

581

## Operating Instructions

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

All rights reserved.

Property of Dürkopp Adler AG and protected by copyright. Any reuse of these contents, including extracts, is prohibited without the written approval in advance of Dürkopp Adler AG.

Copyright © Dürkopp Adler AG 2015

<b>1</b>	<b>About these instructions .....</b>	<b>5</b>
1.1	For whom are these instructions intended?.....	5
1.2	Representational conventions – Symbols and characters	5
1.3	Other documents .....	7
1.4	Liability.....	7
1.4.1	Transportation .....	8
1.4.2	Intended use.....	8
<b>2</b>	<b>Performance description .....</b>	<b>11</b>
2.1	Features .....	11
2.2	Declaration of conformity.....	14
2.3	Additional equipment .....	14
2.4	Technical data .....	17
<b>3</b>	<b>Safety.....</b>	<b>19</b>
3.1	Basic safety instructions .....	19
3.2	Signal words and icons used in warnings.....	20
<b>4</b>	<b>Machine description.....</b>	<b>25</b>
4.1	Control panel .....	26
4.2	Software description .....	29
4.2.1	Structure .....	31
4.2.2	Modes of operation.....	31
<b>5</b>	<b>Operation.....</b>	<b>33</b>
5.1	Switching the machine on and off.....	33
5.2	Activating and deactivating threading mode .....	35
5.3	Using threads and gimp threads.....	36
5.4	Removing and fitting clamping plates .....	37
5.5	Swiveling the sewing machine up and down .....	40
5.6	Threading the needle thread .....	42
5.7	Threading the looper thread .....	44
5.8	Threading the gimp thread .....	47
5.9	Adjusting the thread tension .....	49
5.9.1	Adjusting the needle thread tension .....	50
5.9.2	Setting the looper thread tension.....	51
5.10	Changing the needle .....	52
5.11	Changing the blade .....	53

---

5.12	Sewing .....	54
5.12.1	Sewing using the push buttons .....	54
5.12.2	Sewing with the foot pedal .....	56
5.13	Customer service .....	58
<b>6</b>	<b>Maintenance .....</b>	<b>59</b>
6.1	Inspection .....	60
6.2	Cleaning .....	62
6.3	Lubricating .....	63
6.4	Changing the cutting blocks and blade .....	65
6.4.1	Sub-class without multiflex .....	65
6.4.2	Sub-class with multiflex .....	67
<b>7</b>	<b>Setup .....</b>	<b>71</b>
7.1	Checking the scope of delivery .....	71
7.2	Removing the transport locks .....	71
7.3	Installing the frame .....	73
7.4	Fitting the table plate .....	73
7.5	Using the ring bolt .....	74
7.6	Securing the reel stand .....	74
7.7	Securing the frame .....	75
7.8	Setting the working height .....	76
7.9	Fitting the controller .....	77
7.10	Electrical connection .....	80
7.11	Equipotential bonding .....	80
7.12	Installing the suction container .....	80
7.13	Connecting the pneumatic system .....	82
7.14	Setting the operating pressure .....	83
7.15	Lubrication .....	84
7.16	Topping up the oil .....	87
7.17	Adjusting the material edge stops .....	88
7.18	Carrying out a test run .....	89
<b>8</b>	<b>Software settings .....</b>	<b>91</b>
8.1	User level .....	91
8.1.1	Basic operation .....	91
8.1.2	Single buttonhole mode .....	91
8.1.3	Sequential mode .....	92

---

8.1.4	Adjusting the cutting length .....	94
8.1.5	Adjusting the thread tension .....	95
8.1.6	Adjusting the cutting mode .....	96
8.1.7	Resetting the piece counter .....	98
8.2	Buttonhole programming .....	99
8.3	Sequence programming .....	105
8.3.1	Deleting a buttonhole at the end of a sequence .....	108
8.3.2	Adding a buttonhole at the end of a sequence .....	108
8.3.3	Inserting a buttonhole within a sequence .....	109
8.3.4	Switching off sequential mode .....	109
8.4	Service mode.....	110
<b>9</b>	<b>Decommissioning.....</b>	<b>111</b>
<b>10</b>	<b>Disposal.....</b>	<b>113</b>
<b>11</b>	<b>Troubleshooting .....</b>	<b>115</b>
11.1	Information messages .....	115
11.2	Error messages .....	116
<b>12</b>	<b>Glossary .....</b>	<b>117</b>
<b>13</b>	<b>Appendix .....</b>	<b>121</b>



## 1 About these instructions

These instructions for the 581 have been compiled with the utmost care. They contain information and notes to make long-term and reliable operation possible.

Should you notice any discrepancies or if you have improvement requests, then we would be glad to receive your feedback ( *Customer service*, p. 58).

Please regard these instructions as part of the product and keep them in a safe place where they can be easily accessed. Read the instructions completely prior to using the machine for the first time. Only pass the product on to third parties together with these instructions.

These instructions describe the setup and intended use of the 581.

### 1.1 For whom are these instructions intended?

The instructions are intended for:

- **Operating personnel:**  
This group of employees has been trained in operating the machine and can access the instructions. Specifically,  *5 Operation*, p. 33 is important for the operating personnel.
- **Specialists:**  
This group of employees has the appropriate technical training allowing them to perform maintenance or to repair faults. Specifically,  *7 Setup*, p. 71 is important for the specialists.

Service Instructions are supplied separately.

With regard to minimum qualification and other requirements to be met by the personnel, please also refer to  *3 Safety*, p. 19.

### 1.2 Representational conventions – Symbols and characters

Various items of information are depicted or highlighted in these instructions by the following characters to make them easier to understand:

**Correct setting**

Indicates the correct setting.

**Faults**

Indicates faults that can occur due to an incorrect setting.

**Cover**

Indicates which covers must be removed 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 servicing, maintenance  
and installation****Steps to be performed via the software control panel**

The individual steps are numbered:

1. 1. First step
  2. 2. Second step
  - ...
- The sequence of the steps must always be followed.
- Lists are identified 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 possibilities.

---

**Sequence**

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

## References

 A reference is provided to another place in the text.

**Safety** Important warnings for the user of the machine are specifically marked. Since safety constitutes an area of major importance, hazard symbols, levels of risk, and their signal words are described separately in  3 *Safety*, p. 19.

**Location information** Information on where something is positioned using the terms **right** or **left** must always be regarded from the operator's viewpoint if the figure gives no other obvious indication for determining the location.

## 1.3 Other documents

The machine contains built-in components from other manufacturers. The respective manufacturers have carried out hazard assessments for these purchased parts and confirmed compliance of the design with the applicable European and national regulations. The intended use of the built-in components is described in the corresponding manuals of the manufacturers.

## 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.

The manufacturer cannot be held liable for any damage due to:

- Damage during transport
- Failure to observe these instructions
- Improper use
- Unauthorized modifications to the machine
- The deployment of untrained personnel
- Using unapproved spare parts

### **1.4.1 Transportation**

Dürkopp Adler cannot be held liable for any damage during transport. Check the delivered product immediately after receiving it. Report any damage to the last transport carrier. This also applies if the packaging is not damaged.

Keep the machines, devices and packaging material in the condition they were at the time when the damage was identified. This secures any claims against the transport company.

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

### **1.4.2 Intended use**

The 581 is a sewing machine (hereinafter called the machine), which is designed to be used to sew buttonholes in light to moderately heavy material.

The range comprises 7 sub-classes.

The machine is only intended for processing dry material. The material may not be thicker than 8 mm when it is pressed together by the lowered upper fabric clamps. The material must not contain any hard objects.

The seam must be created with a sewing thread with a requirements profile corresponding to the intended application.

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 EN 60204-31.

Only authorized people may work on the machine.

The manufacturer will not be held liable for damage resulting from improper use.

### WARNING



**Danger from high voltage, crushing and sharp objects.**

Improper use can result in injuries.

Please follow all instructions provided.

### NOTICE

**Damage to the machine due to non-compliance.**

Improper use could result in material damage.

Please follow all instructions provided.



## 2 Performance description

### 2.1 Features

#### Basic type

Double chain stitch-buttonholer or a chain stitch-eyelet maker with CNC step motor technology for material feeding and for rotating the sewing mechanism.

#### Application

- Sewing buttonholes with or without an eye, with taper bar, round tack, cross tack or without a bartack
- Also sewing of eyelets

#### Sewing material

Material comprised of textile or synthetic fibers

#### Equipment

- Thread cutter
- Electronically regulated thread tension
- Different thread cutting systems depending on sub-class

#### Looper

- 2 chain stitch loopers, with the left thread leading (buttonholer)
- 2 chain stitch blind loopers (eyelet maker)

#### Technical features

The machine is fitted with the **Compact Servo** positioning drive, which is integrated in the machine arm.

A stepper motor drives the movements for each of the axes X, Y and Z. These drives are controlled via the electronic controller **DAC comfort** in combination with different pneumatic machine functions.

This drive and controller system provides the following advantages:

- Variable sewing speed, depending on the stitch distance, which can be adjusted by the user between 1200 and

2500 stitches/min, for different qualities of sewing thread and material.

- Optimized cycle time.
- 50 individual programmable buttonholes.
- 25 sequences each programmable with up to 9 buttonhole programs.
- High level of running smoothness, as there is no mechanical switching on and off; noise levels are reduced through optimized needle bar and looper drive.
- Extremely variable range of application through CNC controller with 3 stepper motors (no control cams).
- Integrated Multitest testing and monitoring system. In addition to monitoring the sewing process, this can be used to quickly test the input and output elements and the motor functions without additional measuring equipment.
- Stop points within the buttonhole cycle to check the function sequences.
- The **OP5000** control panel (graphics-capable LCD display with membrane keyboard) is mounted to the right on the sewing head and is easily accessible to the user.
- Adjustable functions:
  - Cutting before or after sewing
  - No slitting
  - Choice of buttonhole shape:
    - With or without an eye
    - Without bartack
    - With taper bar
    - With round tack
    - With cross tack
  - Taper bar length
  - Eye shape
  - Eye size
  - Buttonhole length
- Key operation for the following functions:
  - Closing clamp and opening clamp (clamps open automatically after the end of the seam)
  - Switching on the sewing process
  - Quick stop with needle in upper position

- Piece counter with display on the control panel for the number of sewn buttonholes (daily and overall production).
- Pneumatic buttonhole slitting.
- Suction for the cutting waste.
- Central oil wick lubrication from 2 oil reservoirs.
- Mechanical conversion from narrow to wide zigzag stitch.
- Electronic changing of the zigzag stitch width (+/-0.5 mm) in the buttonhole seam and the eye.
- Electronic setting of the intermediate material width.
- Modern, ergonomically cost effective design within the current DA design line.
- Large-surface fabric support plate with large recess depth for the distance between the buttonhole and the fabric edge.
- Machine head swiveling supported by a gas pressure spring.
- Needle thread monitor interrupts the sewing cycle when the needle thread breaks; the material clamps remain down and hold the sewing material. The sewing material can be removed by key operation.
- Owing to the vertical action of the cutting block system, no adaptation of the cutting blocks by filing is required in the event of different cutting block heights.
- It can be selected on the control panel that after the sewing material is released, the fabric support plate moves to the starting position of the next buttonhole; this makes it easier to see when positioning the part to be sewn.
- Switch in the head cover for moving towards the ideal threading position for the looper and needle thread (gimp thread).
- Automatic adjustment (4-stage) of the cutting force for the buttonhole blade depending on the programmed buttonhole length.
- Electronically regulated needle thread tension (to be assigned to programmed buttonholes).
- Fine adjustment with display for
  - Seam start and seam end
  - Position and length of the cross tack
  - Time of the thread cutting
- Pneumatically actuated thread cutting systems work precisely due to short drive paths.
- Electronic changing of the zigzag stitch width in the cross tack.

- Due to the particular design of the machine arm, it is possible to position the sewing material in the longitudinal direction when using a different fabric holding device (additional equipment).

## 2.2 Declaration of conformity

The machine complies with the European regulations regulating occupational health and safety and environmental protection specified in the declaration of conformity or in the installation declaration.



## 2.3 Additional equipment

● = Standard equipment

○ = Optional extension

△ = Can only be ordered in conjunction with the E1151 sewing equipment

▽ = Can only be ordered in conjunction with length packages L1 or L2

Part no.	Additional equipment	581-112	581-121	581-141	581-151	581-312	581-321	581-341
0580 590074	Thread puller		○				○	
0580 590504	Support table for working while standing	○	○	○	○	○	○	○
0580 591684	Gimp monitoring			○				○

Part no.	Additional equipment	581-112	581-121	581-141	581-151	581-312	581-321	581-341
0580 590574	Back trousers retaining device	○		○	○	○		○
0580 100344	Integrated sewing lamp (LED)	○	○	○	○	○	○	○
0580 591524	Light barrier kit	○	○		○	○	○	
0580 590154	Needle thread catcher	●	●			●	●	
0580 590144	Needle thread catcher (additionally with valve for subsequent installation)			○	○			○
0580 590804	Upper gimp guide				○			
0580 591234	Tandem setup	○	○	○	○	○	○	○
0797 003031	Pneumatic connection package	○	○	○	○	○	○	○
9880 580002	Foot pedal	○	○	○	○	○	○	○
	<b>Positioning aids</b>							
0580 590604	Table extension for longitudinal positioning	○	○		○	○	○	
0580 590404	End stop (R+L) for the buttonhole distance to the fabric edge							
0580 590294	End stop for distance from buttonhole to buttonhole (R+L)	○	○	○	○	○	○	○
0580 590554	Longitudinal positioning kit (left and right clamping plate)				○			
0580 590384	Longitudinal positioning kit (left and right clamping plate)	○						
0580 590374	Longitudinal positioning kit (left and right clamping plate)		○					

<b>Part no.</b>	<b>Additional equipment</b>	<b>581-112</b>	<b>581-121</b>	<b>581-141</b>	<b>581-151</b>	<b>581-312</b>	<b>581-321</b>	<b>581-341</b>
0580 590564	Marking lamp	○	○	○	○	○	○	○
0580 591224	Center stop for back trousers	△		▽		▽		▽
	<b>Frames</b>							
MG58 400104	Frame with fixing parts and table plate 1060x750 incl. maintenance unit and rollers	○	○	○	○	○	○	○
MG58 400114	Frame with fixing parts and table plate 1060x600 incl. maintenance unit and rollers	○	○		○			
MG58 400124	Frame with fixing parts and table plate 620x850 incl. maintenance unit and rollers	○	○	○	○	○	○	○

## 2.4 Technical data

Technical data	Unit	581-112	581-121	581-141	581-151	581-312	581-321
Machine type		Sewing automat					
Sewing stitch type		Double chain stitch					
Number of needles		1					
Needle system		579					
Needle strength	[Nm]	125					
Sewing thread thickness	[Nm]	30/3 - 120/3					
Sewing length	[mm]	max. 50					
Cutting length	[mm]	max. 50					
Thickness of sewing material	[mm]	max. 12					
Stitch length	[mm]	0.5 - 2					
Speed, max.	[mm <sup>-1</sup> ]	2500					
Speed, factory	[mm <sup>-1</sup> ]	2000					
Mains voltage	[V]	190 - 240					
Mains frequency	[Hz]	50/60					
Operating pressure	[bar]	6					
Length	[mm]	1060					
Width	[mm]	750					
Height	[mm]	1050					



### 3 Safety

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



#### 3.1 Basic safety instructions

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

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

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

For the following work, the machine must be disconnected from the power supply using the main switch or by disconnecting the power plug:

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

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

**Transportation** Use a lifting carriage or forklift to transport the machine. Raise the machine max. 20 mm and secure it against slipping off.

**Setup** The connecting cable must have a power plug approved in the specific country. The power plug may only be connected to the power cable by a qualified specialist.

**Operator's obligations** Observe the country-specific safety and accident prevention regulations and the legal regulations concerning industrial safety and the protection of the environment.

All warnings and safety signs on the machine must always be in legible condition and may not be removed. Missing or damaged labels must be replaced immediately.

**Requirements to be met by the personnel**

The machine may only be set up by qualified specialists.

Maintenance work and repairs may only be carried out by qualified specialists.

Work on electrical equipment may only be carried out by qualified specialists.

Only authorized people may work on the machine. Every person who works on the machine must first have understood the operating instructions.

**Operation**

Inspect the machine while in use for any externally visible damage. Interrupt your work if you notice any changes to the machine.

Report any changes to your supervisor. A damaged machine must not be used any further.

**Safety equipment**

Safety equipment may not be removed or put out of service. If this cannot be avoided for a repair operation, the safety equipment must be refitted and put back into service immediately afterwards.

### 3.2 Signal words and icons used in warnings

Warnings in the text are distinguished by color bars. The color scheme is oriented towards the severity of the danger. Signal words specify the severity of a danger.

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

Signal word	Meaning
<b>DANGER</b>	(with hazard symbol) Non-compliance will result in death or serious injury
<b>WARNING</b>	(with hazard symbol) Non-compliance can result in death or serious injury
<b>CAUTION</b>	(with hazard symbol) Non-compliance can result in moderate or minor injury
<b>NOTICE</b>	(without hazard symbol) Non-compliance can result in material damage

**Symbols** In the case of danger to personnel, the following symbols indicate the type of hazard:

Symbol	Type of danger
	General information
	Electric shock
	Puncture
	Crushing
	Environmental damage

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

**DANGER**



**Type and source of the danger!**

Consequences in the event of noncompliance.  
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 the warning is not complied with.

**WARNING**



**Type and source of the danger!**

Consequences in the event of noncompliance.  
Measures for avoiding the danger.

- ↪ This is what a warning looks like for a hazard that could result in serious injury or even death if the warning is not complied with.

**CAUTION**



**Type and source of the danger!**

Consequences in the event of noncompliance.  
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 not complied with.

## ATTENTION



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

Consequences in the event of noncompliance.

Measures for avoiding the danger.

- ↪ This is what a warning looks like for a hazard that could result in environmental damage if the warning is not complied with.

## NOTICE

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

Consequences in the event of noncompliance.

Measures for avoiding the danger.

- ↪ This is what a warning looks like for a hazard that could result in material damage if the warning is not complied with.



## 4 Machine description

Fig. 1: Machine view 581



(1) - Push button for threading mode (3) - Control panel  
(2) - Push buttons

The 581 is fitted with a programmable controller and a control panel ( 4.1 Control panel, p. 26).

These can define up to 50 different buttonholes.

The buttonholes can be programmed in up to 25 sequences (📖 4.2 *Software description*, p. 29).

A sequence can include a maximum of 9 different buttonholes; each individual buttonhole within the sequence can be repeated up to maximum 9 times consecutively.

During sewing, it is possible to switch automatically or manually between the programmed buttonholes (📖 4.2.2 *Modes of operation*, p. 31).

