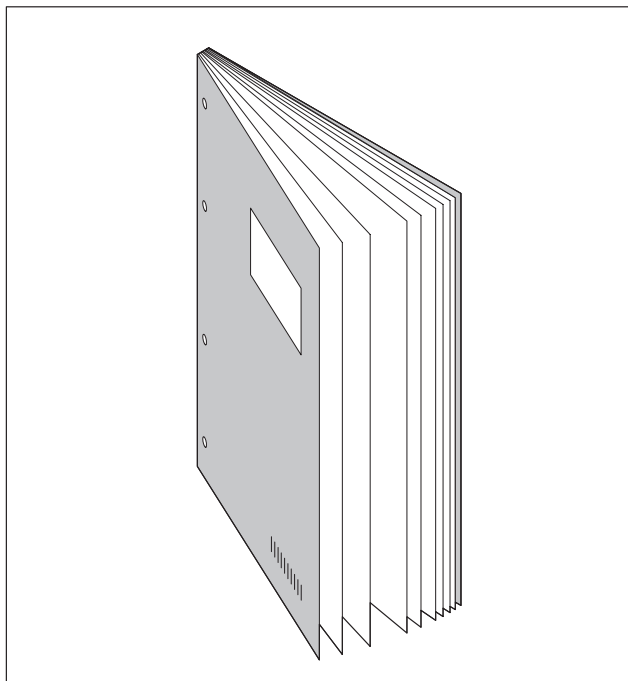


## 1 Preface Preset Plus feeder

### 1.1 Notes for the reader

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GR 0095600200000000

Fig. 1 Operating manual

#### Target group

This operating manual is addressed to you as the operator of the Preset Plus feeder. It is valid for all Preset Plus feeders of this type series. It shows you how you can operate the Preset Plus feeder and how you can achieve good results quickly. Always have this manual available in the vicinity of the printing press.

#### Structure of the operating manual

The operating manual is subdivided into main chapters and chapters. The main chapters are marked by letters (A, B, C, ...).

The sub-chapters are marked by numbers (1, 2, 3, ...).

The main chapter **A Safety** contains the information that is required for working safely on the press.

The main chapter **B** describes the function of the electric controller.

The main chapter **C** describes the mechanical components of the Preset Plus feeder, and its operation and adjustment.

The main chapter **D** describes the maintenance of the Preset Plus feeder.

The main chapter **D Index** helps you in finding specific information.

Each main chapter and each chapter starts with the related table of contents.

#### Control panels and displays

This manual describes the maximum configuration of the Preset Plus feeder. The control panels and displays on the Preset Plus feeder may therefore be different. They depend on type and configuration.

#### Abbreviations used in this document

Fig. = Figure  
 D.S. = drive side  
 O.S. = operator's side  
 PU = printing unit  
 LED = light-emitting diode  
 MID = press display  
 KID = compact display

**Topicality**

The information provided in this manual corresponds to the series version of the press at the time of publication of this document. We reserve the right to make changes in accordance with the progress of modern technology.

Should you have any questions, please contact your Heidelberg agency.

**Note on protection**

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Fig. 2

I.2

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**A Safety**

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## 1 Safety

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### 1.1 Important information about working safely on the Preset Plus feeder

The operating manual of the Preset Plus feeder is an applicable document of the operating manual you have received together with the press. The safety chapter of the operating manual contains important information about working safely with the press.

- Before you start up the Preset Plus feeder, read this operating manual and the operating manual you have received together with the press.
- Make sure that all persons working on this press
  - have received training and instructions,
  - have read this operating manual,
  - have read the operating manual of the press,
  - follow the regulations and instructions for working without risk.
- Keep the operating manual so that it is always available to the operators of the press.

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## 2 Testing the Preset Plus feeder protective devices with CP2000

### 2.1 Testing the protective devices

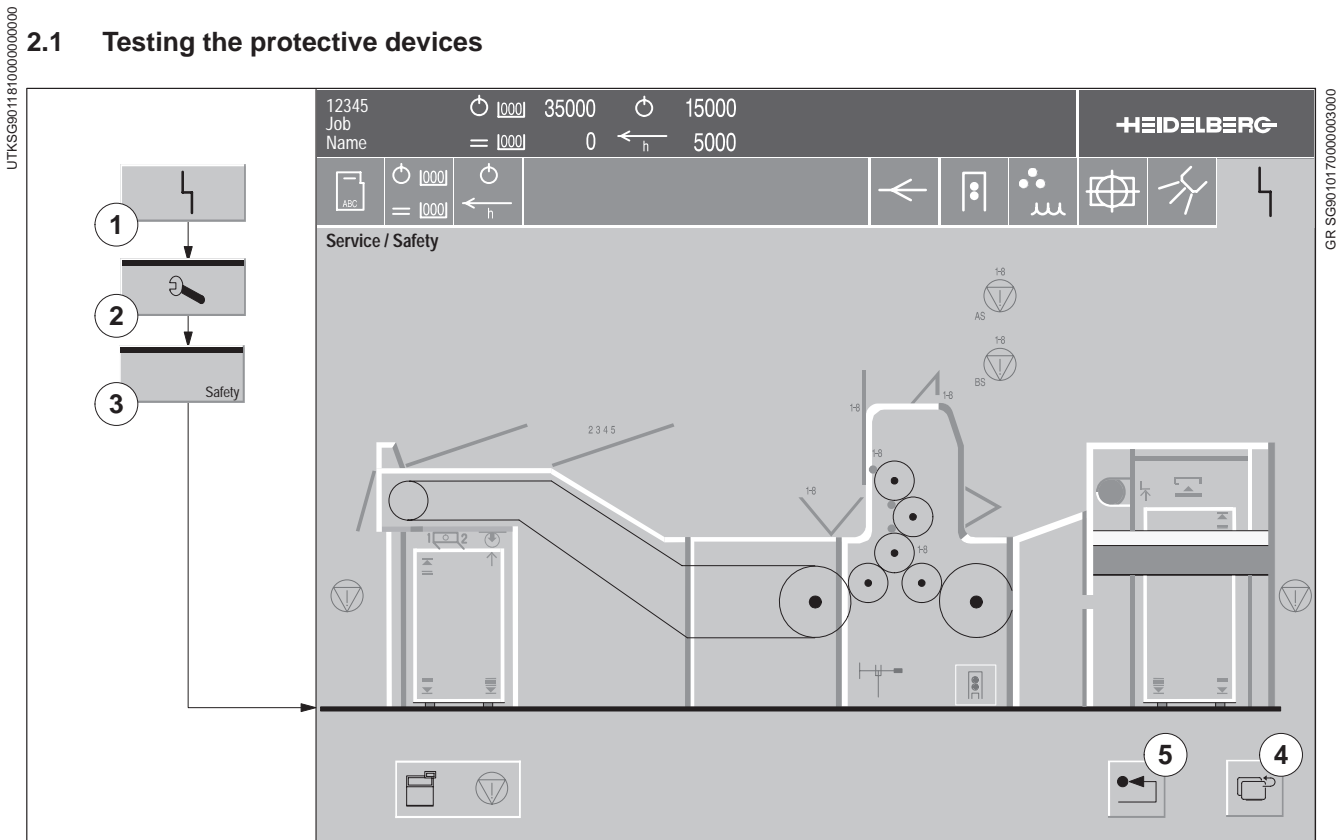


Fig. 1 Service/safety menu

The menu on the CP2000 Center shows the safety devices of the press in a diagram. The representation may differ from the configuration of your press.

Prior to testing the protective devices, close all guards and unlock all *emergency stop buttons*.

1. Press the *Malfunction* button (Fig. 1/1) in the banner line. The **Malfunction** menu appears.
2. Press the *Service* button (Fig. 1/2). The **Service** menu appears.
3. Press the *Safety* button (Fig. 1/3). The **Safety** menu (Fig. 1) appears.

A picture of the press now appears on the screen in which all the safety devices that are to be checked are shown in red.

4. Press and unlock the *emergency stop button*.
5. Actuate the finger protecting bars.
6. One by one and in succession open and close every guard, except for the test of the finger protecting bars. If the respective guard is functioning correctly, its symbol in the display goes off.

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7. Press the *Return* button to exit the menu.

**If another symbol is still visible:**

1. Locate the displayed guard and check it again.
2. Notify the service department of your Heidelberg agency if the guard is defective.

**Re-initialize the test:**

1. Press the *Reset* button (Fig. 1/5). The test is initialized so that it can be repeated completely (after an interruption, for example).

**2.2 Symbols of the protective devices**

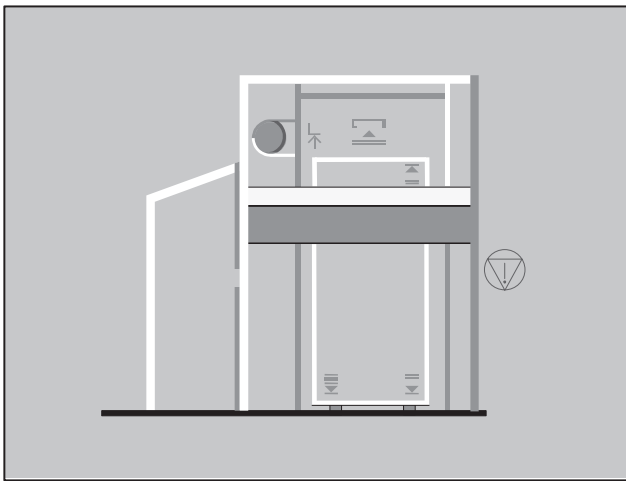










Fig. 2 Feeder protective devices

**Feeder**

-  *Emergency stop button*
-  Bottom main pile limitation
-  Upper main pile limitation
-  Bottom auxiliary pile limitation
-  Upper auxiliary pile limitation
-  Upper pile safety
-  Suction head at highest position
-  The control flap on the suction head was actuated.

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## 3 Protective devices on the Preset Plus feeder

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### 3.1 Fixed guards



#### Warning – Risk of injury

Start up the press only when all guards, coverings and parts of the housing are mounted on the press.

The coverings of the side frames of the Preset Plus feeder on D.S. and on O.S. are firmly screwed on. Operate the press only when all guards, coverings and parts of the housing are mounted on the press.

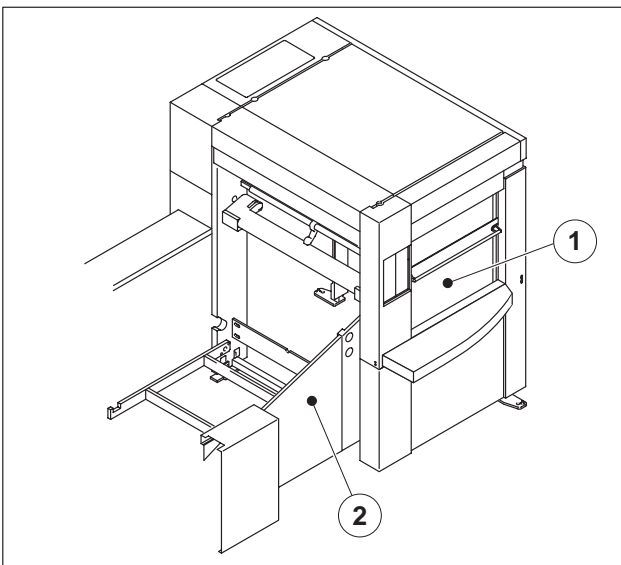
### 3.2 Moveable guards

The moveable (electrically interlocked) guards can be opened by hand to carry out makeready and maintenance work.

When you open an electrically protected guard while production is running, the press stops immediately with the exception of

- the ink fountain roller,
- the water pan roller and the metering roller in the dampening system, if the dampening system guard was not opened.
- the coating pan roller when the guard in front of the coating pan roller and the metering roller was not opened.

### 3.3 Guards on the Preset Plus feeder



GR SG9011861000000000

Fig. 3

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<b>Fig.</b>	<b>Moveable guards</b>	<b>Inching mode with travel limitation</b>	<b>Inching mode without travel limitation</b>	<b>Crawl speed mode</b>
1	Glass sliding guard in front of the feeder pile (noise protection)	Yes	Yes	Yes
2	Door on the feed table	Yes	–	–

Tab. 1

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4 Plus feeder control panels

4.1 Plus feeder control panel

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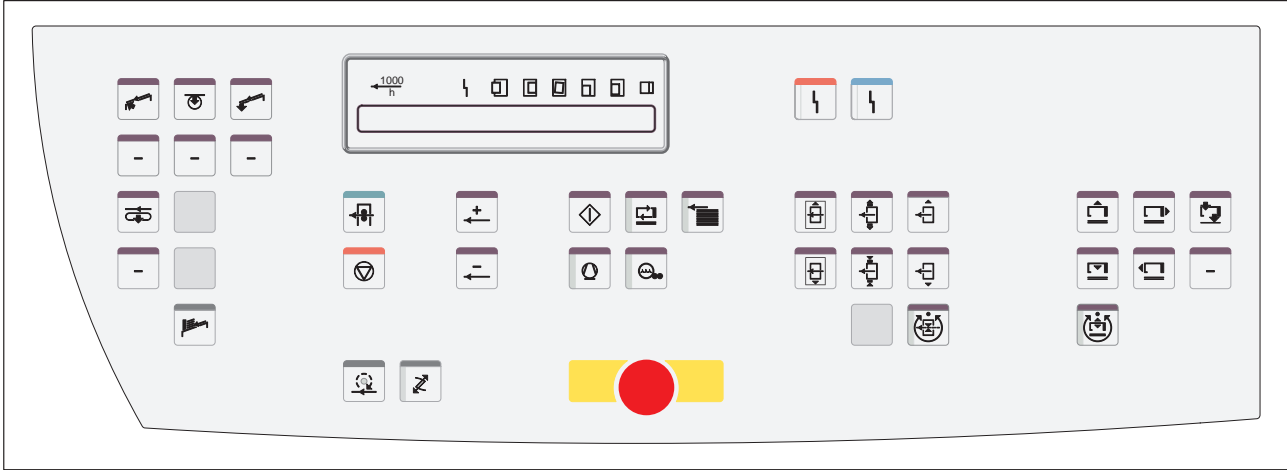


Fig. 4 Feeder control panel

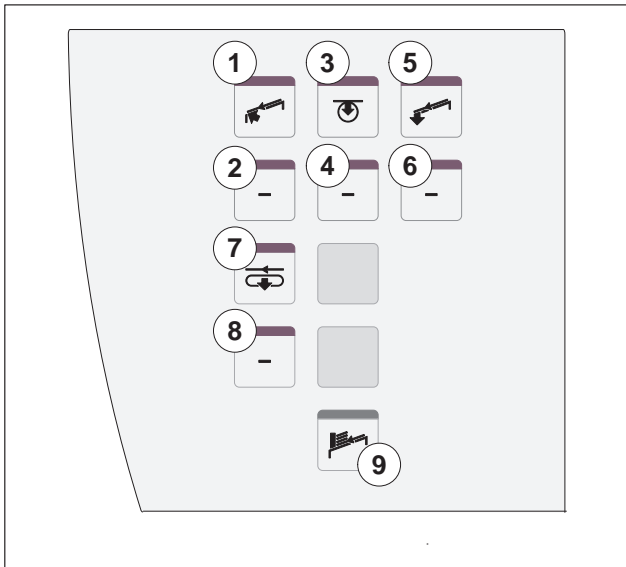


Fig. 5 Feeder control panel, detail

GR SG901186400000000

- 1 *Blowing/suction nozzle*  
Increases the blast air volume of the blowing/suction nozzle.
- 2 – button  
Reduces the blast air volume of the blowing/suction nozzle.
- 3 *Propelling roller*  
Increases the suction air volume of the propelling roller.
- 4 – button  
Reduces the suction air volume of the propelling roller.
- 5 *Pull plate*  
Increases the suction air volume of the pull plate.
- 6 – button  
Reduces the suction air volume of the pull plate.
- 7 *Suction tape*  
Increases the suction air volume of the suction tape.
- 8 – button  
Reduces the suction air volume of the suction tape.
- 9 *Clearing the feed table*  
Transports all sheets that are on the feed table up to the ratchet pawl.

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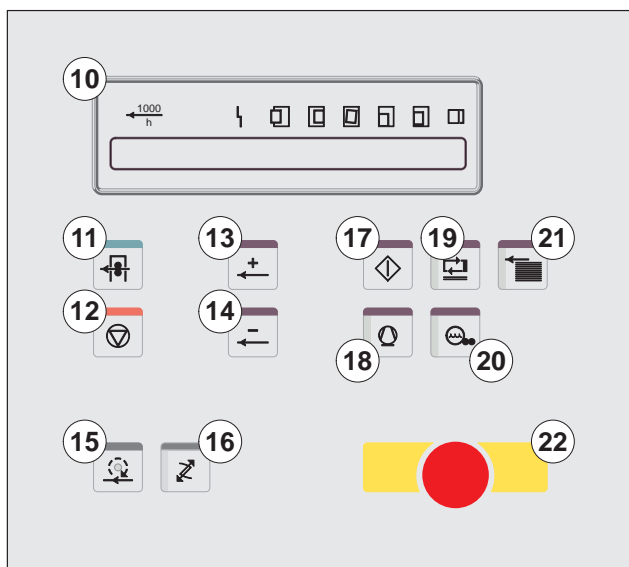


Fig. 6 Feeder control panel, detail

- GR SG9011865000000000
- 10 Press display**  
Displays the current press data (number of impressions, degree value), monitoring of the feed gripper, general malfunctions, etc.
- 11 Production**  
Press in operation: The press automatically transitions to production mode.  
If the press is not in operation: the start-up warning sounds. If pressed again, the press automatically goes into production mode.
- **Note**  
For presses with central air supply, press the *Compressor* button beforehand.
- 12 Halt**  
Stops the press. Actuation during the production run: switches off all functions for the production run (except for the compressor).
- **Note**  
The *Halt* button is not an *Emergency stop button!*
- 13 Increase print speed**  
Increases the press speed continuously.
- 14 Reduce printing speed**  
Reduces the press speed continuously.
- 15 Inch forward**  
The start-up warning signal sounds before the press is inched forwards. Condition: The *Control panel selection* button on the feeder has been pressed.
- 16 Select control panel**  
Press the button twice: From this control panel, the press can only be moved in inching mode (LED is ON).  
To cancel the selection: Press the button again (LED is OFF).
- 17 Operation**  
The start-up warning signal sounds.  
The press starts up at minimum speed when the button is actuated again.
- 18 Compressor**  
Switches the compressor ON (LED is ON) and OFF.
- 19 Feeder ON**  
Switches the feeder automatically ON (LED is ON) and OFF.
- 20 Dampening form rollers ON/OFF**  
Throws all preselects dampening form rollers manually ON (LED is ON) or OFF.

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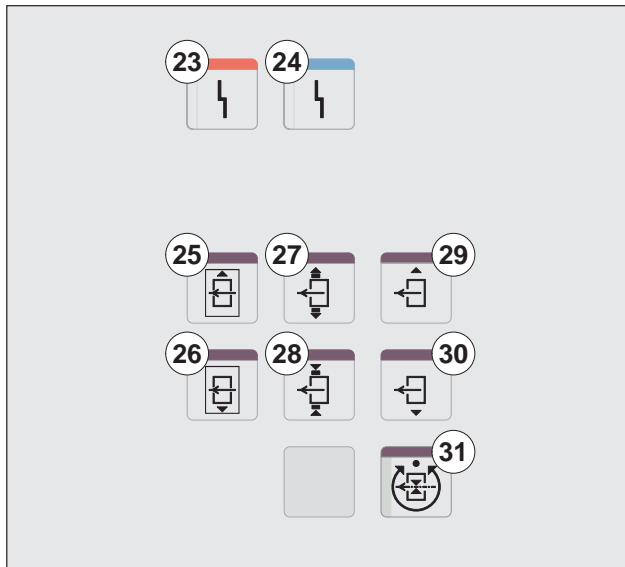


Fig. 7 Feeder control panel, detail

- 21 Paper ON**  
Switches the sheet travel ON (LED is ON) and OFF.
- 22 EMERGENCY STOP**  
The press stops immediately and the palm button is locked.  
Turn: the lock is released.
- 23 Malfunction button red**  
Due to a fault, the press cannot be put into operation.
- 24 Malfunction button blue**  
Due to a fault, the press cannot be put into operation.
- 25 Pull distance correction towards D.S.**
- 26 Pull distance correction towards O.S.**
- **Note**  
The feeder display shows the current format width during adjustment or when the *Pull distance correction* buttons (Fig. 7/25 and 26) are pressed at the same time.
- 27 Increase lateral sheet separation blower sheet size**  
Moves the opposite lateral sheet separation blower away from the pile. The lateral sheet separation blower on the pull side remains.
- 28 Reduce lateral sheet separation blower sheet size**  
Moves the opposite lateral sheet separation blower towards the pile. The lateral sheet separation blower on the pull side remains.
- **Note**  
The feeder display shows the current format width during adjustment or when the *Lateral sheet separation blower sheet size* buttons (Fig. 7/27 and 28) are pressed at the same time.
- 29 Pile to D.S.**  
Moves the active pile to D.S.
- 30 Pile to O.S.**  
Moves the active pile to O.S.
- 31 Pile alignment automatic ON/OFF**  
Selects the pile alignment operating mode.  
The LED is ON: "Automatic"  
The LED is OFF: "Manual" mode

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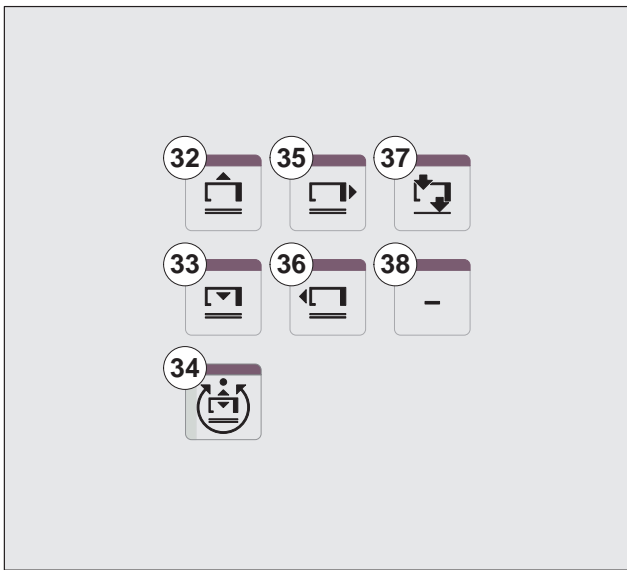


Fig. 8 Feeder control panel, detail

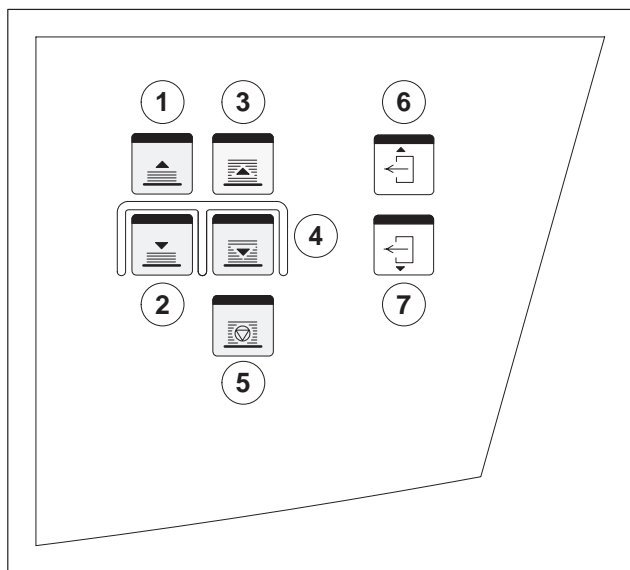
- 32** *Suction head up*  
Automatic mode: Increases the nominal value of the height adjustment.  
Manual mode: Moves the suction head up.
- 33** *Suction head down*  
Automatic mode: Decreases the nominal value of the height adjustment.  
Manual mode: Moves the suction head down.

**!** **Caution – Danger of collision!**  
The suction head can collide with the pile when it is moved down. Lower the pile before you move the suction head downwards.

- 34** *Height adjustment automatic ON/OFF*  
Selects the height adjustment operating mode.  
The LED is ON: "Automatic"  
The LED is OFF: "Manual" mode
- 35** *Increase suction head sheet size*  
Moves the suction head away from the forwarding rollers.
- 36** *Reduce suction head sheet size*  
Moves the suction head in the direction of the forwarding rollers.
- 37** *Increase blast air compensation*  
Increases the blast air volume of the blast air compensation.
- 38** *Reduce blast air compensation*  
Reduces the blast air volume of the blast air compensation.

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4.2 Pile control control panel



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- 1 *Auxiliary pile up*  
The auxiliary pile moves upwards as long as the button is pressed.
- 2 *Auxiliary pile down*  
The auxiliary pile moves down as long as the button is pressed.
- 3 *Main pile up*  
The main pile moves upwards as long as the button is pressed.
- 4 *Main pile down*  
Moves the main pile down. The downward movement stops approximately 12 cm above the ground. Pressing the button again briefly moves the pile support plate down to a distance of approximately 1 cm above the floor. Pile support plate and pile support frame are centered and set down to the floor.
- 5 *Pile stop*  
Interrupts the movement of auxiliary pile and main pile.
- 6 *Pile to D.S.*  
"Manual" mode: Moves the active pile to D.S.
- 7 *Pile to O.S.*  
"Manual" mode: Moves the active pile to O.S.

Fig. 9 Pile control control panel

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4.3 Suction head control panel

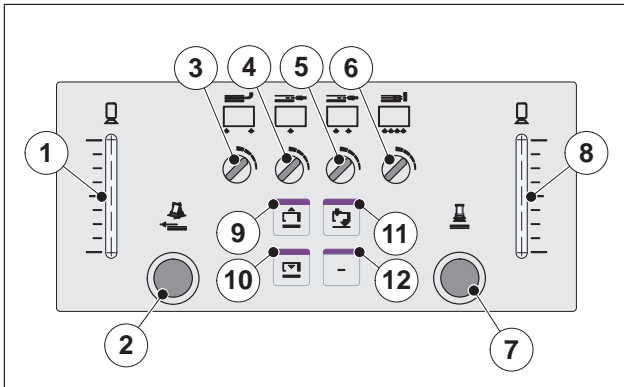


Fig. 10 Suction head control panel

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- 1 *Forwarding sucker O.S.*  
Adjusts the level of the forwarding sucker on O.S.
- 2 *Lifting sucker inclination*  
Adjusts the inclination of the lifting suckers.
- 3 *Rear edge blowers*  
Adjusts the blast air volume of the rear edge blowers.
- 4 *Inner carrier air blowers*  
Adjusts the blast air volume of the inner carrier air blowers.
- 5 *Outer carrier air blowers*  
Adjusts the blast air volume of the outer carrier air blowers.
- 6 *Sheet separation blowers*  
Adjusts the blast air volume of the sheet separation blowers.
- 7 *Lifting sucker distance*  
Adjusts the magnitude of the stroke movement.
- 8 *Forwarding sucker D.S.*  
Adjusts the level of the forwarding sucker D.S.
- 9 *Suction head up*  
Automatic mode: Increases the nominal value of the height adjustment.  
Manual mode: Moves the suction head up.
- 10 *Suction head down*  
Automatic mode: Decreases the nominal value of the height adjustment.  
Manual mode: Moves the suction head down.



**Caution – Danger of collision!**

The suction head can collide with the pile when it is moved down. Lower the pile before you move the suction head downwards.

- 11 *Increase blast air compensation*  
Increases the blast air volume of the blast air compensation.
- 12 *Reduce blast air compensation*  
Reduces the blast air volume of the blast air compensation.

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4.4 Air control control panel

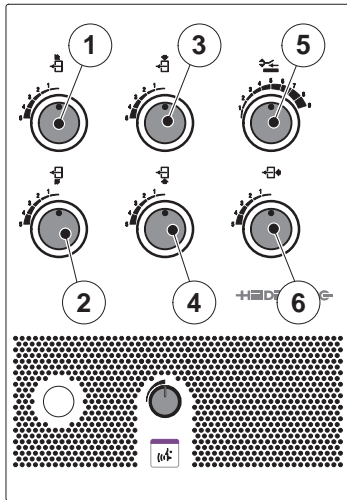


Fig. 11 Air control control panel

- GR SG8016877000000000
- 1 *Corner blowers D.S.*  
Adjusts the blast air volume of the corner blowers D.S.
  - 2 *Corner blowers O.S.*  
Adjusts the blast air volume of the corner blowers O.S.
  - 3 *Diagonal blower bars D.S.*  
Adjusts the blast air volume of the diagonal blower bars D.S.
  - 4 *Diagonal blower bars O.S.*  
Adjusts the blast air volume of the diagonal blower bars O.S.
  - 5 *Guide plate*  
Adjusts the level of the guide plate.
  - 6 *Pre-separation air*  
Adjusts the pre-separation air volume of the carrier air blowers and sheet separation blowers. The pre-separation air is blown into the pile before the sheet travel is switched on.

**B Control**

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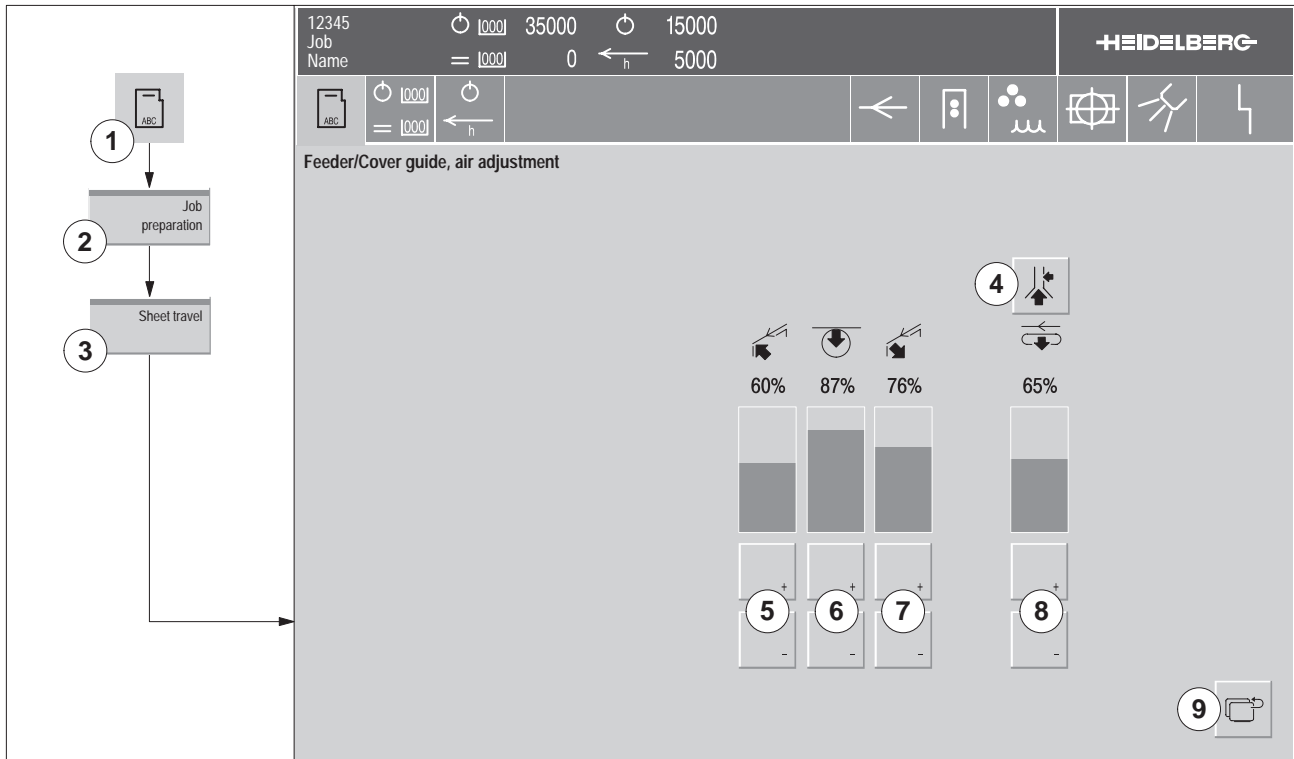


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1 Adjustments for the Preset Plus feeder

1.1 Print job preparation

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GR SG901398000000000000

Fig. 1 Job preparation, presets

The **Feeder/Cover guide, air adjustment** menu of the job preparation (violet CP2000 area) enables you to preset the air adjustments on the feeder for new print jobs. The printing press accepts the adjustments at the beginning of the print job.

1. Press the *Job* button (Fig. 1/1) in the banner line. The **Job** menu appears.
2. Press the *Job preparation* button (Fig. 1/2). The **Job/Job preparation** menu opens.
3. Press the *Sheet travel* button (Fig. 1/3). The **Feeder/Cover guide, air adjustment** menu (Fig. 1) appears.
4. Press the *Bypass valve open/close* button (Fig. 1/4) to be able to reduce the suction air at the suction tape further. The button is highlighted when the valve is open.
5. Use the "+" and "-" buttons (Fig. 1/5) to adjust the blast air at the blowing/suction nozzle. The selected value appears above the bar chart.
6. Use the "+" and "-" buttons (Fig. 1/6) to adjust the suction air at the propelling roller. The selected value appears above the bar chart.

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7. Use the "+" and "-" buttons (Fig. 1/7) to adjust the suction air at the pull plate. The selected value appears above the bar chart.
8. Use the "+" and "-" buttons (Fig. 1/8) to adjust the suction air at the suction tape. The selected value appears above the bar chart.
9. To exit the menu: Press the *Return* button (Fig. 1/9) or a button in the banner line.

## 1.2 Sheet travel/Feeder pile menu

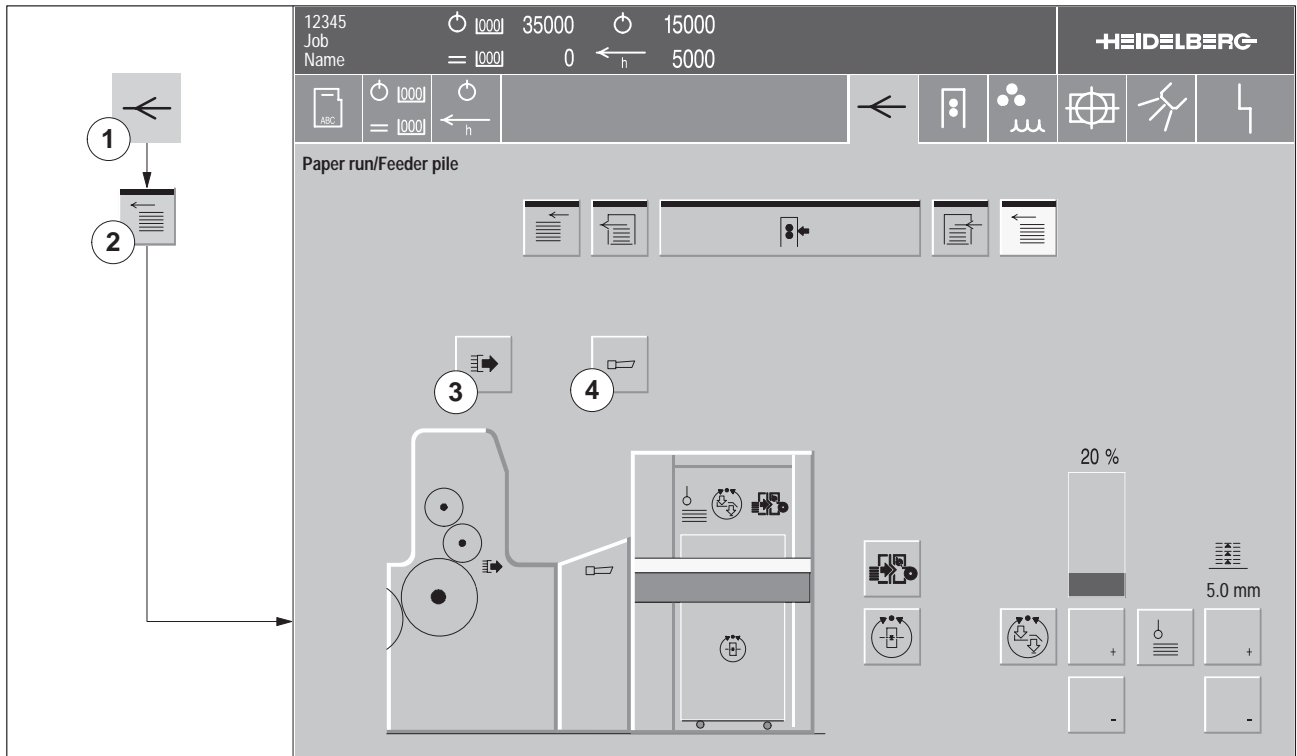


Fig. 2 Sheet travel/Feeder pile menu

1. Press the *Sheet travel* button (Fig. 2/1) in the banner line. The **Paper run** menu appears.
2. Press the *Feeder pile* button (Fig. 2/2). The **Paper run/Feeder pile** menu (Fig. 2) appears.
3. Switching the suction brush on/off: Press the button (Fig. 2/3). The button is highlighted when the suction brush is switched on.
4. Switching the pull horn on/off: Press the button (Fig. 2/4). The button is highlighted when the suction brush is switched on.

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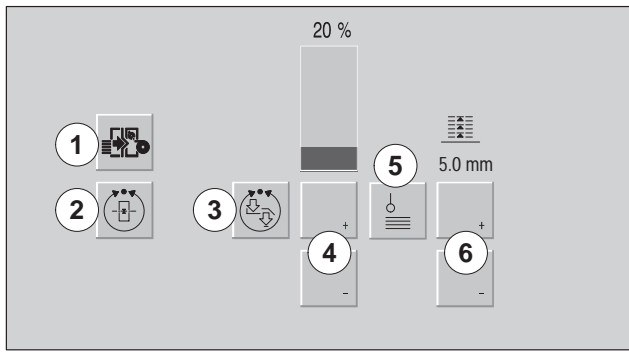


Fig. 3 Sheet travel/Feeder – separation menu

- 1 *Prepare sheeter operation*  
Prepares the printing press for the operation with the sheeter.
- 2 *Pile alignment with respect to pull lay*  
Aligns the pile automatically with respect to the pull lay.
- 3 *Blast air speed compensation ON/OFF*  
Adjusts the blast air volume automatically to the printing speed.
- 4 *Speed-compensated blast air*  
*Speed compensation ON:* The buttons "+" and "-" are used for adjusting the compensation value (0...100 %).  
*Speed compensation OFF:* The buttons "+" and "-" are used for adjusting the blast air volume (20...100 %).
- 5 *Pile height sensor ON/OFF*  
Switches the pile height sensor on or off.
- 6 *Pile stroke*  
The buttons "+" and "-" are used for adjusting the pile stroke.

1.3 Air adjustment

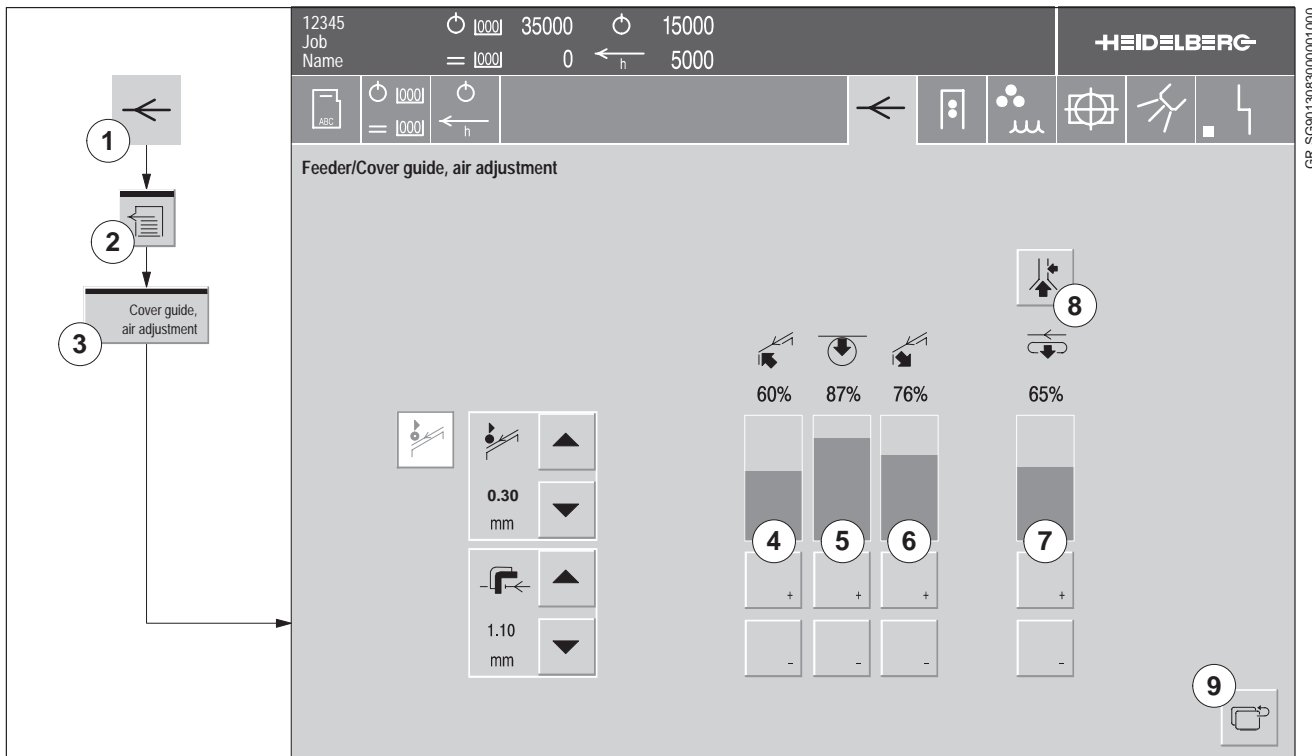


Fig. 4 Air adjustment - Preset Plus feeder

The following functions can be set in the **Feeder/Cover guide, air adjustment** menu:

- The blast air at the blowing/suction nozzle (Fig. 4/4)

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- The suction air at the propelling roller (Fig. 4/5)
  - The suction air at the pull plate (Fig. 4/6)
  - The suction air at the suction tape (Fig. 4/7)
  - The by-pass valve at the suction tape (Fig. 4/8)
1. Press the *Sheet travel* button (Fig. 4/1) in the banner line. The **Paper run** menu appears.
  2. Press the *Feeder* button (Fig. 4/2). The **Paper run/Feeder** menu appears.
  3. Press the *Cover guide, air adjustment* button (Fig. 4/3). The **Feeder/Cover guide, air adjustment** menu (Fig. 4) appears.
  4. Use the "+" and "-" buttons (Fig. 4/4) to adjust the blast air at the blowing/suction nozzle. The selected value appears above the bar chart.
  5. Use the "+" and "-" buttons (Fig. 4/5) to adjust the suction air at the propelling roller. The selected value appears above the bar chart.
  6. Use the "+" and "-" buttons (Fig. 4/6) to adjust the suction air at the pull plate. The selected value appears above the bar chart.
  7. Use the "+" and "-" buttons (Fig. 4/7) to adjust the suction air at the suction tape. The selected value appears above the bar chart.
  8. Press the *By-pass valve open/close* button (Fig. 4/8) to be able to reduce the suction air at the suction tape further. The button is highlighted when the valve is open.

