DÜRKOPP ADLER

827/827-M

Operating Instructions

IMPORTANT

READ CAREFULLY BEFORE USE

KEEP FOR FUTURE REFERENCE

1 About these instructions

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

Should you notice any discrepancies or if you have improvement requests, then we would be glad to receive your feedback through **Customer Service** (📖 *p. 91*).

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

1.1 For whom are these instructions intended?

These instructions are intended for:

- Operators:
  This group is familiar with the machine and has access to the instructions. Specifically, chapter **Operation** (📖 *p. 19*) is important for the operators.
- Specialists:
  This group has the appropriate technical training for performing maintenance or repairing malfunctions. Specifically, the chapter **Setup** (📖 *p. 65*) is important for specialists.

Service Instructions are supplied separately.

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

1.2 Representation conventions – symbols and characters

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

Proper setting

Specifies proper setting.

Disturbances

Specifies the disturbances that can occur from an incorrect setting.

Cover

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

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

Steps to be performed for service, maintenance, and installation

Steps to be performed via the software control panel

The individual steps are numbered:

1. First step
2. Second step

... The steps must always be followed in the specified order.

- Lists are marked by bullet points.

Result of performing an operation

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

Important

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

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

Order

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

References

Reference to another section in these instructions.

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

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

1.3 Other documents

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

1.4 Liability

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

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

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

Transport

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

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

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

2 Safety

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

2.1 Basic safety instructions

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

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

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

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

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

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

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

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

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

All the warnings and safety signs on the machine must always be in legible condition. Do not remove!
Missing or damaged warnings and safety signs must be replaced immediately.

Requirements to be met by the personnel

Only qualified specialists may:

- set up the machine
- perform maintenance work and repairs
- perform work on electrical equipment

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

Operation

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

Safety equipment

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

2.2 Signal words and symbols used in warnings

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

Signal words

Signal words and the hazard they describe:

Signal word	Meaning
DANGER	(with hazard symbol) If ignored, fatal or serious injury will result
WARNING	(with hazard symbol) If ignored, fatal or serious injury can result

CAUTION	(with hazard symbol) If ignored, moderate or minor injury can result
CAUTION	(with hazard symbol) If ignored, environmental damage can result
NOTICE	(without hazard symbol) If ignored, property damage can result

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

Symbol	Type of danger
	General
	Electric shock
	Puncture
	Crushing
	Environmental damage

Examples Examples of the layout of warnings in the text:

DANGER

Type and source of danger!
Consequences of non-compliance.
Measures for avoiding the danger.

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

WARNING

Type and source of danger!
Consequences of non-compliance.
Measures for avoiding the danger.

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

CAUTION

Type and source of danger!
Consequences of non-compliance.
Measures for avoiding the danger.

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

NOTICE

Type and source of danger!

Consequences of non-compliance.

Measures for avoiding the danger.

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

CAUTION

Type and source of danger!

Consequences of non-compliance.

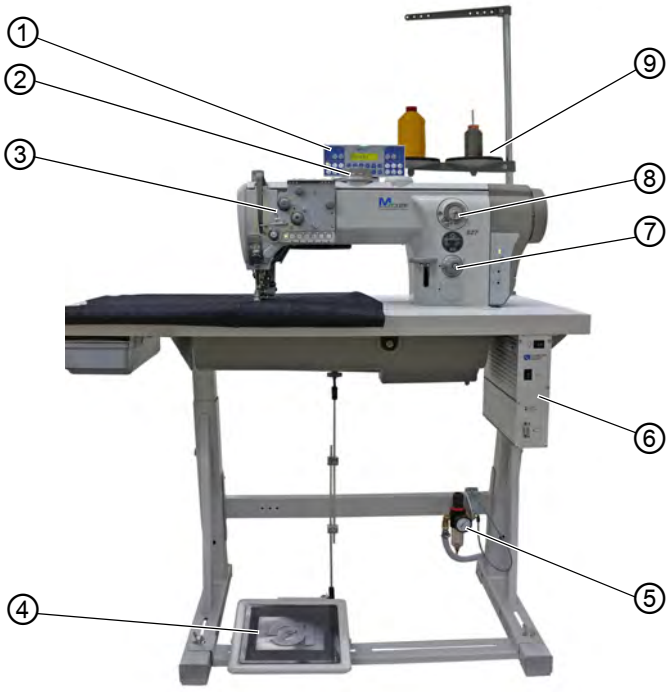
Measures for avoiding the danger.

