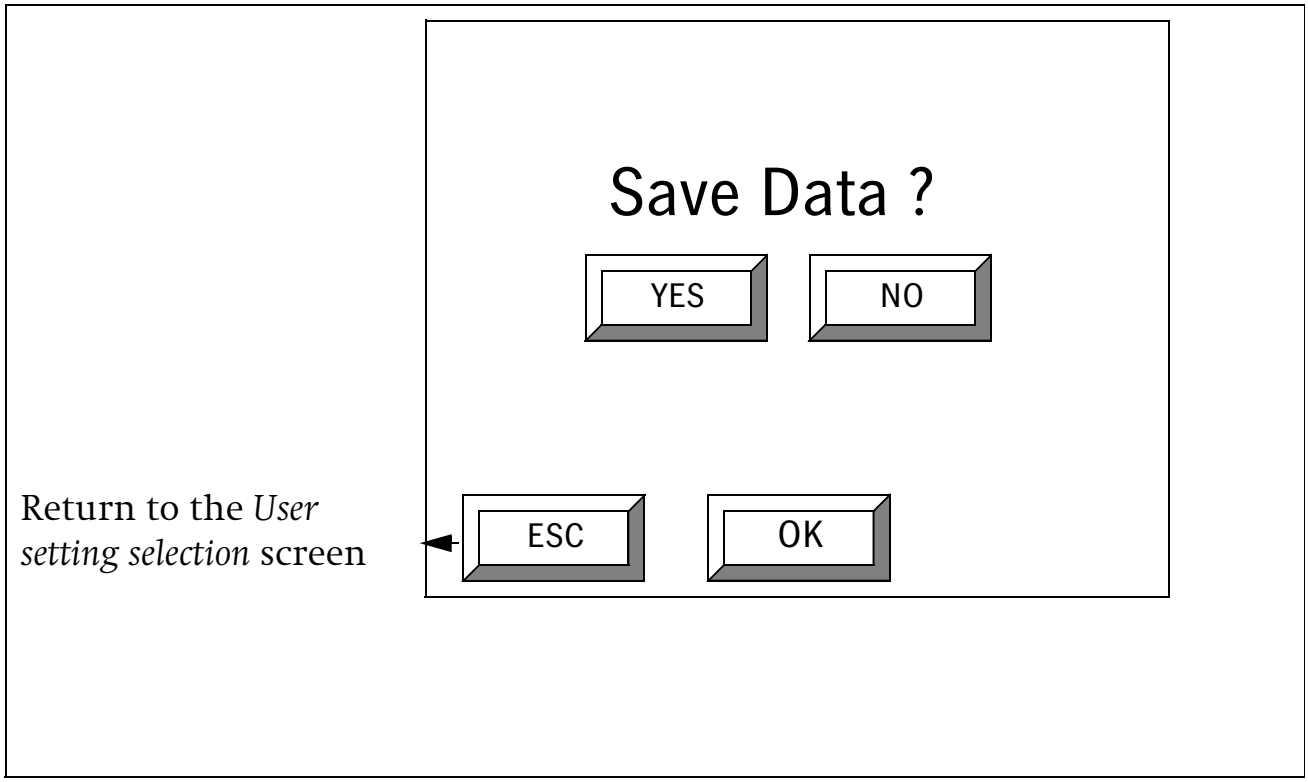
Punch cycles of each punch block

ESC Return to the *User setting selection* screen.



4. Press the *Next* button to return to the *Consumable timer setting* screen.

5. Press the *SAVE* button; a confirmation screen appears.

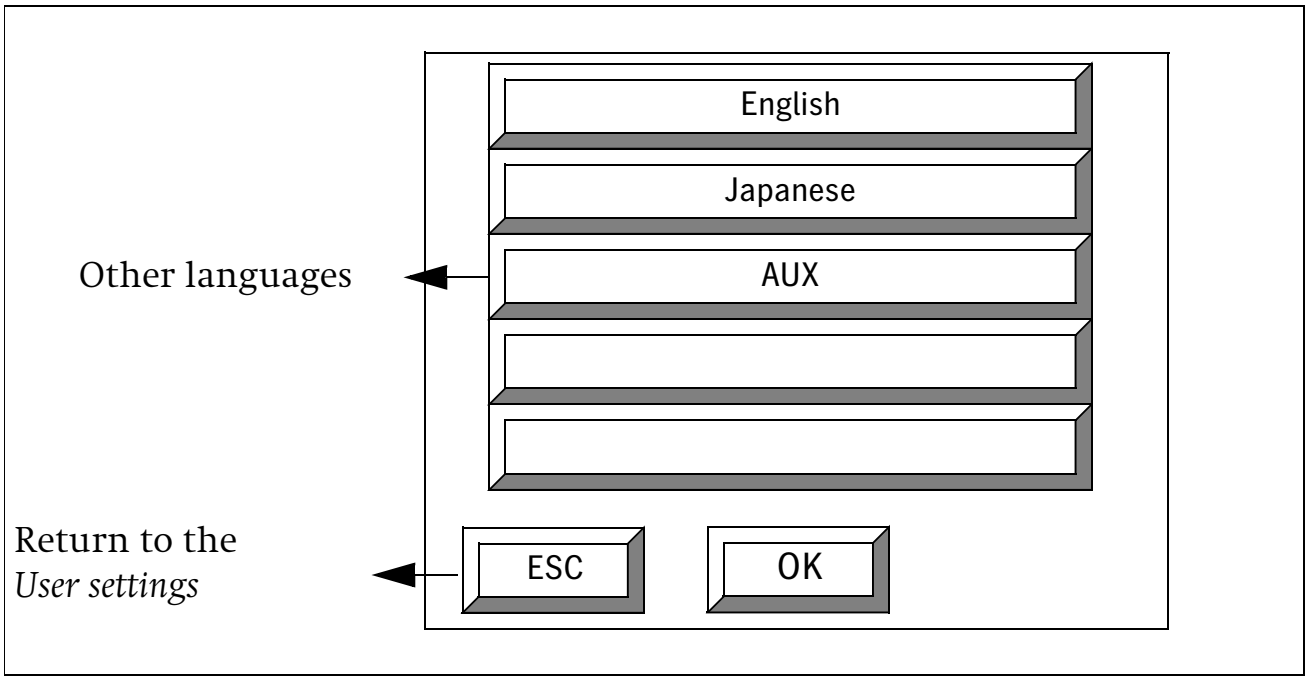


6. Press the *YES* button and then the *OK* button to save the data. The user setting selection screen reappears. If you want to cancel the data save, press the *NO* button and then the *OK* button.

Setting the language on the operating panel

You can change the language used on the operating panel.

1. Press *Language* and then the *OK* button in the *User setting selection* screen. The *Language selection* screen appears.

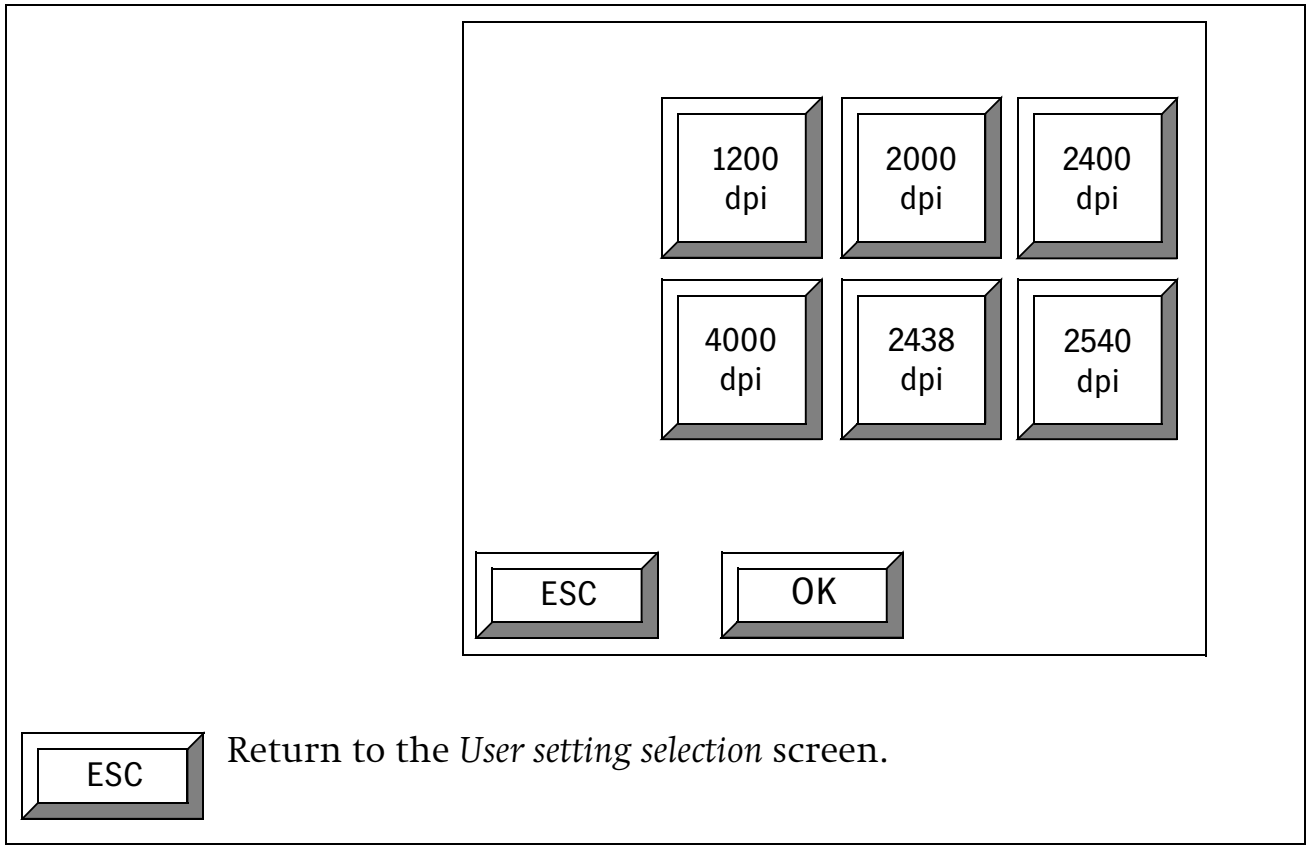


2. Select the desired language and then press the *OK* button.

Laser power measurement

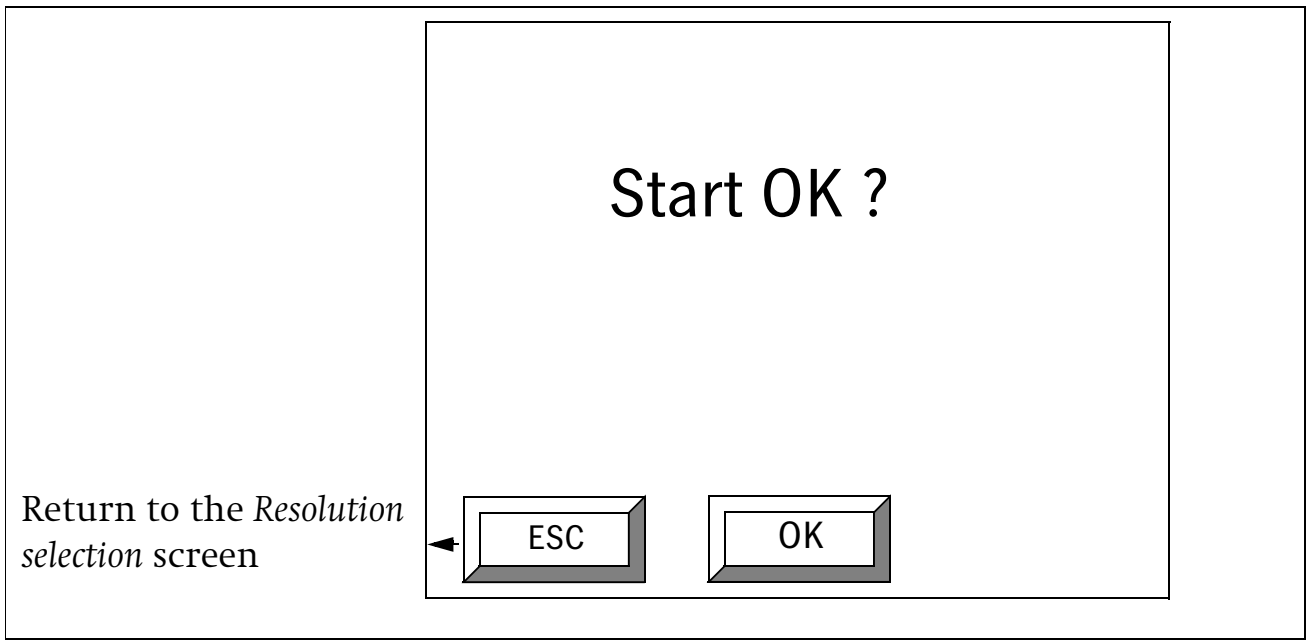
With this function, you can check if the Topsetter P/PF 102 is properly calibrated at a specific laser power.

1. In the User setting selection screen, select *Laser power measure* and press the *OK* button. The *Resolution selection* screen appears.

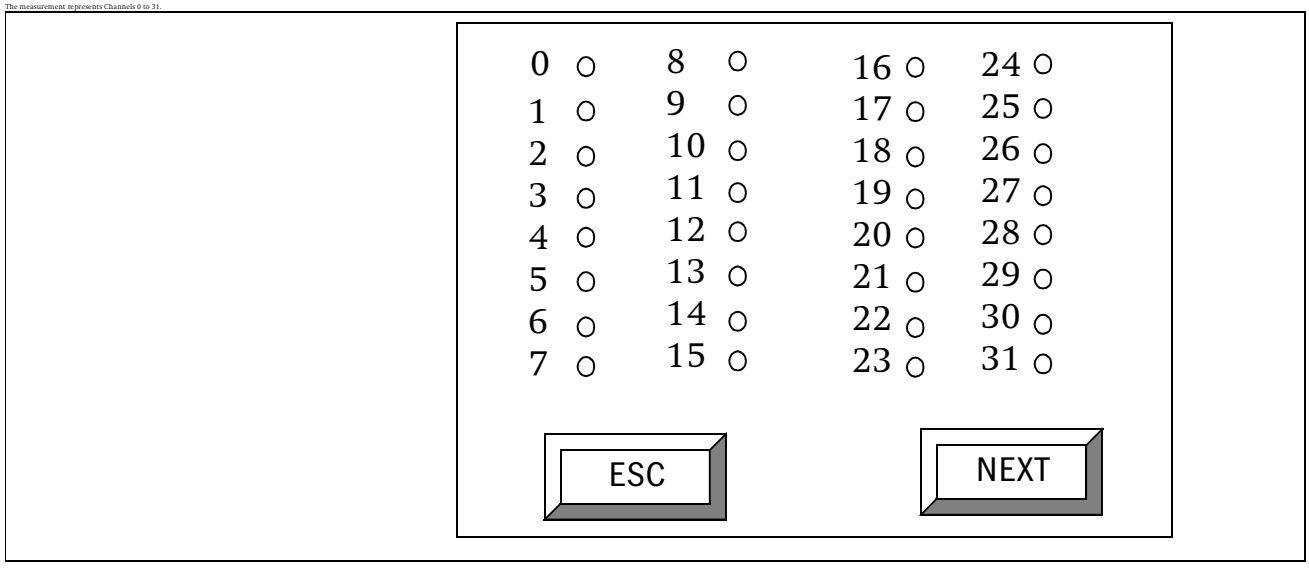


ESC Return to the *User setting selection* screen.

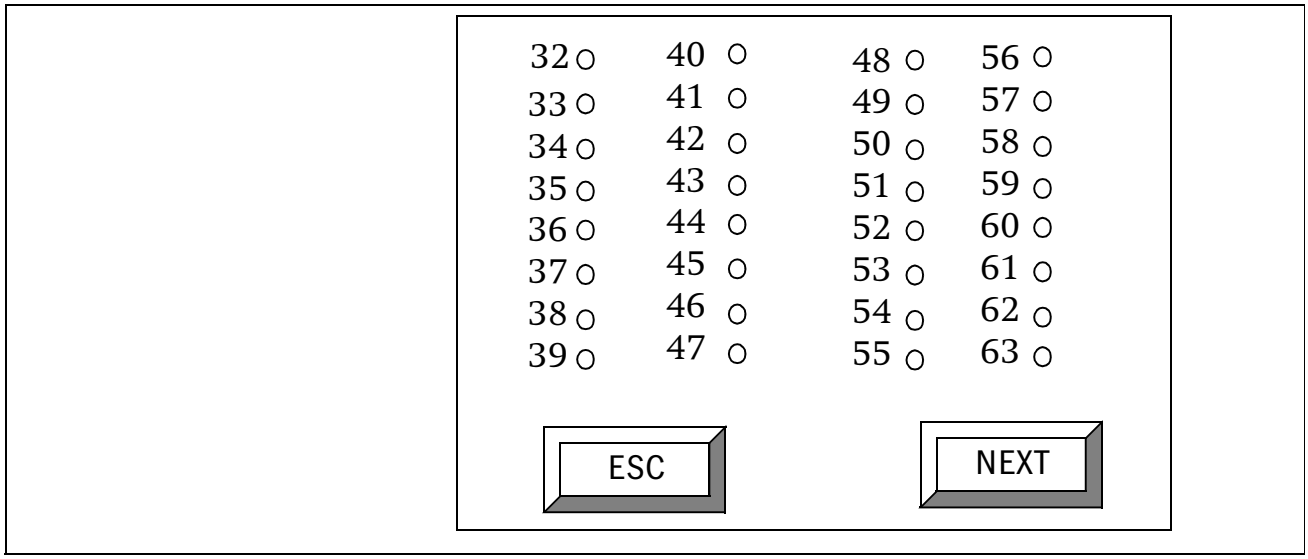
2. Select the resolution at which you want to perform the measurement and press the *OK* button. The *Measurement start confirmation* screen appears.



3. Press the *OK* button. The laser intensity measurement begins.



4. Press the *NEXT* button. This screen shows the laser power percentage for the laser channels 32 to 63.



5. If the symbol ○
is displayed for each laser channel, there is no problem with the exposure quality.

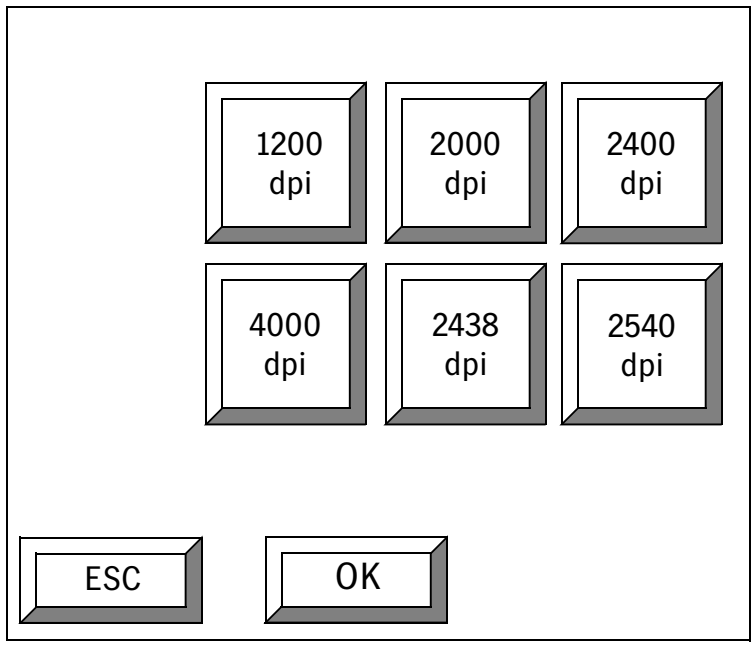
Note: If the character X
is displayed for a laser channel, perform a laser calibration, seesection Laser calibration, page 4–98.

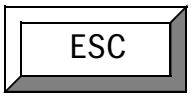
6. Press the *ESC* button to return to the *User setting selection* screen.

Laser calibration

Calibrate the laser head for each resolution.

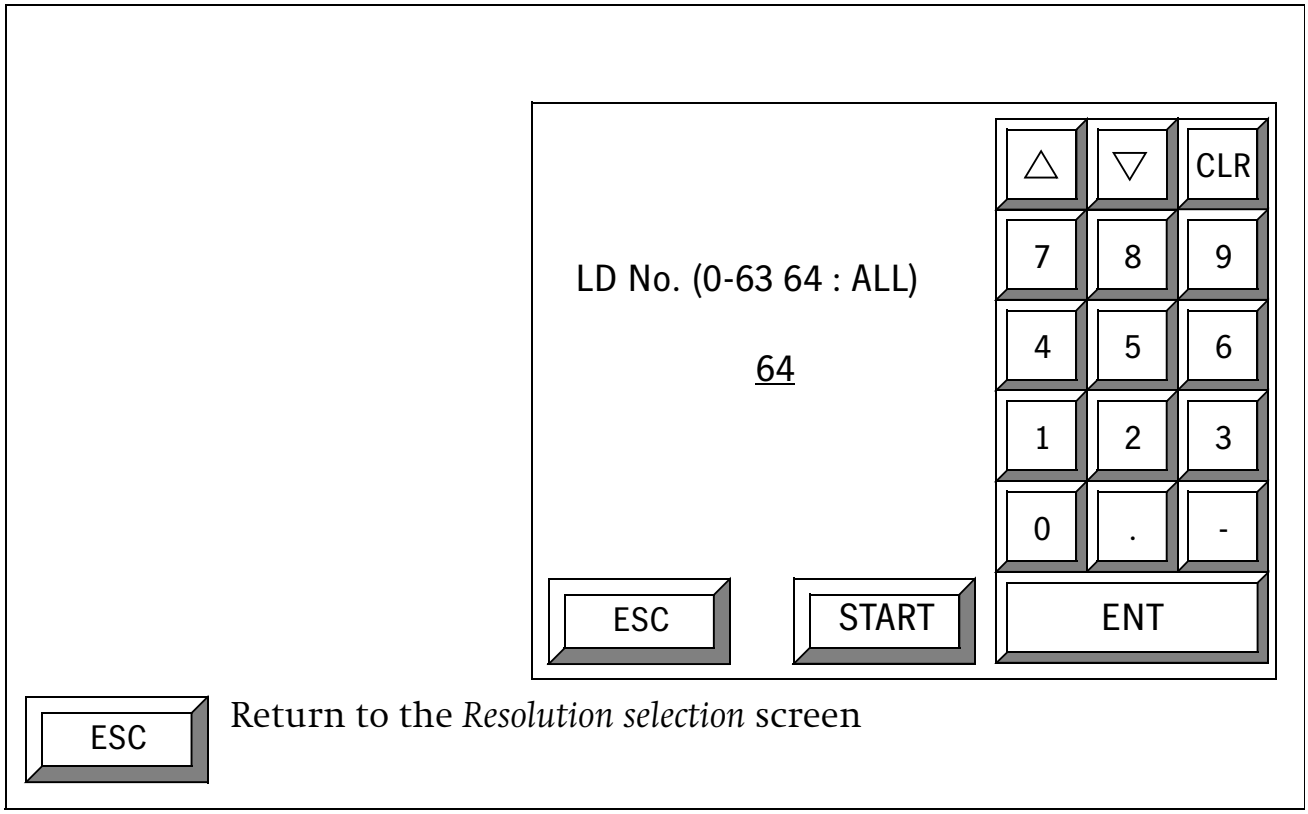
1. Select *Laser calibration* in the *User setting selection* screen and then press the *OK* button. The *Resolution selection* screen appears.