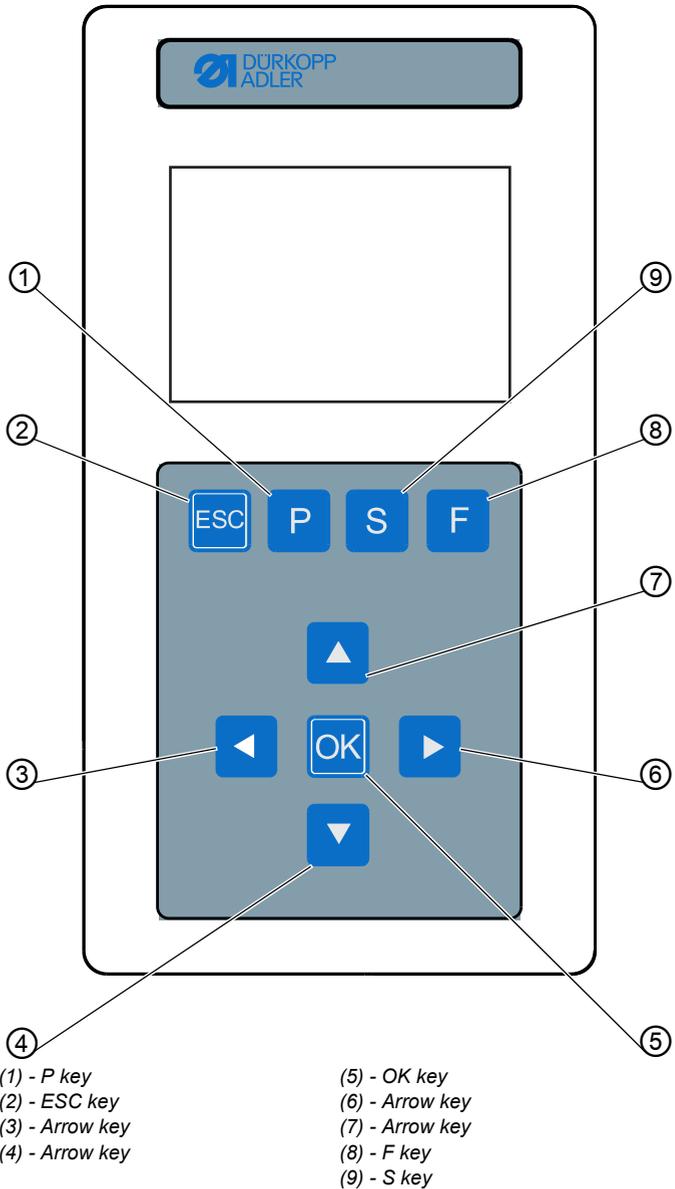
## 4.1 Control panel

The **OP5000** control panel is located on the side of the machine and is connected to the controller. Using the control panel, you can set the functions for the relevant buttonhole.

The control panel comprises:

- Display (📖 4.2 *Software description*, p. 29)
- Keys

Fig. 2: Control panel



**Keys and functions of the control panel**

Item	Key	Function
①		<ul style="list-style-type: none"> <li>• Calls up the setting mode for individual buttonholes</li> </ul>
②		<ul style="list-style-type: none"> <li>• Returns to the user level</li> <li>• Rejects changes</li> </ul>
③		<ul style="list-style-type: none"> <li>• Moves one level down</li> <li>• Changes to previous buttonhole shape</li> </ul>
④		<ul style="list-style-type: none"> <li>• Moves to the menu item one field lower</li> <li>• Reduces values</li> </ul>
⑤		<ul style="list-style-type: none"> <li>• Calls up values</li> <li>• Saves changed values</li> </ul>
⑥		<ul style="list-style-type: none"> <li>• Changes to the next buttonhole shape</li> </ul>
⑦		<ul style="list-style-type: none"> <li>• Moves to the menu item one field higher</li> <li>• Increases values</li> </ul>
⑧		<ul style="list-style-type: none"> <li>• Calls up service mode</li> </ul>
⑨		<ul style="list-style-type: none"> <li>• Calls up the setting mode for buttonhole sequences</li> </ul>

## 4.2 Software description

There are 2 modes at user level:

- Sequential mode
- Single buttonhole mode

The main menu comprises the following fields depending on the mode:

- Sequential number (1) or buttonhole number (8)
- Buttonhole sequence (2) or empty row
- Thread tension (7)
- Cutting length or eyelet diameter (6)
- Cutting mode (5)
- Piece counter (4)

Fig. 3: Sequential mode

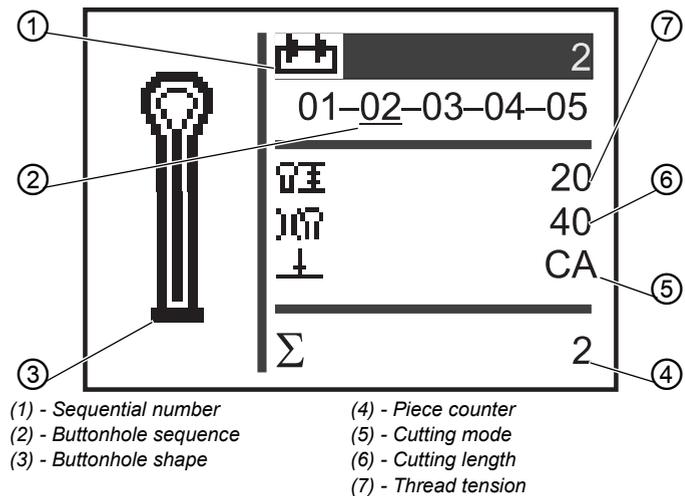
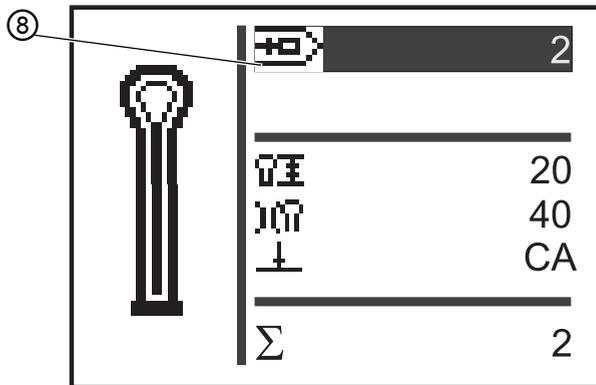


Fig. 4: Single buttonhole mode



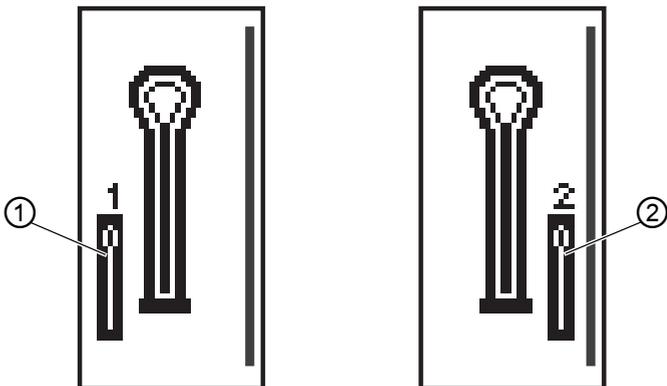
(8) - Buttonhole number

It is possible to see which field is active by the white lettering on a dark background.

For sub-classes 312, 321 and 341, there is also monoflex mode, as two blade positions are possible.

Active monoflex mode is indicated by display of a bar next to the buttonhole shape:

Fig. 5: Monoflex mode



(1) - Blade position 1

(2) - Blade\_position 2

### 4.2.1 Structure

The machine menu is divided into levels. In the main menu, the most important information for sewing operation is displayed (user level).

There are further levels in addition to the user level:

- Setting mode, to program buttonholes (P level)
- Setting mode, to program buttonhole sequences (S level)
- Service mode, to perform service work (F level); this is password-protected

A menu item in these levels can also contain further sub-menu items.

### 4.2.2 Modes of operation

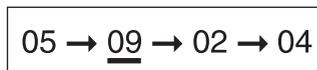
Depending on the setting, when the machine is in sequential mode it will be in one of the following operating modes:

- Automatic operation
- Manual operation
- Light barrier mode (if present)

#### Automatic operation

In the sequence shown on the display, arrows are displayed between the buttonhole shapes. It is possible to see the currently selected buttonhole from the bar underneath.

Fig. 6: Display for automatic operation



After sewing a buttonhole, the controller changes automatically to the next buttonhole shape. After sewing the last buttonhole, the controller changes back to the first buttonhole shape within the sequence.

#### Manual operation

In the sequence shown on the display, lines are displayed between the buttonhole shapes. It is possible to see the currently selected buttonhole from the bar underneath.

Fig. 7: Display for manual operation

05 — 09 — 02 — 04

The controller does **not** change automatically between the buttonhole shapes. Changes are made manually using the keys



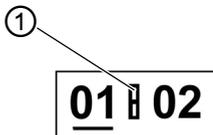
### Light barrier mode

If the light barrier kit ( 2.3 *Additional equipment*, p. 14) is installed, it is possible to work in light barrier mode.

Either the lapel or the front edge is detected by 2 light barriers and the corresponding program is automatically selected.

Precisely 2 programs must be entered in the sequence. Light barrier mode can be recognized by the symbol (1).

Fig. 8: Display for light barrier mode



(1) - Symbol

## 5 Operation

### 5.1 Switching the machine on and off

Fig. 9: Switching the machine on and off



(1) - Main switch

#### Switching on the power supply



##### Step

1. Turn the main switch (1) into position I.
- ↳ The welcome screen appears on the display, whereby YYYY-MM-DD stands for the current date:

Fig. 10: Display after switching on



The machine moves into the insertion position and is ready to sew, when the main menu ( 4.2 *Software description*, p. 29) appears.

## Switching off the power supply

---



### Information

The main switch is simultaneously the EMERGENCY STOP switch. When the main switch is switched off, the machine is disconnected from the power supply.

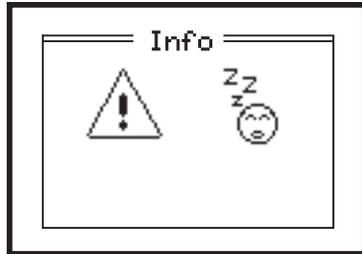
---



### Step

1. Turn the main switch (1) into position 0.
-  All drives and the controller are separated from the mains power.  
The following appears on the display:

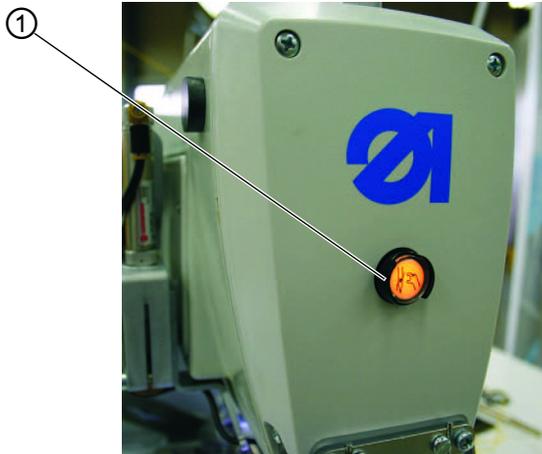
Fig. 11: Display after switching off



## 5.2 Activating and deactivating threading mode

Threading mode can be used to thread the needle thread, looper thread and gimp thread.

Fig. 12: Activating threading mode



(1) - Push button for threading mode

## Activating threading mode



### Step

1. Press push button (1) on the head cover. The push button must engage.
  - ↳ The machine is in threading mode.  
The push button lights up.  
The fabric support plate moves into the best position for threading.  
The fabric clamps remain in the position they were in when threading mode was switched on.  
The sewing drive is separated from the power supply.  
The slitting blade is switched off.

You can now:

- Fit the needle
- Thread the looper thread
- Thread the needle thread
- Thread the gimp thread

## Deactivating threading mode



### Step

1. Press the push button (1) again. The push button must disengage.
  - ↳ After a short pause, the machine is ready to sew again. The sewing process is continued from the point where threading mode was activated.

## 5.3 Using threads and gimp threads

### Threads

The appearance of the buttonhole is influenced considerably by:

- the thread used
- the use of different strengths for needle and looper threads

### Gimp threads

The purpose of gimp is to stabilize the buttonhole and at the same time make it flexible.

It should have the following characteristics:

- not too thick, but supple and firm
- even thickness

## 5.4 Removing and fitting clamping plates

### WARNING



#### Risk of puncture wounds from sharp objects!

Severe injuries possible.

Remove and fit clamping plates when the machine is switched off or in threading mode.

### Removing clamping plates



#### Step

1. Slightly raise the right clamping plate (2) at the back and pull it backwards.
2. Remove the clamping plate (2) sideways to the right.
3. Slightly raise the left clamping plate (1) at the back and pull it backwards.
4. Remove the clamping plate (1) sideways to the left.

Fig. 13: Removing clamping plates



(1) - Clamping plate, left

(2) - Clamping plate, right

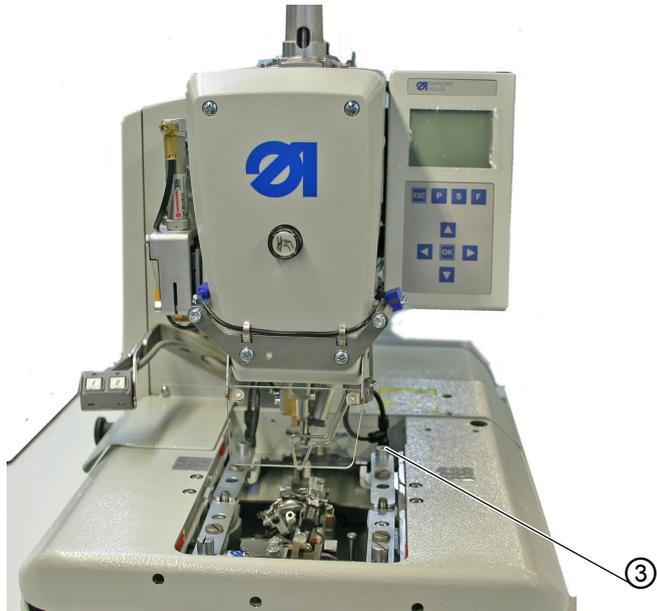
### Fitting clamping plates



#### Step

1. Push the clamping plate forward into the mounting.
2. Allow the clamping plate to engage at the back into the pin (3).

Fig. 14: Fitting clamping plates



(3) - Pin

### NOTICE

#### **Damage due to incorrectly positioned clamping plates!**

Incorrectly positioned clamping plates can result in material damage.

Position clamping plates as described.

## 5.5 Swiveling the sewing machine up and down

### WARNING



**Risk of puncture wounds from sharp objects!**

Severe injuries possible.

Only swivel the machine up when it is switched off or in threading mode.

### Swiveling up

You must swivel the machine up for a variety of activities (e. g. to thread the looper thread or the gimp thread).

*Fig. 15: Swiveling the machine up*



(1) - Locking bolt

To swivel the machine up:



### Step

1. Pull out the locking bolt (1).
2. Raise the machine at the front.
3. Release the locking bolt (1) again and allow it to engage in a hole.

To do this, you may have to swivel the machine up and down a little.

4. Do not let go of the machine until the locking bolt (1) has engaged.

Once you have completed the activities you have planned, swivel the machine back down again.

### Swiveling the sewing machine down



#### Step

1. Hold the machine firmly.
2. Pull out the locking bolt (1).
3. Swivel the machine down slowly.

#### WARNING



#### Risk of crushing from moving parts!

When swiveling down, the machine can unintentionally move faster than intended and cause serious injuries.

Hold the machine firmly when swiveling it down.

#### NOTICE

#### Damage due to machine operation when it is swiveled up!

Operating the machine when it is swiveled up can result in material damage.

Always swivel the machine down before starting to sew.

## 5.6 Threading the needle thread

### WARNING



**Risk of puncture wounds from sharp objects!**

Severe injuries possible.

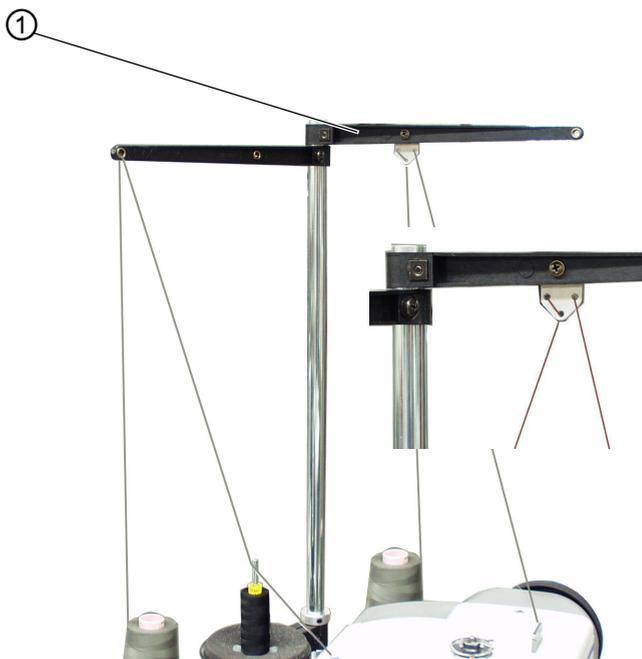
Only thread the needle thread when the machine is switched off or in threading mode.



### Step

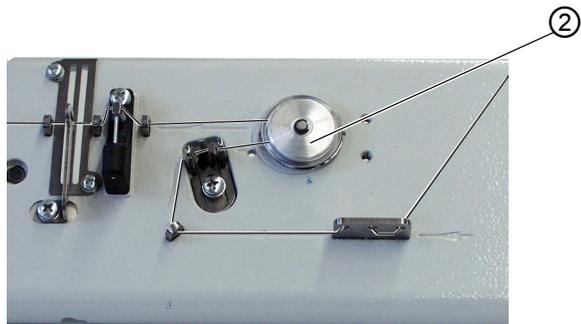
1. Thread the needle thread as shown in the figures.