► **Note**

The bypass valve at the suction tape opens automatically when you select a printing material thickness of  $\leq 0.1$  mm in the print job data.

9. To exit the menu: Press the *Return* button (Fig. 4/9), or a button in the banner line.

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## 1.4 Selecting cardboard mode for the separator roll bar

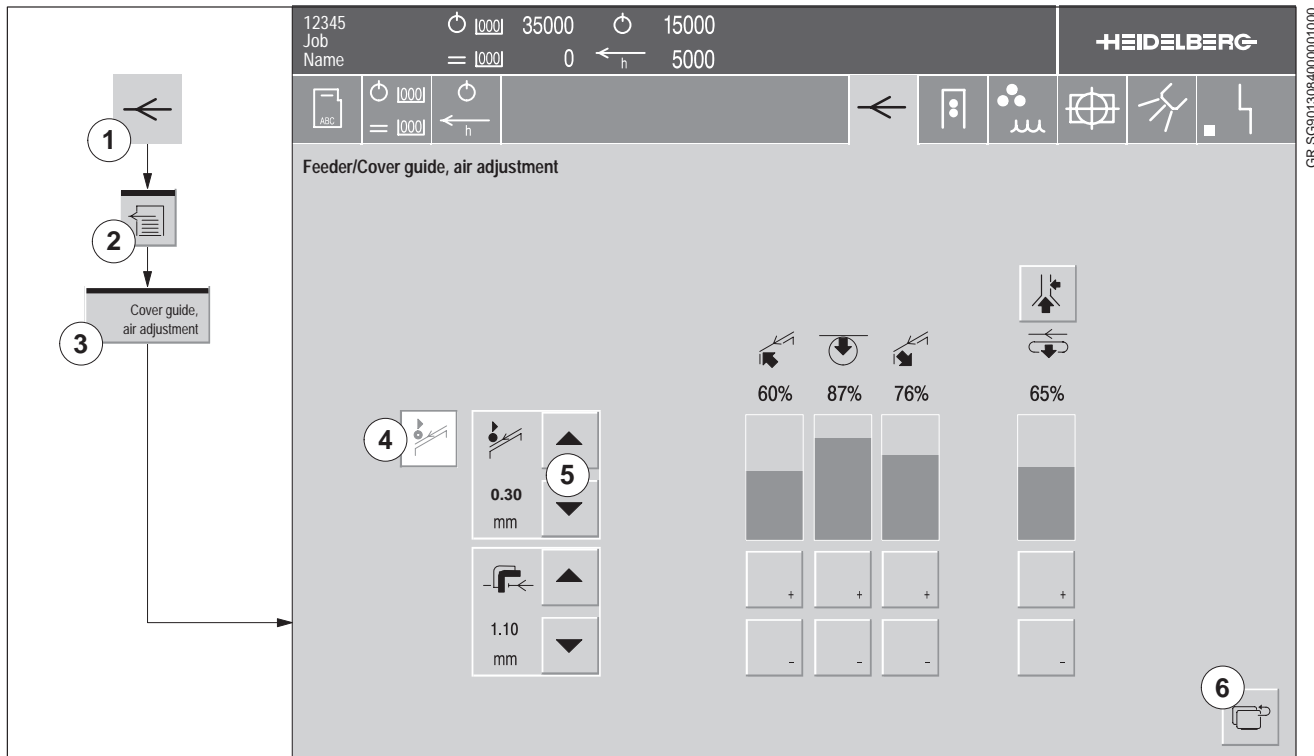


Fig. 5 Separator roll bar in cardboard mode

The **Feeder/Cover guide, air adjustment** menu enables you to select cardboard mode for the separator roll bar, even if you are using thin printing materials (< 0.4 mm). If the stock thickness exceeds 0.4 mm, cardboard mode is selected automatically and cannot be deselected afterwards (Fig. 5/4).

1. Press the *Sheet travel* button (Fig. 5/1) in the banner line. The **Paper run** menu appears.
2. Press the *Feeder* button (Fig. 5/2). The **Paper run/Feeder** menu appears.
3. Press the *Cover guide, air adjustment* button (Fig. 5/3). The **Feeder/Cover guide, air adjustment** menu (Fig. 5) appears.
4. To select cardboard mode: Press the button (Fig. 5/4). The button is now highlighted.
5. Use the arrow keys (Fig. 5/5) to change the preset separator roll height.
6. To exit the menu: Press the *Return* button (Fig. 5/5), or a button in the banner line.

# confidential

## 1.5 Changing the cover guide height later

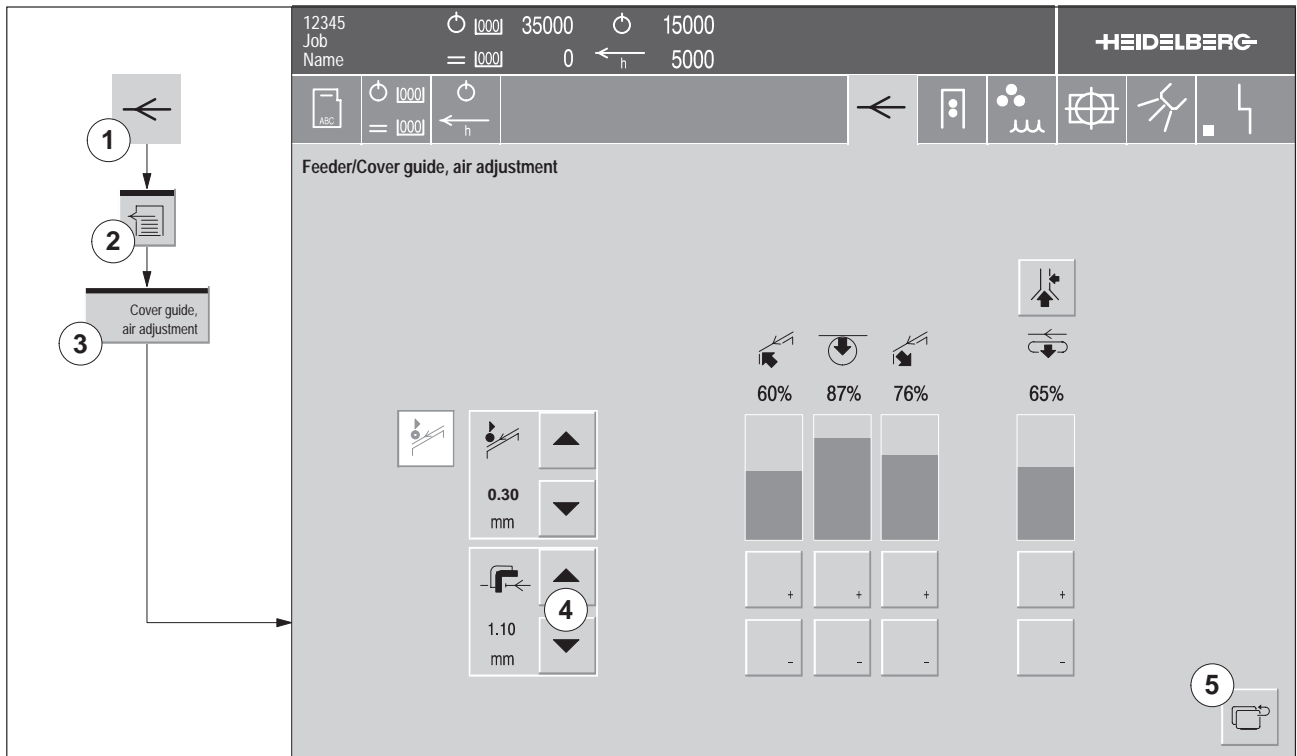


Fig. 6 Changing the cover guide height later

The cover guide height is set automatically when you enter the stock thickness in the **Job/Printing material** menu. The **Feeder/Cover guide, air adjustment** menu enables you to change the cover guide height later.

1. Press the *Sheet travel* button (Fig. 6/1) in the banner line. The **Paper run** menu appears.
2. Press the *Feeder* button (Fig. 6/2). The **Paper run/Feeder** menu appears.
3. Press the *Cover guide, air adjustment* button (Fig. 6/3). The **Feeder/Cover guide, air adjustment** menu (Fig. 6) appears.
4. Use the arrow keys (Fig. 6/4) to select the cover guide height in mm. The selected value is displayed to the left of the arrow keys.  
Maximum cover guide height: 1.90 mm  
Minimum cover guide height: Stock thickness + 0.05 mm
5. To exit the menu: Press the *Return* button (Fig. 6/5), or a button in the banner line.

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1.6 Adjusting the front lay deflection

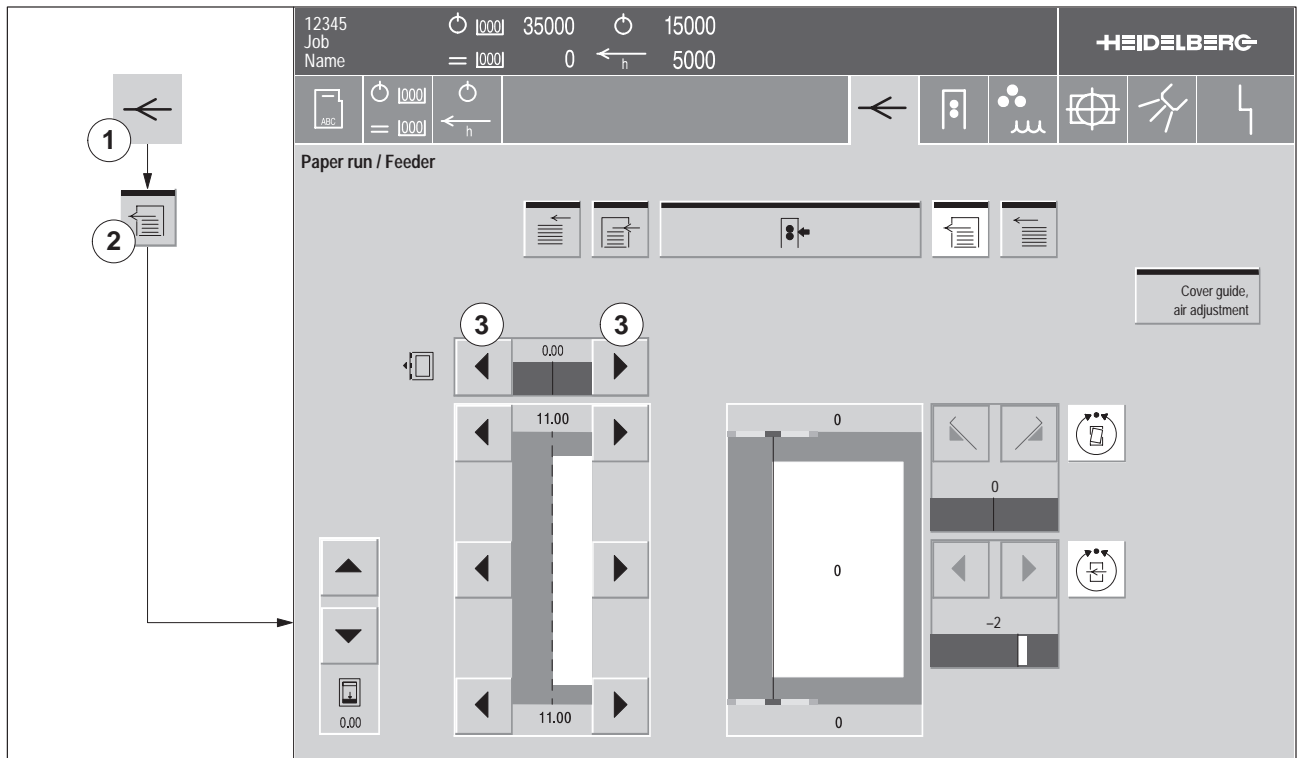


Fig. 7 Adjusting the front lay deflection

The **Sheet travel/Feeder** menu enables you to set the deflection of the front lay shaft in order to adjust it to the cut edge of the printing material.

1. Press the *Sheet travel* button (Fig. 7/1) in the banner line. The **Paper run** menu appears.
2. Press the *Feeder* button (Fig. 7/2). The **Paper run/Feeder** menu (Fig. 7) appears.
3. Use the arrow keys (Fig. 7/3) to adjust the front lay deflection. The set value is displayed between the two arrow keys.

**Adjustment range**

- Typically: +0.5...-0.3 mm
- At a gripper bite of 11.9 mm: +0.4...-0.3 mm
- At a gripper bite of 12 mm: +0.3...-0.3 mm

# confidential

## 1.7 Switching automatic pull lay cleaning on/off

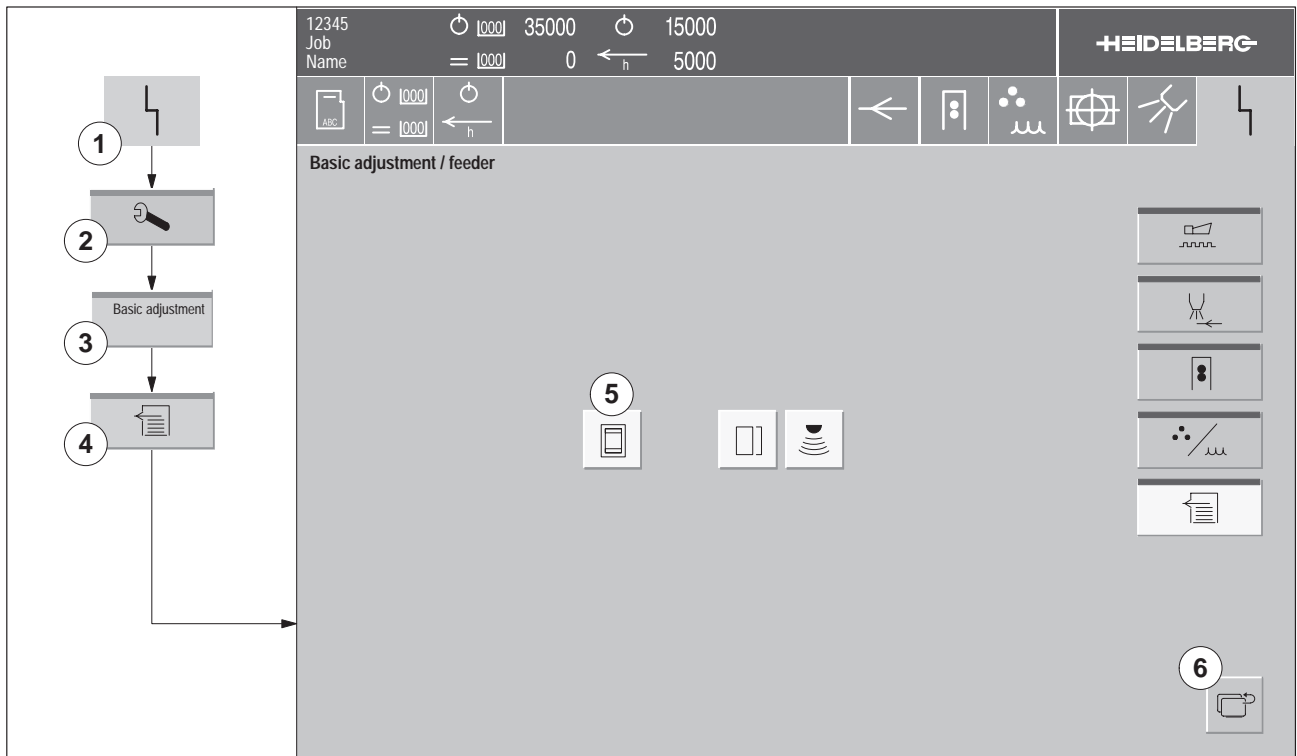


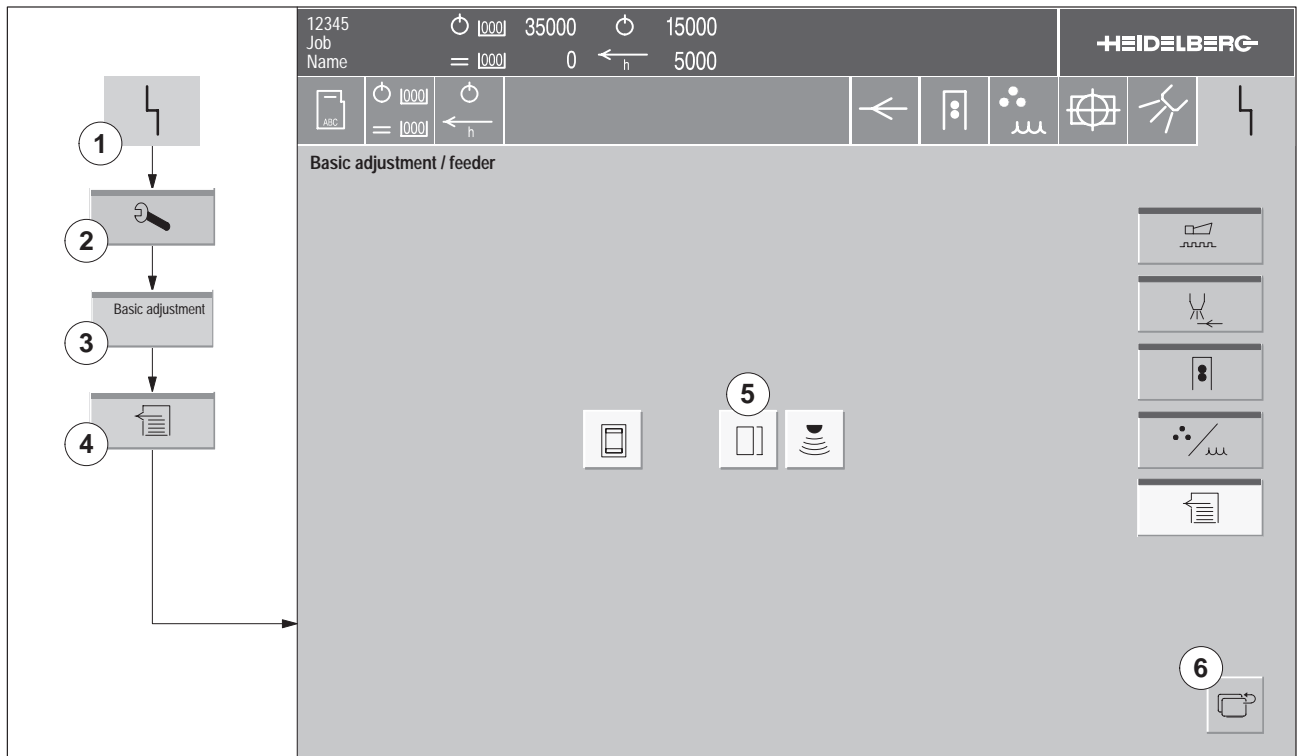
Fig. 8 Switching automatic pull lay cleaning on/off

The **Basic adjustments/Feeder** menu enables you to switch on/off the automatic pull lay cleaning function. When automatic pull lay cleaning is switched on, the pull plate is blown free after each washup of the blanket.

1. In the header, press the button *Malfunction* (Fig. 8/1). The **Malfunction** menu appears.
2. Press the *Service* button (Fig. 8/2). The **Service** menu appears.
3. Press the *Basic settings* button (Fig. 8/3). The menu **Basic settings/Start-up warning signal** appears.
4. Press the *Feeder* button (Fig. 8/4). The **Basic adjustments/Feeder** menu (Fig. 8) appears.
5. To switch on or off automatic pull lay cleaning: Press the button (Fig. 8/5). The button is highlighted when automatic pull lay cleaning is switched on.
6. To exit the menu: Press the *Return* button (Fig. 8/6), or a button in the banner line.

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## 1.8 Switching the double sheet detector in the pull lay on or off (option)



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Fig. 9 Switching the double sheet detector in the pull lay on/off

The **Basic adjustments/Feeder** menu enables you to switch on or off the double sheet detector in the pull lay (option).

1. In the header, press the button *Malfunction* (Fig. 9/1). The **Malfunction** menu appears.
2. Press the *Service* button (Fig. 9/2). The **Service** menu appears.
3. Press the *Basic settings* button (Fig. 9/3). The menu **Basic settings/Start-up warning signal** appears.
4. Press the *Feeder* button (Fig. 9/4). The **Basic adjustments/Feeder** menu (Fig. 9) appears.
5. To switch on or off the double sheet detector in the pull lay: Press the button (Fig. 9/5). The button is highlighted when the double sheet detector is switched on.

If your press is equipped with a double sheet detector in the pull lay **and** an ultrasonic double sheet detector, you may:

- switch on both double sheet detectors
- switch off the double sheet detector in the pull lay **or** the ultrasonic double sheet detector.

One of the two double sheet detectors always remains ON.

# confidential

- To exit the menu: Press the *Return* button (Fig. 9/6), or a button in the banner line.

## 1.9 Switching the ultrasonic double sheet detector on/off (option)

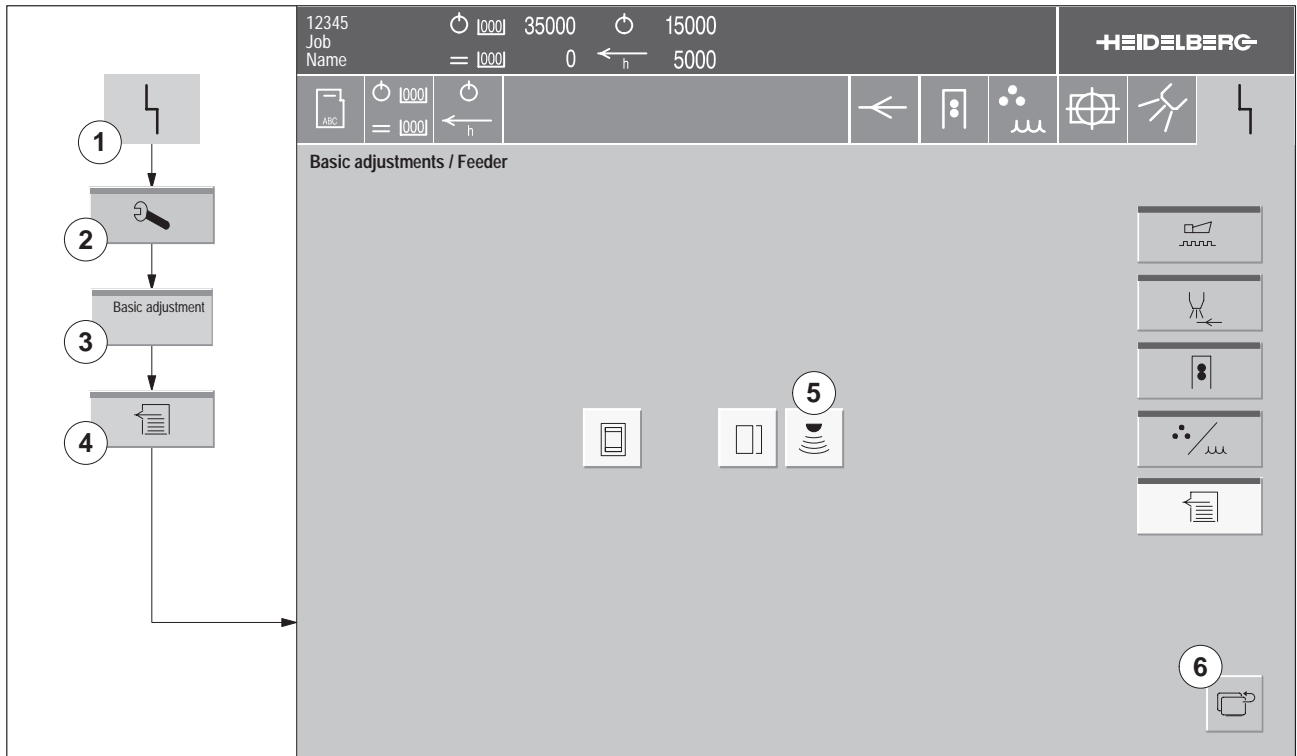


Fig. 10 Switching the ultrasonic double sheet detector on/off

The **Basic adjustments/Feeder** menu enables you to switch on/off the ultrasonic double sheet detector (option).

It is not suitable for:

- Double-layer printing materials (such as envelopes)
- Printing material of a grammage of more than 600 g/m<sup>2</sup>

1. Press the *Malfunction* button (Fig. 10/1). The **Malfunction** menu appears.
2. Press the *Service* button (Fig. 10/2). The **Service** menu appears.
3. Press the *Basic adjustments* button (Fig. 10/3). The menu **Basic settings/Start-up warning signal** appears.
4. Press the *Feeder* button (Fig. 10/4). The **Basic adjustments/Feeder** menu appears.
5. To switch the ultrasonic double sheet detector on/off: Press the button (Fig. 10/5). The button is highlighted when the ultrasonic double sheet detector is switched on.

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If your press is equipped with a double sheet detector in the pull lay **and** an ultrasonic double sheet detector, you may:

- switch on both double sheet detectors
- switch off the double sheet detector in the pull lay **or** the ultrasonic double sheet detector.

One of the two double sheet detectors always remains ON.

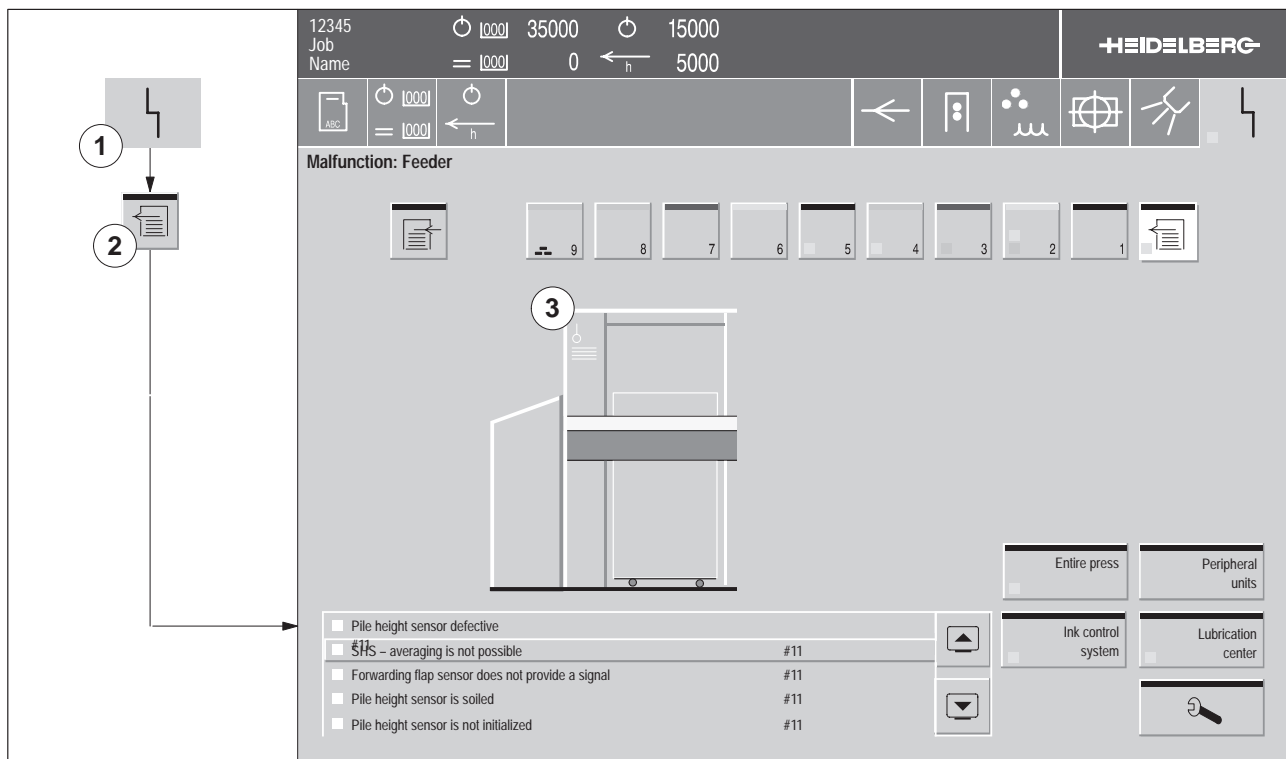
6. To exit the menu: Press the *Return* button (Fig. 10/6) or a button in the banner line.

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2 Malfunctions – Preset Plus feeder

2.1 Malfunctions in the pile height sensor

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Fig. 11 Malfunctions in the pile height sensor

	Symbol	Error message	Type
3		<b>Pile height sensor defective</b> Notify your authorized Service agent.	yellow
		<b>SHS – averaging not possible</b> Notify your authorized Service agent.	yellow
		<b>The forwarding flap sensor does not provide a signal</b> Notify your authorized Service agent.	yellow
		<b>Soiled pile height sensor</b> Clean the sensor	yellow
		<b>Pile height sensor has not been initialized</b> Notify your authorized Service agent.	yellow

Tab. 1

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2.2 Bundle detector

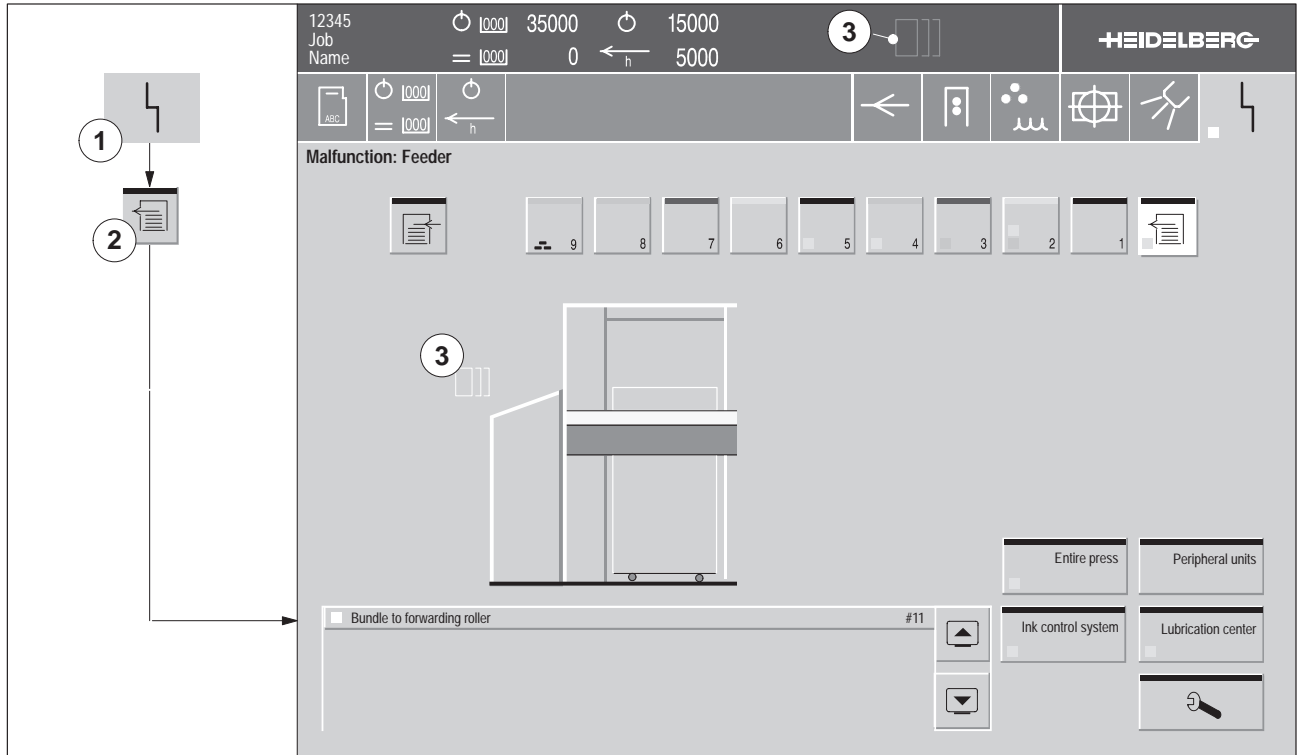


Fig. 12 Bundle to forwarding roller

	Symbol	Error message	Type
3		<b>Bundle to forwarding roller</b> Remove double sheets or multiple sheets	yellow

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2.3 Tear-off detector / multiple-sheet detector

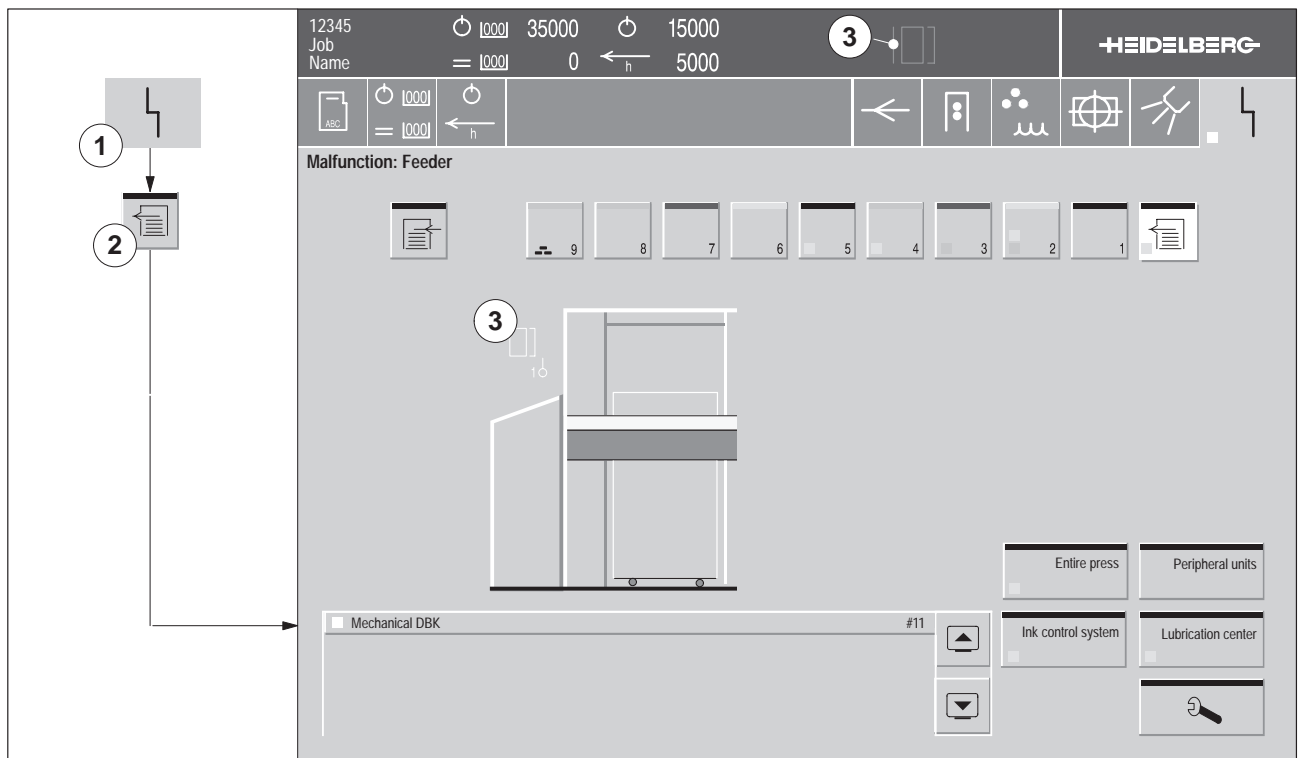


Fig. 13 Double sheets or multiple sheets on tear-off detector

	Symbol	Error message	Art
3		<b>Mechanical double sheet detector</b> Remove double sheets or multiple sheets	yellow
			yellow

**C Machine**

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## 1 Feeder – To be observed when working at the press

### 1.1 Safety instructions

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**Warning – Danger of crushing!**

Touching moveable parts – such as forwarding rollers, lifting suckers and forwarding suckers or adjacent components – can lead to injuries of the fingers. Switch off the feeder and secure it against being switched on inadvertently before you start any adjustment work.

**Warning – Rotating rollers and cylinders are crushing points!**

Since press motion is possible whilst the guards are open, there is a risk of injury if improperly operated. Pay particular attention to moving parts and hazards in the material infeed area while you perform any adjustment work on the feeder.

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1.2 Distinguishing Preset Plus feeder and standard feeder or Preset feeder

Some significant distinction marks tell you whether you press is equipped with a Preset Plus feeder, a Preset feeder, or a standard feeder.

Standard feeder	Preset feeder	Preset Plus feeder
Several narrow transport tapes on the feed table	Several narrow transport tapes on the feed table	One suction tape on the feed table
Mechanical pull lay	Mechanical pull lay	Pneumatic pull lay
The feeder components must be adjusted manually	Once the format has been entered at the CP2000 Center, the following feeder components automatically adjust to the format. <ul style="list-style-type: none"> <li>● Side stops</li> <li>● Lateral sheet separation blowers</li> <li>● ...</li> </ul>	Once the format has been entered at the CP2000 Center, the following feeder components automatically adjust to the format. <ul style="list-style-type: none"> <li>● The pull lay</li> <li>● Side stops</li> <li>● Lateral sheet separation blowers</li> <li>● ...</li> </ul>
Hold-down rod on the feed table	Hold-down rod on the feed table	Separator rolls

Tab. 1 Distinction features

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## 2 Pile change

### 2.1 Normal pile change

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#### Note

- The maximum pile weight is:
- with pile carriage 1400 kg.
  - without pile carriage 2000 kg.

1. Press the *Main pile down* button.  
The pile support plate moves down. For safety reasons, the pile support plate stops the down motion 12 cm above ground.



#### Warning – the pile support plate can crush members!

When lowering the pile support plate, do not stand in the zone of danger of the pile support plate.  
Before lowering the pile to the ground, ensure

- that there are no persons in the zone of danger.
- that nothing can be pinched underneath the pile support plate.

2. Press again the *Main pile down* button.  
The pile support plate
  - stops briefly above the ground,
  - aligns itself automatically in center position,
  - and continues its movement down to the ground.
3. Move the empty pallet out of the feeder.
4. Move a full pallet onto the pile support plate.  
Center the pallet when you insert it.
5. Press the *Main pile up* button.  
The pile support plate moves upwards and stops at the alignment position underneath the side stops for the pile alignment.  
The pile aligns itself automatically when pile alignment is switched on. If pile alignment is switched off, you must use the *Align pile* buttons to align the pile manually.

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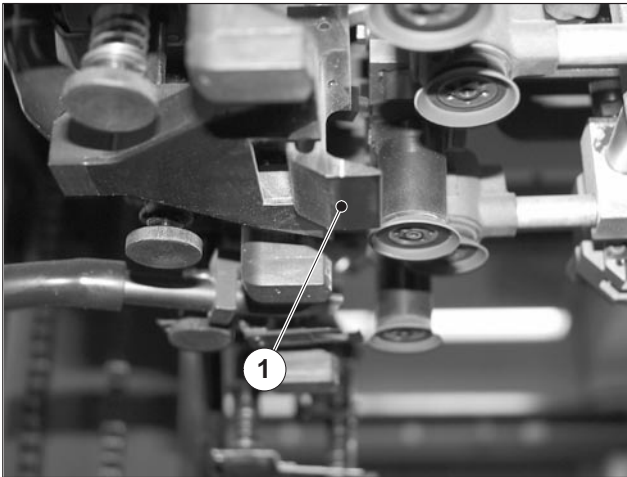


Fig. 1 Governor foot in inquiry position

When feeder and pile alignment are switched on, the pile automatically moves to the governor foot after the alignment process has been completed.

If the feeder is not switched on, you must manually raise the pile.

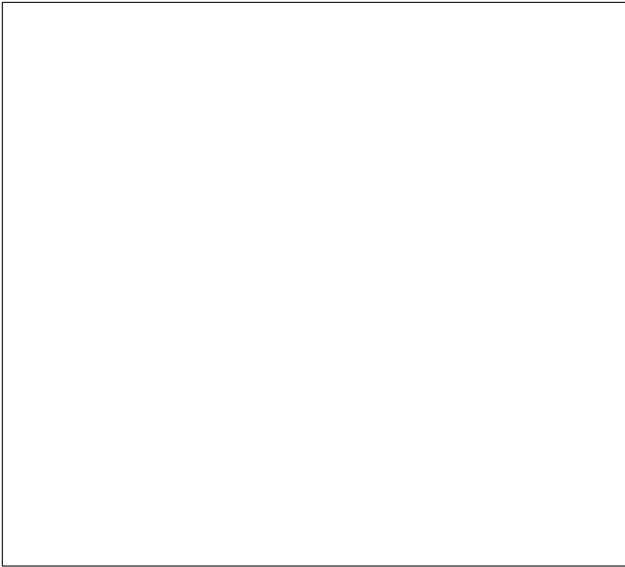
► **Note**

The governor foot (Fig. 1/1) on the suction head must be in inquiry position (Fig. 1).

6. If the governor foot is **not** in inquiry position: Switch the feeder off and back on. The governor foot automatically swivels to the inquiry position.
7. Press the *Main pile up* button until the pile stops.

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2.2 Non-stop pile change



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The non-stop pile change function enables you to replace an empty pallet with a full one without interrupting the production.

The non-stop accessories consist of 9 supporting members.

The supporting members (Fig. 3/2) and the non-stop bar (Fig. 3/1) are in a holding device (Fig. 3) on the feeder.

On D.S., there is a scale (Fig. 2/1) with a white and a black area.

- White area (Fig. 2/2): Changing piles is possible in this area. The bottom point of the white area is the lowest position the non-stop bar can reach.
- Black area (Fig. 2/3): Merging auxiliary pile and main pile must be completed in this area. The upper point of the black area is the highest position the auxiliary pile can reach. Pile raising stops if auxiliary pile and main mail have not yet merged at this point.