Return to the *User setting selection* screen.

2. Press the button for the desired calibration resolution and then press the *OK* button. The *Channel selection* screen appears.



3. Enter the channels you wish to calibrate (normally you will want to enter 64 to calibrate all channels) and then press the *ENT* button.

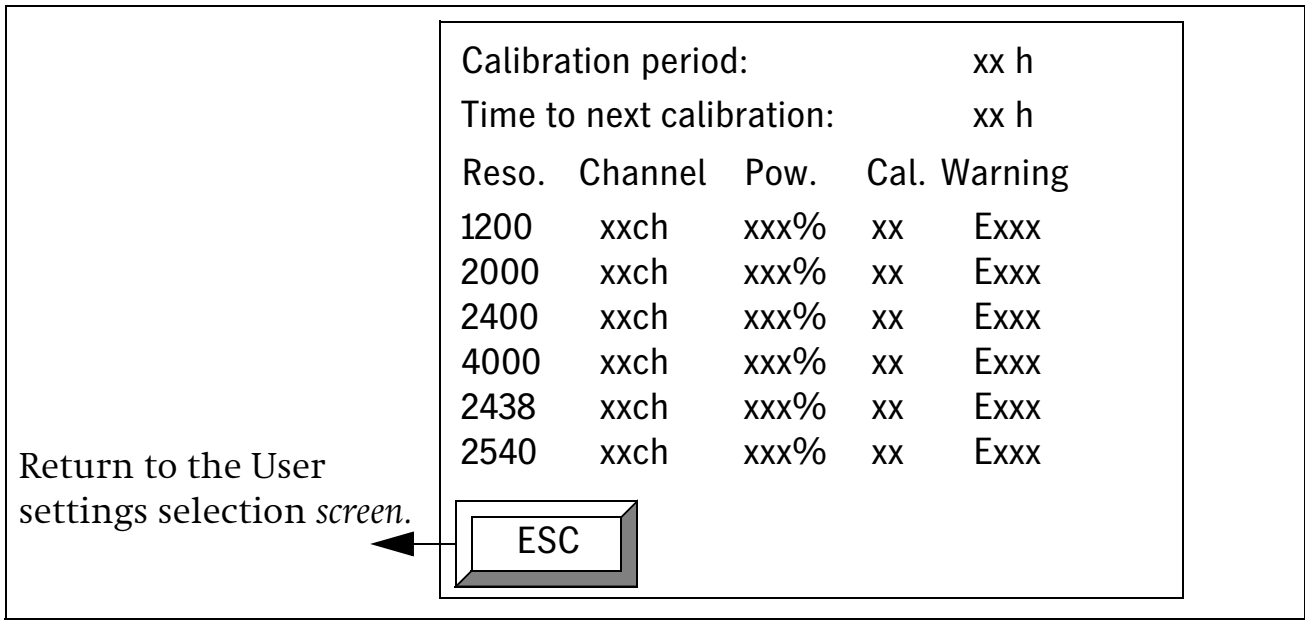
4. When finished, press the *START* button. Calibration is carried out. When calibration ends, the *User setting selection* screen reappears.

Note: Calibration of one channel takes approximately 20 seconds, and calibration of all channels takes approximately two minutes.

Calibration information

This function is used to display the calibration states of the laser head.

1. Select *Calibration information* in the *User setting selection* screen and press the *OK* button. The *Calibration information* screen appears.



- Calibration period:
  Automatic calibration is performed each time the indicated number of exposure hours is exceeded.
- Time to next calibration:
  This shows the exposure time remaining until the next automatic calibration.

The following information is displayed for each resolution:

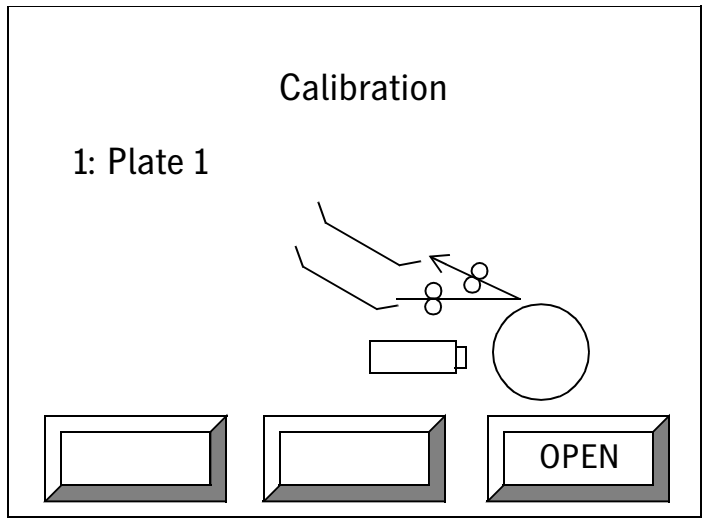
- 64ch:
  This indicates that the laser is calibrated to expose using the laser diodes of all 64 channels.
- 0 to 31ch
  Some laser diodes in channels 32 to 63 cannot be

calibrated to the set light intensity. The laser head is therefore calibrated so that channels 0 to 31 are used for exposure.

- 32 to 63ch:
  Some laser diodes in channels 0 to 31 cannot be calibrated to the set light intensity. The laser head is therefore calibrated so that channels 32 to 63 are used for exposure.
- Pow.:
  This indicates the percentage of the laser power to which the laser head has been calibrated.
  Normally this is 100%. A value below 100% means that some channels cannot be calibrated to the set laser power. Calibration is thus performed with a reduced intensity so that exposure takes place at a laser power higher than the laser power set for the printing plate (this does not affect the exposure quality).
  If the value displayed is "????", calibration did not take place normally (thus exposure quality will be adversely affected).
- Cal.
  When the exposure time indicated in *Calibration period* elapses and calibration is required, *req* appears until calibration is performed. After calibration is performed, *done* appears.
- Warning:
  This displays the code of warnings or errors that occurred during calibration. Nothing will appear if calibration was completed normally.

Attention: Normally, the entry *64ch* appears under *Channel* and *100%* under *Pow.* and nothing appears under *Warning*. If this does not appear, please contact Heidelberg Support.

Note: To maintain excellent exposure quality, the laser is automatically calibrated every time the set exposure time elapses (normally 50 hours). This automatic calibration is performed before exposure, started from the workstation, begins. The calibration process takes 1 to 2 minutes. The following screen appears during the calibration process:



How calibration is performed

Calibration via the user settings, or automatic calibration, is performed as follows:

1. All 64 channels are calibrated to the set laser power. When the calibration process is completed, the system checks to see if any channels are nearing the end of their service life. If not, calibration is completed. If there are channels which are almost at the end of their service life, the following warning appears:

   Ex816: Some LD is nearing the end of its usable life. Contact our office or agency and ask to replace them.

   Calibration is terminated when the warning message screen is closed.

2. If there are any channels that do not calibrate to the set laser power, the system checks to see if all plates of printing machine settings No. 1 through 15 can be exposed at the light intensity of the channel with the lowest laser power. If so, calibration is performed once again to the laser power of the channel with the lowest power and the following warning appears:

   Ex819: Some LD cannot be calibrated to target power. Contact our office or agency and ask to replace them.

   Calibration is terminated when the warning message screen is closed.

3. If the calibration cannot be carried out as described under No.2, a check is made whether it can be carried out using either channels 0 to 31 or 32 to 63.
   If so, calibration is carried out so that the exposure can be performed using either channels 0 to 31 or 32 to 63. The following message appears:

   Ex81a: Some LD cannot be calibrated to target power. Contact our office or agency and ask to replace them.

When the laser is calibrated in this way, the exposure time will double because only 32 of the 64 channels are used.

Even if one of messages 1 to 3 appears, image quality will not be affected. However, you should still inform Heidelberg Support to have the laser diode(s) replaced.

If calibration is not possible even as described under No. 3, the following error message appears:

Exxx Some LD cannot be calibrated to target power. Contact our office or agency and ask to replace them.

If this message appears, exposure can be continued after the error has been cleared. However, the image quality may be impaired. Please contact Heidelberg Support to have the laser diode replaced.

Measuring laser power

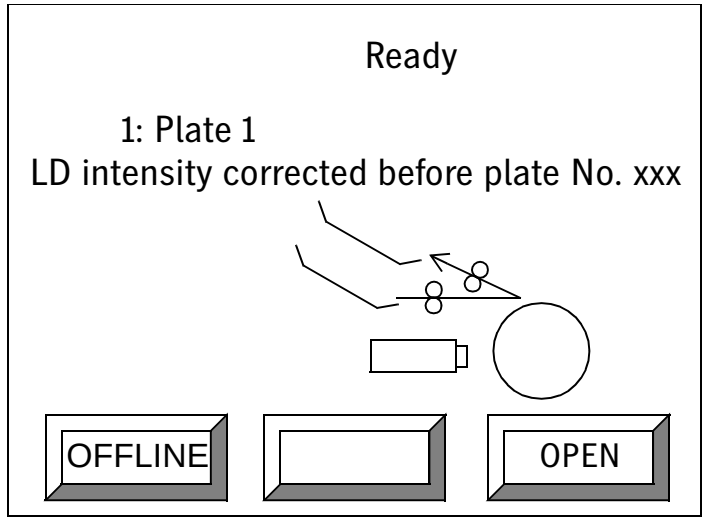
The Topsetter P/PF 102 measures the laser power when the first exposure after switch-on is performed and after 16 printing plates have been exposed. While measurement is running, *Measurement* is displayed in the *Online* screen.

If one of the laser deviates from the standard power, calibration is performed automatically. The following message is displayed to inform you that, although calibration was performed correctly, one of the last 16 printing plates was exposed at a laser power that was not correct.

EX82A: Since the light intensity of laser diodes is detected as having deviated more than 5% from the specified value, the equipment executes the calibration.

If a warning message is displayed during automatic calibration

If a warning message is displayed as the result of automatic calibration, the message *LD intensity corrected before plate No. xxx* flashes in the *Online* screen later.



xxx starts at zero and is incremented whenever a printing plate is loaded. This screen takes priority over the *The next is the same plate* and *Please wait* screens and is not cleared when the unit is switched off. It is not cleared from the screen before calibration has been performed.

For more information, see section Laser calibration, page 4–98.

If the message *LD intensity corrected before plate No. xxx* is displayed:

1. Call up the *Error log summary* screen and check whether other messages have been generated in connection with the laser or warnings have been issued when the printing plate in question was exposed. For more information, see section Information screen, page 4–109.

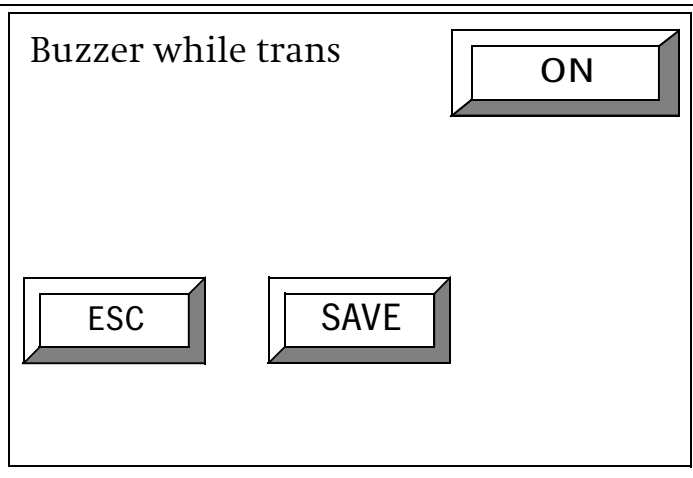
2. If only one error or warning message was generated, one of the previous 16 printing plates may not have been exposed at the specified laser power. Do not continue exposing printing plates before you have carefully checked the printing plates exposed before.
3. If two or more error or warning message were generated, one of the previous 16 printing plates or one of the next printing plates may not have been exposed at the specified laser power. Do not continue exposing printing plates before you have carefully checked the printing plates exposed before.
4. Perform a calibration to clear the message *LD intensity corrected before plate No. xxx* .
5. Before you continue exposing plates make sure that all settings for the laser head are correct.
6. If you have any queries, please contact Heidelberg Support.

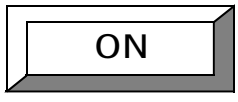
Switching the buzzer (signal) on/off during plate transport

During plate transportation, an acoustic signal is given once a second until the printing plate has left Conveyor P/PF 102. As long as the signal sounds, you cannot load plates.

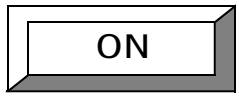
But you can switch the signal off.

Select *Option setting* and then press the *OK* button.

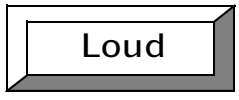




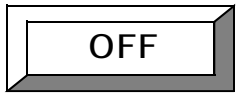
Whenever you press the button, the screen switches from *ON* and *Loud* to *OFF* and back.



The signal is given



The signal sounds loud



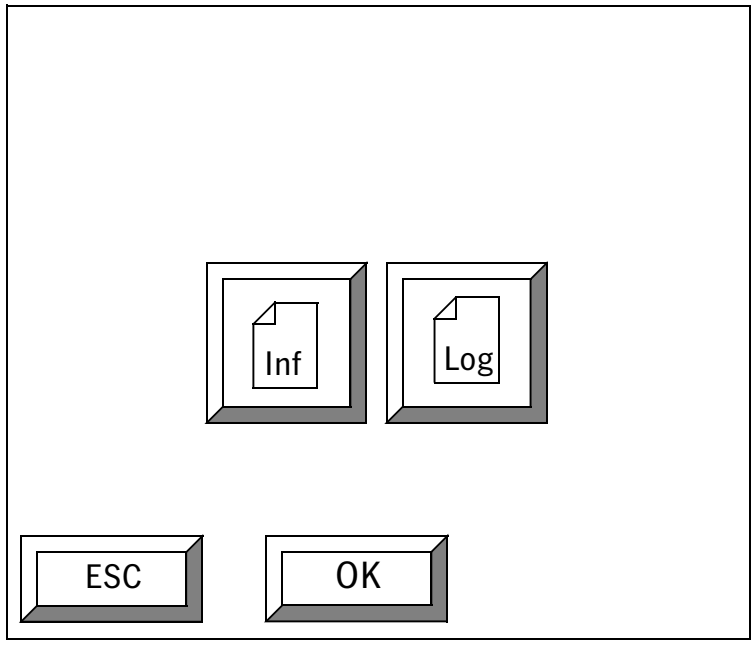
No signal is given

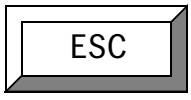
Select a signal setting and press the *SAVE* button. This takes you back to the *User settings selection* screen.

Information screen

With this function, you can view the version number of the software currently installed in the Topsetter P/PF 102 and the automatically created error log.

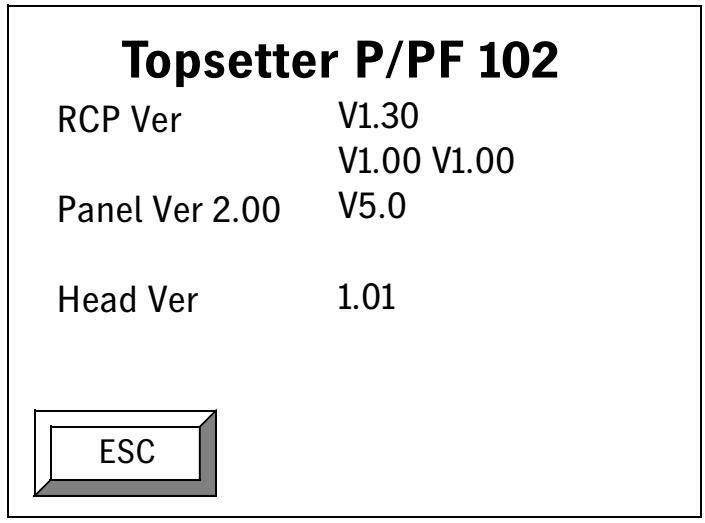
1. Select *Information* and then press the *OK* button on the *Offline* screen. The Information screen appears.





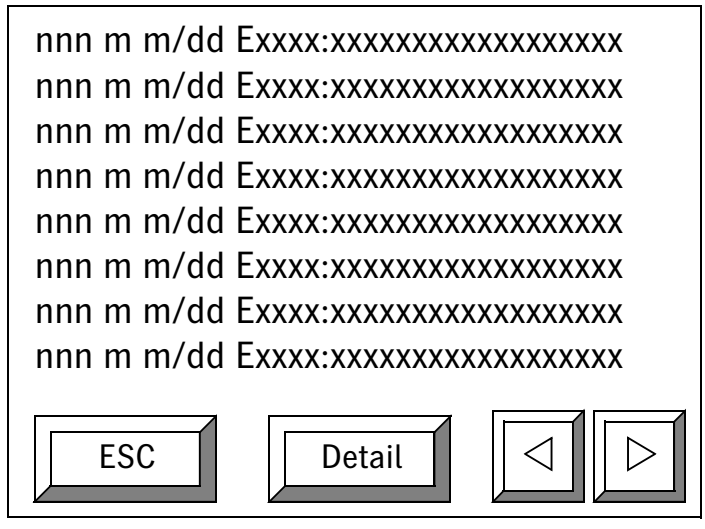
Return to the *Offline* screen

2. To display the *Software version* screen, select *Inf* and then press the *OK* button.



ESC Return to the *Information display mode* screen

3. To display the error log, select *Log* and then press the *OK* button.

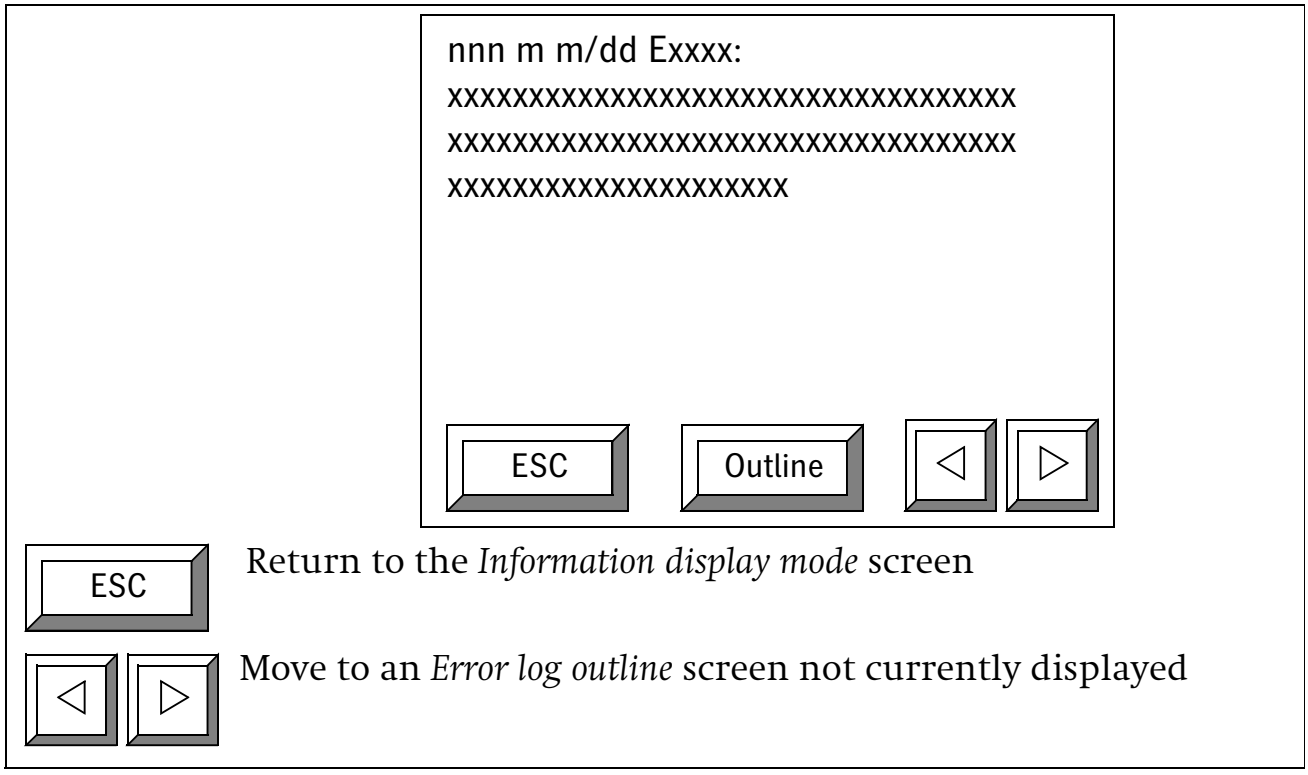


ESC Return to the *Information display mode* screen

◁ ▷ Move to an *Error log outline* screen not currently displayed

- nnn:
  Number 1 bis 160 of the error log.
- mm/dd:
  Date of the error message.
- Exxx
  Number of the warning or the error message.

4. Press the *Detail* button to display the detailed error log.



This screen shows detailed information about the error messages.