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

3 Machine description

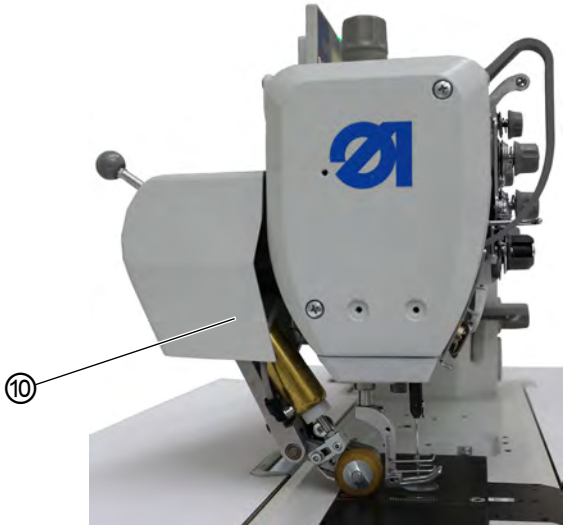
3.1 Components of the machine

Fig. 1: Components of the machine (1)



(1) - Control panel OP1000
(2) - Adjusting wheel for roller top feed
(3) - Thread tension plate
(4) - Pedal
(5) - Compressed air maintenance unit
(6) - Control
(7) - Adjusting wheel for the stitch length
(8) - Winder
(9) - Reel stand

Fig. 2: Components of the machine (2)



(10) - Roller top feed

3.2 Proper use

WARNING

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

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

Follow all instructions provided.

NOTICE

Non-observance will lead to property damage!

Improper use can result in material damage at the machine.

Follow all instructions provided.

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

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

The needle thicknesses permissible for the machine are listed in the **Technical data** (📖 *p. 103*) chapter.

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

The machine is intended for industrial use.

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

Only authorized persons may work on the machine.

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

3.3 Declaration of Conformity

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

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4 Operation

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

4.1 Preparing the machine for operation

WARNING

Risk of injury from moving, cutting and sharp parts!

Crushing, cutting and punctures are possible.

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

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

- Inserting/changing the needle
- Threading the needle thread
- Inserting and winding on the hook thread
- Setting the thread tension

4.2 Switching on and off the machine

Fig. 3: Switching on and off the machine

(1) - Main switch

Switching on the machine

To switch on the machine:

1. Press the main switch (1) from position **0** to position **I**.

↳ The machine and the control panel start up.

Switching off the machine

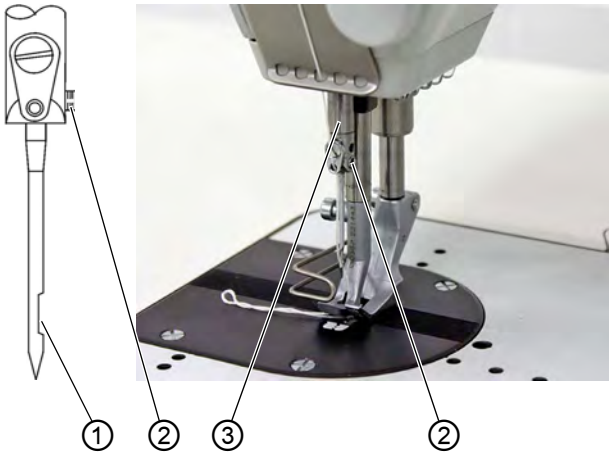
To switch off the machine:

1. Press the main switch (1) from position **I** to position **0**.

↳ The machine and the control panel shut down.

4.3 Inserting/changing the needle

Fig. 4: Inserting/changing the needle



(1) - Groove
(2) - Screw
(3) - Needle bar

To insert or change the needle:

1. Loosen the screw (2).
2. Pull the needle straight downwards out of the needle bar (3).
3. Insert the new needle straight into the needle bar (3) until it reaches the end stop.

