



1365-7

# Operating Instructions

**IMPORTANT**  
**READ CAREFULLY BEFORE USE**  
**KEEP FOR FUTURE REFERENCE**

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## 1 About these instructions


These instructions have been prepared with utmost care. They contain information and notes intended to ensure long-term and reliable operation.

Should you notice any discrepancies or if you have improvement requests, then we would be glad to receive your feedback through **Customer Service** ( p. 93).


Consider the instructions as part of the product and store them in a place where they are readily available.

### 1.1 For whom are these instructions intended?

These instructions are intended for:

- **Operators:**  
This group is familiar with the machine and has access to the instructions. Specifically, chapter **Operation** ( p. 17) is important for the operators.
- **Specialists:**  
This group has the appropriate technical training for performing maintenance or repairing malfunctions.

Service Instructions are supplied separately.

With regard to minimum qualification and other requirements to be met by personnel, please also follow the chapter **Safety** ( p. 9).

### 1.2 Representation conventions – symbols and characters

Various information in these instructions are represented or highlighted by the following characters in order to facilitate easy and quick understanding:



#### **Proper setting**

Specifies proper setting.



#### **Disturbances**

Specifies the disturbances that can occur from an incorrect setting.



#### **Cover**

Specifies which covers must be disassembled in order to access the components to be set.



**Steps to be performed when operating the machine (sewing and equipping)**



**Steps to be performed for service, maintenance, and installation**



**Steps to be performed via the software control panel**

**The individual steps are numbered:**

1. First step
  2. Second step
  - ... The steps must always be followed in the specified order.
- Lists are marked by bullet points.



**Result of performing an operation**

Change to the machine or on the display/control panel.



**Important**

Special attention must be paid to this point when performing a step.



**Information**

Additional information, e.g. on alternative operating options.



**Order**

Specifies the work to be performed before or after a setting.

**References**



Reference to another section in these instructions.

**Safety**

Important warnings for the user of the machine are specifically marked. Since safety is of particular importance, hazard symbols, levels of danger and their signal words are described separately in the chapter **Safety** (📖 p. 9).

**Location information**

If no other clear location information is used in a figure, indications of **right** or **left** are always from the user's point of view.

### 1.3 Other documents

The machine includes components from other manufacturers. Each manufacturer has performed a hazard assessment for these purchased parts and confirmed their design compliance with applicable European and national regulations. The proper use of the built-in components is described in the corresponding manufacturer's instructions.

### 1.4 Liability

All information and notes in these instructions have been compiled in accordance with the latest technology and the applicable standards and regulations.

Dürkopp Adler cannot be held liable for any damage resulting from:

- Breakage and transport damages
- Failure to observe these instructions
- Improper use
- Unauthorized modifications to the machine
- Use of untrained personnel
- Use of unapproved parts

#### Transport

Dürkopp Adler cannot be held liable for breakage and transport damages. Inspect the delivery immediately upon receiving it. Report any damage to the last transport manager. This also applies if the packaging is not damaged.

Leave machines, equipment and packaging material in the condition in which they were found when the damage was discovered. This will ensure any claims against the transport company.

Report all other complaints to Dürkopp Adler immediately after receiving the product.



## 2 Safety

This chapter contains basic information for your safety. Read the instructions carefully before setting up or operating the machine. Be sure to follow the information in the safety instructions. Failure to do so can result in serious injury and property damage.



### 2.1 Basic safety instructions

The machine may only be used as described in these instructions.

These instructions must be available at the machine's location at all times.

Work on live components and equipment is prohibited. Exceptions are defined in the DIN VDE 0105.

For the following work, switch off the machine at the main switch or disconnect the power plug:

- Replacing the needle or other sewing tools
- Leaving the workstation
- Performing maintenance work and repairs
- Threading

Missing or faulty parts could impair safety and damage the machine. Only use original parts from the manufacturer.

**Transport** Use a lifting carriage or stacker to transport the machine. Raise the machine max. 20 mm and secure it to prevent it from slipping off.

**Setup** The connecting cable must have a power plug approved in the relevant country. The power plug may only be assembled to the power cable by qualified specialists.

**Obligations of the operator** Follow the country-specific safety and accident prevention regulations and the legal regulations concerning industrial safety and the protection of the environment.

All the warnings and safety signs on the machine must always be in legible condition. Do not remove!

Missing or damaged warnings and safety signs must be replaced immediately.

**Requirements to be met by the personnel** Only qualified specialists may be used for:

- Setting up the machine/putting the machine into operation
- Performing maintenance work and repairs
- Performing work on electrical equipment

Only authorized persons may work on the machine and must first have understood these instructions.

**Operation** Check the machine during operating for any externally visible damage. Stop working if you notice any changes to the machine. Report any changes to your supervisor. Do not use a damaged machine any further.

**Safety equipment** Safety equipment should not be disassembled or deactivated. If it is essential to disassemble or deactivate safety equipment for a repair operation, it must be assembled and put back into operation immediately afterward.



## 2.2 Signal words and symbols used in warnings

Warnings in the text are distinguished by color bars. The color scheme is based on the severity of the danger. Signal words indicate the severity of the danger.




**Signal words** Signal words and the hazard they describe:

Signal word	Meaning
<b>DANGER</b>	(with hazard symbol) If ignored, fatal or serious injury will result
<b>WARNING</b>	(with hazard symbol) If ignored, fatal or serious injury can result
<b>CAUTION</b>	(with hazard symbol) If ignored, moderate or minor injury can result
CAUTION	(with hazard symbol) If ignored, environmental damage can result
<b>NOTICE</b>	(without hazard symbol) If ignored, property damage can result

**Symbols** The following symbols indicate the type of danger to personnel:

Icon	Type of danger
	General
	Electric shock



Icon	Type of danger
	Puncture
	Crushing
	Environmental damage

**Examples** Examples of the layout of warnings in the text:

### DANGER



#### Type and source of danger!

Consequences of non-compliance.

Measures for avoiding the danger.

↪ This is what a warning looks like for a hazard that will result in serious injury or even death if ignored.

### WARNING



#### Type and source of danger!

Consequences of non-compliance.

Measures for avoiding the danger.

↪ This is what a warning looks like for a hazard that could result in serious or even fatal injury if ignored.

### CAUTION



#### Type and source of danger!

Consequences of non-compliance.

Measures for avoiding the danger.

↪ This is what a warning looks like for a hazard that could result in moderate or minor injury if the warning is ignored.

## CAUTION



### **Type and source of danger!**

Consequences of non-compliance.

Measures for avoiding the danger.

- 
- ↪ This is what a warning looks like for a hazard that could result in environmental damage if ignored.

## NOTICE

### **Type and source of danger!**

Consequences of non-compliance.

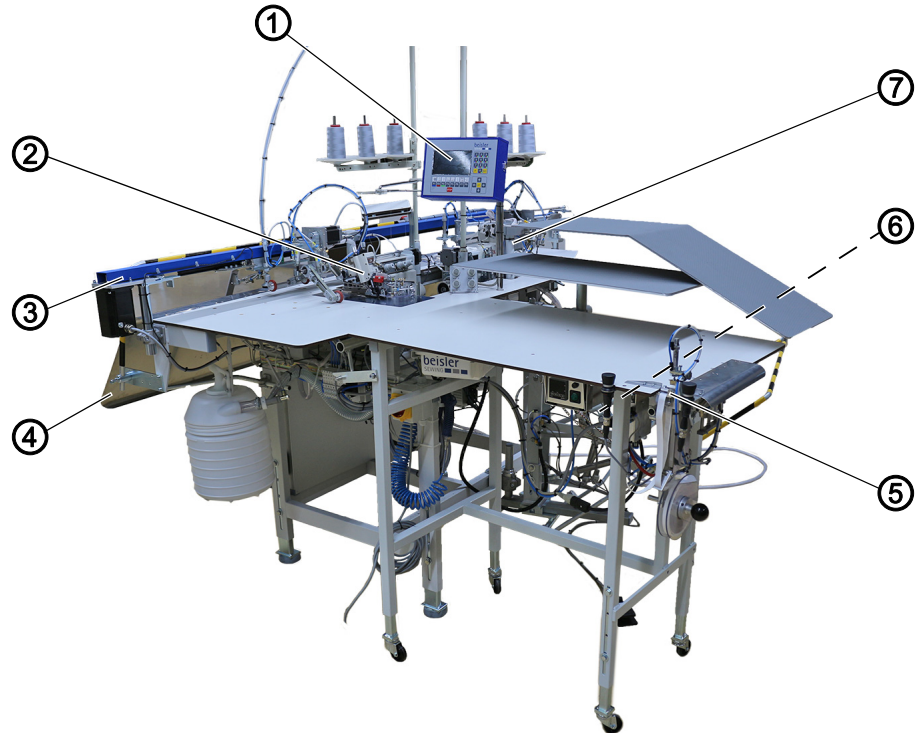
Measures for avoiding the danger.

- 
- ↪ This is what a warning looks like for a hazard that could result in property damage if ignored.

### 3 Machine description

#### 3.1 Components of the machine

Fig. 1: Components of the machine



- (1) - Control panel
- (2) - A machine
- (3) - Cross transport
- (4) - Sliding plate

- (5) - Fusing station
- (6) - Stacker (covered)
- (7) - B machine

Another option is to equip the machine with a 3<sup>rd</sup> sewing head, turning it into a C machine for serging short seams as waistband seam, hem seam, and fly seam.

### 3.2 Proper use

#### WARNING



**Risk of injury from live, moving and cutting parts as well as from sharp parts!**

Improper use can result in electric shock, crushing, cutting and punctures.

Follow all instructions provided.

#### NOTICE

**Non-observance will lead to property damage!**

Improper use can result in material damage at the machine.

Follow all instructions provided.

The machine may only be used with sewing material that satisfies the requirements of the specific application at hand.

The machine is intended only for use with dry sewing material. The sewing material must not contain any hard objects.

The needle thicknesses permissible for the machine are listed in the **Technical data** (📖 p. 99) chapter.

The seam must be completed with a thread that satisfies the requirements of the specific application at hand.

The machine is intended for industrial use.

The machine may only be set up and operated in dry conditions on well-maintained premises. If the machine is operated on premises that are not dry and well-maintained, then further measures may be required which must be compatible with DIN EN 60204-31.

Only authorized persons may work on the machine.

Dürkopp Adler cannot be held liable for damages resulting from improper use.

### 3.3 Declaration of Conformity

The machine complies with European regulations ensuring health, safety, and environmental protection as specified in the declaration of conformity or in the declaration of incorporation.





## 4 Operation

The operating sequence consists of several different steps. Fault-free operation is necessary in order to achieve a good sewing result.

### 4.1 Preparing the machine for operation

#### WARNING



#### Risk of injury from moving, cutting and sharp parts!

Crushing, cutting and punctures are possible.

If possible, make preparations only when the machine is switched off.

Complete the following steps in preparation of sewing before starting to work:

- Inserting or changing the needle
- Threading the needle thread
- Threading or winding the hook thread
- Adjusting the thread tension
- Inserting the tape

### 4.2 Operating the machine head

#### WARNING



#### Risk of injury from sharp and moving parts!

Puncture or crushing possible.

If possible, operate the machine head only when the machine is switched off.

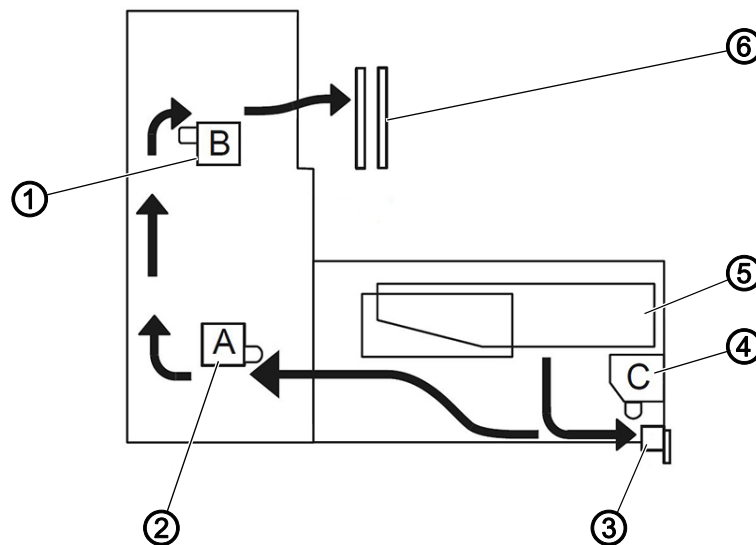


#### Information

The operation of the machine head (needle insertion or change, threading of needle thread and hook thread etc.) is described in the separately included Operating Instructions of the sewing head manufacturer. The Operating Instructions are included in the accessories of the machine.

### 4.3 Sewing process sequence

Fig. 2: Sewing process sequence



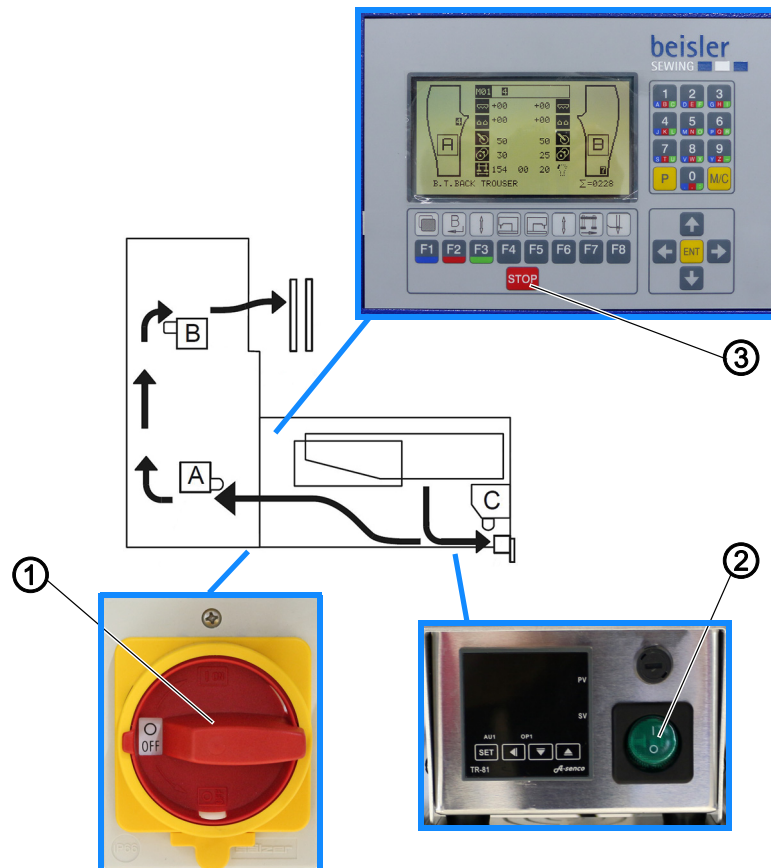
- |                                 |                            |
|---------------------------------|----------------------------|
| (1) - B machine                 | (4) - C machine (optional) |
| (2) - A machine                 | (5) - Trays                |
| (3) - Fusing station (optional) | (6) - Stacker              |

1. The sewing material is kept ready on trays (5).
2. Knee lining and front trousers are fixed in place on top of each other at the (optional) fusing station (3) using a transparent tape.
3. The short seams can optionally be serged at the A machine (2) or at the C machine (4) (optional).
4. The sewing material is positioned at the contour guide of the A machine (2).  
The fully automatic sewing process is started.
5. The cross transport picks up the sewing material from the transport unit of the A machine (2) and feeds it to the B machine (1).
6. The second seam is serged at the B machine (1).
7. The transport units of the B machine (1) feeds the sewing material from the working plate to the stacker (6).
8. The workpieces are stacked and deposited in the stacker (6).
9. As soon as the sewing process has been started at the A machine (2), the next knee lining can be fixed together with the front trousers at the fusing station (3) (optional).



## 4.4 Switches

Fig. 3: Main switch



(1) - Main switch

(2) - Toggle switch heating module

(3) - Program stop key

### Main switch

The main switch (1) is used to turn the power supply of the machine on and off. The main switch also (1) serves as an emergency stop switch.