5. Press the *Outline* button to return to the Error log screen.

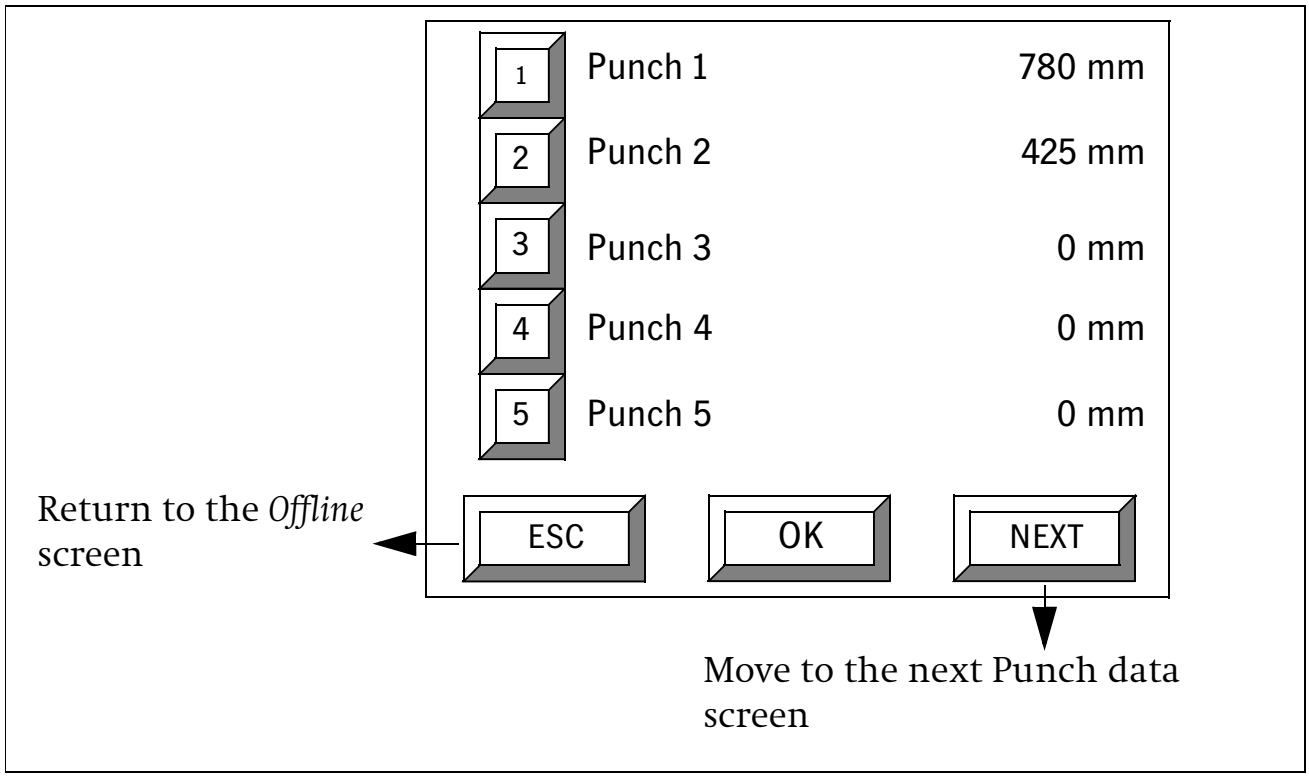
Note: A maximum of 160 error and warning messages are recorded.

Setting the punch name

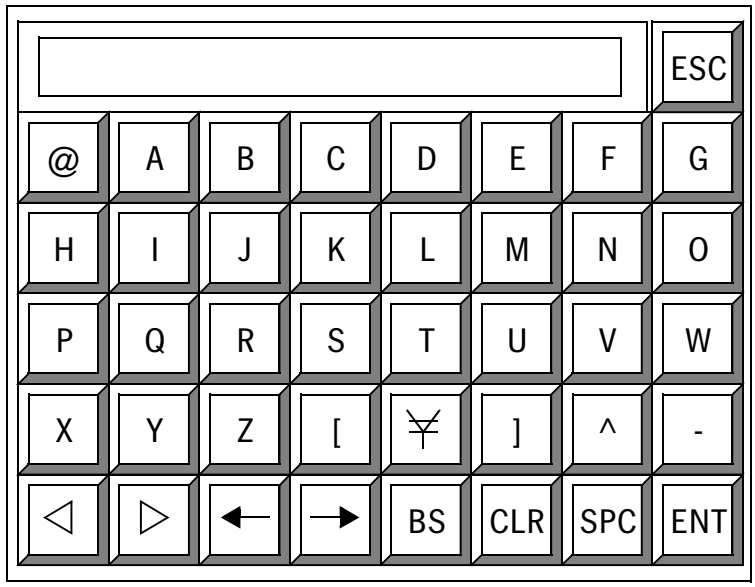
When an optional punch is installed, a service technician will set the punch number (1 to 9) and the punch hole pitch. The punching process can then be carried out. To make it easier to select a punch in the printing machine settings, you can assign a name to the punch.

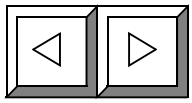
In the following example, a Bacher punch is installed as punch 1 with a punch hole pitch of 780 mm.

1. Select *Set punch name* and then press the *OK* button on the *Offline* screen. The *Punch data* screen appears.

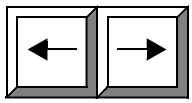


2. Select *1* and then press the *OK* button. The screen for entering the punch name appears.

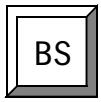




Changeover for upper/lower case letters and symbols/ numbers

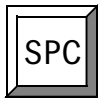


Moves the cursor to the input position

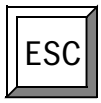


Deletes the character to the left of the cursor

Deletes the comment which has been entered



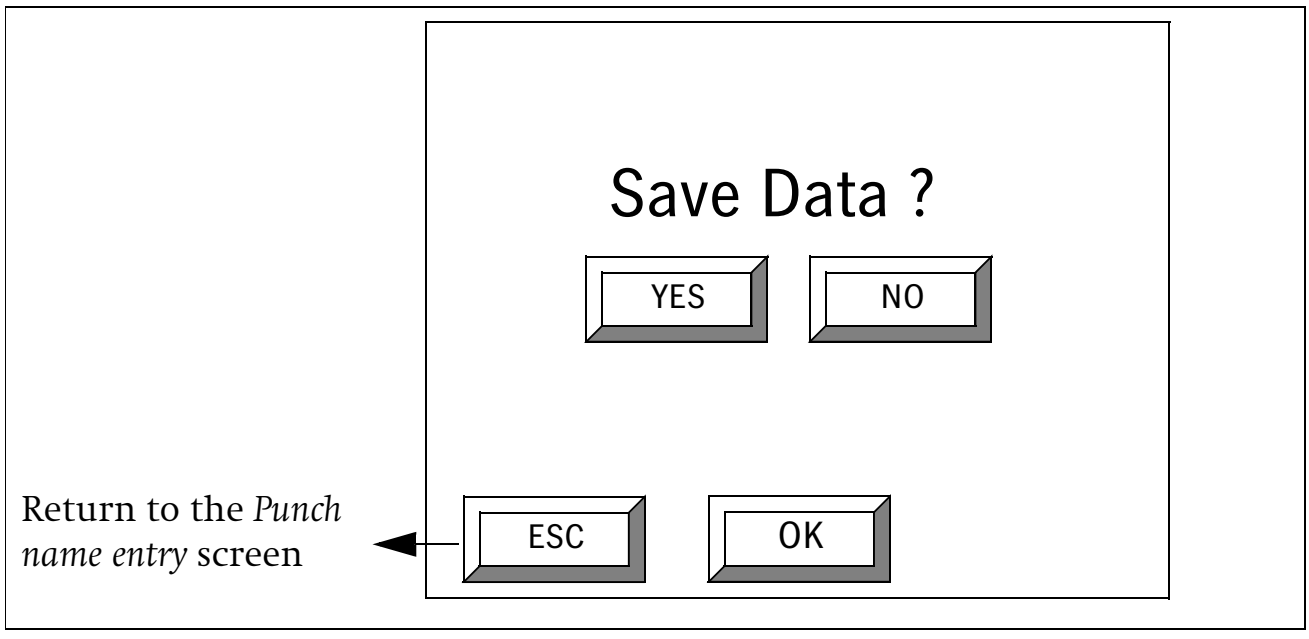
Enters a space



Return to the *Punch data* screen

3. Enter a name for punch 1 (for example, Bacher 780 mm).

4. Press the *ENT* button. The *Save confirmation* screen appears.



5. Press the *YES* button and then the *OK* button to save the data. The User setting selection screen reappears. If you want to cancel the data save, press the *NO* button and then the *OK* button.

General Information

Warning: Unauthorized opening of the casing not specifically stipulated in the operating manual or inexpert repairs can lead to considerable danger for the user.

Service work may only be carried out by persons authorized by Heidelberg. The relevant accident prevention regulations must be observed at all times.

Non-observance of safety regulations can lead to the loss of accident insurance cover.

Warning: Under no circumstances remove covers or other housing components except in the case of the procedures specified in the *Service and Maintenance* and *Trouble Shooting* chapters. When doing so, keep to the stipulated sequence of operations.

Otherwise, there is a danger that the powerful invisible laser beam could cause injury to eyes and skin or even a fatal electric shock.

If hoods or cover panels are opened without disconnecting the power plug, the safety loops are interrupted.
The optical carriage drive and laser beam are switched off.

The safety loops must not be bridged in any circumstances as this could result in injuries to the skin or eyes through invisible laser radiation, crushing by the lens carriage or fatal electric shocks.

Maintenance Schedule

The table below outlines the minimum recommended maintenance required to maintain optimum quality and to decrease the number of Heidelberg service calls.

Maintenance work which is not carried out or done incorrectly, not only impairs the quality but can also cause damage to the unit.

Make sure that no imaging is performed during maintenance procedures.

Maintenance Procedure	Maintenance interval
Cleaning exterior surfaces	weekly
Cleaning the drum	monthly
Removing punch waste	monthly
Cleaning the cleaning roller	monthly
Cleaning the air filter	monthly

Cleaning Exterior Surfaces

Warning: Before damp cleaning, ensure the unit is disconnected from the power supply by disconnecting the power plug. Otherwise there is the danger of electric shock.

The exterior surfaces of the Topsetter P/PF 102 should be cleaned on a weekly basis as they can become dirty in the Prepress environment.

Cleaning the exterior surfaces of the Topsetter equipment weekly preserves the appearance and finish of the equipment, and ensures that visual indicators and markings are clearly visible. Most importantly, it reduces the amount of dust that can fall into the unit when access panels are opened. The areas most prone to the accumulation of dust are the side panels and the hood.

The high repeat accuracy and output quality are dependent on clean exterior surfaces.

Cleaning Recommendations

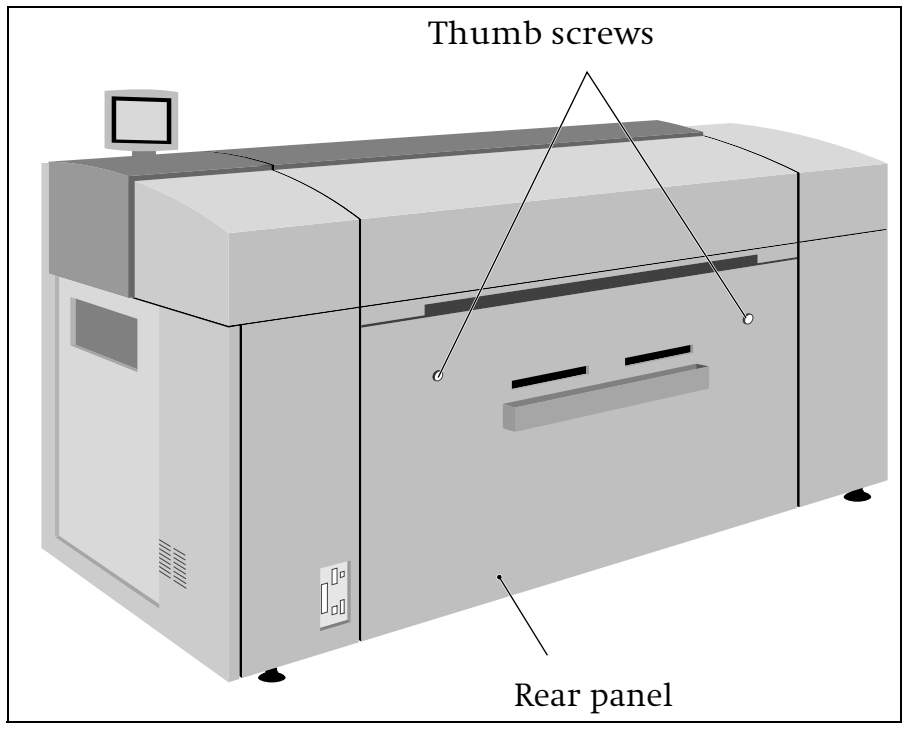
Before cleaning the exterior surfaces, you should vacuum all surfaces to remove any accumulated dust. It may be sufficient to simply wipe the surfaces clean with a dry cloth if the unit is cleaned frequently, and the environment is relatively dry and free of vapors. If the device is very dirty, clean with a damp cloth which has been dipped in dish-washing liquid and well wrung.

Warning: Ensure that no fluids enter the interior of the device and keep moisture away from the connections on the rear of the device.

Cleaning the drum

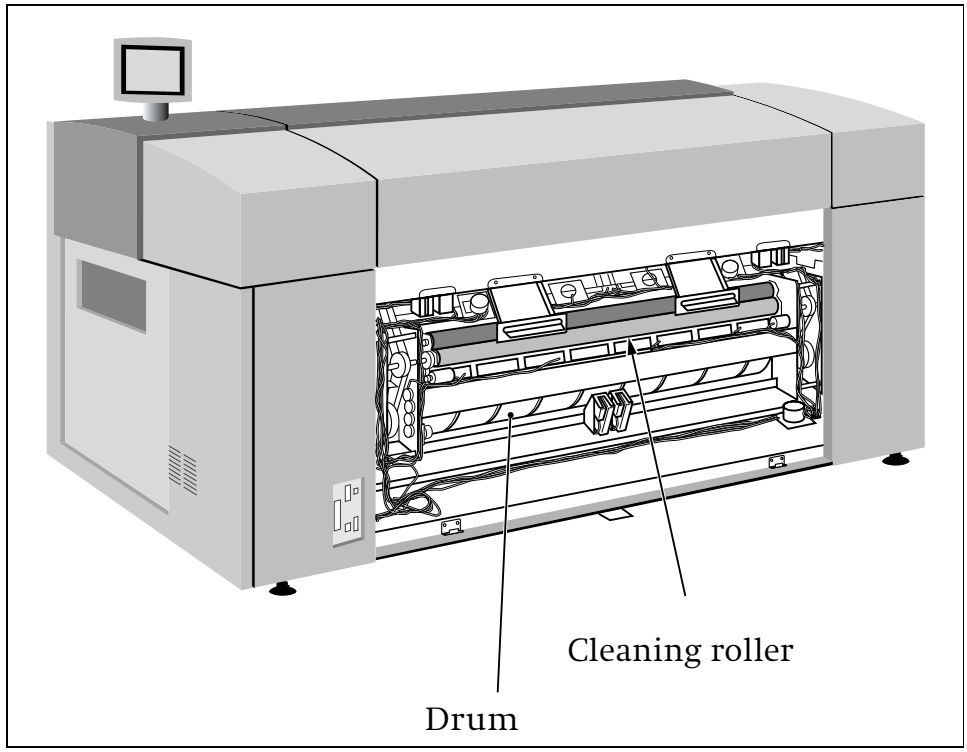
Warning: When the Topsetter P/PF 102is off, the drum locks and cannot be rotated for cleaning. The drum must therefore be cleaned with the unit switched on. An interlock prevents exposure to laser radiation and ensures the drum does not start rotating.

1. Verify that all doors and covers of the Topsetter P/PF 102 are closed.
2. Switch the Topsetter P/PF 102 on and wait until the initialization process has been completed.
3. Loosen the two thumb screws at the top of the rear panel and remove the rear panel.



Warning: Do not under any circumstances remove screws or covers not indicated in this step. Otherwise, there is a danger that the powerful invisible laser beam could cause injury to eyes and skin or even a fatal electric shock.

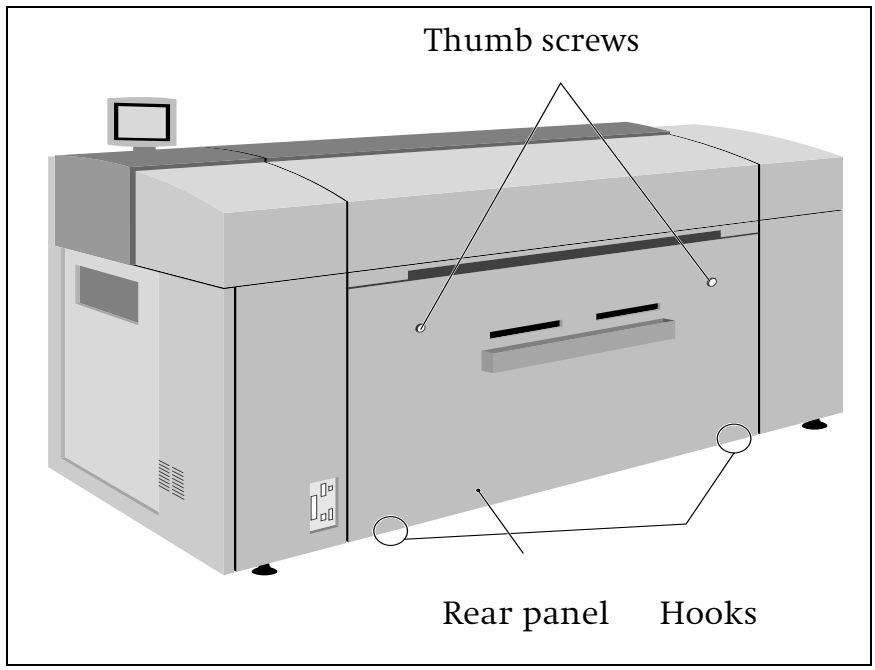
4. While rotating the drum by hand, wipe the surface of the drum with a cloth moistened with ethyl alcohol or film cleaner. The cloth must be soft, clean and lint-free.



Warning: Cleaning agents are flammable, therefore:

- Do not smoke during cleaning.
- Avoid electrostatic charges.
- Only use cleaning agents drop by drop to eliminate the risk of deflagration.

5. When you have finished cleaning, place the rear panel, with the recesses on the bottom edge, on the hooks.



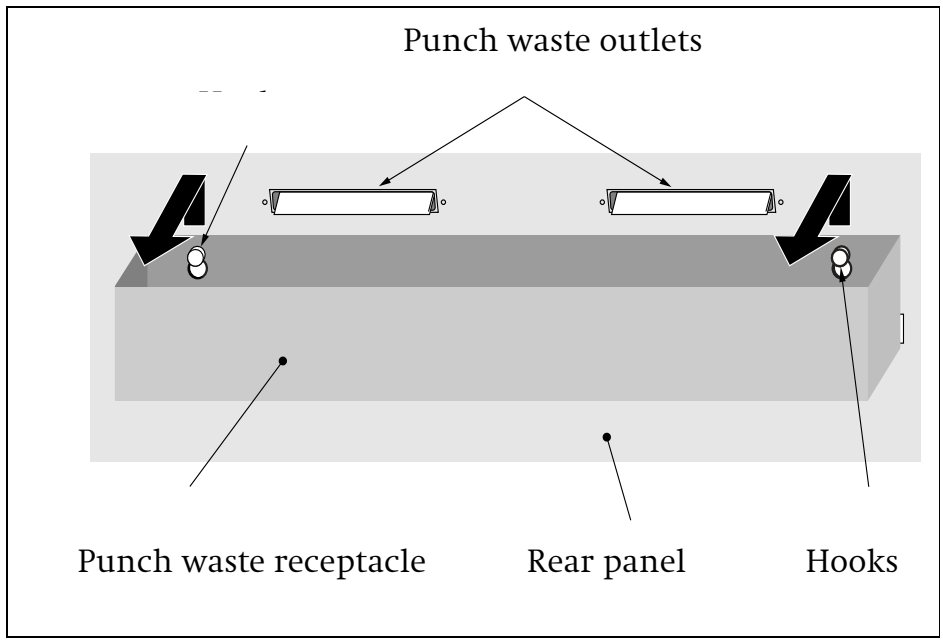
6. Press the rear panel against the unit so that the thumb screws fit in the corresponding holes and tighten them.

Attention: If the thumb screws are not tightened properly, the interlock will not disengage and a printing plate cannot be loaded. An error message is then displayed.

Removing punch waste

If your Topsetter P/PF 102 is equipped with an optional punch unit, the punch waste must be removed on a regular basis.

1. Remove the punch waste receptacle from the hooks on the rear panel.



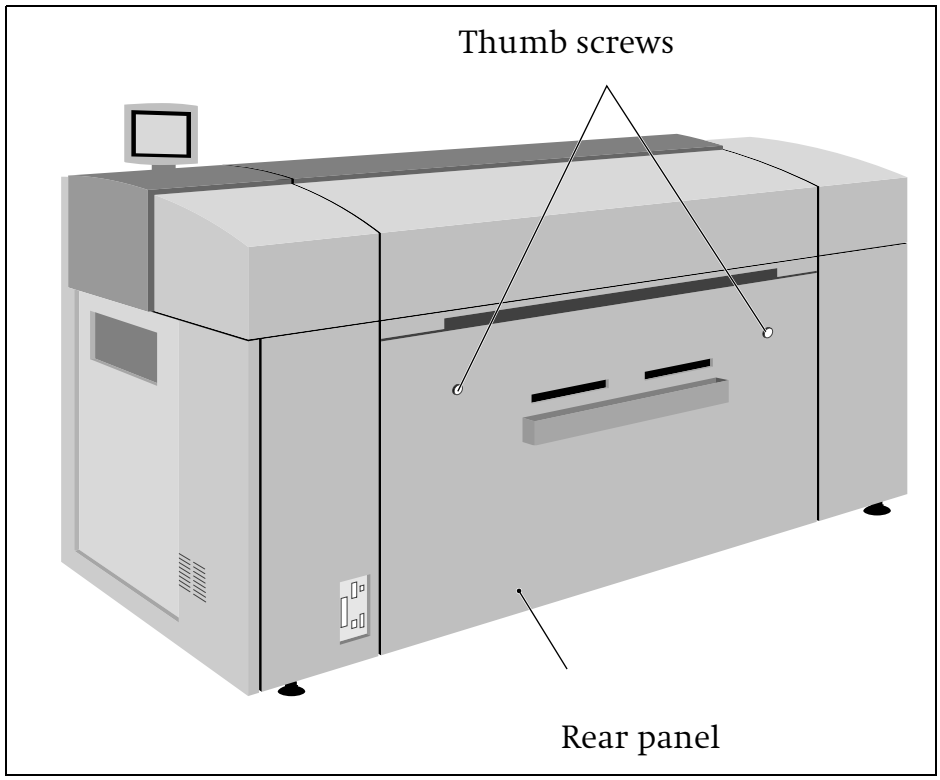
2. Empty the receptacle and fit it back on the hooks on the rear panel.