Important

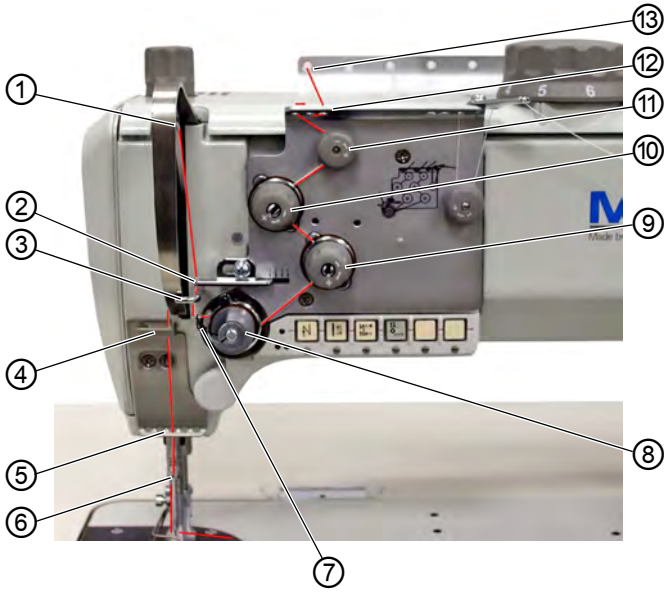
The groove (1) for the needle must face the hook.

4. Tighten the screw (2).

4.4 Threading the needle thread

4.4.1 Needle thread threading on 1-needle machines

Fig. 5: Needle thread threading on 1-needle machines



(1) - Thread lever
(2) - Needle thread regulator
(3) - Guide
(4) - Guide
(5) - Guide
(6) - Guide
(7) - Thread tension spring
(8) - Tensioner element
(9) - Additional tensioner
(10) - Main tensioner
(11) - Pre-tensioner
(12) - Guide
(13) - Guide

To thread the needle thread:

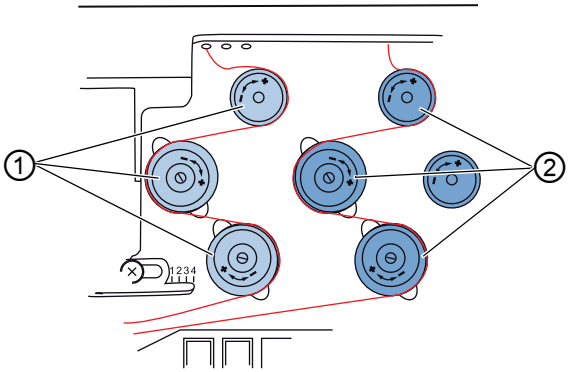
1. Place the thread reel on the thread reel holder and guide the thread through the guide of the unwinding bracket.
2. Insert the needle thread through the guide (13).
3. Insert the needle thread in a wavelike manner from top to bottom through the guide (12), as shown above.
4. Guide the needle thread clockwise through the pre-tensioner (11).

5. Guide the needle thread counterclockwise through the main tensioner (10).
6. Guide the needle thread clockwise through the additional tensioner (9).
7. Feed the needle thread through the tensioner element (8).
8. Feed the needle thread from the right to the left through the thread tension spring (7).
9. Feed the needle thread from bottom to top through the guide (3).
10. Insert the needle thread from bottom to top through the needle thread regulator (2).
11. Feed the needle thread through the thread lever (1).
12. Feed the needle thread through guides (4) and (5).
13. Feed the needle thread through the guide (6) on the needle bar.
14. Feed the needle thread through the needle eye from left to right.

4.4.2 Needle thread threading on 2-needle machines

2-needle machines are equipped with a 2nd tensioning screw triangle for the 2nd needle thread.

Fig. 6: Needle thread threading on 2-needle machines



(1) - Tensioning screws in triangular arrangement for the left needle thread

(2) - Tensioning screws in triangular arrangement for the right needle thread

To thread the needle thread in 2-needle machines:

1. Thread the left needle thread as described above for a 1-needle machine (📖 *p. 22*).
2. Insert the right needle thread from the rear to the front through the thread guide.
3. Guide the thread clockwise around the pre-tensioner of the 2nd tensioning screw triangle (2).
4. Guide the thread counterclockwise around the additional tensioner of the 2nd tensioning screw triangle (2).
5. Guide the thread clockwise around the main tensioner of the 2nd tensioning screw triangle (2).
6. Feed the needle thread from the right to the left through the thread tension spring (7).