To switch the machine on/off:

1. Turn the main switch (1) to the **I - ON** position.
  - ↪ The machine starts up.  
The control and the control panel of the machine start up.
2. Press the program stop key (2) on the control panel twice.
  - ↪ The machine performs a reference run and is afterwards ready for sewing.
3. Turn the main switch (1) to the **O - OFF** position.
  - ↪ The machine switches off.

### Program stop

The program stop key (3) can be used to stop all working steps and operational movements at the machine immediately.



#### Important

A press of the program stop key (3) cancels the sewing process. However, it will NOT interrupt the power supply.

To disconnect the power supply, switch off the machine using the main switch (1) (📖 p. 19).



To stop the machine with the program stop key:

1. Press the program stop (3) key.
- ↪ All movements of the sewing unit are stopped immediately.
- ↪ The sewing process is interrupted.

### Resuming operation after a program stop



To place the machine back into operation after a program stop:

1. Press the program stop (3) key.
- ↪ The control program performs a reset.
- ↪ The sewing unit is afterwards ready for sewing again.

### Heating module

The (optional) fusing station is equipped with a thermostat that has a separate switch. The toggle switch heating module (2) has been installed below the fusing station.

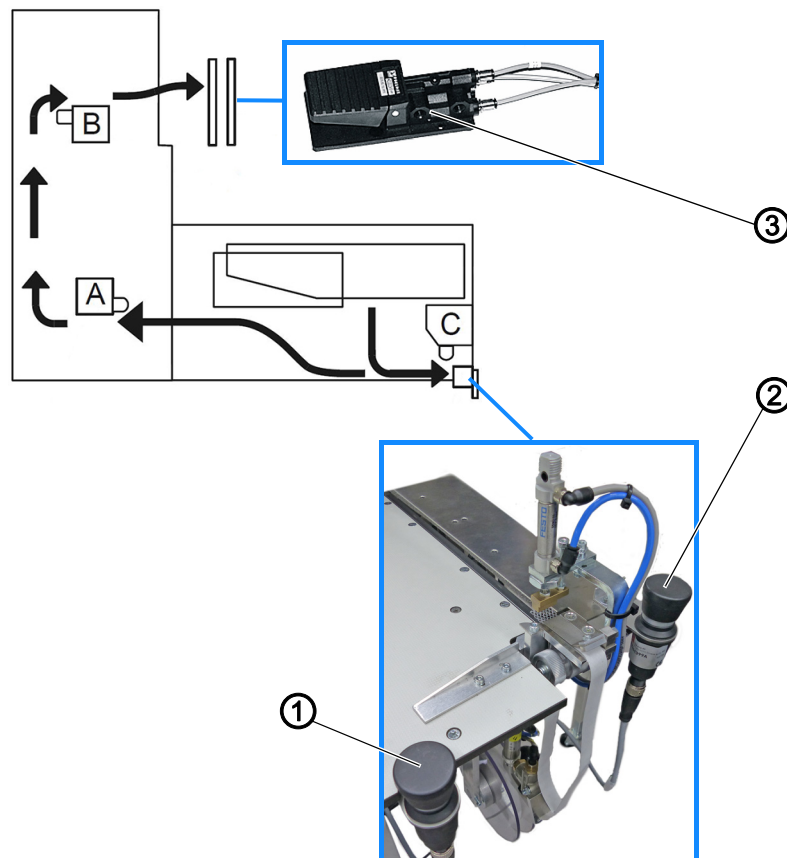


To switch the heating module on/off:

1. The power supply must be switched on with the help of the main switch (1) (📖 p. 19).
2. Press the toggle switch heating module (2) into the **I** position.
- ↪ The lower stamp of the fusing station is heated up.
3. Press the toggle switch heating module (2) into the **O** position.
- ↪ The heating process is finished.

## 4.5 Function keys

Fig. 4: Function keys



- (1) - Button for lowering the knee lining clamping device      (3) - Pedal clamping device  
 (2) - Button for triggering the fusing process

### Button for lowering the knee lining clamping device

When in its normal operating state, the knee lining clamping device is open. The knee lining is positioned under the knee lining clamping device. A press of the button for lowering the knee lining clamping device (1) clamps the knee lining at the edge of the hem. At the same time, the tape with the backing material is advanced, separating the transparent tape from the backing material.

### Button for the fusing stamp

The front trousers are placed on top of the knee lining. With a press of the button for the fusing process (2), the upper and the lower stamp of the fusing station are pressed together, bonding the sewing material by hot fusing with the help of the transparent tape that is positioned in between.

### Pedal stacker

The bundle clamp of the stacker is opened with a press of the pedal (2). The sewing material can be removed. When the pedal (3) is released, the bundle clamp closes automatically.

## 4.6 Operating the fusing station

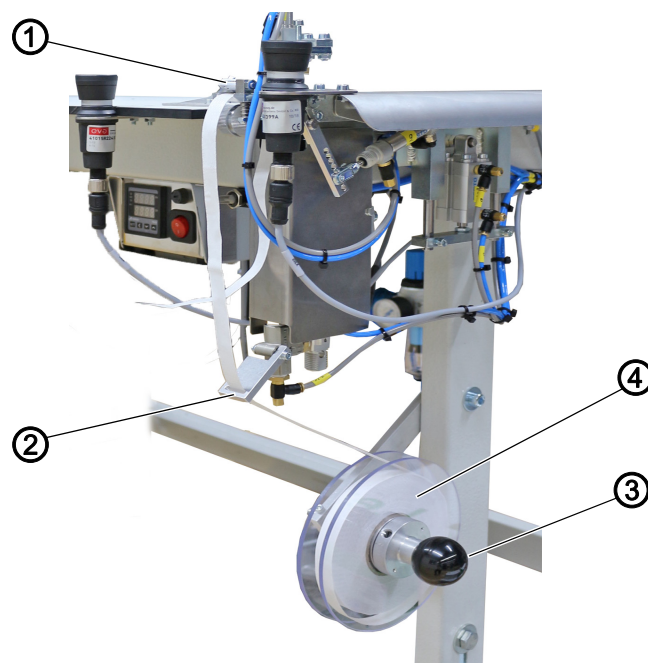


### Information

A detailed description of how to operate the fusing station can be found in the instructions for use of the A-senco TR-81 Universal Temperature Controller. The instructions for use of the A-senco TR-81 Universal Temperature Controller are included in the accessories of the machine.

### 4.6.1 Inserting/changing the tape

Fig. 5: Inserting/changing the tape (1)



(1) - Flap  
(2) - Guide

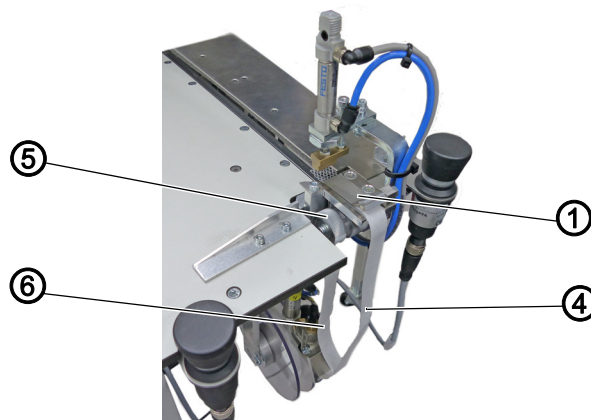
(3) - Handle of the tape holder  
(4) - Tape with backing material



To insert the tape:

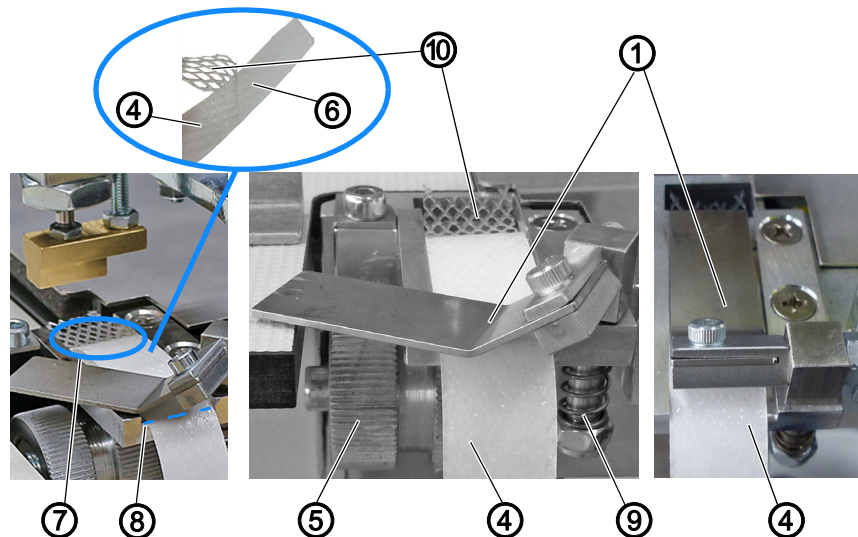
1. Forcefully pull on the handle of the tape holder (3) and pull off the support plate on the right.
2. Insert a new roll of tape with backing material (4).
  - Make sure the entire roll turns counterclockwise when being unwound.
  - Make sure that the transparent adhesive side of the tape with backing material (4) faces forward.
3. Slide the right support plate back onto the shaft and engage it.
4. Feed the tape with backing material (4) through the guide (2).

Fig. 6: Inserting/changing the tape (2)



- |                                  |                        |
|----------------------------------|------------------------|
| (1) - Flap                       | (5) - Transport roller |
| (2) - Tape with backing material | (6) - Backing material |

Fig. 7: Inserting/changing the tape (3)



- |                                  |                         |
|----------------------------------|-------------------------|
| (1) - Flap                       | (7) - Slot              |
| (4) - Tape with backing material | (8) - Slot              |
| (5) - Transport roller           | (9) - Spring            |
| (6) - Backing material           | (10) - Transparent tape |



5. Turn the flap (1) up and to the side by pressing the spring (9).
6. Remove the tape with backing material (4) from the backing material (6).
7. Slightly bend the backing material (6) and feed it into the slot (7).
8. Insert the tape with backing material (4) into the slot (8).
9. Turn the transport roller (5) manually to guide the backing material (6) downward behind the transport roller (5).
10. Check the position of the tape with backing material (4) in the slot (8) and engage the flap (1) above it.

### 4.6.2 Switching on the fusing station

Fig. 8: Switching on the fusing station



(1) - Main switch

(2) - Toggle switch



To switch the fusing station on and off:

1. Turn the main switch (1) to the **I - ON** position.
  - ↪ The machine switches on.
2. Turn the toggle switch (2) to the **I** position.
  - ↪ The toggle switch (2) illuminates.

### 4.6.3 Adjusting the temperature



#### Important

##### The upper value:



PV = actual value and display  
Indicates the current heating value.

##### The lower value:

SV = target value and status indicator  
Indicates the preset heating value, alternating with *Low Alarm*.



To adjust the temperature:

1. Switch on the fusing station (📖 p. 24).
  - ↪ The temperature controller displays the current temperature.
2. Press the *SET* button until the display shows *Su*.
3. Press the  button.
  - ↪ The actual value indicator shows a lower value.
  - ↪ The longer you press the button, the faster the value changes.
4. Press the  button.
  - ↪ The actual value indicator shows a higher value.
  - ↪ The longer you press the button, the faster the value changes.



#### 4.6.4 Fusing knee lining and front trousers

### WARNING

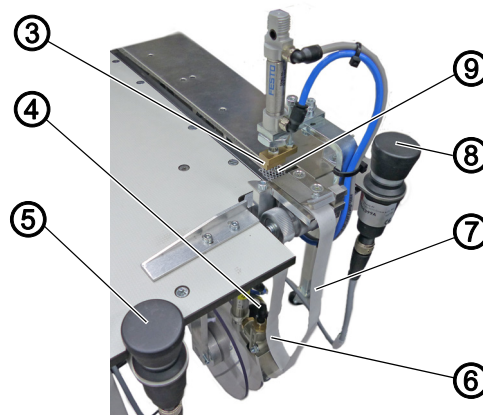
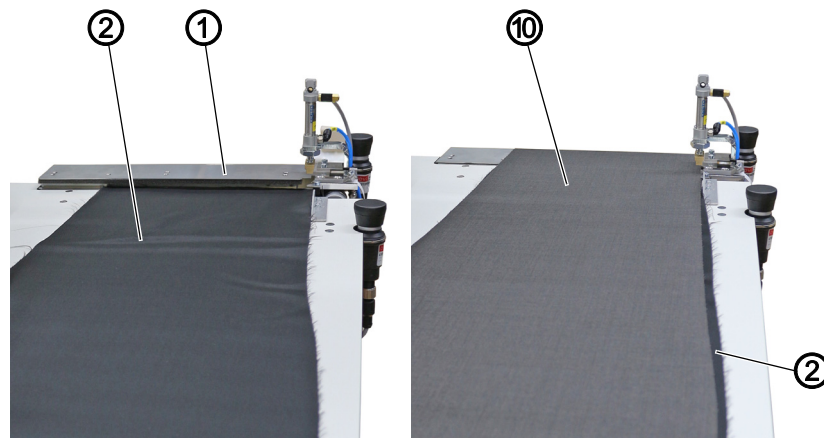


#### Risk of injury from hot fusing stamp!

Risk of burns.

Do not touch the area around the fusing station as the lower stamp is very hot.

Fig. 9: Fusing knee lining and front trousers



- |   |  |
|---|--|
| (1) - Knee lining clamping device                         | (6) - Backing material                         |
| (2) - Knee lining   | (7) - Tape with backing material               |
| (3) - Upper stamp   | (8) - Button for triggering the fusing process |
| (4) - Toggle switch                                       | (9) - Transparent tape                         |
| (5) - Button for lowering the knee lining clamping device | (10) - Front Trousers                          |



#### Important

To keep the knee lining from shifting during sewing, you need to set a fusing point with the fusing station that will keep the lining in place at the correct position. Only after this point has been set will you be able to sew the knee lining from the hem to the waistband edge.



To fuse the knee lining and the front trousers:

1. Position the knee lining (2) under the knee lining clamping device (1).

2. Press the button for lowering the knee lining clamping device (5).
  - ↳ The knee lining clamping device (1) is lowered and clamps the knee lining (2) at the edge of the hem.  
At the same time, the tape with the backing material (7) is advanced, separating the transparent tape (9) from the backing material (6).
3. Position the front trousers (10) and align them with the knee lining (2).
  - ↳ When positioning the knee lining (2), make sure it protrudes in accordance with the desired fullness.
4. Press the button for triggering the fusing process (8).
  - ↳ The upper stamp (3) moves down while the lower heated stamp moves up. The stamps press the front trousers (10) and the knee lining (2) together with the transparent tape (9) positioned in between and fix the tape in place.

Following the preset fusing time, the upper stamp (3) and the knee lining clamping device (1) are raised automatically, while the lower stamp is lowered.

Knee lining (2) and front trousers (10) have been fused and can be positioned for overedging.



#### Information

The toggle switch (4) can be used to set 2 different positions for the lower, heated stamp.

1. **Toggle switch (4) flipped to the left:**  
The lower, heated stamp is down and moves up for the fusing operation.
  2. **Toggle switch (4) flipped to the right:**  
The lower, heated stamp moves up and will remain in the up position for the duration of the work process.
- 



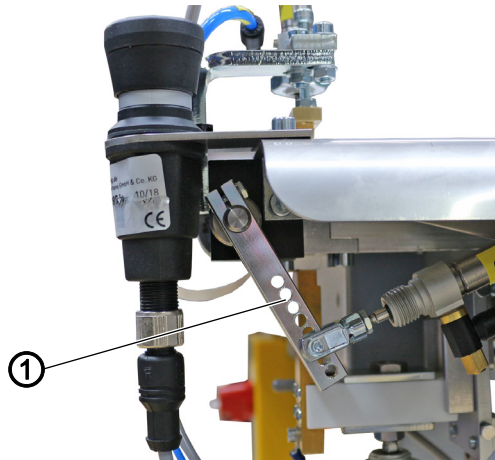
#### Important

In position 2 (toggle switch (4) flipped to the right), the knee lining may sustain damage or melt if the temperature is too high.



#### 4.6.5 Adjusting the tape feed

Fig. 10: Adjusting the tape feed



(1) - Lever

You can use the lever (1) to adjust the amount of tape that will be advanced.