*Fig. 16: Threading the needle thread (1)*



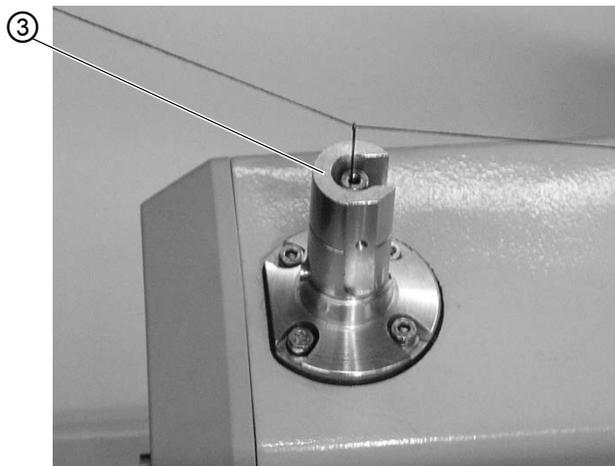
*(1) - Unwinding bracket*

Fig. 17: Threading the needle thread (2)



(2) - Needle thread tensioner element

Fig. 18: Threading the needle thread (3)

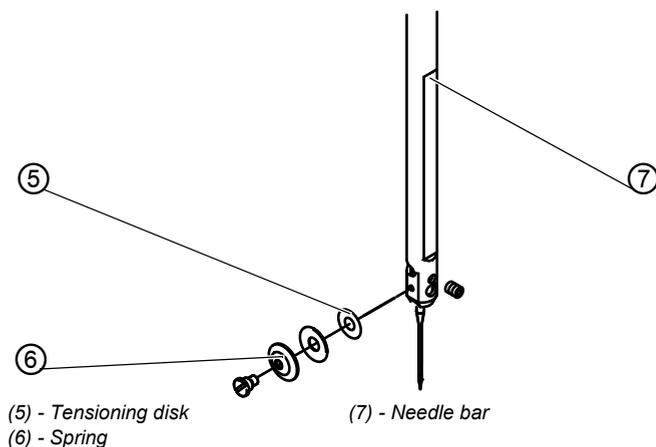


(3) - Thread guide

(4) - Hook

2. To thread the needle thread, push the threading wire (in the accessory pack) through the hollow needle bar (7) from the bottom upwards.
3. Hang the needle thread at the top behind the hook (4).
4. Pull the needle thread down with the threading wire.
5. Guide the needle thread to the left behind the tensioning disk (5) and thread it into the needle from the back to the front.

Fig. 19: Threading the needle thread (4)



## 5.7 Threading the looper thread

### WARNING



**Risk of puncture wounds from sharp objects!**

Severe injuries possible.

Only thread the looper thread when the machine is switched off or in threading mode.

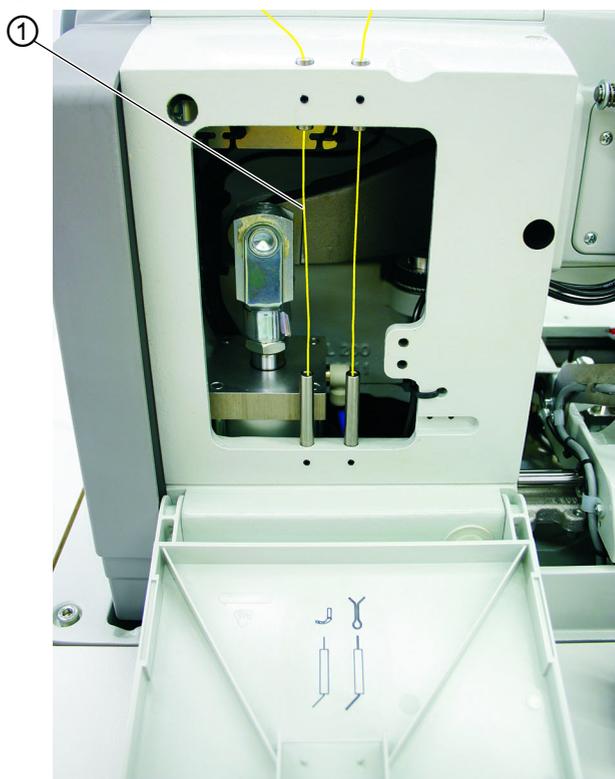
The machine must be in the end position, i.e. the looper turret should face forward with the loopers.



### Step

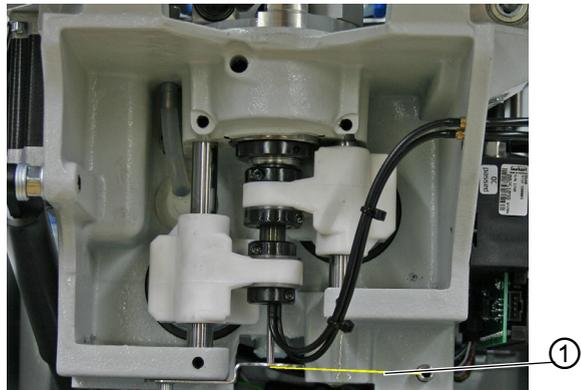
1. Remove the clamping plates (📖 5.4 *Removing and fitting clamping plates*, p. 37).
2. Swivel the machine up (📖 5.5 *Swiveling the sewing machine up and down*, p. 40).
3. Thread the looper thread (1) using the long threading wire (accessory pack) as shown in the figures.

Fig. 20: Threading the looper thread (1)



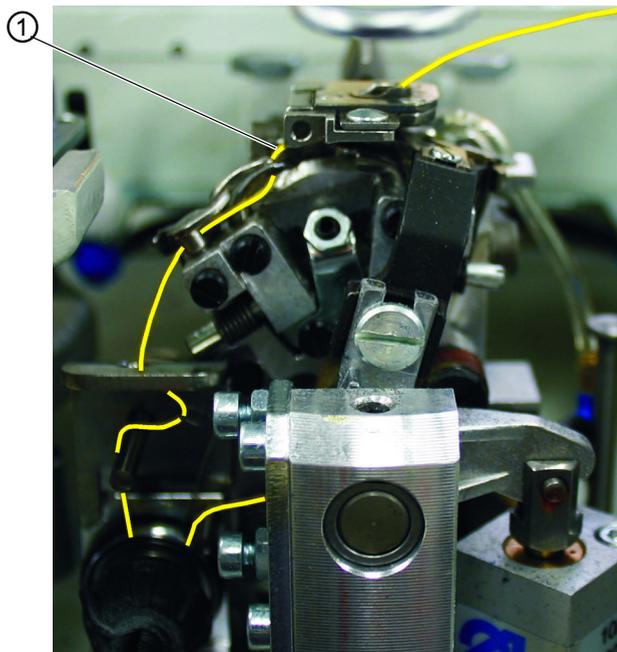
(1) - Looper thread

Fig. 21: Threading the looper thread (2)



(1) - Looper thread

Fig. 22: Threading the looper thread (3)



(1) - Looper thread

4. Leave an end of looper thread approx. 25 mm long hanging out from the hole in the throat plate.
5. Fit the clamping plates.

## 5.8 Threading the gimp thread

### WARNING



**Risk of puncture wounds from sharp objects!**

Severe injuries possible.

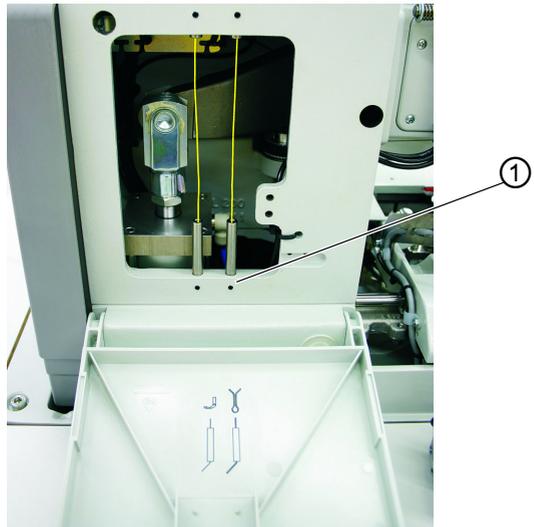
Thread the gimp thread only when the machine is switched off or in threading mode.



### Step

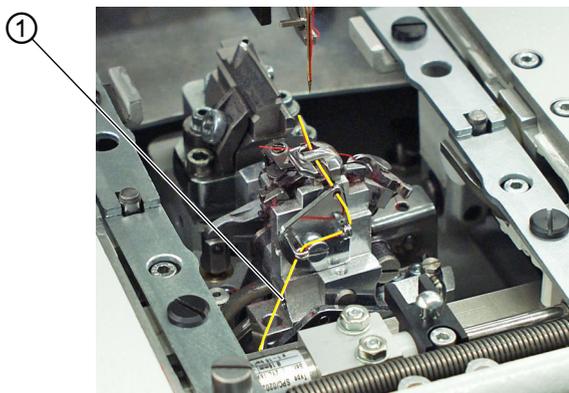
1. Thread the gimp thread (1) as shown in the figures (depending on the sub-class).  
For sub-classes 141 and 341, thread the gimp thread as shown in A.

*Fig. 23: Threading the gimp thread (1)*



*(1) - Gimp thread*

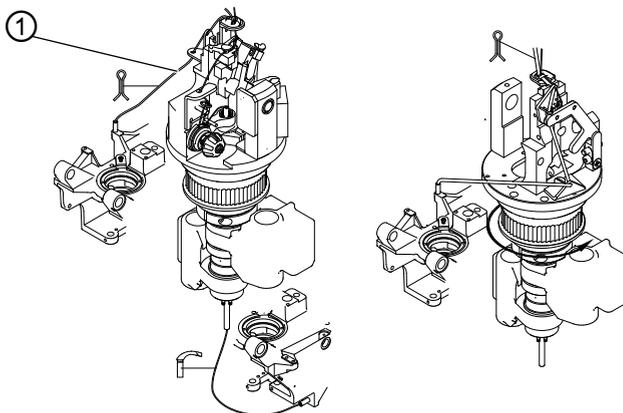
Fig. 24: Threading the gimp thread (2)



(1) - Gimp thread

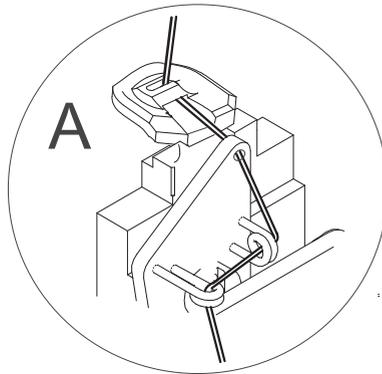
2. Leave an end of gimp thread approx. 25 mm long hanging out from the gimp hole in the throat plate.

Fig. 25: Threading the gimp thread (3)



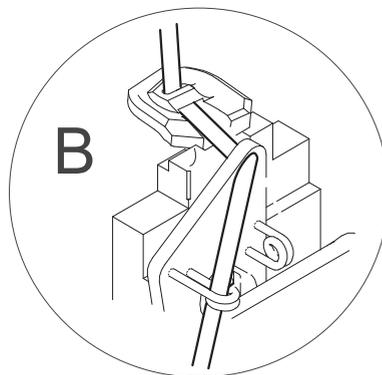
(1) - Gimp thread

Fig. 26: Threading the gimp thread (4)



3. Sew the buttonhole and check whether the gimp is pulled back far enough.  
For sub-classes 141 and 341, the gimp thread may have to be rethreaded as shown in B.

Fig. 27: Rethreading the gimp thread



## 5.9 Adjusting the thread tension

The thread tensions depend on the type and quality of the thread as well as on the sewing material. The buttonhole looks best when sewn with the lowest possible thread tension.

Overly tight thread tensions can result in undesired ruffing and thread breakages with thin materials.

### 5.9.1 Adjusting the needle thread tension

The tension of the needle thread must generally be tighter than the tension of the looper thread. The thread tension is electronically regulated. It comprises the main tension for the sewing process and a remaining residual tension (cutting tension) for tightening the needle thread during the cutting operation under the throat plate.

Regulate the residual tension (cutting tension) to suit the elasticity of the needle thread used, so that the thread end hanging from the needle is sufficiently long to ensure a safe sewing start.

To set the needle thread tension:

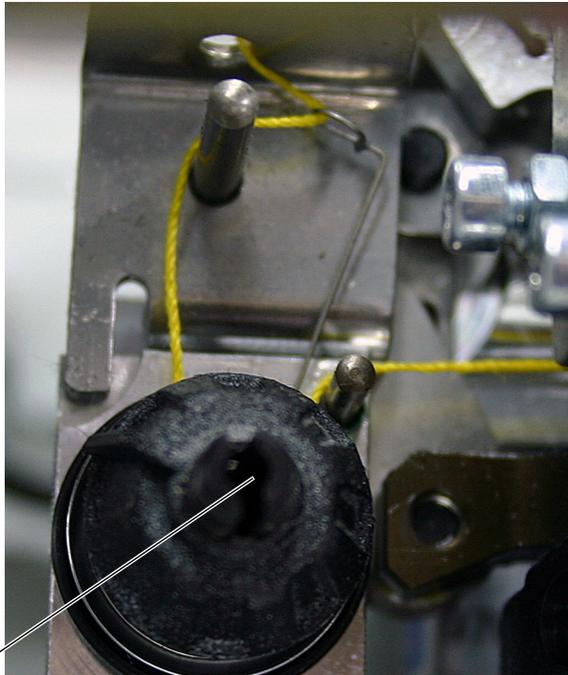


#### Step

1. Set the main tension for the sewing process using the control panel ( 8.1.5 *Adjusting the thread tension*, p. 95).
2. Set the residual tension (cutting tension) using the control panel.

## 5.9.2 Setting the looper thread tension

Fig. 28: Setting the looper thread tension



(1) - Looper thread tensioner element



### Step

1. Swivel the upper part of the machine up.
2. Set the looper thread tension with the tensioner element (1):
  - to increase the looper thread tension, turn clockwise
  - to decrease the looper thread tension, turn counterclockwise
3. Swivel the upper part of the machine down.

The length of the starting thread can be adjusted by changing the thread tension at the start.

## 5.10 Changing the needle

### WARNING

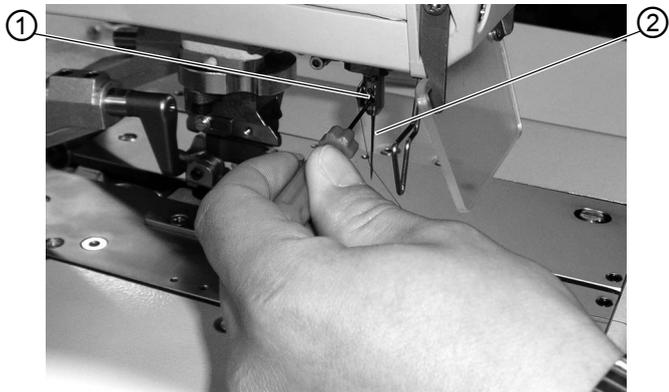


**Risk of puncture wounds from sharp objects!**

Severe injuries possible.

Only change the needle when the machine is switched off.

Fig. 29: Changing the needle (1)



(1) - Screw

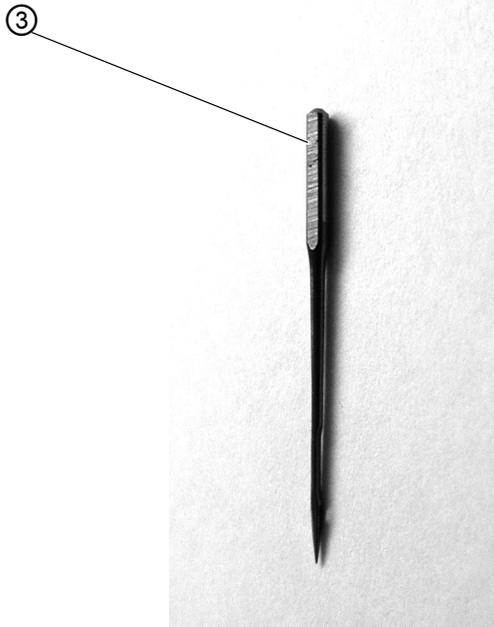
(2) - Needle



### Step

1. Loosen the screw (1) (hex key in the accessory pack).
2. Pull the needle (2) from the needle bar.
3. Push in the new needle into the bore of the needle thread through to the end stop.

Fig. 30: Changing the needle (2)



(3) - Needle piston

4. Align the needle (2) such that the groove is facing forwards and the flat part (only in needle system 579) on the needle piston (3) is facing to the left in the direction of the screw (1).
5. Tighten the screw (1).

## 5.11 Changing the blade



### Step

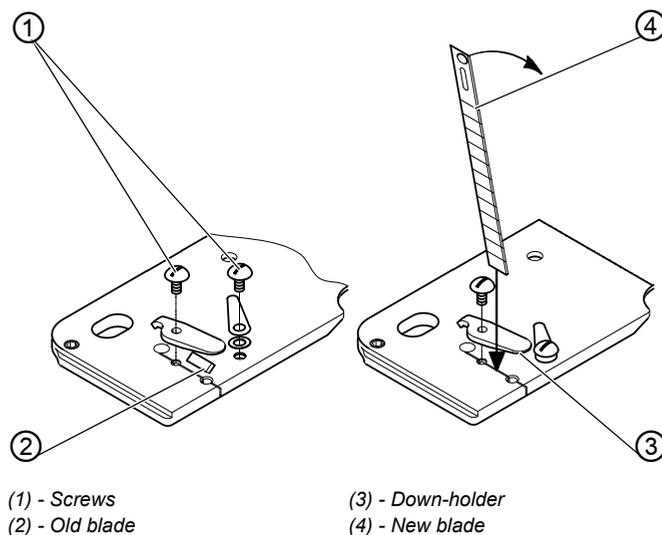
1. Loosen the screws (1) and remove the down-holder (3).
2. Remove the old blade (2).
3. Insert the new blade (4) to the base of the groove and bend in the direction of the arrow.
4. Re-tighten the screws (1).
5. Tighten the down-holder using the screw (1).



**Important**

The blade may not project outside the down-holder!

Fig. 31: Changing the blade



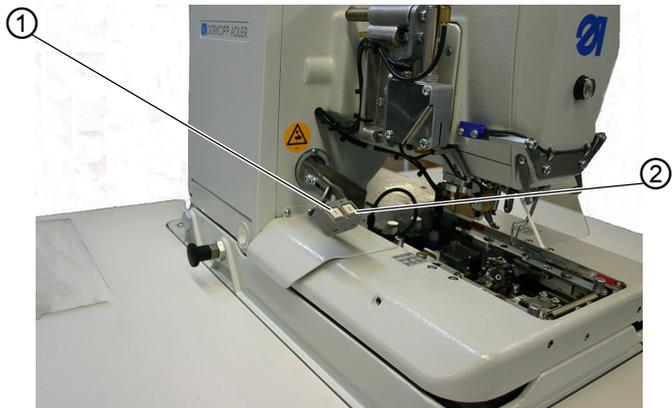
**5.12 Sewing**

The sewing process can be controlled either with the push buttons on the machine or via the foot pedal.

**5.12.1 Sewing using the push buttons**

The clamps can be controlled and the sewing process started with the push buttons on the machine. The function differs depending on the setting in the Service menu ( *Service Instructions*).