↳ The remaining steps of the threading process are identical to the threading process in 1-needle machines.

4.5 Winding the hook thread

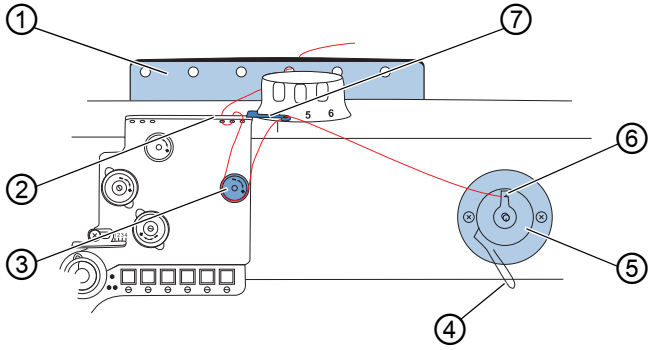
NOTICE

Property damage may occur!

Risk of breakage when the hook thread is not wound on while sewing is in progress.

When winding on the hook thread while sewing is not in progress, lock the sewing foot in the lifted position and set the sewing foot stroke to the smallest value.

Fig. 7: Winding the hook thread



(1) - Guide
(2) - Guide
(3) - Tensioner
(4) - Winder lever
(5) - Winder
(6) - Thread-pulling knife
(7) - Guide

To wind the hook thread:

1. Place the thread reel on the thread reel holder and guide the thread through the guide of the unwinding bracket.
2. Feed the hook thread through the guide (1).
3. Insert the hook thread in a wavelike manner from top to bottom through the guide (2), as shown above.
4. Feed the hook thread counterclockwise through the tensioner (3).
5. Feed the hook thread from bottom to top through the guide (7).

6. Clamp the hook thread behind the thread-pulling knife (6) and tear it off.
7. Fit the bobbin onto the winder (5).
   The hook thread does not have to be wound on by hand.
8. Press the winder lever (4) into the bobbin.
9. Sew.

↳ The hook thread is wound onto the bobbin.
The winder lever (4) stops winding as soon as the bobbin is full. The winder always stops such that the thread-pulling knife (6) is at the proper position.

10. Pull off the full bobbin.
11. Clamp the hook thread behind the thread-pulling knife (6) and tear it off.

4.6 Changing the bobbin

CAUTION

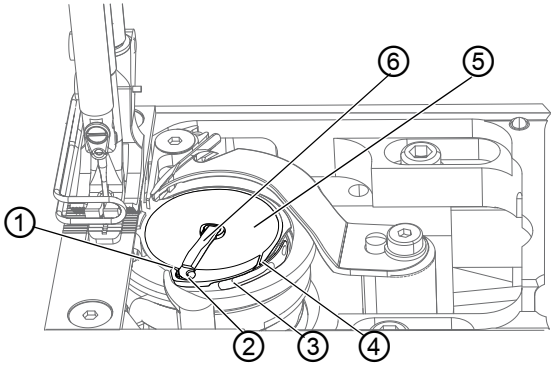
Risk of injury from sharp parts!

Punctures possible.

Switch off the machine before changing the bobbin.

The procedure used to change the bobbin is the same for 1-needle machines and 2-needle machines. The only difference is that the hook into which the bobbin is inserted is turned by 180 degrees for the left and the right side.

Fig. 8: Changing the bobbin



(1) - Slot
(2) - Guide
(3) - Tension spring
(4) - Slot
(5) - Bobbin
(6) - Bobbin case retainer

To change the bobbin:

1. Swivel up the bobbin case retainer (6).
2. Remove the empty bobbin.
3. Insert a full bobbin:

Important

Insert the bobbin so that it moves in the opposite direction of the hook when the thread is pulled out.

4. Feed the hook thread through the slot (4) in the bobbin case retainer.

5. Pull the hook thread under the tension spring (3).
6. Feed the hook thread through the slot (1) and pull it approx. 3 cm further.
7. Close the bobbin case retainer (6).