To adjust the tape feed:

1. Use the lever (1) to select the desired hole:
  - **more tape:** select higher hole
  - **less tape:** select lower hole

#### 4.6.6 Cleaning the stamp

### WARNING

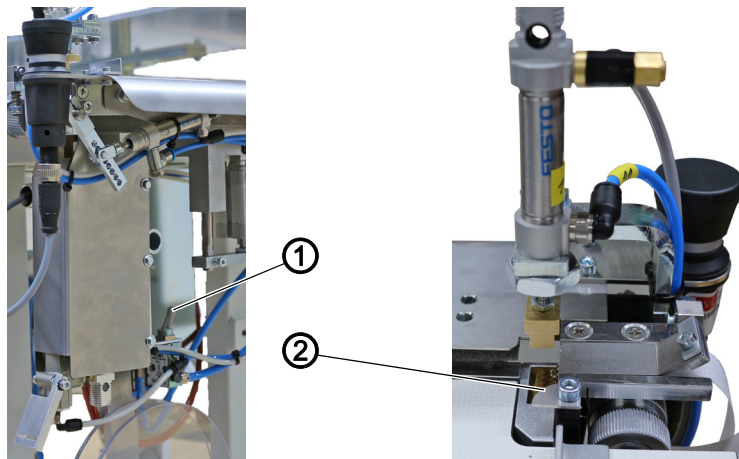


**Risk of injury from hot fusing stamp!**

Risk of burns.

Allow the stamp to cool down before cleaning it.

Fig. 11: Cleaning the stamp



(1) - Toggle switch

(2) - Lower stamp



To clean the stamp:

1. Flip the toggle switch (1) to the right.

↪ The lower stamp (2) moves up and will remain in the up position for the duration of the work process.



#### Important

In this position the knee lining may sustain damage or melt if the temperature is too high.



2. Clean the stamp.

3. Flip the toggle switch (1) to the left.

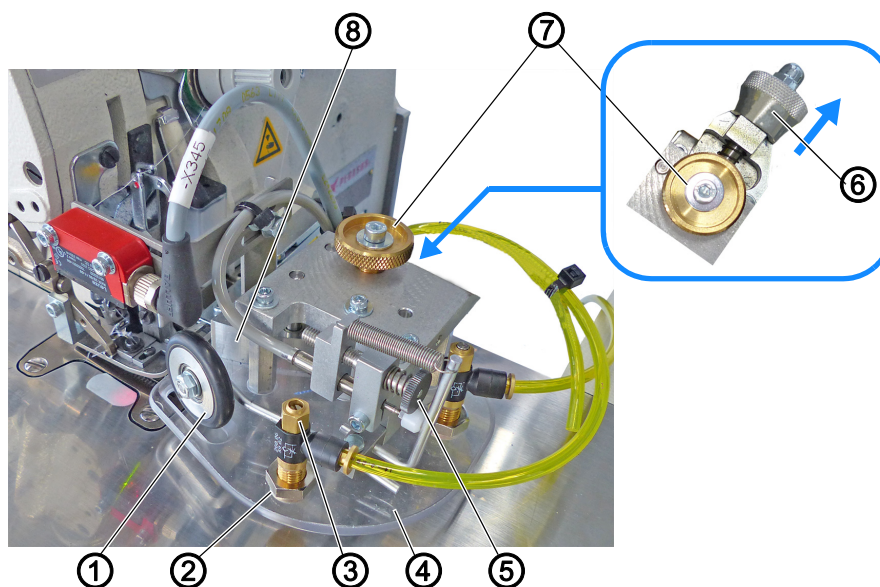
↪ The lower stamp (2) moves down.

## 4.7 Guiding the sewing material

The guiding of the sewing material along the edge guide of the A machine and the B machine is controlled by the contour guide in conjunction with the transport unit. At the B machine, the swiveling sword device can be activated as an additional means to control strong hip curve contours for the purpose of turning the sewing material.

### 4.7.1 Contour guide

Fig. 12: Contour guide



- |  |  |
|--|--|
| (1) - Help roller                                  | (6) - Adjusting wheel for adjusting the height of the contour guide  |
| (2) - Blow-on air nozzle                           | (7) - Adjusting wheel for the fine adjustment of the material height |
| (3) - Throttle valve                               | (8) - Edge guide   |
| (4) - Contour guide                                |  |
| (5) - Adjusting wheel for the help roller pressure |  |

The height-adjustable contour guide (4) ensures that the sewing material is positioned and guided evenly in front of the sewing head. The height of the contour guide (4) can be adjusted with the adjusting wheel for adjusting the height of the contour guide (6) to match the thickness of the sewing material.

The help roller (1) ensures that the sewing material is precisely fed up to the edge guide (8) in the contour guide (4). At the same time, the sewing material is guided towards the edge guide (8) by the blow-on air nozzle (2).

### Adjusting the height of the contour guide



To adjust the height of the contour guide:

1. Pull the adjusting wheel for adjusting the height of the contour guide (6) in the direction of the arrow.

2. Turn the adjusting wheel for adjusting the height of the contour guide (6) to one of the 4 catch positions.

- **Position 1:** lowest height (0.8 mm)
- **Position 4:** greatest possible height (3.2 mm)

### Adjusting the fine adjustment of the contour guide



#### Proper setting

A single fabric layer of the sewing material should effortlessly slide through under the contour guide (4).



To adjust the fine adjustment of the contour guide:

1. Turn the adjusting wheel for the fine adjustment of the material height (7).
  - **Material height low:** turn clockwise.
  - **Material height high:** turn counterclockwise.

### Adjusting the pressure of the help roller



To adjust the pressure of the help roller:

1. Turn the adjusting wheel for the help roller pressure (5).
  - **Stronger help roller pressure (1):** turn counterclockwise.
  - **Lower help roller pressure (1):** turn clockwise.



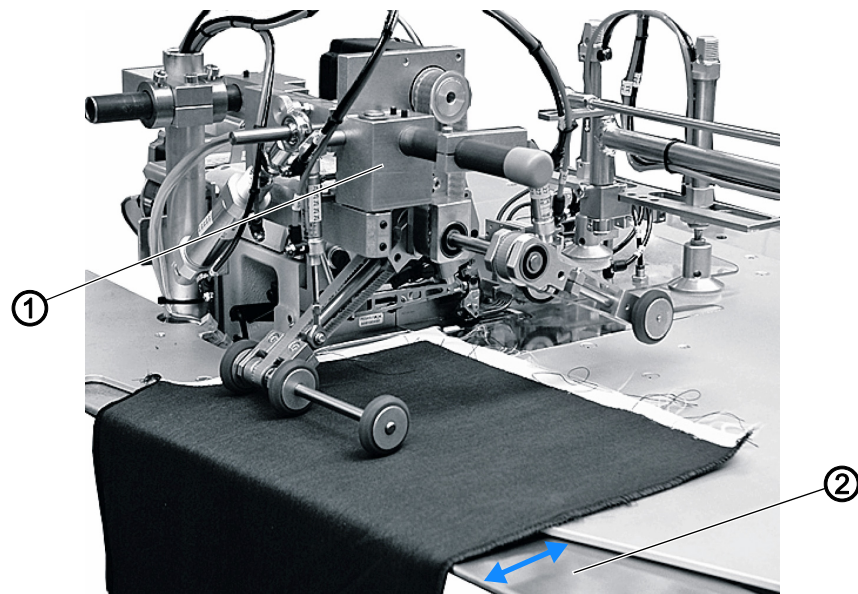
### Information

The parameters on the control panel can be used to program the section length/duration of the lowered help roller (1) ( p. 56, *puller speed, parameters 33 and 34*) and of the blow-on air nozzle (2) ( p. 58, *sewing speed, parameters 10 and 35*).

The position of the blow-on air nozzle (2) has been set at the factory and should not be adjusted. For the purpose of regulating the contour control, the intensity of the air blast can be adjusted with the help of the throttle (3).

## 4.7.2 Swiveling sword device

Fig. 13: Swiveling sword device



(1) - Joint

(2) - Blade

The blade (2) at the B machine can be swung out/in (1) in arrow direction to lightly turn the sewing material during the sewing process. This is recommended for improving control over the hip curve and when sewing starts at the trousers hem.

To guide the sewing material into the correct position at the stacker, the puller with outfeed roller unit additionally swings out at the joint (1) when the material is transported away.



### Information

You can use the program parameters on the control panel to program the pneumatic, swiveling sword device (📖 p. 58, *Sewing speed at the hip curve, parameter 11*).

## 4.8 Serging

The functions sewing stitch, thread cutting and serging are executed by the sewing equipment.

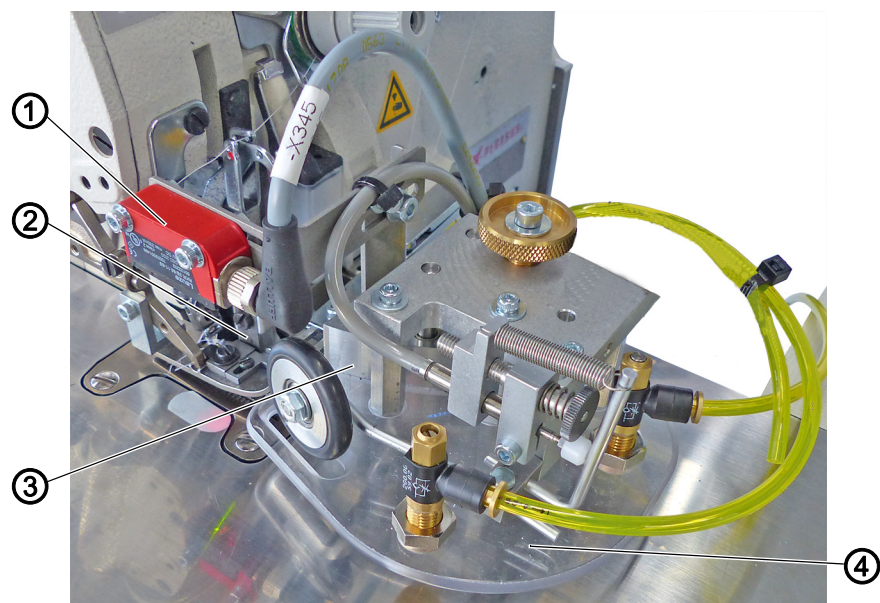
If necessary, the sewing equipment of the A and the B machine will also incorporate the fullness (📖 p. 33) for the knee lining.



### Information

A press of the program stop key on the control panel stops all machine movements and the sewing process immediately (📖 p. 44).

Fig. 14: Serging



(1) - Photocell  
(2) - Knife

(3) - Edge guide  
(4) - Contour guide



To serge the sewing material:

1. Slide the sewing material at the edge guide (3) into the sensor area of the photocell (1).
  - ↪ The photocell (1) recognizes the sewing material.
  - ↪ The contour guide (4) is lowered.
  - ↪ The sewing process starts:  
Fabric and thread residues are cut off by the knife (2) and extracted into the suction container.  
The sewing material is stitched down and serged.
2. The sewing process is repeated at the B machine for the opposite seam.

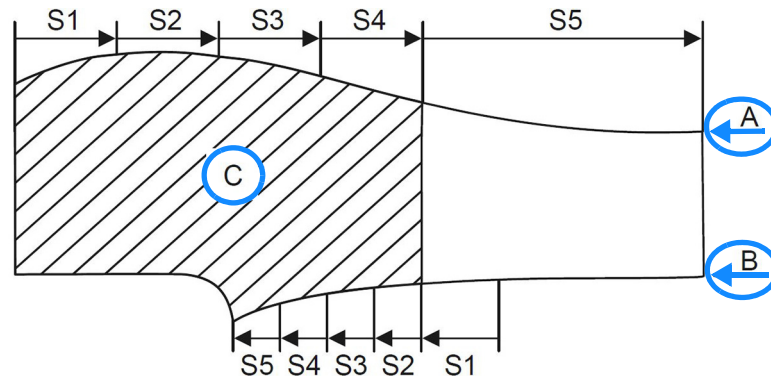


## 4.9 Fullness distribution for knee lining

To achieve the correct fullness distribution, the transport properties of the differential top and the differential bottom feed must be adapted to the material of the knee lining. This adjustment is necessary if fullness is added during the sewing of the lining.

### 4.9.1 Presetting

Fig. 15: Fullness distribution for knee lining (1)



In the sewing area of side seam **A** and crotch seam **B**, the trousers part is subdivided into 5 seam sections each (S1 to S5).

The knee lining **C** reaches over 4 of the 5 sections. For each of these seam sections, the length of the seam line can be varied, and the corresponding fullness can be preset via the program control.

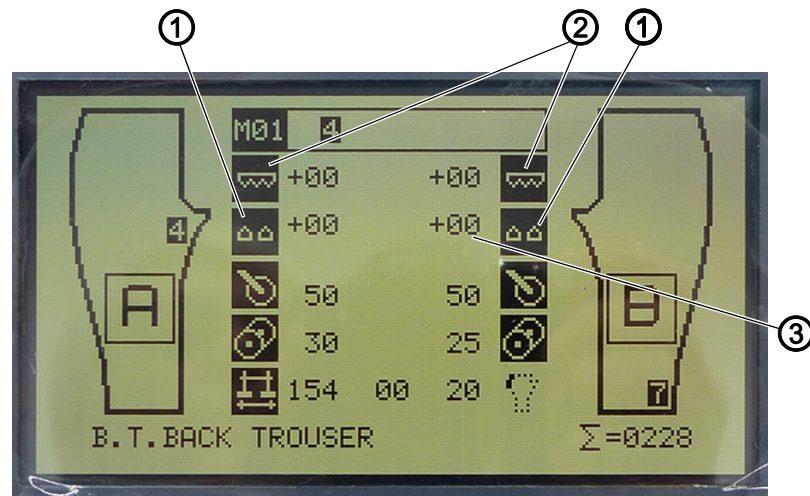


#### Information

The parameters on the control panel can be used to program the fullness and the length of the section (📖 p. 53, *Adjusting the fullness and the length of the section*).

### 4.9.2 Quick adjustment

Fig. 16: Fullness distribution for knee lining (2)







- (1) - Differential bottom feed                      (3) - Input field  
(2) - Differential top feed

As an additional option, you can use direct access on the control panel to quickly adjust the fullness by changing the differential top feed (📖 p. 53) and the differential bottom feed (📖 p. 54).



To change a parameter value:

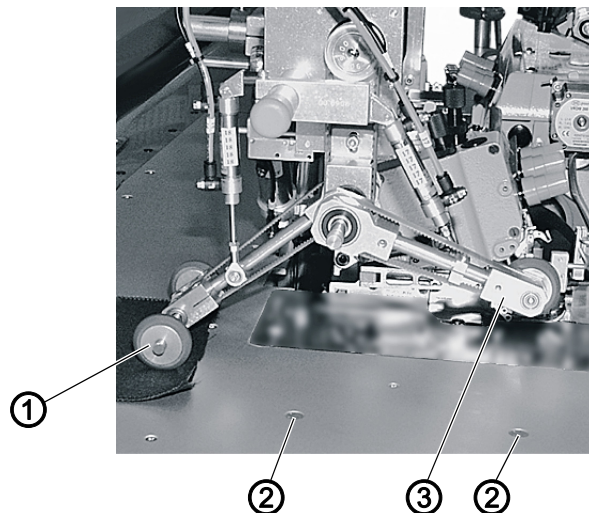
1. Press and hold button **F3** for the A machine / button **F6** for the B machine until the input field (3) next to  for the differential top feed (1) or next to  for the differential bottom feed (2) is highlighted in black.
2. Press the button  / .
- ↳ The parameter value is increased/reduced.
3. Press the **P** button.
- ↳ The input is confirmed.
- ↳ The control exits Programming mode.



## 4.10 Feeding

### 4.10.1 Transport unit A machine

Fig. 17: Transport unit A machine



(1) - Outfeed roller  
(2) - Air nozzles in the tabletop

(3) - Puller

The transport unit on the A machine consists of puller (3) and outfeed roller (1). The puller (3) transports the sewing material during the sewing process. The outfeed roller (1) feeds the sewing material to the cross transport. In addition, the outfeed roller (1) supports the transport function of the puller (3). This function can be enabled as an option for heavy sewing materials.

The air nozzles in the tabletop (2) help the sewing material to be fed properly during the ongoing sewing process. The compressed air blows against the sewing material from the bottom, creating an air cushion. Lifting and advancing the sewing material towards the sewing head/stacker reduces the risk of the sewing material becoming caught (📖 p. 37).