Fig. 2 Scale



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Fig. 3 Supporting members in holding device

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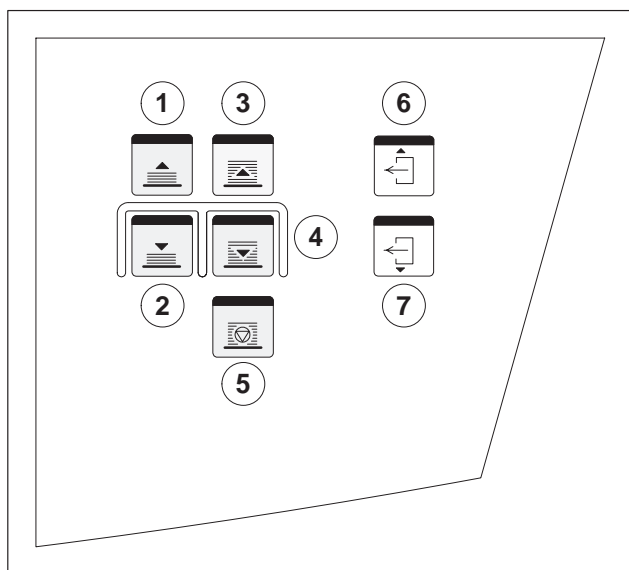


Fig. 4 Pile control control panel

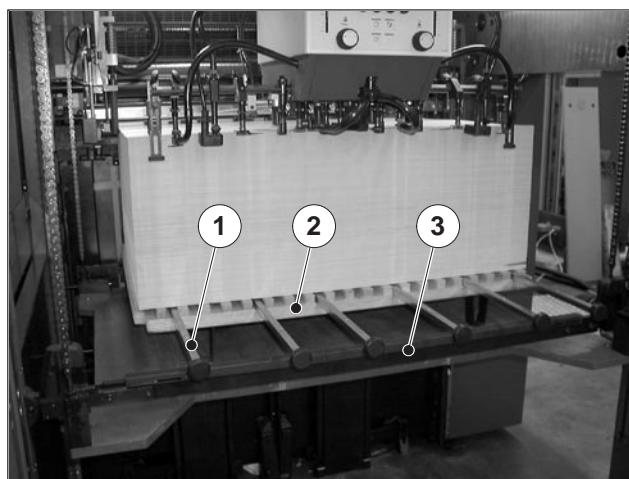


Fig. 5 Inserting the supporting members

Method of operation

1. Use the Heidelberg non-stop pallets (Fig. 5/2) with recesses for the members.
2. Lower the auxiliary pile with the *Auxiliary pile down* button (Fig. 4/2) until the retainer for the non-stop bar on D.S. and O.S. can easily be reached.
3. Hook the non-stop bar (Fig. 5/3), with the guide rail upwards, to the retainer on D.S. and O.S. (Fig. 5/1). The non-stop bar must lock home on D.S. and O.S.
4. Press the *Auxiliary pile down* button (Fig. 4/2). The non-stop bar automatically goes down to the level of the pile support plate (Fig. 5), or to the lowest position - the lowest point of the white scale area (Fig. 5/?).
5. Push the supporting members (Fig. 5/1), with the chamfer upwards, fully home into the recess of the pallet.
6. Press the *Auxiliary pile up* button (Fig. 4/1) after you have inserted all supporting members. Move the auxiliary pile system under the supporting members.

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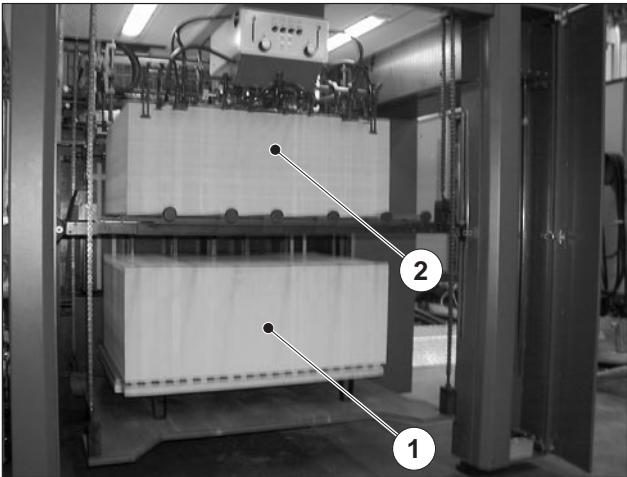


Fig. 6

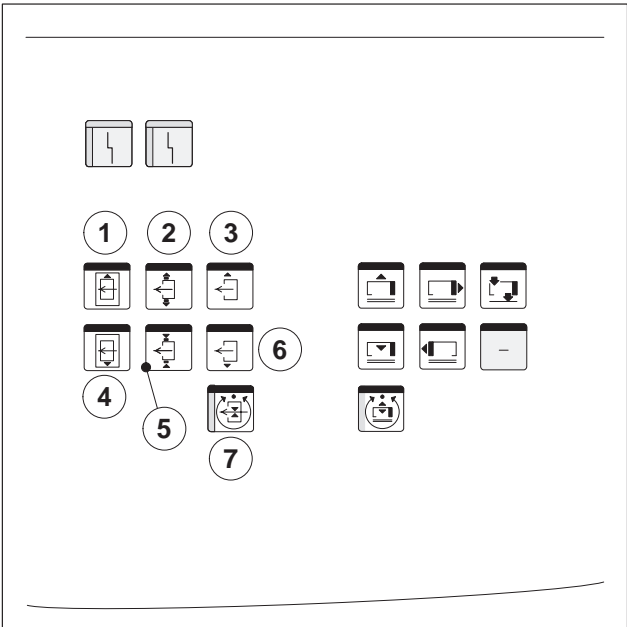


Fig. 7 Feeder control panel

A sensor in the area of the front non-stop bar senses the supporting members. The control system automatically switches over the pile transport to the auxiliary pile. The pile support plate with the empty pallet moves downwards and stops 12 cm above ground.

7. Press the *Main pile down* button (Fig. 4/4). The pile support plate
  - stops briefly above the ground,
  - aligns itself automatically in center position,
  - and continues its movement down to the ground.
8. Move the empty pallet out of the feeder.
9. Move the new pallet onto the pile support plate. Center the pallet when you insert it.
10. Move the pile (Fig. 6/1) upwards until it is approximately 10 cm below the auxiliary pile (Fig. 6/2).
11. Use the *Align pile* buttons (Fig. 7/3 and 6) to align the main pile laterally to the auxiliary pile.
12. Press the *Main pile up* button (Fig. 4/3).

The lifting speed is reduced automatically when the main pile approaches the auxiliary pile. The new main pile moves underneath the supporting members of the auxiliary pile at reduced speed. The pile transport now switches over automatically from the auxiliary pile to the new main pile. The auxiliary pile drive automatically moves downwards.

13. Starting from the inside, pull out the supporting members. Next, pull out the two middle supporting members (first press them apart, then pull them out slowly).

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Fig. 8

## End of run reached ?

14. Remove the non-stop bar from the feeder. Tilt the non-stop bar against the running direction of paper and remove the non-stop bar from the top from the retainers on D.S. and O.S. Store the non-stop bar in the retainer (Fig. 8/1) on the feeder.
15. Press the *Auxiliary pile up* button (Fig. 4/1) to move the non-stop bar to the topmost position. This completes the non-stop cycle.



### Note

Pile support plate and non-stop bar cannot collide. If you do not raise the non-stop bar manually, it will be moved upwards as a function of the upwards motion of the pile support plate.

## Feeder stop if the residual pile is too small

When the auxiliary pile reaches the upper end of the black scale, the pile transport of main pile and auxiliary pile and the feeder are switched off.

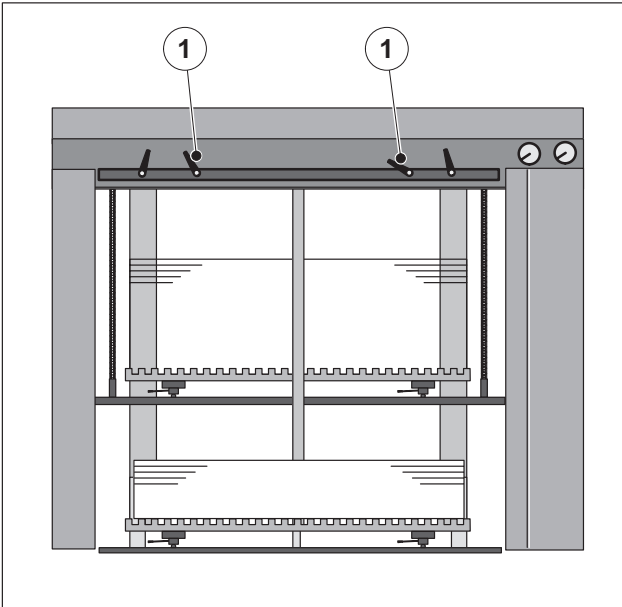
1. Lower the auxiliary pile by approximately 2 cm (Fig. 4/2).
2. Press the *Main pile up* button (Fig. 4/3) until the supporting members are in contact with the main pile.
3. Pull out the supporting members.
4. Press the *Main pile up* button until the pile stops.
5. Switch on the sheet travel.

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3 Preloading and pile change

3.1 Preloading device

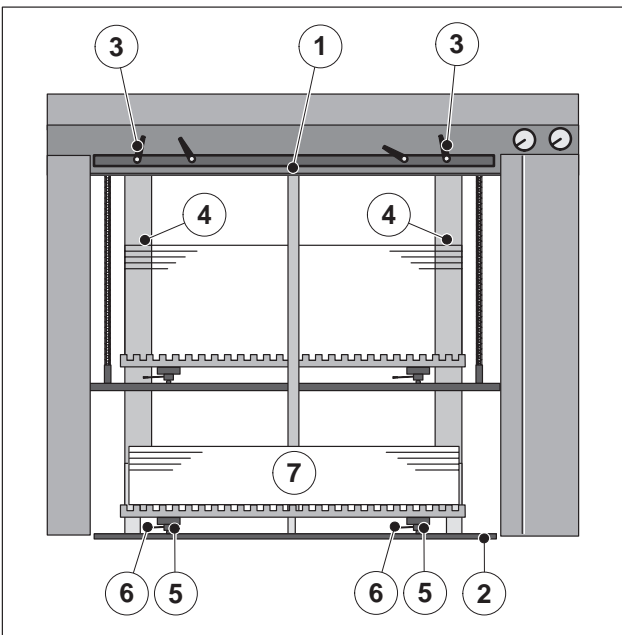
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1. Release the levers at the stops (Fig. 9/1).
2. Adjust the stop on the pull side to the sheet width. The scale on the guard already takes the pull distance into account.
3. Adjust the stop on the non-pull side to the sheet width plus 10 mm.
4. Tighten the locking screws.

Fig. 9 Preloading device



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5. Hook the middle stop (Fig. 10/1) in the center and to the cross bar on the floor (Fig. 10/2).
6. Loosen the locking screws of the guide piece (Fig. 10/3).
7. Push the guide piece (Fig. 10/4) to the stops.
8. Close the lever.
9. Push the pile carriage on the rails (Fig. 10/5) to the stops.
10. Close the brakes (Fig. 10/6) on the pile carriage.
11. Align the pile (Fig. 10/7).
12. Release the brakes and pull back the pile carriage by a short way.
13. Push the guide piece (Fig. 10/4) towards D.S. or O.S.  
Leave the stops at their positions for further pile changes.
14. Detach the middle stop (Fig. 10/1).

Fig. 10 Pile change

3.2 Pile change



**Note**

The maximum pile weight is:  
 - with pile carriage: 1,400 kg  
 - without pile carriage: 2,000 kg

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1. Press the *Main pile down* button.  
The pile support plate moves down. For safety reasons, the pile support plate stops the down motion 12 cm above ground.

**Warning – the pile support plate can crush members!**

When lowering the pile support plate, do not stand in the zone of danger of the pile support plate.

Before lowering the pile to the ground, ensure

- that there are no persons in the zone of danger.
- that nothing can be pinched underneath the pile support plate.

2. Press again the *Main pile down* button.  
The pile support plate
  - stops briefly above the ground,
  - aligns itself automatically in center position,
  - and continues its movement down to the ground.
3. Move the empty pile carriage out of the feeder.
4. Move the prealigned pile carriage on the rails up to the front pile stops. Carefully observe the lateral stops during this process.
5. Close the brakes on the pile carriage.
6. Press the *Main pile up* button.  
The pile support plate moves upwards and stops at the alignment position underneath the side stops for pile centering.  
The pile aligns itself automatically when pile centering is switched on. If pile centering is switched off, you must use the *Align pile* buttons to align the pile manually.

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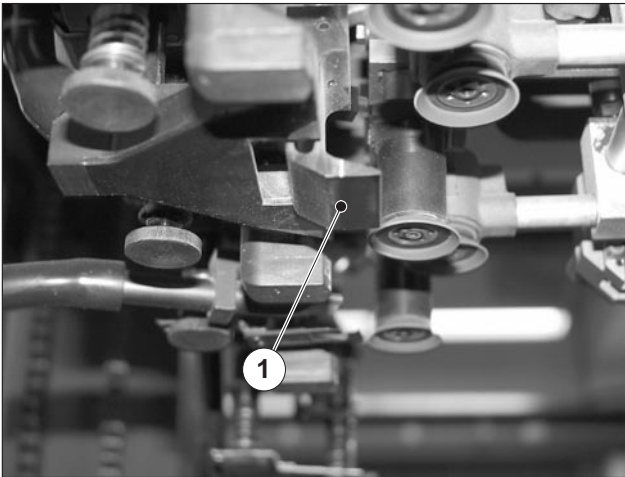


Fig. 11 Governor foot in inquiry position

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When feeder and pile centering are switched on, the pile automatically moves to the governor foot after the alignment process has been completed.

If the feeder is not switched on, you must raise the pile manually.

► **Note**

The governor foot (Fig. 11/1) on the suction head must be in inquiry position (Fig. 11).

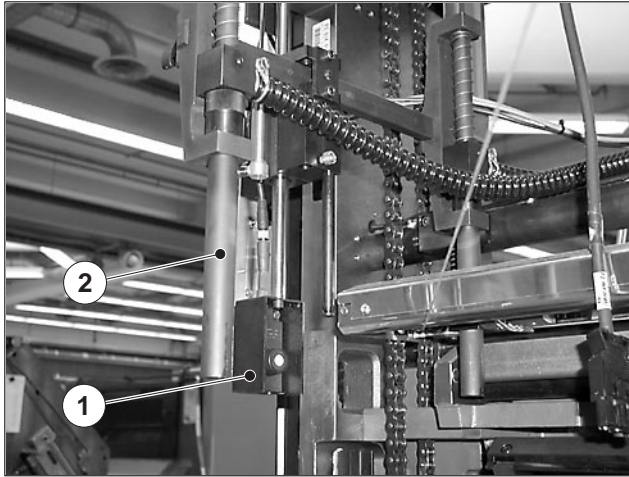
7. If the governor foot is **not** in inquiry position: Switch the feeder off and back on. The governor foot automatically swivels to the inquiry position.
8. Press the *Main pile up* button until the pile stops.

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## 4 Automatic pile alignment

### 4.1 Function

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Fig. 12 Mechanical elements of the pile alignment

#### Pile alignment

- aligns slanted piles or piles that are in steps.
- positions the piles in order to guarantee a pull distance of approximately 5 mm towards D.S. or O.S.

The automatic pile alignment can be switched on or off on the control console.

During alignment, pile support frame, pile support plate and the auxiliary pile system are positioned jointly. Starting from the pile center, the maximum motion path is 35 mm to D.S. and 35 mm to O.S.

Depending on whether you have defined the pull side on D.S. or on O.S., the sensors perform different tasks.

#### Sensor on pull side

The sensor (Fig. 12/1) measures the lateral distance between the pile and the lateral sheet separation blower (Fig. 12/2). It controls the pile such that

- a constant distance to the lateral sheet separation blower is maintained;
- the sheet is aligned to a pull distance of approximately 5 mm.

The control system sets the sensor in two different positions.

- Lower position (preset position): In the lower position, the pile is pre-aligned.
- Upper position (production position): In the upper position, the pile is aligned with respect to the lateral sheet separation blower.

#### Sensor on non-pull side

The sensor on the non-pull side is used for positioning the lateral sheet separation blowers. The lateral sheet separation blowers are adjusted to a distance of approximately 3 mm from the pile edge.

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4.2 Key functions

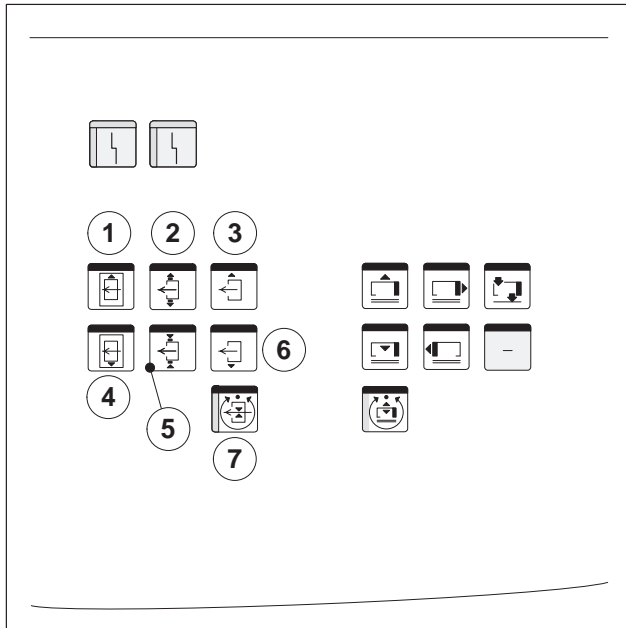


Fig. 13

Mode selection

Automatic/manual pile alignment (Fig. 13/7)

The LED is ON: "Automatic"  
The LED is OFF: "Manual" mode

Correcting the pull distance

Pull distance correction towards D.S. (Fig. 13/1)

The pull distance increases if O.S. is the pull side.  
The pull distance decreases if D.S. is the pull side.

Pull distance correction towards O.S. (Fig. 13/4)

The pull distance decreases if O.S. is the pull side.  
The pull distance increases if D.S. is the pull side.

► Note

The feeder display shows the selected pull distance during adjustment, or when the buttons (Fig. 13/1) and (Fig. 13/4) are pressed at the same time.

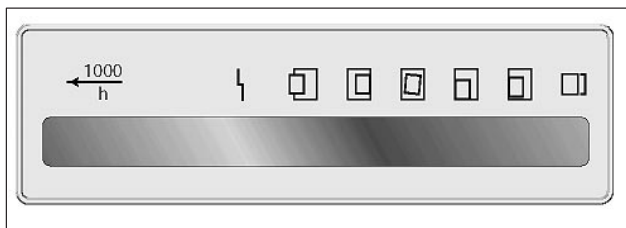


Fig. 14 MID on feeder

Correcting the format/moving the pile stops

You can change the position of the lateral sheet separation blowers manually when automatic pile alignment is switched off (Fig. 13/7).

Increasing the lateral sheet separation blower sheet size (Fig. 13/2)

The lateral sheet separation blower on the pull side remains. The opposite lateral sheet separation blower moves away from the pile.

Decreasing the lateral sheet separation blower sheet size (Fig. 13/5)

The lateral sheet separation blower on the pull side remains. The opposite lateral sheet separation blower moves towards the pile.

► Note

The feeder display shows the current sheet width during adjustment or when the buttons (Fig. 13/2) and (Fig. 13/5) are pressed at the same time.

**confidential****Aligning the active pile**

In "Manual" mode, the pile (main pile or auxiliary pile) can be aligned with the buttons (Fig. 13/3) and (Fig. 13/6). These buttons do not have any function in "Automatic" mode. The pile is aligned by the pile control system.

*Pile to D.S.* (Fig. 13/3)

The active pile moves to D.S.

*Pile to O.S.* (Fig. 13/6)

The active pile moves to O.S.

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4.3 Method of operation in "Automatic" mode

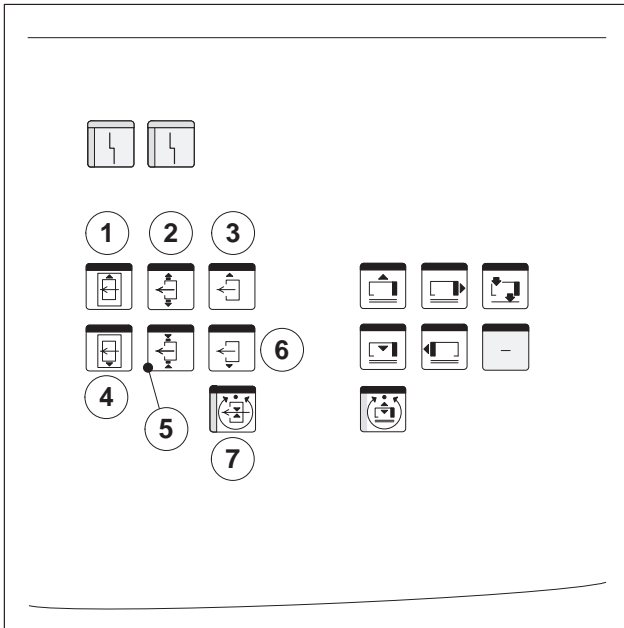


Fig. 15

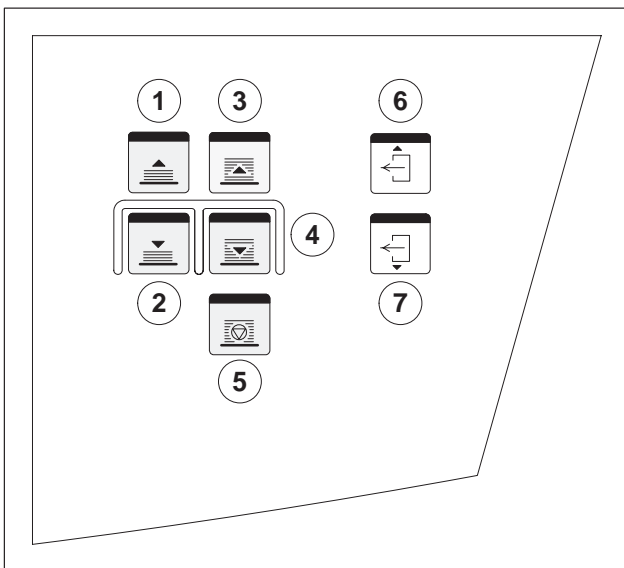


Fig. 16

In Automatic" mode, the LED in the *Operating mode* button (Fig. 15/7) is ON.

1. When the *Main pile up* button (Fig. 16/3) is pressed, the pile moves up to the paper detection sensor, and stops there. The pile alignment system performs a first alignment of the pile support plate.

If the feeder is switched on, the pile moves upwards to the governor foot after the alignment process has been completed.

If the feeder has stopped:

- ▶ **Note**  
The governor foot on the suction head must be in inquiry position.

2. Press the *Main pile up* button until the pile stops.

The pile alignment system aligns the pile. The sensor moves to the upper position.

Just before the pile end is reached, the pile alignment system switches over to the new operating mode. Thus it prevents that the sensors are influenced by the pallet.

- ▶ **Note**  
After the *Main pile down* button has been pressed, the pile support plate automatically moves down and stops approximately 12 cm above ground. When the *Main pile down* button is pressed again, the pile support plate moves downwards, stops again closely above the floor, aligns itself in center position, and moves eventually fully down to the floor.

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5 Suction head

5.1 Components of the suction head

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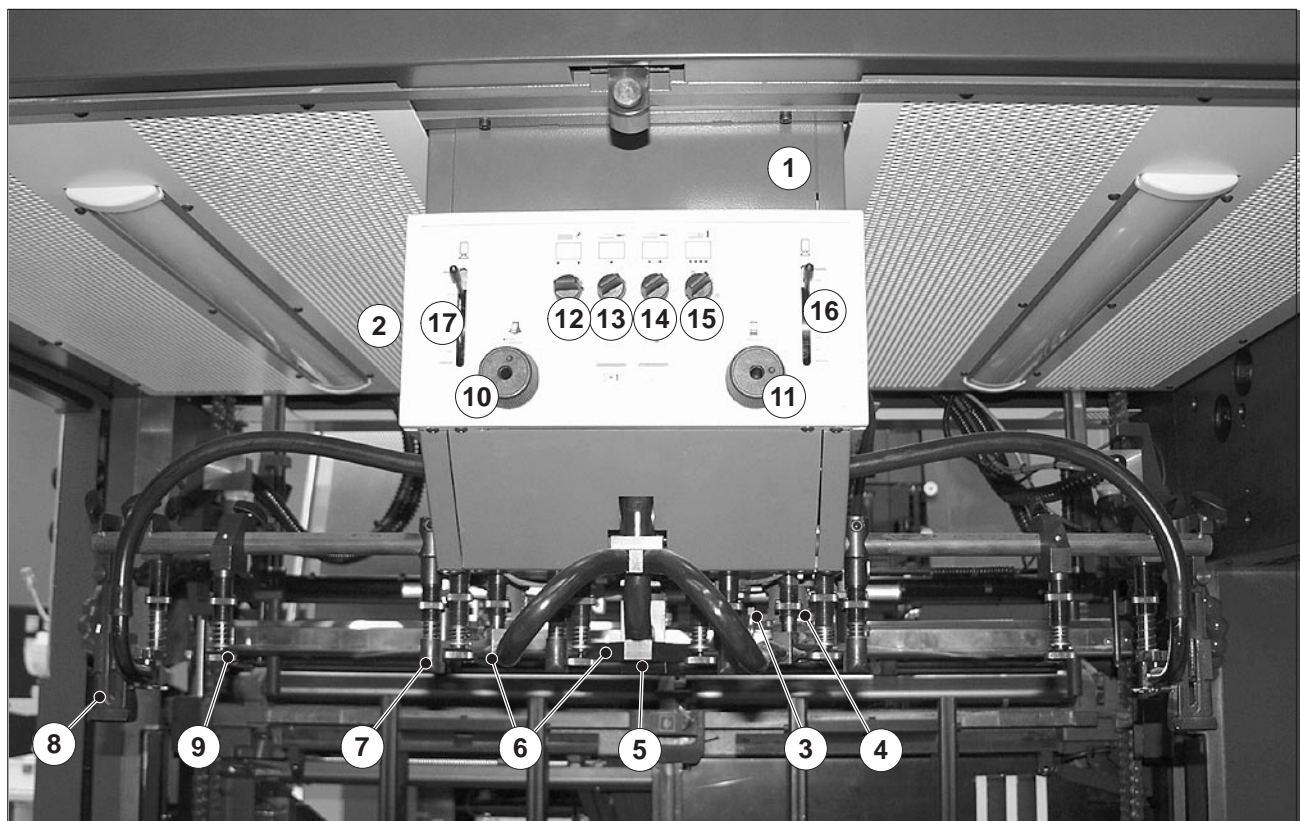


Fig. 17 Suction head – overview

- 1 Housing
- 2 Rotary valve
- 3 Lifting suckers
- 4 Forwarding sucker
- 5 Governor foot
- 6 Carrier air blowers
- 7 Sheet separation blower
- 8 Pile stop
- 9 Sheet separator finger
- 10 Inclination lifting sucker
- 11 Height lifting sucker
- 12 Blast air rear edge blower
- 13 Blast air carrier air blower inside
- 14 Blast air carrier air blower outside
- 15 Blast air sheet separation blower
- 16 Height forwarding sucker D.S.
- 17 Height forwarding sucker O.S.

5.2 Adjusting the format

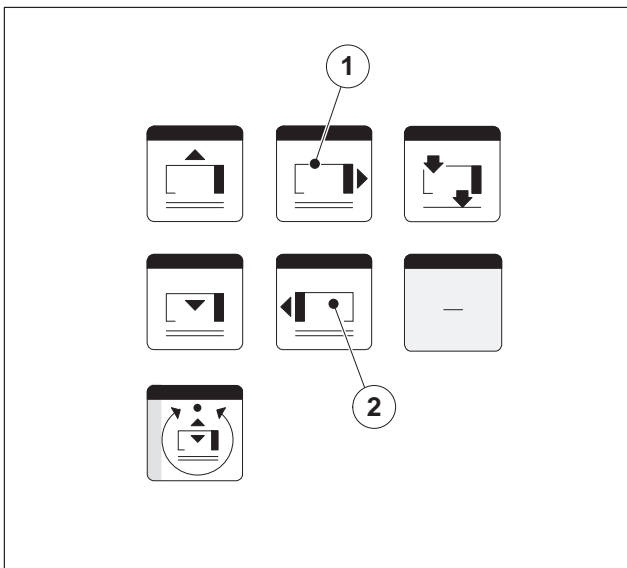


Fig. 18 Adjusting the button format

The control system positions the suction head according to the format input. If necessary, you can change this adjustment via the buttons (Fig. 18) on the feeder console.

- Press the *Increase suction head format* button (Fig. 18/1), to move the suction head away from the forwarding rollers.
- Press the *Reduce suction head format* button (Fig. 18/2), to move the suction head towards the forwarding rollers.

**! Caution – risk of collision**  
Ensure that the suction head does not collide with the pile or the pallet when you change the format setting manually.

5.3 Adjusting the height

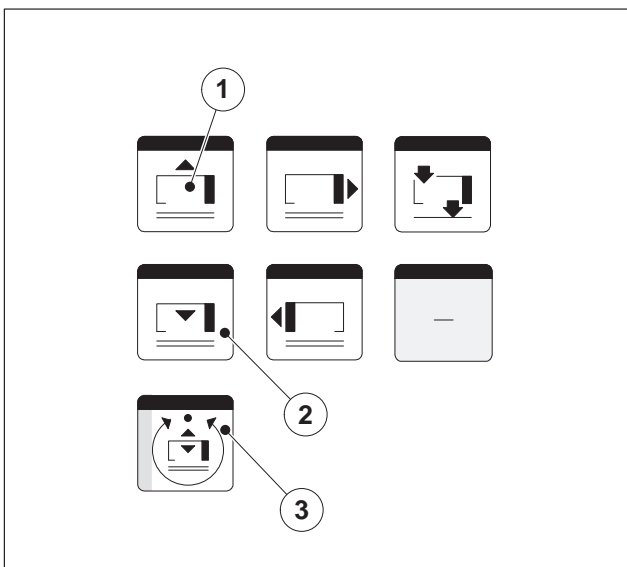


Fig. 19 Adjusting the button format

The height of the suction head has an influence of the pile height.

Depending on the operating mode, you can either adjust the height of the suction head (manual mode), or the setpoint value of the front edge control (automatic mode).

**Automatic front edge control**

In automatic mode, the upper front edge of the pile is seized by the pile height sensor at the forwarding flap, and adjusted to the preselected setpoint value.

The front edge of the pile is controlled by the automatic height adjustment of the suction head (Fig. 21).

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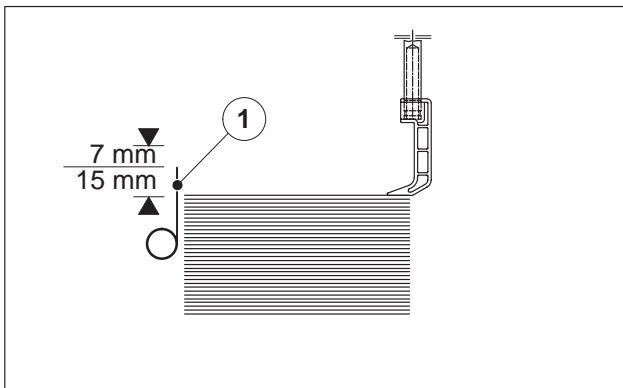


Fig. 20 Forwarding flap diagram

## Switching on automatic mode

### ► Note

The detection range of the pile height control begins approximately 15 mm under the forwarding flap, and ends approximately 7 mm above it.

The current measured value is set as the new setpoint value if the front edge of the pile is inside this measuring range when automatic mode is switched on.

The setpoint value last selected is used if then front edge of the pile is outside the measuring range.

Pressing the *Front edge pile height control* button (Fig. 19/3) toggles between automatic mode and manual mode.

1. Press the *Front edge pile height control* button (Fig. 19/3) until the LED in the button is ON. The automatic front edge control mode is active.

## Automatic mode – changing setpoint

You can select a setpoint value in the range between approximately 3 mm above the forwarding flap and approximately 10 mm below the forwarding flap.

### ► Condition

Automatic front edge control mode is active and the front edge of the pile is inside the measuring range of the pile height sensor.

- Press the *Suction head height adjustment up* button (Fig. 19/1) to increase the setpoint value.
- Press the *Suction head height adjustment down* button (Fig. 19/2) to decrease the setpoint value.

### ► Note

Hold the button down until the required value appears on the display and the suction head height and pile height have been set.

The current setpoint value is displayed on the MID.

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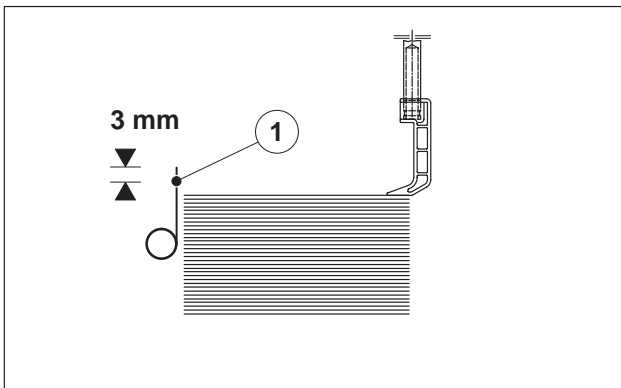


Fig. 21 Forwarding flap diagram

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## Manual operation

In manual mode, the suction head does not change its height adjustment. The height difference between upper pile edge and forwarding flap can therefore change.

1. Adjust the suction head such that, during production, the upper edge of the pile is approximately 3 mm below the upper edge of the forwarding flap.

## Manual mode – changing the height adjustment of the suction head

### ► Condition

Automatic front edge control is switched off - the LED in the button (Fig. 19/3) is OFF.

- Press the *Suction head height adjustment up* button (Fig. 19/1) to move the suction head up.



### ! Caution – Risk of collision!

The suction head can collide with the pile when it is moved down. Lower the pile before you move the suction head downwards.

- Press the *Suction head height adjustment down* button (Fig. 19/2) to move the suction head down.

The current actual value is displayed on the MID.

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## 5.4 Lifting suckers

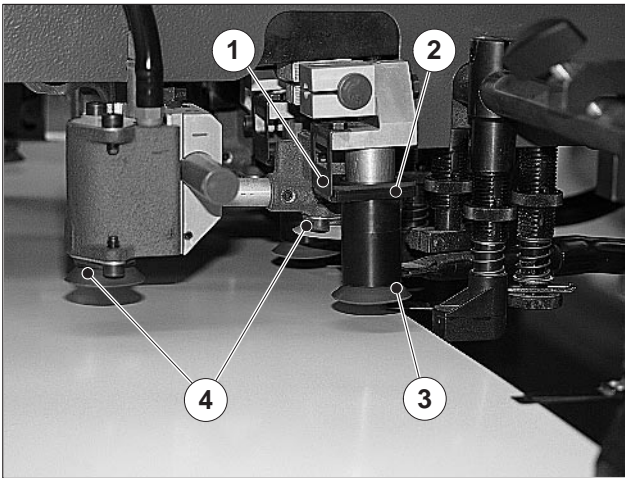


Fig. 22 Lifting suckers

The lifting suckers (Fig. 22/3) raise the topmost sheet at its rear edge and separate it from the pile.

### Replacing lifting suckers

There are different rubber disk shapes for different printing materials.

1. Rotate the lifting sucker (Fig. 22/3) through 90° and pull it out from the bottom.
2. Insert the new lifting sucker into the retainer on the suction head. The collar (Fig. 22/2) of the lifting sucker must be above the stop (Fig. 22/1).

► **Note**

Install the lifting suckers with integrated magnets at the two inner lifting sucker positions. Sheet travel is not possible without these special lifting suckers.

3. Rotate the lifting sucker through 90° into the locking device. Check the proper seating of the new lifting sucker.

### Adjusting the height of the lifting suckers

The height adjustment of the lifting suckers is **only** visible during operation.

1. Switch on the feeder without sheet travel.
2. Adjust the height of the lifting suckers at the control knob (Fig. 23/2).

► **Note**

The sheet travel monitor on the suction head assumes that the inner lifting suckers reach the upper end position after the sheets have been lifted off.

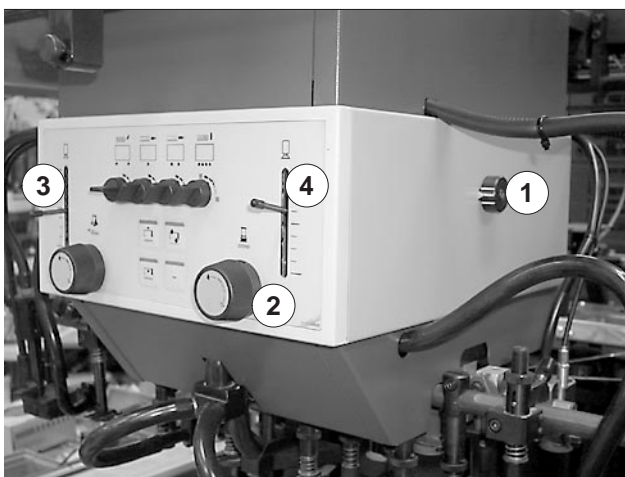


Fig. 23 Adjusting the lifting sucker

Adjust the height such that the suckers lightly rest on the pile.

With double sheets: Correct the settings of the wipers.

The height adjustment can be checked on the suction head indicators (Fig. 23/1). The marks show the upper, middle and lower end position of the lifting suckers.

## 5.5 Forwarding suckers

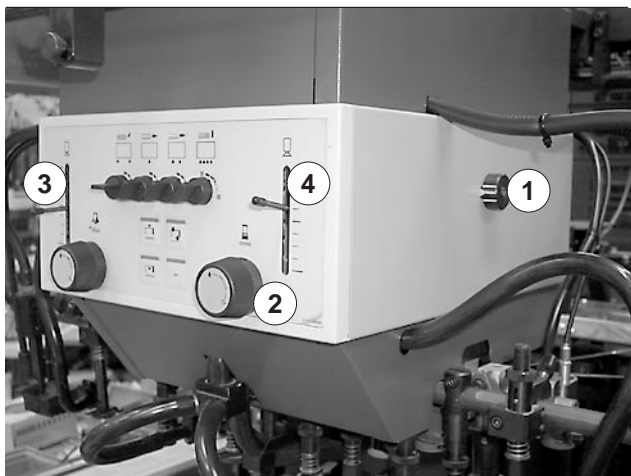


Fig. 24 Adjusting the lifting sucker



Fig. 25 Reducing the forwarding sucker suction air

The forwarding suckers (Fig. 22/4) take the sheet that is raised by the lifting suckers.

**Note**

The forwarding suckers are suction-air controlled. Always ensure smooth functioning. Do not oil or lubricate them.

The distance between the forwarding suckers is fixed.

**Adjusting the height of the forwarding suckers**

Adjust the height of the forwarding suckers during sheet travel.

## 1. Select

- the drop height of the forwarding suckers on O.S. via the lever (Fig. 24/3).
- the drop height of the forwarding suckers on D.S. via the lever (Fig. 24/4).

The drop height of the forwarding suckers with respect to the sheet must be approximately 4 - 5 mm.

**Reducing the suction air for forwarding suckers and lifting suckers****Note**

Reduce the suction air volume only in exceptional cases when you process thin or porous paper. With reduced suction air there is the risk that the sheet is not attached or is lost after it has been sucked up.

1. Turn the clamp ring (Fig. 25/1) to adjust the suction air to the printing material. The currently selected vacuum is shown on the manometer (Fig. 25/2).

Effect on the suction force:





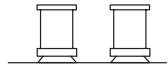

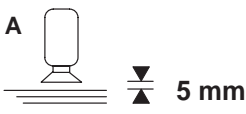


Air is sucked through the opening, and the suction force of the lifting and forwarding suckers is reduced. The suction force on lifting and forwarding suckers falls as the visible opening increases.