Fig. 32: Push buttons



(1) - Push button 1

(2) - Push button 2

1st setting (default):

- Push button 1: Clamps are opened or closed, respectively.
- Push button 2: The sewing process starts if the clamps are closed.

2nd setting:

- Push button 1: Clamps are opened or closed, respectively.
- Push button 2: If the clamps are not lowered, they are lowered now. The sewing process starts.

The push buttons facilitate quick switch-off during sewing.

Activate quick switch-off as follows:



**Step**

1. Press push button 1 or 2.
- ↳ The sewing process stops.

You now have the following options:

- Interrupt the sewing process
- Continue the sewing process

To interrupt the sewing process:

**Step**

1. Press push button 1.

To continue the sewing process:

**Step**

1. Press push button 2.

### 5.12.2 Sewing with the foot pedal

The foot pedal ( 2.3 *Additional equipment*, p. 14) is a 2-step pedal without backpedal function:

- When the first step is pressed, the clamps are closed. To re-open the clamps, release the first step.
- When the second step is pressed, the sewing process starts. When the sewing process is running, you can release the foot pedal.

The foot pedal supports quick switch-off during sewing. You cannot continue the sewing process with the foot pedal.

Activate quick switch-off as follows:

**Step**

1. Press the foot switch.
-  The sewing process stops.

You now have the following options:

- Interrupt the sewing process
- Continue the sewing process

To interrupt the sewing process:



### Step

1. Press the foot switch.  
↳ The sewing procedure was cancelled.

To continue the sewing process:



### Step

1. Press the key  on the control panel.



### Information

You can also use the push buttons on the machine for quick switch-off.

## Removing the completed sewing material for sub-class 151



### Step

1. Guide the looper thread and the gimp thread under the thread clamp (2).
2. Pull both threads from right to left along the blade (1).  
↳ The threads are cut.

Fig. 33: Removing the sewing material for sub-class 151



(1) - Blade

(2) - Thread clamp

### **5.13 Customer service**

Contacts for repair in the event of damage to the machine:

Dürkopp Adler AG  
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)

## 6 Maintenance

This chapter describes simple maintenance work that needs to be carried out on a regular basis, in order to extend the service life of the machine and achieve the desired seam quality. The maintenance work can be carried out by the operating personnel.

Advanced maintenance work must only be carried out by qualified specialists ( *Service Instructions*).

### WARNING



#### **Risk of puncture wounds from sharp objects!**

Severe injuries possible.

Only perform maintenance work when the machine is switched off.

### WARNING



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

Severe injuries possible.

Only perform maintenance work when the machine is switched off.

**Overview of works to be performed**

Work to be performed	Operating hours			
	8	40	160	500
<b>Machine</b>				
Remove lint accumulations	●			
Clean sewing dust from the area under the throat plate	●			
Check the oil level	●			
Check and clean the toothed belt			●	
Lubricate the cutting punch			●	
Lubricate the clamping arm at the felt			●	
Lubricate the felt at the cam plate			●	
<b>Pneumatic system</b>				
Check the water level in the pressure controller	●			
Clean filter element in the maintenance unit	●			
Check the leak tightness of the system			●	

## 6.1 Inspection

### **NOTICE**

#### **Material damage due to contamination!**

Sewing dust and thread residue can damage the machine.

Clean the machine as described here.

## Oil



### Step

1. Check the oil level in the oil reservoirs daily ( 7.16 *Topping up the oil*, S. 87).

### ATTENTION



#### Risk of environmental damage from oil!

Oil is a pollutant and must not enter the wastewater system or the ground.

Collect waste oil carefully.

Dispose of waste oil and oily machine parts in accordance with the applicable statutory regulations.

Use only **DA 10** lubricant or an equivalent oil conforming to the following specifications to top up the oil reservoirs:

- Viscosity at 40 °C: 10 mm<sup>2</sup>/s
- Flash point: 150 °C

You can obtain the oil from our sales offices under the following part numbers:

Container	Part no.
250 ml	9047 000011
1 l	9047 000012
2 l	9047 000013
5 l	9047 000014

## Pneumatic system

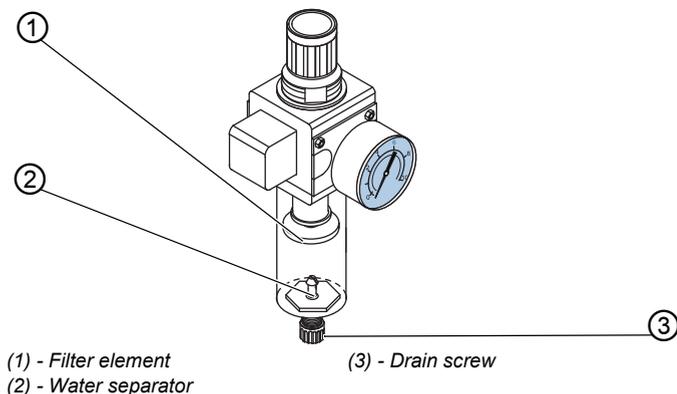


### Step

1. Check the water level in the pressure controller daily. The water level must not rise to the level of the filter element (1).

After unscrewing the drain screw (3), drain the water under pressure from the water separator (2).

Fig. 34: Checking the water level



## 6.2 Cleaning

The machine must be cleaned of dust and thread residue daily. A clean machine provides protection from faults.

To clean the machine:



### Step

1. Clean the area of the looper, thread cutter, throat plate and the sewing head of sewing dust, thread residue and cutting waste. If a vacuum is available, it is recommended to vacuum the sewing waste.
2. If required, empty the cutting waste from the suction container.

## 6.3 Lubricating

### CAUTION



#### **Skin damage due to contact with oil!**

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

Wash the affected area thoroughly after any skin contact.

Perform the lubrication at regular intervals

( *6 Maintenance*, S. 59).

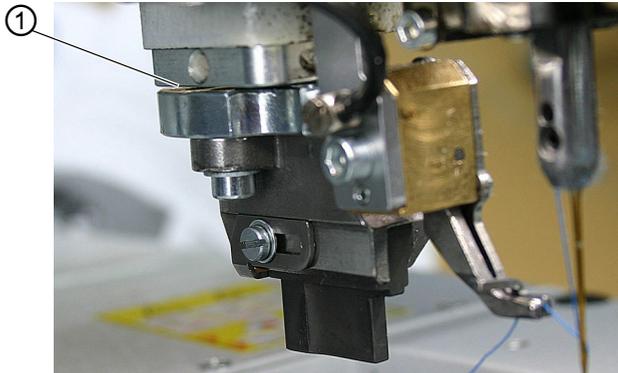
To lubricate the machine:



### Step

1. Lubricate the cutting punch (1).

*Fig. 35: Lubricating the cutting punch*



(1) - Cutting punch

2. Lubricate the felt at the cam plate (2).

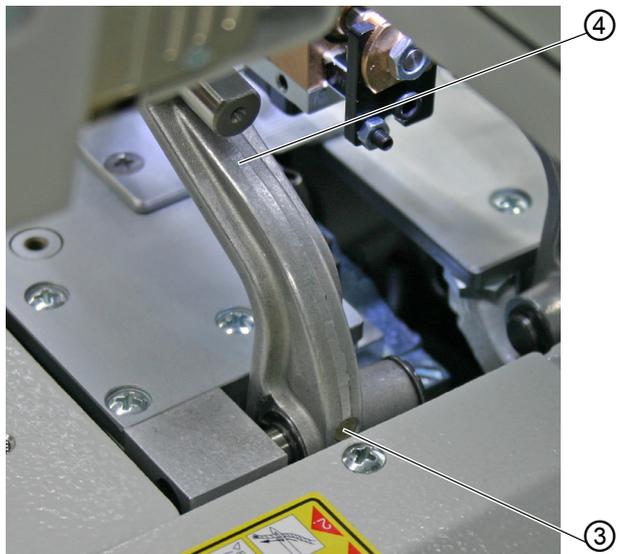
*Fig. 36: Lubricating the cam plate*



*(2) - Cam plate*

3. Lubricate the felts (3) of the clamping arms (4).

*Fig. 37: Lubricating the clamping arm*



*(3) - Felt*

*(4) - Clamping arm*

## 6.4 Changing the cutting blocks and blade

Depending on the area of application, you must change the cutting blocks and blade after 6 months at the earliest. You can change the cutting length by changing the cutting blocks. The method for changing the cutting blocks and/or the blade differs depending on the sub-classes.

### WARNING



#### **Risk of puncture wounds from sharp objects!**

Severe injuries possible.

Only change the cutting block or blade when the machine is switched off.

### 6.4.1 Sub-class without multiflex

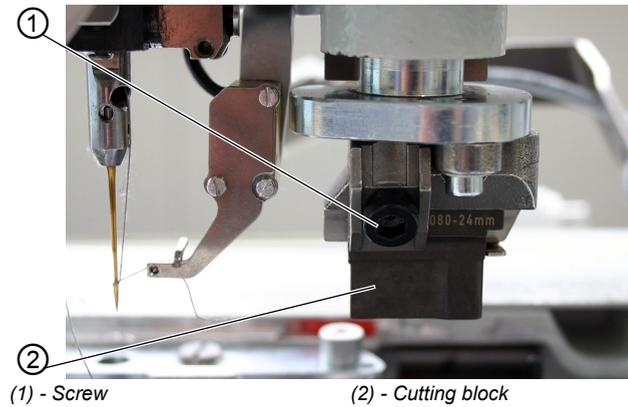
#### Changing the cutting block



#### Step

1. Loosen the screw (1) (hex key in the accessory pack).
2. Pull the cutting block (2) forward and remove.
3. Insert the new cutting block and push to the end stop.
4. Retighten the screw (1).

Fig. 38: Changing the cutting block



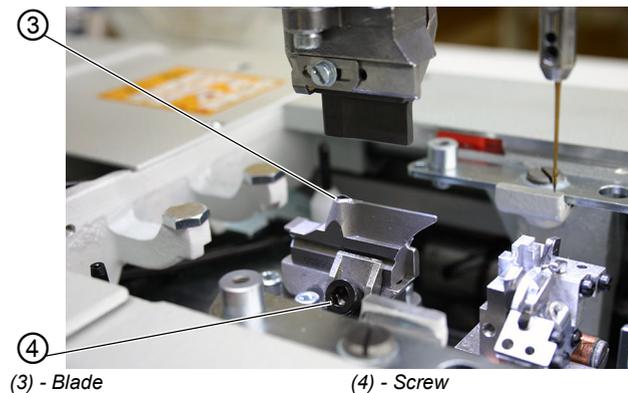
### Changing the blade



#### Step

1. Loosen the screw (4).
2. Pull the blade (3) forward and remove.
3. Insert the new blade and push to the end stop.
4. Retighten the screw (4).

Fig. 39: Changing the blade



## 6.4.2 Sub-class with multiflex

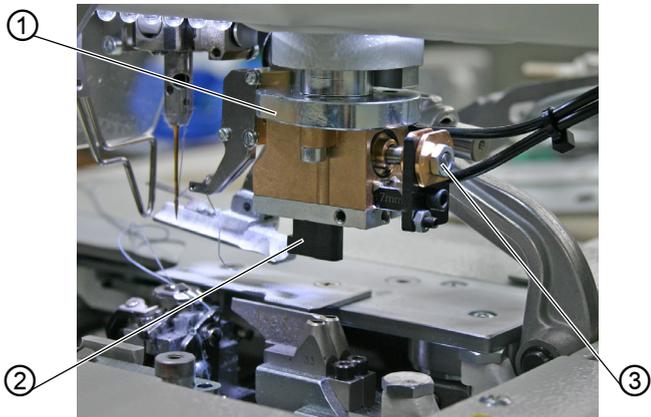
### Changing the cutting block



#### Step

1. Remove compressed air supply hose (📖 S. 82).
2. Press the cutting block holder (1) down carefully with a screwdriver.

Fig. 40: Changing the cutting block with multiflex (1)



- (1) - Cutting block holder                      (3) - Screw  
(2) - Cutting block

3. Loosen the screw (3).
4. Pull the cutting block (2) out to the left.
5. Push the new cutting block (2) into the guide and tighten the screw (3).
6. Reconnect the compressed air hose.

When the compressed air is connected (📖 7.13 *Connecting the pneumatic system*, S. 82), the cutting block holder automatically moves back up.



**Information**

If you want to use a cutting block with a different length, you must make the appropriate setting on the control panel (📖 *Service Instructions*).

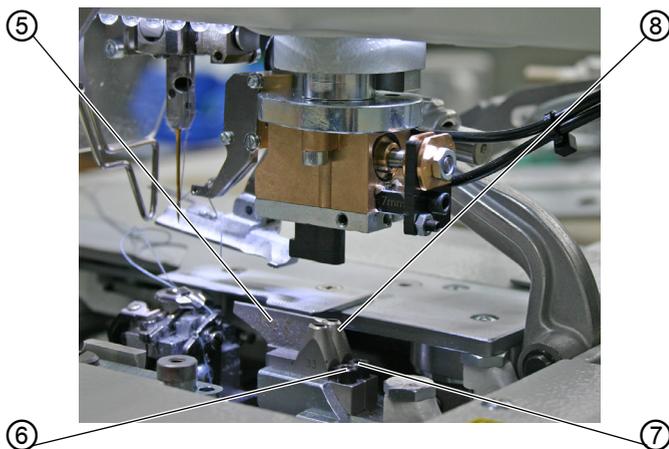
**Changing the blade**



**Step**

1. Loosen screw (5) or (6) (hex key in the accessory pack).
2. Remove blade (4) or (7).
3. Insert the new blade and tighten with screw (5) or (6).

*Fig. 41: Changing the blade with multiflex*



(4) - Blade  
(5) - Screw

(6) - Screw  
(7) - Blade



**Important**

If you cannot remove the blade, slightly loosen the screw of the second blade.



**Information**

If you want to use a blade with a different shape, you must make the appropriate settings on the control panel ( *Service Instructions*).

---



## 7 Setup

### WARNING



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

Severe injuries possible.

The machine may only be set up by qualified specialists.

Wear safety shoes and gloves.

### 7.1 Checking the scope of delivery

The scope of delivery depends on your specific order. Upon receipt check that the scope of delivery is correct.

### 7.2 Removing the transport locks

All transport locks must be removed prior to setup.

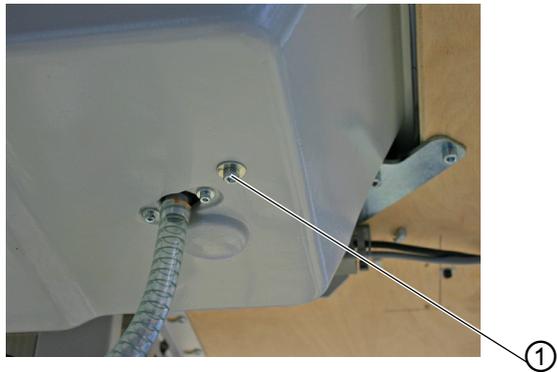
To remove the transport locks:



#### **Step**

1. Remove the lashing straps and wooden blocks from the
  - Machine head
  - Machine table
  - Frame
2. Remove the screw (1) on the oil pan under the table plate. The screw prevents the machine head from swiveling up during transportation.

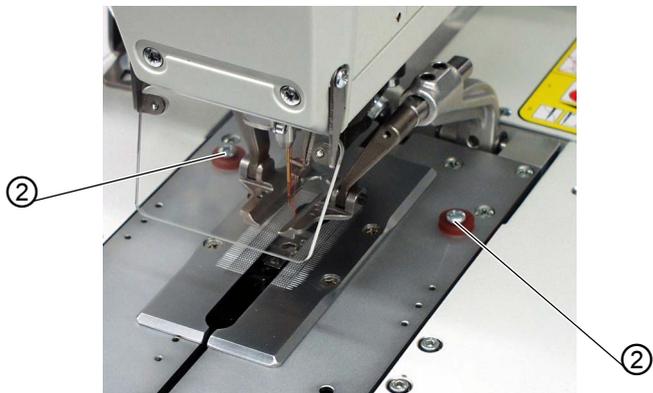
Abb. 42: Removing the transport lock of the machine upper section



(1) - Screw

3. Remove the screws (2).  
The screws prevent the clamping plates from falling out.

Abb. 43: Removing the transport lock of the clamping plates



(2) - Screws

4. Remove the screw (3).

Abb. 44: Removing the transport lock of the machine table



(3) - Screw

### 7.3 Installing the frame

If you have ordered the appropriate frame ([📖 2.3 Additional equipment](#), p. 14), continue with [📖 7.5 Using the ring bolt](#), p. 74.

If you would like to use a different frame, you must perform the following work independently:

- Fit the main switch ([📖 Additional Instructions Connecting the control box at the main switch](#))
- Fit the table plate ([📖 7.4 Fitting the table plate](#), p. 73)
- Fit the maintenance unit ([📖 7.13 Connecting the pneumatic system](#), p. 82)

### 7.4 Fitting the table plate

If you want to make your own table plate, use the drawing ([📖 Appendix](#), p. 121) as a template for the dimensions. The table plate should be approx. 40 mm thick.

## 7.5 Using the ring bolt

The ring bolt makes it easier for you to lift the machine into the frame. You can use it e.g. to lift the machine with a suspension crane or you can also thread a stable rod through the ring bolt and then have 2 people lift the machine. The ring bolt is in the accessory pack.

To use the ring bolt:



### Step

1. Screw the ring bolt (1) onto the machine.

*Abb. 45: Using the ring bolt*



(1) - Ring bolt

(2) - Machine

2. Lift the machine (2) into the frame.
3. When the machine is fitted, unscrew the ring bolt (1) again.

## 7.6 Securing the reel stand

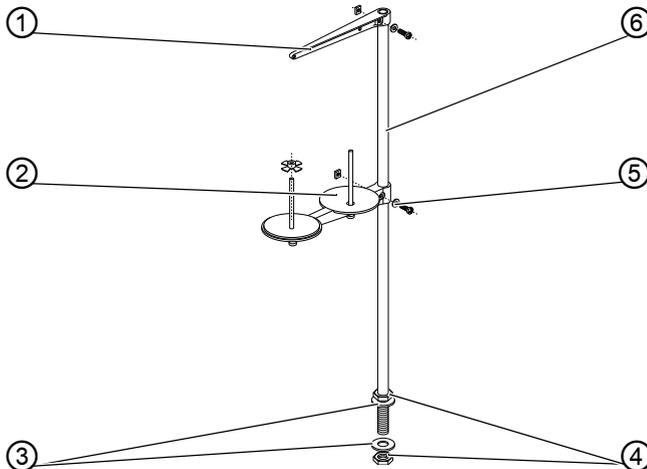


### Step

1. Insert the reel stand (6) into the borehole of the table plate and secure with nuts (4) and washers (3).
2. Fit the thread reel holder (2).
3. Fit the unwinding bracket (1).