Cleaning the cleaning roller

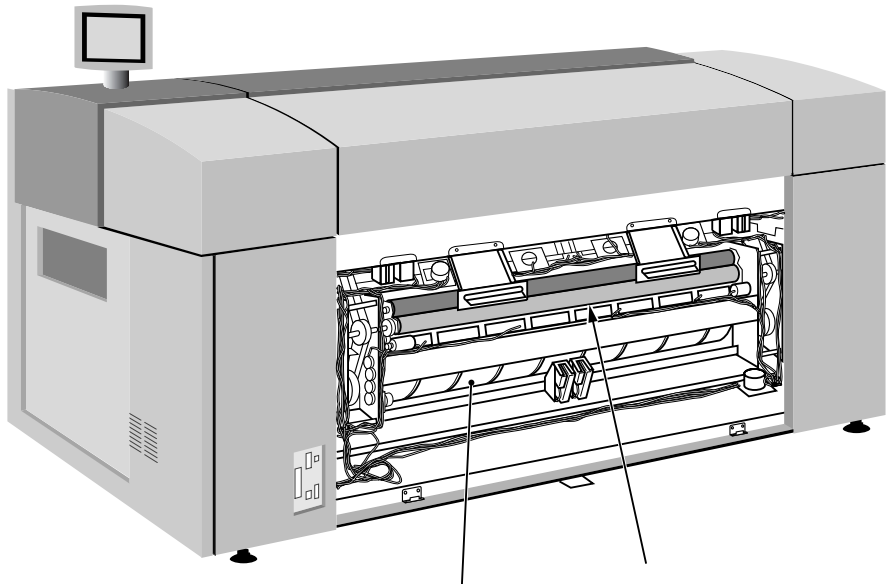
Warning: Do not under any circumstances remove screws or covers not indicated in this step. Otherwise, there is a danger that the powerful invisible laser beam could cause injury to eyes and skin or even a fatal electric shock.

Attention: Do not touch the drum.

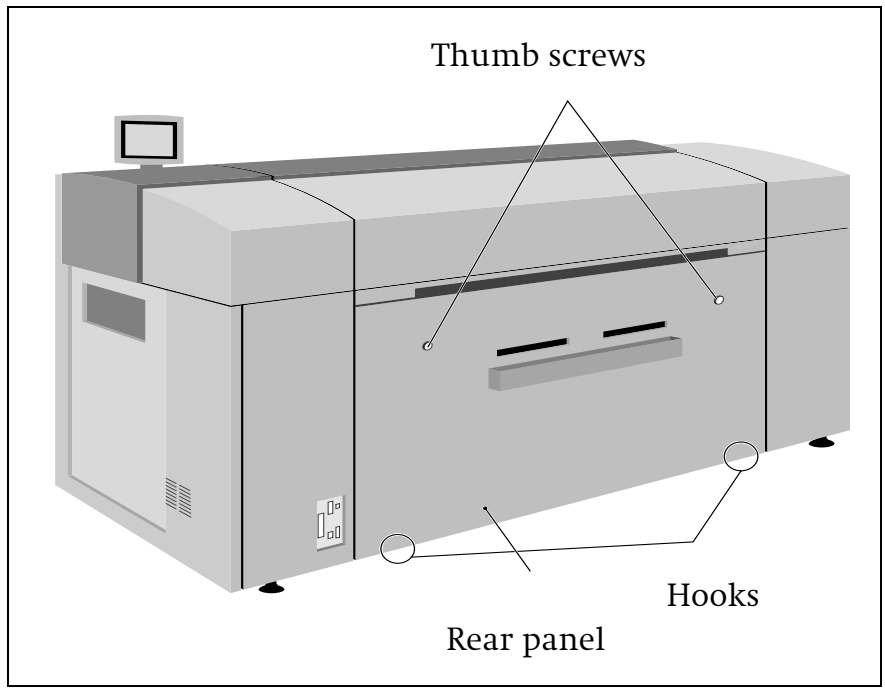
1. Loosen the two thumb screws at the top of the rear panel and remove the rear panel.



2. Use a soft, clean lint-free cloth moistened with water to wipe the cleaning roller (green). Turn the roller with your hand as you wipe.



3. When you have finished cleaning, place the rear panel, with the recesses on the bottom edge, on the hooks.

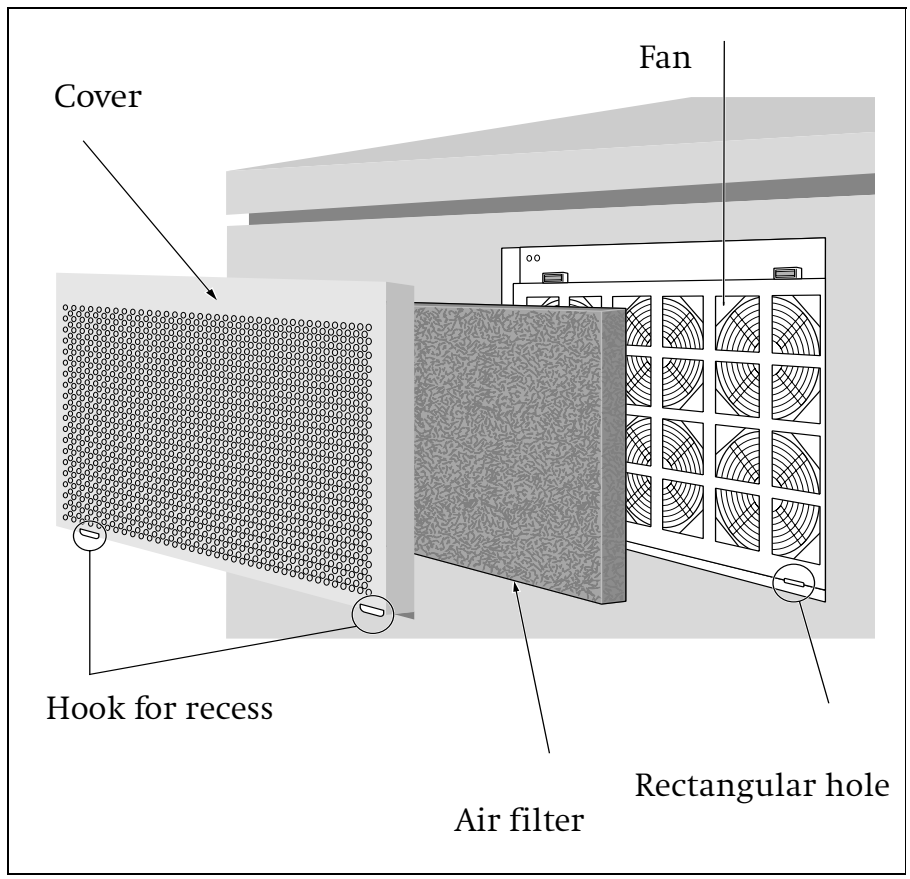


4. Press the rear panel against the unit so that the thumb screws fit in the corresponding holes and tighten them.

Attention: If the thumb screws are not tightened properly, the interlock will not disengage and a printing plate cannot be loaded or unloaded. An error message is then displayed.

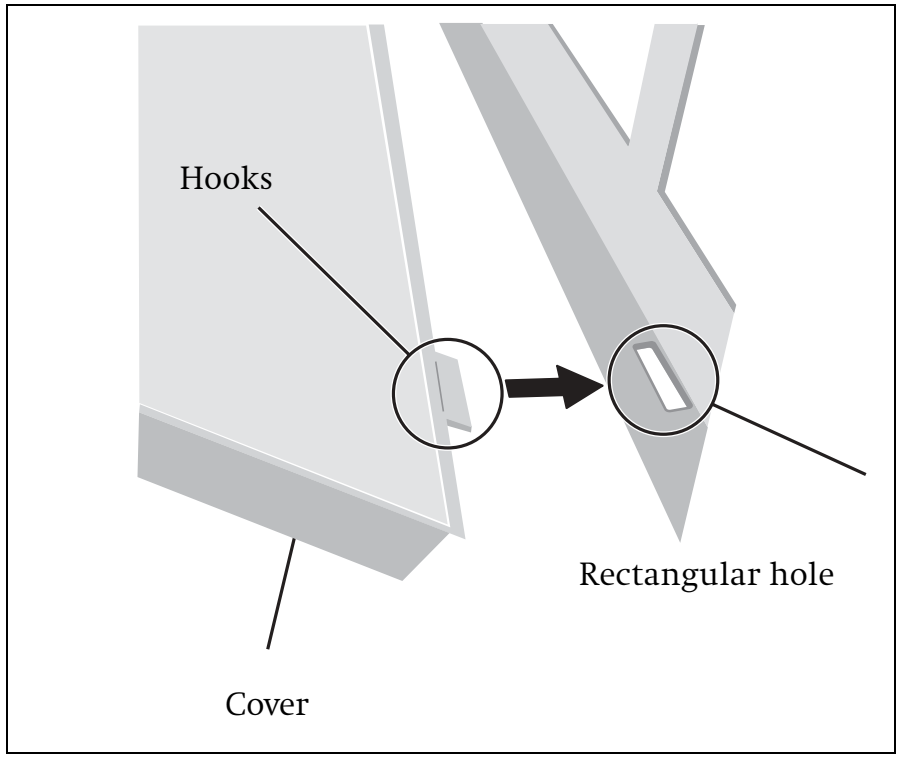
Cleaning the air filter

1. Remove the air filter cover (left side of Topsetter).



2. Remove the air filter from the cover.
3. Wash the external cover filter with water or a neutral detergent.
4. Dry the complete air filter and then re-fit it into the cover.

5. Refit the cover.



6. Reset the *Consumable Timer*, see section Checking the running time and setting the timers for consumables, page 4–89.

Operation request messages

When certain operations are required of the operator, a message will appear on the operating panel. An acoustic signal is also given.

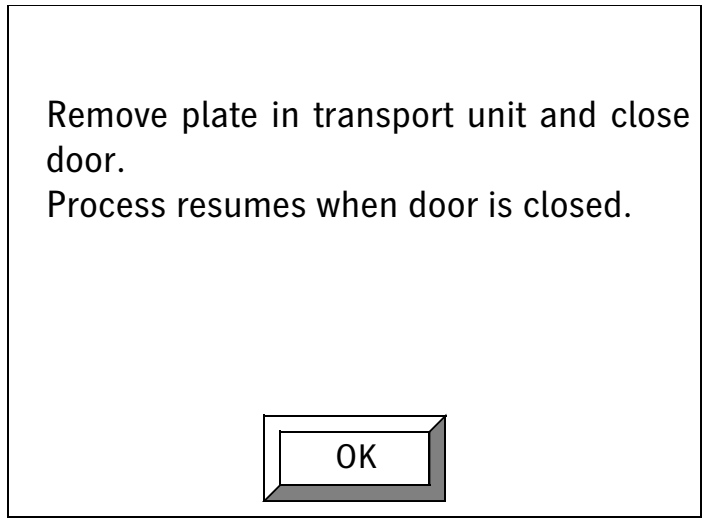
Removing the printing plate (1)

This message appears if a printing plate remains on the discharge table during the unloading process.

Operation:

1. Press the *OK* button to switch the signal off.
2. Remove the plate from the discharge table.
3. Close the operation door.

Removing the printing plate (2)

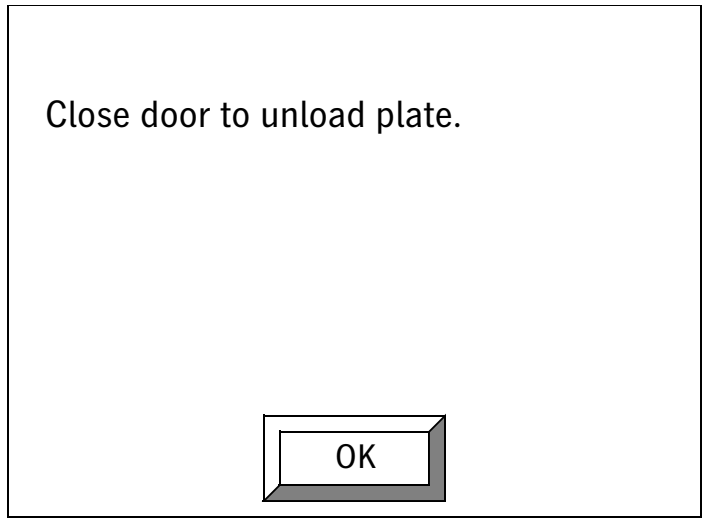


This message may appear if the printing plate remains on the discharge table during the unloading process.

Operation:

1. Press the *OK* button to switch the signal off. The *Cancel* button appears.
2. Remove the plate from the discharge table.
3. Close the operation door.
   If you press the *Cancel* button without closing the operation door, the process will be aborted.

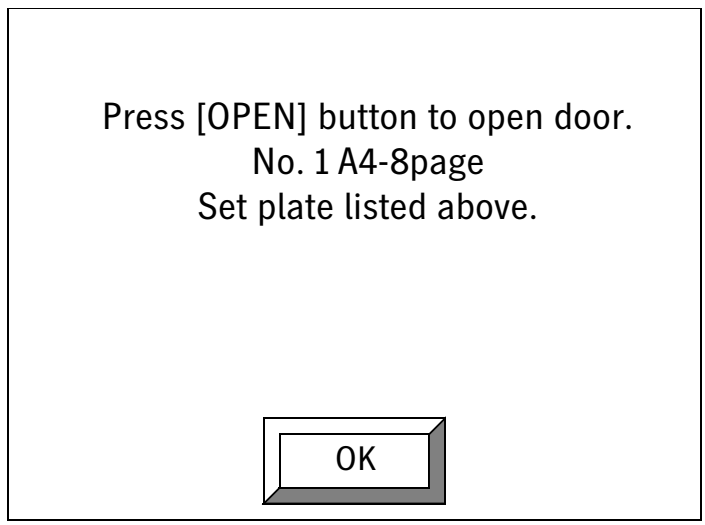
Enabling printing plate output



This message appears if the operation door is open during the unloading process.

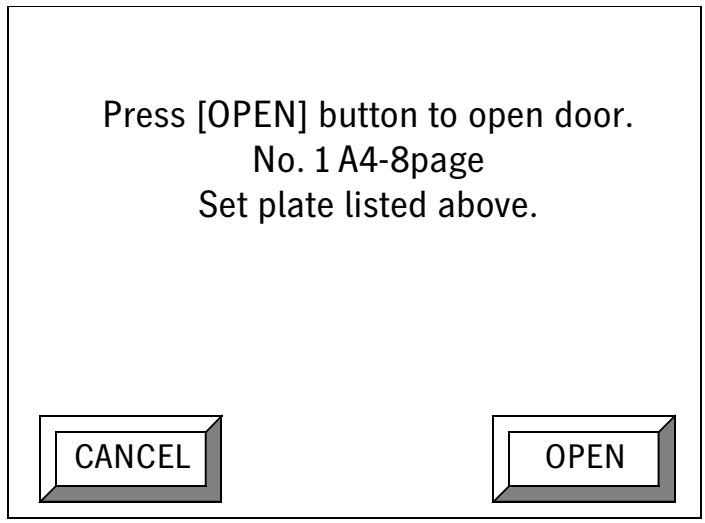
1. Close the operation door.

Loading the printing plate (1)

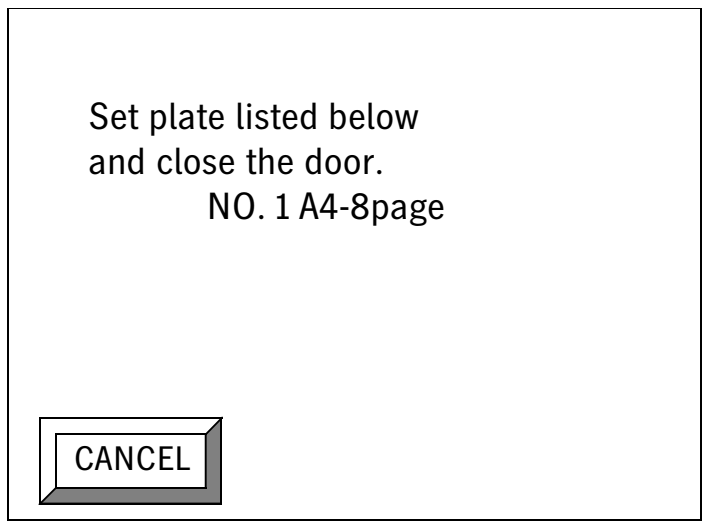


This message appears if a printing plate is to be loaded after a request from the workstation.

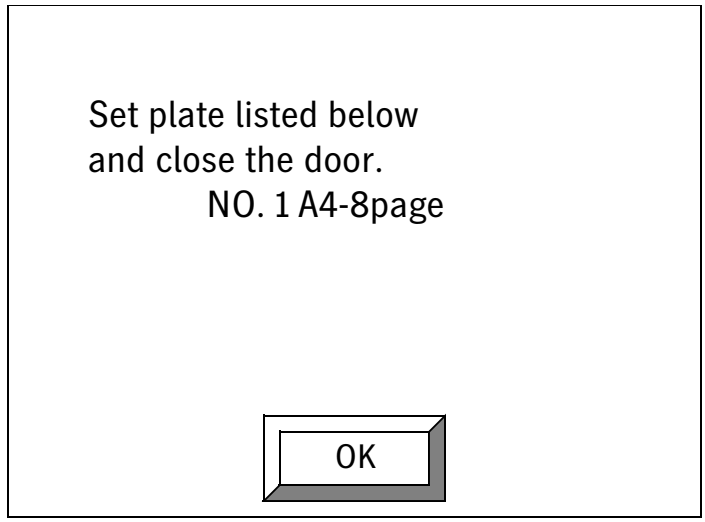
1. Press the *OK* button to switch the signal off. The following screen appears:



2. Press the *OPEN* button. The operation door opens and the message shown below appears on the operating panel.
   If you press the *Cancel* button, the request from the workstation is cancelled, and a corresponding message is displayed at the workstation.



Loading the printing plate (2)

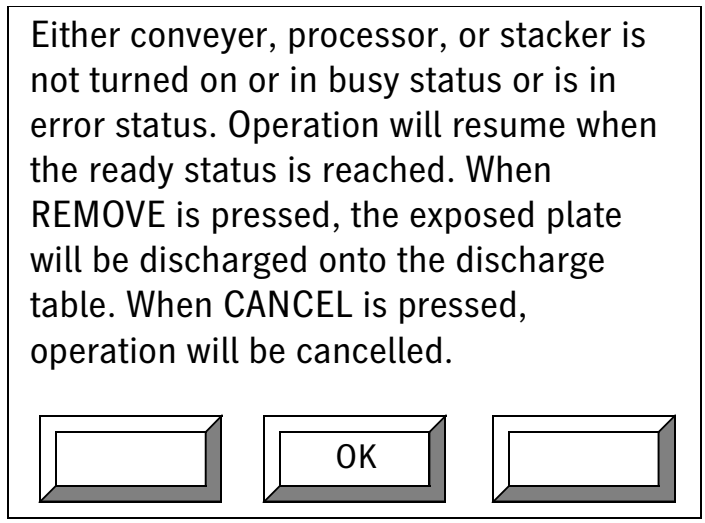


This message appears if the operation door is open after a request from the workstation to load a printing plate.

1. Press the *OK* button to switch the signal off. The following display appears on the operating panel:

2. Place the requested printing plate on the insertion table and close the operation door. If you press the *Cancel* button, the request from the workstation is cancelled and a corresponding message is displayed at the workstation.

Output of a printing plate to an online processor (1)



This message appears when printing plate output to an online processor is selected.
An exposed plate cannot be output and the next exposure requested by the workstation cannot be performed because

the conveyor,

online processor or

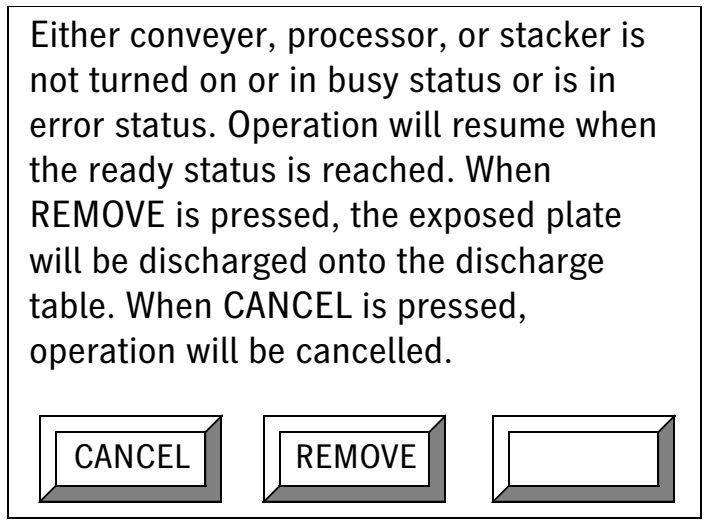
stacker

are not switched on,

an error has occurred or

one of the units is still processing a printing plate.