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**6 Overview table – suction head settings for different printing materials**

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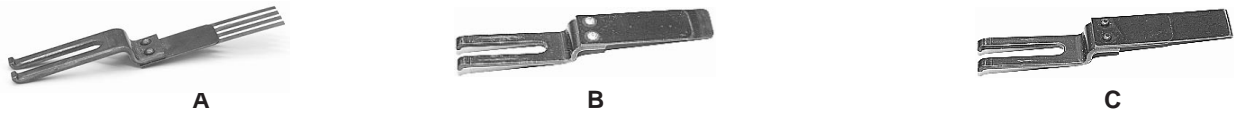
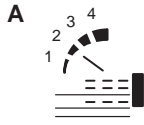
**6.1 Lifting suckers and forwarding suckers**

		Printing materials			
	Voluminous, porous (40 ... 100 g)	Onion skin paper, light-weight (30 ... 60 g)	Labels, light-weight paper, art printing (60 ... 130 g)	Art printing, lightweight cardboard (100 ... 200 g)	Cardboard (> 200 g)
<b>Lifting sucker</b> Suction disks	<b>A</b> Nipples <b>B</b>	<b>A</b> Nipples <b>B</b>	<b>A</b> Gray <b>C</b> / red <b>D</b>	<b>A</b> Red <b>D</b> / gray <b>C</b>	<b>A</b> Red <b>D</b> / gray <b>C</b>
Position	Straight <b>E</b>	Straight <b>E</b>	Straight <b>E</b>	Straight <b>E</b>	Straight <b>E</b>
Height	0 ... 2 mm	0 ... 2 mm	0 ... 2 mm	0 ... 2 mm	Resting
Inclination	Slightly towards the rear edge <b>F</b>	Slightly towards the rear edge <b>F</b>	Slightly towards the rear edge <b>F</b>	Straight	Straight
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"><b>A</b> </div> <div style="text-align: center;"><b>B</b> </div> <div style="text-align: center;"><b>C</b> </div> <div style="text-align: center;"><b>D</b> </div> <div style="text-align: center;"><b>E</b> </div> <div style="text-align: center;"><b>F</b> </div> </div>					
<b>Forwarding suckers</b> Suction disks	Gray <b>C</b>	Gray <b>C</b>	Gray <b>C</b> / red <b>D</b>	Red <b>D</b> / gray <b>C</b>	Red <b>D</b> / gray <b>C</b>
Height	5 mm <b>A</b>	5 mm <b>A</b>	5 mm <b>A</b>	5 mm <b>A</b>	5 mm <b>A</b>
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"><b>A</b> </div> <div style="text-align: center;"><b>C</b> </div> <div style="text-align: center;"><b>D</b> </div> </div>					

Tab. 2 Components of lifting suckers and forwarding suckers

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6.2 Sheet separator fingers and sheet separation blowers

Printing materials					
	Voluminous, porous (40 ... 100 g)	Onion skin paper, light-weight (30 ... 60 g)	Labels, light-weight paper, art printing (60 ... 130 g)	Art printing, lightweight cardboard (100 ... 200 g)	Cardboard (> 200 g)
<b>Sheet separator fingers</b>					
Inside Height	Slotted <b>A</b> 0 mm	Slotted <b>A</b> 0 mm	Normal <b>B</b> 0 mm	Normal <b>B</b> 0 mm	Norm./thick <b>C/B</b> 3 mm
Outside Height	Brush <b>A</b> 0 mm	Brush <b>A</b> 0 mm	Brush <b>B / A</b> 0 mm	Brush <b>B</b> 0 mm	Brush <b>B</b> 0 mm
					
<b>Sheet separation blowers</b>					
Height	5 ... 10 sheets	5 ... 10 sheets	5 ... 10 sheets	5 ... 10 sheets	5 sheets
Air volume <b>A</b>	Position 1...2	Position 1...2	Position 2...3	Position 2...3	Position 3...4
					

Tab. 3 Setting sheet separator finger and sheet separation blower

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6.3 Sheet stops and forwarding flap

Printing materials					
	Voluminous, porous (40...100 g)	Onion skin paper, light-weight (30...60 g)	Labels, light-weight paper, art printing (60...130 g)	Art printing, lightweight cardboard (100...200 g)	Cardboard (> 200 g)
<b>Rear sheet stops</b>					
Position	Outside	Outside	Outside	Outside	Outside
Distance	1 mm	1 mm	1 mm	1 mm	1 mm
Steel weight	Top	Top	Top or bottom	Bottom	Bottom
Plastic weight	Bottom	Bottom	Bottom	Bottom	Bottom
<b>Forwarding flap</b>					
Height above pile <b>A</b>	3...5 mm	3...5 mm	3...5 mm	3...5 mm	3...5 mm

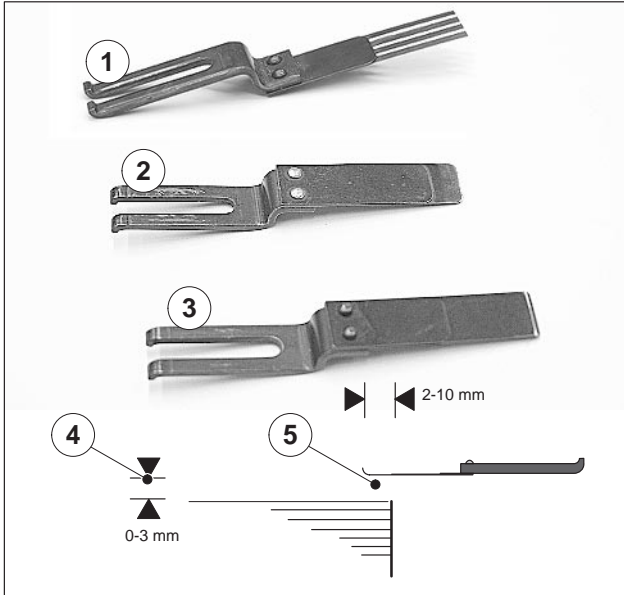
Tab. 4 Adjusting sheet stops and forwarding flap

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7 Sheet separator fingers

7.1 Function

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- 1 Sheet separator fingers for light printing materials
- 2 Sheet separator fingers for medium-heavy printing materials
- 3 Sheet separator fingers for heavy printing materials

The sheet separator fingers (Fig. 26/1...3) limit the fanning of the sheets and prevent that double sheets are drawn off.

The sheet separator finger retain the sheets when carrier air blowers blow air underneath the sheets.

Fig. 26 Sheet separator fingers

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7.2 Adjusting the sheet separator fingers

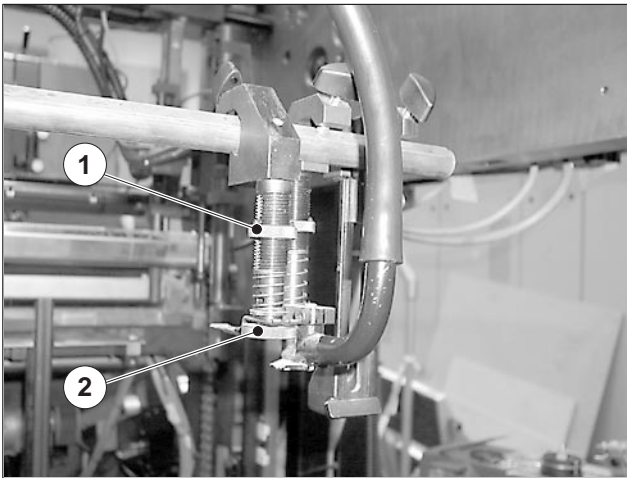


Fig. 27 Sheet separator finger – outer carrier air blower

Fitting the supports

1. Loosen the knurled head screw (Fig. 27/2).
2. Install the required sheet separator finger between knurled head screw and support.
3. Manually tighten the knurled head screw (Fig. 27/2).

Adjusting the height

1. Adjust the height of the sheet separator finger at the knurled nut (Fig. 27/1).

The distance between the upper edge of the sheet and the sheet separator finger must be between 0 and 3 mm (Fig. 26/4).

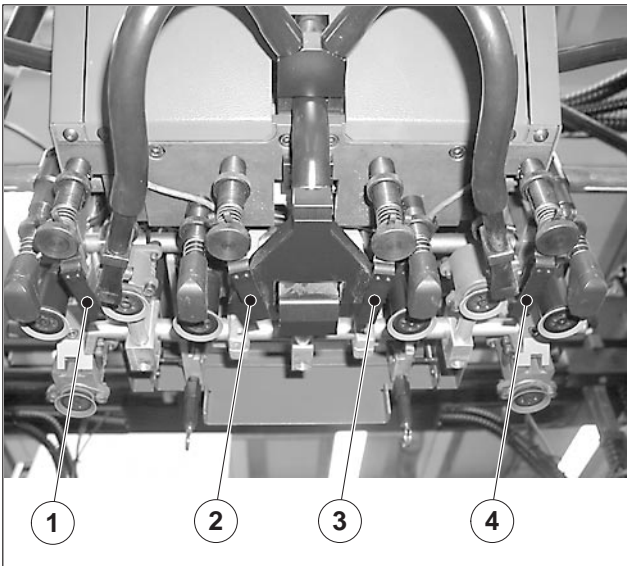


Fig. 28 Aligned sheet separator finger

Adjusting the distance to the pile

► **Note**  
 Sheet separator fingers that protrude too far into the pile can obstruct the "leaping up" of sheets and lifting suckers and thus trigger a missing sheet. The press is switched off when a missing sheet is detected.

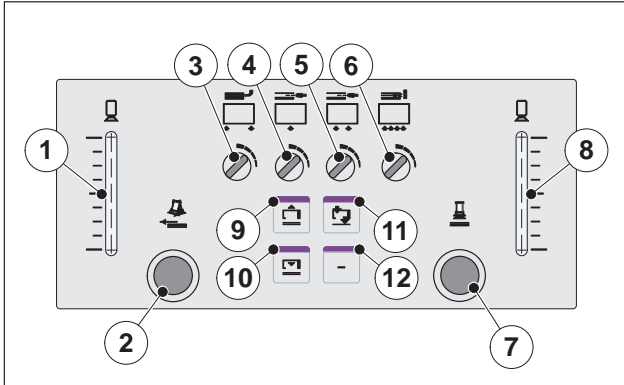
1. Loosen the knurled head screw (Fig. 27/2).
2. Move the sheet separator finger until it protrudes into the pile by 2...10 mm (Fig. 26/5).
3. Position the sheet separator fingers, obliquely towards the inside, underneath the carrier air blowers (Fig. 28/1 through 4).
  - Inner sheet separator fingers (Fig. 28/2, 3)  
 Set the sheet separator fingers lightly towards the inside, underneath the inner carrier air blower.
  - Outer sheet separator fingers (Fig. 28/1, 4)  
 Set the sheet separator fingers lightly towards the inside, underneath the outer carrier air blowers.
4. Manually tighten the knurled head screw (Fig. 27/2).

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8 Adjusting blast air on the suction head

8.1 Overview

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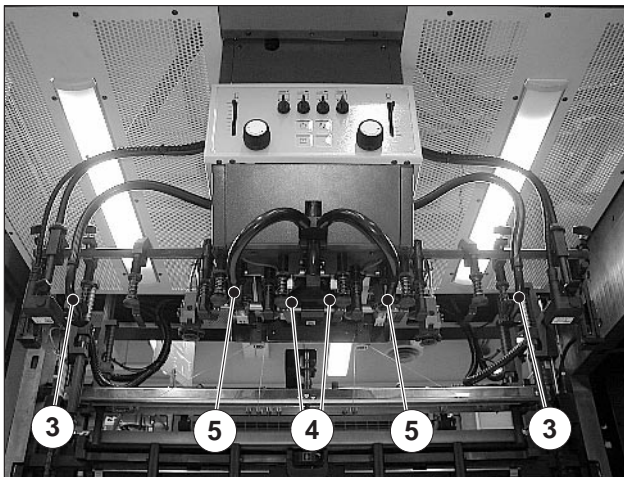


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Fig. 29 Control panel on the suction head

Overview of functions

- 1 Height forwarding sucker O.S.
- 2 Inclination lifting sucker
- 3 Blast air rear edge blowers (Fig. 29, Fig. 30)
- 4 Blast air inner carrier air blowers (Fig. 29, Fig. 30)
- 5 Blast air outer carrier air blowers (Fig. 29, Fig. 30)
- 6 Blast air sheet separation blower
- 7 Height lifting sucker
- 8 Height forwarding sucker D.S.
- 9 Suction head up
- 10 Suction head down
- 11 Blast air compensation, increase blast air
- 12 Blast air compensation, reduce blast air



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Fig. 30 Carrier air blower / rear edge blower

Adjusting blast air

1. Adjust the blast air such that
  - the air safely blows underneath the top-most sheet up to the front edge.
  - the rear edge of the raised sheet is not bent down.

Adjustment information:

If the middle of the sheet sags:

Increase the blast air of the inner carrier air blowers (Fig. 29/4).

If the front corners of the sheet get stuck:

Increase the blast air of the outer carrier air blowers (Fig. 29/3).

If the sheet gets stuck:

Increase the blast air at the compensation controller (Fig. 29/11).

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8.2 Sheet separation blower

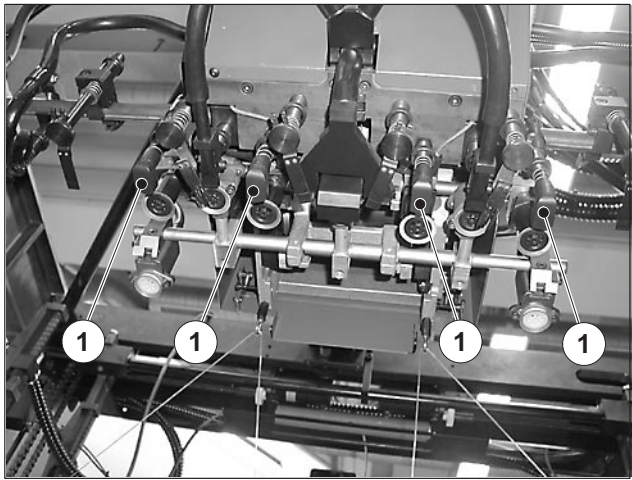


Fig. 31 Sheet separation blower

Adjusting the blast air

1. Adjust the blast air volume of the sheet separation blowers (Fig. 31/1) on the control knob (Fig. 29/6).

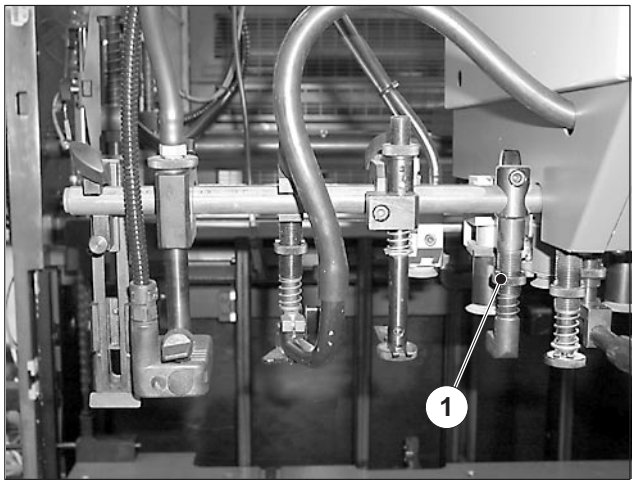


Fig. 32 Sheet separation blowers – adjusting the height

Adjusting the height

1. Adjust the height of the sheet separation blowers with the knurled nut (Fig. 32/1). We recommend to adjust the blast air such that 5 - 10 sheets are fanned.

8.3 Inner carrier air blowers

Adjusting the blast air

1. Adjust the blast air of the inner carrier air blowers at the control knob (Fig. 29/4).

## 8.4 Outer carrier air blowers

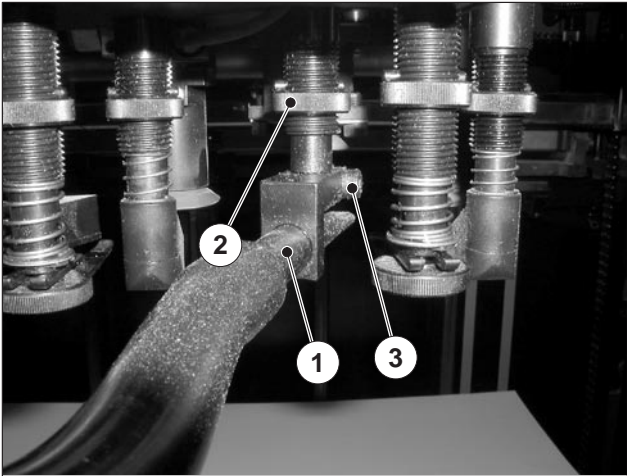


Fig. 33 Middle carrier air blowers

### Adjusting the blast air

1. Adjust the blast air of the outer carrier air blowers (Fig. 33/1) at the control knob (Fig. 29/5).

### Adjusting the height

1. Adjust the height of the outer carrier air blowers (Fig. 33/1) with the knurled nut (Fig. 33/2). The carrier air blowers should blow under the sucked sheet, up to the front edge of the sheet.

### Adjusting the direction of blast air

The direction of the blast air of the outer carrier air blowers can be changed. The direction of the blast air of the inner carrier air blowers cannot be changed.

1. Loosen the 4-mm hexagon socket screw on the support (Fig. 33/3).
2. Set
  - the carrier air blower (Fig. 33/1) on D.S. slightly towards the outside in the direction of the pile edge D.S.
  - the carrier air blower (Fig. 33/1) on O.S. slightly towards the outside in the direction of the pile edge O.S.
3. Tighten the hexagon socket screw at the support.

## 8.5 Rear edge blowers

The rear edge blowers continuously blow air onto the pile edges.

### Adjusting the blast air

1. Adjust the blast air volume at the control knob (Fig. 29/3).

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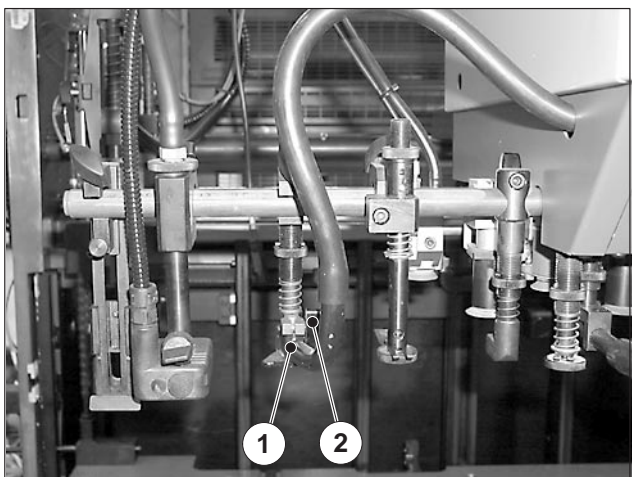


Fig. 34 Adjusting the rear edge blowers

**Adjusting the direction of blast air**

1. Open the clamping (Fig. 34/2) on the rear edge blower.
2. Set
  - the rear edge blower (Fig. 34/1) on D.S. slightly towards the outside in the direction of the pile edge D.S.
  - the rear edge blower (Fig. 34/1) on O.S. slightly towards the outside in the direction of the pile edge O.S.
3. Close the clamping (Fig. 34/2) on the rear edge blower.

**8.6 Pre-separation air**

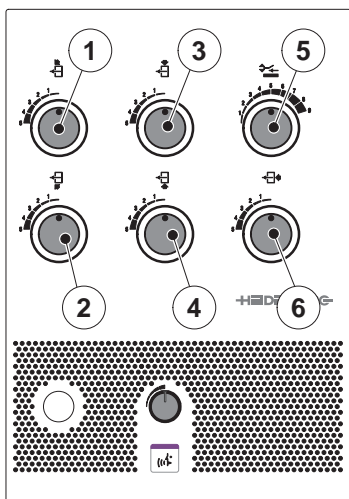


Fig. 35 Feeder air control control panel

**Adjusting the pre-separation air**

The control knob (Fig. 35/6) on the feeder air control control panel enables you to adjust the pre-separation air in the suction head area.

In order to prevent double sheets, the pre-separation air is blown into the pile before sheet travel is started. During sheet travel, the control knob does not have any influence on the air volume on the suction head.

1. Adjust the total air volume on the control knob (Fig. 35/6) such that the upper sheets of the pile are slightly fanned. Ensure that the fanned sheets do not float too much.

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9 Pile stops

9.1 Components and place of installation

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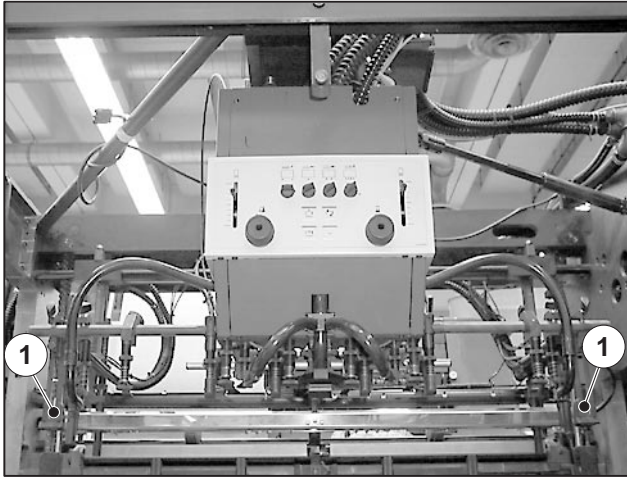


Fig. 36 Pile stops

The pile stops for the rear edge of the sheet sit on the suction head (Fig. 36/1).

Components

- Locking screw for sheet size adjustment (Fig. 37/1)
- Locking screw – swiveling the pile stop (Fig. 37/2)
- Stop plate of rear edge of pile (Fig. 37/3)
- Steel sheet steadier (Fig. 37/4)
- Plastic sheet steadier (Fig. 37/5)
- Thrust piece for arresting the steel sheet steadier (Fig. 37/6)

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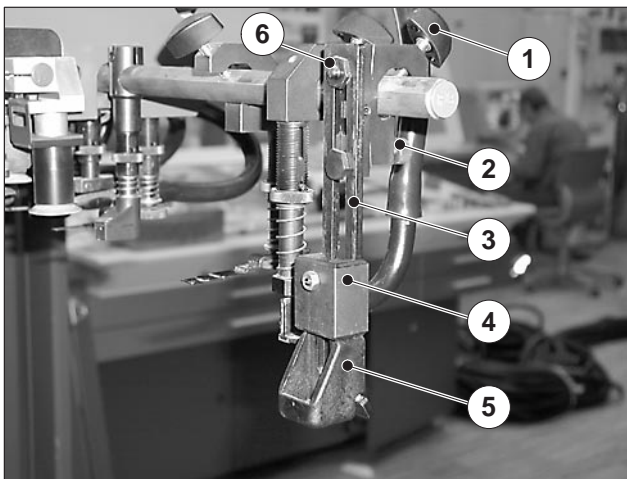


Fig. 37 Pile stop

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9.2 Adjusting to different printing materials

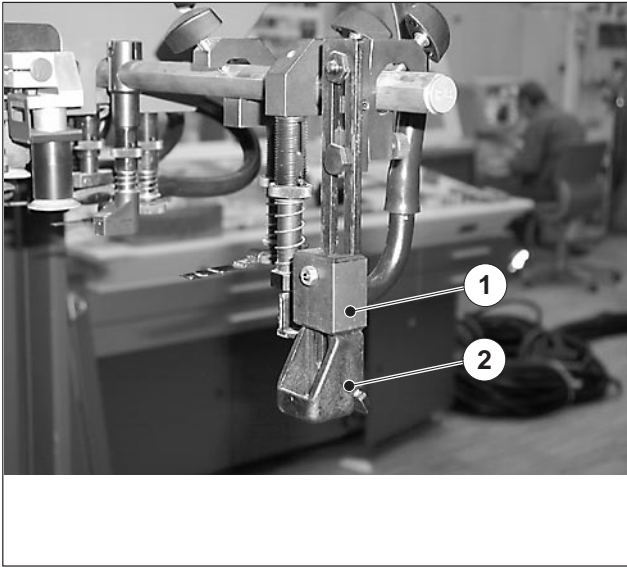


Fig. 38 Pile stop in normal position

**Normal position**

In normal position, steel weight (Fig. 39/1) and plastic weight (Fig. 39/2) of the pile stop rest on the pile with their dead weight. This setting is suitable for heavy papers and cardboard.

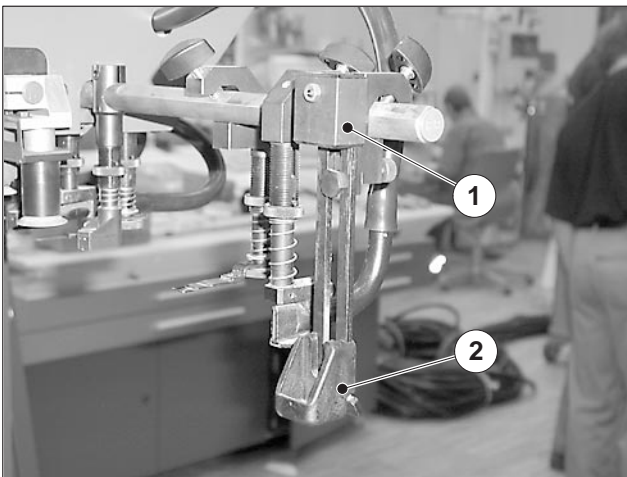


Fig. 39 Pile stop without steel weight

**Setting for thin printing materials**

In this position, merely the plastic weight (Fig. 39/2) rests on the pile. The steel weight is locked in its upper position.

1. Push the steel weight (Fig. 39/1) up and press it – against the resistance of the thrust piece into the upper park position.

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## 10 Ionizing unit

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### 10.1 Function

The ionizing unit is a special accessory. It eliminates electrostatic charges on the printing material.

The ionizing unit consists of:

- two ion blowers on the suction head,
- one ionizer in the delivery
- and, as an option, one or two additional ionizer(s) in the feeder.

### 10.2 Switching on

1. Switch on the ion blower on the delivery display. The ion blowers become active
  - after sheet travel has been switched on.
  - after production has been switched on.

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10.3 Adjusting the ion blower

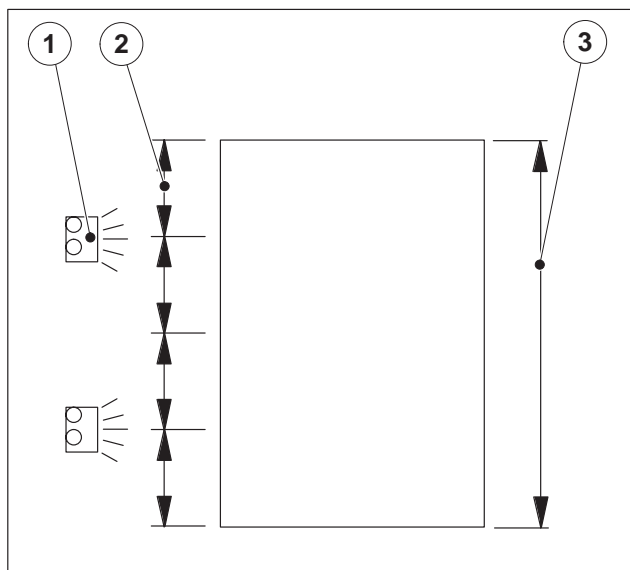


Fig. 40

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**Lateral position**

- 1 Ion blower
  - 2 A quarter of the pile width
  - 3 Pile width
1. Loosen the tommy bar screw (Fig. 41/1).
  2. Adjust the ion blower to the format. Position the ion blowers on the first quarter (Fig. 40) of the sheet width on D.S. and O.S.
  3. Tighten the tommy bar screw (Fig. 41/1).

**Height**

4. Use the knurled ring (Fig. 41/3) to adjust the height of the ion blower. The center of the ion blower (Fig. 41/4) must be set to the level of the upper pile edge.

- Rotating clockwise moves the ion blower upwards.
- Rotating anti-clockwise moves the ion blower down.

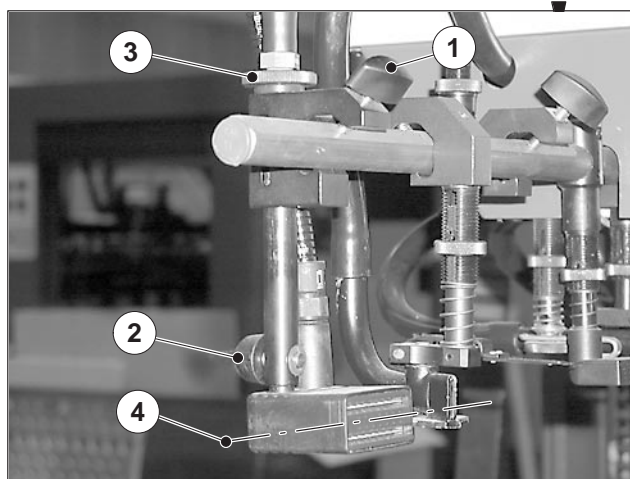


Fig. 41 Ion blower

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**Blast air volume**

5. The valve on the ion blower (Fig. 41/2) enables you to adjust the blast air volume.
  - Vertical position: Full blast air volume.
  - Horizontal position: Blast air shut off.

The blast air volume can be set continuously.

## 11 Lateral sheet separation blowers

### 11.1 Function

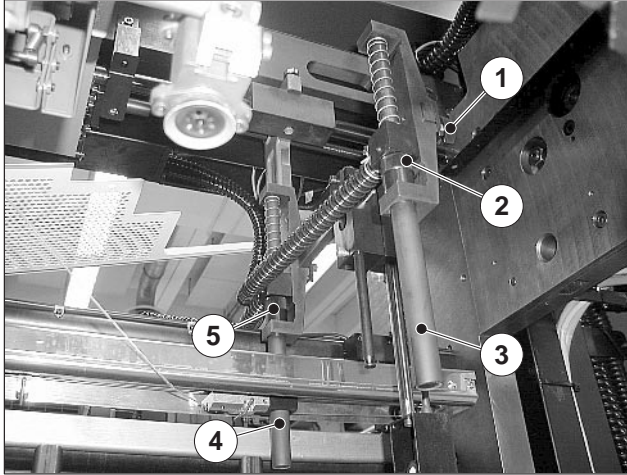


Fig. 42 Lateral sheet separation blowers

There are lateral sheet separation blowers on D.S. and on O.S. The lateral sheet separation blowers consist of

- a corner blower (Fig. 42/4)
- and a diagonal blower bar (Fig. 42/3).

The lateral sheet separation blowers must be adjusted such that they fan the upper sheets of the pile.

### 11.2 Automatic adjustment of the lateral sheet separation blowers

The lateral sheet separation blowers are adjusted automatically after the sheet format has been set at the CP2000 Center. The control system positions the lateral sheet separation blowers at a distance of approximately 3 mm from the pile edge.

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11.3 Manual adjustment of the lateral sheet separation blowers

► **Note**  
The lateral sheet separation blowers shall separate the upper sheets.

**Adjusting the height**

1. Adjust the height of the corner blower (Fig. 42/4) with the knurled nut (Fig. 42/5).
2. Adjust the height of the diagonal blower bar (Fig. 42/3) with the knurled nut (Fig. 42/2).

**Adjusting the distance**

You can change the distance between the diagonal blower bar and the corner blower. The position of the corner blower cannot be changed.

3. Open the wing screw (Fig. 42/1) on the diagonal blower bar.
4. Adjust the diagonal blower bar (Fig. 42/3) to the sheet format.
5. Close the wing screw (Fig. 42/1) on the diagonal blower bar.

11.4 Setting the blast air volume

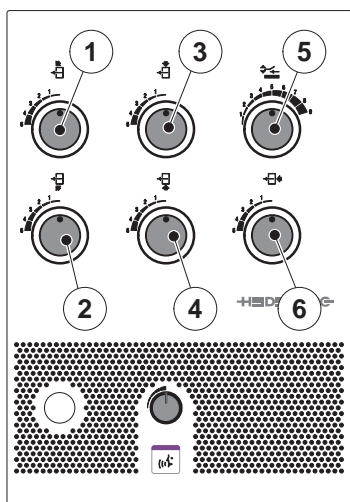


Fig. 43 Feeder air control control panel

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The blast air volume for the lateral sheet separation blowers can be adjusted via the feeder control panel (Fig. 43).

1. Use the controllers (Fig. 43/1 ... 6) to adjust the blast air volume to the currently used printing material.
- 1 Blast air volume corner blowers D.S.
- 2 Blast air volume corner blowers O.S.
- 3 Blast air volume diagonal blower bars D.S.
- 4 Blast air volume diagonal blower bars O.S.
- 5 Height adjustment guide plate
- 6 Pre-separation air suction head

## 12 Rope guide

### 12.1 Function

The rope leads the sheet on its way from the pile to the forwarding roller. Tension springs maintain a constant rope tension that is independent of the sheet size adjustment.

### 12.2 Replacing the rope

**Warning – risk of injury**

Press the emergency stop button on the feeder before you start replacing the rope. Secure the feeder against being switched back on. - One end of the rope is connected with a spring. The spring ensures a constant rope tension. Removing: Slacken an intact rope before you remove it. Installation: Fasten the spring before you tighten the rope at the suction head.

If the rope breaks, you must install a new rope in the rope guide.

**Note**

The structure of the rope guide on O.S. is mirrored to the structure of the rope guide on D.S. We recommend to start with removing the rope at one side only. When mounting the new rope, you can use the intact rope guide to orientate yourself.

**Tip**

Move the suction head to the rearmost position (largest format). This gives you sufficient space for the rope change.

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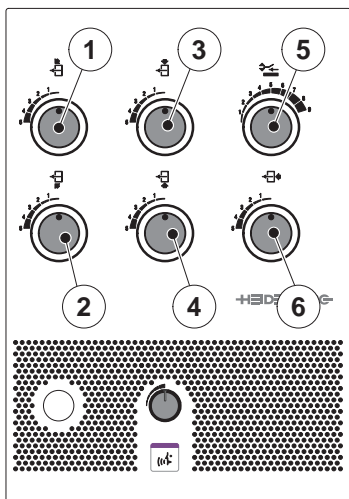


Fig. 44 Feeder air control control panel

1. Slacken the rope - loosen the screw (Fig. 50/1) on the suction head and remove the rope from the guide roll (Fig. 50/2).
2. Using the control knob Fig. 44/5), move the guide plate down.
3. Loosen the five screws (Fig. 45/1) on the cover plate (Fig. 45/2).
4. Raise the actuating bar of the limit switch (Fig. 46/1) and push, for example, an Allen key into the borehole (Fig. 46/2). The actuating bar remains locked in its upper position.
5. Remove the cover plate from the feeder. Store the cover plate at a protected place.

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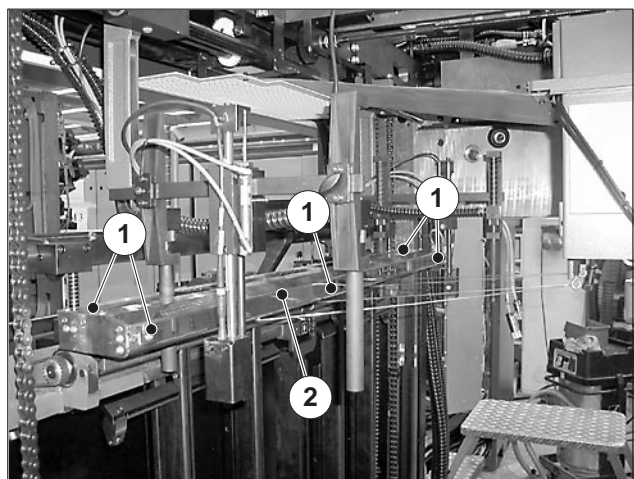


Fig. 45 Screws on the cover plate

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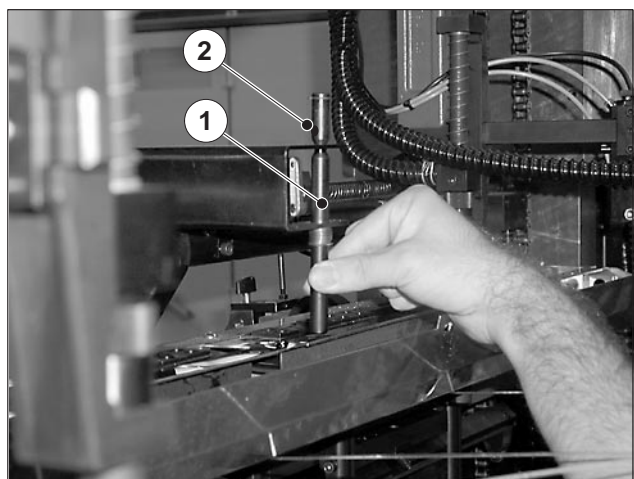


Fig. 46 Actuating bar

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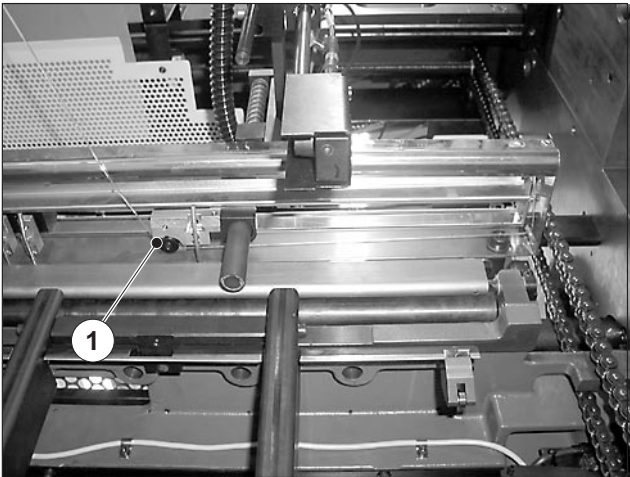


Fig. 47

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6. Detach the rope next to the lateral sheet separation blower (Fig. 47/1).
7. Remove the spring from the guide plate and detach the spring (Fig. 48/1).
8. Remove the spring lock (Fig. 48/2) on the pin (Fig. 48/3) and remove the old rope.

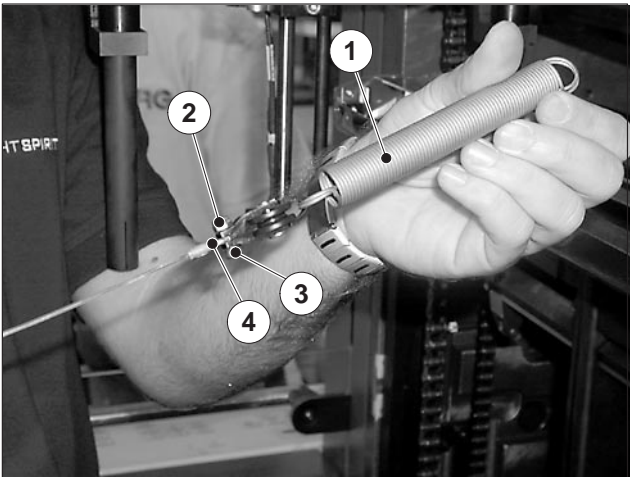
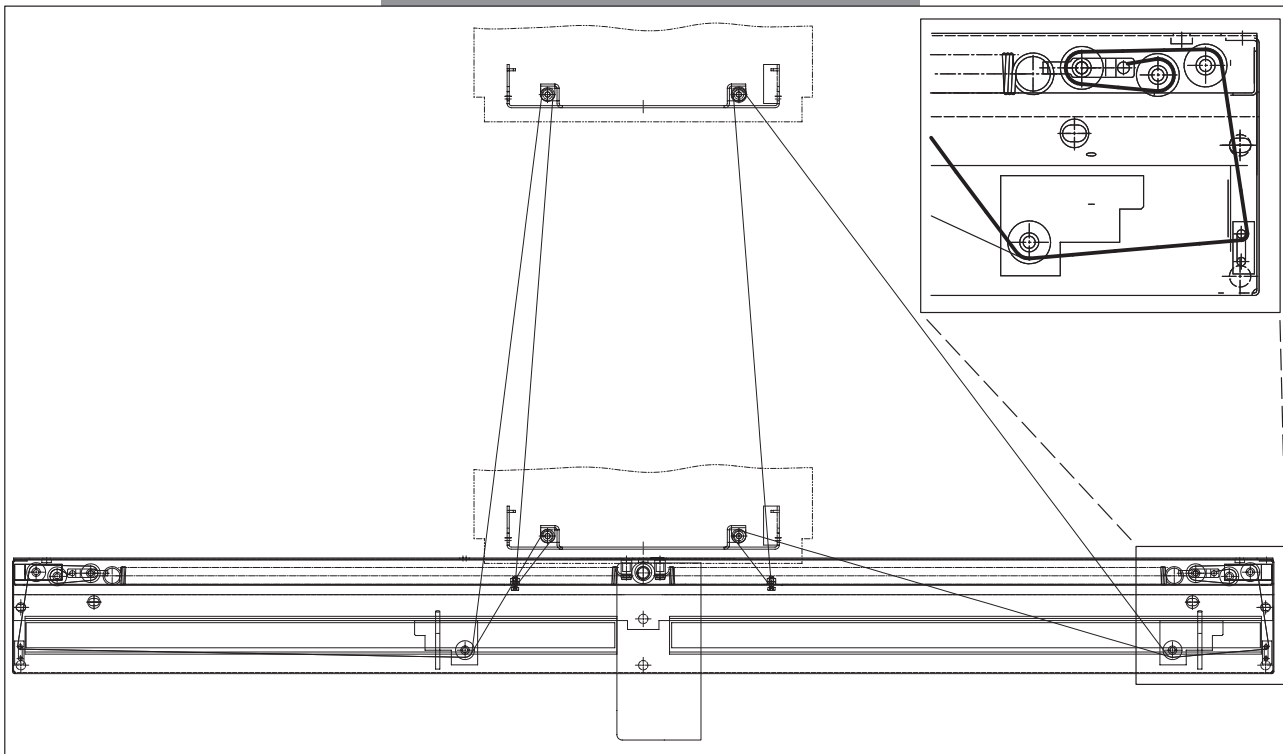


Fig. 48

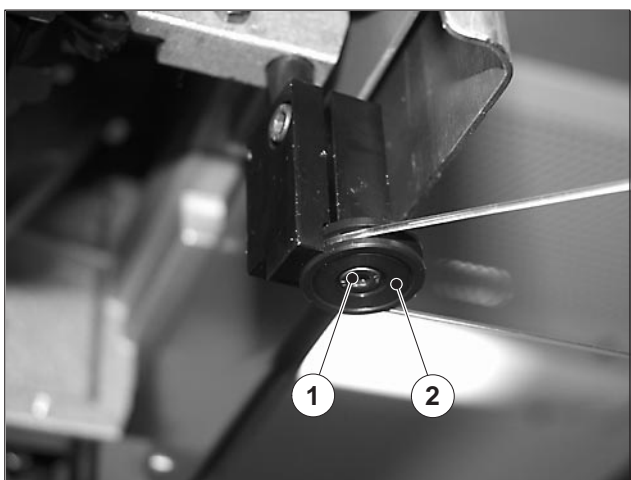
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Fig. 49 Ropeway diagram



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Fig. 50 Guide roll on the suction head

9. Hook the ear of the new rope to the rope pulley (Fig. 48/4). Thread the pin (Fig. 48/3) through the rope pulley and through the ear on the rope.
10. Insert the spring lock into the groove on the pin.
11. Hook in the spring and place the spring into the plate guide.
12. Thread the rope through the guide pulleys (Fig. 49). Use the intact rope guide to orientate yourself.
13. Hook the second rope end into the guide plate.
14. Tighten the rope - place the rope onto the guide roll (Fig. 50/2) and tighten the screw (Fig. 50/1) on the suction head.

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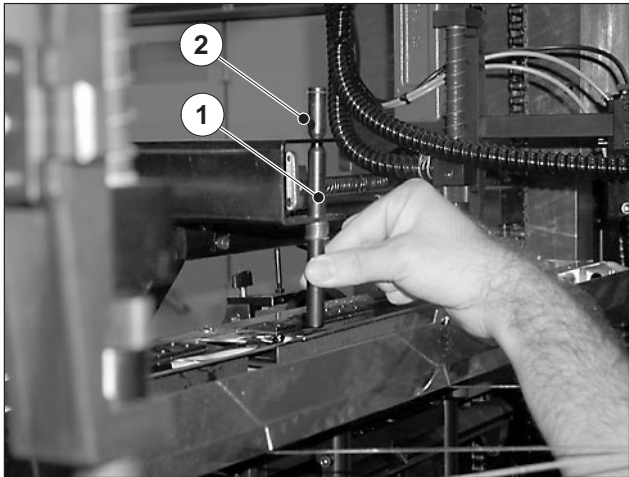


Fig. 51

15. Insert the cover plate (Fig. 52/2) and tighten the five screws (Fig. 52/1) on the cover plate.
16. Remove the locking device from the borehole on the actuating bar (Fig. 51/2).

**Result**

The actuating bar leads into the borehole on the cover plate.

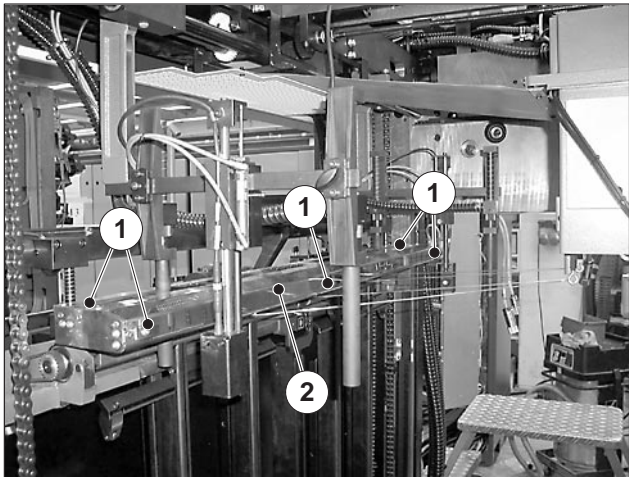


Fig. 52

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## 13 Double sheet detector

### 13.1 Overview

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Depending on the configuration, the Preset Plus feeder can be equipped with up to four systems for double-/multiple-sheet detection.