- Align the thread reel holder (2) and unwinding bracket (1) so that the thread reel holder and unwinding bracket are parallel to one another.

Abb. 46: Securing the reel stand



(1) - Unwinding bracket  
(2) - Thread reel holder  
(3) - Washers

(4) - Nuts  
(5) - Washer  
(6) - Reel stand



### Information

You must set the centering piece to suit the type of thread reel. Incorrect settings can result in sewing disruptions.

## 7.7 Securing the frame

To ensure that the frame cannot move unintentionally, you have the option of securing it.

To secure the frame:

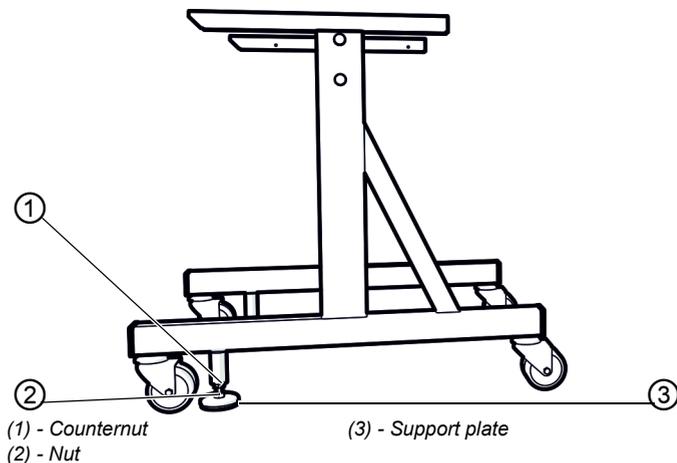


### Step

- Screw both support plates (3) on the nut (2) as far down as required to ensure that the machine is firm and secure.
- Screw the counternut (1) upward.

3. Tighten the counternut (1) slightly.

Abb. 47: Securing the frame



## 7.8 Setting the working height

The working height is continuously adjustable between 73 cm and 90 cm (measured to the upper edge of the table plate).

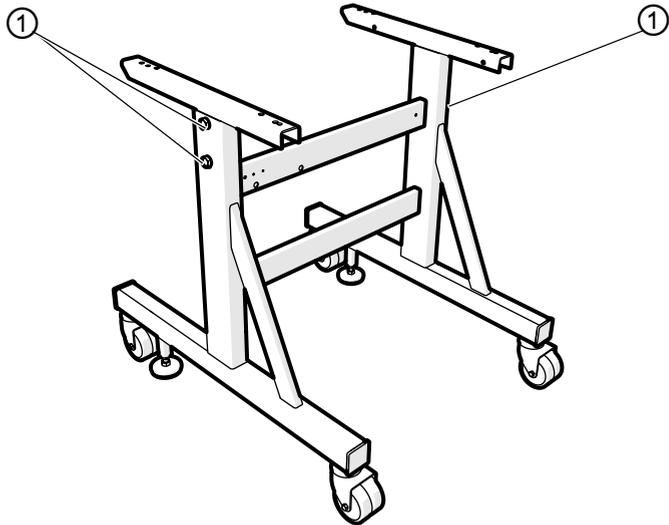
To set the working height:



### Step

1. Loosen the screws (1) on both sides of the frame.
2. Adjust the table plate of the machine so that it is level at the desired working height.  
Pull out or push in the table plate evenly at both sides to prevent it from jamming.
3. Tighten the screws (1).

Abb. 48: Setting the working height



(1) - Screws

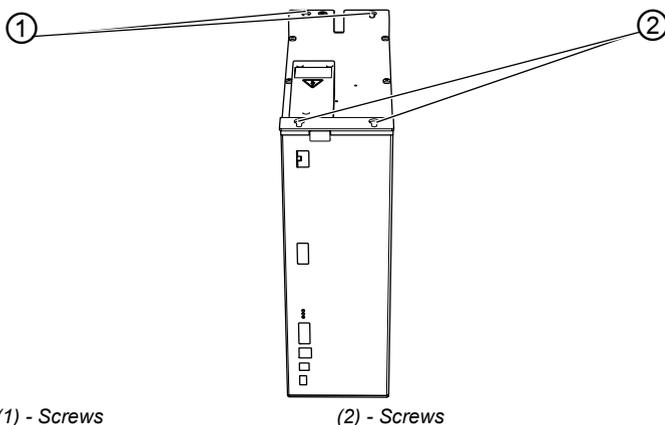
## 7.9 Fitting the controller



### Step

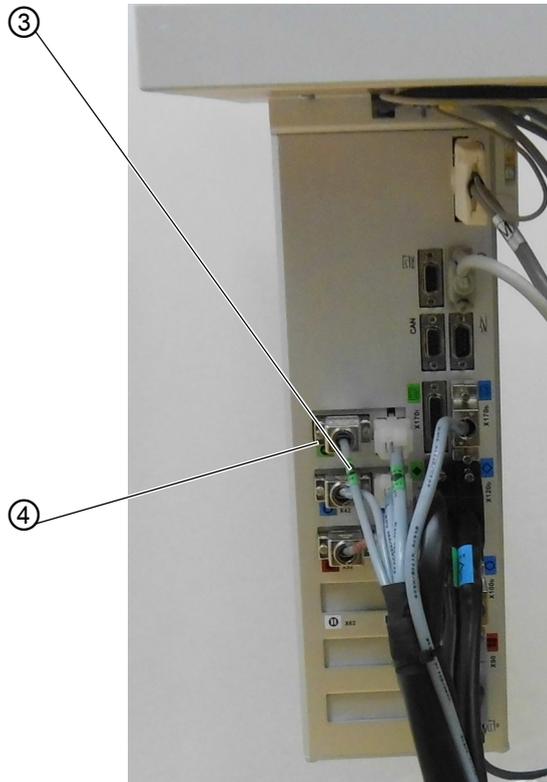
1. Screw the controller using screws to the underside of the table plate at positions (1) and (2). The side with the type plate should be facing forward here.

Abb. 49: Fitting the controller



2. Connect all plugs with the relevant connections. The plugs are clearly labeled by means of identification on the cable (3) and the connections (4) on the housing are labeled correspondingly. The cable and connection have the same designation or the same symbol.

Abb. 50: Connecting the controller



(3) - Cable

(4) - Connection

3. Connect all plugs with the connections.
4. To ensure that the cables are not accidentally pulled out or damaged, screw the protective bar under the table plate.
5. In addition, screw the protective bar securely to the controller.

## 7.10 Electrical connection

### DANGER



#### **Risk of electric shock from live parts!**

Dangerous injuries to life and limb.

Only qualified specialists may perform work on electrical equipment.



#### **Step**

1. Connect the machine in accordance with the wiring plan ( *Appendix*, p. 121).

## 7.11 Equipotential bonding



#### **Step**

1. Establish equipotential bonding in accordance with the wiring plan ( *Appendix*, p. 121).

## 7.12 Installing the suction container

The cutting waste that occurs during sewing ends up in the suction container.

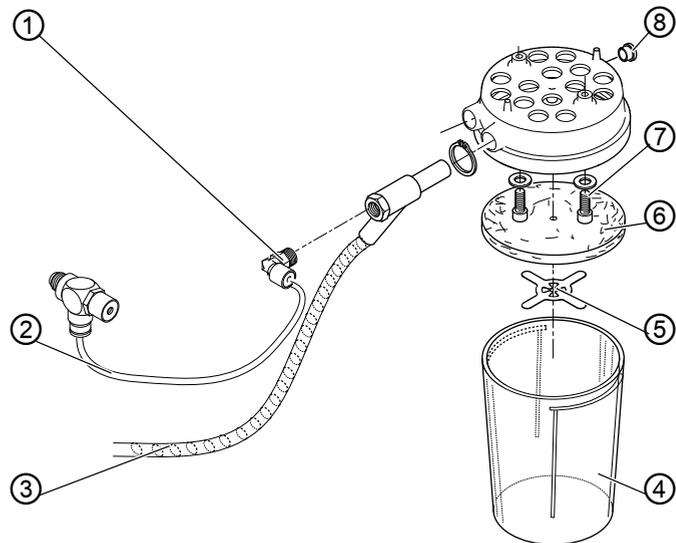
To install the suction container:



#### **Step**

1. Disassemble components 4, 5, 6 and 7 of the suction container in accordance with the figure.

Abb. 51: Installing the suction container



(1) - Angle piece  
(2) - Hose  
(3) - Hose  
(4) - Container

(5) - Spring plate  
(6) - Foam  
(7) - Screws  
(8) - Blanking plug

2. Insert the blanking plug (8).
3. Screw the suction container into the pre-bored holes under the oil pan using the screws (7).
4. Secure the foam (6) with the spring plate (5) again.
5. Tighten the container (4).
6. Connect the hose (3) to the suction container via the injector. Cutting waste is extracted via the hose (3) into the container (4).
7. Screw the angle piece (1) onto the injector.
8. Connect the suction container with the pressure supply via the hose (2).

### 7.13 Connecting the pneumatic system

The pneumatic system of the machine and the auxiliary equipment must be supplied with moisture-free, unlubricated compressed air. A pneumatic connection package (📖 2.3 *Additional equipment*, p. 14) for frames with maintenance unit and pneumatic additional equipment is available for this purpose:

- Connection hose, 5 m long, dia. = 9 mm
- Hose connectors and hose clamps
- Coupling socket and coupling cover R ¼

To connect the pneumatic system:



#### Important

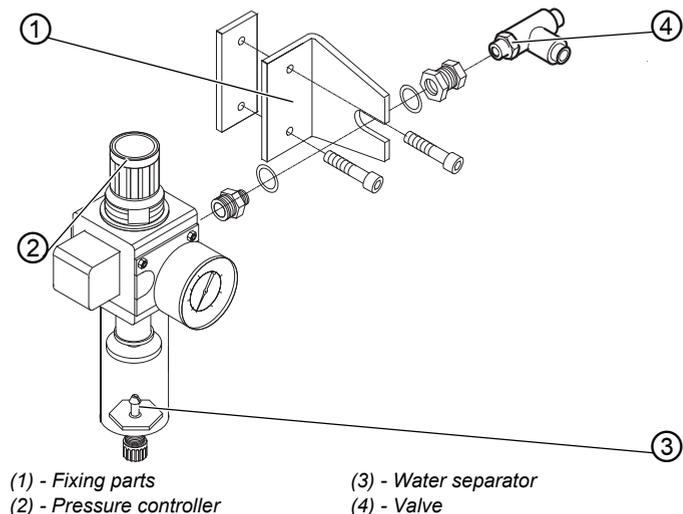
If you have ordered a suitable frame (📖 2.3 *Additional equipment*, p. 14), continue with step 4.



#### Step

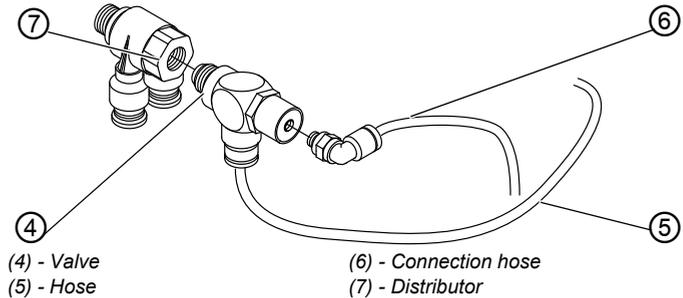
1. Screw the maintenance unit, comprising pressure controller (2) and water separator (3), with fixing parts (1) to the frame so that the compressed air hoses from the machine can be connected.

Abb. 52: Fitting the maintenance unit



2. Connect the distributor (7) with the thicker two of the three compressed air hoses coming from the cable duct of the machine.
3. Screw the distributor (7) to valve (4).

Abb. 53: Connecting the maintenance unit



4. Connect the valve (4) to the hose (5) for the suction container.
5. Connect the connection hose (6) for the compressed air to the valve (4).

## 7.14 Setting the operating pressure

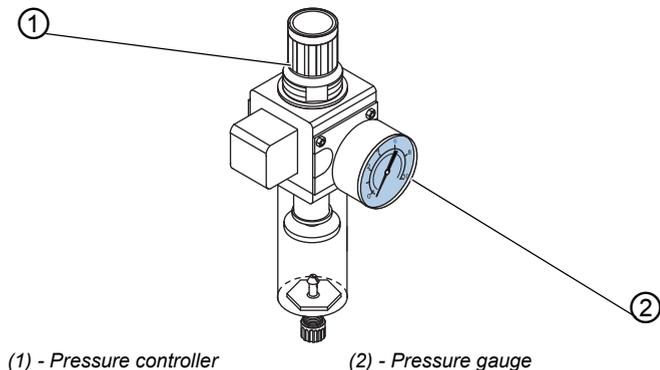


### Correct setting

The operating pressure is 6 bar.

You can read the operating pressure on the pressure gauge (2).

Abb. 54: Setting the operating pressure



### NOTICE

#### **Material damage from incorrect operating pressure!**

Incorrect pressure can cause damage to the machine.

Ensure an operating pressure of  $6 \pm 0.5$  bar.

To set the operating pressure:



#### **Step**

1. Pull the pressure controller (1) up.
2. Turn the pressure controller (1) such that the pressure gauge (2) displays the correct operating pressure:
  - Turn clockwise = increases pressure
  - Turn counter-clockwise = reduces pressure
3. Push the pressure controller (1) down.

## **7.15 Lubrication**

The wicks, felt, looper and needle bar must all be lubricated with a little oil when setting up the machine, or after longer stand-still periods.

All moving parts in the machine are lubricated via an oil-wick system from 2 oil reservoirs.

### ATTENTION



#### **Risk of environmental damage from oil!**

Oil is a pollutant and must not enter the wastewater system or the ground.

Collect waste oil carefully.

Dispose of waste oil and oily machine parts in accordance with the applicable statutory regulations.

Use only **DA 10** lubricant or an equivalent oil conforming to the following specifications for lubrication:

- Viscosity at 40 °C: 10 mm<sup>2</sup>/s
- Flash point: 150 °C

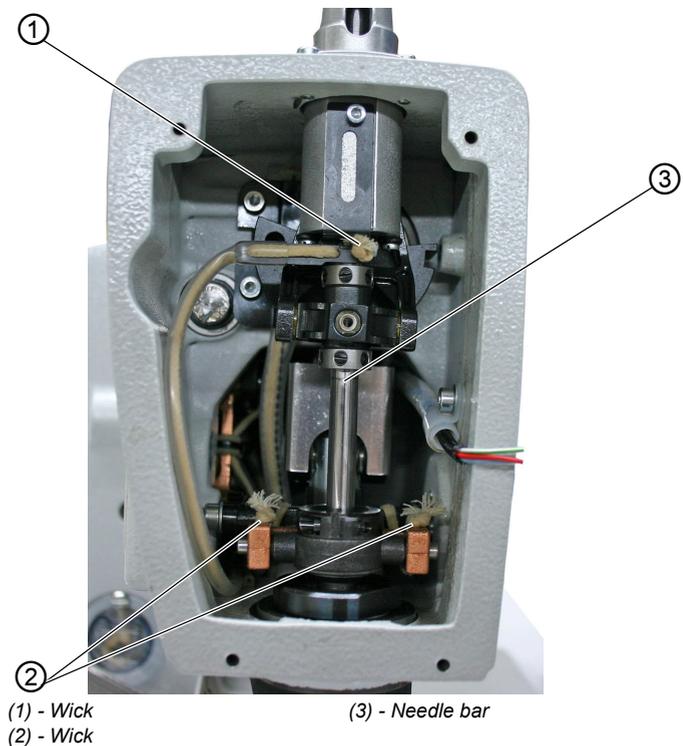
To lubricate the machine components:



### Step

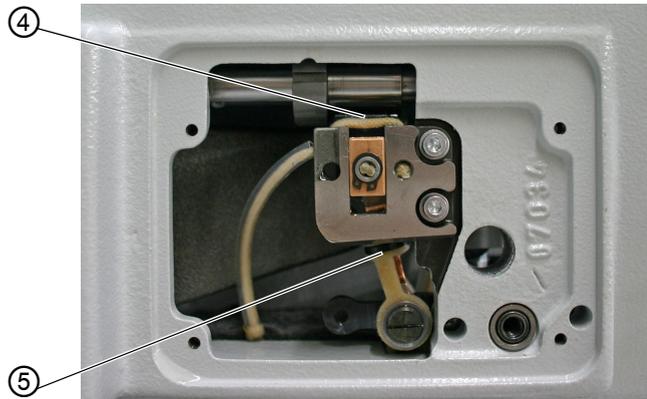
1. Unscrew the head and side covers.

Abb. 55: Lubricating (1)



2. Soak the wicks (1) and (2) as well as felt (5) with a little oil.
3. Add 1-2 drops of oil to the pendulum sleeve and needle bar (3).

Abb. 56: Lubricating (2)

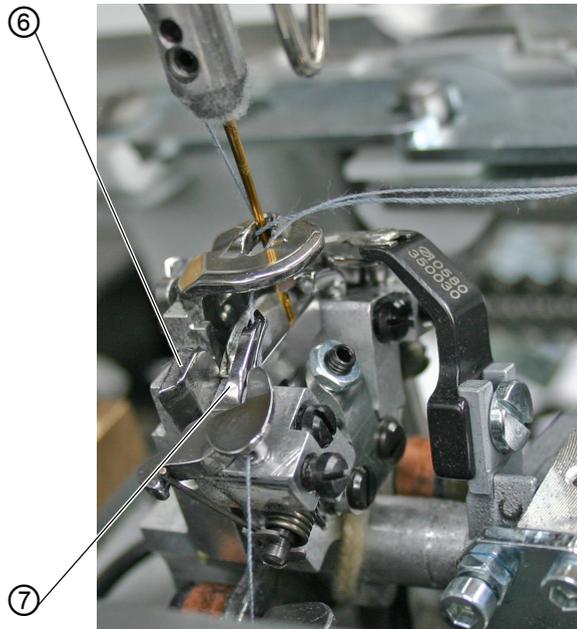


(4) - Wick

(5) - Felt

4. Screw the head and side covers on.
5. Remove the clamping plates.
6. Soak the wick (4) with a little oil.
7. Add 1-2 drops of oil to the spreader plate (6) and to the spreader (7).

Abb. 57: Lubricating (3)



(6) - Spreader plate

(7) - Spreader

## 7.16 Topping up the oil

To top up the oil reservoirs, use only an oil with the same specifications as that for lubricating ( 7.15 Lubrication, p. 84).