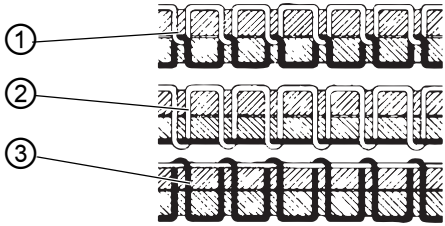
4.7 Thread tension

Together with the hook thread tension, the needle thread tension influences the final seam pattern. With thin sewing material, excessive thread tension can lead to undesired gathering and thread breakage.

Proper setting

If the tension of needle thread and hook thread is identical, the thread interlacing lies in the middle of the sewing material.
Set the needle thread tension so that the desired seam pattern is achieved with the lowest possible tension.

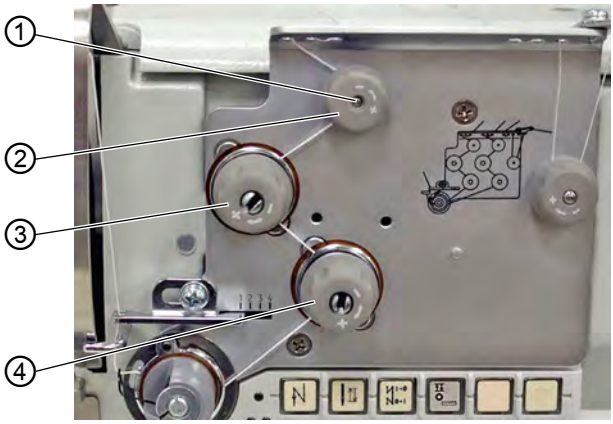
Fig. 9: Thread tension



(1) - Identical needle thread and hook thread tension
(2) - Hook thread tension higher than needle thread tension
(3) - Needle thread tension higher than hook thread tension

4.7.1 Setting the needle thread tension

Fig. 10: Setting the needle thread tension



(1) - Bolt
(2) - Pre-tensioner
(3) - Main tensioner
(4) - Additional tensioner

Setting the pre-tensioner

When main tensioner (3) and additional tensioner (4) are open, a small amount of residual tension of the needle thread is required. This residual tension is generated by the pre-tensioner (2).

The pre-tensioner (2) also affects the length of the cut needle thread end and, thus, the length of the initial thread for the new seam.

To set the pre-tensioner:

1. Turn the pre-tensioner adjusting wheel (2) until the front side is flush with the bolt (1).
   - Shorter initial thread: Turn the adjusting wheel (2) clockwise
   - Longer initial thread: Turn the adjusting wheel (2) counterclockwise

Setting the main tensioner

The main tensioner (3) should be set as low as possible.

To set the main tensioner:

1. Turn the adjusting wheel (3).
   - Increase the tension: turn clockwise
   - Reduce the tension: turn counterclockwise

Setting the additional tensioner

The switchable additional tensioner (4) is used to quickly adjust the needle thread tension, e.g. for thickened seams.

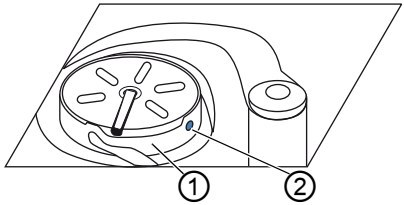
The additional tensioner (4) should always be set lower than the main tensioner (3).

To set the additional tensioner:

1. Turn the adjusting wheel (4).
   - Increase the tension: turn clockwise
   - Reduce the tension: turn counterclockwise

4.7.2 Setting the hook thread tension

Fig. 11: Setting the hook thread tension



(1) - Tension spring *(2) - Screw*

The hook thread tension is generated by the tension spring (1) and adjusted via the screw (2).

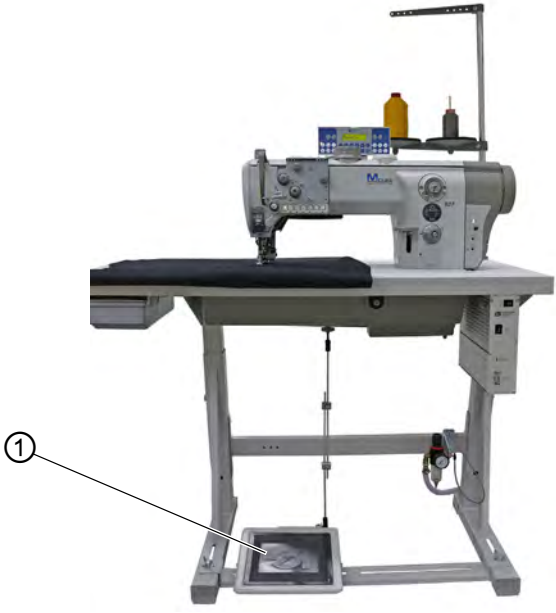
To set the hook thread tension:

1. Turn the screw (2).
   - Increase the hook thread tension: turn clockwise
   - Reduce the hook thread tension: turn counterclockwise

4.8 Sewing foot

4.8.1 Lifting the sewing foot

Fig. 12: Lifting the sewing foot



(1) - Pedal

To lift the sewing foot:

1. Press the pedal (1) halfway back.

↳ The sewing foot is lifted during a machine standstill.

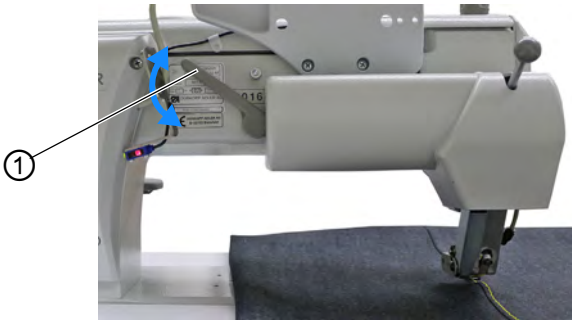
OR

1. Press the pedal (1) fully back.

↳ The thread cutter is activated, and the sewing foot is lifted.

4.8.2 Locking the sewing foot in top dead center

Fig. 13: Locking the sewing foot in top dead center



(1) - Lever

Locking the sewing foot in top dead center

To lock the sewing foot in place in top dead center:

1. Swivel the lever (1) down.

↳ The sewing foot is locked at top dead center.

Removing the lock

To remove the lock:

1. Swivel the lever (1) up.

↳ The lock is canceled.

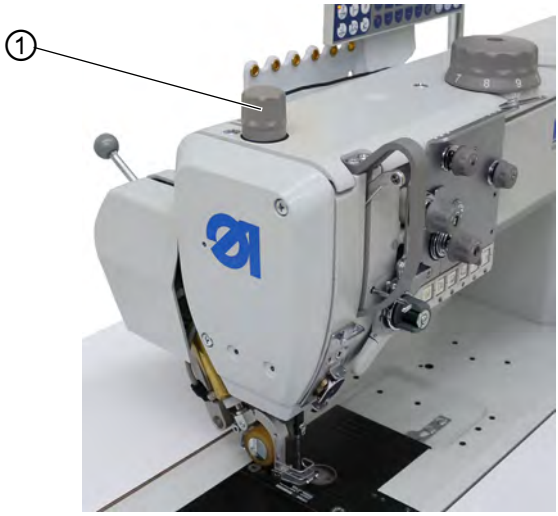
OR

1. Press the pedal.

↳ The lock is canceled, and the lever (1) swivels back to its initial position.

4.8.3 Setting the sewing foot pressure

Fig. 14: Setting the sewing foot pressure



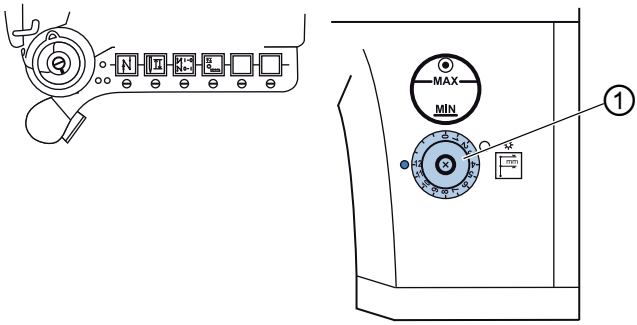
(1) - Adjusting wheel

To set the sewing foot pressure:

1. Turn the adjusting wheel (1).
   - Increase sewing foot pressure: turn clockwise
   - Reduce sewing foot pressure: turn counterclockwise