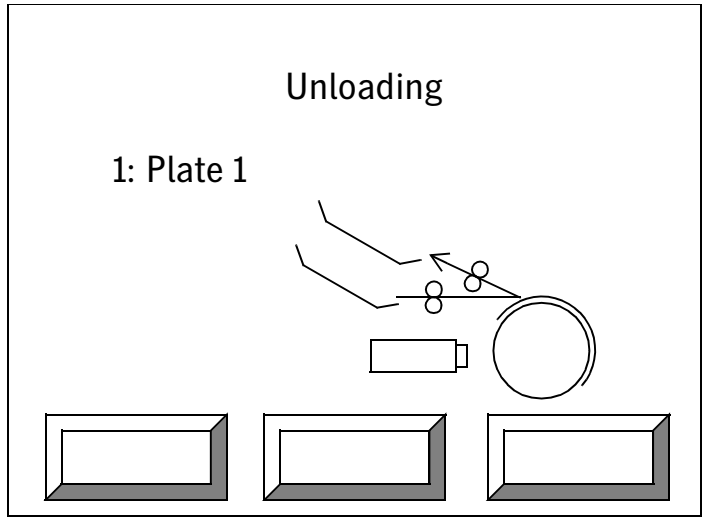
1. Press the *OK* button to switch the signal off. The following screen appears:



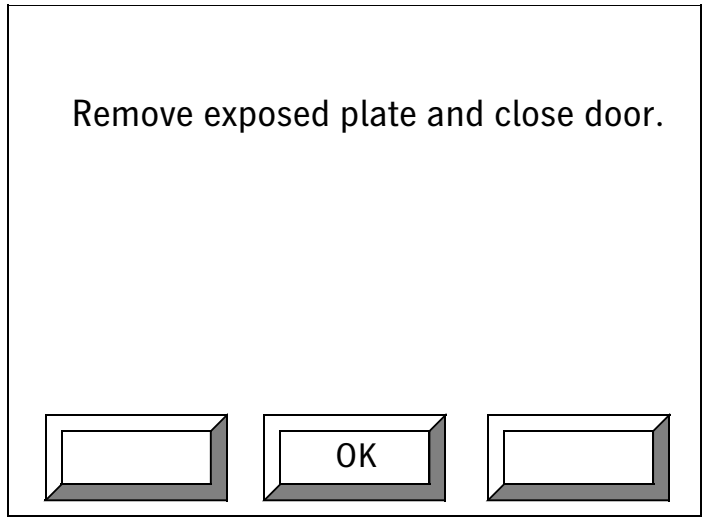
2. Perform one of the three operations listed below:

   - When the conveyor, online processor and the P/PF 102 Autoloader are all in the ready state, the exposed plate will automatically be transported to the online processor. The next plate will be loaded and exposed. The normal screen reappears on the operating panel.
   - If the *REMOVE* button is pressed, the exposed printing plate is transported to the discharge table. The next plate will be loaded and exposed. The screen remains.
   - If the *CANCEL* button is pressed, the exposed printing plate is transported to the discharge table. The request from the workstation is cancelled.

If the *REMOVE* button or the *CANCEL* button is pressed, the following screen appears on the operating panel and the exposed printing plate is transported to the discharge table.

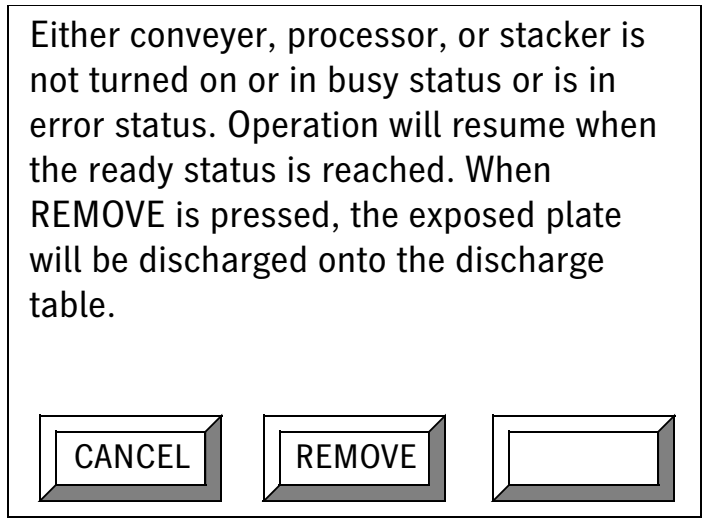


When the unloading process has been completed, the following screen appears on the operating panel:



3. Press the *OK* button to switch the signal off.
4. Remove the printing plate from the discharge table and close the operation door.

Output of a printing plate to an online processor (2)



This message appears when printing plate output to an online processor is selected.
The exposed printing plate cannot be output because

the conveyor,

online processor or

stacker

are not switched on,

an error has occurred or

one of the units is still processing a printing plate.

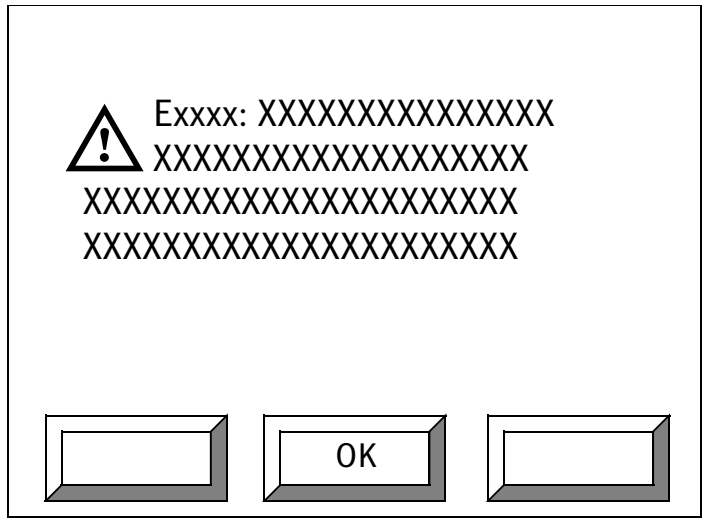
Perform one of the operations listed below.

- When the conveyor, online processor and stacker are all in the ready state, the exposed plate will automatically be transported to the online processor.
- Press the *REMOVE* button to transport the exposed printing plate to the discharge table.

Warning messages

After mal-operation of the unit or if it becomes necessary to warn the operator for some reason, a message like the one shown below is displayed. This message consists of a four-digit hexadecimal error code "Exxxx" and an error message.

Note: The last three digits of the error code describe the contents of the error.
The first digit in the error code specifies the seriousness of the error or the remedial measure.

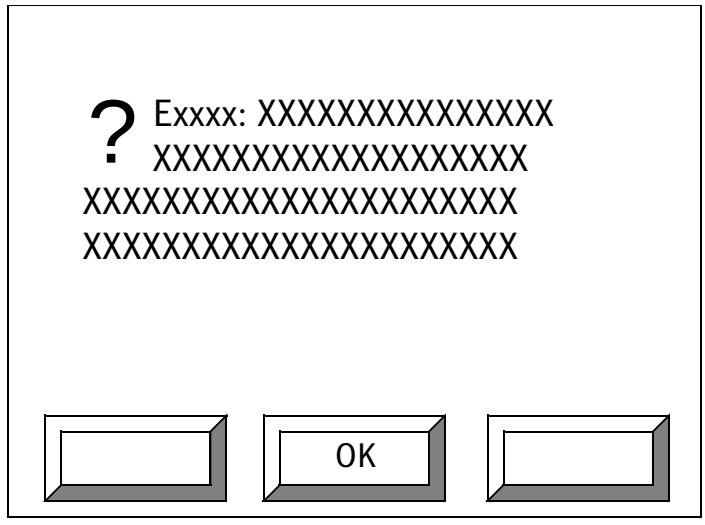


After mal-operation of the unit, an acoustic signal is given and a warning message (see above) is displayed on the operating panel.

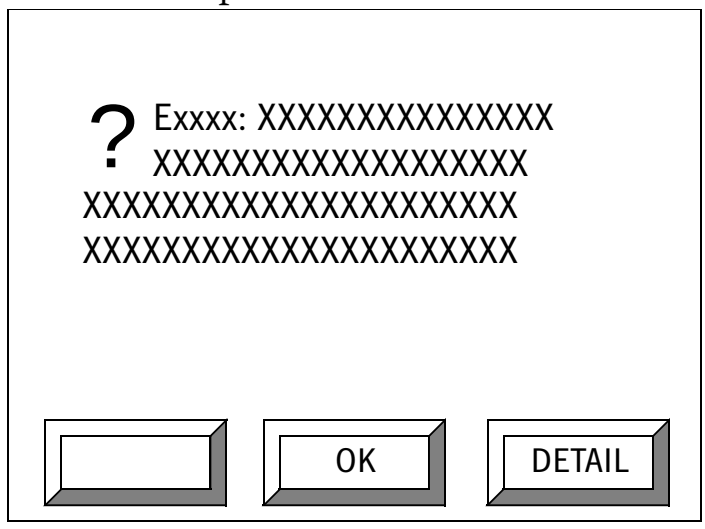
1. Press the *OK* button to return to the original screen (or the previous screen). Continue operation.
2. If it is necessary to warn the operator during normal operation of the unit, the screen shown above appears and an acoustic signal is given.
3. Press the *OK* button. The previous screen appears and normal operation is resumed.

Error displays

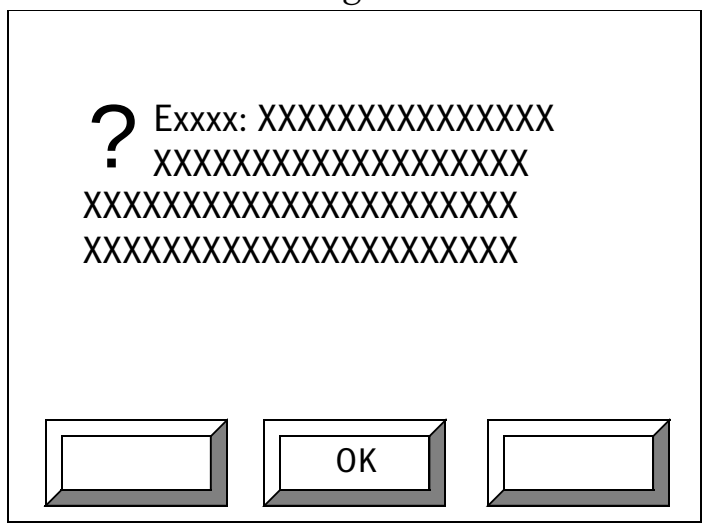
If an error occurs, the screen shown below appears and an acoustic signal is given:



1. Press the *OK* button to switch the signal off. The following screen appears on the operating panel with a brief description of the error:



2. For a more detailed description, press the *DETAIL* button. The screen shown below will appear with the detailed error message.:



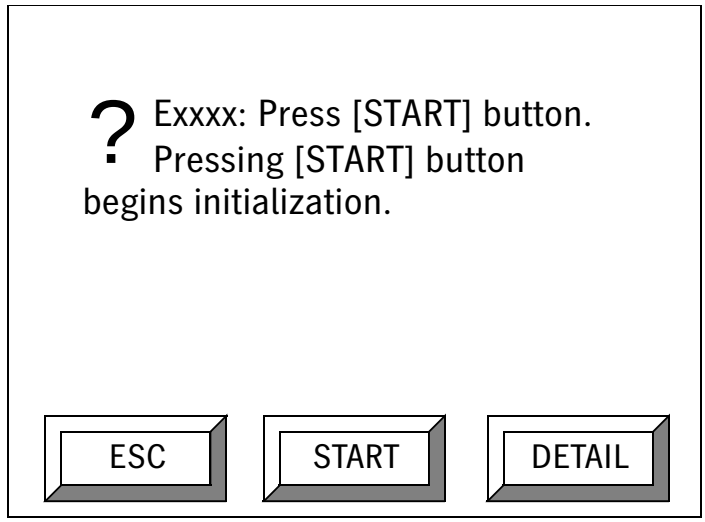
3. Press the *OK* button to return to the original error message screen.

Errors that do not have to be reset

If there is no need to reset the error, pressing the *OK* button will restore the original screen (or the previous screen). Normal operation can be resumed.

Errors that have to be reset

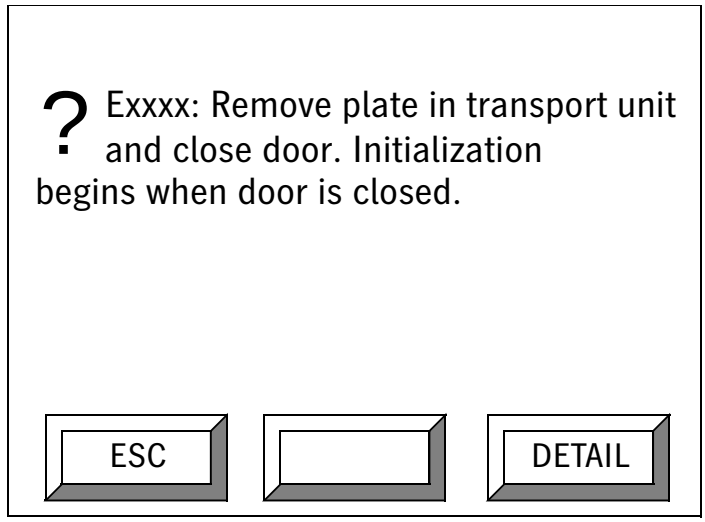
If the error requires you to reset the error before you can resume operations, pressing the *OK* button at the error display screen will bring up one of the screens shown on the following page:



Pressing the *ESC* button restores the error message screen.

When the *DETAIL* button is pressed, a detailed description of the error is displayed.

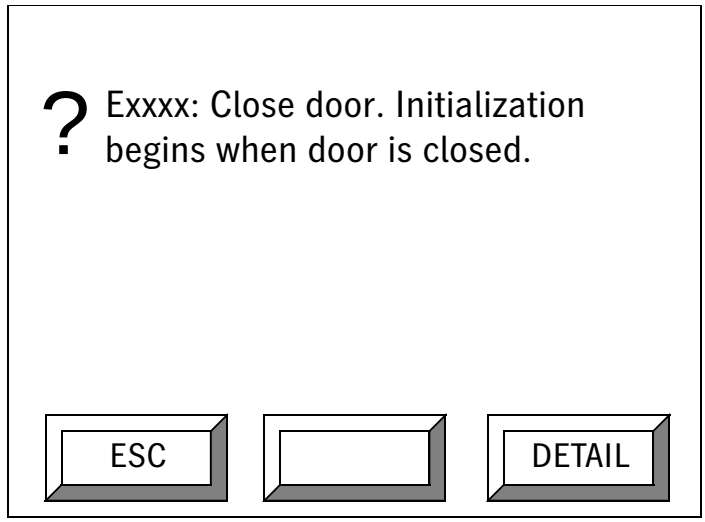
Press the *START* button to begin initialization (error reset). Once the initialization process has been successfully completed, the original screen (or the previous screen) reappears.



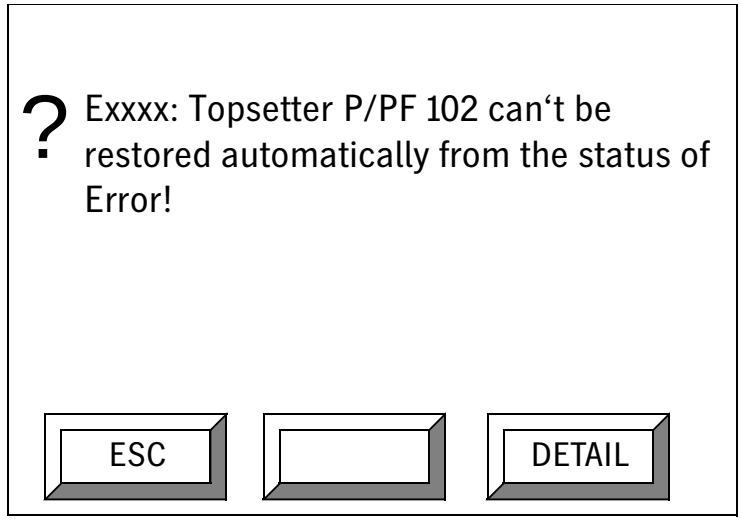
This message appears if it is necessary to remove a printing plate from the transport unit before starting initialization (error reset).

Remove the printing plate from the transport unit (insertion table and/or discharge table) and then close the operation door.

When the operation door is closed, initialization (error reset) will resume. Once the initialization process has been successfully completed, the original screen (or the previous screen) reappears.

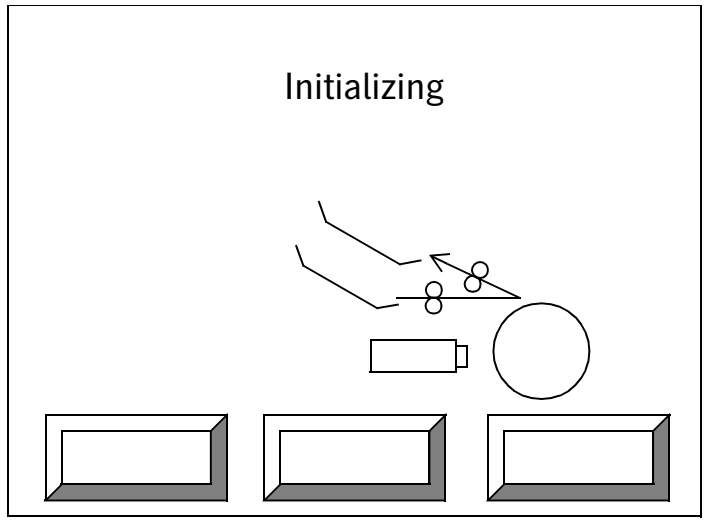


When the operation door is closed, initialization (error reset) will resume. Once the initialization process has been successfully completed, the original screen (or the previous screen) reappears.

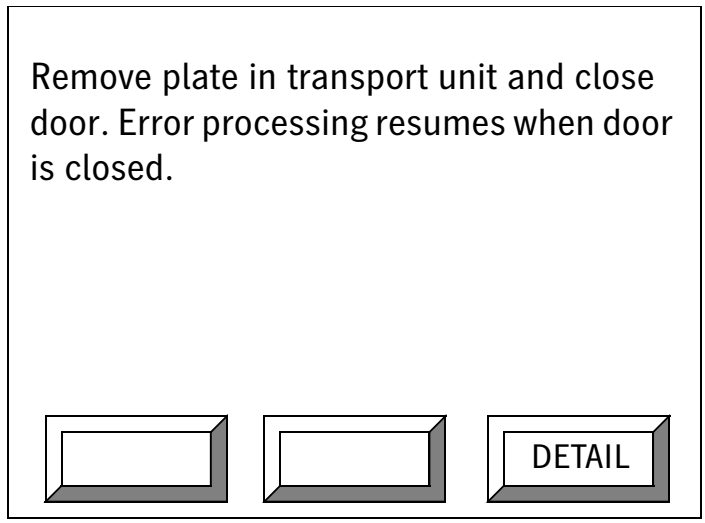


This message appears if a plate jam or other such problem has occurred that requires Heidelberg service technicians to reset the error. If this screen appears, call Heidelberg Support.

Note: During initialization, the screen shown below is displayed. Once the initialization process has been successfully completed, the original screen (or the previous screen) reappears.



Note: If it is necessary to remove a printing plate that was transported on the insertion or discharge table during initialization, the following message appears.



If this message appears, remove the printing plate from the transport unit (insertion table and/or discharge table) and then close the operation door.

When the operation door is closed, initialization (error reset) will resume. Once the initialization process has been successfully completed, the original screen (or the previous screen) reappears.

Error code/Error message

The messages consist of a 4-digit hexadecimal error code (Exxxx) and an error message.

The last three digits of the error code describe the contents of the error.
The first digit in the error code specifies the seriousness of the error or the remedial measure.

Exxxx: Mechanical error

This message is displayed if there is a printing plate jam or some other mechanical error occurs while the plate is being conveyed. Press the *DETAIL* button for more detailed information.

Exxxx: Electrical error

This message appears if an error occurs in the electronics during exposure. Press the *DETAIL* button for more detailed information.

Exxxx: Exposure head error

This message appears if an error occurs concerning the exposure head. Press the *DETAIL* button for more detailed information.

Exxxx: System error

This message appears if there is a control software error. Contact Heidelberg Support.

Exxxx: Remove plate in transport unit.

This message appears if there is still a printing plate in the transport unit, e.g. during initialization. Press the *DETAIL* button for more detailed information.

Exxxx: Plate size is incorrect.

This message appears

- if a printing plate of a different size than requested is loaded,
- if a different plate size is selected during loading or
- if a plate size is entered, which does not match the plate settings.

Exxxx: Plate conveyance to conveyor error.

This message is displayed if an error occurs during transportation of the plate to the online processor.

Open the conveyor cover and remove the plate. Close the conveyor cover and press the *START* button. Initialization begins.

After pressing the *OK* button, the following message appears: ”Exxxx: Error occurred during transfer of plate to conveyor”. Open the conveyor cover and remove the plate. Close the conveyor cover and press the *START* button. Initialization begins.

Exxxx: Some LD cannot be calibrated to target power. Contact office or agency and ask to replace them.

This message is displayed if an LD (laser diode) is detected that could not be set to the specified laser power when calibration was performed.

If an initialization process has been performed after the occurrence of this error, exposure can be performed again. However, the quality of the image may be impaired.

Please contact Heidelberg Support to have the laser diode replaced.

Once this message appears, it will be displayed as a warning after every fourth exposure performed until the laser diode is replaced and laser calibration is performed.

Ex400: Plate has already been loaded

This message appears if an attempt is made to load a printing plate when a plate is already loaded.

Ex401: Plate has not been loaded.

This message appears if an attempt is made to unload a printing plate when there is no plate loaded.

Ex402: Door is open.

This message appears if the operation door is open. Close the operation door.

Ex143: A plate remains on the discharge table in the transport unit.

This message appears if there is a printing plate on the discharge table, e.g. during initialization, when there should not be a plate in the transport unit. Remove the plate.

Ex144: A plate remains on the insertion table in the transport unit.

This message appears if there is a printing plate on the insertion table, e.g. during initialization, when there should not be a plate in the transport unit. Remove the plate.

Ex14C: Front cover or rear is open. (Some interlock switches are OFF.)

This message appears when either the front or rear cover is not fitted properly. Fit the covers correctly.

Ex14E: Thumb screw is not tightened securely on the rear cover. (The servo stop switch is OFF.)

This message appears when the thumb screw for the rear cover is not completely tightened. Tighten the screws properly.

Ex186: Drum's vacuum pressure is not sufficient.

This message appears if the drum vacuum is insufficient. Check if a blower hose or a connection has come loose.

Ex188: Drum operation is halted due to low pressure in the drum.

This message appears if the drum is stopped due to a lack of vacuum.

Ex189: Door is open.

This message appears if the operation door is open. Close the operation door.

Ex18A: Door does not open.

This message appears if the operation door has not been opened.

Press the *OK* button. If the *OPEN* button appears, press the *OPEN* button to open the operation door. If the *OPEN* button does not appear, insert a long wire into the hole below the lock on the operation door and unlock it. Then open the operation door.

Ex18C: Blower does not operate (check if power to blower is not turned on, if control cable is not connected, or if blower is malfunctioning).

This message appears if the blower is not turned on, if the connecting cable is not connected, or if the blower is malfunctioning. Check if the blower is turned on and the connecting cable is connected. If so, then the blower is malfunctioning. Contact Heidelberg Support.