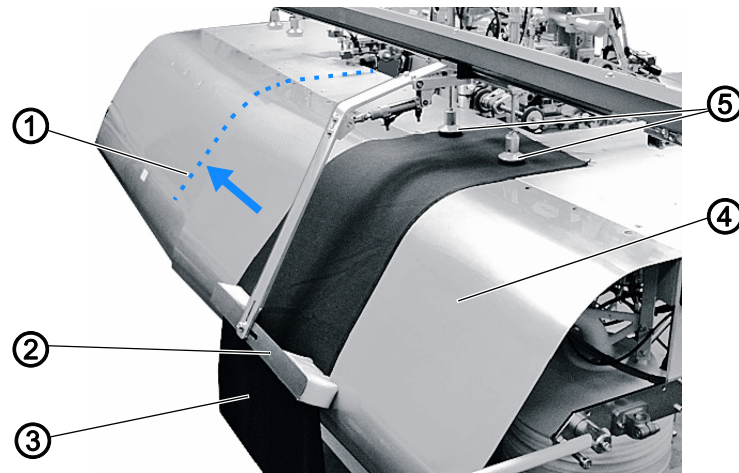


#### Information

The machine parameters on the control panel can be used to program the blowing air of the air nozzles (📖 p. 59, parameters 06 and 07).

### 4.10.2 Cross transport

Fig. 18: Cross transport



- (1) - Waiting position
- (2) - Auxiliary stamp
- (3) - Sewing material

- (4) - Sliding plate
- (5) - Double stamp

The cross transport is composed of a double stamp (5) and an auxiliary stamp (2). The cross transport picks up the sewing material (3) at the A machine and feeds it to the B machine via the sliding plate (4).

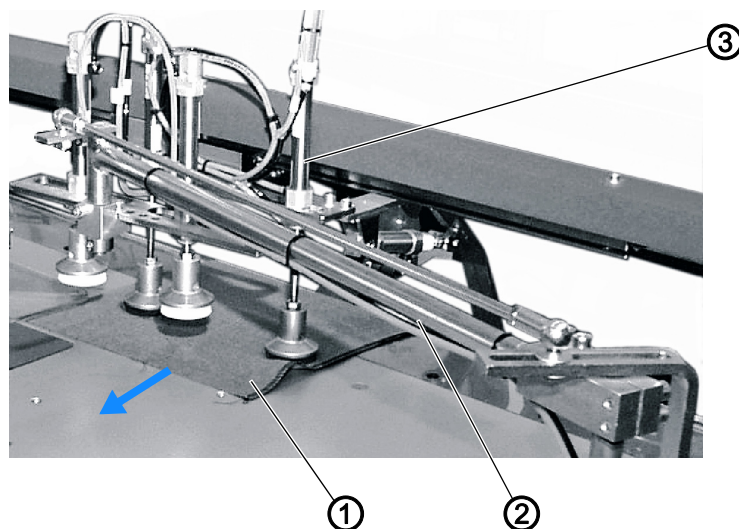


#### Important

If the sewing process at the B machine is not yet complete, the cross transport is stopped at a waiting position (1) in front of the B machine.

### 4.10.3 Swing arm

Fig. 19: Swing arm



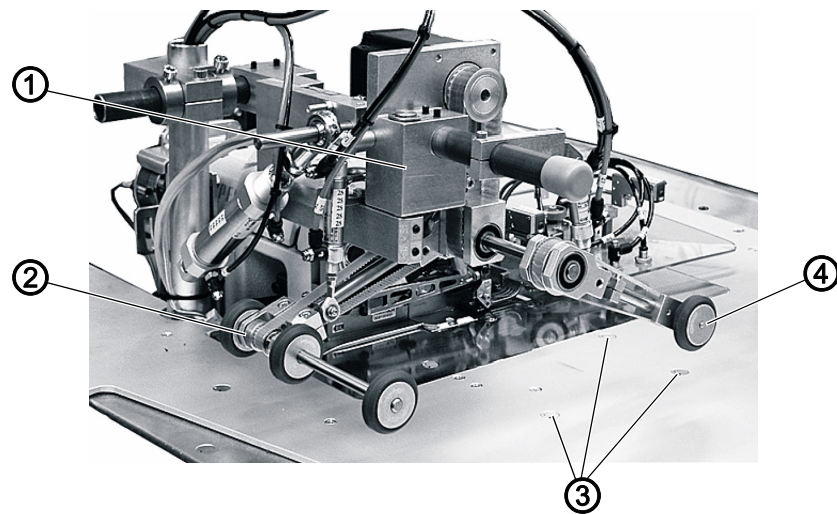
- (1) - Sewing material
- (2) - Swing arm

- (3) - Cross transport unit

The swing arm (2) takes over the sewing material (1) from the cross transport unit (3) and positions it at the contour guide of the B machine.

#### 4.10.4 Transport unit B machine

Fig. 20: Transport unit B machine



(1) - Joint  
 (2) - Outfeed roller

(3) - Air nozzles in the tabletop  
 (4) - Puller

The transport unit on the B machine consists of puller (4) and outfeed roller (2).

The puller (4) transports the sewing material during the sewing process. The outfeed roller (2) feeds the sewing material from the worktable to the stacker. To ensure that the trousers parts are stacked flush on top of each other at the stacker, the outfeed roller (2) swivels out at the joint (1) during the sewing of the crotch seams.

### 4.11 Air nozzles in the tabletop

#### 4.11.1 Adjusting the air nozzles in the tabletop



##### Proper setting

Air nozzles facing the sewing head.


To allow for the support of the material feed to the sewing head during the sewing process.

Air nozzles facing the stacker.

To allow for the support of the transport to the stacker.

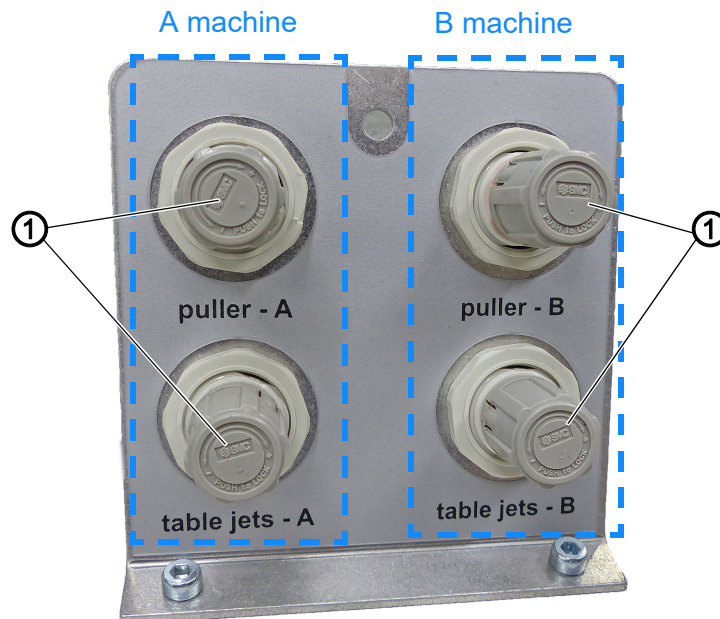


##### Information

If the sewing material is **not** pushed towards the sewing head/stacker, the air nozzles in the tabletop need to be adjusted accordingly ( Service Instructions).

### 4.11.2 Adjusting the air supply intensity

Fig. 21: Adjusting the air supply intensity



(1) - Adjusting wheels

The air nozzles in the tabletop help the sewing material to be fed properly during the ongoing sewing process. The compressed air blows against the sewing material from the bottom, creating an air cushion. Lifting and advancing the sewing material towards the sewing head/stacker reduces the risk of the sewing material becoming caught.



To adjust the air supply intensity:

1. Turn the adjusting wheels (1).
  - **Blowing air more intense:** turn clockwise
  - **Blowing air less intense:** turn counterclockwise



#### Information

The machine parameters on the control panel can be used to program the blowing air of the air nozzles (📖 p. 59, parameters 06 and 07).

## 4.12 Stacker

### WARNING



#### Risk of injury from moving parts!

Crushing possible.

While stacking is in progress, **DO NOT** reach into the working area of the stacker.

### 4.12.1 Flip stacker

Fig. 22: Flip stacker



(1) - Bundle bar


(2) - Pedal

As soon as the chain has been cut, the flip stacker is set in motion automatically and deposits the sewing material above the bundle bar (1).

#### Removing stacked pieces




To remove stacked pieces:

1. Press the pedal (2) ( p. 21) for opening the flip stacker (3) and keep it there.
  - ↙ The bundle clamp opens.
2. Remove the stacked pieces.
3. Take your foot off the pedal
  - ↙ The bundle clamp closes

### 4.13 Thread monitor



You can use 1 or 2 thread monitors.

If thread breaking occurs, an error message will immediately be shown on the control panel reading A head/B head thread breaking ( p. 93).

The sewing program continues until completion before the machine stops to allow you to perform the threading procedure.



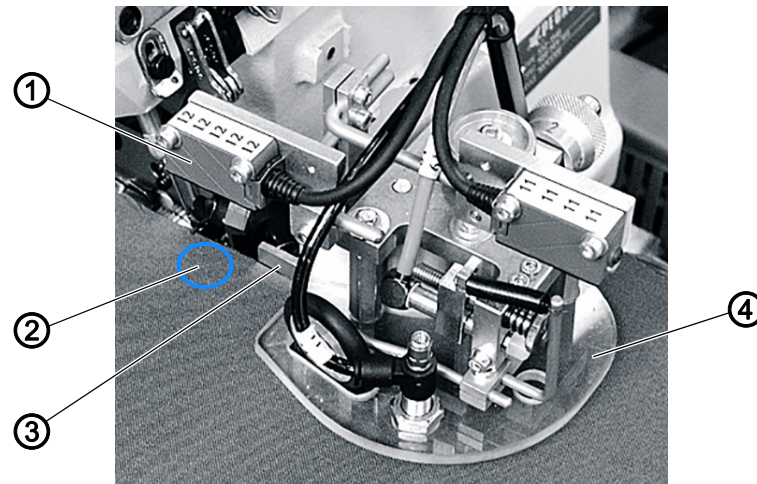
To use the thread monitor:

1. Error A head/B head thread breaking is displayed on the control panel.
2. To switch to threading mode ( p. 60), press the **F8** button.
3. Remove the sewing material.
4. Re-thread the needle thread.
5. To exit threading mode, press the **F8** button.
6. Start a new sewing process ( p. 41).



## 4.14 Starting the automatic sewing process

Fig. 23: Starting the automatic sewing process (1)



- |                                 |                     |
|---------------------------------|---------------------|
| (1) - Photocell                 | (3) - Edge guide    |
| (2) - Area of the light barrier | (4) - Contour guide |



To start the automatic sewing process:



1. Select the desired seam on the control panel.
  2. Position the trousers part at the A machine.
  3. Slide the trousers part with the waistband side under the contour guide (4) until nearly reaching the edge guide (3) and smooth it.
  4. Slide the trousers part into the area of the photocell (2).
- ↙ The contour guide is lowered, and the automatic sewing process starts.
  - ↙ The trousers part is stitched down and serged.



### Important

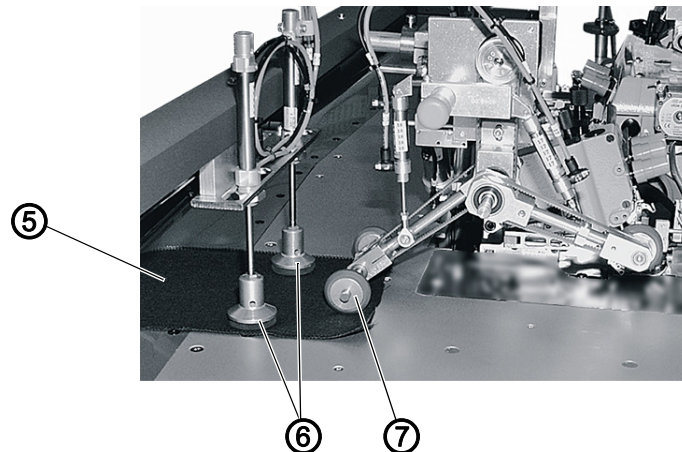
To achieve a proper seam course, the sewing material must be released as soon as the feed dog has caught the material.



### Information

The loading process can be canceled by pulling the sewing material back from the area of the light barrier (2).  
If sewing has started, the automatic sewing process can only be canceled by pressing the program stop key (📖 p. 44).

Fig. 24: Starting the automatic sewing process (2)

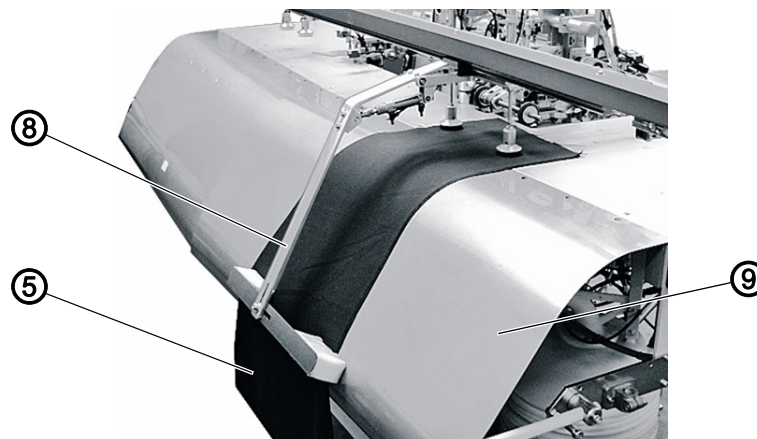


(5) - Sewing material  
(6) - Stamp

(7) - Outfeed roller

↪ The stamps (6) of the cross transport take over the sewing material (5) from the outfeed roller (7) of the A machine.

Fig. 25: Starting the automatic sewing process (3)



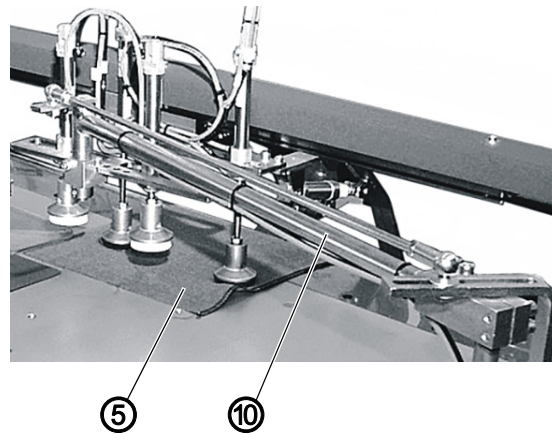
(5) - Sewing material  
(8) - Cross transport

(9) - Sliding plate

↪ The sewing material (5) is fed to the B machine via the sliding plate (9). If the sewing process at the B machine is still ongoing, the cross transport (8) is stopped at a waiting position in front of the B machine (📖 p. 36).



Fig. 26: Starting the automatic sewing process (4)

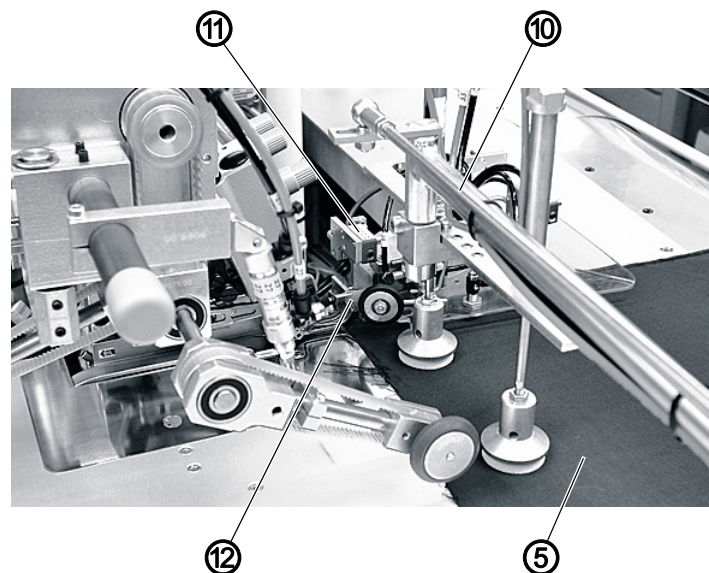


(5) - Sewing material

(10) - Swing arm

↙ The swing arm (10) swivels the sewing material (5) to the contour guide of the B machine.