To top up the oil reservoirs:



### Step

1. Top up the oil reservoir (2) through the fill opening (1) up to the max mark.

Abb. 58: Topping up the oil (1)



(1) - Fill opening

(2) - Oil reservoir

2. Top up the oil reservoir (4) through the fill openings (3) up to the max mark.

Abb. 59: Topping up the oil (2)



(3) - Fill opening

(4) - Oil reservoir

## 7.17 Adjusting the material edge stops

To enable you to work precisely with the sewing material, you can adjust the position of the material edge stops.





### Sequence

1. Switch on the machine.
2. Carry out a test run.
3. Switch off the machine.

To carry out a test run:



### Step

1. Insert the material to be sewn.
2. Select a buttonhole shape ( 8.1.2 *Single buttonhole mode*, p. 91) and first set a low speed.
3. Sew the buttonhole ( 5.12 *Sewing*, p. 54).
4. Continuously increase the speed.
5. Check whether the buttonhole meets the desired requirements.

If the requirements are not met, change the thread tension ( 5.9 *Adjusting the thread tension*, p. 49).

---



### Information

If the welcome screen does not appear on the control panel after switching on even after waiting for a long time, this means that there is no software on the controller.

In this case, the software must first be installed ( *Service Instructions*).

---

## 8 Software settings

### 8.1 User level

In the user level, the most important information for sewing operation is displayed.

#### 8.1.1 Basic operation

You can change the values at user level by pressing the corresponding key on the control panel (see 4.1 Control panel, p. 26).

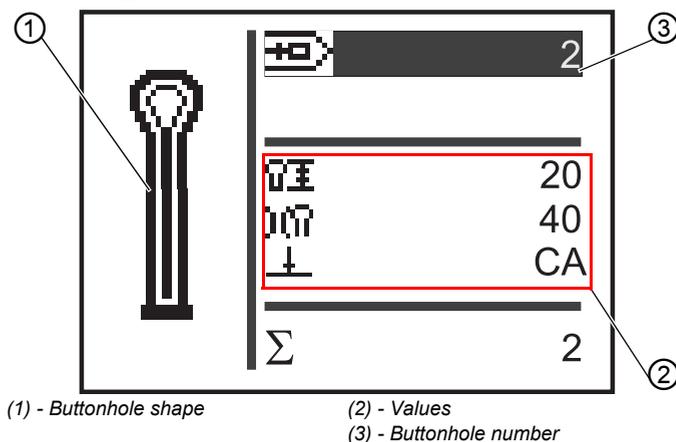
Depending on the setting in the sequence menu, either sequential mode or single buttonhole mode is available (see 8.2 Buttonhole programming, p. 99).

You can tell which mode is activated by the fact that it is highlighted in the topmost field of the display after switching on (see 4.2.1 Structure, p. 31).

#### 8.1.2 Single buttonhole mode

On user level, you can select a buttonhole from 50 pre-programmed buttonholes.

Abb. 61: Single buttonhole mode



To select a pre-programmed buttonhole:



### Step

1. Using the key , navigate to the field **Buttonhole number** (3).

2. Press the key .

↳ The cursor flashes.

3. Select the desired buttonhole number using the

keys  or .

As a selection aid, the current buttonhole shape (1) and the most important corresponding values (2) are displayed.

4. Confirm the selection with the key .

### 8.1.3 Sequential mode

Depending on the setting, the machine will be in either automatic, manual or light barrier mode ( *4.2.2 Modes of operation*, p. 31). In sequential mode you can switch between programmed buttonholes in the sequence at any time, unless you are working in light barrier mode.

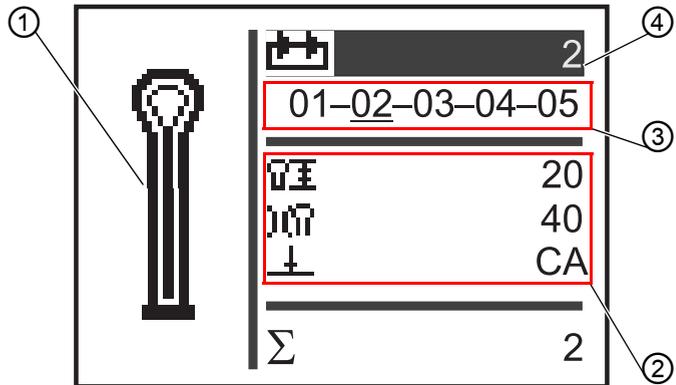
There are 2 steps for selecting a buttonhole in sequential mode:



### Sequence

1. Select a sequential number.
2. Select a buttonhole.

Abb. 62: Sequential mode



(1) - Buttonhole shape  
(2) - Values

(3) - Sequence  
(4) - Sequential number

### Selecting a sequential number

To select the sequential number:



#### Step

1. Using the key , navigate to the field **Sequential number** (4).

2. Press the key .

↳ The cursor flashes within the desired row.

3. Select the desired number using the keys  or .

4. Confirm the selection with the key .

### Selecting a buttonhole

To select a buttonhole:



#### Step

1. Select the buttonhole within the sequence shown using the

keys  or .

- ↳ The desired buttonhole is marked with a bar.  
As a selection aid, the current buttonhole shape is displayed in the **Buttonhole shape** (1) field and the corresponding values are displayed in the **Values** (2) area.

### Selecting the mode of operation

1. Use the keys  or  to navigate to the field **Sequence** (3).

2. Press the key .

3. Use the key  to change operating mode.

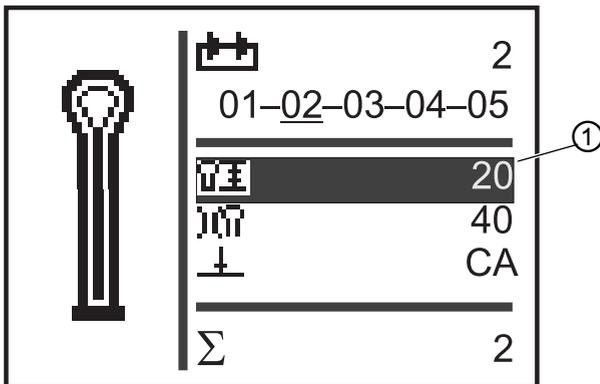
- ↳ The arrows between the buttonhole shapes appear or disappear as appropriate.

4. Confirm the selection with the key .

### 8.1.4 Adjusting the cutting length

On the display, the field (1) indicates the cutting length. You can adjust the cutting length.

Abb. 63: Adjusting the cutting length in sequential mode



(1) - Cutting length

To set the cutting length:



### Step

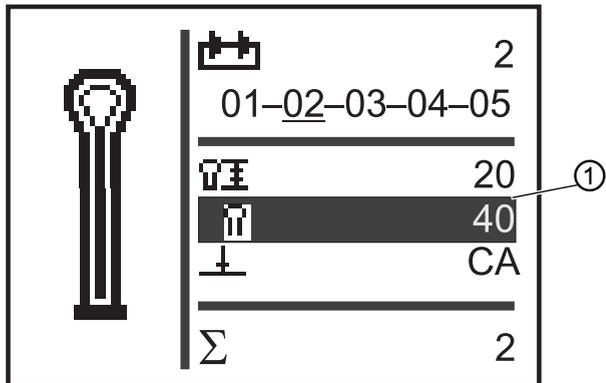
1. Use the key  to navigate to the field **Cutting length** (1).
2. Press the key  .  
 The cursor flashes.
3. Use the keys  or  to set the desired value.
4. Confirm with the key  .

You can also adjust the thread tension.

### 8.1.5 Adjusting the thread tension

On the display, the field (1) indicates the thread tension during sewing. You can adjust the thread tension.

Abb. 64: Adjusting the thread tension in sequential mode



(1) - Thread tension field

To set the thread tension:



### Step

1. Use the key  to navigate to the field **Thread tension** (1).
2. Press the key .  
 The cursor flashes.
3. Use the keys  or  to set the desired value.
4. Confirm with the key .

You can also adjust the cutting mode.

### 8.1.6 Adjusting the cutting mode

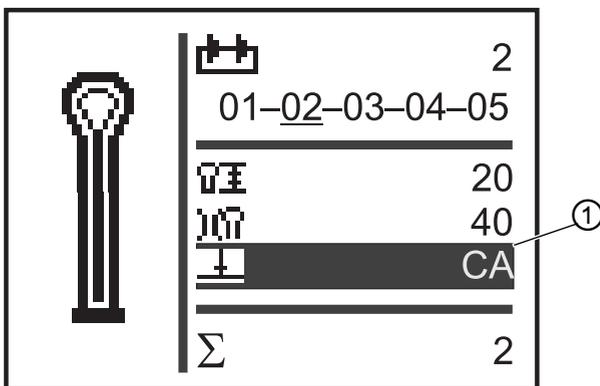
On the display, the field (1) indicates the cutting mode. The cutting mode determines when and whether a buttonhole is to be cut during the sewing process.

For cutting mode, you can switch between the following parameters:

### Parameters for cutting mode

Parameter	Function
0	= No cutting
CA	= Cut after the seam end (Cut After)
CB	= Cut before the start of the seam (Cut Before)

Abb. 65: Setting cutting mode in sequential mode



(1) - Cutting mode

To set the cutting mode:



#### Step

1. Use the key  to navigate to the field **Cutting mode** (1).
2. Press the key  .  
 ↳ The cursor flashes.
3. Use the keys  or  to set the desired value.
4. Confirm with the key  .

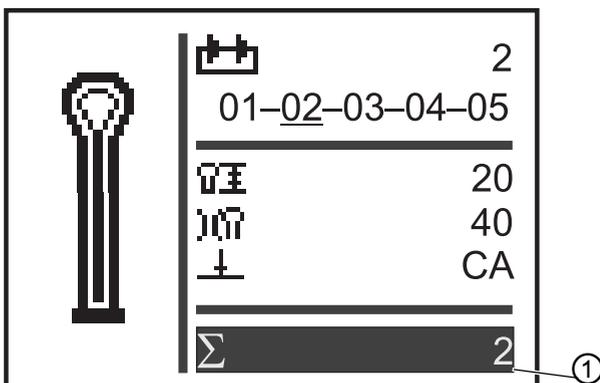
You can reset the piece counter.  
If you do not wish to reset the piece counter, you can now start sewing.

### 8.1.7 Resetting the piece counter

The machine is equipped with a piece counter that counts the number of sewn buttonholes. After the  $\Sigma$  symbol (1) the current value (e.g. 2) is displayed. The piece counter value is retained after the machine is switched off.

The piece counter counts up to a maximum of 9999 buttonholes. When this value is exceeded, the count starts again at 0.

Abb. 66: Resetting the piece counter in sequential mode



(1) - Piece counter field

To reset the piece counter:



#### Step

1. Use the key  to navigate to the field **Piece counter** (1).
  2. Press the key .
- ↳ The menu bar changes.

3. Hold the key  for approx. 2 seconds.
- ↳ The piece counter is set to 0 and the display changes back to the main menu ( 8.1 User level, p. 91).

## 8.2 Buttonhole programming

The buttonholes are programmed on the P level.  
The respective characteristics of the buttonhole, e.g. buttonhole length and eye shape, can be set for all bartack forms.



### Important

Once you press the  key, you can no longer sew.



### Important

If you change the bartack form of a buttonhole program, all values of this buttonhole are reset to the default values.



### Information

Not all buttonhole shapes and variants can be sewn with every sub-class or item of sewing equipment.

To program a buttonhole:



### Step

1. Press the key  .
- ↳ The setting mode for the individual buttonholes is started.
2. Using the key  , navigate to the field **Buttonhole number** ( 8.1.2 Single buttonhole mode, p. 91).
3. Press the key  .

4. Select the desired buttonhole number using the

keys  or .

5. Press the key .

6. Using the keys  or  select the bartack

form .

7. Press the key .

8. Select the desired bartack using the keys  or .

### Bartack forms

No bartack	Taper bar	Cross tack	Round tack	Eyelet
	Y	⌋	U	○

9. Confirm the selection with the key .

Using the key  you can move one level higher and set further values (see the following list of menu items and sub-menu items).

Or you can quit the setting mode using the key .

### List of menu items and sub-menu items

Value	Description
	<b>Length settings</b>
	<b>Cutting length:</b> The cutting length can be adjusted, depending on the sewing direction, from 6 mm to max. 50 mm.
	<b>Eyelet diameter (only for eyelet machines).</b>
	<b>Stitch length in the buttonhole seam:</b> Distance from stitch to stitch within the seam (from 0.5 mm to 2 mm).
	<b>Number of stitches in the eyelet (only for eyelet machines):</b> Number of evenly distributed stitches in the entire eyelet.
	<b>Overlap in the eyelet (only for eyelet machines):</b> Overlap of the start and end of the seam.
	<b>Thread cutting length:</b> The length of the needle thread and of the looper thread end can be changed on the 581-112 or 581-312 on the buttonhole underside. Stitch condensing increases the seam safety at the start and end of the seam.
	<b>Stitch length of the condensing stitches at the start of the seam:</b> Distance from stitch to stitch within the condensing at the start of the seam.
	<b>Stitch length of the condensing stitches at the end of the seam:</b> Distance from stitch to stitch within the condensing at the end of the seam.
	<b>Number of condensing stitches at the start of the seam:</b> Number of stitches within the condensing at the start of the seam.
	<b>Number of condensing stitches at the end of the seam:</b> Number of stitches within the condensing at the start of the seam.

Value	Description
	<b>Needle thread tension</b>
	<b>Sewing tension:</b> Electronically regulated sewing tension within the sewing cycle.
	<b>Cutting tension:</b> Reduced needle thread tension for the needle thread cutter.
	<b>Sewing start tension:</b> The length of the initial thread inserted can be regulated by changing the thread tension at the start of sewing.
	<b>Eye settings</b>
	<b>Eye shape:</b> 7 different eye shapes can be programmed.
	<b>Number of stitches in the eye:</b> Min. 4 to max. 25 stitches can be set in the rounding of the buttonhole eye.
	<b>Eye angle:</b> The buttonhole eye can be inclined slightly to the left or right.
	<b>Zigzag stitch adjustment:</b> The zigzag stitch width can be reduced by up to 1.0 mm or increased by up to 0.5 mm.
	<b>Cutting settings</b>
	<b>Cutting mode:</b> Depending on the sewing direction, the buttonhole can be cut either after (CA), before (CB) or not at all (0).
	<b>Cutting area:</b> Distance between the two inner lips of the forward and return seams.
	<b>Multiflex mode cutting range:</b> 1 = Total cut, 2 = Middle cut, 3 = Eye cut or edge cut/bar cut.

Value	Description
	<b>Cutting length for total cut:</b> The cutting length can be shorted by max. 2 mm.
	<b>Cutting position for middle cut:</b> The position can be specified as a percentage and increases from the eye position (0%) to the rearmost position (100%).
	<b>Cutting correction in the x-direction:</b> The blade position within the buttonhole can be pushed to the left or right.
	<b>Cutting correction in the y-direction:</b> The blade position within the buttonhole can be pushed forward or back.
	<b>Cutting pressure correction:</b> Automatic adjustment (4 stages) of the cutting force for the buttonhole blade depending on the buttonhole length. - up to 14 mm buttonhole length (eyelets) 2 stages - from 15 mm to 30 mm buttonhole length 3 stages - from 31 mm buttonhole length 4 stages In this menu item, you can increase or reduce the pre-set cutting force, depending on the buttonhole length.
	<b>Flexible cutting:</b> Monoflex mode 581-312 or 581-321 or 581-341.
	<b>Taper bar settings</b>
	<b>Taper bar length:</b> The taper bar length can be adjusted, depending on the sewing direction and buttonhole length, from 2 mm to max. 36 mm.
	<b>Zigzag stitch width in the taper bar:</b> The zigzag stitch width applicable for the entire buttonhole can be reduced in the taper bar.
	<b>Overlap in the taper bar:</b> Overlap of the forward and return seams in the taper bar.
	<b>Height of the bartack incline:</b> The length of the taper in the bartack is adjustable.

Value	Description
	<b>Cross tack settings</b>
	<b>Cross tack length:</b> Total length of the cross tack. The setting range is automatically adjusted depending on the selected cutting space and the zigzag stitch.
	<b>Stitch length in the cross tack:</b> Distance from stitch to stitch within the cross tack (from 0.5 mm to 2 mm).
	<b>Zigzag stitch width in the cross tack:</b> The zigzag stitch width can be reduced or increased in the cross tack.
	<b>x-position of the cross tack:</b> The entire cross tack can be moved slightly to the left or right.
	<b>Seam length in the cross tack:</b> Overlap of the forward and return seams with the cross tack.
	<b>Round tack settings</b>
	<b>Number of stitches in the round tack:</b> Min. 6 to max. 12 stitches can be set in the round tack or 4 to 10 stitches in the lower semi-circle.
	<b>Zigzag stitch width in the round tack:</b> The zigzag stitch width applicable for the entire buttonhole can be reduced in the round tack.
	<b>Seam start position:</b> The start of the seam can be either in the round tack or within the forward seam.
	<b>Overlap in the seam:</b> Overlap of the start and end of the seam.
	<b>Seam starting position within the seam:</b> The position of the seam start within the forward seam can be changed from the start of the seam (100%) to the eye (0%).
	<b>Overlap in the round tack:</b> Overlap of the start and end of the seam in the round tack.

Value	Description
	<b>Gimp monitoring (only for additional equipment 581-141 and 581-341):</b> Monitoring on/off, as to whether the gimp thread is inserted.
	<b>Following buttonhole:</b> Number of the buttonhole that is sewn directly after this buttonhole without opening the clamps. This makes it possible to carry out double passes.
	<b>Speed:</b> Revolutions per minute.

### 8.3 Sequence programming

The sequences are programmed on the S level.



#### Important

Once you press the key  , you can no longer sew.