Ex18E: Door does not open, because some interlock switches are OFF (front cover or rear cover is open.)

This message appears when either the front or rear cover is not fitted properly.

Ex600:
Ex601: Either the conveyor, processor, or stacker is not turned on or is in the busy status or is in error status.

This message appears if plate output to an online processor is selected.
The exposed printing plate cannot be output because

the conveyor,

online processor or

stacker

are not switched on,

an error has occurred or

one of the units is still processing a printing plate.

Ex80D: The result of the calculation [Initial value + increment value x (repetition - 1)] exceeds the upper limit value.

This message appears if a setting for the test exposure exceeds the upper limit value.

Ex80E: (The result of the calculation [Exposure starting point + (pattern width + gap) x (repetition - 1)] exceeds the plate size.

This message appears if a setting for the test exposure exceeds the exposable area of the printing plate.

Ex80F: The specified plate is not linked with the printer's data.

This message appears if the loaded printing plate does not match the selected printing machine data.

Ex812: Plate (printer) size specified by host computer is not registered.

This message appears when exposure is performed from another workstation, and the plate size specified by the workstation is not contained in the selected printing machine data. Save the requested plate size and allocate it to the printing machine data.

Ex813: Image size specified by host computer is larger than allowable output image size.

This message appears if the specified image size from the workstation is larger than 1160 mm x 940 mm, or is larger than the possible output size for the specified printing machine. Check the specified image size and the size possible on the selected printing machine.

Ex814: Current offset of printing machine settings cause image to extend off plate.

This message is displayed if the offset settings position the image outside exposable area. Check the offset settings.

Ex815: Current offset of printing machine settings cause image to extend off plate.

This message appears if the positioning settings position the image outside the exposable area. Check the positioning settings.

Note: The allowable exposure area is the maximum plate size of 1160 x 940 mm plus 9 mm on each the top, bottom, left, and right.

Ex817: Some LD is nearing the end of its usable life. Contact our office or agency and ask to replace them.

This message is displayed if a laser diode nearing the end of its service life is detected when calibration is performed. The quality of the exposure is not impaired. Please contact Heidelberg Support to have the laser diode replaced.

Once this message is displayed, the same message will be displayed every time the Topsetter is turned on until you have the LD (laser diode) replaced and perform calibration.

Ex81b: Some LD cannot be calibrated to target power. Contact our office agency and ask to replace them.

This message appears if a laser diode cannot be set to the normal laser power. The image quality is not affected, but the laser diode is reaching the end of its service life. Please contact Heidelberg Support to have the laser diode replaced.

Ex81c: Some LD cannot be calibrated to target power. Contact our office agency and ask to replace them.

This warning message appears if a laser diode is detected that does not reach the normal power and thus the calibration can only be set for half of the 32 channels for exposure. The image quality is not affected. However, the time required for exposure will double. Please contact Heidelberg Support to have the laser diode replaced.

Ex81d: Some LD cannot be calibrated to target power. Contact our office agency and ask to replace them.

This message is displayed if exposure is not possible because the laser power specified in the media (plate) type settings is not attained after calibration. Perform a laser calibration.

Ex81E: Temperature of environment rises. Lower temperature of the environment.

This message appears when the ambient temperature exceeds 28°C. Lower the ambient temperature.

Ex81F: Temperature of environment lowers. Increase temperature of the environment.

This message appears when the ambient temperature drops below 18 °C. Increase the ambient temperature.

Ex820: Sensor for temperature of environment has not been connected.

This message appears after two unsuccessful attempts to connect to the sensor for measuring ambient temperature.

Ex821: Trail clamps are nearing the end of their usable life. Please contact office or agency to replace them.

If this message appears, please contact Heidelberg Support. The clamps only have a limited servide life and you need new ones (please order replacements).

Ex822: The clamps have been used for more than the endurance time. Please contact office or agency to replace them.

If this message appears, you have not reacted when message Ex821 was displayed. Please contact Heidelberg Support immediately and order the necessary spares.

Ex825: Calibration must be done because there is some LD which doesn‘t reach the target power. But, LD calibration can not processed because temperature of LD block is too low.

This message is displayed if a laser diode is detected during laser measurement which does not have the specified value. The temperature in the Topsetter is too low. Increase the temperature and initiate laser calibration on the operating panel. Should you reset the error you will only be able to expose 15 plates, the error will occur again when the 16th plate is processed. Image quality could be adversely affected until calibration has been performed.

Ex826: The direction where a connected conveyor can‘t be changed is set up in the plate types setting.

If this message is displayed, please check all settings for all (1-15) of the printing plate types. The straight conveyor cannot switch. If a plate setting does not correspond to the direction setting for the straight conveyor - i.e. the output direction parameter has a different value - select the active icon and save the setting.

Ex82A: Since the light intensity of laser diodes is detected as having deviated more than 5% from the specified value, the equipment executes the calibration.

This message appears if automatic calibration was performed because a deviation was detected during laser measurement. This laser measurement is performed after 16 plates.

ExEF6: LD calibration can not processed because temperature of LD block is too low.

This message is displayed if the internal temperature of the Topsetter is lower than 20°C and thus a laser calibration cannot be performed.

Exexx: Temperature of the LD block in the exposure head rises. Lower temperature of the environment.

Lower the ambient temperature.

Exexx: Temperature of the LD block in the exposure head rises. Wait for a while until temperature inside the machine falls.

Wait for a while until the temperature inside the machine has dropped.

Exexx: Temperature of the LD block in the exposure head lowers. Wait for a while until temperature inside the machine rises.

Wait for a while until the temperature inside the machine has risen.

Exexx: The exposure head has dew. Wait for a while until temperature inside the machine rises.

Wait for a while until the temperature inside the machine has risen.

Exexx: The exposure head has dew. Lower humidity.

Reduce air humidity.

Exexx: It is just before an exposure head has dew. Wait for a while until temperature inside the machine rises.

Wait for a while until the temperature inside the machine has risen.

Exexx: It is just before an exposure head has dew. Increase temperature of the environment slowly.

Slowly increase the ambient temperature.

Exexx: Temperature of the radiator in the exposure head rises. Lower temperature of the environment.

Lower the ambient temperature.

Exexx: Temperature of the radiator in the exposure head rises. Wait for a while until temperature inside the machine falls.

Wait for a while until the temperature inside the machine has dropped.

Exexx: Temperature of the radiator in the exposure head rises. Please call a serviceman.

Contact Heidelberg Support.

Exexx: Temperature inside the machine around the exposure head rises. Lower temperature of the environment.

Lower the ambient temperature.

Exexx: Temperature inside the machine around the exposure head rises. Wait for a while until temperature inside the machine falls.

Wait for a while until the temperature inside the machine has dropped.

Exexx: Temperature inside the machine lowers.

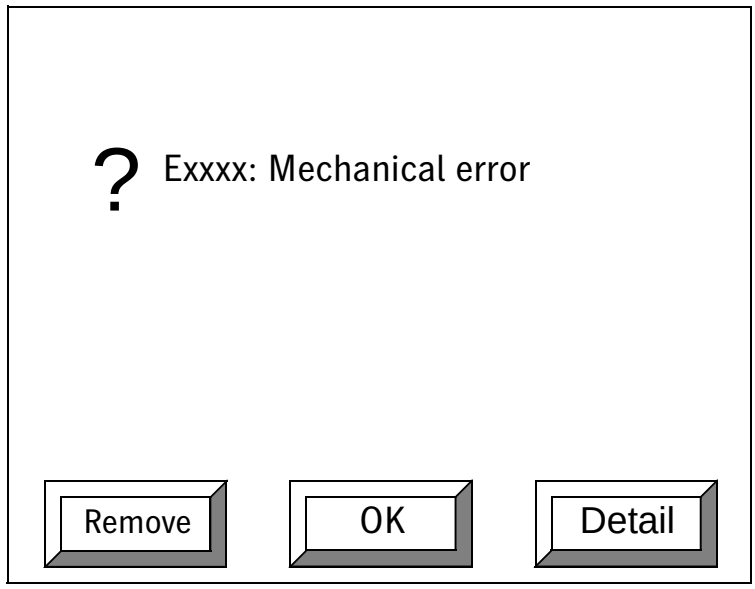
The temperature inside the machine is falling.

Exexx: Temperature inside the machine lowers. Increase temperature of the environment.

Increase the ambient temperature.

Eliminating a printing plate jam

When a plate jam occurs, the error rectification procedure in the Topsetter P/PF 102 ensures that the jammed plate will be discharged. The operator does not therefore have to remove the printing plate manually from inside the unit under normal circumstances.

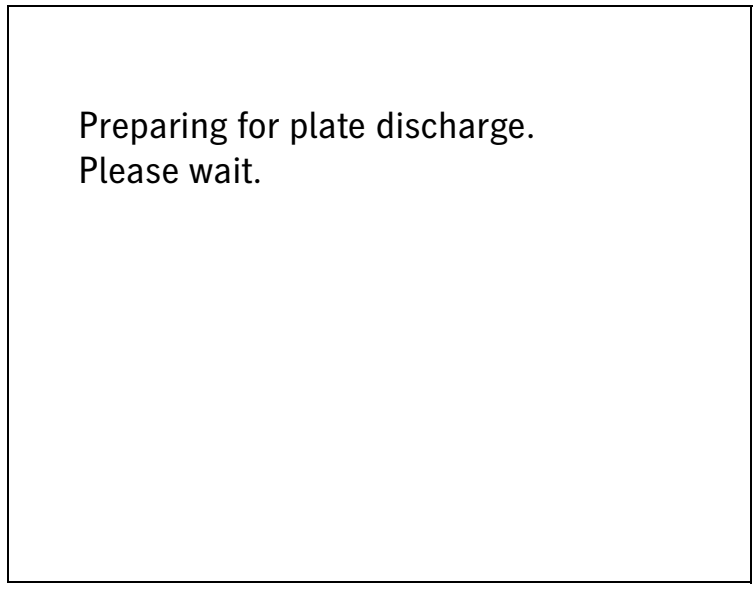


This error message appears if an error occurs concerning the plate conveyance. If, after initialization (error reset), the same error occurs again, the *Remove* button appears.

Note: The *Remove* button does not appear for all errors. The button is displayed depending on the type of error.

1. Press the *OK* button to perform initialization.
   If the *Remove* button appears, remove the printing plate according to the following procedure:

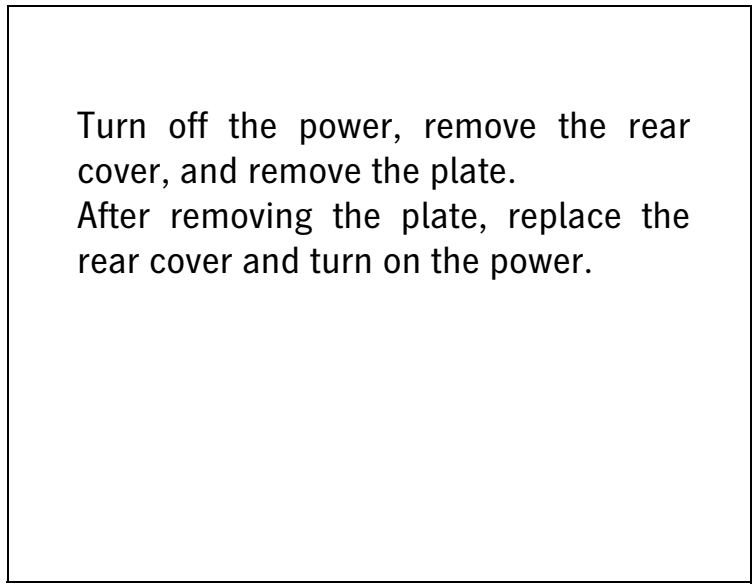
2. Press the *Remove* button. The *Plate removal preparation* screen appears while the Topsetter P/PF 102 performs preparations for plate removal.



Note: During this procedure, the drum will be spinning and noises caused by the plate moving inside the unit can be heard. These are normal and do not constitute a problem.

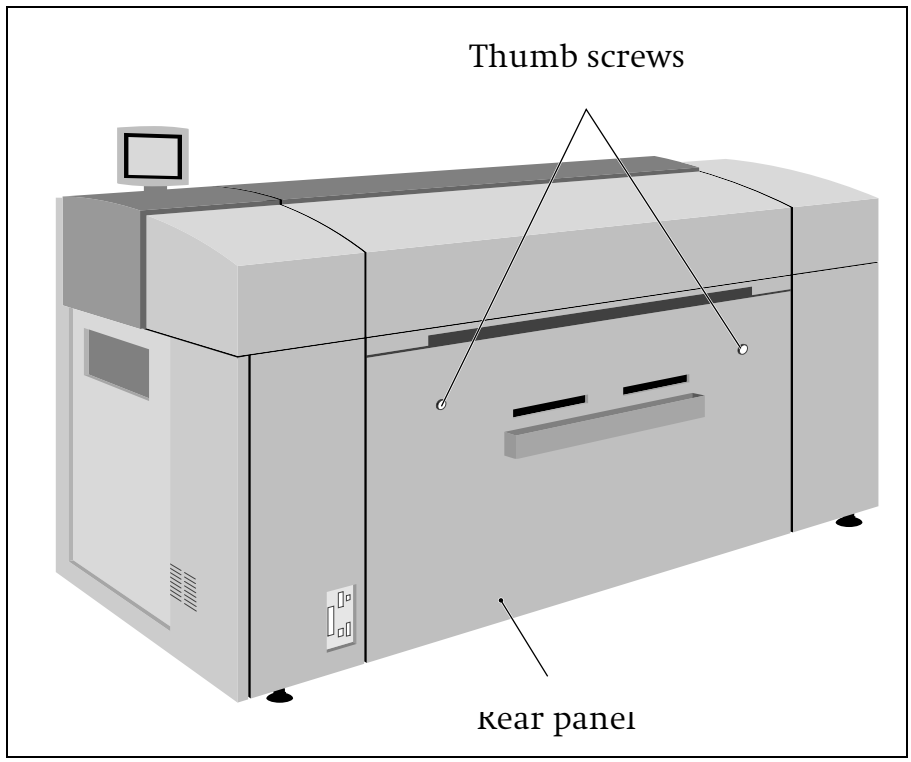
Attention: If an error occurs during this procedure, then it is not possible to continue. Contact Heidelberg Support.

3. After plate removal preparation is completed, the *Plate removal* screen appears.



4. Switch the unit off.

5. Loosen the knurled screws on the rear panel and remove it.

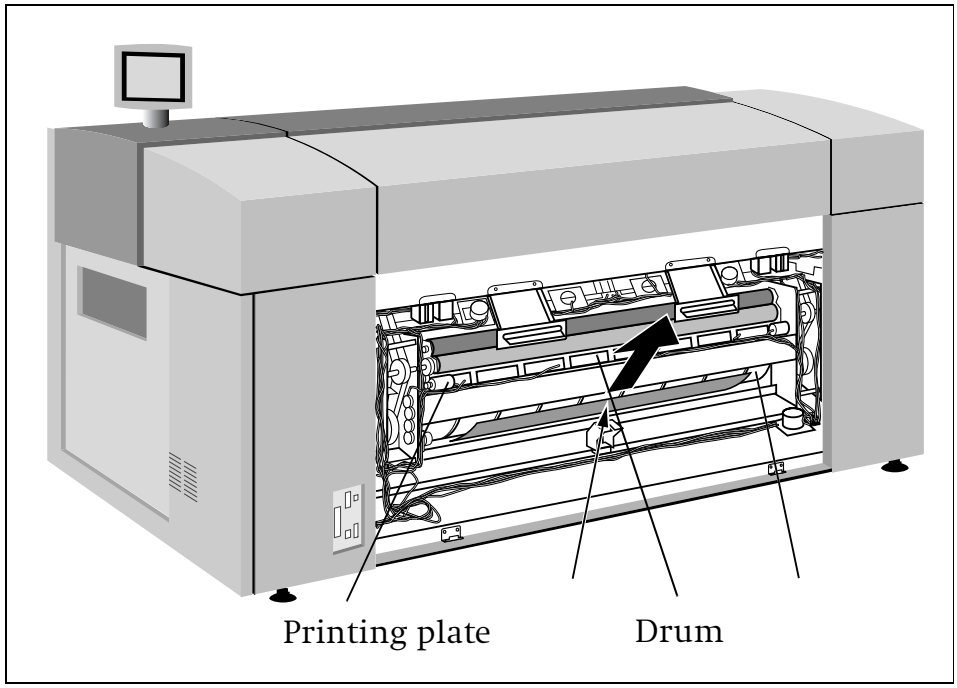


The printing plate is now visible below the drum (even small plates are visible below the drum).

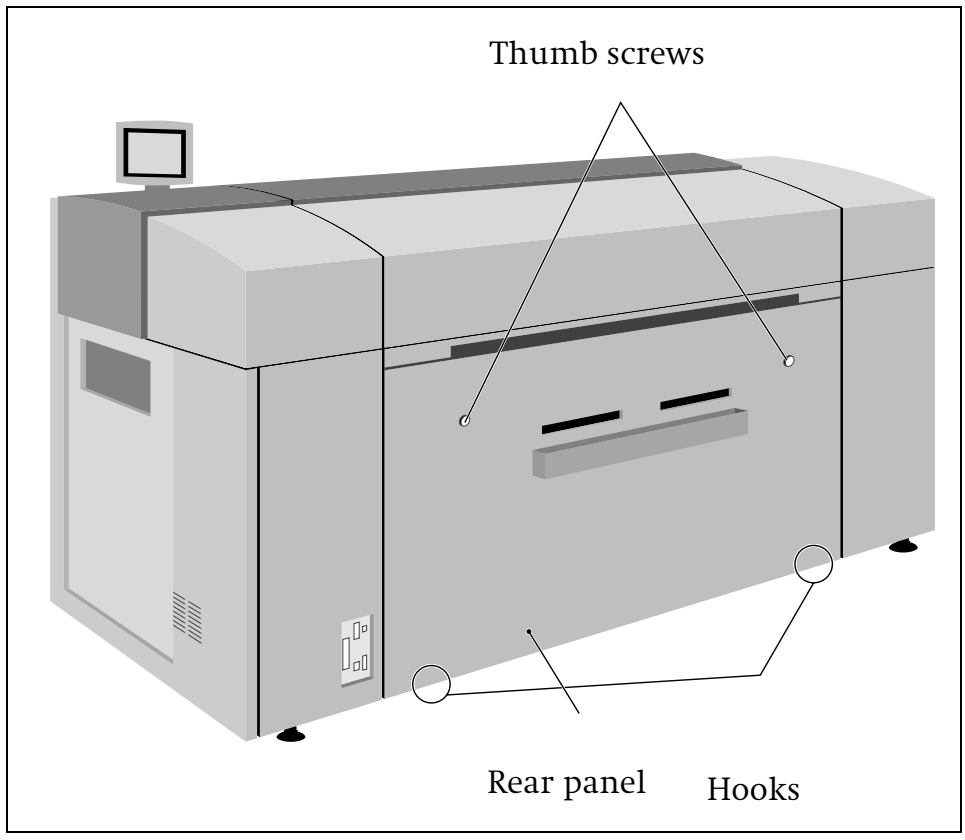
Warning: Printing plate edges can be sharp. Failure to wear protective gloves can result in injuries to your hands.

6. Put on protective gloves.

7. Use both hands to grasp the printing plate and pull it out of the unit.



8. After removing the printing plate, refit the rear panel, with the recesses on the bottom edge, on the hooks.

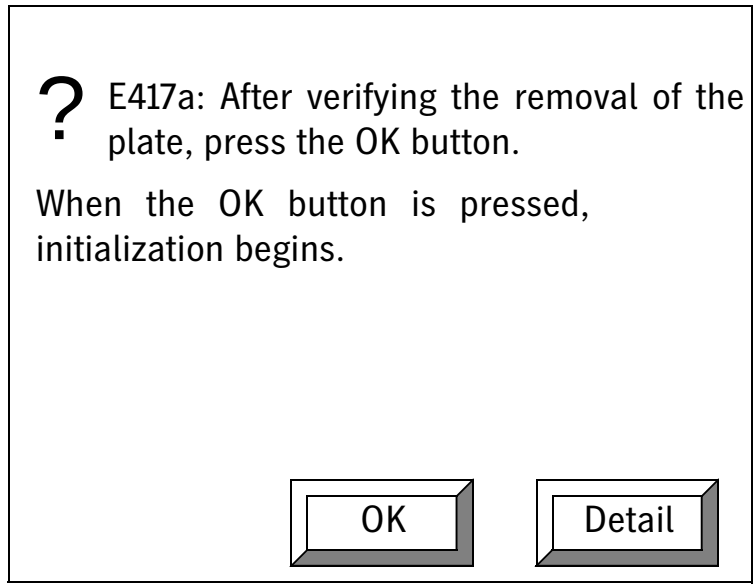


9. Press the rear panel against the unit so that the thumb screws fit in the corresponding holes and tighten them.

STOP

Attention: If the thumb screws are not tightened properly, the interlock will not disengage and a printing plate cannot be loaded or unloaded. An error message is then displayed.

10. Switch the unit on and press the *START* button. After a few moments, the *Reset error* screen appears.



11. Press the *OK* button. Initialization (error reset) begins.

Attention: Be sure to press the *OK* button after removing the plate. Doing so would damage the unit. If you have not removed the printing plate by this time, then turn the unit off and remove the plate. In this case, the *Reset error* screen does not appear after removing the printing plate and switching the unit on again.