Fig. 27: Starting the automatic sewing process (5)



(5) - Sewing material

(11) - Photocell

(10) - Swing arm

(12) - Edge guide

↙ The swing arm (10) positions the sewing material (5) at the edge guide (12) in the sensor area of the photocell (11). The sewing process at the B machine is started. The seam is automatically stitched down and serged.

↙ Finally, the sewing material (5) is fed from the worktable to the stacker and then stacked.

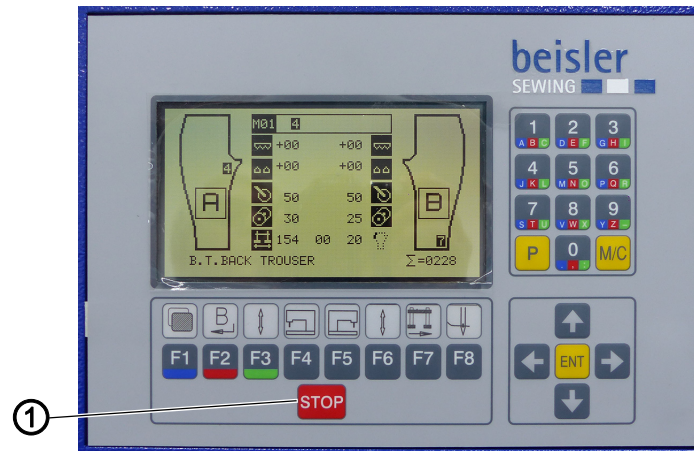
5. To complete the sewing process, steps 2 to 4 are repeated continuously.

6. Optionally with the fusing station:

As soon as the sewing process has been started at the A machine, the next knee lining can be fixed together with the front trousers at the fusing station.

## 4.15 Stopping the automatic sewing process

Fig. 28: Stopping the automatic sewing process



(1) - Program stop key

The sewing process is canceled with a press of the program stop key (1) on the control panel.



To stop the automatic sewing process:

1. Press the program stop key (1).
- ↳ All machine movements and the sewing process are stopped immediately.



### Important

To restart the machine after a program stop, all functions must be reset, and the machine cycle for the ongoing sewing process must be returned to the zero position.



To unlock the program stop key (1):

1. Press the program stop key (1) twice.
- ↳ The control performs a reset.

## 4.16 Moving the machine to the zero position

The machine must be moved to the zero position in the following situations:

- prior to production
- after machine tests
- after corrections to seam programs

to ensure a proper machine cycle during the sewing process.



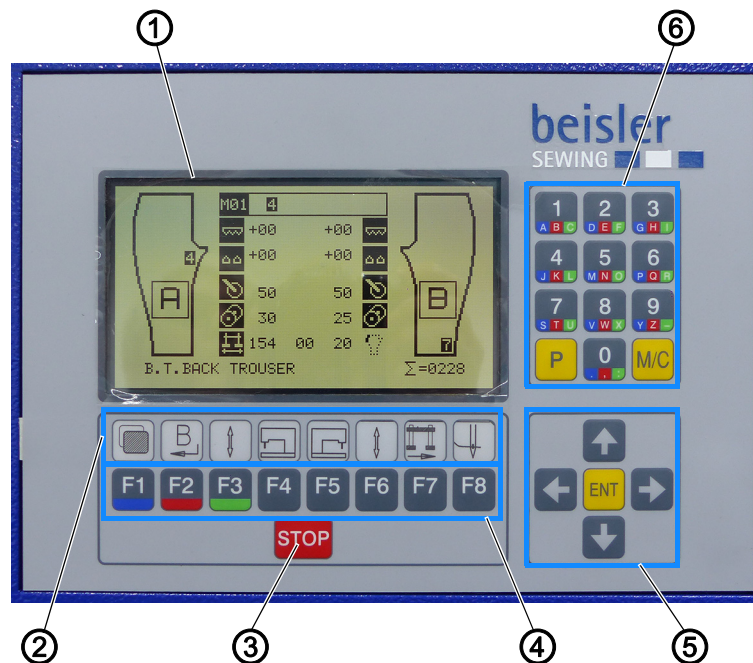
To move the machine to the zero position:

1. Press the program stop key twice (📖 p. 44).

## 5 Programming

### 5.1 Control panel

Fig. 29: Control panel



- |                        |                      |
|------------------------|----------------------|
| (1) - Display          | (4) - Function keys  |
| (2) - Symbol bar       | (5) - Arrow keys     |
| (3) - Program Stop key | (6) - Numeric keypad |

#### Display (1)

The display (2) shows all information about the control and the program parameters.


When a function is enabled or disabled for the seam program, the corresponding symbol and/or parameter value is shown or hidden.

#### Symbol bar (2)

The symbol bar (3) indicates the menus that can be requested using function keys (4) directly from the start level.

All other functions can be adjusted by selecting the corresponding menus on the program levels.



#### Program stop key (3)

The program stop key (7) is used to cancel the machine cycle ( p. 44).

#### Function keys (4)


The function keys (4) are used to call up the menus of the control.

### Arrow keys (5)

Pressing the arrow keys  /  will move the cursor one line up or down in the selected menu.



Pressing the arrow keys  /  will mark the desired parameter with the cursor

- in the selected menu.
- If the parameter list comprises several pages:  
browse forward or backward.

The Enter button  is used to confirm entries.

### Numeric keypad (6)

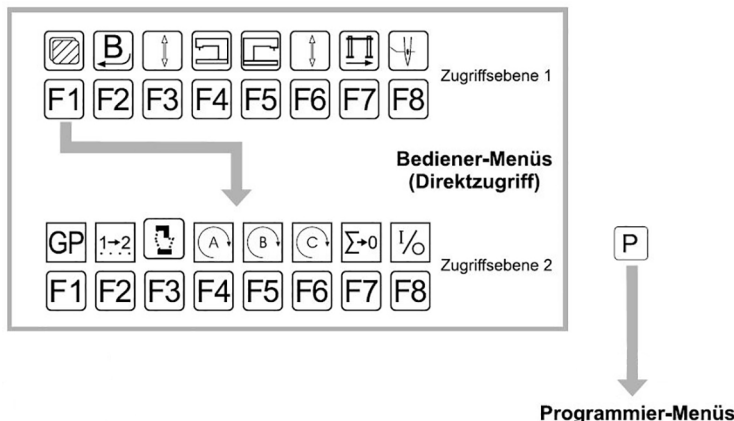
The numeric keypad (6) is used to enter all changeable number values.

- The seam programs **M01 - M09** are called up by entering the numeric designation.
- The seam programs **M10 - M20** are selected with a press of the button  and then called up by entering the numeric designation.
- The button  is used to request submenus, confirm input and exit the programming mode.

### 5.2 Menu structure

The functions of the user menu extend over 2 access levels and can be called up directly after the initialization of the control or after every RESET.

Fig. 30: Menu structure



### 5.3 User menus on access level 1

Fig. 31: User menus on access level 1

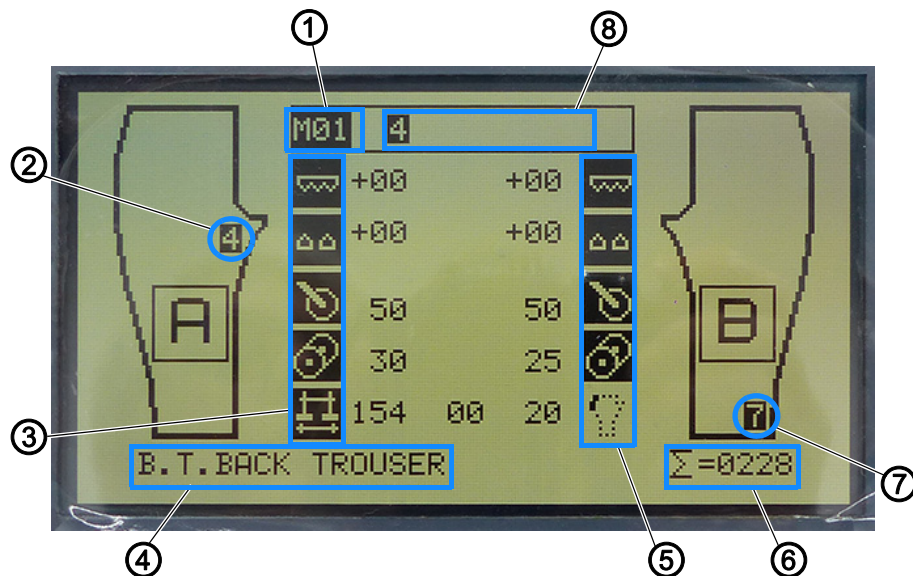


Function key	Meaning
F1	Call up access level 2 of the user menus
F2	Reset sewing process at the B machine
F3	A machine: Change sewing parameters (p. 52), activate or deactivate machine functions, (p. 58)
F4	Select machine parameters of the A machine (p. 59)
F5	Select machine parameters of the B machine (p. 59)

Function key	Meaning
F6	B machine: Change sewing parameters ( p. 52), activate or deactivate machine functions ( p. 58)
F7	Execute cross transport manually ( p. 60)
F8	Threading

### 5.3.1 Seam programs

Fig. 32: Seam programs ( 1)



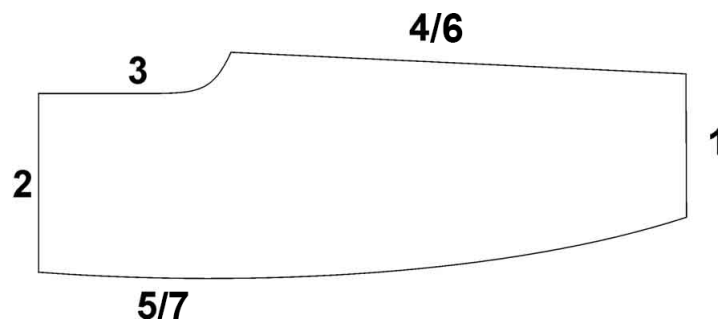
- |  |  |
|--|--|
| (1) - Seam program   | (5) - Symbols of the activated seam functions of the B machine |
| (2) - Seam number of the A machine                             | (6) - Piece counter  |
| (3) - Symbols of the activated seam functions of the A machine | (7) - Seam numbers 6-7 of the B machine                        |
| (4) - Program name   | (8) - up to 7 seams  |

The memory store of the program control can hold up to 20 programs (1) from M01 - M20. Each seam program (1) can be assigned a maximum of 7 seams (8) with the corresponding seam numbers (2) and (6). The seams are distinguished by the control parameters they were assigned during the programming of the seam program (1) as well as by the control functions that have been enabled.

The piece counter (6) counts each of the processed seams.



Fig. 33: Seam programs ( 2)



Description of the individual seams	
Short seam	Seam number: 1 = Hem
Short seam	Seam number: 2 = Waistband
Short seam	Seam number: 3 = Fly seam or seat seam
Long seam	Seam number: 4 = Crotch seam 6 = Crotch seam from the hem
Long seam	Seam number: 5 = Side seam 7 = Side seam from the hem

### Example

The example refers to the pre-programmed seam program **M03** (1), which can be used to alternately process short and long seams.

### At the A machine



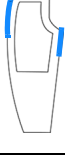
1. The short seams: **1/2/3** are serged manually.
2. The long seam: **4 / 5** is serged automatically.

### At the B machine

3. Each opposite long seam: **6 / 7** is processed further and serged automatically.

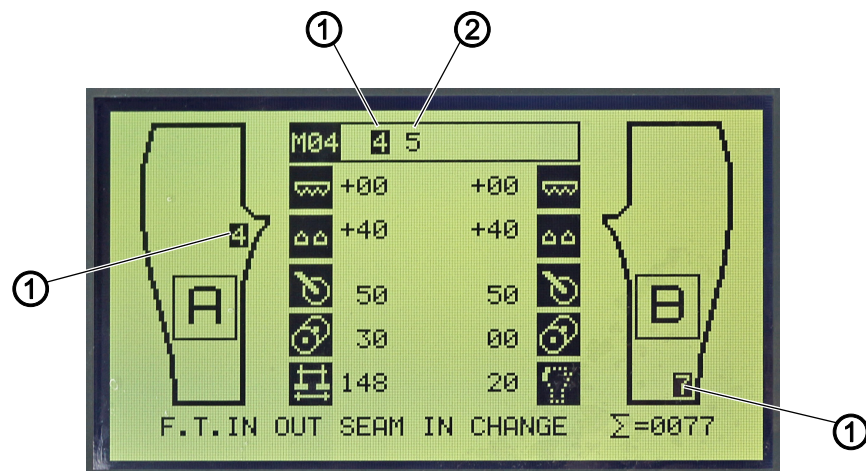
A seam program (1) can be combined with either one seam number (2)/(6) or several seam numbers (2)/(6). If a seam program (1) with several seam numbers (2)/(6) is called up, the short and long seams are processed one at a time in the order of the seam numbers (2)/(6) from left to right. The order of the seam numbers (2)/(6) can be changed arbitrarily.

The program control has been programmed with 3 seam programs (1) at the factory.

Program	Description
 M01	<b>Hind trousers normal</b>
 M02	<b>Hind trousers with strong hip curve</b> Marking on the hind trousers indicates where fullness has been programmed for the side seam.
 M03	<b>Front trousers with knee lining</b> The marking on the front trousers where fullness has been programmed for the side and the crotch seam.

### 5.3.2 Selecting a seam program

Fig. 34: Selecting a seam program



(1) - Active seam number

(2) - Passive seam number

The numeric keypad (6) is used to enter all changeable number values.

- The seam programs **M01 - M09** are called up by entering the numeric designation.
- The seam programs **M10 - M20** are selected with a press of the button **M/C** and then called up by entering the numeric designation.

The button **P** is used to request submenus, confirm input and exit the programming mode.





To select one of the seam programs 01 - 09 on the control panel:

1. Use the numeric keypad to enter the number of the seam program.





To select one of the seam programs 10 - 20 on the control panel:

1. Press the **M** button.
- ↪ The memory store is called up.
2. Use the numeric keypad to enter the number of the seam program.



To activate a seam number of a selected seam via direct access:

1. Use the buttons  /  to place the cursor on the seam number.
- ↪ The active seam number (1) is shown inverted.

### 5.3.3 Changing the functions of the seam programs

For the A and the B machine, you can modify the following functions of a seam program separately within a range of values or enable or disable them altogether as executable machine functions:













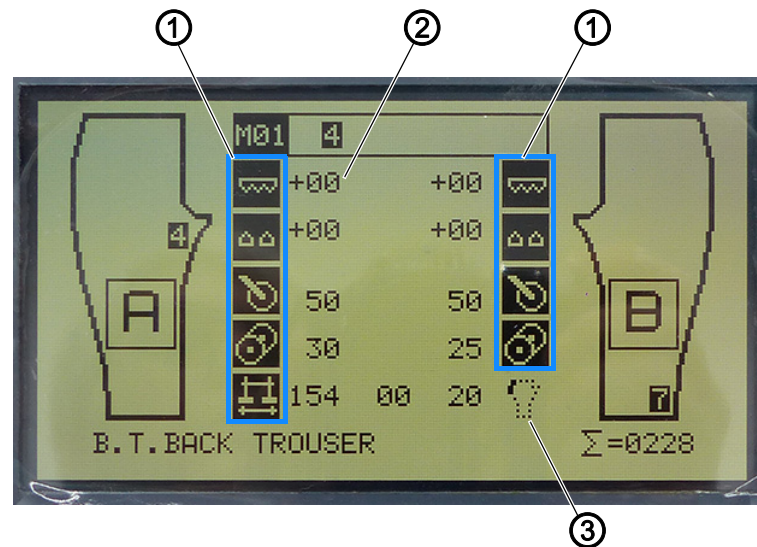
Function	Description
 Differential top feed	Addition to basic setting (  p. 53)
 Differential bottom feed	Addition to basic setting (  p. 54)
 Puller	Parameter 14, speed (  p. 56)
 Outfeed roller	Parameter 30, transport distance (  p. 579)
 Cross transport	Parameter 39, transport distance (  p. 57)
 Sewing speed	Basic speed value (  p. 58)

Fig. 35: Changing the functions of the seam programs



(1) - Enabled functions  
(2) - Input field

(3) - Disabled functions

Enabled functions (1) are shown as an inverted symbol.  
Disabled functions (3) are shown as a line drawing on a light background.