- Ultrasound double sheet detector
- Double sheet detector in the pull lay (option)
- Bundle detector
- Tear-off detector/multiple-sheet detector (option, standard with sheeter)

The four systems work independently of each other.

► **Note**

If your press is equipped with an ultrasound double sheet detector **and** a double sheet detector in the pull lay, you may switch off either the ultrasound double sheet detector or the double sheet detector in the pull lay. Switching off both double sheet detectors at the same time is not possible.

### 13.2 Ultrasound double sheet detector

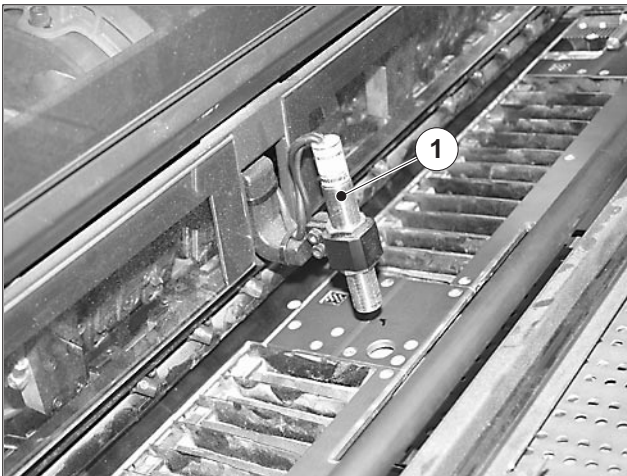


Fig. 53

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The ultrasound double sheet detector protects the press against damages caused by infed double and multiple sheets. The ultrasound double sheet detector is operational after the feeder has been switched on.

With the exception of multilayer printing materials or thick foils, the ultrasound double sheet detector recognizes all standard printing materials.

#### Switching off the ultrasound double sheet detector

In order to process special multi-layer printing materials or thick foils, you may switch off the ultrasound double sheet detector via the CP2000 Center. After a job change, the ultrasound double sheet detector automatically becomes operational again.

1. Information about switching off the ultrasound double sheet detector can be found in Chapter B "Basic adjustment".

### 13.3 Double sheet detector in the pull lay (option)

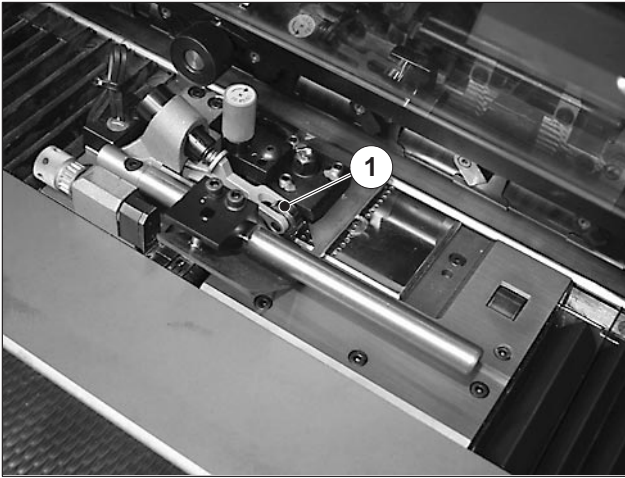


Fig. 54 Double sheet detector in the pull lay

The double sheet detector in the pull lay (Fig. 54/1) adjusts **automatically** as a function of the stock thickness that is entered via the CP2000 Center. A sensor in the pull lay measures the thickness of the sheet during the pull procedure. The control system generates an average value from the measured values of the most recent five sheets. This average value is used as the reference value for the subsequent sheets.



#### Note

Only use stock types as advance sheets that correspond to the thickness of the press sheets. If the press sheets are more than 1.5 times thicker than the advance sheets, there can be a mistripping of the double sheet detector when the first press sheet is fed.

#### Switching off the double sheet detector in the pull lay

1. Information about switching off the pull lay double sheet detector can be found in Chapter *B "Basic adjustment"*.

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## 13.4 Bundle detector

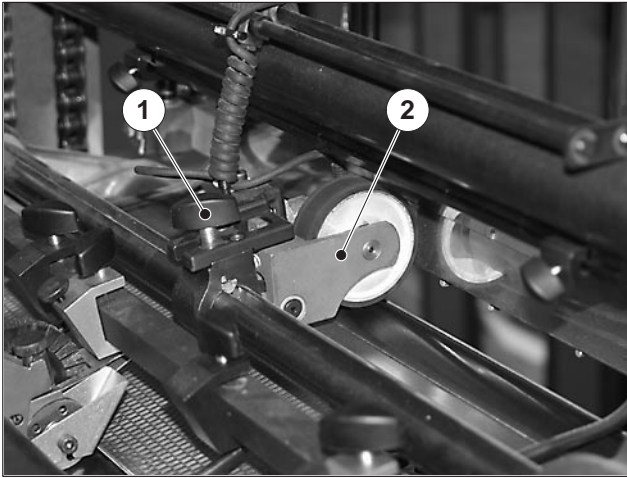


Fig. 55

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The bundle detector adjusts automatically as a function of the stock thickness entered via the CP2000 Center. The bundle detector is always active, it cannot be switched off.

The bundle detector (Fig. 55/2) checks the shingle thickness in the infeed roller area. Different measures are taken, depending on whether a double sheet or multiple sheets have been detected.

**Note**

Distinction between double sheet and bundle (multiple sheets) is only possible if the stock thickness of a sheet is at least 0.4 mm. Only bundles (multiple sheets) are detected if the stock thickness is less than 0.4 mm.

**Double sheets**

The double sheet is

- stopped before the printing unit by the sheet stop finger;
- the ratchet pawl moves upwards;
- the feeder is switched off.

**Bundle (multiple sheets)**

The feeder is switched off immediately after multiple sheets are detected.

**Moving bundle detector on forwarding roller shaft**

1. Loosen the tommy bar screw (Fig. 55/1) on the bundle detector.
2. Move the bundle detector to the required position.
3. Tighten the tommy bar screw (Fig. 55/1) on the bundle detector.

## 13.5 Tear-off detector/multiple-sheet detector

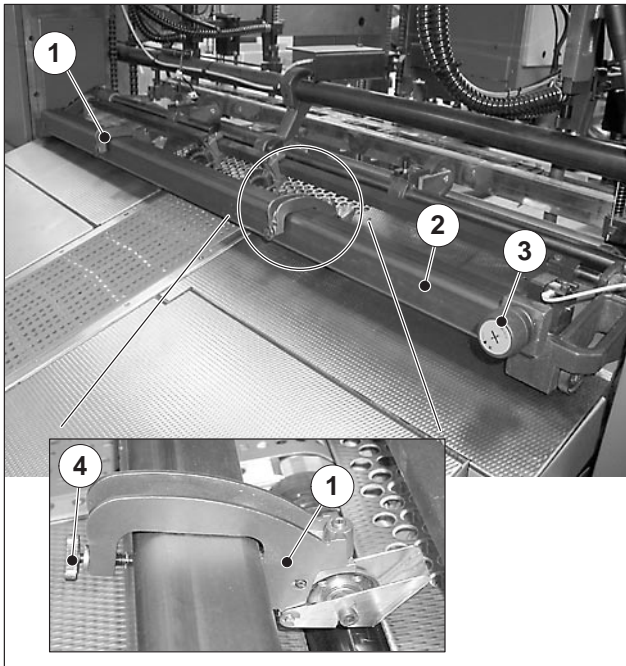


Fig. 56 Double sheet detector above the tape driving roller

The double sheet detector above the suction tape drive roller consists of a cross bar (Fig. 56/2) that can be equipped with 1...24 feeler rollers (Fig. 56/1). It detects

- double sheets,
- bundles (multiple sheets),
- - depending on number and position of the feeler rollers - paper bits of different sizes.

Adjust the tear-off detector/multiple-sheet detector at the control knob (Fig. 56/3). The control knob has a notch division of 1/100 mm.

#### Adjustment to paper thickness

1. Switch on feeder and sheet travel.
2. Turn the control knob (Fig. 56/3) clockwise until the double sheet detector is just activated.
3. Determine the setting values for the current print job. The following formula is used for the calculation:  $\text{Stock thickness} / 2 \times 100$

#### Example:

- Stock thickness 0.1 mm:  
 $0.1 / 2 = 0.05 \times 100 =$  turn 5 notches to the left.
  - Cardboard 0.8 mm:  
 $0.8 / 2 = 0.4 \times 100 =$  turn 40 notches to the left.
4. Turn the control knob (Fig. 56/3) anti-clockwise by the calculated number of notches.

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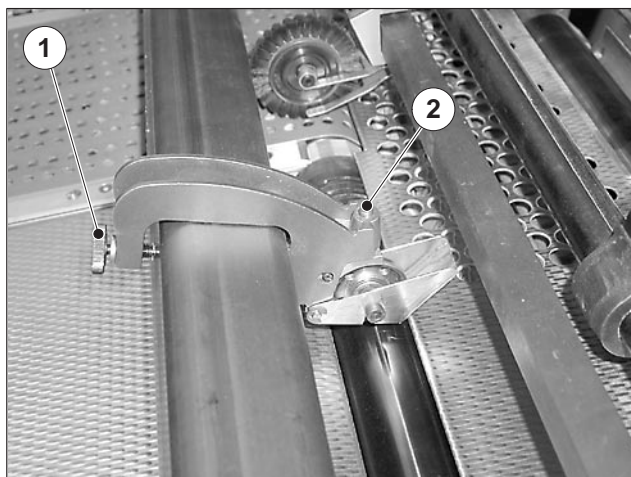


Fig. 57 Feeler roller

## Installing the feeler roller

You can install 1 ...24 feeler rollers on the cross bar. Four feeler rollers are included in the scope of delivery of the press. The more feeler rollers are installed on the cross bar, the smaller are the bits of paper that can be detected.

1. Set the feeler roller (Fig. 57) onto the cross bar and push it to the required position.
2. Secure the feeler roller on the cross bar with the knurled head screw (Fig. 57/1).

## Basic adjustment

You must check the basic adjustment

- when you install additional feeler rollers,
- or
- when you move one or more feeler rollers.
1. Switch on the feeder.
  2. Set the stock thickness on the control knob (Fig. 56/3) to minimum sheet thickness (turn the control knob fully to the right).
  3. Adjust each feeler roller at the stud (Fig. 57/2) such that it just follows the suction tape drive roller.

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13.6 Clearing the feeder

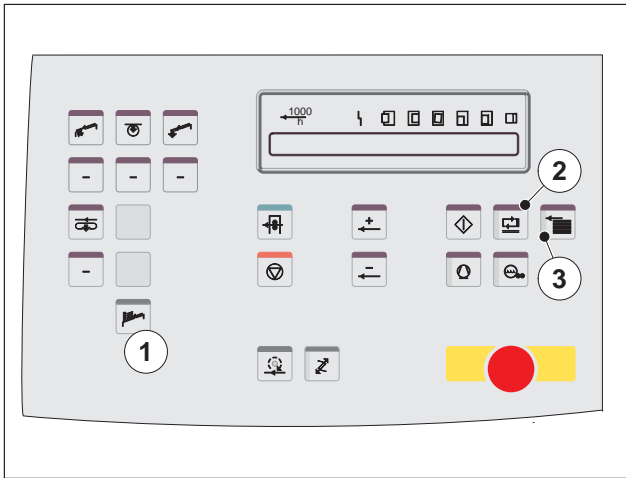


Fig. 58



The *Clear feeder* button is on the feeder control panel. This function enables you to clear the sheets from the feed table.

► **Condition**

Sheet arrival detector, missing sheet overrun sheet control, and double sheet detector have not been triggered.

1. Press the *Release sheet stop finger* button (Fig. 59/1) on the control panel of the first printing unit. Remove the sheet above the sheet arrival detector. The sheet stop finger remains released (sheet stop finger up) as long as you press the button.
2. Press the *Clear feeder* button (Fig. 58/1). Sheet travel is switched off. The sheets on the feed table are transported to the printing unit in the direction of the sheet travel. Ratchet pawl and sheet stop finger are closed.
3. Remove the sheets from the feed table before they reach the sheet alignment.

13.7 Switching the feeder back on after double sheet or multiple sheet recognition

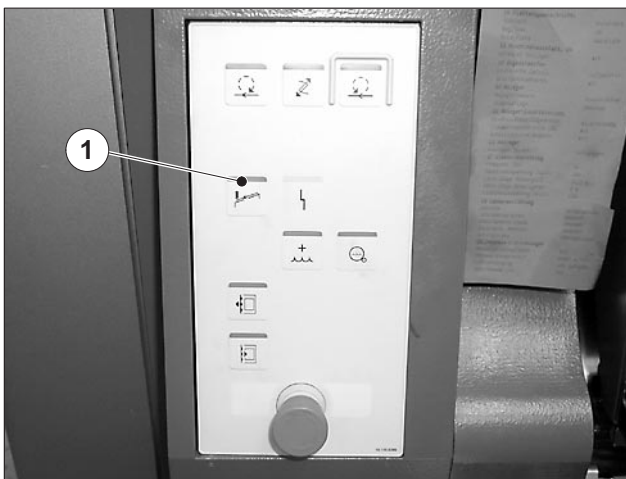


Fig. 59

Prerequisite: The feeder was switched off after double or multiple sheets have been detected.

1. Remove the double or multiple sheets from the feeder.  
To remove the sheets under the sheet stop finger, press the *Release sheet stop finger* button (Fig. 59/1) on the control panel of the first printing unit. The sheet stop finger remains released (sheet stop finger up) as long as you press the button.
2. Switch on the feeder (Fig. 58/2) and the sheet travel (Fig. 58/3).

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## 14 Forwarding rollers

### 14.1 Adjusting to sheet format

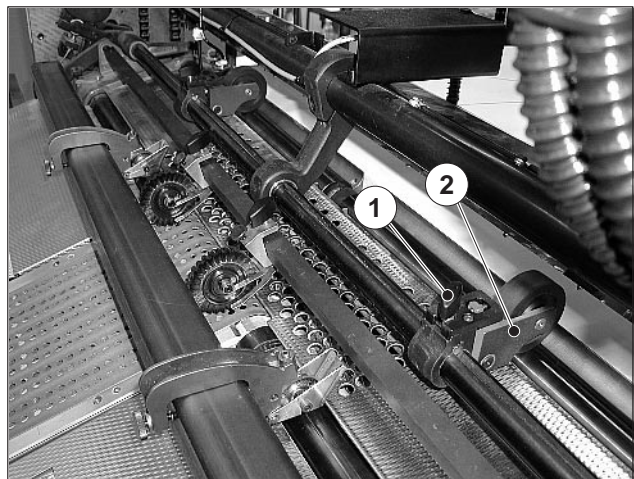


Fig. 60 Forwarding roller



#### Note

Clear the feed table before you start positioning the forwarding rollers. Due to the bundle check, there can be startup problems when you move the forwarding rollers on the sheets.

1. Open the tommy bar screw (Fig. 60/1).
2. Move the forwarding roller (Fig. 60/2) to the required position.  
Recommended adjustment:  
Set the distance between the forwarding rollers to half the sheet width.
3. Tighten the tommy bar screw (Fig. 60/1).

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15 Pull lay

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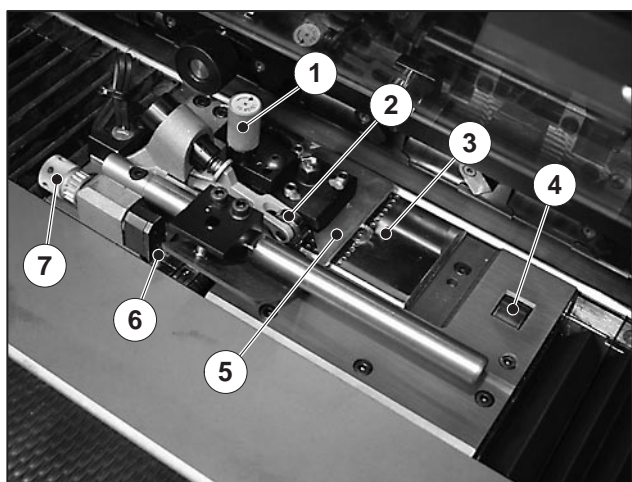
15.1 Function

There are two pull lays (one on D.S. and one on O.S.) on the feed table, shortly before the sheets enter the printing unit. Depending on the required pull direction, you can select the pull lay on D.S. or on O.S. via the CP2000 Center.

The pull lays perform the lateral alignment of all sheets before they are fed into the printing unit.

The pull lay on D.S. pulls the sheet against the pull stop on D.S. - the pull lay on O.S. pulls the sheet against the pull stop on O.S.

15.2 Function elements



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- 1 Adjusting screw retainer height
- 2 Feeler roller for double sheet detection
- 3 Pull plate
- 4 Propelling roller
- 5 Retainer
- 6 Pull sensor
- 7 Pull sensor adjusting screw

Fig. 61 Pulling device, overview

15.3 Adjusting the sheet size

Adjust pulling device and pull side via the CP2000 Center (see Chapter B "Printing a job").

Once the job data has been accepted, the preselected pulling device moves to the position at which the sheet runs centered through the press.

The uninserted pulling device moves out of the format to the extent that the measuring lever of the double sheet detector is still effective. The pull lay channel is covered automatically when the pulling device is positioned.

**Malfunction during the positioning procedure**

The pulling device stops if the *emergency stop button* is pressed while the pulling device is being positioned.

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In this case, you must acknowledge again the sheet size adjustment on the CP2000 Center (see Chapter B "Printing a job"). The pulling device then moves to the preselected position.

15.4 Adjusting the suction air

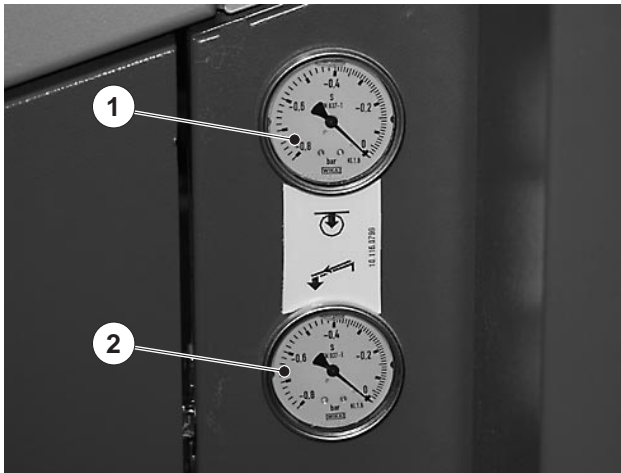


Fig. 62 Suction air of pull lay and propelling roller

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Pull plate and propelling roller suck the sheet. The control system regulates the suction air volume as a function of the stock thickness.

- Light printing material – little suction air.
- Heavy printing material – much suction air.

Adjusting the suction air manually

Using the buttons (Fig. 63/1...4) you can adjust the suction air volumes of pull plate and propelling roller separately.

1. Press
  - the button (Fig. 63/3) to increase the suction air volume on the pull plate.
  - the button (Fig. 63/4) to reduce the suction air volume on the pull plate.

The current working pressure of the pull plate is shown on the manometer (Fig. 62/2).

If there is not enough suction air, the sheet is not guided correctly to the pull stop.

If there is too much suction air, the sheet is deformed at the pull stop.

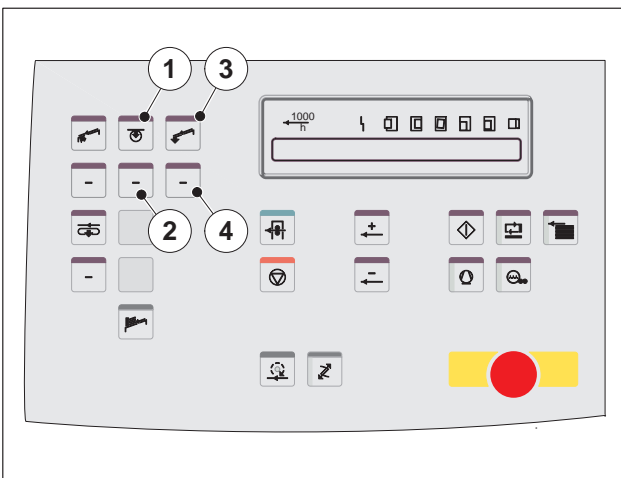


Fig. 63

GR SG901582100000000000

2. Press
  - the button (Fig. 63/1) to increase the suction air volume on the propelling roller.
  - the button (Fig. 63/2) to reduce the suction air volume on the propelling roller.

The current working pressure of the propelling roller is shown on the manometer (Fig. 62/1).

If there is not enough suction air, the sheet is not guided correctly to the front lays.

If there is too much suction air, thin (light) sheets can be distorted in the area of the propelling rollers.

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15.5 Adjusting the pull stop

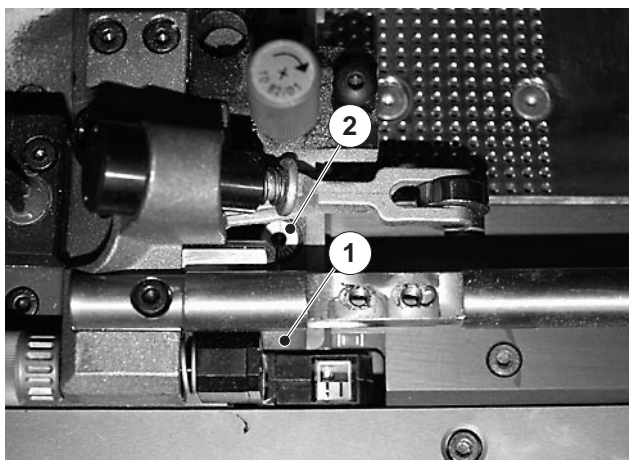


Fig. 64 Pull stop adjusting elements

You can adjust the angle of the pull stop if the sheets are not cut at right angles or if the front lays are inclined. In the basic adjustment (orthogonal position), the long mark on the adjustment eccentric (Fig. 64/2) is at the mark on the pull stop.

1. Adjust the pull stop (Fig. 64/1) on the adjustment eccentric (Fig. 64/2) to the edge of the print sheet.
2. At the end of the job, reset the pull stop to the orthogonal position.

15.6 Pull lay monitor

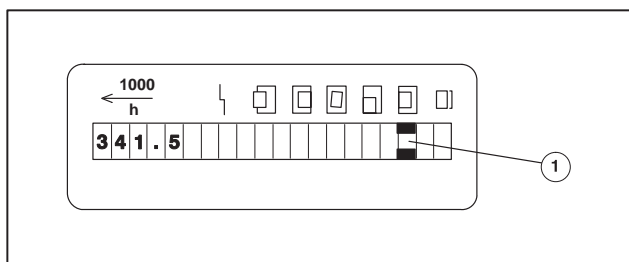


Fig. 65 MID, pull lay monitor

A light probe checks the function of the pulling device. A signal sounds (only during sheet travel) if a sheet has not correctly been pulled to the stop of the pulling device. A pull error is shown on the feeder display (Fig. 65/1) and on the control console.

An infeed error is signaled if the sheet is too close to the side stop before the pull procedure is started. The press remains in production.



Fig. 66 Pull lay monitor adjustment elements

**If an infeed error occurs**

1. Increase the pull distance.

**If a pull error occurs**

1. Check the pull distance adjustment and the vacuum
  - at the pull plate
  - and at the suction drive roller.

**Preselecting the pull lay monitor**

See Chapter B "Preparing a job".

**Adjusting the pull lay monitor**

1. Set the front lays straight.
2. Set the pull stop such that it is at right angles to the front lay (the long mark on the adjustment eccentric (Fig. 64/2) is at the mark on the pull stop).
3. Put the press on safe via the feeder console.

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4. Place a sheet onto the feed table. The sheet must be in contact with the front lays and the pull stop.
5. Turn the knurled head screw (Fig. 66/1) towards

- pull lay on O.S. - white arrow,
- pull lay on D.S. - black arrow,

until the display on the MID (Fig. 65/1) disappears.

6. Turn the knurled head screw in the opposite direction, until the display on the MID (Fig. 65/1) lights up.

Basic adjustment:

Continue turning the knurled head screw by 10 notches.

► **Tip**

The sensitivity of the monitor decreases with the number of notches you turn the screw (larger pull error possible).

The sensitivity of the monitor increases if you reduce the number of notches you turn the screw.

**Example:** One notch corresponds to 0.03 mm. In basic adjustment, a pull error is reported if the distance between sheet and sheet stop is more than 0.3 mm after pulling. The infeed warning sounds if the pull distance is  $\leq 0.3$  mm.

## 15.7 Adjusting the pull distance

Once the format of the printing material has been entered, the control system automatically adjusts the pull lays to the preselected pull distance. The pull distance can manually be adjusted at the CP2000 Center, at the feeder console and at the feeder control panel on D.S. (see chapter "B, Printing a job").

### Recommended settings

Paper of less than 200 g and cardboard of more than 200 g to 4...6 mm.

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15.8 Adjusting the retainers

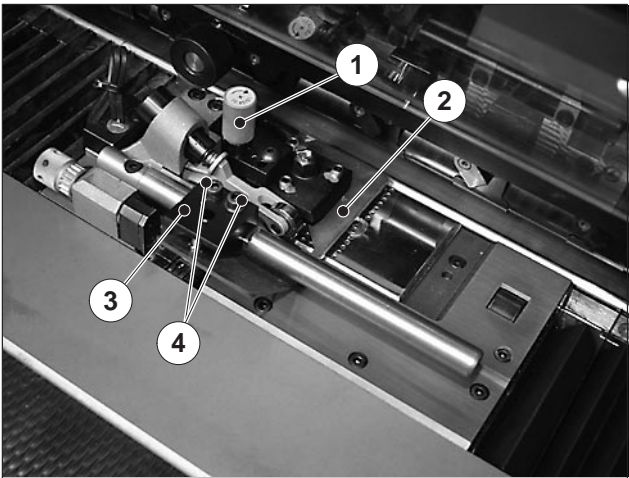


Fig. 67 Retainer on the pull lay

1. Push two strips of the currently used printing material under both retainers.
2. Using the knurled head screw (Fig. 67/1), adjust the height of the retainers (Fig. 67/2).

- Retainers up = anti-clockwise.
- Retainers down = clockwise.

The retainers must guide the strips of paper lightly without squeezing them.

15.9 Removing/installing the retainer

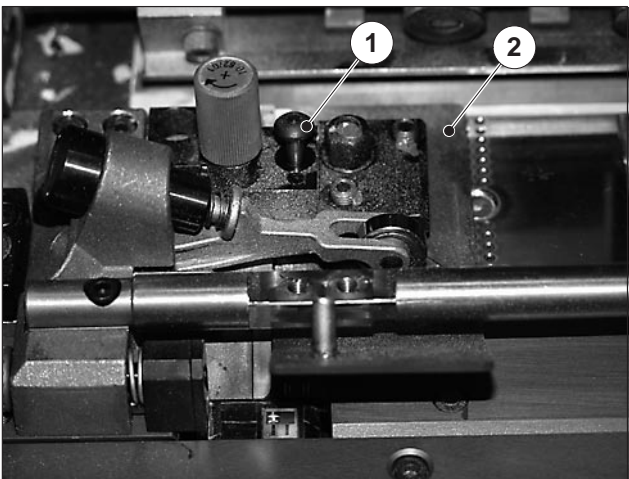


Fig. 68 Removing the retainer

Removing the retainer



**Caution – Press damage**

Screws or small parts that get into the press can damage the equipment seriously. Ensure that screws or other small parts cannot get into the press.

1. Loosen and remove the two screws (Fig. 67/4) on the guide block.
2. Remove the guide block (Fig. 67/3).
3. Using the knurled head screw (Fig. 67/1), set the retainer to the topmost position.

- Retainers up = anti-clockwise.
- Retainers down = clockwise.

4. Loosen the screw (Fig. 68/1) from the retainer. Pull the screw from the top and turn it at the same time in anti-clockwise direction until the screw is fixed at the upper position (Fig. 68/1).



**Caution – Damaged retainers can obstruct the sheet travel**

Do not bend or scratch the retainers. Handle the retainers with extreme care when you remove or install them.

5. Press the retainer (Fig. 68/2) down and out of the support.

**confidential****Installing the retainer**

1. Install the retainer from the bottom in the support (Fig. 68/2).  
The spring pins in the retainer must be engaged at the boreholes of the support.
2. Turn the screw (Fig. 68/1) clockwise out of the fixed position and into the retainer.
3. Tighten the screw (Fig. 68/1).
4. Align the retainer in parallel to the sheet stop.
5. Install the guide block (Fig. 67/3).  
Secure the guide block with the two screws (Fig. 67/4).
6. Adjust the retainer to the currently used printing material.

**15.10 Cleaning the pull lay**

The pull lay is equipped with an automatic cleaning facility. After each washup of the blanket,

- the pull rail
- and the pull sensor

are blown free with compressed air.

Heavy soiling of the pull lay can be removed by additional cleaning with a vacuum cleaner.

## 16 Separator rolls

### 16.1 Function

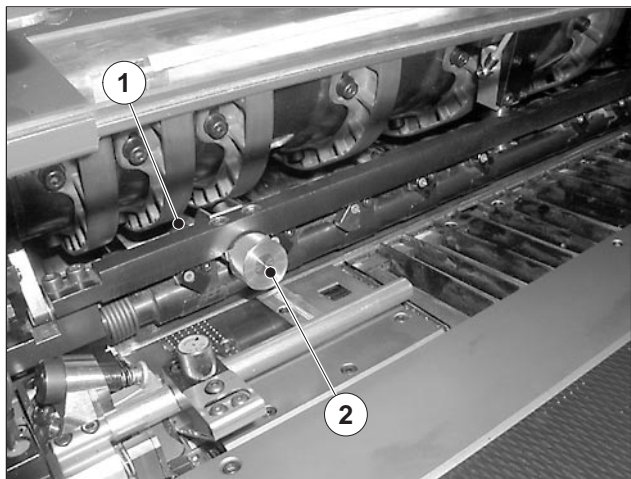


Fig. 69 Adjusting the separator rolls

### 16.2 Adjusting the height of the separator rolls

The separator rolls (Fig. 69/1) guide the sheets under the cover guides. They ensure a safe infeed into the press with few marks.

With printing material that is thicker than 0.4 mm, the separator rolls automatically swivel to the cardboard position after the first sheet has been fed in.

You can change the position and the height adjustment of the separator rolls manually, and throw off individual separator rolls.

To adjust the separator rolls, use three strips of paper of the current print job.

1. Push the strips of paper between separator roll and feed table.
2. Turn the knurled head screw (Fig. 69/2) to adjust the height of the separator rolls. The strip of paper should run tightly between separator roll and feed table, without getting pinched.
  - Turning clockwise increases the distance between separator rolls and feed table.
  - Turning anti-clockwise reduces the distance between separator rolls and feed table.

The maximum distance between separator rolls and feed table is 10.4 mm.

The minimum distance between separator rolls and feed table is.

- 0.2 mm in paper position,
- 0.4 mm in cardboard position.

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## 16.3 Changing the separator roll position

The control system adjusts the separator roll position according to the stock thickness. The separator rolls can swing to two different positions:

- Paper mode: Up to a stock thickness of 0.4 mm, the separator rolls remain in paper position.
- Cardboard mode: If the stock is thicker than 0.4 mm, the separator rolls swing to the cardboard position after the first print sheet has been fed in.

For stock thickness values between 0.3 mm and 0.4 mm you may select paper mode or cardboard mode. We recommend cardboard mode to print very stiff material in this thickness range.

Paper mode cannot be selected if the stock thickness exceeds 0.4 mm.

## 16.4 Throwing on/off individual separator rolls

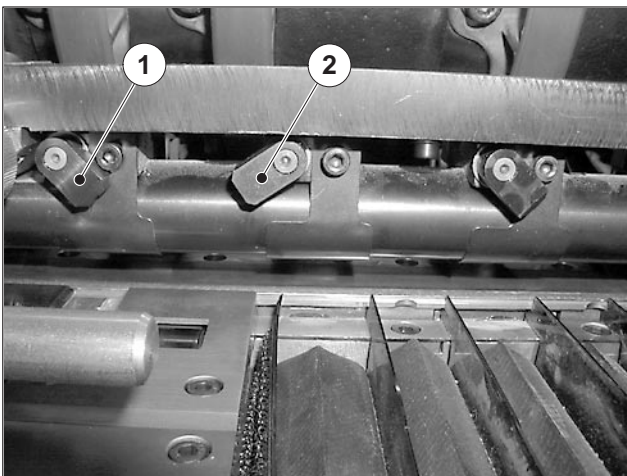


Fig. 70 Throwing on/off separator rolls

You may throw off individual separator rolls. This can be helpful for printing envelopes, for example, or other materials of different thickness.

### Throwing off the separator roll

1. Fold the lever on the separator roll clockwise to O.S. (Fig. 70/2).

### Throwing on the separator roll

1. Fold the lever on the separator roll anti-clockwise to D.S. (Fig. 70/1).

## 16.5 Cleaning the separator rolls

1. Using a brush or compressed air, remove the paper dust daily.
2. If a separator roll marks on the print sheet: Clean the separator roll with a **lightly dampened** cloth. Use only water and the cleaners that are approved by Heidelberg.

The separator roll must be replaced by Heidelberg Service if it is still tight after it has been cleaned.

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## 16.6 Cleaning the sheet guide plate

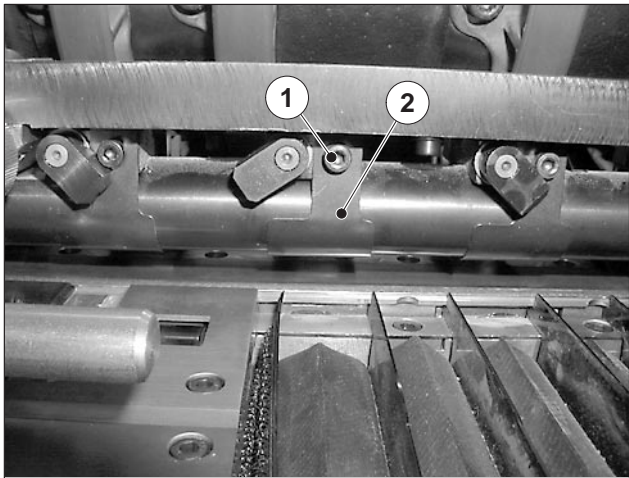


Fig. 71 Cleaning the sheet guide plate

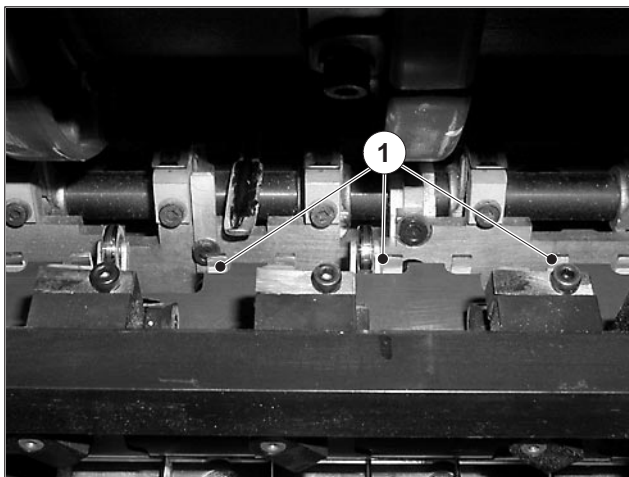
1. Turn the screw (Fig. 71/1) back by one turn.
2. Pull the sheet guide plate (Fig. 71/2) from D.S. out of the retainer.
3. Clean the sheet guide plate with a **lightly dampened** cloth. Use only water and the cleaners that are approved by Heidelberg.
4. Push the cleaned sheet guide plate towards O.S. into the retainer.
5. Tighten the screw (Fig. 71/1).

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## 17 Front lays

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### 17.1 Function



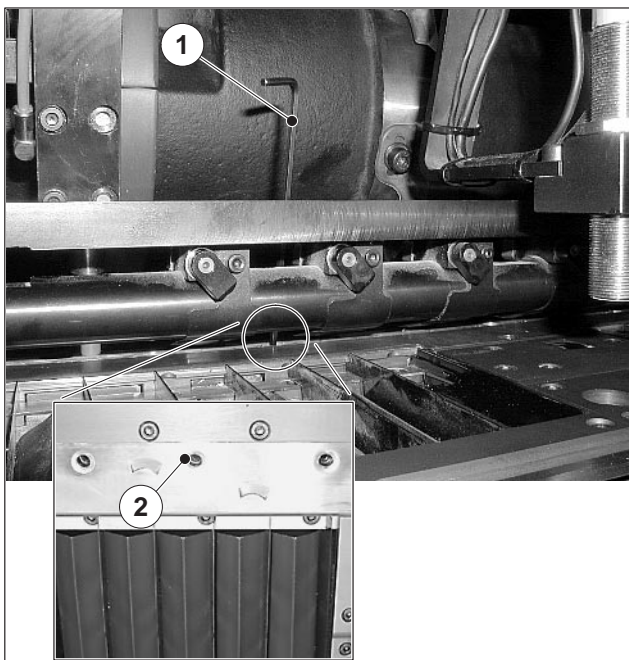
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The Speedmaster SM/CD 102 has fifteen tilting front lays (Fig. 72/1) underneath the feed table. These front lays can individually and gradually be thrown on and thrown off. The front lays align the front edge of the print sheets true to register. The following settings are possible:

- Throwing on and throwing off: A front lay that has been thrown on is in contact with the front edge of the print sheet during the alignment procedure.
- Setting forward and backward: This function is used for adjusting the gripper bite.

Fig. 72 Front lays

### 17.2 Throwing on/off the front lays



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Throwing on/off the front lays requires a 3-mm Allen key.

1. Open the glass guard on the printing unit. The separator rolls swing back.
2. Insert the Allen wrench (Fig. 73/1) through the borehole in the sheet guide plate (Fig. 73/2) into the adjusting screw of the required front lay.
3. Turn the screw through 90°
  - clockwise, if you wish to throw on the front lay.
  - anti-clockwise, if you wish to throw off the front lay.

► **Note**

When you turn the screw, you can feel a notched division. The rotary distance between "front lays thrown on" and "front lays thrown off" is subdivided into 15 notches. Setting intermediate values should be the exception.

4. Close the glass guard on the printing unit.

Fig. 73

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### 17.3 Adjusting the gripper bite

The gripper bite can be adjusted on the CP2000 Center (see Chapter B "Printing a job"). In the center position of the front lays, the gripper bites on A.S. and on O.S. are 11 mm each. You may change the setting by +/- 1 mm in 0.02-mm increments:

- forwards or backwards in parallel,
- forwards or backwards in different steps for D.S. and O.S.
- deflecting in the range from +0.5 through -0.3 mm
  - with a gripper bite of 11.9 mm: from +0.4 through -0.3
  - with a gripper bite of 12 mm: from +0.3 through -0.3

Observe the following points:

- Begin at the center position when you start a new job. This provides you with allowance in all directions.
- Do not change the adjustment of the front lays when you print on front and rear side in several press passes. There can be deviations in the register truth of front and rear side.
- You should mark the pile at the point where you change the front lay setting while you are printing a pressrun. Finishing will then be able to check the press setting at the corresponding point.

### 17.4 Cleaning the front lays

1. Using a brush or compressed air, remove the paper dust daily.
2. You should clean the roller when a front lay or a front lay supporting roller marks on the print sheet. Use only the cleaners that are approved by Heidelberg. The roller must be replaced by Heidelberg Service if it is still tight after it has been cleaned.

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17.5 Blowing/suction nozzles

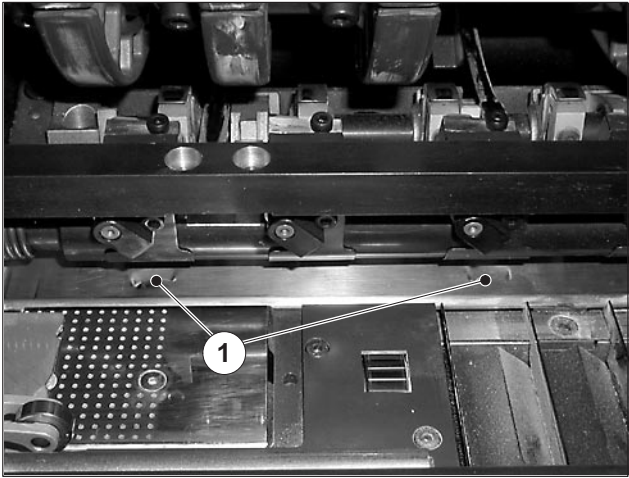


Fig. 74 Blowing/suction nozzles

The blowing/suction nozzles (Fig. 74/1) guide the sheet under the cover guides.

1. Adjust the blast air volume with the buttons on the feeder console (Fig. 75/1).
  - The button (Fig. 75/1) increases the blast air volume.
  - The button (Fig. 75/2) reduces the blast air volume.

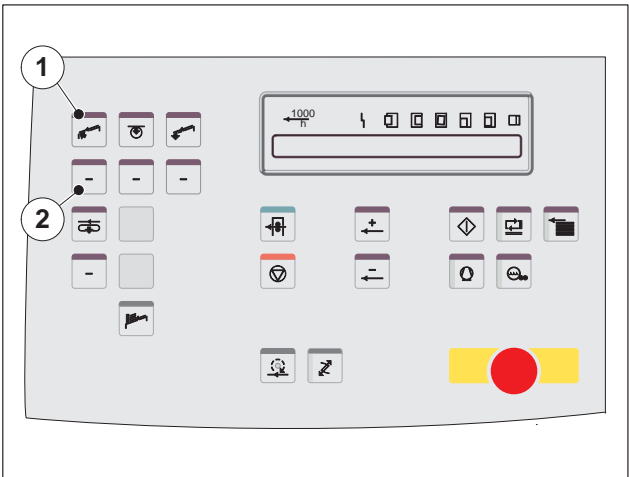


Fig. 75 Air adjustment of the blowing/suction nozzles

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## 17.6 Raising the sheet stop fingers

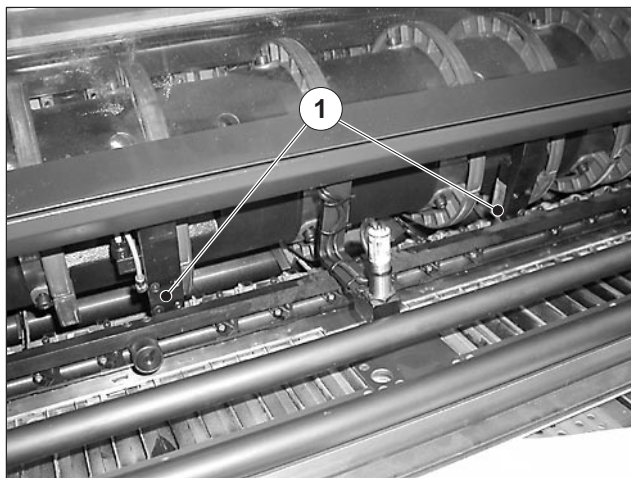


Fig. 76 Sheet stop fingers

The sheet stop fingers (Fig. 76/1) are used for retaining double sheets, early sheets and late sheets on the feed table. To perform certain adjustment work or to remove double sheets you can raise the sheet stop fingers.