Topsetter P/PF 102

Dimensions:
Width: 2,420 mm
Depth: 1,295 mm
Height: 1,285 mm

Weight
1150 kg (Topsetter PF 102)
1000 kg (Topsetter P 102)

Power supply:
200 V - 240 V

Mains Frequency:
50/60 Hz

Rated Operation Current:
Topsetter P 102: 10 A
Topsetter PF 102: 15 A
(plus SCL or MCL)

Power consumption:
approx. 3 kW

Heat Radiation:
18060 kJ (4300 kcal) (17060 BTU)

Ambient Conditions (Operation):
Temperature: +18°C to +26°C
Air pressure: 700 mbar to 1060 mbar
Rel. humidity: 40 % to 70 % non-condensing

Ambient Conditions (Transport):
Temperature: 10°C to +40°C
Air pressure: 250 mbar to 1060 mbar
Rel. humidity: 25 % to 75 % non-condensing

Noise emission:
< 70 dB (A), workplace-related value

Print plate sizes:
370 mm x 500 mm to 940 mm x 1160 mm

Max. exposure area:
354 mm x 500 mm to 924 mm x 1160 mm
(if the hook punch function is switched off)
346 mm x 4,500 mm to 916 mm x 1160 mm
(if the hook punch function is switched on)

Print plate thickness:
0.15 mm to 0.3 mm

Resolution:
472 pixels/cm (1200 dpi)
787 pixels/cm (2000 dpi)
945 pixels/cm (2400 dpi)
960 pixels/cm (2438 dpi)
1000 pixels/cm (2540 dpi)
1575 pixels/cm (4000 dpi)
Depending on workflow

Blower

Power supply:
200 V - 230 V

Mains Frequency:
50/60 Hz

Rated Operation Current:
10 A

Power consumption:
1.2 kW

Heat Radiation:
4334kJ (1032 kcal) (4094 BTU)

Protection and safety requirements

Standards

The unit complies with the safety regulations of the following standards.

General

GSG "Gerätesicherheitsgesetz" (device safety regulations)	(Germany)
98/37/EC Machinery Directive	(Europe)
73/23/EEC Low Voltage Directive	(Europe)
89/336/EEC EMC Directive	(Europe)

Laser safety

Please refer to the label overview at the end of this chapter for laser labels and their positions.

BGV B2	(Germany)
EN 60825-1	(Europe)
IEC 60825-1	(International)
21 CFR 1040	(USA)

Mechanical safety

EN 292	(Europe)
98/37/EC Machinery Directive	(Europe)
UVV Accident prevention guidelines	(Germany)

Electrical safety

EN 60204-1	(Europe)
IEC 60204-1	(International)
EN 60950	(Europe)
IEC 60950	(International)
UL 60950	(USA)
CSA C22.2 No. 60950	(Canada)

Electromagnetic compatibility (EMC)

EMVG Gesetz über elektromagnetische Verträglichkeit von Geräten (law regarding electromagnetic compatibility)		(Germany)
89/336/EEC	EMC directive	(Europe)

Noise emission (radio interference and interference voltage)

EN 55022, threshold value A	(Europe)
CISPR 22 mod., threshold value A	(International)
FCC, Part 15, Subpart B, Class A	(USA)
ICES-003, Class A	(Canada)
AS/ZN 3542	(Australia/New Zealand)

Interference resistance

EN 55024	(Europe)
EN 61000-6-2	(Europe)

Radio interference suppression

In compliance with electromagnetic compatibility according to directive 89/336/EEC, the unit is only to be operated with all covers correctly installed.

In compliance with the radio interference suppression regulations, the instructions given by the manufacturer of this unit regarding correct installation and maintenance are to be adhered to when connecting other electrical units.

Adherence to radio interference suppression regulations can be assumed when the additional device in question is marked with the European Union mark of conformity (CE) and the instructions for installation, operation and service are followed.

Approvals and conformity symbols

GS	(Germany)
CE: Declaration of Conformity	(Europe)
UL: E156891 (NWGQ)	(USA)
CDRH: Accession-No.	(USA)
cUL: E156891 (NWGQ7)	(Canada)
GOST-R	(Russia)
ACN 004 395 779	(Australia)

Labels on the Topsetter P/PF 102

1

HEIDELBERG D-24107 Kiel

Type 2340/2350 ID-No.
Ser.-No. 1

1ph ~200V -240V	50HZ	20/25 A
1ph ~200V -240V	60HZ	20/25 A

Date of Manufacture
Made in Germany

TÜV Rheinland Product Safety · GS geprüfte Sicherheit · c UL us LISTED I.T.E 7C46

2

LASER PRODUCT
CLASS 1
IEC 60825 - 1/A2: 2001

3

This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.
Cet appareil numèrique de la classe A respecte toutes les exigencis du Règlement sur le matèriel brouilleur du Canada.

This product has been manufactured to meet or exceed the performance requirements for laser products as stated in 21CFR1040.10 and 21CFR1040.11 of the Health and Safety Act of 1968

4

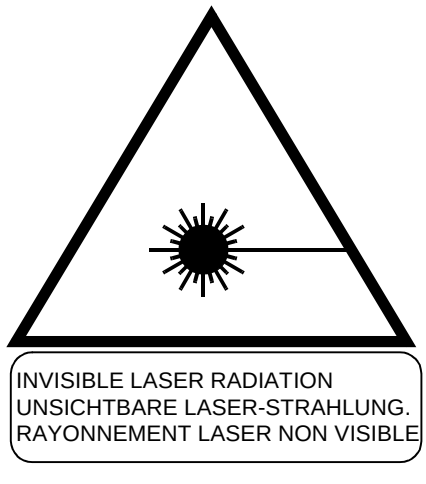
VORSICHT HOHER ABLEITSTROM!
VOR INBETRIEBNAHME SCHUTZLEITER-VERBINDUNG HERSTELLEN

CAUTION HIGH LEAKAGE CURRENT!
EARTH CONNECTION ESSENTIAL BEFORE CONNECTING SUPPLY

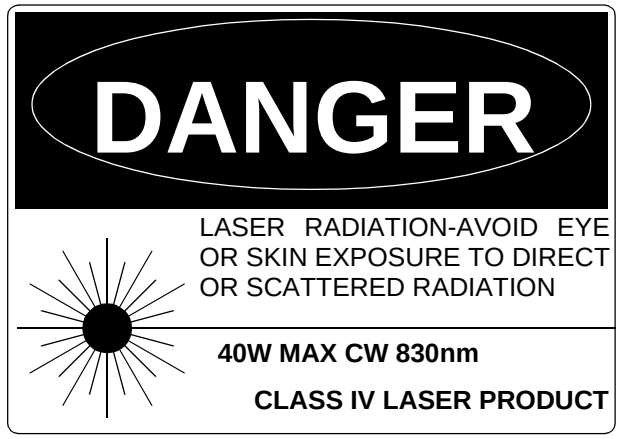
ATTENTION CURRENT DE FUITE ÉLEVÉ!
RACCORDEMENT A LA TERRE INDISPENSABLE AVANT LE RACCORDEMENT AU RÉSEAU

5

6


INVISIBLE LASER RADIATION
UNSICHTBARE LASER-STRAHLUNG.
RAYONNEMENT LASER NON VISIBLE

7


DANGER
LASER RADIATION-AVOID EYE
OR SKIN EXPOSURE TO DIRECT
OR SCATTERED RADIATION
40W MAX CW 830nm
CLASS IV LASER PRODUCT

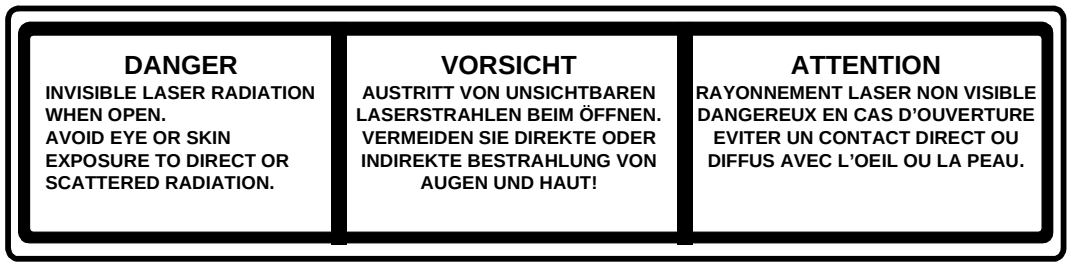
8


DANGER
INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED.
AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION.
VORSICHT
UNSICHTBARE LASERSTRAHLEN; WENN GEÖFFNET UND SICHERHEITSSCHALTER DEAKTIVIERT SIND.
VERMEIDEN SIE DIREKTE ODER INDIREKTE BESTRAHLUNG VON AUGEN
ATTENTION
RAYONNEMENT LASER NON VISIBLE DANGEREUX EN CAS D'OUVERTURE ET LORSQUE LA SÉCURITÉ EST NEUTRALISÉE.
EVITER UN CONTACT DIRECT OU DIFFUS AVEC L'OEIL OU LA PEAU.

9

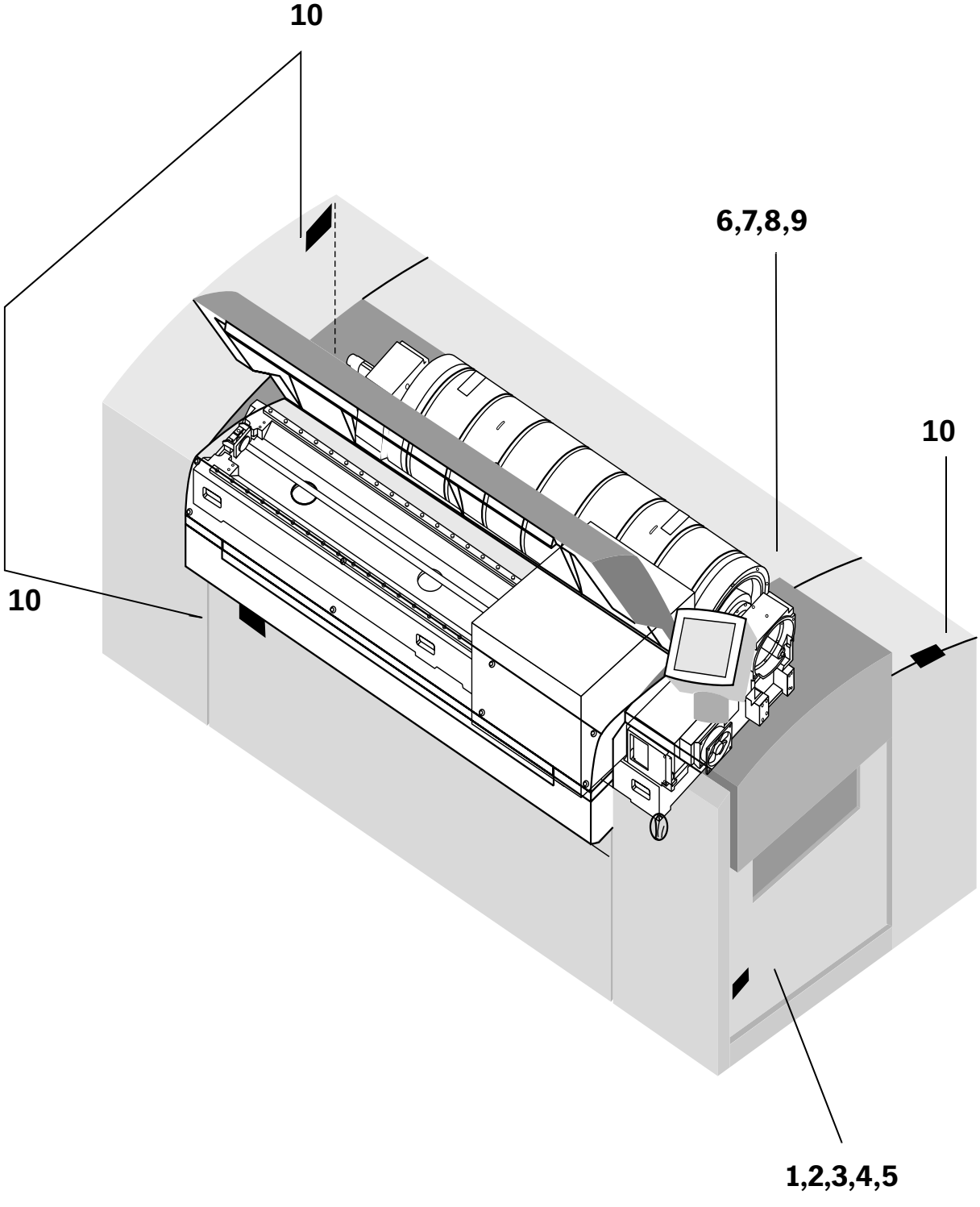

INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION
40 W MAX CW 830 nm
CLASS 4 LASER PRODUCT
UNSICHTBARE LASERSTRAHLUNG
BESTRAHLUNG VON AUGE ODER HAUT DURCH DIREKTE ODER STREUSTRAHLUNG VERMEIDEN.
40 W MAX CW 830 nm
LASER KLASSE 4
RAYONNEMENT LASER NON VISIBLE
EXPOSITION DANGEREUSE DE L'OEIL OU DE LA PEAU AU RAYONNEMENT DIRECT OU DIFFUS.
40 W MAX CW 830 nm
APPAREIL Á LASER DE CLASSE 4

10


DANGER
INVISIBLE LASER RADIATION WHEN OPEN.
AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION.
VORSICHT
AUSTRITT VON UNSICHTBAREN LASERSTRAHLEN BEIM ÖFFNEN.
VERMEIDEN SIE DIREKTE ODER INDIREKTE BESTRAHLUNG VON AUGEN UND HAUT!
ATTENTION
RAYONNEMENT LASER NON VISIBLE DANGEREUX EN CAS D'OUVERTURE
EVITER UN CONTACT DIRECT OU DIFFUS AVEC L'OEIL OU LA PEAU.

11

Label overview



Declaration of conformity

HEIDELBERG

EG-Konformitätserklärung

gemäß der Maschinenrichtlinie 98/37/EG und der Niederspannungsrichtlinie 73/23/EWG
und der EG-Richtlinie 89/336/EWG über die Elektromagnetische Verträglichkeit

EC Declaration of Conformity

in accordance with the Directive of Machinery 98/37/EC and the Low Voltage Directive 73/23/EEC
and the Directive of Electromagnetic Compatibility 89/336/EEC

Hersteller / manufacturer :	**Heidelberger Druckmaschinen AG**
Adresse / address :	Kurfürsten-Anlage 52 - 60 D- 69115 Heidelberg, Germany
Produktionsstätte / plant of manufacturing Adresse / address :	Dr.-Hell-Straße D- 24107 Kiel, Germany

erklärt, daß das Produkt
declares, that the product

Produktname / product name :	**Topsetter 52 / 74 /102 with Blower Unit**
Optionen / options :	**Single- / Multi- Autoloader, Conveyor**
Geräteart / product class :	**Laser Recorder (plate setter)**
Typenbezeichnung / type designation :	**23xx – xx**

xx nach der Zahl 23 : Zahlenergänzung für die jeweiligen Systemgeräte;
xx nach dem Bindestrich : optionale, alphanumerische Ergänzung für Software- oder Marketing Optionen.
xx after number 23 : numeric suffix, denoting system parts ;
xx after the dash : optional numeric or alphabetic suffix, denotes software- or marketing options.

übereinstimmt mit den Bestimmungen der oben genannten EG-Richtlinien.
conforms with the above mentioned Directives.

Angewandte Normen und technische Spezifikationen : / Applicable Standards :

- EN60204-1:1997	Elektrische Ausrüstung von Maschinen Electrical Equipment of Industrial Machines
- EN 60950:2000	Sicherheit von Einrichtungen der Informationstechnik einschließlich elektrischer Büromaschinen Safety of Information Technology Equipment including electrical business equipment
- EN 60825-1:1994 +A11:1996	Sicherheit von Laser-Einrichtungen Safety of Laser Products
- EN 55022:1998, Klasse A	EMV-Produktnorm Störaussendung EMC Product Standard, Emission (CISPR 22 Class A)
- EN 55024:1998	EMV-Produktnorm Störfestigkeit EMC Product Standard, Immunity
- EN 61000-6-2:1999	EMV-Fachgrundnorm Störfestigkeit, Industriebereich EMC Generic Immunity Standard, Industrial Area

Heidelberg, 09. November 2001

Dr. Klaus Spiegel
Member of the Board of Directors

Kiel, 09. November 2001

Heino Schadwald
Senior Vice President

45/2001 S. 1/2

HEIDELBERG

GB, IRL

EC Declaration of Conformity :
Heidelberger Druckmaschinen AG declares, that the product described overleaf conforms to the following relevant provisions :
- **Directive 98/37/EC** **relating to machinery**
- **Directive 89/336/EEC** **relating to electromagnetic compatibility**
- **Directive 73/23/EEC** **relating to electrical equipment designed for use within certain voltage limits**

F, B, L

DÉCLARATION «CE» DE CONFORMITÉ:
Heidelberger Druckmaschinen AG affirme que le produit décrit au verso correspond aux références suivantes adéquates :
- **Directive 98/37/CE** **relatives aux machines**
- **Directive 89/336/CEE** **relatives à la compatibilité électromagnétique**
- **Directive 73/23/CEE** **relatives au matériel électrique destiné à être employé dans certaines limites de tension**

DK

EF-overensstemmelseserklæring :
Heidelberger Druckmaschinen AG erklærer, at det produkt, der er beskrevet efterfølgende, opfylder følgende relevante bestemmelser :
- **Rådets direktiv 98/37/EF** **lovgivning om maskiner**
- **Rådets direktiv 89/336/EØF** **lovgivning om elektromagnetisk kompatibilitet**
- **Rådets direktiv 73/23/ EØF** **lovgivning om elektrisk materiel bestemt til anvendelse inden for visse spændingsgrænser**

E

DECLARACIÓN «CE» DE CONFORMIDAD :
Heidelberger Druckmaschinen AG declara que el producto descrito al dorso corresponde a las siguientes disposiciones relevantes :
- **Directiva 98/37/CE** **sobre máquinas**
- **Directiva 89/336/CEE** **relativas a la compatibilidad electromagnética**
- **Directiva 73/23/CEE** **sobre el material eléctrico destinado a utilizarse con determinados límites de tensión**

FIN

EY-VAATIMUSTENMUKAISUUSVAKUUTUS:
Heidelberger Druckmaschinen AG ilmoitta, että kääntöpuolella kuvattu tuote vastaa seuraavia asiaan kuuluvia määräyksiä :
- **Direktiivi 98/37/EY** **koneita koskevan jäsenvaltioiden lainsäädännön lähentämisestä**
- **Direktiivi 89/336/ETY** **koneita koskevan jäsenvaltioiden lainsäädännön lähentämisestä**
- **Direktiivi 73/23/ETY** **tietyllä jännitealueella toimivia sähkölaitteita koskevan jäsenvaltioiden lainsäädännön lähentämisestä**

GR

Κοινοτική δήλωση συμβατότητας σύμφωνα με :
Heidelberger Druckmaschinen AG δηλώνει, ότι το ακολούθως περιγραφόμενο βρισκόμενο στην οπισθία σελίδα προϊόν εκπληρεί τις ακόλουθες σχετικές διατάξεις :
- ΕΟΚ/οδηγία 98/37/ΕΟΚ για μηχανές
- ΕΟΚ/οδηγία 89/336/ΕΟΚ για ηλεκτρομαγνητική ανεκτικότητα
- ΕΟΚ/οδηγία 73/23/ΕΟΚ για ηλεκτρικά είδη εξοπλισμού, που προορίζονται για χρήση εντός καθορισμένων ορίων τάσης

I

Dichiarazione CE di conformità :
Heidelberger Druckmaschinen AG dichiara che il prodotto descritto a tergo è conforme alle seguenti disposizioni :
- **Direttiva 98/37/CE** **relative alle macchine**
- **Direttiva 89/336/CEE** **relative alla compatibilità elettromagnetica**
- **Direttiva 73/23/CEE** **relative al materiale elettrico destinato ad essere adoperato entro taluni limiti di tensione**

NL

EG-VERKLARING VAN OVEREENSTEMMING:
Heidelberger Druckmaschinen AG verklaart dat de aan de ommezijde beschreven produkten aan de volgende bestemmingen van belang voldoen :
- **Richtlijn 98/37/EG** **betreffende machines**
- **Richtlijn 89/336/EEG** **inzake elektromagnetische compatibiliteit**
- **Richtlijn 73/23/EEG** **inzake elektrisch materiaal bestemd voor gebruik binnen bepaalde spanningsgrenzen.**

P

Declaração CE de conformidade :
Heidelberger Druckmaschinen AG declara que o produto descrito no verso corresponde às seguintes determinações relevantes :
- **Directiva 98/37/CE** **respeitantes às máquinas**
- **Directiva 89/336/CEE** **respeitantes à compatibilidade electromagnética**
- **Directiva 73/23/CEE** **no domínio do material eléctrico destinado a ser utilizado dentro de certos limites de tensão**

S

EG-FÖRSÄKRAN OM ÖVERENSSTÄMMELSE
Heidelberger Druckmaschinen AG deklarerar, att produkten enl. bifogad beskrivning motsvarar följande gällande bestämmelser :
- **Rådets direktiv 98/37/EG** **om maskiner**
- **Rådets direktiv 89/336/EEG** **om elektromagnetisk kompatibilitet**
- **Rådets direktiv 73/23/EEG** **om elektrisk utrustning avsedd för användning inom vissa spänningsgränser**

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Disposal of the unit

The unit contains harmful substances. It must be handed over to an approved waste disposal company and not be disposed of as household waste. Addresses can be obtained from the relevant environmental office or from the environmental officer at Heidelberg in Kiel.

The diagrams can deviate from the actual unit as a result of modifications.

Harmful substances

The following table lists all parts which contain harmful substances and should therefore be disposed of/recycled separately. The parts can be identified with the help of the drawing alongside.

Designation	Harmful substances contained
- PCBs - Power supply unit	Tetrabrombisphenol A, lead among others
Optical head - Laser diodes	Selen (among others)
LCD display with lamps	Mercury (fluorescent lamp)
Fixed and adjustable balancing weights in the drum side flange	Lead
Gas pressure spring	Hydraulic oil
Air filter	Plate burn-off

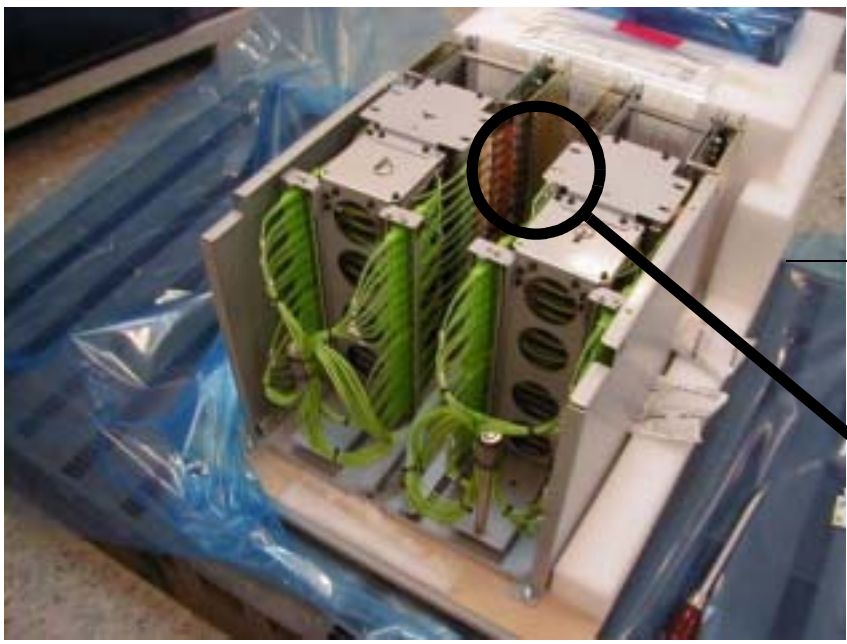
The cable insulation can contain PVC. All capacitors are PCB-free. The electronic PCBs and parts of the cladding contain flame-retardants, state-of-the-art technology allows uncomplicated thermal re-cycling in appropriately equipped plants.