The parameter value that has been assigned to a function is shown in the corresponding input field (2) next to the function symbol.

### 5.3.4 Changing parameter values




To change a parameter value:

1. Press and hold button **F3** for the A machine / button **F6** for the B machine until the input field (2) next to the desired parameter is highlighted in black.
2. Press the button **←** / **→**.
  - ↪ The parameter value is increased/reduced.
3. Press the **P** button.
  - ↪ The input is confirmed.
  - ↪ The control exits Programming mode.

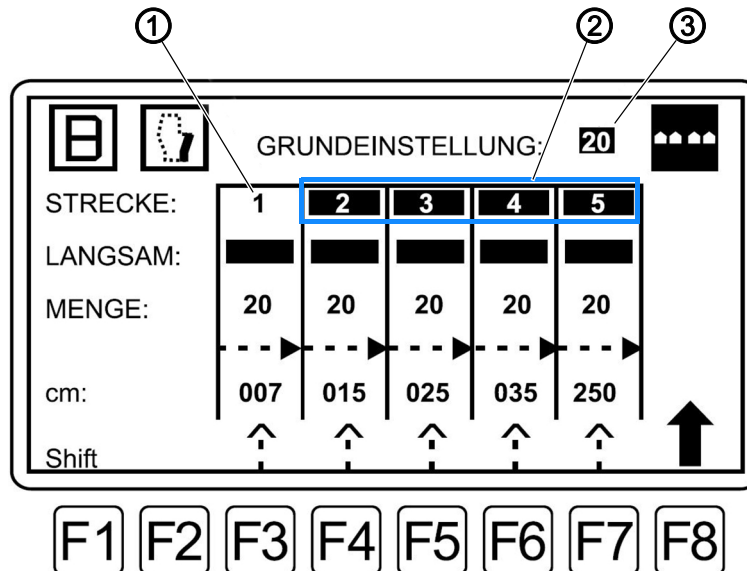


### 5.3.5 Differential top feed

The quick adjustment of the differential top feed can be used - both on the A and the B machine - to correct the fullness distribution ( p. 33).

For this purpose, you can use a quick adjustment to also adjust the position of the differential top feed relative to the main feed dog of the sewing equipment within a range of **-19 to +19** in the input field (3). This setting will only affect the section of the seam that was activated for fullness.

Fig. 36: Differential top feed



(1) - Individual section  
(2) - Remaining sections

(3) - Input field

### Adjustment of the differential top feed





To adjust the differential top feed:

1. Press the button  / .

**OR**

Use the two-digit value on the numeric keypad.

2. Press the  button.

 The input is confirmed.

 The control exits Programming mode.

### Activating/deactivating an individual section



To activate/deactivate an individual section:

1. Press the function key  to .

2. Press the **P** button.
- ↪ The input is confirmed.
- ↪ The control exits Programming mode.

### Adjusting the fullness and the length of the section



To adjust the fullness and the length of the section:

1. To activate/deactivate the **input field**:

Press the button / .

2. To change the **value**:

Press the button / .

**OR**

Use the two-digit value on the numeric keypad.

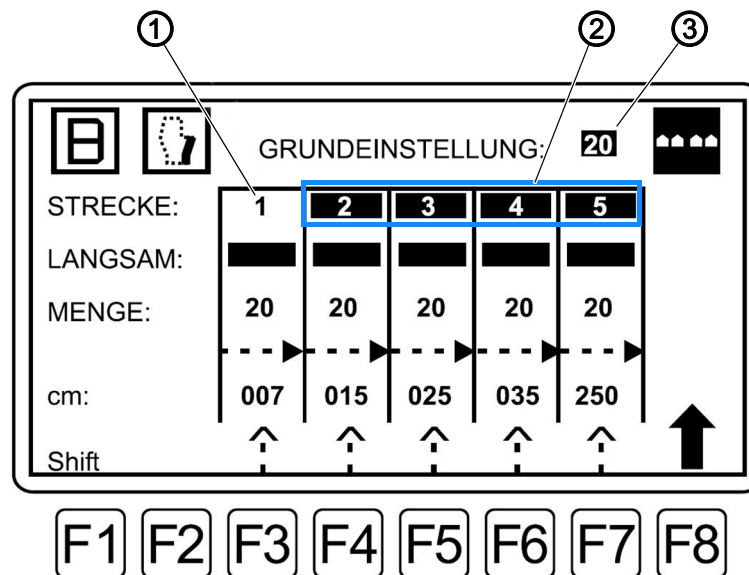
3. Press the **P** button.
- ↪ The input is confirmed.
4. The control exits Programming mode.



### 5.3.6 Differential bottom feed

You can use a quick adjustment to also adjust the position of the differential bottom feed relative to the main feed dog of the sewing equipment within a range of **-19 to +19** in the input field (3). This setting will only affect the section of the seam that was activated for fullness.

Fig. 37: Differential bottom feed



- (1) - Individual section  
(2) - Remaining sections

- (3) - Input field

### Adjustment of the differential bottom feed





To adjust the differential bottom feed:

1. Press the button  / .

**OR**

Use the two-digit value on the numeric keypad.

2. Press the  button.

 The input is confirmed.


3. The control exits Programming mode.


### Activating/deactivating an individual section



To activate/deactivate an individual section:

1. Press the function key  to .

2. Press the  button.

 The input is confirmed.

3. The control exits Programming mode.

### Adjusting the fullness and the length of the section



To adjust the fullness and the length of the section:

1. To activate/deactivate the **input field**:

Press the button  / .


2. To change the **value**:

Press the button  / .

**OR**

Use the two-digit value on the numeric keypad.

3. Press the  button.

 The input is confirmed.

-  The control exits Programming mode.



### 5.3.7 Puller

The photocell identifies the deviation of the fabric contour from the ideal contour and regulates, if necessary, the speed of the puller.

- If the workpieces are shifted aside from the stop during the feed, the speed of the puller is too high,
- if the workpieces curl up at the stop, the speed is too low.

The basic speed of the puller can be altered via the input field.

Parameter	Function
14	Puller speed • Main parameter/basic setting of the rotational speed
15	Higher puller speed • Increase the rotational speed if the workpiece curls up at the stop
16	Lower puller speed • Reduce the rotational speed if the workpiece is shifted aside from the stop
17	Section until puller down • Section until the puller lowers after the sewing start
18	Section with puller down • Length of the section along which the puller pulls the workpiece
19	Section puller lifting • Length of the section during which the puller is lifted to release the sewing material
33	Until help roller down • A machine: Section following the sewing start after which the contour roller lowers • B machine: Section after which photocell 15 recognizes <i>bright</i>
34	Duration help roller down • The length of the section under the guidance of the lowered contour roller



### 5.3.8 Outfeed roller

The parameter alters the length of the section over which the outfeed roller transports the workpiece from the A machine to the point where it is taken over by the cross transport / from the worktable to the stacker at the B machine.

Parameter	Function
25	Section until roller down <ul style="list-style-type: none"> <li>Seam section after the sewing start until the outfeed roller lowers (only required for heavy sewing material)</li> </ul>
26	Section with roller down <ul style="list-style-type: none"> <li>Length of the section over which the outfeed roller completes its transport</li> </ul>
27	Until roller stop/thread chain <ul style="list-style-type: none"> <li>Distance the outfeed roller will move before stopping to separate the chain</li> </ul>
28	Duration of roller stop/thread chain <ul style="list-style-type: none"> <li>Duration for which the outfeed roller will stop for separating the chain</li> </ul>
29	Roller speed [99] <ul style="list-style-type: none"> <li>Rotational speed of the outfeed roller</li> </ul>
30	Roller transport length [18] <ul style="list-style-type: none"> <li>Main parameter/ basic setting of the outfeed roller transport distance until the workpiece is delivered to the cross transport.</li> <li>The screw is the reference point</li> </ul>



### 5.3.9 Cross transport

This value is used to set the actual transport distance from the A machine to the B machine. Or, the distance covered by the cross transport to transport the workpiece from the waiting position in front of the B machine to the position where it is taken over by the swing arm.

Parameter	Function
37	CT takeover position <ul style="list-style-type: none"> <li>Position at which the cross transport takes over the workpiece at the A machine</li> </ul>
38	CT waiting position <ul style="list-style-type: none"> <li>Waiting position at which the cross transport stops in front of the B machine</li> </ul>
39	CT stop after photocell 14 bright <ul style="list-style-type: none"> <li>Main parameter/ basic setting of the transport distance from the waiting position to the point where the workpiece is taken over by the swing arm at the B machine</li> </ul>
40	CT dummy section photocell 14 <ul style="list-style-type: none"> <li>Response delay of the photocell for bypassing gaps/incisions in the workpiece</li> </ul>

Parameter	Function
41	CT speed A -> B • Travel speed of the cross transport
42	CT speed B -> A • Return speed of the cross transport
43	Waiting pos -> swivel pos Distance over which the workpiece is sewn at the B machine before a subsequent workpiece moves from the waiting position to the swing arm



### 5.3.10 Sewing speed at the hip curve

The parameter alters the basic value of the puller speed when stitching down the hip curve. The puller speed can be adapted depending on the shape of the hip curve.

Parameter	Function
10	Duration of fly blowing • Duration for which the compressed air blows the fly away
11	Until blade swivels • Distance from beginning of sewing at the B machine before the blade swivels in
20	Low speed at hip curve • Main parameter/basic setting of the puller speed
21	Low speed up to hip curve • The section sewn with the regular puller speed until the speed is reduced in the hip curve
22	Duration of low speed at hip curve • The section sewn at low speed in the hip curve
23	Puller after hip curve • Remaining section sewn again with the regular puller speed
35	Up to fly blowing • Length of the scanning distance to the seam end at the B machine before the fly is blown away
44	Swivel puller • This function is only required for the crotch seam Switch function on = 01 Switch function off = 00

### 5.3.11 Activating/deactivating functions



To activate/deactivate functions:

- To select a function at the A or the B machine: Press and hold the function key **F3** / **F6** until the corresponding input field is highlighted in black.



2. Press the **ENT** button.
  - ↪ The user interface switches to the menu *Global parameters*
3. Press the **F8** button.
  - ↪ The function is activated/deactivated
4. Press the **P** button.
  - ↪ The input is confirmed.
  - ↪ The control exits Programming mode.

### 5.3.12 Resetting the sewing process at the B machine

If the sewing process is interrupted at the B machine, the work process can be resumed by positioning the workpiece at the photocell of the contour guide.



To reset the sewing process at the B machine:



1. Press the **F2** button.
2. Position the workpiece at the photocell.
  - ↪ The sewing process is resumed automatically.

### 5.3.13 Selecting the machine parameters of the A machine/B machine

The settings define the sewing behavior of the A machine/B machine.

Parameter	Function
01	Sewing at low speed • Rotational speed at reduced sewing speed during the sewing start
02	Sewing at high speed • Rotational speed of the sewing speed
03	Sewing start at low speed • Section of decelerated sewing start
05	Section until contour guide down • Seam section sewn from the sewing start until the contour guide is lowered
06	Until table blowing on • Seam section sewn from the sewing start until the blowing nozzles of the working plate are supplied with compressed air
07	Duration of table blowing [70] • Section over which a workpiece is additionally transported by compressed air
09	Reduced speed • reduced speed switched on for the differential bottom feed using the function <i>Slow</i>

### 5.3.14 Executing cross transport manually

This function can be used to transport a workpiece manually from the A machine to the B machine.

The transport stamps are lowered, and the feed progresses from the transfer position to the B machine. Once the feed is complete, the further machine cycle is triggered and continued automatically.



To execute cross transport manually:

1. Position the workpiece below the stamps.
2. Press the **F7** button.



↳ The cross transport moves to the waiting position in front of the B machine.

↳ The further machine cycle is continued automatically.

### 5.3.15 Threading

This function allows for unhindered threading at both sewing heads. The photocells are switched off, and the sewing equipment is locked. The sewing feet are lowered, and the transport units are raised.



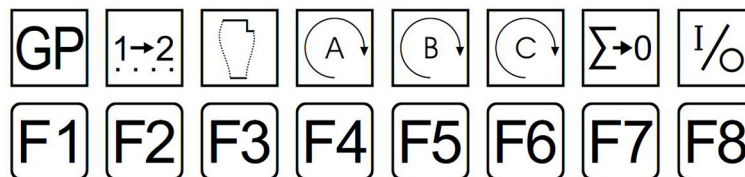
To use the *Thread* function:

1. Press the **F8** button.
2. Thread needle thread and hook thread.
3. Press the **F8** button.

↳ The machine is ready for sewing.

## 5.4 User menus on access level 2









Fig. 38: User menus on access level 2



To switch to access level 2:

1. Press the **F1** button.

↪ The functions of access level 2 are displayed:



Function key	Meaning
<b>F1</b>	List of global parameters (  p. 72)
<b>F2</b>	Activate/deactivate seams of a seam program (  p. 61)
<b>F3</b>	Adjust pre-seams (  p. 63)
<b>F4</b>	Activate A machine manually (  p. 64)
<b>F5</b>	Activate B machine manually (  p. 64)
<b>F6</b>	Activate C machine manually (optional) (  p. 64)
<b>F7</b>	Reset daily piece counter to zero (  p. 64)
<b>F8</b>	Show inputs/outputs (  <i>Service Instructions</i> )

### 5.4.1 Activating/deactivating seams of a seam program

You can deactivate individual seams in a seam program. A deactivated seam will not be deleted, but can be activated again at any time.





To **deactivate** a seam:

1. Press the **F2** button.
2. Select the desired seam number using the  /  buttons.
3. Press the button **0** on the numeric keypad.

4. Press the **P** button.
- ↵ The input is confirmed.
- ↵ The seam has been deactivated and is hidden from the seam sequence.



To **activate** a seam:

1. Press the **F2** button.
2. Select the desired seam number using the  /  buttons.

**OR**

Use the two-digit value on the numeric keypad.

3. Press the **P** button.
- ↵ The input is confirmed.
- ↵ The seam has been activated and is shown in the seam sequence.

### 5.4.2 Adjusting pre-seams

The A machine and the C machine can be programmed to process the pre-seams (short seams: waistband, fly and hem seam).



To adjust the pre-seams:



1. Press the **F3** button.

↳ The parameter list *Short seams* opens:

Parameter	Options
1	<ul style="list-style-type: none"> <li>• Hem speed Sewing speed</li> <li>• Hem differential top feed Basic setting fullness</li> <li>• Hem differential bottom feed Basic setting fullness</li> <li>• With puller Switch puller on = 01 Switch puller off = 00</li> </ul>
2	<ul style="list-style-type: none"> <li>• Waistband speed Sewing speed</li> <li>• Waistband differential top feed Basic setting fullness</li> <li>• Waistband differential bottom feed Basic setting fullness</li> <li>• With puller Switch puller on = 01 Switch puller off = 00</li> </ul>
3	<ul style="list-style-type: none"> <li>• Fly speed Sewing speed</li> <li>• Fly differential top feed Basic setting fullness</li> <li>• Fly differential bottom feed Basic setting fullness</li> <li>• With puller Switch puller on = 01 Switch puller off = 00</li> </ul>

#### Basic setting fullness



2. Select the desired input filed in the parameter list using the  /  button.

3. Press the **ENT** button.

↳ The desired parameter is activated.

4. To change the value: Press the  /  button.

**OR**

Use the numeric keypad to enter the desired value.

5. Press the **P** button.

↵ The input is confirmed.

### 5.4.3 Activating the A/B and C machine manually



To activate the A/B and C machine manually:

1. Press button **F4**, **F5** or **F6** and keep it pressed.

↵ The desired machine will run for as long as the button is pressed.

### 5.4.4 Resetting the daily piece counter



To reset the daily piece counter:

1. Press the **F7** button.

↵ The daily piece counter jumps to 0.  
The display shows  $\Sigma = 0000$ .

2. Press the **P** button.

↵ The input is confirmed.

↵ Return to access level 1.

## 5.5 Programming seam programs

The following steps are required for creating a new seam program:


- allocate a free storage location
- add new seams or copy existing seams into the seam program
- configure seams

You can both program a completely new seam program and copy and adjust an existing seam program.

### 5.5.1 Allocating a free storage location



Seam programs are stored in the memory store (**M**).

Up to **20 seam programs (M 01 - M 20)** can be stored in the memory store.