1. Press the *Release sheet stop finger* (Fig. 77/1) on the control panel of the first printing unit. The sheet stop fingers (Fig. 76/1) are raised.

or

2. Inch the press until the feeder engages and the sheet stop fingers are raised.

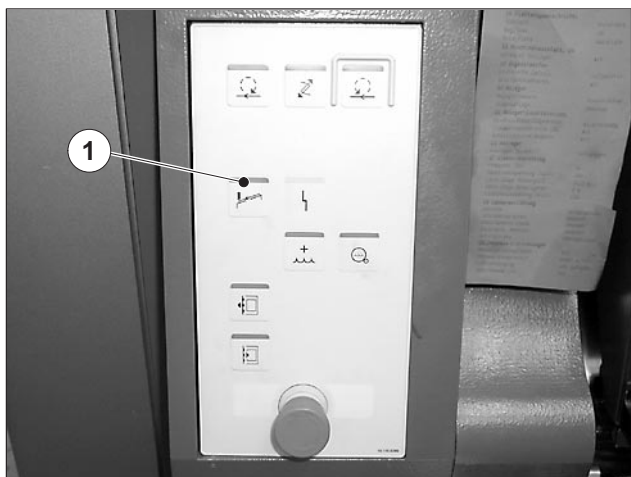


Fig. 77

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## 18 Crash bar

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### 18.1 Function

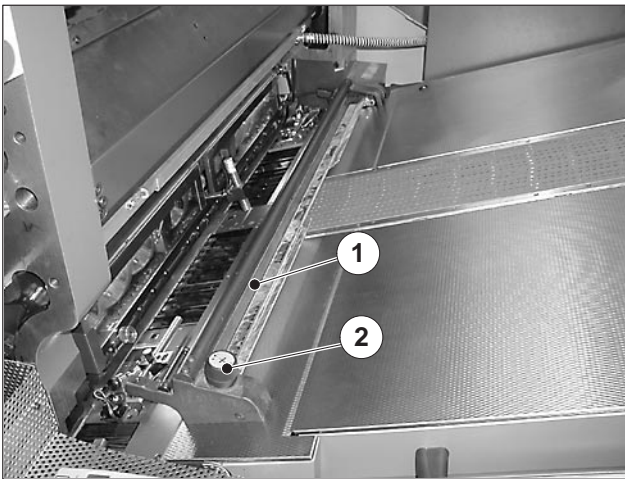
The crash bar prevents larger objects (such as an Allen key) from penetrating the printing unit.



**Caution - penetrating foreign bodies can damage the sheet alignment system and the printing unit.**

The crash bar must be installed on the feed table and be adjusted to the currently relevant stock thickness.

### 18.2 Adjusting the crash bar



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1. Using the control knob, set a gap of 1 mm between crash bar (Fig. 78/1) and printing material.
  - Turn the control knob (Fig. 78/2) clockwise if you wish to reduce the gap.
  - Turn the control knob (Fig. 78/2) anti-clockwise if you wish to increase the gap.

Fig. 78 Crash bar

19 Replacing the suction tape

19.1 Preparing the work

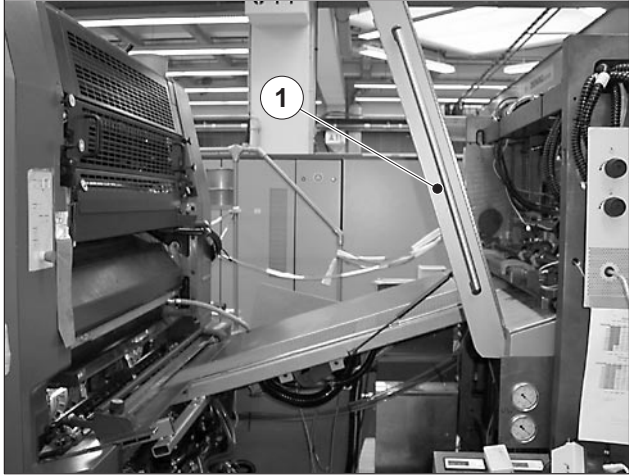


Fig. 79

Replacing the suction tape takes approximately one hour.

1. Put the press on safe via the feeder console.
2. The press must be non-printing before work is started.
3. Remove all sheets from the feed table.
4. Fold up the feed table (Fig. 79/1) on O.S.

19.2 Removing the suction tape module

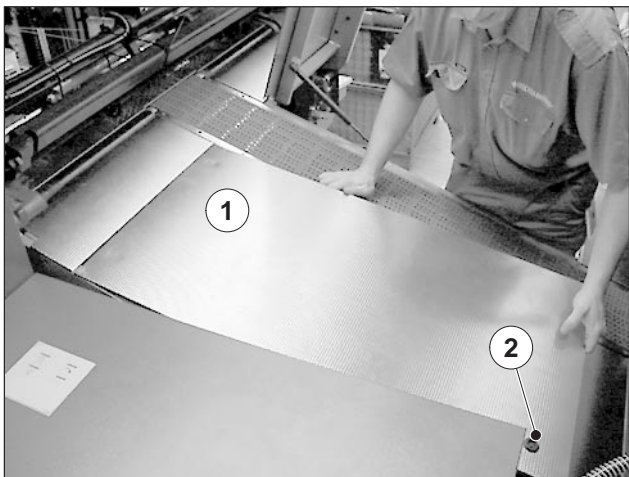


Fig. 80

Removing the sheet guide plate D.S.

1. Open the sheet guide plate locking device (Fig. 80/2) with the matching key.
2. Raise the sheet guide plate (Fig. 80/1) and remove it from the feeder. Store the sheet guide plate at a protected place.

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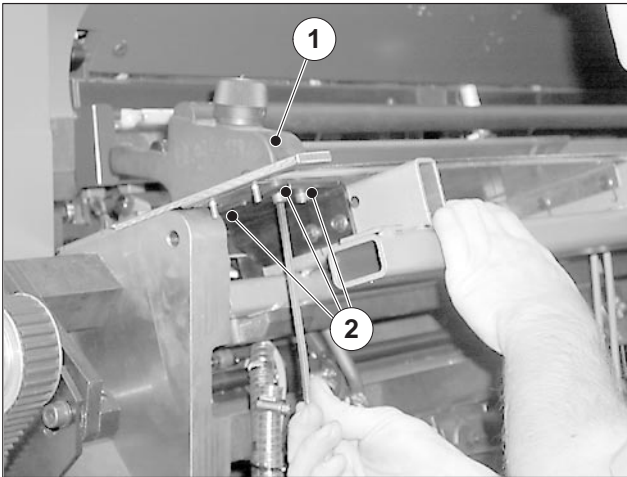


Fig. 81

**Removing the crash bar**

The crash bar (Fig. 81/1) is secured with three screws on A.S. and three screws on O.S. (Fig. 81/2).

3. Loosen and remove the three screws underneath the crash bar on D.S.
4. Loosen and remove the three screws underneath the crash bar on O.S.
5. Lift the crash bar from the feeder and store it at a protected place.

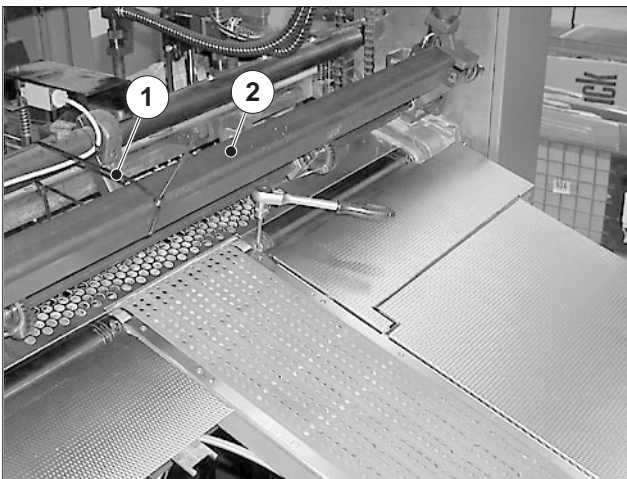


Fig. 82

**Tying up the tear-off detector / multiple-sheet detector**

6. Secure the tear-off detector / multiple-sheet detector (Fig. 82/2) at the upper position. Use a cable tie (Fig. 82/1), for example, to secure the detector.

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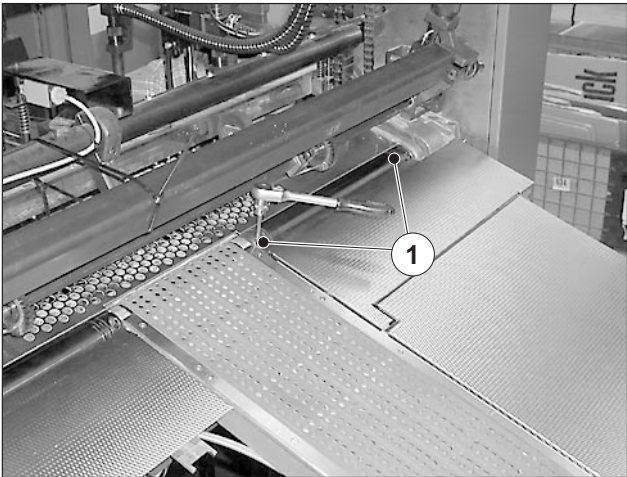


Fig. 83

Releasing the tape driving roller

7. Crank the suction tape drive roller until the screws (Fig. 83/1) on D.S. and O.S. are accessible.
8. Loosen the screws (Fig. 83/1) on D.S. and on O.S.
9. Push the segments of the suction tape drive roller on D.S. and on O.S. outwards in the direction of the arrow (Fig. 84/1).

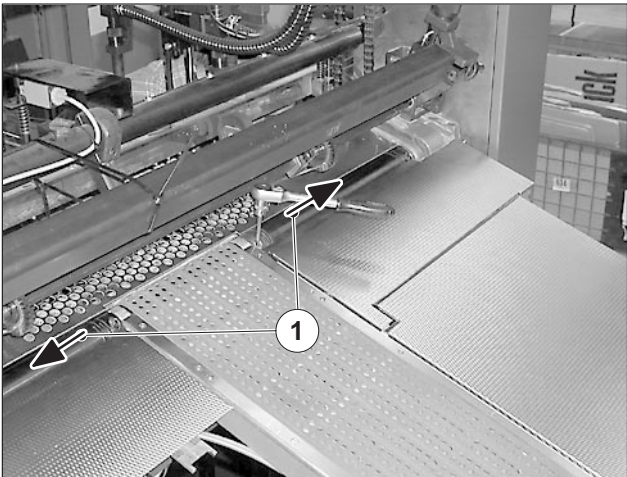


Fig. 84

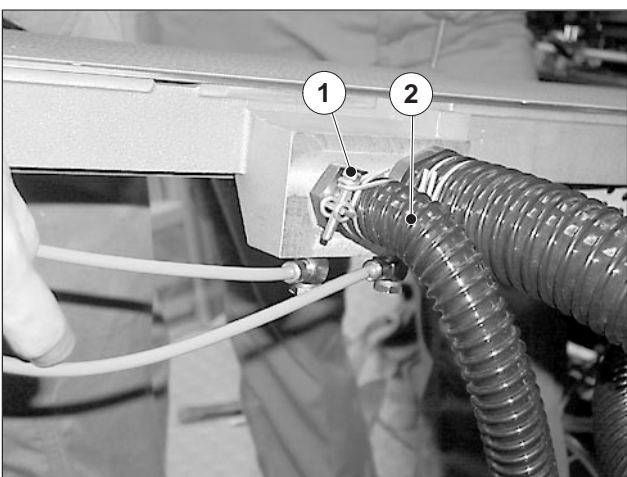


Fig. 85

Separating the air supply

10. Remove both suction air hoses from the suction tape. Loosen the screw (Fig. 85/1) at the clamp strap and pull the hose (Fig. 85/2) off the hose nozzle.

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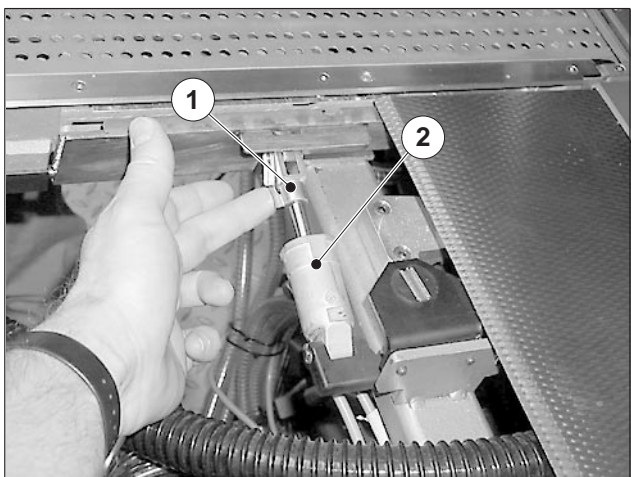


Fig. 86

**Detaching the pneumatic cylinder of the breather**

11. Loosen the retaining spring (Fig. 86/1) at the pneumatic cylinder of the breather (Fig. 86/2).
12. Detach the pneumatic cylinder.

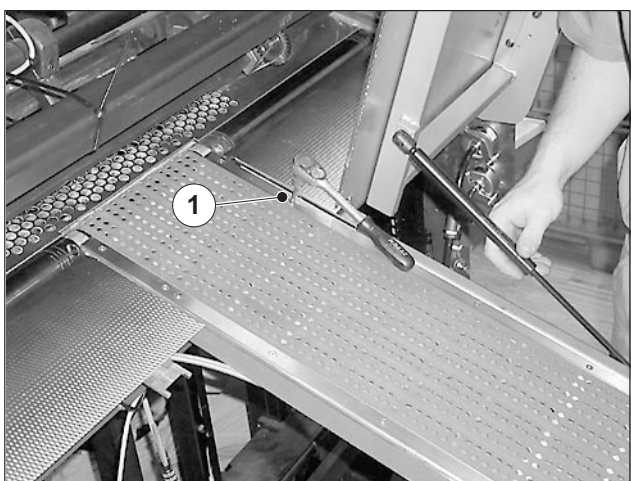


Fig. 87

**Removing the suction tape module**

13. Four screws secure the suction tape module on the feeder frame. Loosen the four screws (Fig. 87/1).

► **Note**  
The suction tape module is heavy. Do not carry the suction tape module on your own. Ask another person to help you.

14. Together with a second person, raise the suction tape module from the feeder. Place the suction tape module onto a stable support.

**19.3 Removing the suction tape**

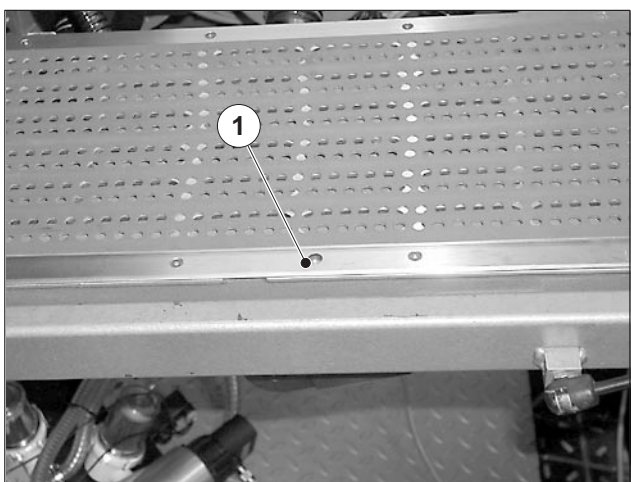


Fig. 88 Clamp bolt on the suction tape module

1. Turn the clamp bolt (Fig. 88/1) anti-clockwise in order to relieve the suction tape.

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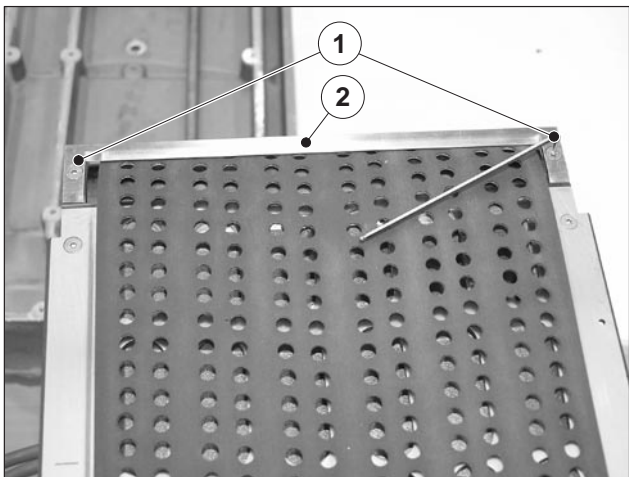


Fig. 89 Removing the guide plate

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Removing the guide plate

2. Loosen the screws (Fig. 89/1) on the guide plate.
3. Remove the guide plate (Fig. 89/2) from the suction tape module.



Fig. 90

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4. Turn the suction tape module over (Fig. 90).

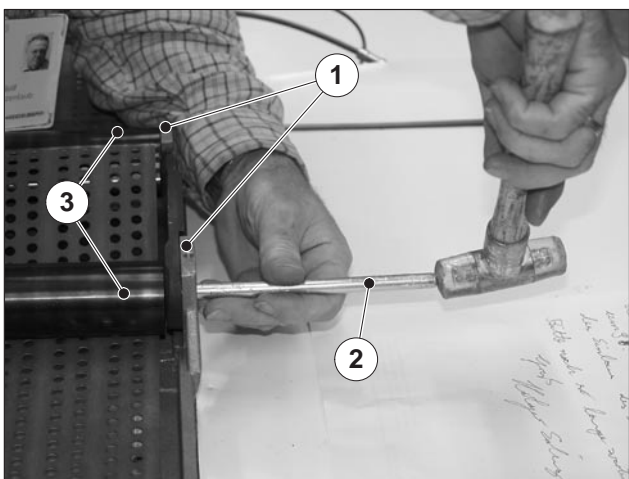


Fig. 91 Removing the idler pulley

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Removing the rollers for the tape guide

5. Loosen the two grub screws (Fig. 91/1) on the roller bearings.
6. Use a punch (Fig. 91/2) for removing the two shafts.  
With light blows, drive the shafts out of the roller bearing and pull off the shafts.
7. Remove the rollers (Fig. 91/3).

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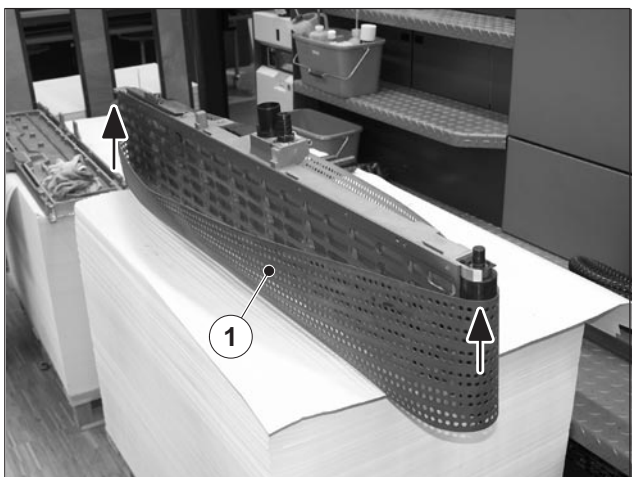


Fig. 92

**Removing the suction tape**

8. Pull the suction tape (Fig. 92/1) off the suction tape module.

**19.4 Installing the suction tape**

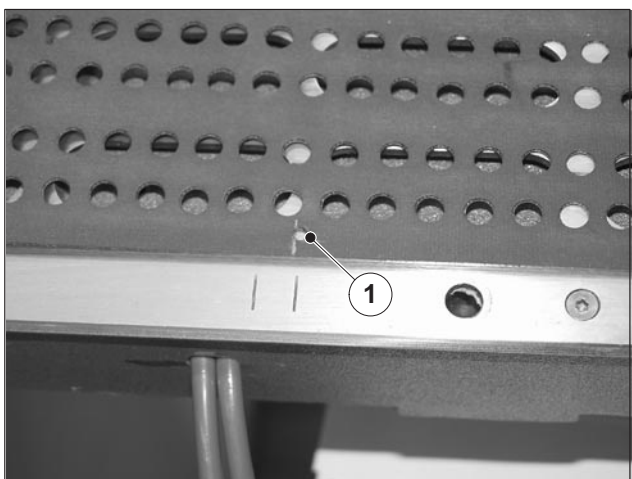


Fig. 93 Fitting the suction tape

**Fitting the suction tape**

1. Fit the suction tape on the suction tape module.

► **Note**  
The two bore markings in the suction tape (Fig. 93/1) must be at O.S.

2. Place the suction tape on the center of the suction tape module. Ensure that the suction tape is underneath the guides of the suction tape module.

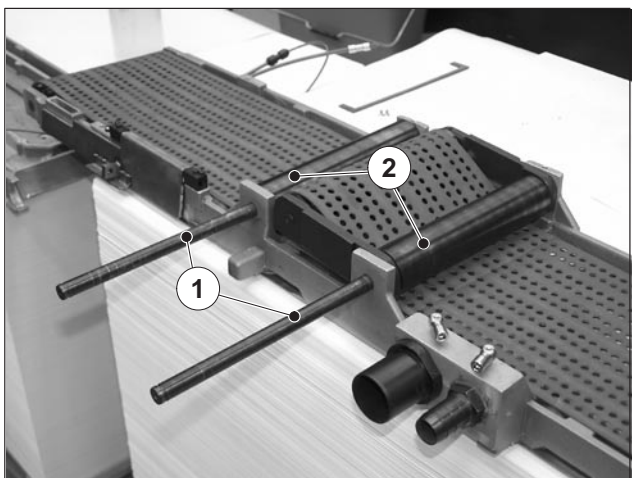


Fig. 94 Installing the idler pulley

**Installing the suction tape guide**

3. Place the tape guide rollers (Fig. 94/2) between the roller bearings.
4. Insert the shafts (Fig. 94/1) into the roller bearings. Push the shaft through the first roller bearing and the roller until it is in contact with the borehole of the second roller bearing.
5. Using light blows with a hammer (Fig. 95/1), drive the shafts into the bearing until they are flush with the outside of the roller bearings.

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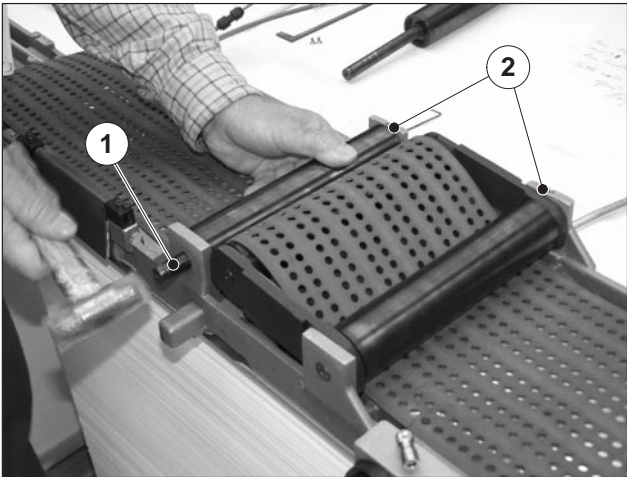


Fig. 95 Securing the shaft idler pulley

**Securing the shafts**

6. Tighten the two grub screws on the roller bearings (Fig. 95/2).

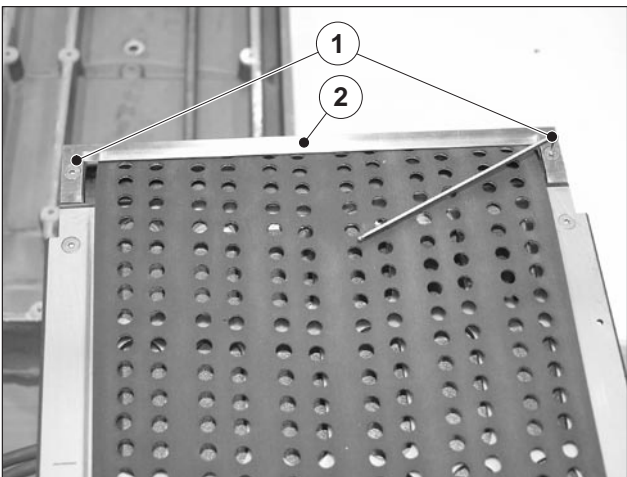


Fig. 96 Guide plate on the suction tape

**Installing the guide plate**

7. Place the guide plate (Fig. 96/2) onto the suction tape module.
8. Screw guide plate and suction tape module (Fig. 96/1) together.

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19.5 Stretching the suction tape

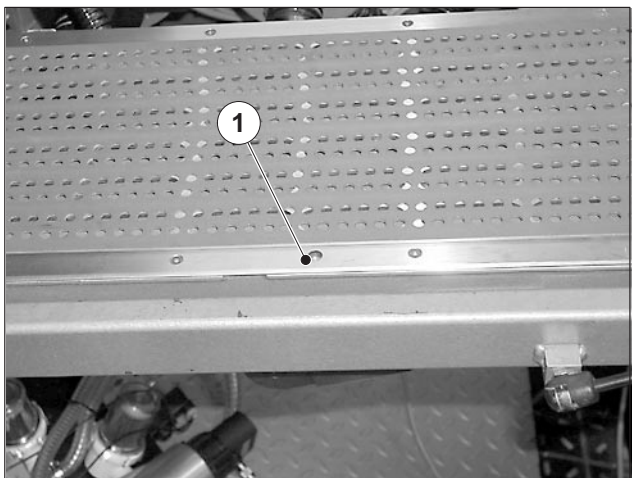


Fig. 97

1. Tighten the suction tape with the clamp bolt (Fig. 97/1) until it lies flatly on the suction tape module, but is not yet stretched.

Marks on the suction tape module (Fig. 98/1 ... 3) and bore marking in the suction tape (Fig. 98/4 and 5) are intended to help you with adjusting the correct tape tension.

2. Move the suction tape until
  - the first bore marking in the suction tape (Fig. 98/4) is at the line mark (Fig. 98/1).
  - the second bore marking in the suction tape (Fig. 98/5) is at the line mark (Fig. 98/2).

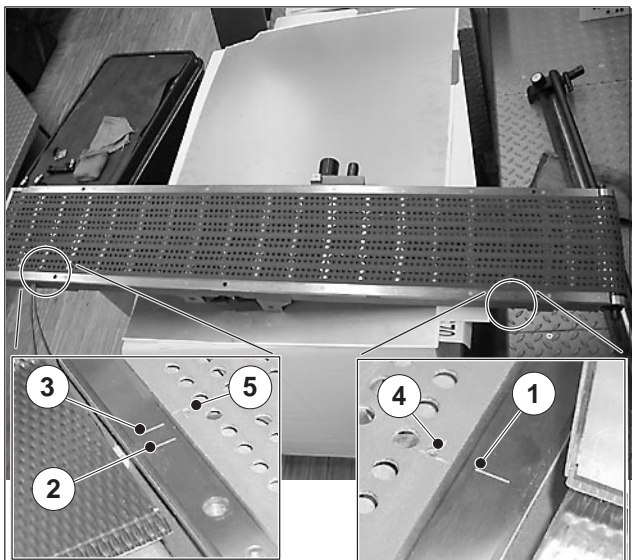


Fig. 98

3. Stretch the suction tape with the clamp bolt (Fig. 97/1). The suction tape has properly been stretched if the bore markings in the suction tape (Fig. 98/4 and 5) are at the single line mark (Fig. 98/1) and at the outer line mark (Fig. 98/3).

19.6 Installing the suction tape module

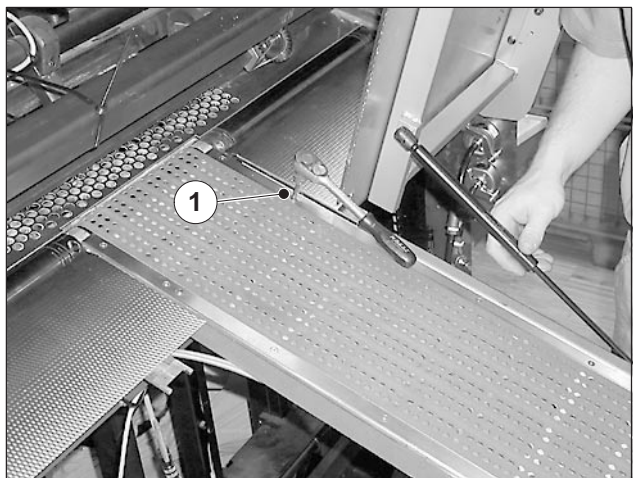


Fig. 99

► **Note**  
The suction tape module is heavy. Do not carry the suction tape module on your own. Ask another person to help you.

1. Ensure that the tear-off detector / multiple-sheet detector is tied up. See "Removing the suction tape module" in this chapter.
2. Together with a second person, place the suction tape module onto the feeder frame. Insert the suction tape module first at the suction tape drive roller, then at the printing unit.
3. Secure the suction tape module with the four screws (Fig. 99/1) on the feeder frame.

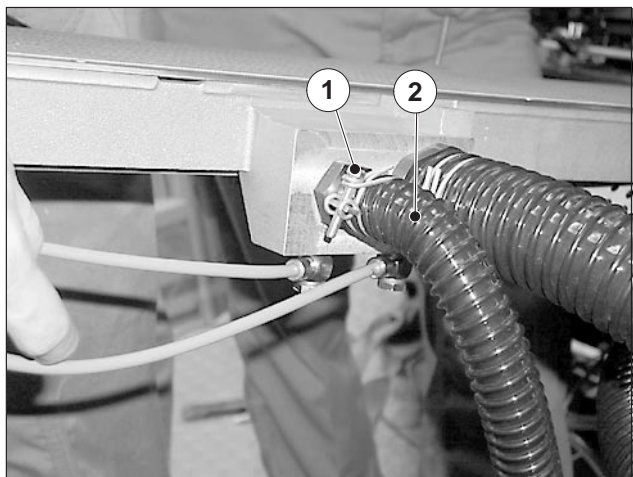


Fig. 100

**Installing the air supply**

4. Plug the two suction air hoses (Fig. 100/2) onto the hose nozzles on the suction tape. Tighten the screw (Fig. 100/1) on the clamp strap.

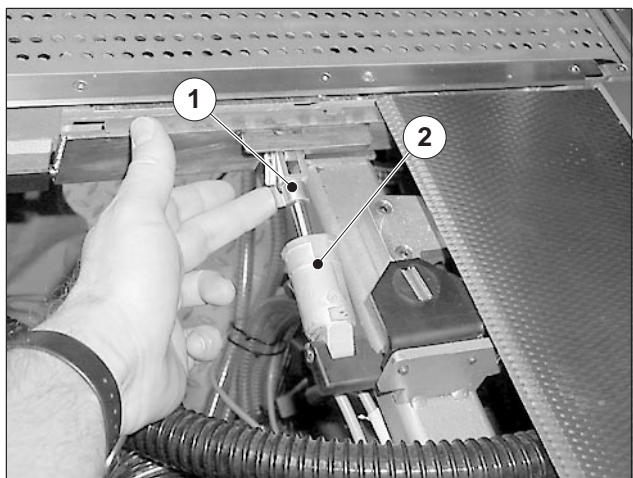


Fig. 101

**Hook in the pneumatic cylinder of the breather**

5. Hook in the pneumatic cylinder (Fig. 101/2) at the breather.
6. Close the retaining spring (Fig. 101/1) on the pneumatic cylinder.

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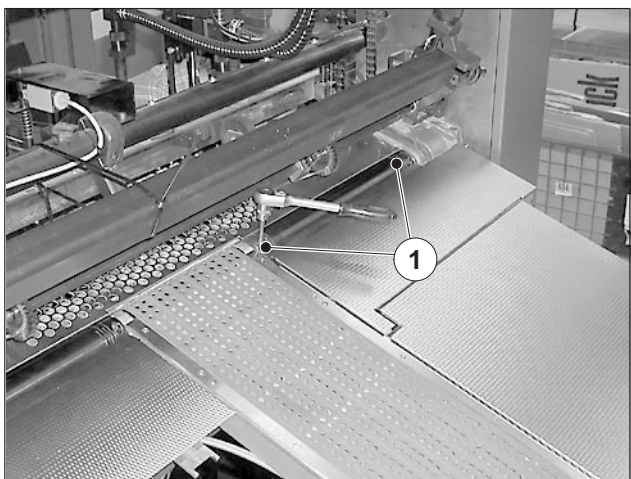


Fig. 102

**Connecting the tape driving roller**

7. Crank the suction tape drive roller until the screws (Fig. 102/1) on D.S. and O.S. are accessible.
8. Push the segments of the suction tape drive roller on D.S. and on O.S. inwards in the direction of the arrow (Fig. 103/1).  
If necessary, pull on the suction tape until the journals on the suction tape are flush with the grooves on the segments.
9. Tighten the four screws (Fig. 102/1) on D.S. and on O.S.

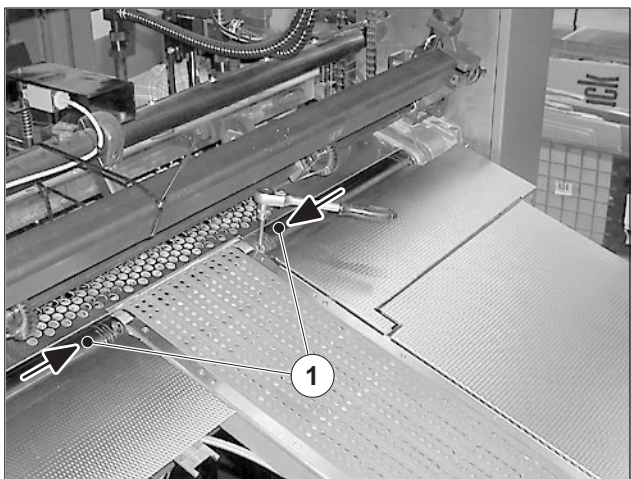


Fig. 103

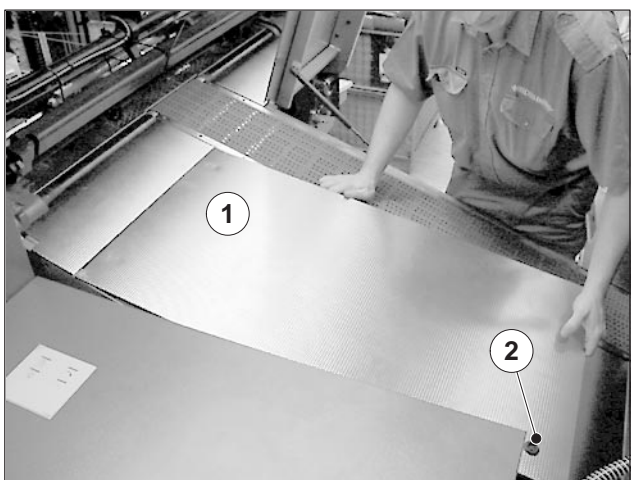


Fig. 104

**Installing the sheet guide plate D.S.**

10. Place the sheet guide plate (Fig. 104/1) onto the feeder frame on D.S.
11. Using the matching key, close the sheet guide plate locking device (Fig. 104/2).

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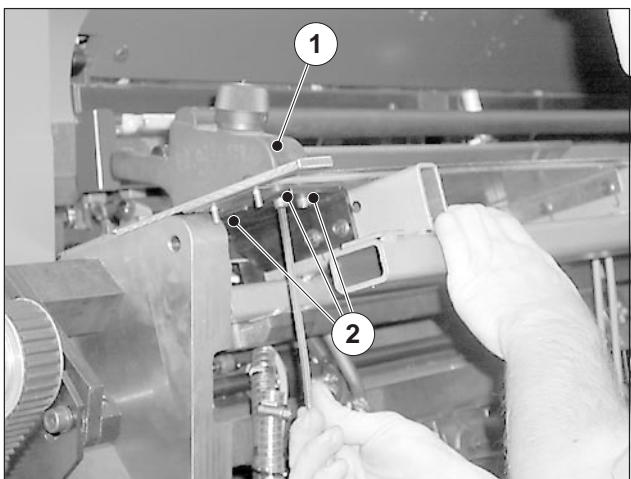


Fig. 105

**Installing the crash bar**

The crash bar (Fig. 105/1) is secured with three screws on A.S. and three screws on O.S. (Fig. 105/2).

12. Place the crash bar onto the feed table.
13. Tighten the three screws underneath the crash bar on D.S.
14. Tighten the three screws underneath the crash bar on O.S.

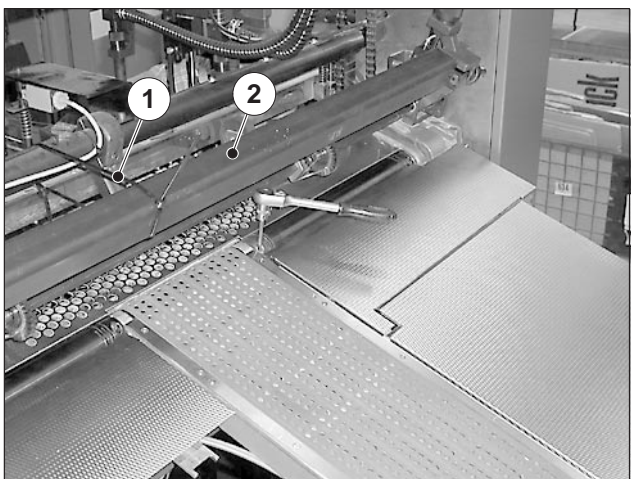


Fig. 106

**Putting the tear-off detector / multiple-sheet detector into operation**

15. Fold the tear-off detector / multiple-sheet detector (Fig. 106/2) into working position.

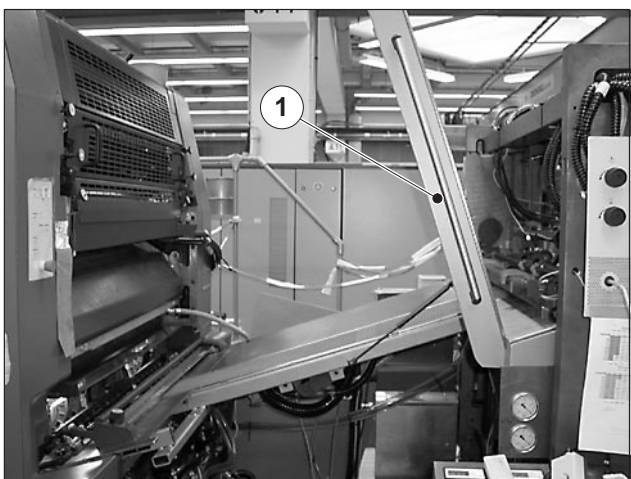


Fig. 107

16. Fold down the feed table (Fig. 107/1) on O.S.
17. Close all guards



**Caution - press damage and sheet travel malfunctions**

Prior to press start-up you must ensure that the segments of the tape driving roller have been secured. Ensure that the crash bar is screwed to the feed table. Ensure that the sheet guide plate is aligned towards O.S. as far as possible. The alignment is OK if you can insert a sheet of paper between the suction tape module and the sheet guide plate.

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## 20 Adjustment information for special printing material

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### 20.1 Special printing material ...

... requires special settings of the press.

This chapter gives you some information about printing on special printing material. The sheet travel depends on a large number of factors. Thus, we can give you only adjustment recommendations here.

The fine correction of the recommended values must be determined during operation.

### 20.2 Book paper

Book paper is a wood-free or slightly woodpulp printing material. Its high volume and a light coloring are typical for this printing material.

When processing this printing material you must chiefly take the porosity into account.

#### Suction head

1. Install the form-B tissue paper suckers on the lifting suckers.
2. Adjust the sucking level of the lifting suckers such that the tissue paper sucker touch the unfanned pile.
3. Insert the form-A sheet separator fingers into the supports on the suction head.
  - Sheet separator fingers that protrude too far into the pile tear the sucked-on sheet off the lifting suckers.
  - Sheet separator fingers that reach not far enough into the pile favor the formation of double sheets.
4. Reduce the suction air on the suction head as required.



#### Note

Reducing the suction air too much results in sheet loss on the lifting suckers.

#### Suction tape

In most cases, the suction air at the suction tape must be reduced significantly.

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Too high a vacuum at the suction tape results in waves on the fed sheets and in pull errors.

**Note**

The bypass air flap must be open when you adjust a vacuum of  $\leq 25\%$ .

1. Reduce the suction air on the suction tape as required.  
Some book papers require a vacuum of 10 % and less to be adjusted.

Prior to adjusting a vacuum of  $\leq 25\%$ :

2. Switch off the feeder.
3. Open the bypass air flap on the suction tape.  
On the CP2000 Center, press the *Bypass suction tape* button in the **Sheet travel/feeder/cover guide, air adjustments** menu.
4. Switch the feeder back on.

**Pull lay**

1. In case of pull errors, increase the suction air volume to approximately 60-80%.

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**D General information / Checklists**

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## 1 General maintenance information

### 1.1 Maintenance reduces costs!

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Regular thorough maintenance and cleanliness at printing press and peripheral units means maintaining the press availability by reducing failure and repair times.

Adhering to the service instructions and service intervals that are provided in this manual is a prerequisite for obtaining a long service life of your printing press and the peripheral units and for preserving their value in an optimum way.

The service instructions are generally valid, and must be observed. Furthermore, you can define your own individual regulations that are adapted to your print shop: This means that pollution is kept to a minimum and removed as required, even before the defined service interval.

Check your printing press and the peripheral units at regular intervals: For example the cooling air ducts of the main driving motor for powder dust and ink deposits. Remove the deposits with dry blast air and a brush. Avoid lubricant accumulation on the floor and on components.