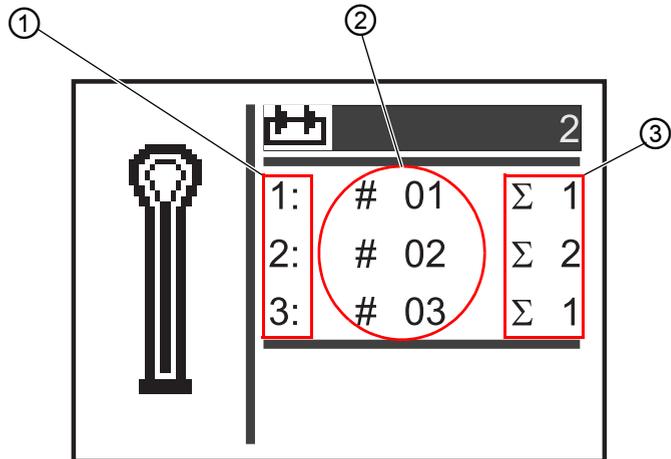
To program a sequence:



#### Step

1. Press the key  .  
 The setting mode for the individual sequences is started.
2. Use the key  to navigate to the **Sequential number** field ( 8.1.3 *Sequential mode*, p. 92).
3. Press the key  .  
 The following appears on the display:

Abb. 67: Programming sequences (1)



(1) - Position within the sequence      (3) - Number of buttonholes  
(2) - Buttonhole number

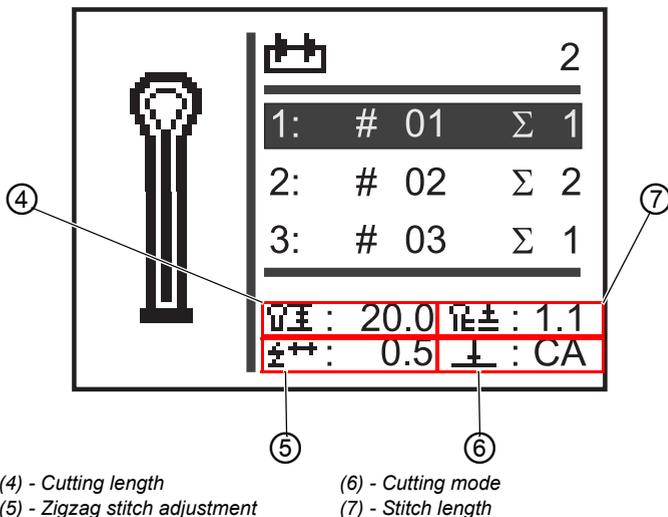
4. Select the desired sequential number using the

keys  or .

5. Press the key .

↳ The following appears on the display:

Abb. 68: Programming sequences



6. Use the keys  or  to select the position desired for the buttonhole within the sequence (1st column of the display).  
 ↳ The cursor shows the current position.
7. Press the key  .
8. Use the keys  or  to select the desired buttonhole number (2nd column of the display).  
 ↳ The buttonhole shape is displayed.
9. Press the key  .
10. Use the keys  or  to set the desired number of buttonholes (3rd column of the display).

11. Confirm with the key .

You can add further buttonhole programs. Start again with step 1.

### 8.3.1 Deleting a buttonhole at the end of a sequence

To delete a buttonhole at the end of a sequence:



#### Step

1. Use the keys  or  to select the last but one line of the programmed buttonhole sequence.

2. Press the key .

3. Use the keys  or  to select the buttonhole program 0.

4. Confirm with the key .

 The selected buttonhole is deleted.

When you want to quit setting mode, press the key . This will take you back to the user level.

### 8.3.2 Adding a buttonhole at the end of a sequence

To add a buttonhole at the end of a sequence:



#### Step

1. Use the key  to select the last line of the programmed buttonhole sequence.

2. Press the key .

3. Select the desired buttonhole program using the

keys  or .

4. Press the key .

When you want to quit setting mode, press the key . This will take you back to the user level.

### 8.3.3 Inserting a buttonhole within a sequence

It is not possible to insert buttonholes individually into the sequence. Note the current sequence programming and change the sequence accordingly ( 8.2 Buttonhole programming, p. 99).

You can also switch off sequential mode.

### 8.3.4 Switching off sequential mode

If you want to use single buttonhole mode instead of sequential mode, switch off sequential mode.

To switch off sequential mode:



#### Step

1. Press the key .
2. Use the key  to navigate to the field **Sequential number** ( 8.1.3 Sequential mode, p. 92).
3. Press the key .
4. Use the key  to select the sequential number 0.

5. Press the key  .  
↳ The sequential mode is switched off.
  
6. Press the key  .  
↳ The setting mode is ended. This will take you back to the user level.

## 8.4 Service mode

In service mode, there are functions that can be used for servicing work. Service mode is password-protected in order to prevent unintentional incorrect machine settings.

More detailed information on the contents of service mode is provided in the  *Service Instructions*.

## 9 Decommissioning

A number of activities must be performed if the machine is to be shut down for a longer period of time or completely decommissioned.

### WARNING



#### **Risk of injury due to a lack of care!**

Severe injuries possible.

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

### CAUTION



#### **Skin damage due to contact with oil!**

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

Avoid any skin contact with oil residues.

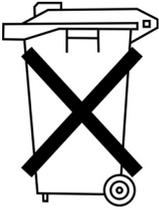
Decommission the machine as follows:



#### **Step**

1. Switch off the main power switch located centrally under the fabric support surface.
2. Unplug the power plug.
3. Disconnect the pneumatic connection.
4. Remove residual oil from the oil pan under the fabric support surface using a cloth.
5. Cover the control panel to protect it from soiling.
6. Cover the controller to protect it from soiling.
7. Cover the entire machine if possible to protect it from soiling and damage.





## 10 Disposal

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

The machine must be disposed of in an appropriate and correct manner according to the national regulations.

### ATTENTION



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

Incorrect disposal of old oil can result in severe environmental damage.

ALWAYS observe the legally prescribed regulations for disposal.

When disposing of the machine, be aware that it consists of a range of different materials (steel, plastic, electronic components etc.). Observe the applicable national regulations for disposal.



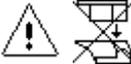
## 11 Troubleshooting

Should an error occur that is not described here, please contact the manufacturer ( 5.13 *Customer service*, p. 58).

Do not try to repair the error yourself.

### 11.1 Information messages

Symbol	Description	Remedy
	At the start of sewing, the needle is not in the upper home position or is on the wrong side.	<ul style="list-style-type: none"> <li>• Turn the handwheel until the message disappears.</li> </ul>
	At the start of sewing the machine is in the threading position.	<ul style="list-style-type: none"> <li>• Press the push button on the head cover.</li> </ul>
	The thread breaks during sewing.	<ul style="list-style-type: none"> <li>• Press the push button on the head cover.</li> </ul>
	At the start of sewing the needle is in the threading position.	<ul style="list-style-type: none"> <li>• Press the push button on the head cover.</li> <li>• Switch the machine off and on again.</li> </ul>

Symbol	Description	Remedy
	There is no compressed air or the pressure is too low.	<ul style="list-style-type: none"> <li>• Switch off the machine.</li> <li>• Ensure the supply of sufficient compressed air.</li> <li>• Switch on the machine.</li> </ul>
	A prohibited cutting combination was selected (ONLY for multiflex).	<ul style="list-style-type: none"> <li>• In the controller, check and adjust the data for the blade and cutting block set.</li> <li>• If necessary, install and set an appropriate blade and cutting block.</li> </ul>
	The sewing process stops (ONLY for 141, 341 with integrated and activated gimp monitoring).	<ul style="list-style-type: none"> <li>• The sewing process can be continued with the <b>OK</b> key or the push buttons, or be stopped with the <b>ESC</b> key or the push buttons.</li> </ul>

## 11.2 Error messages

If an error occurs, the  symbol appears on the display, followed by a four-digit number combination ( *Service Instructions*).

## 12 Glossary

Term	Explanation
CA	Abbreviation shown by the display: See <i>Cutting mode</i> .
CB	Abbreviation shown by the display: See <i>Cutting mode</i> .
Control panel	You can: <ul style="list-style-type: none"> <li>• call up modes</li> <li>• read values</li> <li>• read information and error messages</li> </ul> Is located on the side of the machine.
Cursor	Marks the current position in the software on the <i>display</i> .
Cutting diameter	Defines the diameter of the buttonhole to be cut.
Cutting length	Defines the length of the buttonhole, which depends on the diameter of the button.
Cutting mode	Determines when and whether a buttonhole is to be cut during the sewing process: <ul style="list-style-type: none"> <li>• CB (before the sewing process)</li> <li>• CA (after the sewing process)</li> <li>• 0 (Cutting mode off)</li> </ul> Changes the <i>cutting diameter</i> .
Display	Displays information.
End bartack	Secures the end of a seam.
Eyelet diameter	See <i>Cutting diameter</i> .
Function key	Refers to the F key. Activates service mode (technician level).
Light barrier	Optically detects the end of the seam by means of a sensor.
Looper thread	Refers to the thread which comes from the bobbin under the fabric support surface.
Machine function	Refers to an equipment feature of a machine.

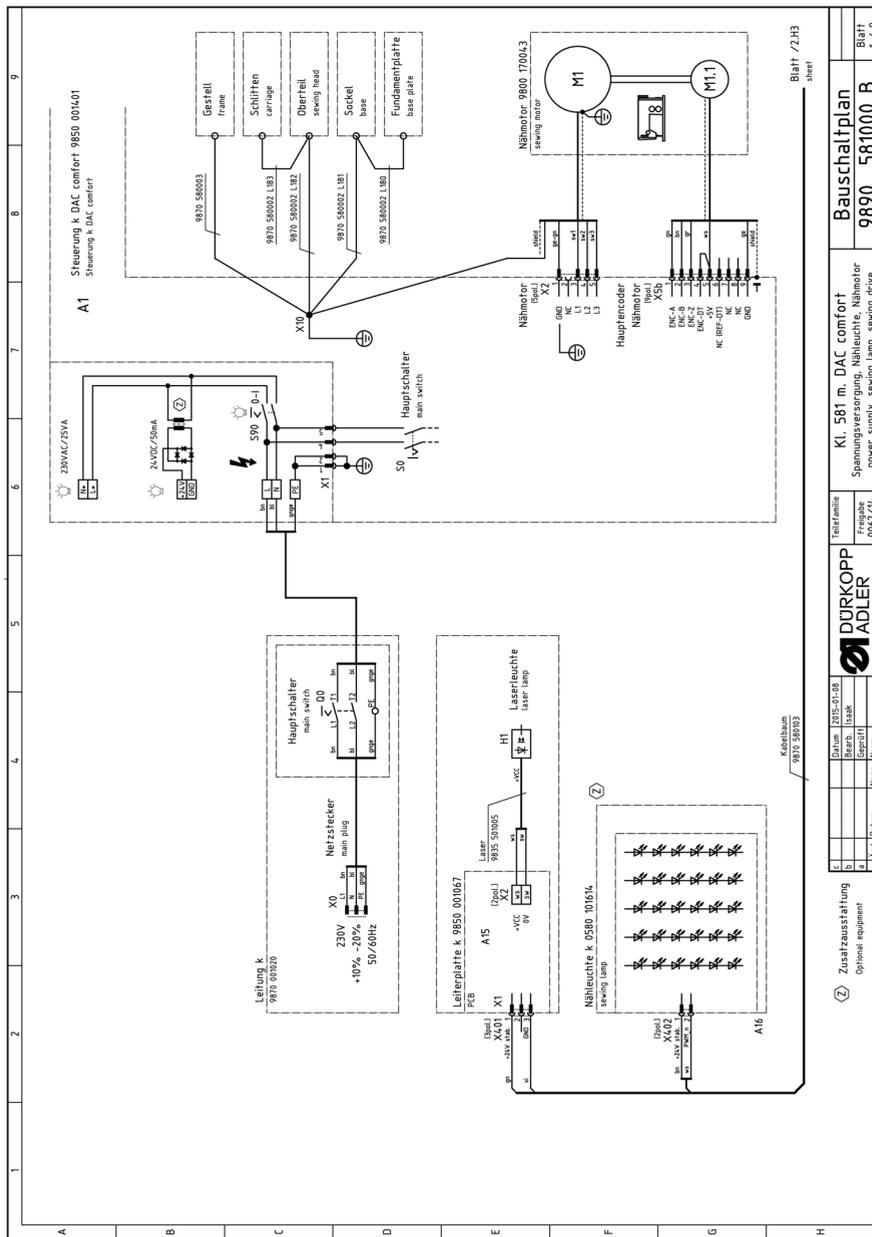
<b>Term</b>	<b>Explanation</b>
Maintenance unit	Comprises a water separator and pressure controller.
Needle thread	Refers to the thread that is coming from the thread reel and is guided by the needle.
Needle thread monitor	Interrupts the sewing process if the needle thread breaks.
Parameter	Numerical value that activates or sets a machine function.
Piece counter	Counts the sewing cycles completed (quantity) after the sewing thread is cut.
Pressure controller	Ensures the correct operating pressure.
Pressure gauge	Measures and displays the operating pressure.
Reduced speed	Machine runs at a lower speed than set by default in the factory.
Residual thread monitor	Reports when the looper thread bobbin is empty.
S.p.m.	Refers to the number of stitches per minute.
Sewing material	Refers to the material to be sewn.
Sewing speed	The mathematical product of the stitch length and the s.p.m.
Sewing thread	Umbrella term for looper and needle thread.
Speed	Refers to the revolutions per minute performed by the sewing motor.
Speed limitation	See <i>Reduced speed</i> .
Start bartack	Secures the start of a seam.
Thread cutter	Cuts the sewing thread after each sewing process. Sits under the fabric support surface.
Thread tension	Determines the appearance of the sewing material. Depends on the thread and sewing material used. There is: <ul style="list-style-type: none"> <li>• Needle thread tension</li> <li>• Looper thread tension</li> </ul>

Term	Explanation
Threading mode	Mode that can be activated at the push of a button. Serves as a threading aid.
User level	Controls authorization as to which processes can be performed on the controller. There are 4 levels: <ul style="list-style-type: none"><li>• Operator</li><li>• Buttonhole programming (P)</li><li>• Sequence programming (S)</li><li>• Technician (F)</li></ul>
Water separator	Filters the condensed water and the dirt from the compressed air. Enriches the air with a certain quantity of oil.





Fig. 70: Wiring diagram (1)



Blatt / 2113  
sheet

Blatt  
1 / 9

**Bauschaltplan**  
9890 581000 B

**Kl. 581 m. DAC comfort**  
Spannungsversorgung, Nähleuchte, Nähmotor  
power supply, sewing lamp, sewing drive

Teilfamilie  
Erzeugnis  
0062/14

**DÜRKOPP  
ADLER**

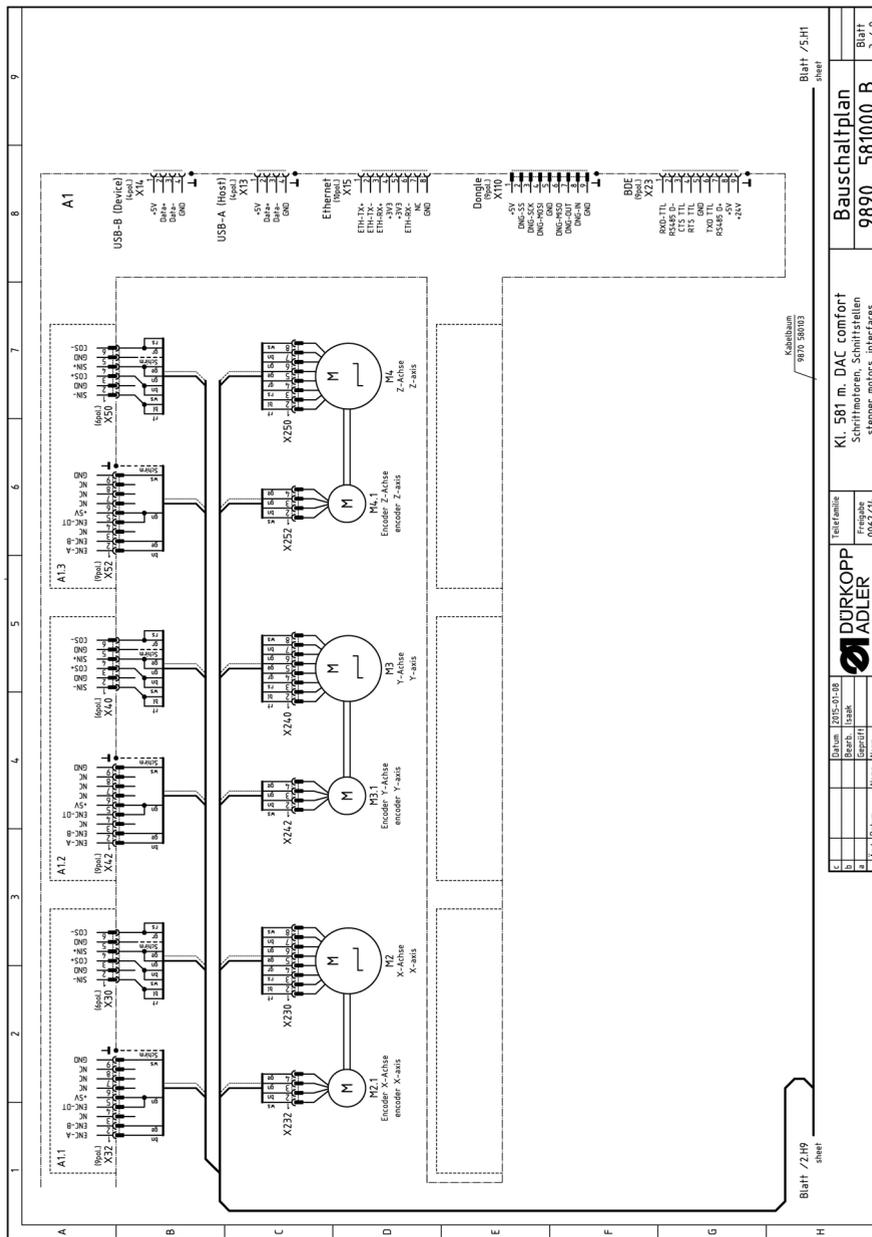
Datum	2015-07-08
Bereit.	Isarak
Gezeichnet	
Prüft.	
Freigegeben	
Mod.	
Datum	
Name	
Postf.	