Storage locations **M 01**, **M 02** and **M 03** have been assigned pre-programmed seam programs at the factory ( p. 48).



To allocate a free storage location:

1. Press the **M** button.
2. Select the desired seam number using the  /  buttons.

**OR**

Use the two-digit value on the numeric keypad.



3. Press the **P** button.
- ↳ The input is confirmed.
- ↳ The control exits Programming mode.

### 5.5.2 Copying a seam into a seam program

You can copy existing seams into a seam program and adjust them afterwards.



To copy a seam into a seam program:

1. Press the **P** button.
- ↳ The user interface of the programming menu appears.
2. Press the **F1** button.
- ↳ The function *Init Parameters* is activated.
3. Press the **F3** button to *Copy from seam no.*
4. Select the desired seam number using the  /  buttons.

**OR**

Use the two-digit value on the numeric keypad.

5. Press the **ENT** button.
- ↳ The display shows the message *OK PLEASE WAIT*.  
The seam number is shown in the seam program.



You can now adjust the sewing parameters to the seam program ( p. 52).

### 5.5.3 Deleting a seam from a seam program

A seam program consists of several seams. The contents of these seams (sewing parameters) can be deleted completely.



To delete the seam of a seam program:

1. Press the **P** button.  
↳ The user interface of the programming menu appears.
2. Press the **F1** button.  
↳ The function *Init Parameters* is activated.
3. Press the **F4** button to *Delete seam*.
4. Select the desired seam number using the  /  buttons.

**OR**

Use the two-digit value on the numeric keypad.

5. Press the **P** button.  
↳ The display shows the message *Are you sure?*
6. Press the **ENT** button.  
↳ The display shows the message *OK PLEASE WAIT*.  
↳ The seam is deleted.



## 5.6 Memory functions

### NOTICE

#### Possible data loss!

Data loss may occur if the EPROM or the microprocessor of the control experiences a defect.

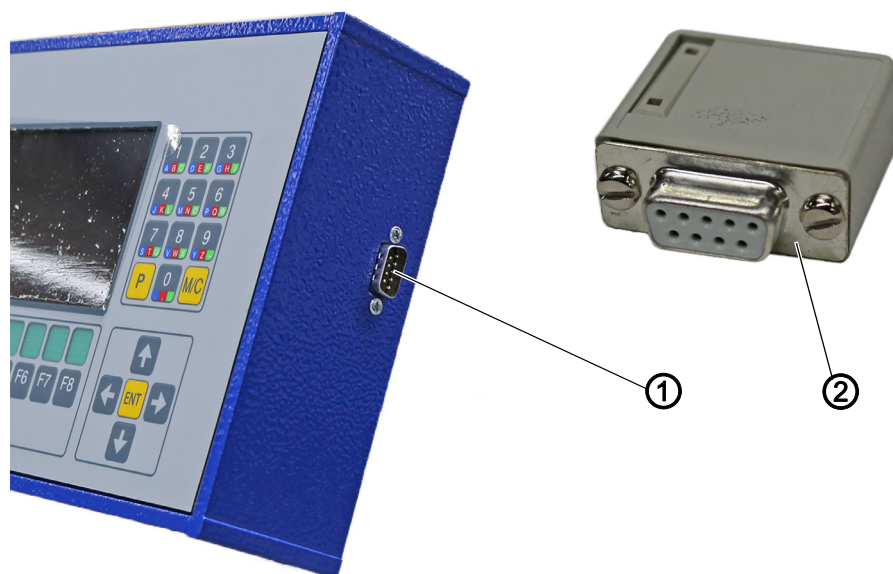
Save all seam programs and individual seams to a memory stick on a regular basis.

Do NOT use seam programs and individual seams stored on the memory stick provided by the manufacturer along with the standard seam programs.

### 5.6.1 Formatting the memory stick

If you use several memory sticks for data backups, you need to format them before using them for the first time.

Fig. 39: Formatting the memory stick



(1) - Slot

(2) - Memory stick



To format the memory stick:

1. Plug the memory stick (2) into the slot (1) of the control panel.

1. Press the **P** button.

↪ The user interface of the programming menu appears.

2. Press the **F2** button.


↪ The function *Memory stick* is activated.

3. Press the button **F5** for *Memory stick format*. The display shows the message *Are you sure?*
  4. Press the **ENT** button.
- ↳ While formatting is in progress, the display shows the message *OK PLEASE WAIT!*

### 5.6.2 Storing data on the memory stick



To store data on the memory stick:

1. Plug the memory stick into the slot of the control panel ( p. 67).

2. Press the **P** button.

↳ The user interface of the programming menu appears.

3. Press the **F2** button.

↳ The function *Memory stick* is activated.

4. To save the **selected seam**:

Press the button **F1** *Cur.seam <-> Stick*.

**OR**

To save **all seam programs**:

Press the button **F3** *Mach.memory <-> Stick*.

5. Press the **ENT** button.

↳ While saving is in progress, the display shows the message  
*OK PLEASE WAIT!*

### 5.6.3 Transferring data from the memory stick

#### NOTICE


##### Possible data loss!

A transfer of all seam programs to the control panel will overwrite ALL data.

Ensure that all relevant data has been backed up before transferring data from the memory stick.



To transfer data from the memory stick to the control panel:

1. Plug the memory stick into the slot of the control panel ( p. 67).

2. Press the **P** button.

↳ The user interface of the programming menu appears.

3. Press the **F2** button.

↳ The function *Memory stick* is activated.

4. To transfer **a single seam** to the control panel:

Press the button **F2** *Stick -> Cur.seam.*

#### OR

To transfer **all seam programs** to the control panel:

Press the button **F4** *Stick -> Mach.memory.*

5. Press the **ENT** button.



↳ While the transfer is in progress, the display shows the message *OK PLEASE WAIT!*

## 5.7 Additional programs

### 5.7.1 Language selection



To select a language:

1. Press the **P** button.  
↳ The user interface of the programming menu appears.
2. Press the **F5** button.  
↳ The function *Additional programs* is activated.
3. Press the button **F3** for *Language selection*.
4. Select the desired language using the  /  buttons.
5. Press the **ENT** button.  
↳ The selected language is applied on the control panel.

### 5.7.2 Piece counter

The total number of workpieces processed with the machine is indicated with a counter.  
It is NOT possible to reset this counter to 0.



To call up the piece counter:

1. Press the **P** button.  
↳ The user interface of the programming menu appears.
2. Press the **F5** button.  
↳ The function *Additional programs* is activated.
3. Press the button **F2** for *Piece counter*.

The total number of workpieces processed with the machine is displayed.

## 5.8 Global parameters

### NOTICE

#### Property damage may occur!

Improper alterations of the global parameters can negatively affect the production quality.

Improper alterations of the global parameters can result in damage to machine components.

The global parameters have been set to their optimal values at the factory and should not be changed if possible.

Global parameters are values that control the basic functions of the machine.







#### Important

Changing global parameters will result in changes to ALL stored seam programs.



To call up the list of global parameters:

1. Press the **P** button.  
↳ The user interface of the programming menu appears.
2. Press the **F1** button.  
↳ The function *Init Parameters* is activated.
3. Press the button **F1** for *EPROM Global Parameters*.
4. Select the desired parameter using the  /  buttons.
5. Press the **ENT** button.  
↳ The input field of the desired parameter opens.
6. Press the button  / .
- ↳ The parameter value is increased/reduced.
7. Press the **P** button.  
↳ The input is confirmed.  
↳ The control exits Programming mode.

### Global parameters

Parameter	Meaning
01	Photocell start delay seam beginning <ul style="list-style-type: none"> <li>• Time delay between loading process (photocell recognizes <i>dark</i>) and sewing start</li> </ul>
02	Photocell Dark → Foot down <ul style="list-style-type: none"> <li>• Time until the sewing foot is lowered and the thread chain is activated</li> </ul>
03	Thread lifting seam beginning <ul style="list-style-type: none"> <li>• Duration for which the needle thread is released before being tightened again</li> </ul>
04	Thread chain duration at the beginning <ul style="list-style-type: none"> <li>• Duration of the thread chain at seam beginning</li> <li>• 3-thread machines require a longer suction process</li> <li>• Switch off to save energy</li> </ul>
05	Section to be restitched <ul style="list-style-type: none"> <li>• Section where follow-up stitches are sewn if the sewing material is manually removed from the sewing equipment during sewing</li> </ul>
06	Thread chain duration at the end <ul style="list-style-type: none"> <li>• Duration of the thread chain at seam end</li> <li>• Switch off to save energy</li> </ul>
07	Thread lifting seam end <ul style="list-style-type: none"> <li>• Duration for which the needle thread is released at seam end</li> </ul>
08	Photocell blocking time at the end <ul style="list-style-type: none"> <li>• Time delay for inserting a new piece (blocking time after <i>bright</i> photocell)</li> </ul>
09	A machine roller stop with photocell <ul style="list-style-type: none"> <li>• Switching state of photocell 17</li> <li>• Switch function on = 01</li> <li>• Switch function off = 00</li> </ul>
10	Outfeed roller wait (manual) <ul style="list-style-type: none"> <li>• Duration for which the outfeed lower will be lowered during a manual seam</li> </ul>
12	Roller up → Cross transport start [0.1] <ul style="list-style-type: none"> <li>• Time delay after roller has been lifted until the cross transport starts</li> </ul>
13	Cross transport stop → Stamp down <ul style="list-style-type: none"> <li>• Time delay after the cross transport stops before the swing arm stamp is lowered at the transfer position</li> </ul>
14	Stamp down → Cross transport up <ul style="list-style-type: none"> <li>• Time delay after the swing arm stamp is lowered until the transport stamp of the cross transport is raised</li> </ul>
15	Cross transport up → Cross transport back <ul style="list-style-type: none"> <li>• Time delay after the transport stamp is raised until the cross transport moves back</li> </ul>
16	Until swivel in... <ul style="list-style-type: none"> <li>• Time delay until the swing arm swivels in</li> </ul>

Parameter	Meaning
17	Swivel in → Foot down • Time delay after the workpiece darkened the photocell until the sewing foot is lowered
18	Photocell dark → stamp up • Time delay after photocell 13 detected the workpiece until the swing arm stamp is raised
21	Stacker → Outfeed roller • Duration of the stacking pulse
22	A thread monitor sensitivity • Sensitivity of the thread monitor at the A head
23	B thread monitor sensitivity • Sensitivity of the thread monitor at the B head
24	<del>Scanning time contour guide</del> • <del>Scanning time of the contour control between Fast – Slow / Slow – Fast</del>
25	A Efka position top • Efka position A head, needle position at seam end
26	B Efka position top • Efka position B head, needle position at seam end
27	C Efka position top • Efka position C head, needle position at seam end
29	C head off/on mode... • Switch C machine on/off in combination with fusing station 00 = C machine and using station OFF 01 = C machine OFF, fusing station ON 02 = C machine ON, fusing station OFF 03 = C machine and fusing station ON • Systems without a C machine require that the fusing station be switched on (01)
30	C sewing speed • Sewing speed of the C machine
31	C Photocell Dark → Foot down • Time delay after the photocell recognized dark until the sewing foot is lowered and the thread chain is activated
32	C foot down → Sewing • Time delay after the sewing foot was lowered until sewing starts
33	C follow-up sewing time • Number of additional follow-up stitches sewn after the workpiece is fully sewn
34	C thread chain duration seam end • Duration of the thread chain at seam end Switch off to save energy
35	C sewing off → Foot up • Time delay for lifting the sewing foot after sewing
36	C photocell blocking time • Time delay for inserting a new piece



## 6 Maintenance

### WARNING



#### Risk of injury from sharp parts!

Punctures and cutting possible.

Prior to any maintenance work, switch off the machine or set the machine to threading mode.

### WARNING



#### Risk of injury from moving parts!

Crushing possible.

Prior to any maintenance work, switch off the machine or set the machine to threading mode.

This chapter describes maintenance work that needs to be carried out on a regular basis to extend the service life of the machine and achieve the desired seam quality.

Advanced maintenance work may only be carried out by qualified specialists.

### Maintenance intervals

Work to be carried out	Operating hours			
	8	40	160	500
<b>Machine head</b>				
Remove sewing dust and thread residues	•			
Check the oil level		•		
First oil change			•	
Subsequent oil changes	every 2 years			
<b>Control box</b>				
Remove sewing dust and thread residues	•			
<b>Air suction device</b>				
Empty container	•			
Remove sewing dust and thread residues		•		
<b>Pneumatic system</b>				
Check the water level in the pressure regulator	•			
Clean the filter element in the maintenance unit.				•
Check the tightness of the system	•			

## 6.1 Cleaning

### WARNING



#### **Risk of injury from flying particles!**

Flying particles can enter the eyes, causing injury.

Wear safety goggles.

Hold the compressed air gun so that the particles do not fly close to people.

Make sure no particles fly into the oil pan.

### NOTICE

#### **Property damage from soiling!**

Sewing dust and thread residues can impair the operation of the machine.

Clean the machine as described.

### NOTICE


#### **Property damage from solvent-based cleaners!**

Solvent-based cleaners will damage paintwork.

Use only solvent-free substances for cleaning.



To clean the machine:

1. Switch off the machine at the main switch ( p. 19).
2. Remove fabric residues.
3. Remove any dust and thread residues using a compressed air gun.
4. Use a compressed air gun to blow out the entire area around the thread guides.
5. Wipe the machine dry using a dry, clean cloth.
6. Remove and empty the suction container.

## 6.2 Lubricating

### CAUTION



#### Risk of injury from contact with oil!

Oil can cause a rash if it comes into contact with skin.

Avoid skin contact with oil.  
If oil has come into contact with your skin, wash the affected areas thoroughly.

### NOTICE

#### Property damage from incorrect oil!

Incorrect oil types can result in damage to the machine.

Only use oil that complies with the data in the instructions.

### CAUTION




#### Risk of environmental damage from oil!

Oil is a pollutant and must not enter the sewage system or the soil.

Carefully collect up used oil.  
Dispose of used oil and oily machine parts in accordance with national regulations.

The machine is equipped with a central lubrication system. The bearings are supplied from the oil reservoir.

Information on refilling and the specification of the oil used is provided in the separately included operating Instructions of the sewing head manufacturer ( *Operating Instructions Machine Head*).




#### Proper setting

You check the oil level of the corresponding sewing head at the inspection glass.

The oil level is between the minimum level and the maximum level marking.

To check the lubrication of the machine head:



1. Check the oil level indicator at the inspection glass every day.
2. Refill oil if the oil level drops to/below the minimum level marking ( *Operating Instructions Machine Head*).

## 6.3 Servicing the pneumatic system

### 6.3.1 Adjusting the operating pressure

#### NOTICE

##### Property damage from incorrect adjustment!

Incorrect operating pressure can result in damage to the machine.

Ensure that the machine is only used when the operating pressure is set correctly.

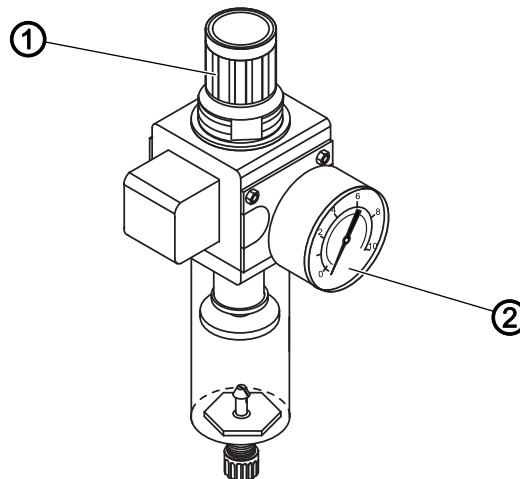


#### Proper setting

Refer to the **Technical Data** (📖 p. 99) chapter for the permissible operating pressure. The operating pressure cannot deviate by more than  $\pm 0.5$  bar.

Check the operating pressure on a daily basis.

Fig. 40: Adjusting the operating pressure



(1) - Pressure regulator

(2) - Pressure gage



To adjust the operating pressure:

1. Pull the pressure regulator (1) up.
2. Turn the pressure regulator until the pressure gage (2) indicates the proper setting:
  - Increase pressure = turn clockwise
  - Reduce pressure = turn counterclockwise
3. Push the pressure regulator (1) down.

### 6.3.2 Draining the water condensation

#### NOTICE

##### Property damage from excess water!

Excess water can cause damage to the machine.