Ensure proper air condition and ventilation of your pressroom. Please refer to the "Technical information", that is enclosed to the document case, for the relevant details.

All these measures reduce costs and ensure productivity.

### 1.2 How to use this manual



#### Note

Service instructions on plates immediately on the printing press must be followed *before* the service instructions in this manual.

- This manual forms the basis for the maintenance work to be performed on your press.
- The main chapter "General information/Checklists" facilitates the first steps with this documentation.  
Please note!  
The check lists contained in the manual and the signature box are your master copies.  
Please always use copies for your work.

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- The maintenance schedule provides you with an overview of the maintenance points and the maintenance work on the printing press. The intervals of the service activities are marked in color. Please refer to the chapter "Service interval" for explanations.  
The maintenance schedule is in the document case, it is not displayed in the Sherlock.  
Please note!  
The specifications concerning maintenance intervals given in the manual and the legend on the maintenance schedule are your master copies.  
Please always use copies for your work.
- The checklists contain – related to the modules – all service activities that are to be carried out on the printing press and on the peripheral units.  
The checklists include information on the following items:
  - Part
  - Maintenance work/location
  - Auxiliary means (e.g. lubricant)
  - Required spare part
  - Maintenance interval
- The main chapter "Service" contains – related to the modules – descriptions of the individual service activities.  
The descriptions always start with an overview of the location of the maintenance points (illustration).  
The place of installation of the maintenance point and the service activity are described.
- Lubricating points are explained in a table. (e.g. type of lubricating point, color codes, etc.).
- Colored identifications allocate the lubricating points to the individual service intervals (see corresponding tables).
- Additionally important hints are specially marked.

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### 1.3 Peripheral equipment

The scope of the service work for each peripheral unit is summarized in a checklist. All checklists can be found in the chapter "Checklists for peripheral units".

Please refer to the unit supplier's documentation for a precise specification of the maintenance work to be done on the peripheral units (e.g. compressors, central air supply and accessories).

The optimum value preservation of the peripheral units is achieved by regular and thorough maintenance and cleanliness. Please follow these instructions.

Check the peripheral units at regular intervals: For example the cooling air ducts of the main driving motor for powder dust and ink deposits. Remove the deposits with dry blast air and a brush. Avoid lubricant accumulation on the floor and on components.

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**2 Notes on the maintenance schedule**

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**2.1 General information**

► **Note**  
 The maintenance schedule is enclosed in the document case and is not displayed in Sherlock.

The maintenance schedule provides an overview of maintenance locations and maintenance work on the printing press. The intervals between maintenance work are marked in color. Refer to "Maintenance interval" for more detailed information.

The following key explains the symbols used in the maintenance schedule. The symbols illustrate the maintenance works. For precise instructions, please refer to the following chapters.

**2.2 Legend**

Maintenance work	Symbol
Check	
Clean	
Lubricate with grease	
Lubricate with oil	
Lubricate with oil/grease/lubricant spray	
Lubricate with grease and brush	
Lubricate with lubricant tube	
Top up oil/grease	
Replace parts	
Oil change	
Perfector	

Tab. 1

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**3 Maintenance interval**

**3.1 Definition**

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Maintenance periods are called maintenance intervals.

A maintenance interval is either the time until a certain number of printed sheets is reached or a fixed time.

We have defined five maintenance intervals.

Maintenance intervals		Colour coding of the lubricating point
I	150 000 impressions, or daily	red
II	750 000 impressions or weekly	yellow
III	3 000 000 impressions or monthly	blue
IV	15 000 000 impressions or twice a year	Green
V	30 000 000 impressions or once a year	violet

Tab. 2

The number of printed sheets is shown:

- CP 2000 user interface  
On the screen of the control station in the menu "Counter"/display "Total impression counter".

*or*

- CPTronic user interface  
On the control console display in the menu "Entire press/Paper run".

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3.2 Menu "Counter"/display "Total impression counter" (CP 2000 user interface)

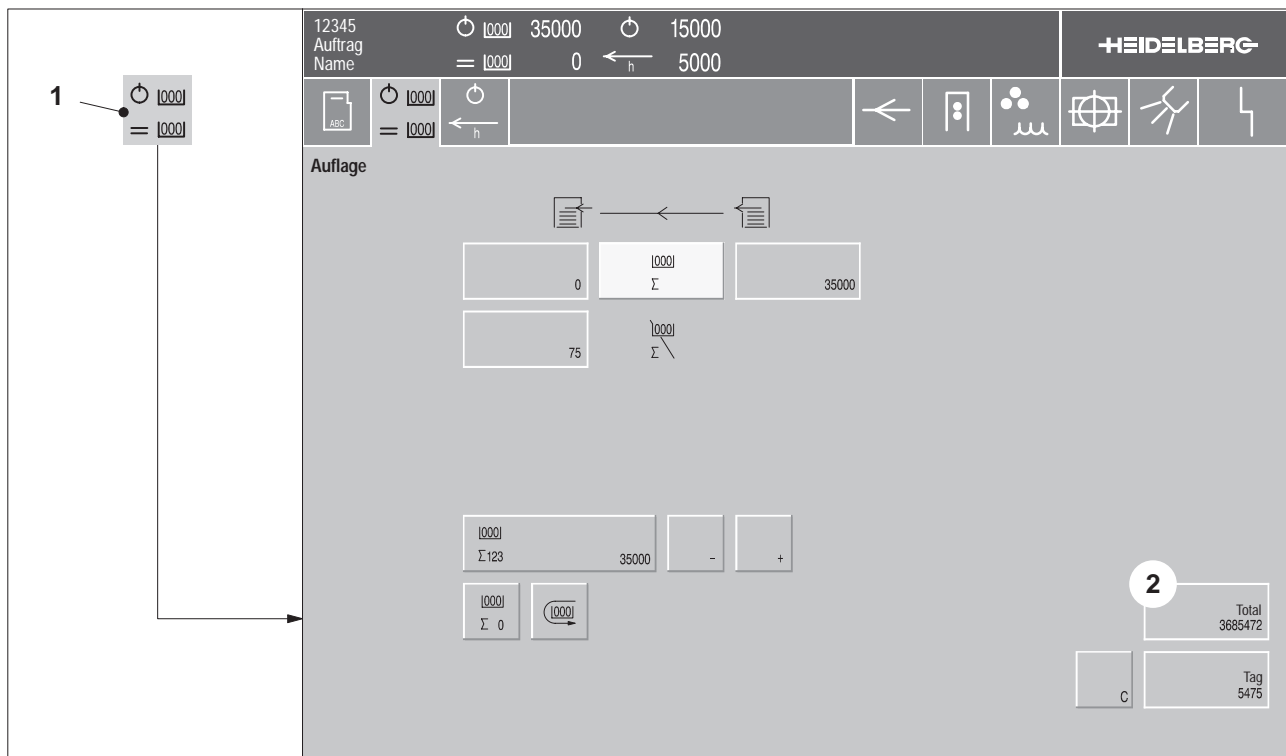


Fig. 1 Menu "Counter"

- 1 Selecting the menu "Counter"
- 2 Display "Total impression counter" (totalizer reading)

3.3 Menu "Entire press/Paper run" (CPTronic user interface)

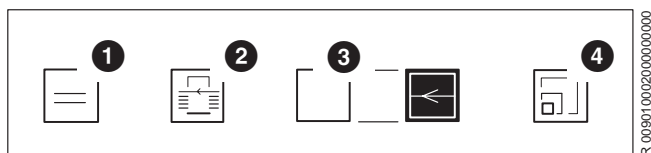


Fig. 2 Selecting the display "Entire press/Paper run"

- 1. to 4. Selecting the menu "Entire press/Paper run"

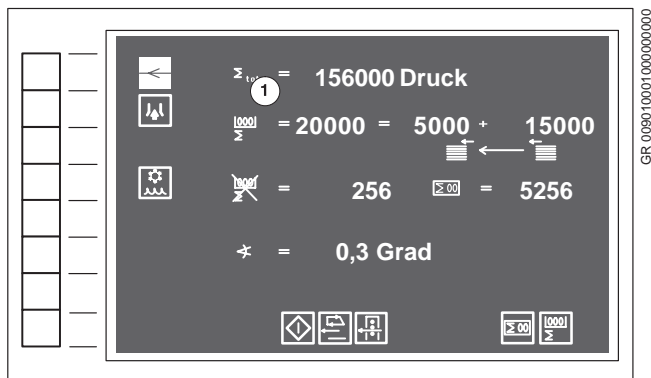


Fig. 3 Control console display with the screen "Entire press/Paper run"

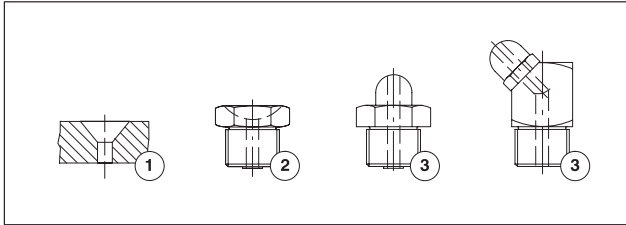
- 1 Totalizing counter

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4 Manual lubrication with grease

4.1 Types of lubricating points

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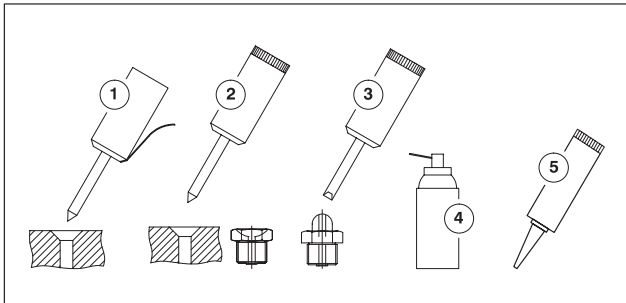


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Fig. 4 Oil and grease lubricating points

- 1 **Open oil or grease lubrication hole**  
The lubricating points are filled either with the oil can or with the grease gun.
- 2 **Recessed grease nipple**  
The lubricating points are filled with the grease gun.
- 3 **Ball type lubricating nipple**  
The lubricating points are filled with the oil gun.

4.2 Lubricating devices



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Fig. 5 Lubricating devices

- 1 **Oil can**  
Used on open oil lubrication holes.
- 2 **Grease gun**  
Used for recessed grease nipples and open grease lubrication holes.
- 3 **Oil gun**  
Used for ball type lubricating nipples.
- 4 **Oil, grease or lubricant spray**
- 5 **Lubricant tube**

4.3 How to apply lubricant

Before each lubrication, clean the lubricating points from any contamination.

Fill lubricant into the lubricating points until the fresh lubricant emerges from the corresponding bearing point.

Remove the emerging, old lubricant by using a rag.

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5 Lubricants

5.1 Approved lubricants

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**Caution**

Always use lubricant of one manufacturer for lubrication.

If you use lubricants of various manufacturers, it is necessary to check with the manufacturers whether the lubricants are compatible and can be mixed.



**Note**

**Range of application: central grease lubrication:**

Only the lubricants included in the table may be used.

The lubricants "HOTEMP 2000" and "VISCOGEN KL 300" are compatible and miscible with "ELKALUB LA 8 P".

Range of application			
Central oil lubrication, manual lubrication with oil	Manual lubrication with grease	Central grease lubrication	Other lubricating points
Lubricating oil according to DIN 51517 – CLP 150, ISO viscosity class according to DIN 51519 – ISO VG 150, mineral oil. Note: Lubricant used ex factory: Mobil MOBILGEAR 629 oil	<i>Grease gun:</i> Grease according to DIN 51825 – KP2K-20, mineral oil, lithium saponified. Note: Lubricant used ex factory: Optimol LONGTIME PD 2	ELKALUB LA 8 P, Messrs. ELKALUB Note: Initial filling of the grease reservoir with "ELKALUB LA 8 P" is done ex factory.	<i>Oil spray:</i> RIVOLTA TRS, Messrs. BREMER and LEGUIL GmbH Note: E.g. for protection grid hinge
	<i>Lubricant tube:</i> Renolit AS (tube, 15 g each) Messrs. Fuchs DEA Note: Use only for the sucker bar on the storage drum and for the modular blanket washup device!	HOTEMP 2000, Messrs. KLÜBER LUBRICATION	<i>Lubricant spray:</i> FLC 1012, Messrs. ELKALUB Note: e.g. for grippers
		VISCOGEN KL 300, Messrs. Optimol	<i>Lubricant spray:</i> Renax AS, Messrs. Fuchs DEA Note: Use only for the sucker bar on the storage drum!

Tab. 3

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## 6 Cleaners and washing fluids

### 6.1 Quality of the approved cleaners

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From a safety point of view, cleaners for manual cleaning and for the automatic washup devices must meet the specifications of the standard pr EN 1010-2 "Safety of Machinery – Safety requirements for the design and construction of printing and paper-converting machines", i.e. they must meet the following criterion:

- Flash point > 55 °C

Furthermore, the Employers' Liability Insurance Association demands that cleaners meet the following requirements:

- Benzene percentage < 0.1 %
- Toluene-xylene content < 1 %
- Aromatics content (> C<sub>9</sub>) < 1 %
- Solutions free from chlorinated hydrocarbon, CFC, terpenes, n-hexane, secondary amines and amides
- Solutions free from other substances, which might constitute a risk to health.

These requirements are met by the approved cleaners

- of the Graphic Technology Research Association (FOGRA),
- of the list of "Cleaners for program-controlled washup devices" by Heidelberg.

The lists are available in the internet under:

- <<http://www.fogra.org>>
- <<http://www.heidelberg.com>>

**confidential****6.2 Non-approved cleaners**

For safety reasons,

- alcohol
- cleaners containing acetone

do not meet the requirements of the standard pr EN 1010-2 "Safety of Machinery – Safety requirements for the design and construction of printing and paper-converting machines", and therefore must not be used.

The following cleaners must not be used either:

- scouring powder
- cream cleansers
- chrome polish
- cleaners on orange terpene base
- strong acids/intensive cleaners (e.g. plate cleaners, phosphoric cleaners, tartaric acids)
- cleaners containing chlorine (e.g. sanitary cleaners)
- strong lyes (e.g. concentrated soap cleaners)
- chlorinated/fluoride hydrocarbons (chlorinated hydrocarbon/CFC)

Current exceptions are:

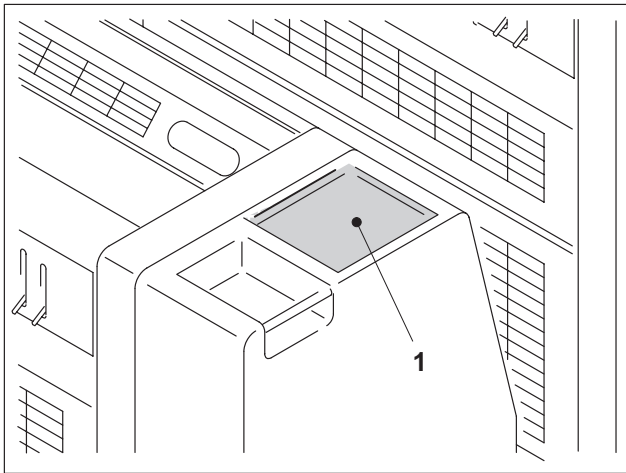
- alcohol
  - may be used in small quantities for cleaning dampening rollers, sensors and displays.
- tartaric acid
  - may be used for cleaning demounted rollers with rubber sleeves.
- cleaners containing acetone
  - may be used in small quantities for cleaning dampening rollers without rubber sleeves.

**Please note!**

The surface coating of the printing press will be attacked by cleaners containing acetone.

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6.3 Information about cleaning work using UV cleaners



1 Deposit pan O.S.



**Caution – Damaging the finish!**

UV cleaners attack the varnish of the printing press. Cleaning cloths soaked with UV cleaners should always be placed into the deposit pan on O.S. (Fig. 6/1).

Fig. 6 Deposit pan O.S.

6.4 General information for manual cleaning work

After each manual cleaning, all parts must be rubbed with a cloth moistened with water.

6.5 Approved cleaners for manual cleaning work



Never splash cleaners containing acetone and alcohol directly on the rollers. Always moisten a cloth with the cleaner.

**Legend**

- 1 A long-term application ( $\geq 1$ h) of the cleaner is not allowed.
- 2 After cleaning, the metering roller must be treated with alcohol.
- 3 Inking and dampening rollers with rubber sleeves may be cleaned with tartaric acid only when demounted.

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Part		Cleaner with test certificate (Fogra)	UV cleaner with test certificate (Fogra)	Cleaner containing acetone (e.g. Rolomatik)	Alcohol (e.g. isopropanol)	Tartaric acid
Sheet-transferring cylinders: transfer gripper, feed drum, transfer cylinder I, transfer drum II, transfer cylinder III Storage drum, reversing cylinder (only with perfector)		X	X			
Front lays and cover guides		X	X			
Impression cylinder	with chromium-plated surface	X	X			
	with refined cylinder jacket	X	X			
	with PerfectJacket	X	X <sup>1</sup>			
Plate cylinder/blanket cylinder		X	X			
Inking rollers	with rubber sleeve	X	X			X <sup>3</sup>
	without rubber sleeve	X	X			
Dampening rollers	with rubber sleeve				X	X <sup>3</sup>
	without rubber sleeve			X <sup>2</sup>	X	
Sensors, display		X			X	

Tab. 4

**6.6 Approved cleaners for automatic cleaning work**

Part	Cleaner with test certificate (Fogra)	UV cleaner with test certificate (Fogra)
Automatic washup device	X	X

Tab. 5

**6.7 Properties of the washing fluid**

The washing fluid for manual cleaning of rollers and cylinders, as well as for the automatic washup devices must meet the following criteria:

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- The washing fluid must be distilled and/or fully demineralized.
- Washing fluid that is partly demineralized and re-hardened by treatment with an ion exchanger or a reverse osmosis filter, can also be used.
- The washing fluid must not contain any fine particles or suspended matter.
- To prevent clogging up in the washing fluid container, e.g. by algae growth, a disinfectant must be added to the washing fluid.
  - Micropur MT 10 (40 tablets)  
One tablet Micropur MT 10 is sufficient for a water quantity of up to 10 liters.  
Part no.: 00.580.6091/
  - Micropur liquid (100-ml bottle)  
100 ml are sufficient for a water volume of up to 1 000 liters.  
Part number: 00.580.3902/
  - Aqua Clean AC5 (100 tablets)  
1 tablet of Aqua Clean AC5 is sufficient for a water volume of up to 5 liters.  
Part number: 00.580.6353/
  - Aqua Clean AC20 (100 tablets)  
One tablet of Aqua Clean AC20 is sufficient for a water volume of up to 20 liters.  
Part number: 00.580.6354/
  - Aqua Clean AC10.000 (100 g powder)  
100 g powder is sufficient for a water volume of up to 10 000 liters.  
Part number: 00.580.6355/

**6.8 Approved washing fluid for manual cleaning work**

Part	Distilled or partly demineralized water	Tap water
Rollers and cylinders	X	
Miscellaneous (e.g. screens, guards, footsteps, etc.)	X	X

Tab. 6

**6.9 Approved washing fluid for automatic cleaning work**

Part	Distilled or partly demineralized water with disinfectant
Automatic washup device	X

Tab. 7

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**Checklists**

<b>1</b>	<b>Note on the checklists .....</b>	<b>D.2.3</b>
1.1	Using the checklists .....	D.2.3
<b>2</b>	<b>Check list, signature box .....</b>	<b>D.2.4</b>
2.1	Maintenance work has been performed: .....	D.2.4
<b>3</b>	<b>Checklist for the Preset Plus feeder, SM 102/CD 102 .....</b>	<b>D.2.5</b>
3.1	Service activities on the Preset Plus feeder .....	D.2.5
<b>4</b>	<b>Checklist for the printing unit, SM 102/CD 102 with Preset Plus feeder .....</b>	<b>D.2.8</b>
4.1	Service activities on the printing unit with Preset Plus feeder .....	D.2.8

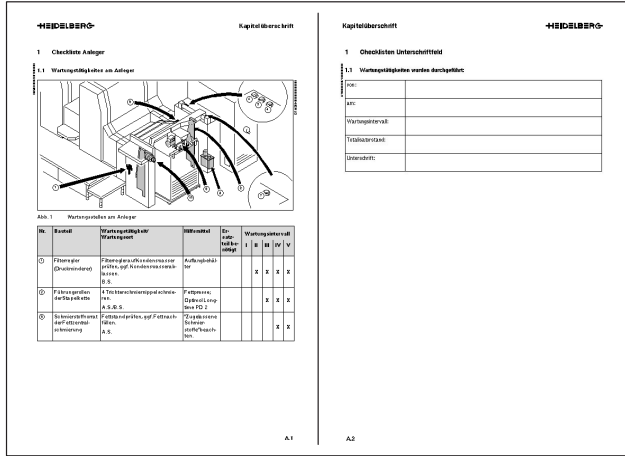


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1 Note on the checklists

1.1 Using the checklists

UTK009040072000000000



GR 009040026000000000

The checklists allow you to gain an overview of and carry out all the necessary maintenance work.

More precise descriptions of the individual maintenance tasks on the printing press can be found in the "Maintenance" chapter.

More precise descriptions of the individual maintenance tasks on the peripheral units can be found in the corresponding operating manuals of the device manufacturers.

Please note!

The checklists in the manual and the signature field are your originals for copying.

Please only use copies for your work.

Use the copies for all maintenance work that is to take place at specific intervals and also document this. Please also complete the entries in the signature field. This is confirmation that the maintenance has been performed correctly.

Fig. 1 Example checklist: printing press feeder

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2 Check list, signature box

2.1 Maintenance work has been performed:

UTK09040730000000

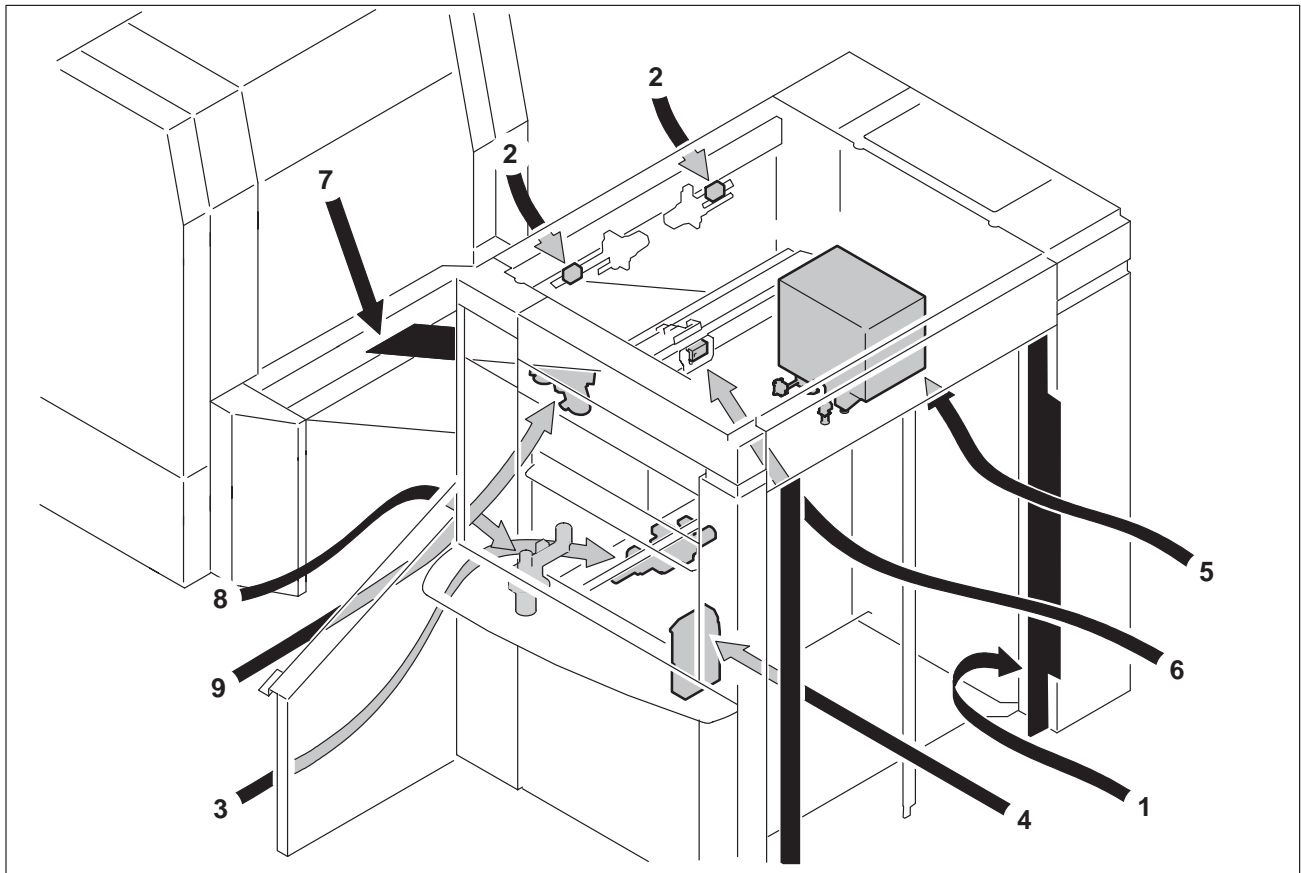
By:	
On:	
Maintenance interval:	
Totalizer reading:	
Signature:	

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3 Checklist for the Preset Plus feeder, SM 102/CD 102

3.1 Service activities on the Preset Plus feeder

UTKSM90404401000000



GR.FS90403100000000

Fig. 2 Maintenance points on the Preset Plus feeder

No.	Part	Maintenance work/ Maintenance location	Tool	Spare part required	Maintenance interval					K
					I	II	III	IV	V	
1	Maintenance points on the preloading device:									
	Stop bar	Clean the stop bars. D.S./O.S.	Cloth				X	X	X	+
2	Maintenance points on the side stops:									
	Bearing block of the side stop	Lubricate 2 recessed grease nipples. D.S./O.S.	Grease gun; Optimol Long-time PD 2					X	X	+
3	Pile alignment	Check operation. Clean 1 adjusting spindle. With Non-Stop: Clean 2 adjusting spindles.	Cloth				X	X	X	+

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No.	Part	Maintenance work/ Maintenance location	Tool	Spare part re- quired	Maintenance interval					K
					I	II	III	IV	V	
4	Guide rail of the pile support plate	Check the function of the limit switches (safety check). 1st switching point 120 mm above the base, 2nd switching point 12 mm above the base.						X	X	+
5	Maintenance points on the suction head:									
	Rotary valve	Loosen the rotary valve and remove it. Clean the valve ducts, the outer surface and the surface of the bearing.	Clean, fluffless cloth; Brush				X	X	X	+
	Lifting suckers	Remove and clean 4 lifting suckers. Clean the lifting sucker guide. Check the smooth functioning of the reinstalled lifting suckers. <b>Note:</b> Do not lubricate!	Clean, fluffless cloth; Brush				X	X	X	+
		Check the state of the suction disks for wear and porosity; replace suction disks if necessary.		X	X	X	X	X	X	+
	Forwarding sucker	Remove and clean 5 forwarding suckers. Clean the housing of the forwarding suckers. Check the smooth functioning of the reinstalled forwarding suckers. <b>Note:</b> Do not lubricate!	Clean, fluffless cloth; Brush				X	X	X	+
6	Capacitive sensor "Automatic pile transport change-over"	Clean the sensor.	Brush; Clean, fluffless cloth	X				X	X	+
7	Suction tape	Check the condition of the suction tape (damage, upright edges, wear, tension, operation) and that it is running correctly. Adjust the suction tape tension according to the operating instructions, if necessary. Replace suction tape, if necessary.		X			X	X	X	+

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No.	Part	Maintenance work/ Maintenance location	Tool	Spare part required	Maintenance interval					K
					I	II	III	IV	V	
8	Compressed-air control unit	Check the compressed-air control unit for condensation water and drain it off, if necessary. O.S.				X	X	X	X	+
		Check the system pressure on the manometer: 6.4 ±0.3 bars, or pointer is in the green range. O.S.						X	X	+
9	Air filter "suction tape suction air"	Clean 2 air filters (carefully knock out or vacuum). Center	Vacuum cleaner			X	X			+
		Replace 2 air filters. Center		X					X	+

Tab. 1

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**4 Checklist for the printing unit, SM 102/CD 102 with Preset Plus feeder**

**4.1 Service activities on the printing unit with Preset Plus feeder**

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GR FS90-4033000000000

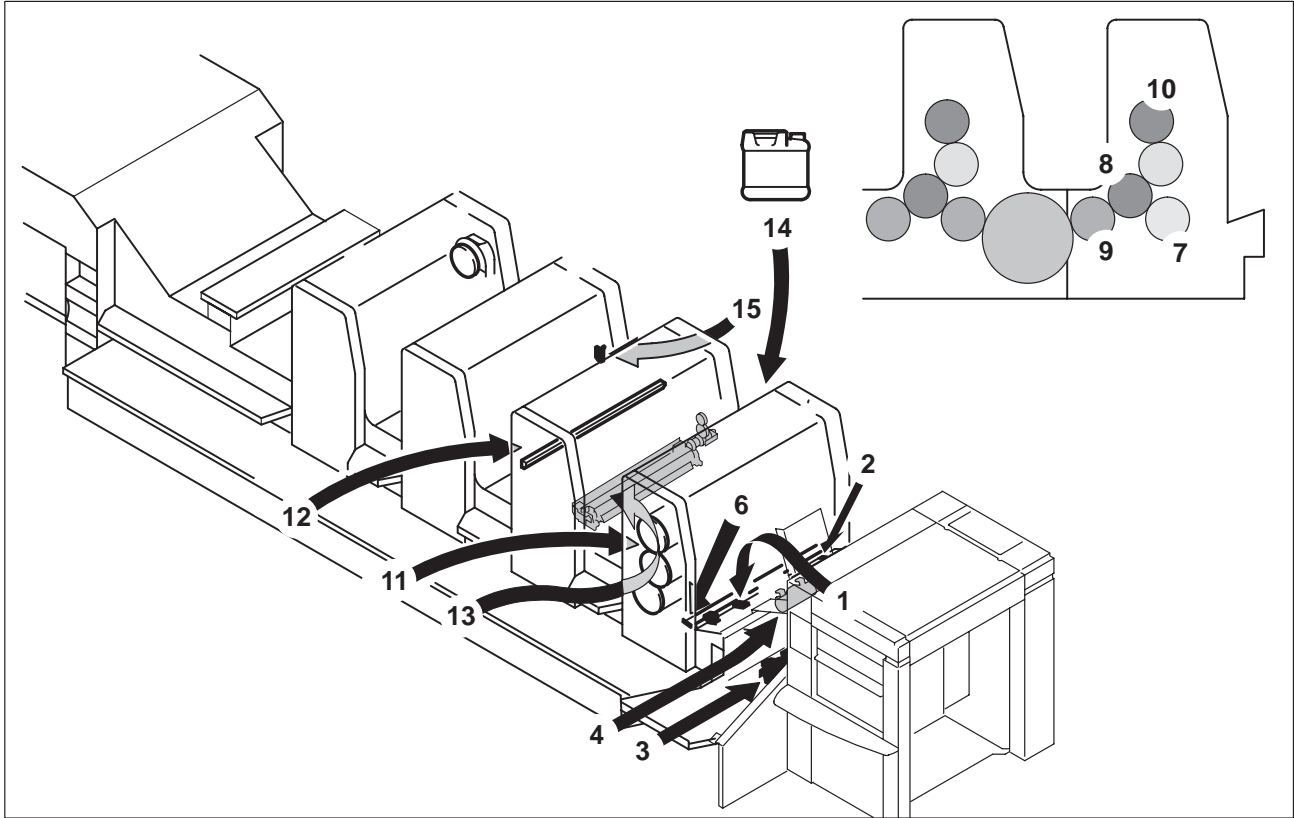


Fig. 3 Maintenance points on the printing unit with Preset Plus feeder

No.	Part	Maintenance work/ Maintenance location	Tool	Spare part required	Maintenance interval					K
					I	II	III	IV	V	
1	Maintenance points on the pull lays:									
	Reflex light button	Clean the reflex light barrier. D.S./O.S.	Clean, fluffless cloth; note the "Approved cleaners" list.		X	X	X	X	X	+
2	Maintenance points on the sheet alignment system:									
	Reflex light button	Clean the reflex light barrier. D.S./O.S.	Clean, fluffless cloth; note the "Approved cleaners" list.		X	X	X	X	X	+
3	Air filter "pull lay suction air/propelling roller"	Clean 2 filter cartridges (carefully knock out or vacuum-clean). Center	Vacuum cleaner				X	X		+
		Replace 2 filter cartridges. Center		X				X		+

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No.	Part	Maintenance work/ Maintenance location	Tool	Spare part required	Maintenance interval					K
					I	II	III	IV	V	
4	Rotary valve "suction tape vacuum regulation"	Loosen the rotary valve, and clean valve ducts, surface of the rotary valve and of the bearing. Center	Clean, fluffless cloth; Brush				X	X	X	+
5	Maintenance points on the front lays:									
	Front lays	Check state and function of front lay throw-off.	3 mm Allen key			X	X	X	X	+
6	Maintenance points on the transfer gripper:									
	Cam lever	Lubricate 2 recessed grease nipples (cam follower). D.S./O.S.	Grease gun; Optimol Long-time PD 2				X	X	X	+
7	Maintenance points on the feed drum:									
	Gripper shaft bearing	Lubricating 7 recessed grease nipples.	Grease gun; Optimol Long-time PD 2				X	X	X	+
	Cam lever	Lubricate 1 recessed grease nipple. O.S.					X	X	X	+
8	Maintenance points on the impression cylinder:									
	Cylinder surface	Clean the surface.	Soft, lint-free cloth; note the "Approved cleaners" list.		X	X	X			+
	Gripper shaft bearing	Lubricate 2 x 7 recessed grease nipples per impression cylinder.	Grease gun; Optimol Long-time PD 2				X	X	X	+
	Cam lever	Lubricate 2 x 1 recessed grease nipples per impression cylinder. O.S.					X	X	X	+
9	Maintenance points on the transfer drum:									
	Gripper shaft bearing	Lubricate 2 x 7 recessed grease nipples per transfer drum.	Grease gun; Optimol Long-time PD 2				X	X	X	+
	Cam lever	Lubricate 2 x 1 recessed grease nipple per transfer drum (cam follower). O.S.					X	X	X	+
10	Plate cylinder	Clean surfaces.	Note the "Approved cleaners" list.		X	X	X			+

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No.	Part	Maintenance work/ Maintenance location	Tool	Spare part re- quired	Maintenance interval					K
					I	II	III	IV	V	
11	Bearers and gauge rings	Cleaning. D.S./O.S.	Protective gloves; note the "Approved cleaners" list.		X	X	X			+
12	Washup blade of the inking roller washup device	Cleaning the rubber lip and blade trough.	Note the "Approved cleaners" list.		X	X	X			+
13	Collecting trough under the drop tubes of the inking roller washup device	Check and, if necessary, drain the cleaner via the drain cock. O.S.					X			+
14	Washing fluid container	Check the sieve, clean, if necessary. O.S.	Note the "Approved cleaners" list.				X	X	X	+
		Check the suction filter, replace, if necessary. O.S.		X				X	X	+
15	Maintenance points on the dampening system:									
	Drive of water pan roller and metering roller	Lubricate 2 gears per dampening system. D.S.	Brush; Optimol Long-time PD 2				X	X	X	+

Tab. 2

**Maintenance**

<b>1</b>	<b>Feeder – To be observed for all work</b> .....	<b>D.3.3</b>
1.1	Safety instructions .....	D.3.3
<b>2</b>	<b>Service activities on the preloading device</b> .....	<b>D.3.4</b>
2.1	Preloading device .....	D.3.4
<b>3</b>	<b>Service activities on the suction head</b> .....	<b>D.3.5</b>
3.1	Suction head .....	D.3.5
<b>4</b>	<b>Service activities on the compressed-air control unit</b> .....	<b>D.3.9</b>
4.1	Compressed-air control unit .....	D.3.9
<b>5</b>	<b>Service activities on pile guide rail and pile transport</b> .....	<b>D.3.11</b>
5.1	Pile alignment .....	D.3.11
5.2	Side stops .....	D.3.12
5.3	Guide rail of the pile support plate .....	D.3.13
5.4	Capacitive sensor "Automatic pile transport changeover" .....	D.3.14
<b>6</b>	<b>Service activities on the feed table</b> .....	<b>D.3.15</b>
6.1	Suction tape .....	D.3.15
6.2	Air filter "suction tape suction air" .....	D.3.16
<b>7</b>	<b>Printing unit – To be observed for all work</b> .....	<b>D.3.18</b>
7.1	Safety instructions .....	D.3.18
<b>8</b>	<b>Service activities on the sheet alignment system</b> .....	<b>D.3.19</b>
8.1	Air filter "Suction air pull lay/propelling roller" .....	D.3.19
8.2	Rotary valve "suction tape vacuum regulation" .....	D.3.20



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## 1 Feeder – To be observed for all work

### 1.1 Safety instructions

UTKSM904079003000000

**Warning – Risk of injury!**

Before performing maintenance work, follow the instructions in the main chapter "Safety" in the operating manual.

**Warning – Rotating rollers, cylinders!**

Since a press motion is possible while guards are open, there is a risk of injury in instances of improper operation.

When maintenance points on the feeder are involved, pay attention to moving parts and to sheet infeed.

Pay attention to dangerous movements in the area of material infeed. Do not reach into the gap between guard and material infeed.

**Warning – Cleaners!**

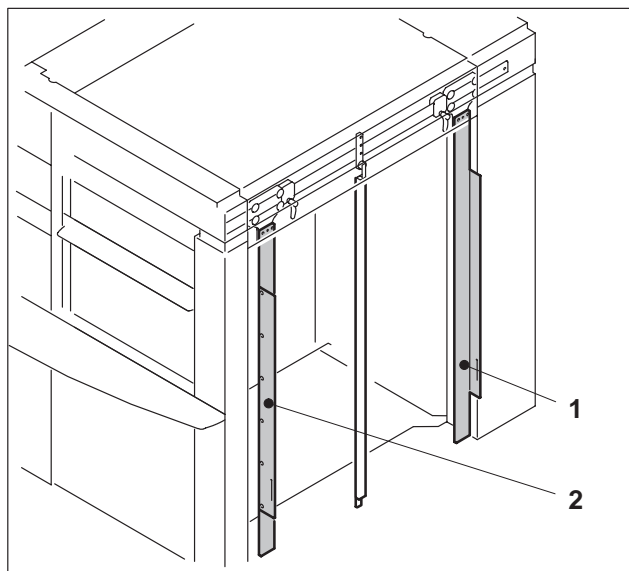
Wear protective gloves. Use only cleaners with a flash point of at least 55 °C.

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**2 Service activities on the preloading device**

**2.1 Preloading device**

UTKFS9040001000000000



GR FS9040000000000000

**Place of installation**

- 1** Stop bar D.S.
- 2** Stop bar O.S.

The stop bars of the preloading device are installed in the feeder on D.S. and on O.S.

Fig. 1 Place of installation of the stop bars

**2.1.1 Cleaning the stop bars**

Maintenance point description	
Maintenance interval	3 000 000 prints, or monthly
Maintenance location	D.S./O.S.
Accessibility of lubricating points	Move the pile in the feeder down and remove it. Secure the press against start-up.
Number/type/maintenance work	Clean the stop bars.
Tool	Soft, fluffless cloth
Cleaning solution	See "Approved cleaners".

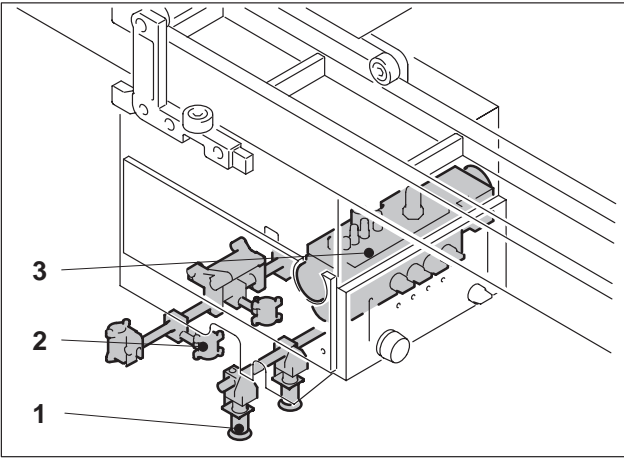
Tab. 1

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3 Service activities on the suction head

3.1 Suction head

UTKFS9040002000000000



GR FS9040000000000000

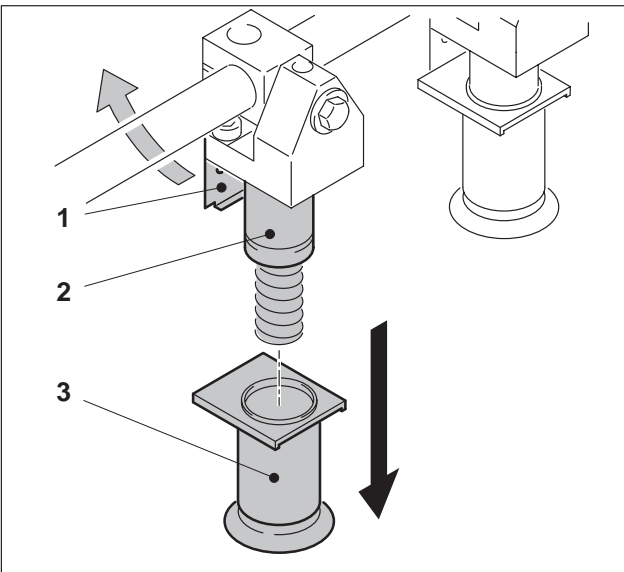
Place of installation

- 1 Lifting sucker
- 2 Forwarding sucker
- 3 Rotary valve

The suction head is installed above the feeder pile.

Fig. 2 Suction head

3.1.1 Lifting suckers Cleaning and checking



GR FS9040001000000000

- 1 Plate spring
- 2 Lifting sucker guide
- 3 Lifting sucker

► **Note**  
Do not lubricate!

Fig. 3 Lifting sucker

Maintenance point description	
Maintenance interval	3 000 000 press rotations, or monthly
Maintenance location	D.S./O.S.
Accessing the maintenance point	See installation and removal.
Maintenance work	Clean and check 4 lifting suckers.
Tool	Soft, fluffless cloth
Cleaning solution	See "Approved cleaners".

Tab. 2

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**Installing and removing the lifting suckers**

1. Press the leaf spring (Fig. 3/1) back, slightly raise the lifting sucker (Fig.3/3) and remove it.
2. Clean lifting sucker guide (Fig. 3/2) and lifting sucker (Fig. 3/3).
3. Install the lifting sucker.
4. Check the smooth functioning of the installed lifting suckers.