Zuszeustattung  
Optional equipment

Kostenbaum  
9870 280025



Fig. 72: Wiring diagram (3)



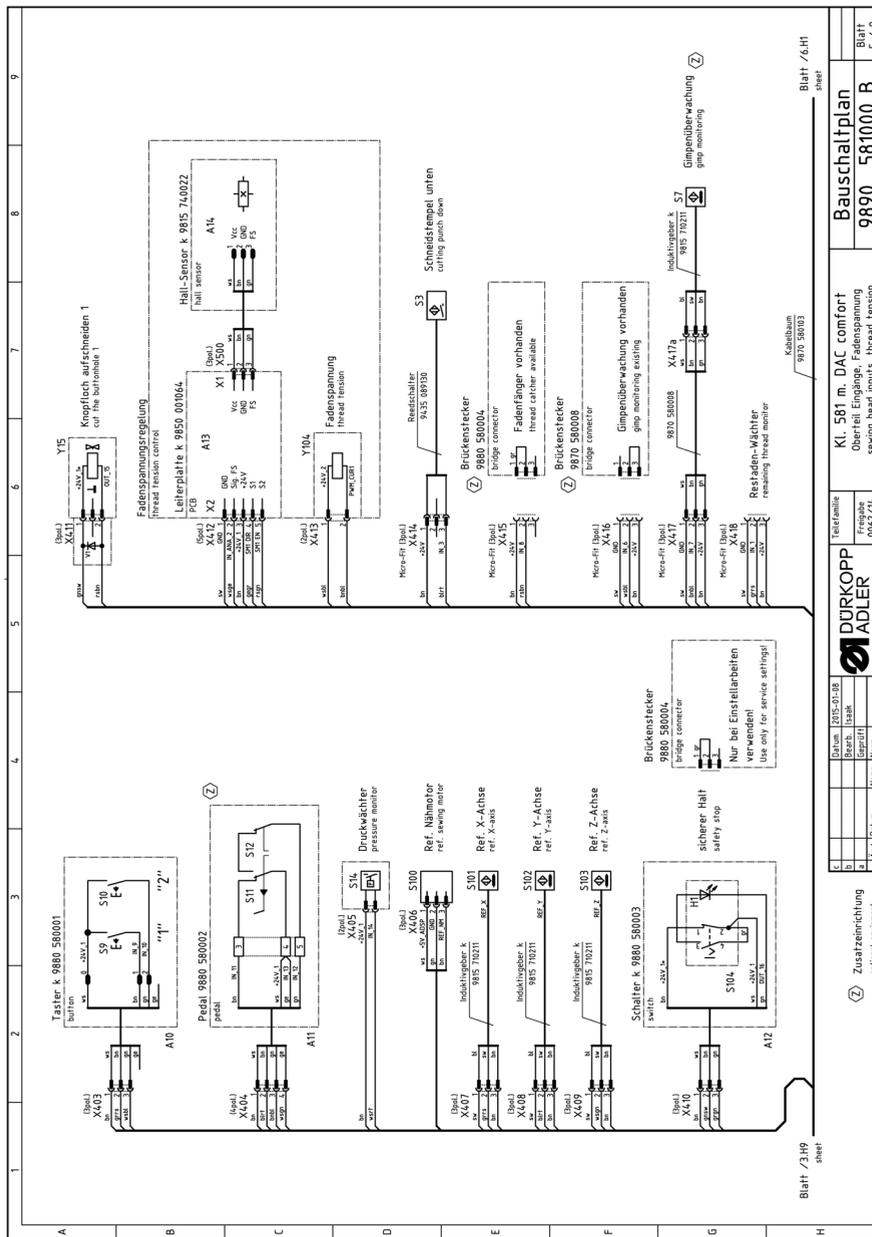
Blatt / 5.1H  
sheet

Blatt / 7.1H  
sheet

Blatt / 5.1H sheet		<b>Bauschaltplan</b>		Blatt / 3 / 9	
Kl. 581 m. DAC comfort		9890 581000 B			
Schrittmotoren, Schnittstellen		stepper motors, interfaces			
DURKOPP ADLER		REIFamilie		Frage-Nr.	
Datei		2015-07-08		0062/1%	
Besch.		Isarak			
Mod.		Name		Nicht	
Datum		Name		Nicht	



Fig. 74: Wiring diagram (5)



Blatt / 3HP sheet

Blatt / 6.H1 sheet

Zusatzzeichnung optional equipment		Datei name		Bauschaltplan 9890 581000 B
a	Blatt	9890 581000 B	Blatt	
b	Blatt	9890 581000 B	Blatt	5 / 9
c	Blatt	9890 581000 B	Blatt	

KL 581 m. DAC comfort  
Oberfall Eingänge, Fadenspannung  
sawing head inputs, thread tension

DÜRKOPP ADLER  
Datei name: 9890 581000 B  
Erzeuger: 0062/14

Datum	2015-07-08
Besch.	Isarak
Zeichner	
Name	
Nachr.	

Z: Schaltplan

Fig. 75: Wiring diagram (6)

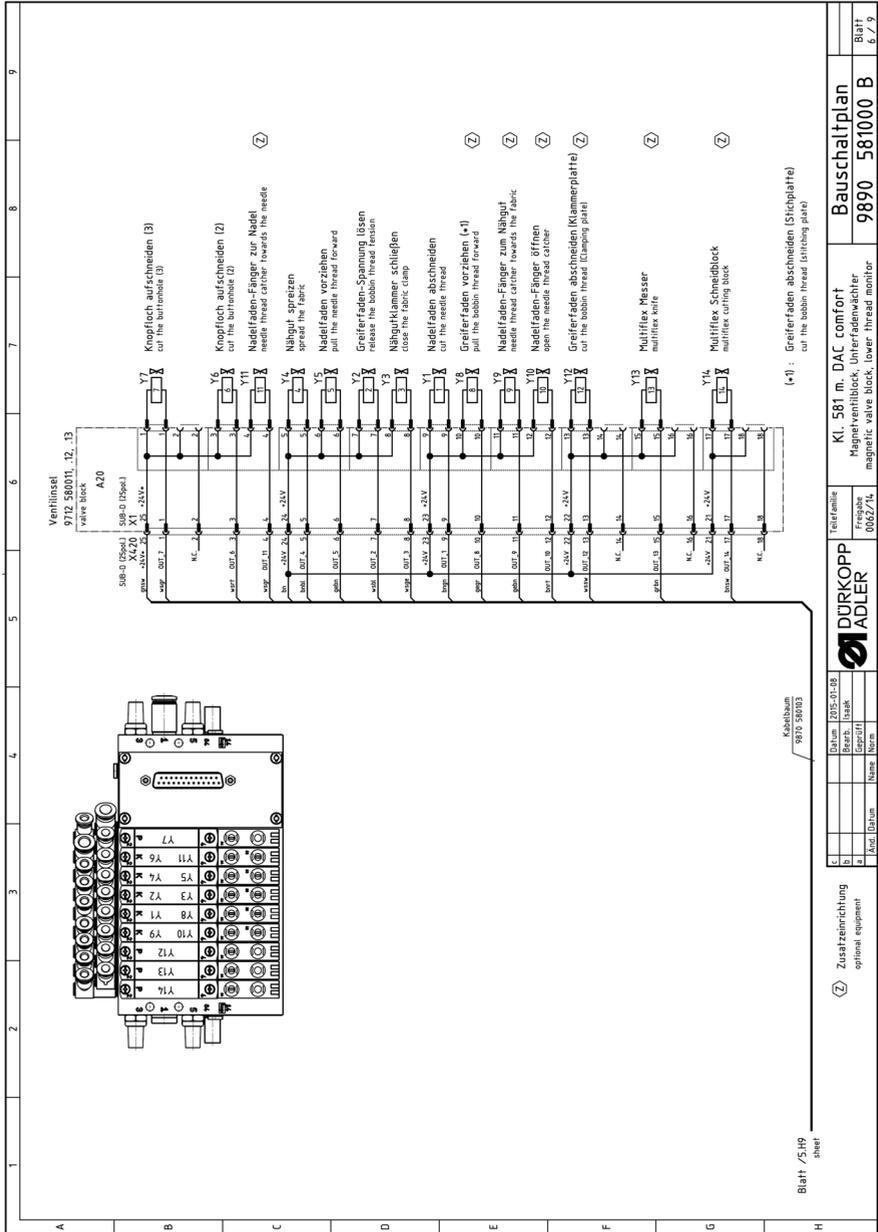
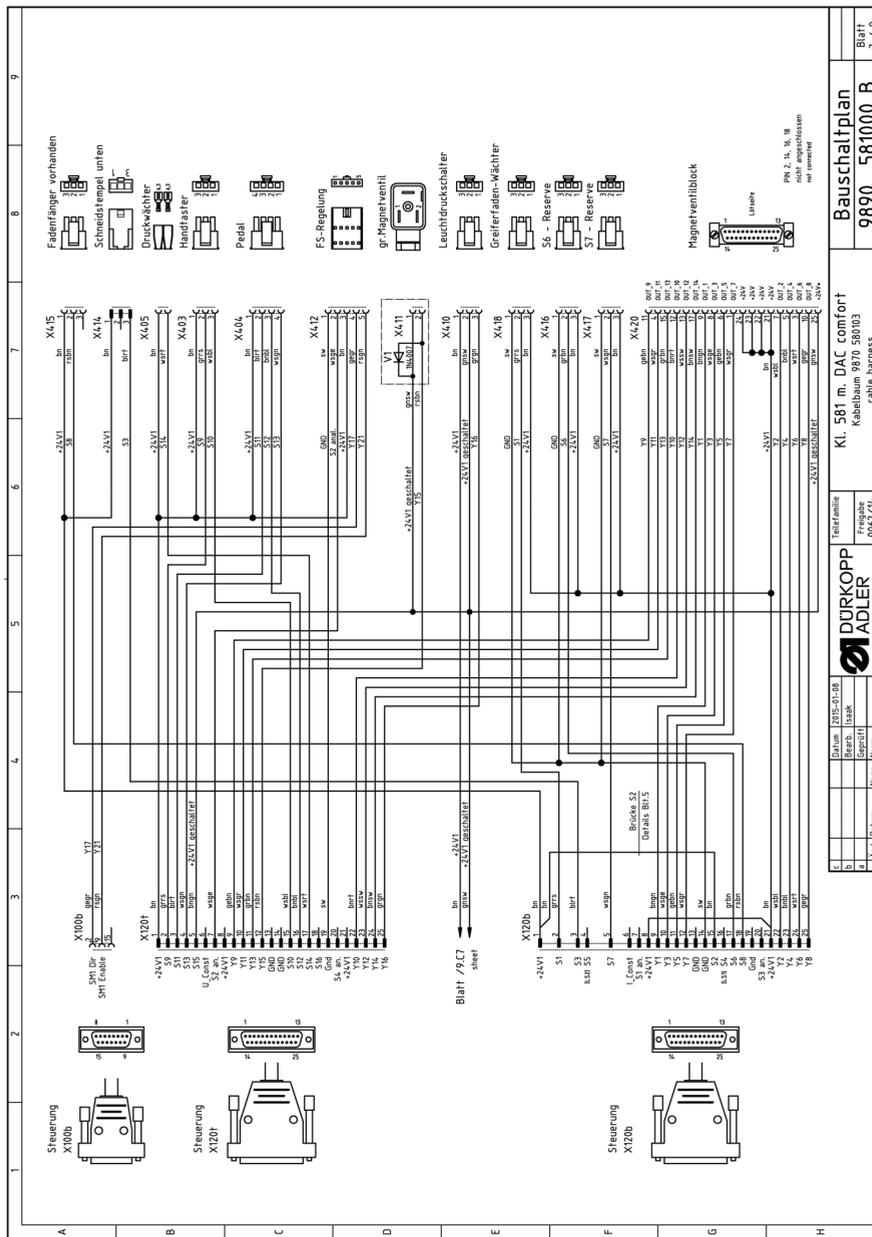


Fig. 76: Wiring diagram (7)



Bauschaltplan		KI 581 m. DAC comfort		Blatt	
9890 581000 B		Kabelbaum 9870 580003		7 / 9	
DÜRKOPP ADLER		KI 581 m. DAC comfort		Blatt	
0062/14		Kabelbaum 9870 580003		7 / 9	
Datei		Datei		Blatt	
Besch.		Besch.		Blatt	
Name		Name		Blatt	
Datei		Datei		Blatt	

Fig. 77: Wiring diagram (8)

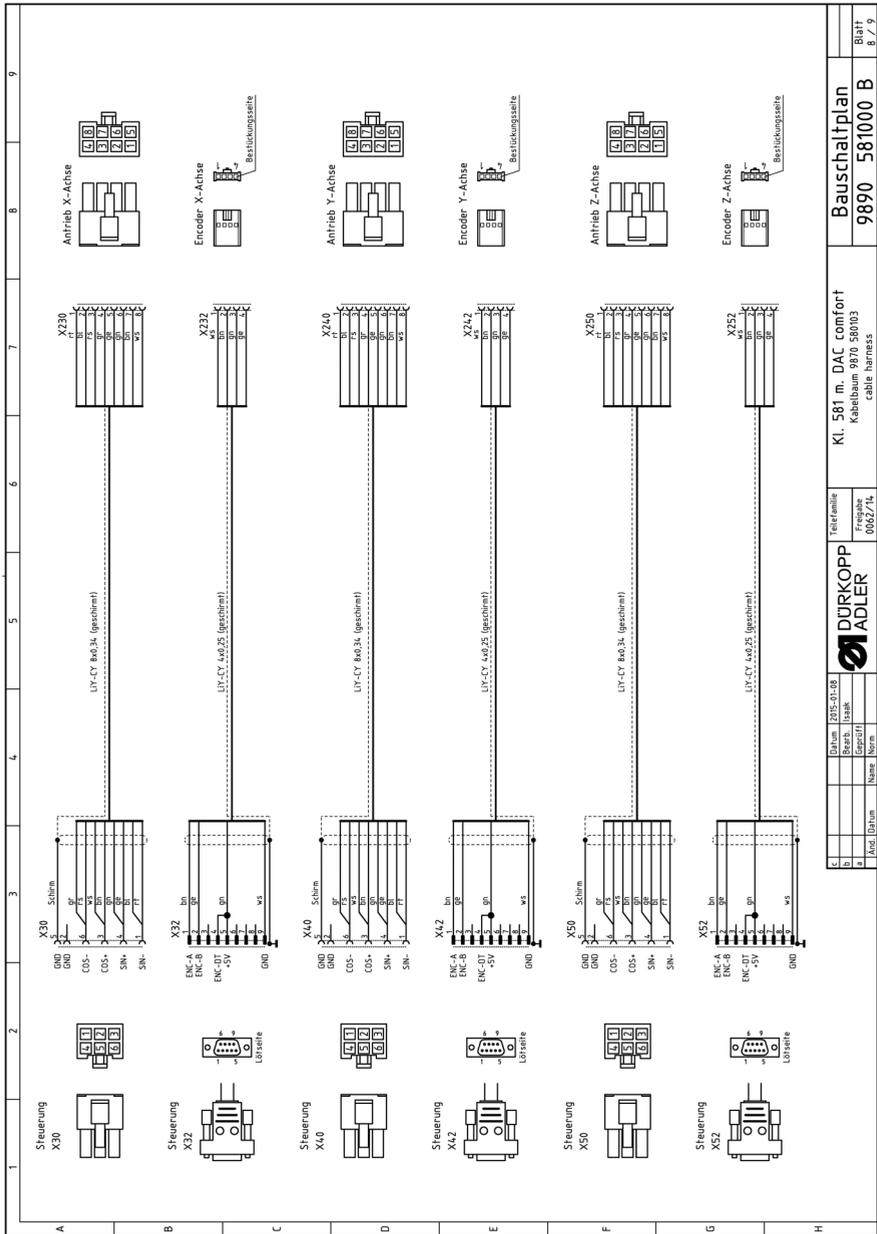
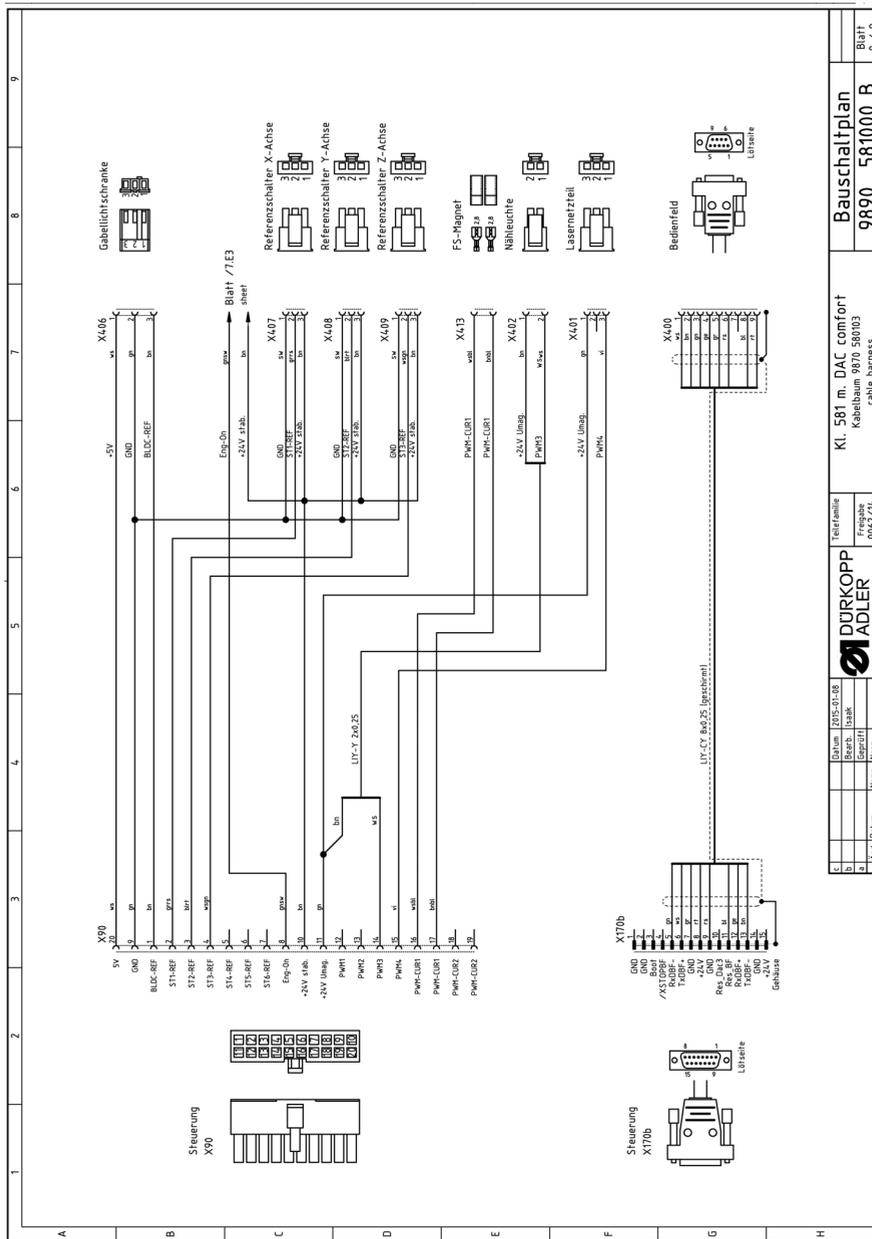


Fig. 78: Wiring diagram (9)



c	Datum	2015-07-08	Referenzlinie	Kl. 581 m. DAC comfort	Blatt	9 / 9
b	Revis.		Erstellt	Kabelbaum 9970 580/03	9 / 9	
a	Gezeichnet		Überprüft	cable harness		
	Proj.		0062/14			
	Name					

**DÜRKOPP  
ADLER**

**Bauschaltplan**  
9890 581000 B





DÜRKOPP ADLER AG  
Potsdamer Str. 190  
33719 Bielefeld  
Germany  
Phone: +49 (0) 521 925 00  
E-mail: [service@duerkopp-adler.com](mailto:service@duerkopp-adler.com)  
[www.duerkopp-adler.com](http://www.duerkopp-adler.com)