Drain water as required.

Water condensation accumulates in the water separator (2) of the pressure regulator.

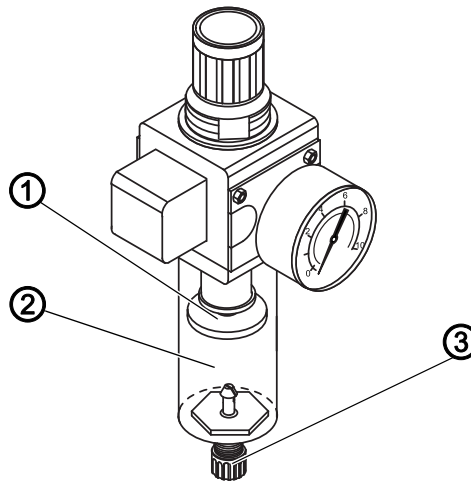


##### Proper setting

Water condensation must not rise up to the level of the filter element (1).

Check the water level in the water separator (2) on a daily basis.

Fig. 41: Draining the water condensation



(1) - Filter element

(2) - Water separator

(3) - Drain screw



To drain water condensation:

1. Disconnect the machine from the compressed air supply.
2. Place the collection tray under the drain screw (3).
3. Loosen the drain screw (3) completely.
4. Allow water to drain into the collection tray.
5. Tighten the drain screw (3).
6. Connect the machine to the compressed air supply.

### 6.3.3 Cleaning the filter element

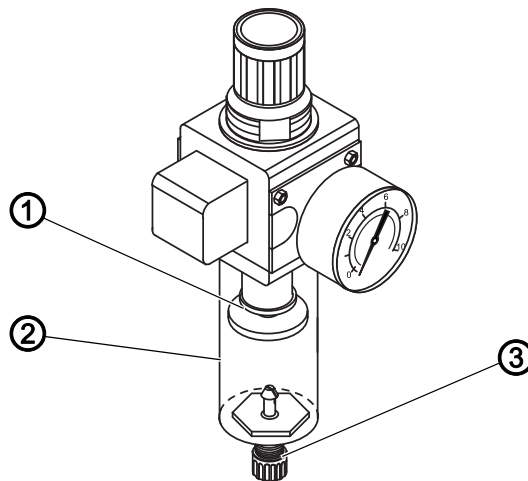
#### NOTICE

**Damage to the paintwork from solvent-based cleaners!**

Solvent-based cleaners damage the filter.

Use only solvent-free substances for washing out the filter tray.

Fig. 42: Cleaning the filter element



(1) - Filter element  
(2) - Collection tray

(3) - Drain screw



To clean the filter element:

1. Disconnect the machine from the compressed air supply.
2. Drain the water-oil mixture (📖 p. 79).
3. Unscrew the collection tray (2).
4. Unscrew the filter element (1).
5. Blow out the filter element (1) using the compressed air gun.
6. Wash out the filter tray using benzine.
7. Tighten the filter element (1).
8. Tighten the collection tray (2).
9. Tighten the drain screw (3).
10. Connect the machine to the compressed air supply.

## 6.4 Parts list

A parts list can be ordered from Dürkopp Adler. Or visit our website for further information at:

[www.duerkopp-adler.com](http://www.duerkopp-adler.com)







## 7 Setup

### WARNING



#### **Risk of injury from cutting parts!**

Cutting injuries may be sustained while unpacking and setting up the machine.

Only qualified specialists may set up the machine.  
Wear safety gloves.

### WARNING



#### **Risk of injury from moving parts!**

Crushing injuries may be sustained while unpacking and setting up the machine.

Only qualified specialists may set up the machine.  
Wear safety shoes.

### 7.1 Checking the scope of delivery

The scope of delivery depends on your specific order. Check that the scope of delivery is correct after taking delivery.

### 7.2 Removing the transport locks

Remove all transport locks before setting up the machine:

- Protective films
- Lashing straps

### 7.3 Adjusting the working height

#### WARNING



#### Risk of injury from moving parts!

The tabletop can sink under its own weight when the screws on the stand bars are loosened. Crushing possible.

Ensure that your hands are not jammed when loosening the screws.

#### CAUTION

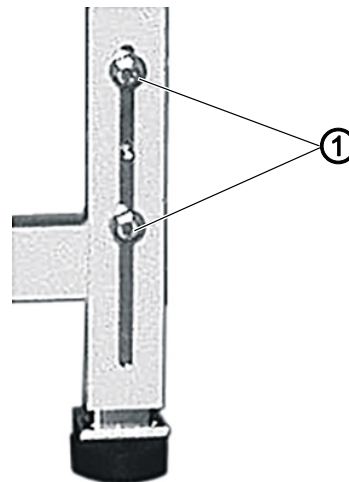


#### Risk of musculoskeletal damage from incorrect setting!

The operator can sustain musculoskeletal damage if failing to comply with the ergonomic requirements.

Adjust the working height to the body height of the person who will operate the machine.

Fig. 43: Adjusting the working height



(1) - Screws

The working height can be adjusted continuously between 850 mm and 1200 mm. The distance is measured from the upper edge of the tabletop to the floor.



To adjust the working height:

1. Loosen the screws (1) on the stand bars.
2. Adjust the tabletop to the desired height.

**Important**

Pull out or push in the tabletop evenly at both sides to prevent it from jamming.

3. Tighten the screws (1).

**7.4 Electrical connection****DANGER****Risk of death from live components!**

Unprotected contact with electricity can result in serious injuries or death.

Only qualified specialists may perform work on electrical equipment.

**Important**

The voltage on the type plate of the sewing motor must correspond to the mains voltage.

**7.5 Pneumatic connection****NOTICE****Property damage from oily compressed air!**

Oil particles in the compressed air can cause malfunctions of the machine and soil the sewing material.

Ensure that no oil particles enter the compressed air supply.

**NOTICE****Property damage from incorrect adjustment!**

Incorrect system pressure can result in damage to the machine.

Ensure that the machine is only used when the system pressure is set correctly.

The pneumatic system of the machine and of the additional equipment must be supplied with dry and oil-free compressed air. The supply pressure must lie between 8 and 10 bar.

### 7.5.1 Assembling the compressed air maintenance unit



To assemble the compressed air maintenance unit:

1. Connect the connection hose to the compressed air supply using a hose coupling R 1/4".

### 7.5.2 Adjusting the operating pressure

#### NOTICE

#### Property damage from incorrect operating pressure!

Incorrect operating pressure can result in damage to the machine.

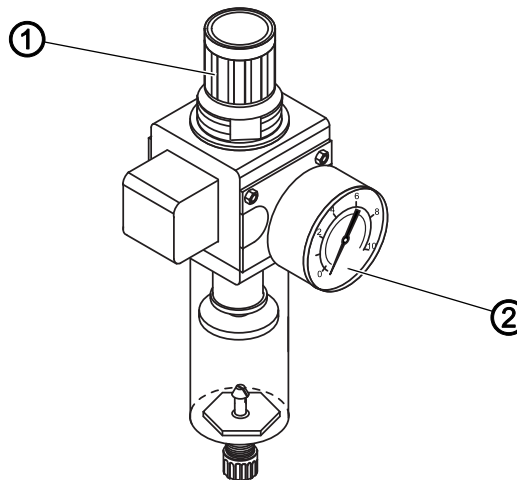
Ensure that the machine is only used when the operating pressure is set correctly.



#### Proper setting

Refer to the **Technical Data** (📖 p. 99) chapter for the permissible operating pressure. The operating pressure cannot deviate by more than  $\pm 0.5$  bar.

Fig. 44: Adjusting the operating pressure



(1) - Pressure regulator

(2) - Pressure gage



To adjust the operating pressure:

1. Pull the pressure regulator (1) up.
2. Turn the pressure regulator (1) until the pressure gage (2) indicates the proper setting:
  - Increase pressure = turn clockwise
  - Reduce pressure = turn counterclockwise
3. Push the pressure regulator (1) down.

## **7.6 Performing a test run**

When setup is complete, perform a test run to check the functionality of the machine.



## 8 Decommissioning

### WARNING



#### **Risk of injury from a lack of care!**

Serious injuries may occur.

ONLY clean the machine when it is switched off.  
Allow ONLY trained personnel to disconnect the machine.

### CAUTION



#### **Risk of injury from contact with oil!**

Oil can cause a rash if it comes into contact with skin.

Avoid skin contact with oil.  
If oil has come into contact with your skin, wash the affected areas thoroughly.



To decommission the machine:

1. Switch off the machine (📖 p. 19).
2. Unplug the power plug.
3. If applicable, disconnect the machine from the compressed air supply.
4. Remove residual oil from the oil pan using a cloth.
5. Cover the control panel to protect it from soiling.
6. Cover the control to protect it from soiling.
7. Cover the entire machine if possible to protect it from contamination and damage.





## 9 Disposal

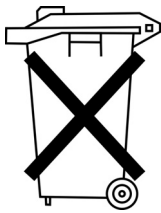
### CAUTION



#### **Risk of environmental damage from improper disposal!**

Improper disposal of the machine can result in serious environmental damage.

**ALWAYS** comply with the national regulations regarding disposal.



The machine must not be disposed of in the normal household waste.

The machine must be disposed of in a suitable manner in accordance with all applicable national regulations.

When disposing of the machine, be aware that it consists of a range of different materials (steel, plastic, electronic components, etc.). Follow the national regulations when disposing these materials.



## 10 Troubleshooting

### 10.1 Customer Service

Contact for repairs and issues with the machine:

#### Dürkopp Adler GmbH

Potsdamer Str. 190  
33719 Bielefeld, Germany

Tel. +49 (0) 180 5 383 756

Fax +49 (0) 521 925 2594

Email: [service@duerkopp-adler.com](mailto:service@duerkopp-adler.com)

Internet: [www.duerkopp-adler.com](http://www.duerkopp-adler.com)



### 10.2 Messages of the software

Please contact customer service if an error occurs that is not described here. Do not attempt to correct the error yourself.

Error message	Meaning	Corrective
Photocells not lighted: 10; 11; 12; 13; 14; 15; 16; 17	Photocell fails to respond to changing light	<ul style="list-style-type: none"> <li>• Adjust photocell correctly</li> <li>• Clean reflecting surface</li> <li>• Replace photocell</li> </ul>
ES 02	Switch not pressed	<ul style="list-style-type: none"> <li>• Air pressure missing</li> <li>• Adjust switch</li> <li>• Replace switch</li> </ul>
I/O communication error	Error during data transmission between control and I/O module	<ul style="list-style-type: none"> <li>• Check all cable connections (flat ribbon cables)</li> <li>• if required, replace control module 9020013 or module 9020024</li> </ul>
Cross transport position read error	no valid cross transport position readable from control	<p>If this message appears only intermittently (alternating with other error messages), data transmission via bus is faulty</p> <ul style="list-style-type: none"> <li>• Check flat ribbon cable connector of adapter module 9020020 &gt; 9020013</li> <li>• Replace adapter module 9020020</li> <li>• Replace I/O module 9020013</li> </ul>

Error message	Meaning	Corrective
Cross transport position	The cross transport did not reach the target position	<ul style="list-style-type: none"> <li>• Check CT motor with test program <i>Cross transport continuous test</i></li> <li>• Check connections to cross transport</li> <li>• Check DC 110V supply for stepper motor</li> <li>• Replace BERGER power unit</li> <li>• Replace BERGER motor</li> <li>• Replace adapter PCB 9020020</li> <li>• if motor fails to run, the cause may be the cross transport driver circuit or power unit</li> </ul> <p>Check the state of the LEDs at the power PCB (BERGER) and continue troubleshooting in accordance with diagnostics for BERGER motor, as required</p> <ul style="list-style-type: none"> <li>• Check connection to the power unit</li> </ul>
Cross transport stop	Limit switch ES01 has switched during transport although internal distance counter detected that cross transport was far from this switch	<ul style="list-style-type: none"> <li>• Check distance counter with test program (steps)</li> <li>• if counter is faulty, replace motor or Replace adapter PCB 9020020</li> <li>• if counter is OK, check switch ES01 and connections</li> </ul>
Error 09: Cross transport cannot leave the switch	during the initialization motion after switch-on, the cross transport has reached ES01, but cannot move away from this switch (direction is not reversed)	<ul style="list-style-type: none"> <li>• Using the test program CT motor actuation, enter a slower speed so that CT motor runs and reverse direction using arrow keys</li> <li>• if motor fails to reverse direction, check connection between 9020020 and power unit (connector); check BERGER power unit</li> <li>• if motor reverses direction, check limit switch ES01</li> </ul>
Cross transport scan photocell 14	while moving from the A machine to the B machine, the photocell 14 failed to detect the workpiece properly	<ul style="list-style-type: none"> <li>• Check photocell and film</li> <li>• check programmed distances</li> <li>• Check LED 5 at I/O module 9020013; this LED indicates the status of photocell 14</li> </ul>
B head error follow-up sewing with F2	Disturbance at the B machine	<ul style="list-style-type: none"> <li>• the sewing of a workpiece in the B machine cannot be finished; continue sewing manually</li> </ul>
B head runs too long	Timeout at photocell 13 (does not light up during sewing after 10 s)	<ul style="list-style-type: none"> <li>• Disturbance during sewing process a workpiece is possibly blocking the transport or covering the reflective surface</li> </ul>

Error message	Meaning	Corrective
A head thread breaking	A machine thread monitor has responded	<ul style="list-style-type: none"> <li>• Re-thread the thread</li> <li>• Change sensitivity in GP 22, 23</li> </ul>
B head thread breaking	B machine thread monitor has responded	<ul style="list-style-type: none"> <li>• Re-thread the thread</li> </ul>
Error 48: I/O RES	internal hardware failure during data transmission	<ul style="list-style-type: none"> <li>• Replace adapter PCB 9020013 - 9020020</li> </ul>

### 10.3 Errors in sewing process

Error	Possible causes	Corrective
Unthreading at seam beginning	Needle thread tension is too firm	Check needle thread tension
Thread breaking	Needle thread and hook thread have not been threaded correctly	Check threading path
	Needle is bent or sharp-edged	Replace needle
	Needle is not inserted correctly into the needle bar	Insert the needle correctly into the needle bar
	The thread used is unsuitable	Use recommended thread
	Thread tensions are too tight for the thread used	Check thread tensions
	Thread-guiding parts, such as thread tube, thread guide or thread take-up disk, are sharp-edged	Check threading path
	Throat plate, hook or spread have been damaged by the needle	Have parts reworked by qualified specialists
Skip stitches	Needle thread and hook thread have not been threaded correctly	Check threading path
	Needle is blunt or bent	Replace needle
	Needle is not inserted correctly into the needle bar	Insert the needle correctly into the needle bar
	The needle thickness used is unsuitable	Use recommended needle thickness
	The reel stand is assembled incorrectly	Check the assembly of the reel stand
	Thread tensions are too tight	Check thread tensions
	Throat plate, hook or spread have been damaged by the needle	Have parts reworked by qualified specialists

Error	Possible causes	Corrective
Loose stitches	Thread tensions are not adjusted to the sewing material, the sewing material thickness or the thread used	Check thread tensions
	Needle thread and hook thread have not been threaded correctly	Check threading path
Needle breakage	Needle thickness is unsuitable for the sewing material or the thread	Use recommended needle thickness





## 11 Technical data

### 11.1 Data and characteristic values

Technical data	Unit	Class 1365-7
Machine type		2-head serging unit (3-head optional)
Stitch type		503 2-thread/504 3-thread
Hook type		Chainstitch hook, Overlock hook
Number of needles		1
Needle system		B27
Needle strength	[Nm]	75-90
Thread strength	[Nm]	Bulked thread 100-120
Stitch length	[mm]	1-6
Speed maximum	[min <sup>-1</sup> ]	6500
Speed on delivery	[min <sup>-1</sup> ]	6000
Seam distance	[mm]	6, 5, 4
Sewing material		light/medium
Mains voltage	[V]	1 x 230
Mains frequency	[Hz]	56/60
Operating pressure	[bar]	6
Length (base unit)	[mm]	2300
Width (base unit)	[mm]	1500
Height (base unit)	[mm]	1700
Desk height	[mm]	890-1250
Weight	[kg]	370

### 11.2 Requirements for fault-free operation

Compressed air quality must conform to ISO 8573-1: 2010 [7:4:4].







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