**3.1.2 Checking the suction discs and replacing them if necessary**

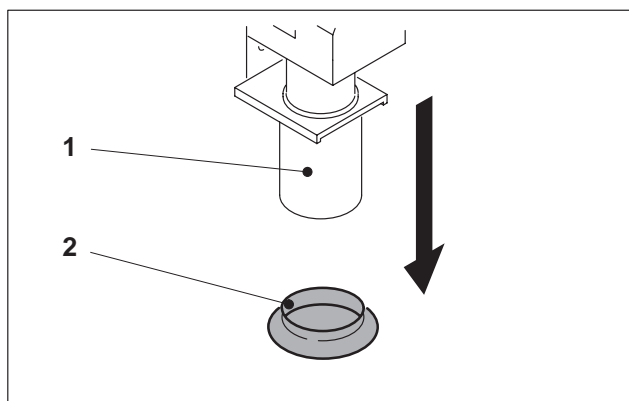


Fig. 4 Suction discs of the lifting suckers

- 1 Lifting sucker
- 2 Suction disc

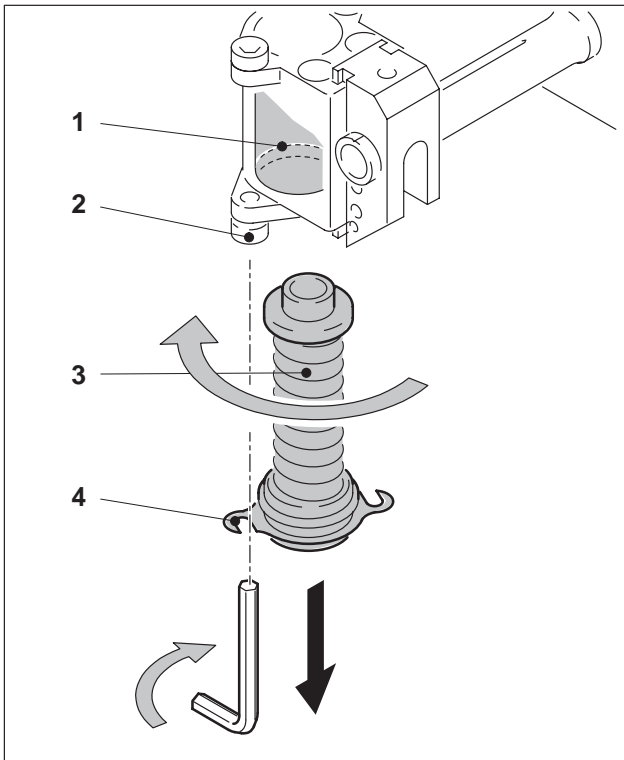
GR F594002700000000

Maintenance point description	
Maintenance interval	150 000 press rotations, or daily
Maintenance location	D.S./O.S.
Accessing the maintenance point	Remove the suction discs from the lifting sucker.
Maintenance work	Check the state of the suction disks for wear and porosity; replace suction disks if necessary.
Tool	–
Cleaning solution	–

Tab. 3

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3.1.3 Cleaning and checking the forwarding suckers



GR F590400020000000000

- 1 Forwarding sucker housing
- 2 Allen screw
- 3 Forwarding sucker
- 4 Bayonet catch

► **Note**  
Do not lubricate!

Maintenance point description	
Maintenance interval	3 000 000 press rotations, or monthly
Maintenance location	D.S./O.S.
Accessing the maintenance point	See installation and removal.
Maintenance work	Clean 5 forwarding suckers.
Tool	Soft, fluffless cloth
Cleaning solution	See "Approved cleaners".

Fig. 5 Forwarding sucker

Tab. 4

**Installing and removing the forwarding suckers**

1. Loosen the Allen screws (Fig. 5/2). Turn the bayonet catch (Fig. 5/4) anti-clockwise to release it and remove the forwarding sucker (Fig. 5/3).
2. Clean the forwarding sucker (Fig. 5/3) and the forwarding sucker housing (Fig. 5/1).
3. Install the forwarding sucker.
4. Check the smooth functioning of the installed forwarding suckers.

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3.1.4 Cleaning the rotary valve

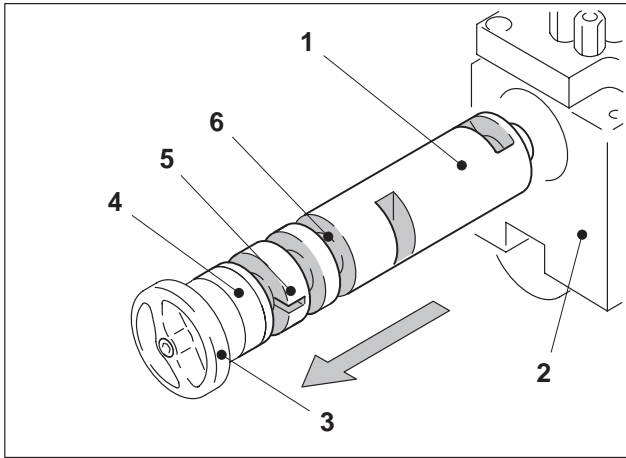


Fig. 6 Rotary valve, valve ports

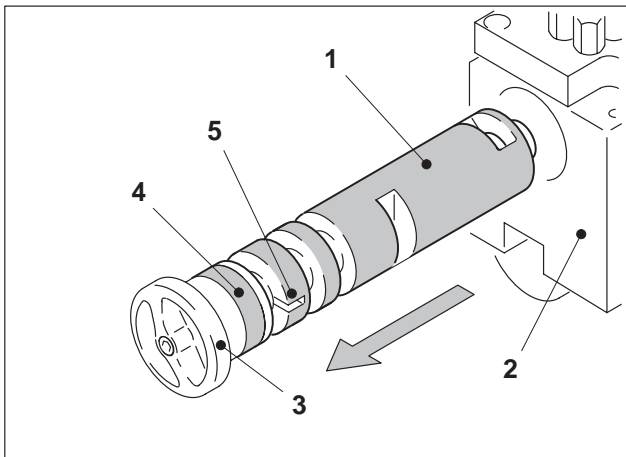


Fig. 7 Rotary valve, surface

**Valve ports, cleaning surface and bearings**

- 1 Rotary valve / surface
- 2 Suction head housing
- 3 Cover plate
- 4 Bearing
- 5 Mark
- 6 Valve ports

► **Note**  
Do not lubricate!

Maintenance point description	
Maintenance interval	3 000 000 press rotations, or monthly
Maintenance location	–
Accessing the maintenance point	See installation and removal.
Maintenance work	Clean valve ports, surface, and bearing.
Tool	Soft, fluffless cloth; brush
Cleaning solution	See "Approved cleaners".

Tab. 5

! **Caution – Damage**  
During any work on the rotary valve you must ensure that the surface is not damaged.

**Installing and removing the rotary valve**

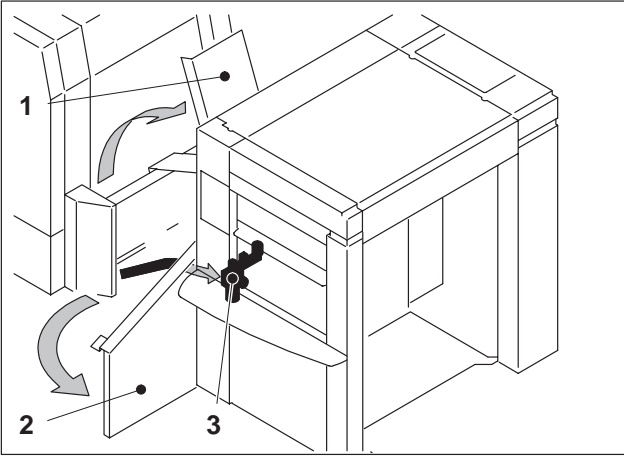
1. Press the cover plate (Fig. 6/3) slightly towards the inside and remove it by turning it anti-clockwise.
2. Pull out the rotary valve (Fig. 6/1), together with the cover plate (Fig. 6/3).
3. Clean the valve ports (Fig. 6), the surface (Fig. 7), and the bearing (Fig. 6/4) of the rotary valve.
4. For installation, set the mark (Fig. 6/5) of the rotary valve to the 3-o'clock-position and push the rotary valve into the suction head housing (Fig. 6/2). Turn the cover plate clockwise to lock it.

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4 Service activities on the compressed-air control unit

4.1 Compressed-air control unit

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GR.FS9040026000000000

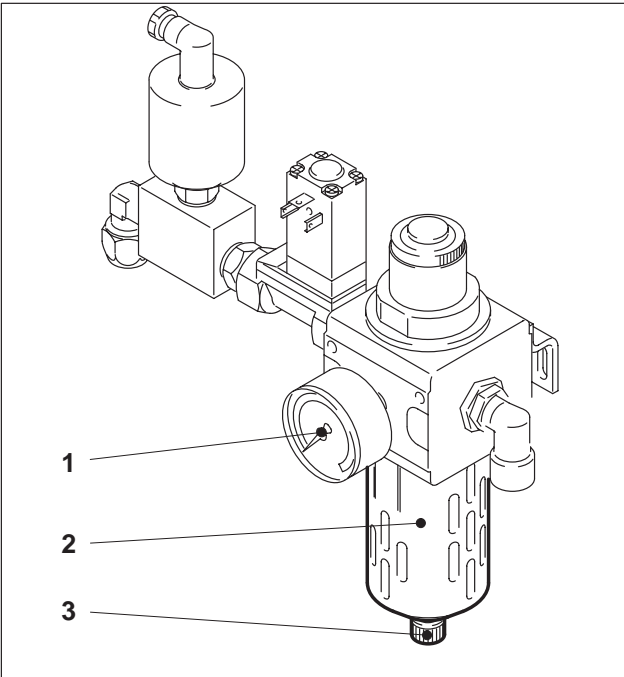
Place of installation

- 1 Feeder table
- 2 "Feeder" guard
- 3 Compressed-air control unit

The compressed-air control unit is installed on O.S. underneath the feed table.

Fig. 8 Location of the compressed-air control unit

4.1.1 Compressed-air control unit – checking and, if necessary, the condensate



GR.FS9040025000000000

- 1 Manometer
- 2 Glass cylinder
- 3 Drain plug



**Caution –**

The glass cylinder of the compressed-air control unit (Fig. 9/1) must never be filled completely with condensation water. The condensation water may enter in the pneumatic system and destroy the pneumatic valves and pneumatic cylinders.

Fig. 9 Compressed-air control unit

Maintenance point description	
Maintenance interval	750 000 prints, or every week
Maintenance location	O.S.
Accessibility of lubricating points	Open the "feeder" guard. Fold up the feed table.
Number/type/maintenance work	Check the compressed-air control unit for condensation water. Drain it if necessary.
Tool	–
Lubricant	–

Tab. 6

**confidential****Draining the condensation water****Caution –**

The system pressure drops (approximately 6.1 bars ... 6.5 bars) when you drain the condensate from the glass cylinder. Never drain the glass cylinder in "production" or "sheet travel" mode.

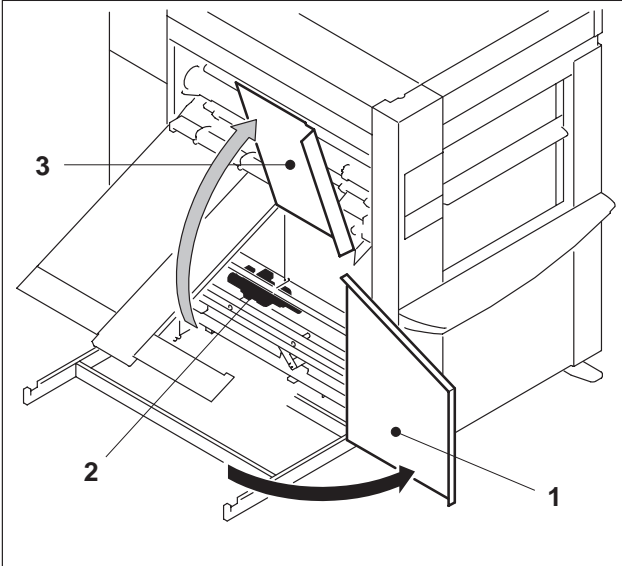
1. Open the drain plug until a spray of condensation water emerges.
2. Close the drain plug once the glass cylinder has completely been drained.
3. Check the manometer for a system pressure of approximately 6 bars, or whether the pointer of the manometer is in the green area.

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5 Service activities on pile guide rail and pile transport

5.1 Pile alignment

UTKFS904000400000000000



GR FS904006000000000000

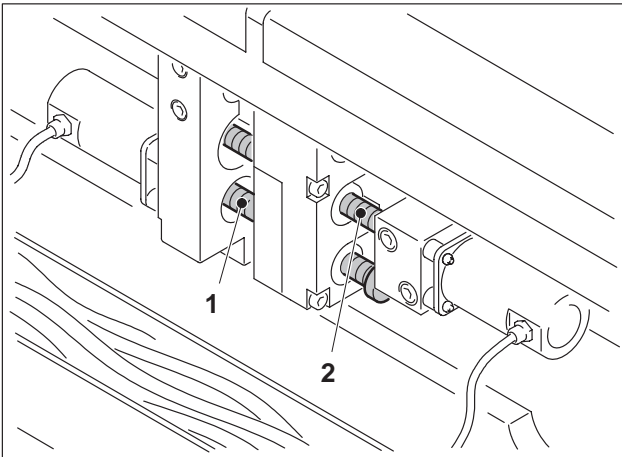
Place of installation

- 1 "Feeder" guard
- 2 Pile alignment
- 3 Feeder table

The adjusting spindles are installed underneath the feed table.

Fig. 10 Place of installation of the pile alignment

5.1.1 Cleaning the adjusting spindles



GR FS904007000000000000

- 1 Adjusting spindle
- 2 Adjusting spindle (non-stop only)

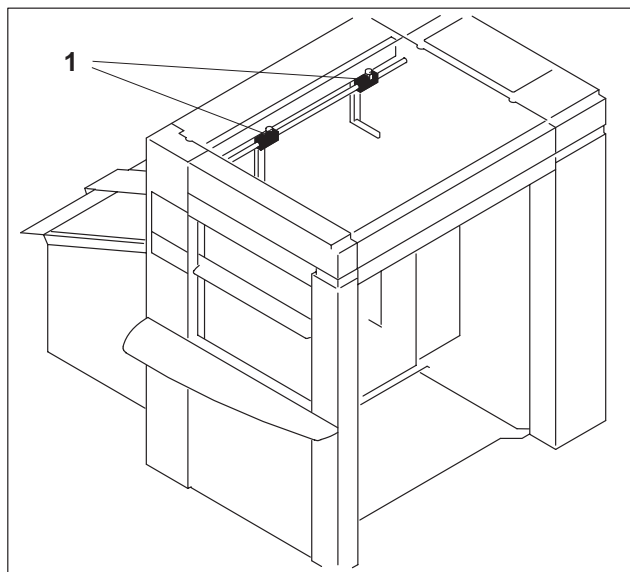
Fig. 11 Maintenance points on the spindles

Maintenance point description	
Maintenance interval	3 000 000 prints, or monthly
Maintenance location	Center
Accessibility of lubricating points	Open the "feeder" guard. Fold up the feed table.
Number/type/maintenance work	Clean one adjusting spindle or two adjusting spindles (non-stop only).
Tool	Soft, fluffless cloth
Cleaning solution	See "Approved cleaners".

Tab. 7

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5.2 Side stops



GR FS9040080000000000

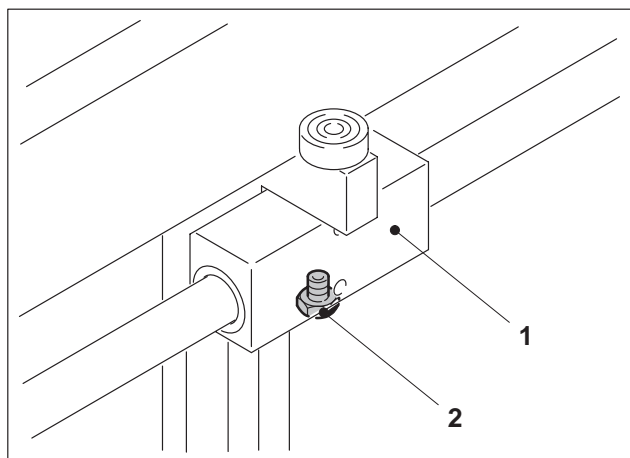
Place of installation

- 1 Side stops

The bearing blocks of the side stops are installed on D.S. and on O.S. above the pile.

Fig. 12 Place of installation of the side stops

5.2.1 Lubricating the bearing block of the side stop



GR FS9040090000000000

- 1 Bearing block
- 2 Recessed grease nipple

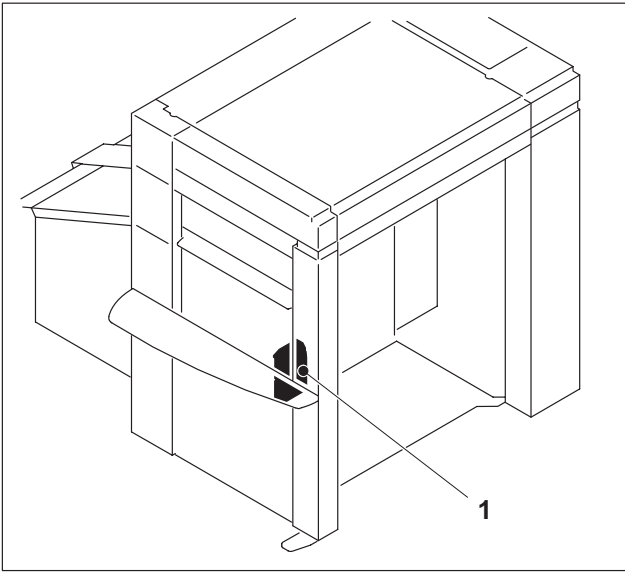
Fig. 13 Lubricating points on the bearing block of the side stops

Lubricating point description	
Maintenance interval	15 000 000 prints, or twice a year
Color code	Green
Maintenance location	D.S./O.S.
Accessibility of lubricating points	From the feed table in the direction of the pile
Number/type/maintenance work	Lubricate 2 recessed grease nipples.
Tool	Grease gun
Cleaning solution	Optimol Longtime PD2

Tab. 8

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5.3 Guide rail of the pile support plate



GR FS9040010000000000

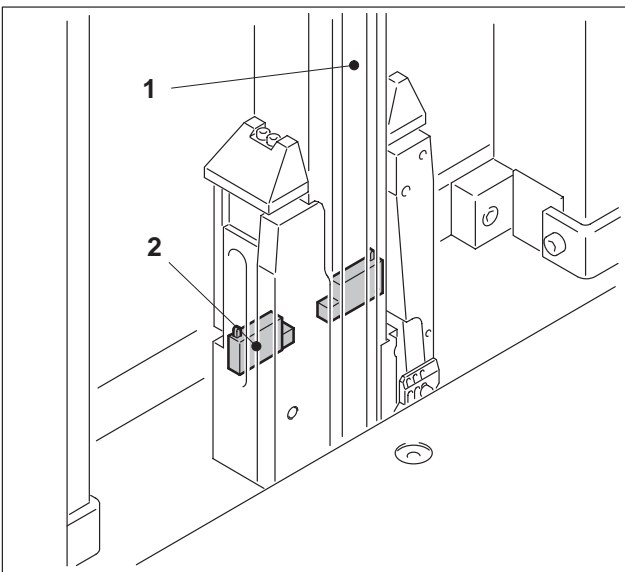
Place of installation

- 1 Guide rail limit switch

The guide rail and the limit switch of the pile board are installed in the feeder.

Fig. 14 Place of installation of the guide rail limit switches

5.3.1 Checking the limit switch



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- 1 Guide rail
- 2 Limit switch

Fig. 15 Checking the function of the limit switches

Maintenance point description	
Maintenance interval	15 000 000 prints, or twice a year
Maintenance location	Center
Accessibility of the maintenance points	Remove the pile from the feeder. Secure the press against start-up.
Number/type/maintenance work	Check the limit switch function (safety test), 1st switching point: 120 mm above the base, 2nd switching point: 12 mm above the base.
Tool	–
Cleaning solution	–

Tab. 9

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5.4 Capacitive sensor "Automatic pile transport changeover"

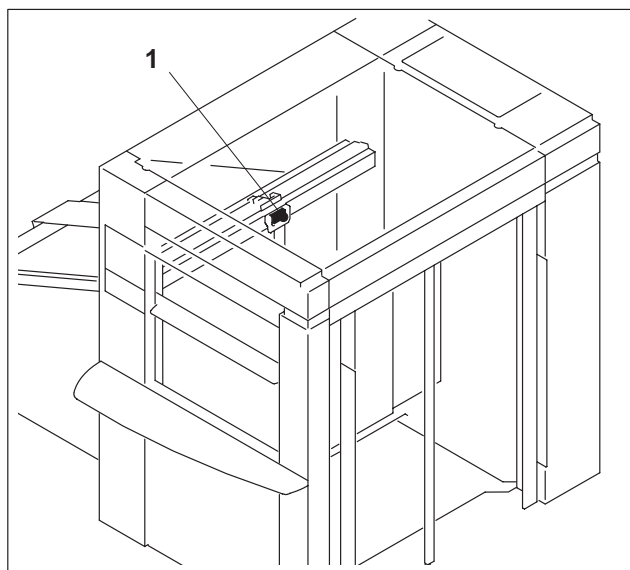


Fig. 16 Place of installation of the "Automatic pile transport changeover" sensor

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Place of installation

- 1 Capacitive sensor "Automatic pile transport changeover"

The capacitive sensor "Automatic pile transport changeover" is installed at the end of the feed table, before the pile.

5.4.1 Cleaning the capacitive sensor

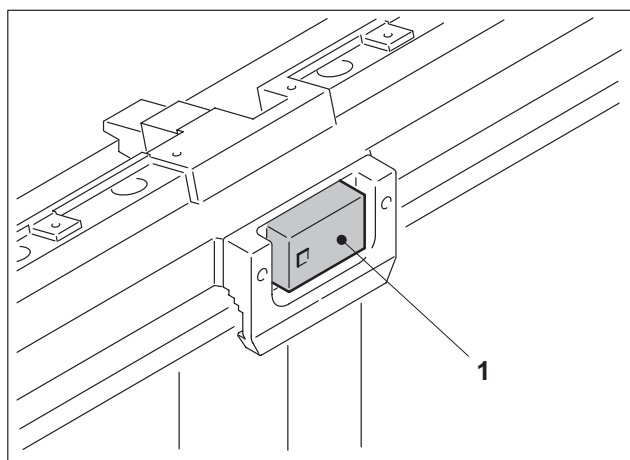


Fig. 17 Clean the sensor

GR FS904013000000000

- 1 Capacitive sensor "Automatic pile transport changeover"

Maintenance point description	
Maintenance interval	15 000 000 prints, or twice a year
Maintenance location	Center
Accessibility of the maintenance points	Remove the pile from the feeder. Secure the press against start-up.
Number/type/main-tenance work	Clean the sensor.
Tool	Clean, fluffless cloth; brush
Cleaning solution	See "Approved cleaners".

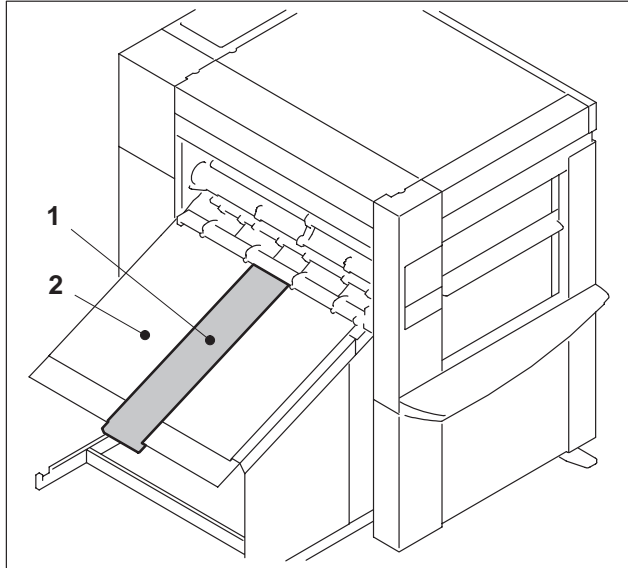
Tab. 10

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6 Service activities on the feed table

6.1 Suction tape

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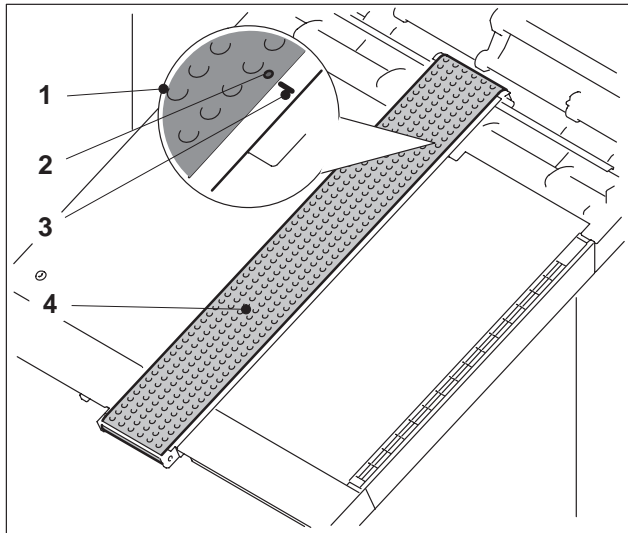
Place of installation

- 1 Suction tape
- 2 Feeder table

The suction tape is installed in the center of the feed table.

Fig. 18 Place of installation of the suction tape

6.1.1 Checking the suction tape



GR FS9040015000000000

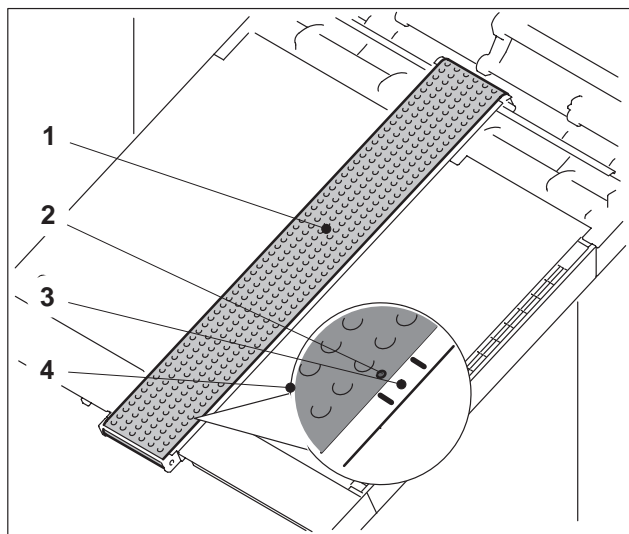
- 1 Reference
- 2 Mark – suction tape
- 3 Mark – feed table
- 4 Suction tape

Fig. 19 Suction tape – reference

Maintenance point description	
Maintenance interval	3 000 000 prints, or monthly
Maintenance location	Center
Accessibility of the maintenance points	Engage the feeder. Move the suction tape (Fig. 19/4) until the "mark – suction tape" (Fig. 19/2) is aligned with the "mark – feed table" (Fig. 19/3).
Number/type/maintenance work	Check the suction tape for damage, turned-up edges, wear, tension, and correct movement.
Tool	–
Lubricant	–

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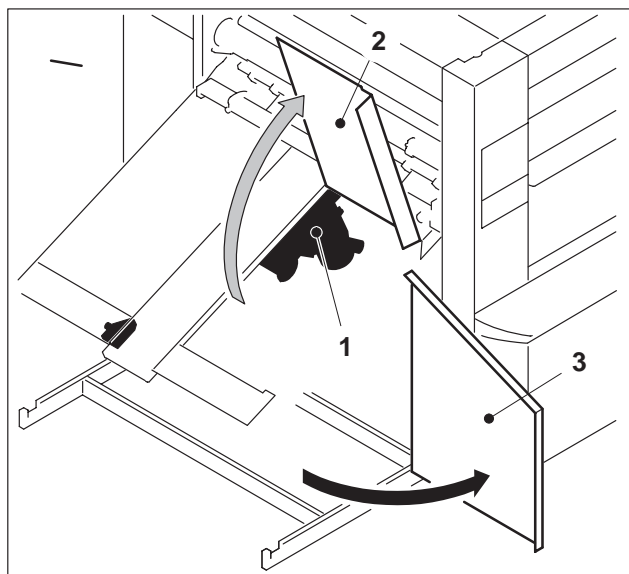
- 1 Suction tape
- 2 Mark – suction tape
- 3 Mark – feed table
- 4 Suction tape

**Checking the suction tape tension**

1. Engage the feeder and move the suction tape (Fig. 20/1) until the "mark – suction tape" (Fig. 19/2) on the "reference" (Fig. 19/1) is aligned with the "mark–feed table" (Fig. 19/4).
2. Check at the "tolerance/adjustment range" (Fig. 20/4), whether the "mark – suction tape" (Fig. 20/2) is between the "marks – feed table" (Fig. 20/3).
3. If necessary, adjust the suction tape tension, or replace the suction tape. Details can be found in Chapter "PresetPlus feeder" of the operating manual.

Fig. 20 Suction tape – tolerance/adjustment range

**6.2 Air filter "suction tape suction air"**



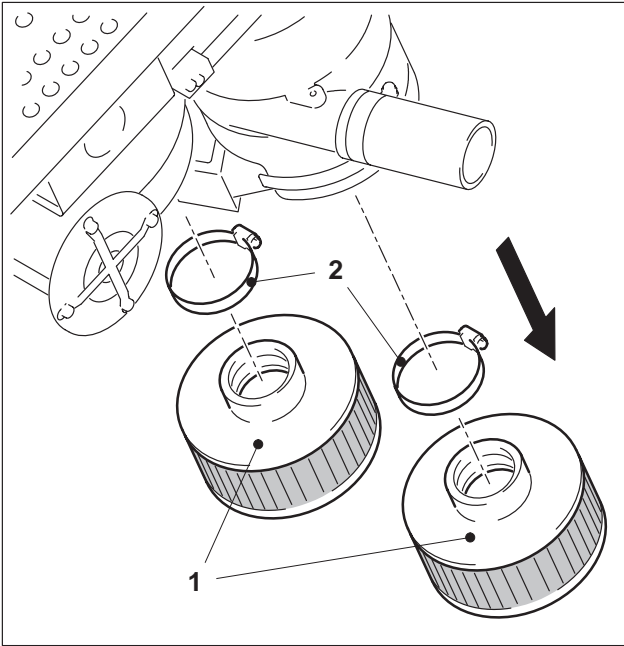
- Place of installation**
- 1 Air filter "suction tape suction air"
  - 2 Feeder table
  - 3 "Feeder" guard

The two air filters are installed underneath the feed table.

Fig. 21 Place of installation of the air filters "suction tape suction air"

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6.2.1 Cleaning the air filter "suction tape suction air"



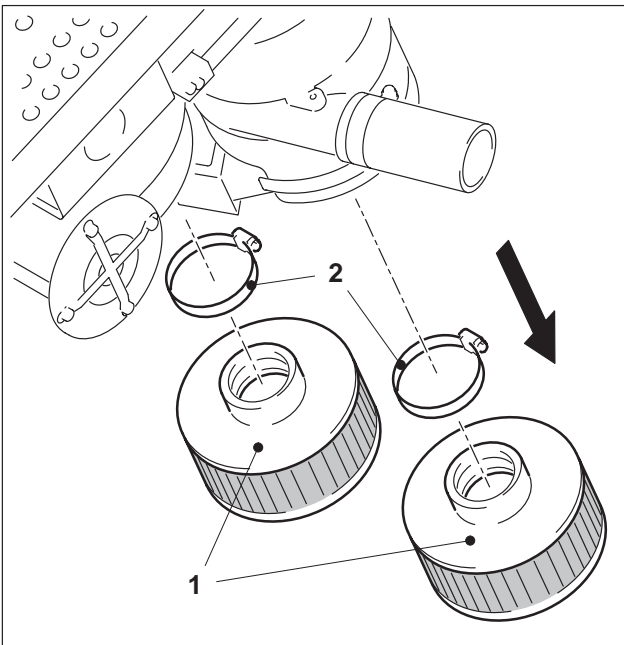
- 1 Air filter "suction tape suction air"
- 2 Pipe clamp

Maintenance point description	
Maintenance interval	3 000 000 prints, or monthly
Maintenance location	Center
Accessibility of lubricating points	Open the "feeder" guard; fold up the feed table; release 2 pipe clamps.
Number/type/maintenance work	Clean the air filters (carefully knock out or vacuum).
Tool	Vacuum cleaner
Lubricant	–

Tab. 12

Fig. 22 Cleaning the air filter "suction tape suction air"

6.2.2 Replacing the air filter "suction tape suction air"



- 1 Air filter "suction tape suction air"
- 2 Pipe clamp

Maintenance point description	
Maintenance interval	30 000 000 impressions, or once a year
Maintenance location	Center
Accessibility of lubricating points	Open the "feeder" guard; fold up the feed table; release 2 pipe clamps.
Number/type/maintenance work	Replace the air filter.
Tool	–
Lubricant	–

Tab. 13

Fig. 23 Replacing the air filter "suction tape suction air"

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## 7 Printing unit – To be observed for all work

### 7.1 Safety instructions

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**Warning – Risk of injury!**

Before performing maintenance work, follow the instructions in the main chapter "Safety" in the operating manual.

**Warning – Rotating rollers, cylinders!**

Since a press motion is possible while guards are open, there is a risk of injury in instances of improper operation.

When you clean the cylinders, make sure that the ball of your hand points in the direction of the infeed nip and the fingers in the direction of the outlet nip! Choose the respective direction of rotation.

When performing maintenance work on a swung-down and engaged ink fountain, observe the movement of the ink fountain roller with special care.

**Warning – Cleaners!**

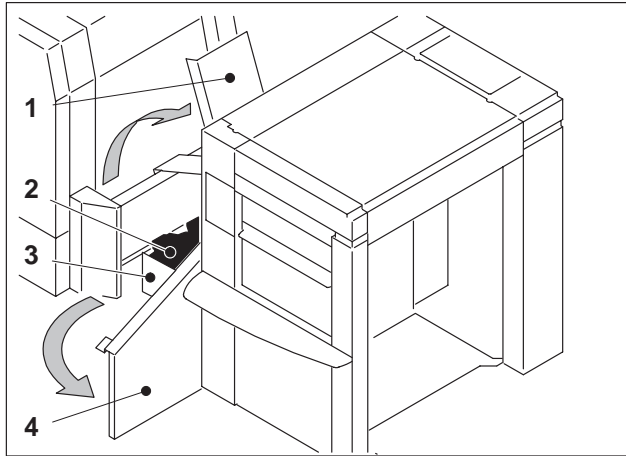
Wear protective gloves.  
Use only cleaners with a flash point of at least 55 °C.

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8 Service activities on the sheet alignment system

8.1 Air filter "Suction air pull lay/propelling roller"

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GR FS904001900000000000

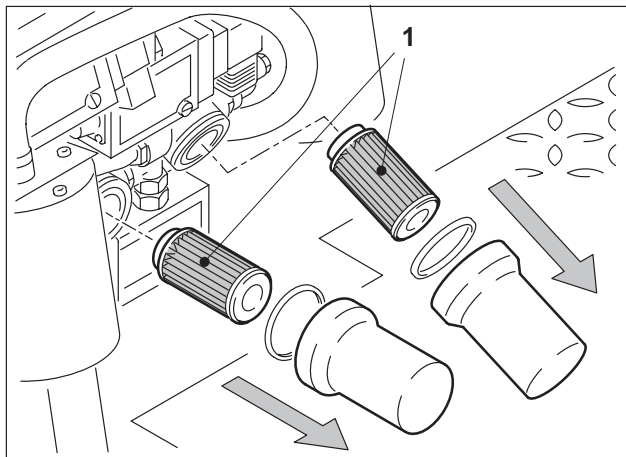
Place of installation

- 1 Feeder table
- 2 Air filter "pull lay suction air/propelling roller"
- 3 Service port
- 4 "Feeder" guard

The air filter "suction air pull lay/propelling roller" is installed underneath the feed table.

Fig. 24 Air filter "suction air pull lay/propelling roller", place of installation

8.1.1 Cleaning the filter cartridge



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- 1 Filter cartridge "suction air pull lay/propelling roller"

Fig. 25 Cleaning the filter cartridges "suction air pull lay/propelling roller"

Maintenance point description	
Maintenance interval	3 000 000 press rotations, or monthly
Maintenance location	D.S./middle
Accessing the maintenance point	Open the "feeder" guard; fold up the feed table; open the service port.
Number/type/maintenance work	Clean 2 filter cartridges (carefully knock out or vacuum-clean).
Tool	Vacuum cleaner
Cleaning solution	–

Tab. 14

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8.1.2 Replacing the filter cartridge "suction air pull lay/propelling roller"

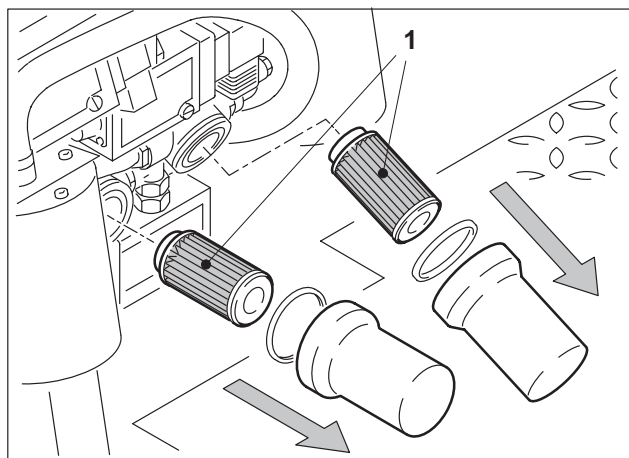


Fig. 26 Replacing the filter cartridges "suction air pull lay/propelling roller"

- 1 Filter cartridge "suction air pull lay/propelling roller"

Maintenance point description	
Maintenance interval	30 000 000 press rotations, or yearly
Maintenance location	D.S./middle
Accessing the maintenance point	Open the "feeder" guard; fold up the feed table; open the service port.
Number/type/maintenance work	Replace 2 air filters.
Tool	–
Cleaning solution	–

Tab. 15

8.2 Rotary valve "suction tape vacuum regulation"

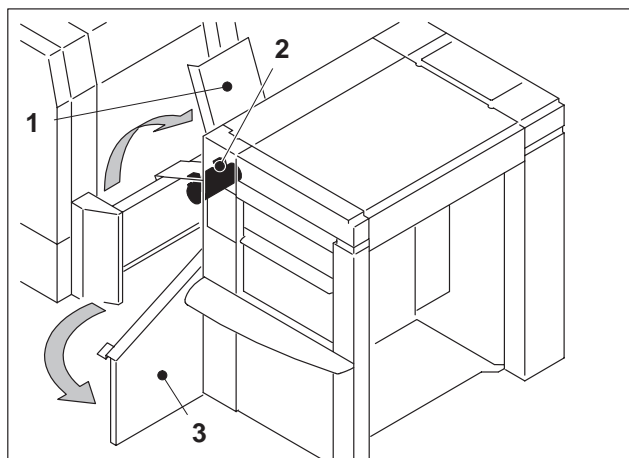


Fig. 27 Rotary valve "suction tape vacuum regulation"

Place of installation

- 1 Feeder table
- 2 Rotary valve "suction tape vacuum regulation"
- 3 "Feeder" guard

The rotary valve "suction tape vacuum regulation" is installed in the middle, underneath the feed table.

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8.2.1 Cleaning the rotary valve "suction tape vacuum regulation"

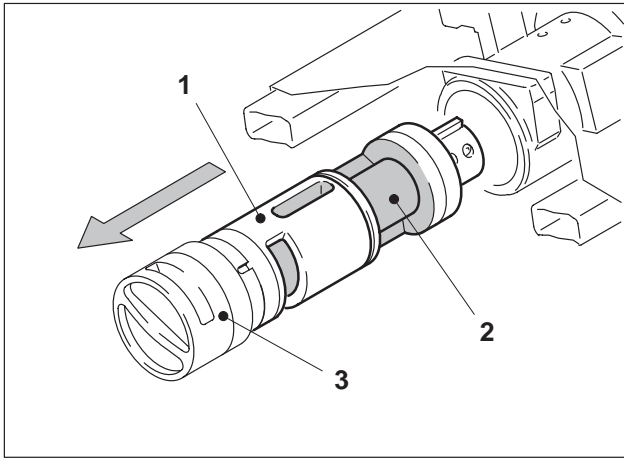


Fig. 28 Rotary valve "suction tape vacuum regulation"; cleaning the valve ports

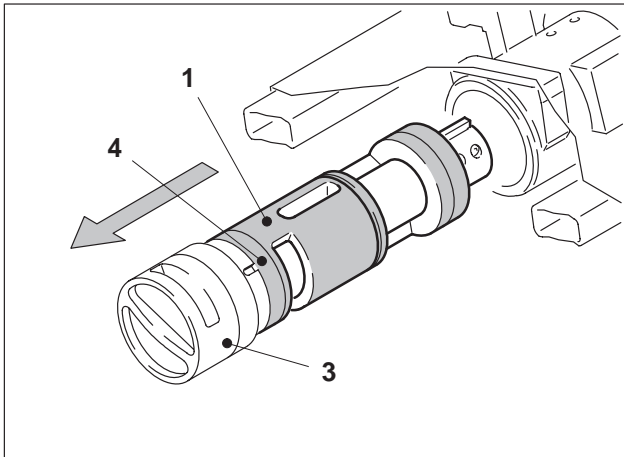


Fig. 29 Rotary valve "suction tape vacuum regulation"; cleaning the surface

Cleaning valve ports, surface, and bearing

- 1 Rotary valve/surface
- 2 Valve ports
- 3 Cover plate
- 4 Bearing

► **Note**  
Do not lubricate!

Maintenance point description	
Maintenance interval	3 000 000 press rotations, or monthly
Maintenance location	Center
Accessing the maintenance point	Open the "feeder" guard. Fold up the feed table.
Number/type/maintenance work	Loosen and remove the rotary valve. Clean valve ports, surface and bearings.
Tool	Soft, fluffless cloth; brush
Cleaning solution	See "Approved cleaners".

Tab. 16

! **Caution – Damage**  
During any work on the rotary valve you must ensure that the surface is not damaged.

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VISCOGEN KL 300

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