Warning: The gas springs contain oil and are pressurized. They must not be opened or heated, they must be disposed of as hazardous waste.

Illustration 1

Laser head access direction in installed condition, viewed from the front

Laser head, covered, viewed from the rear



Laser head, not covered, viewed from the rear

Laser diodes, 64 per head

Illustration 1a

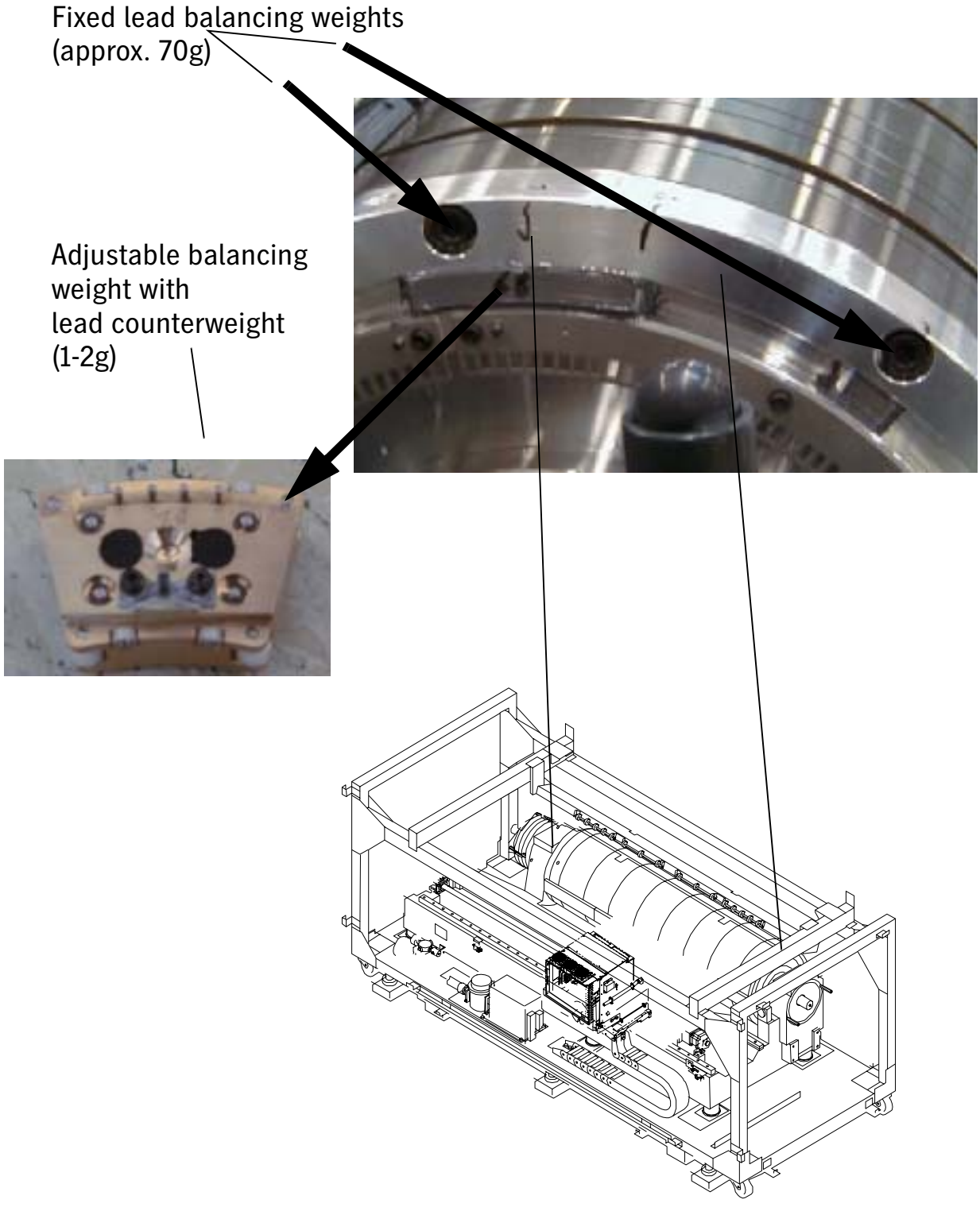


Illustration 2

Recyclable materials

The following table lists the most important parts which do not contain harmful substances and which can undergo environmentally safe recycling. The parts can be identified with the aid of their designation in the drawing.

Designation	Material
Cover plates	Sheet steel, coated with 2K-PUR paint
Base frame	Sheet steel, coated with 2K-PUR paint
Machine base	Cast steel
Drum	Aluminum extruded section, 755-2

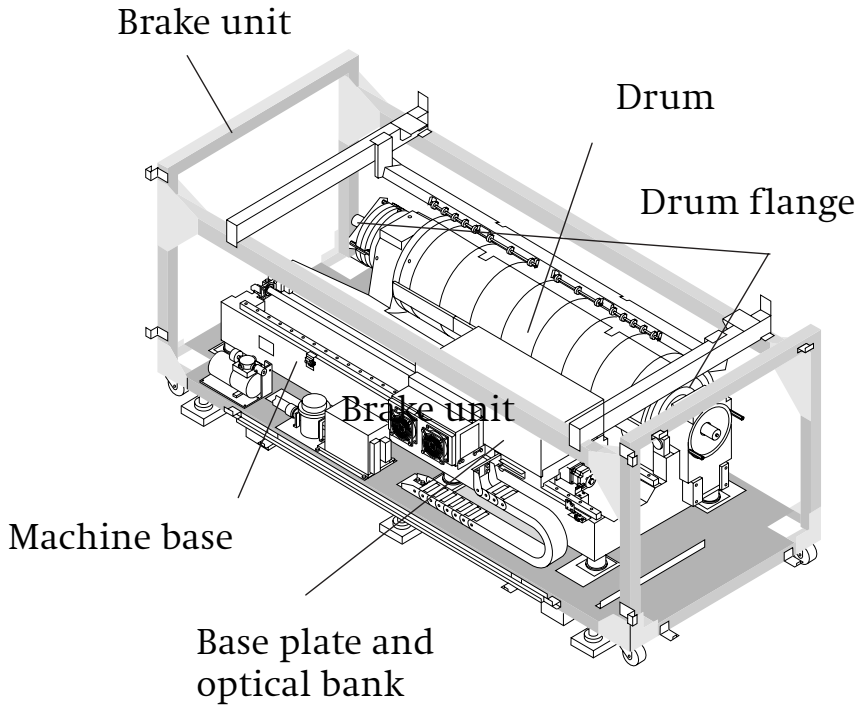


Illustration 3

Dismantling

The following dismantling sequence is recommended. Observe the drawings at the end of this section.

The unit must only be dismantled by an approved waste disposal company; these dismantling instructions do not apply for customers !

Work step	Note
1. Dismantle the front cover	2 thumb screws (Ill.4)
2. Unscrew the rear panel, left and right	each 2x Phillips screws in the housing slot (Ill.4)

Work step	Note
3. Unscrew the side panel, left and right	each 2x Phillips screws in the housing slot (Ill.4)
4. Unscrew the front panel	3 hexagon socket screws (Ill.5)
5. Unscrew the front panel, left and right	2x Phillips screws each, after releasing the screws, the parts can be pivoted out (Ill.5)
6. Remove the display	Turn the unit and pull it upwards and out (Ill.4)
7. Unscrew the upper housing bridge	each 2x Phillips screws in the housing slot, pull the unit to the rear (Ill.4)
8. Unscrew the upper housing parts	Phillips screws can be accessed from the inside
9. Dismantle the gas pressure springs on the operator flap	2 gas pressure springs, hexagon socket (Ill. 5)
10. Remove the gas pressure springs on the plate conveyor	2 gas pressure springs, only visible when the housing parts are removed (Ill. 5)
11. Dismantle electronic units 1,2,3	Ill.1
12. Dismantle the film transport units	
13. Remove the optical head	Ill.6 and 1a
14. Detach the feed plate under the laser head	Ill.6
15. Dismantle the	Ill.6
16. Dismantle and extract the flange from the drum	8 M6 hexagon socket (Ill.6)

Work step	Note
17. Lift the drum out of the unit using lifting gear	
18. Remove the glued on lead weights	Glued on; strike with hammer to remove them (Ill. 2)
19. Remove the lead weight in the adjustable balancing weight	Remove the segments on the face of the drums; dismantle the brass balancing weight and remove the lead (Ill.2)
20. Detach the machine base	6 x rubber-metal connection
21. Lift the machine base out of the unit using lifting gear	

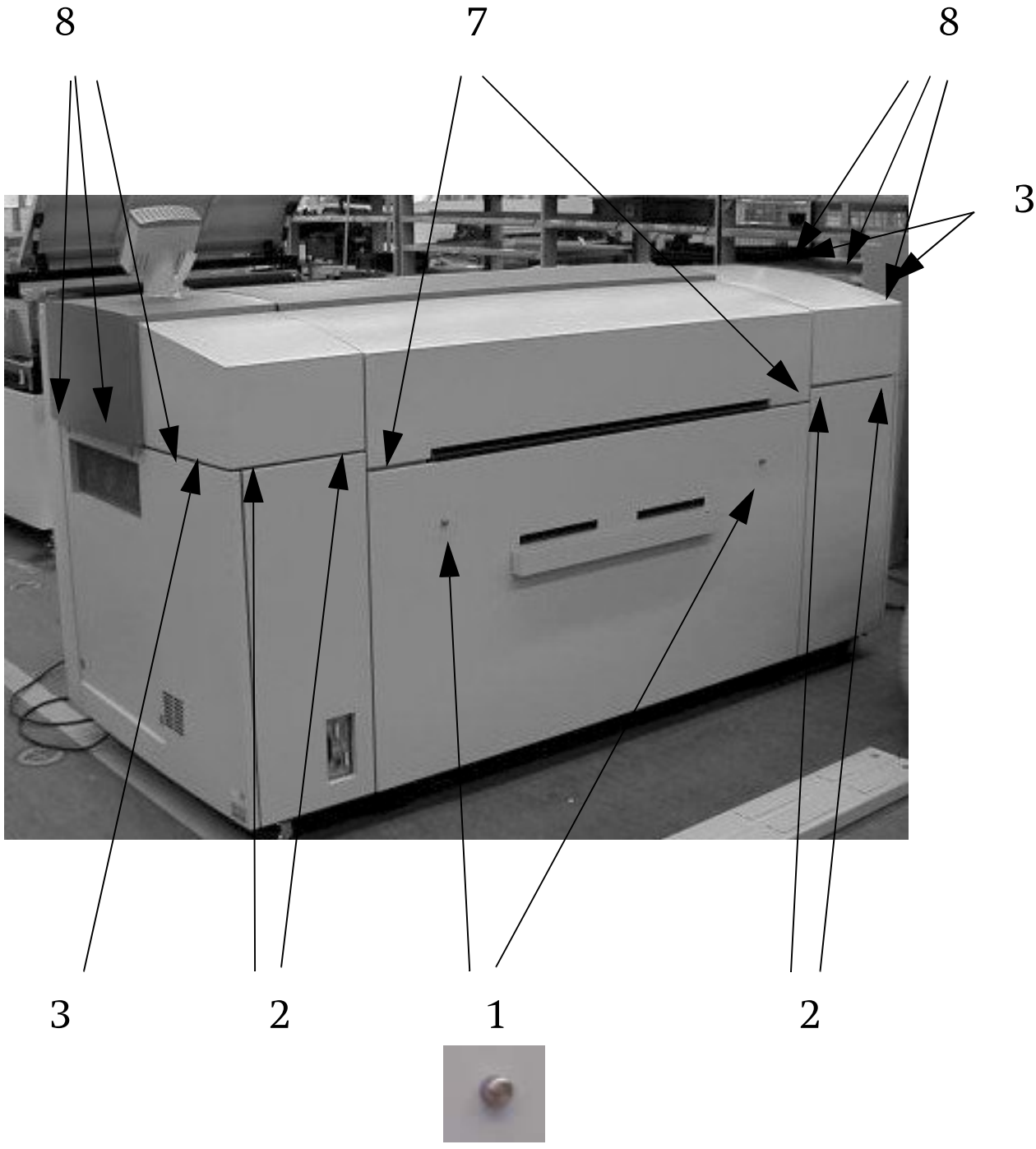


Illustration 4

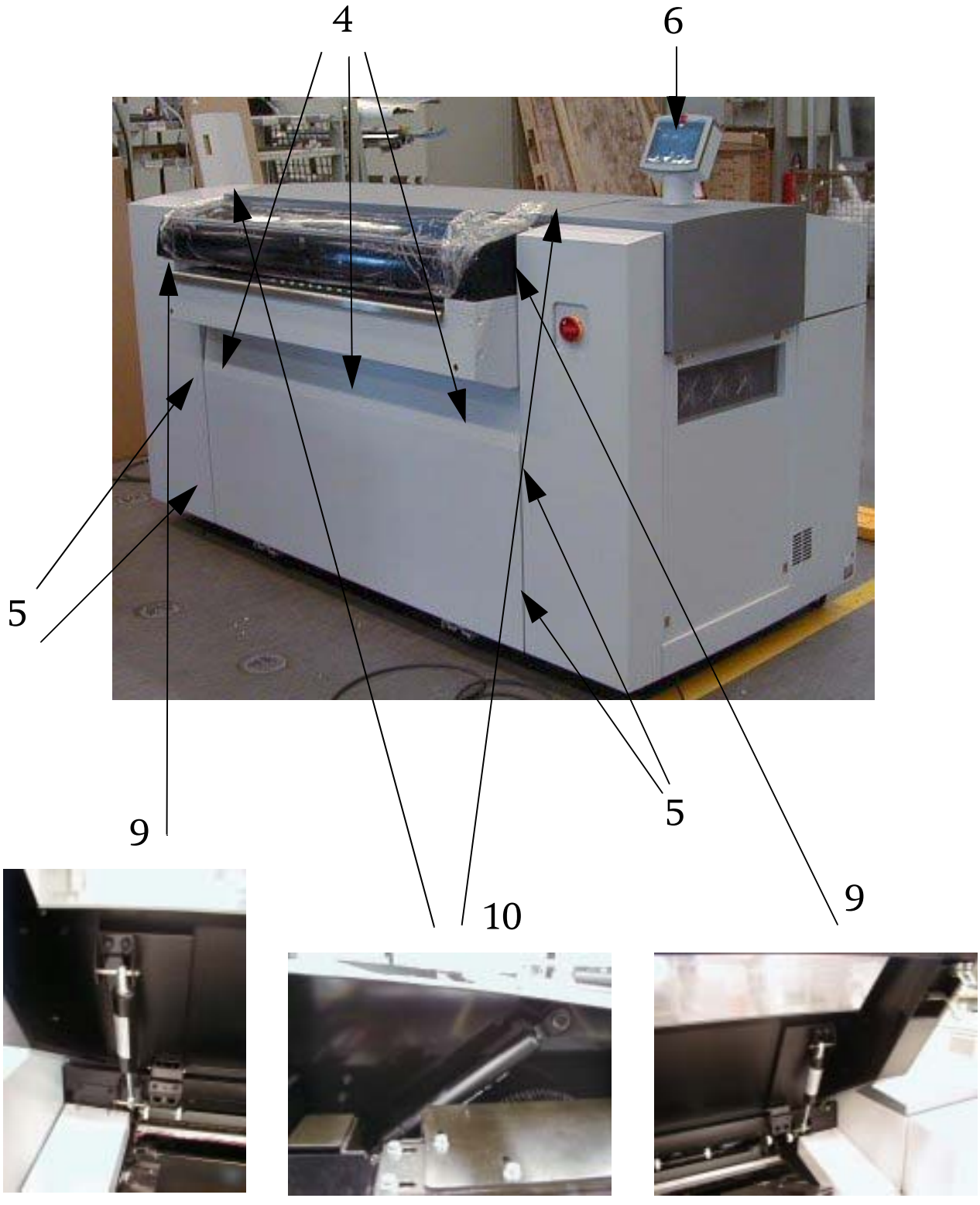


Illustration 5

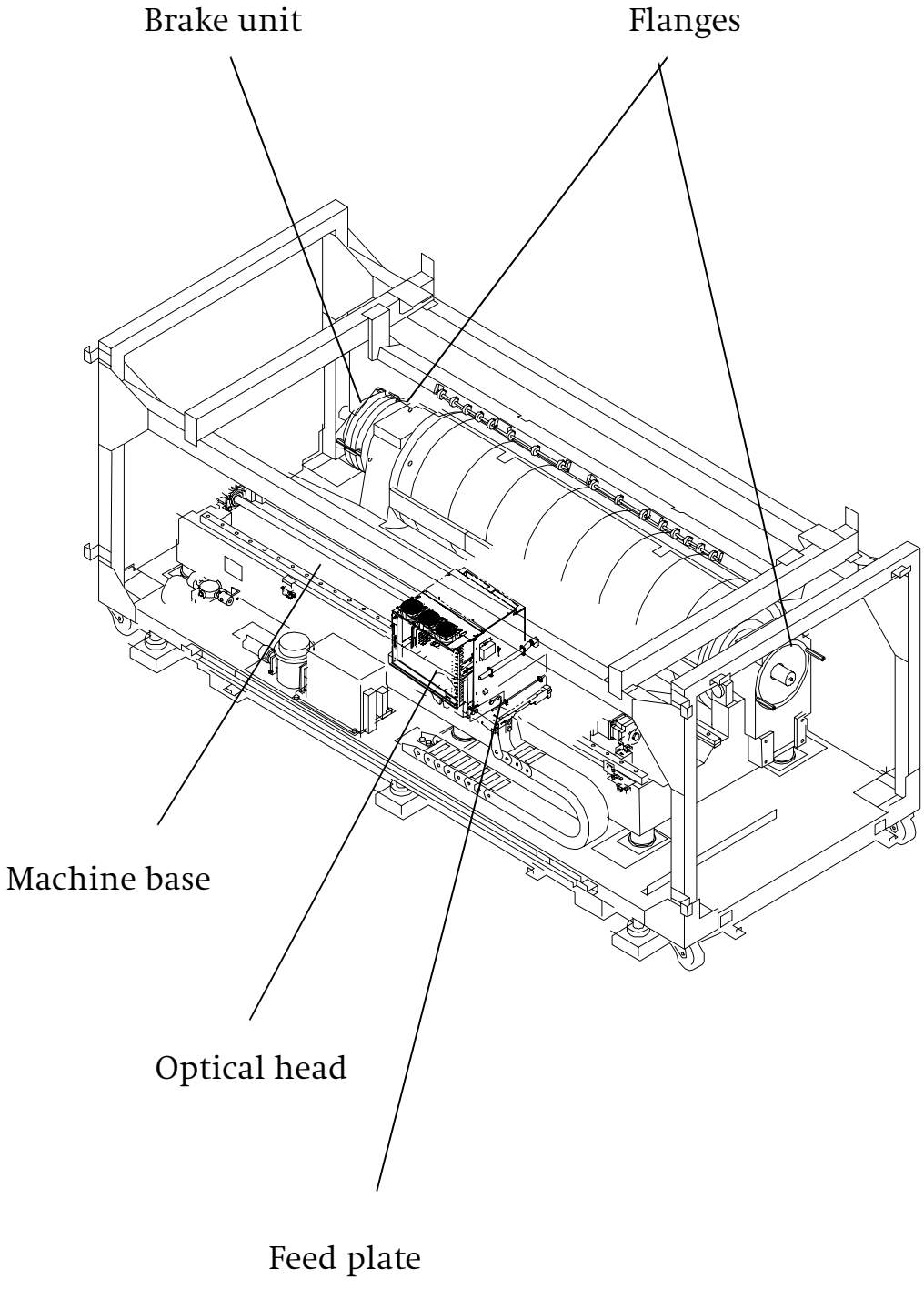


Illustration 6

Quality Assurance

If you should encounter any problems when using our hardware or software, please contact one of our local branches or the Heidelberg agency responsible for you.

"Central Call Desk"

For customers in Germany, please contact our ”Central Call Desk", telephone (0 18 03) 23 23 33 if problems should arise.
In the case of operational faults, any intervention by technicians is coordinated by the downstream service control center.

Please contact the Heidelberg representative responsible for you if you are a customer outside of Germany.

The ”Central Call Desk" is open Monday through Friday, 7 a.m. to 18 p.m.. Your queries will be dealt with immediately.

Answering any user queries after the guarantee period is a service which can only be given after purchasing a "Heidelberg Infoline-Box". This also applies for telephone advice regarding operating malfunctions or for user-specific problem analyses.

Problem Report for Customers and Service Technicians

Please use the enclosed Problem Report in cases where you have detected general product defects or where you find that there is scope for improvement for particular products.

The Problem Report should not be used to clarify queries concerning the use or operation of our products! In these cases, you should contact your Heidelberg agency, your local Heidelberg branch or our Central Call Desk.

It is advisable to copy the form before using it so that an original is always available for later use.

Note: The serial number or the service number of the device which is causing problems or is defective must always be specified.

Specify the exact names of the products (unit description, software and version).

A separate form should be used to describe each problem. The exact environment in which the problem occurs should also be specified, e.g. error messages, serial/service no. of the unit, modification status, software and version used, etc.

Please also state your full address, customer no. and, if possible, telephone number, fax number and email address.

Please send the Problem Report to your local branch or your Heidelberg agency.

Heidelberger Druckmaschinen AG
Kurfuersten Anlage 52–60
69115 Heidelberg
Germany
Phone +49-62 21-92-00
Fax +49-62 21-92-69 99

For further information please contact
your local Heidelberg representative.
www.heidelberg.com