4.9 Setting the stitch length

Fig. 15: Setting the stitch length



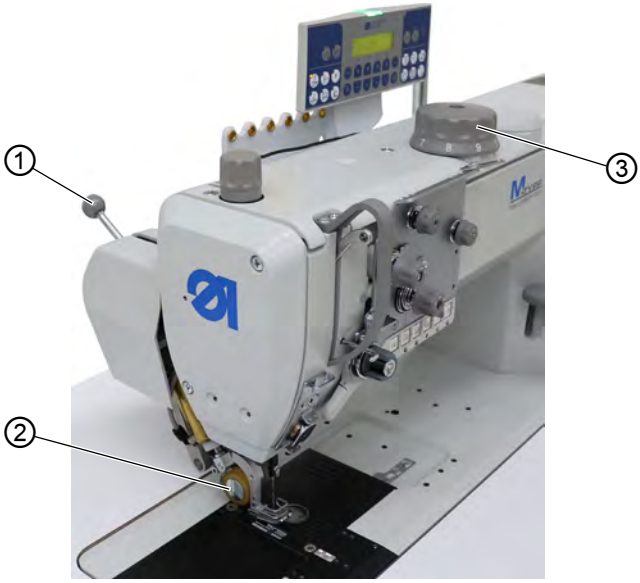
(1) - Adjusting wheel for the stitch length

To set the stitch length:

1. Turn the adjusting wheel (1).
   - Minimum stitch length: **1**
   - Maximum stitch length: **7**

4.10 Roller top feed

Fig. 16: Roller top feed



(1) - Lever
(2) - Carrier roller
(3) - Adjusting wheel

The feed length of the roller top feed can be set to a different length of up to 9 mm relative to the bottom feed using the adjusting wheel (3).

After the machine has been switched on, the carrier roller (2) is lowered.
After the sewing foot has been lifted, the carrier roller (2) is raised.

If programmed, the stitch count begins upon the start of the seam (📖 *p. 49*).
If the start bartack is switched on, the stitch count will not start until after the start bartack.

Switching on the roller top feed

To switch on the roller top feed:

1. Push the lever (1) down.

↳ The carrier roller (2) descends onto the sewing material.

Switching off the roller top feed

To switch off the roller top feed:

1. Pull the lever (1) up.

↳ The carrier roller (2) is raised and inactive.

Activating and deactivating the roller top feed

Fig. 17: Activating and deactivating the roller top feed

(1) - Button for roller top feed

To activate the roller top feed:

1. Press the button (1).

↳ The button lights up.
The roller top feed is switched on.
The roller carrier is lowered during the completion of the subsequent seams.

To deactivate the roller top feed:

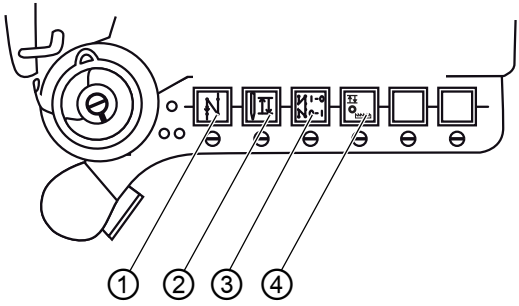
1. Press the button (1).

↳ The button turns off.
The roller top feed is switched off.

4.11 Buttons on the machine arm

4.11.1 Activating push buttons

Fig. 18: Buttons on the machine arm



(1) - Sewing backwards
(2) - Needle position
(3) - Start and end bartacks
(4) - Roller top feed

To activate a button on the machine arm:

1. Press the button.

The function is activated.
The button lights up.

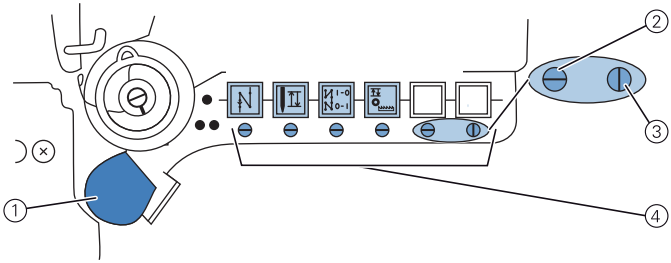
Buttons on the machine arm

Button	Function
	**Sewing backwards** When this button is activated, the machine sews in reverse.
	**Needle position** When this button is activated, the needle moves to a specific position. This position is determined via the parameter settings (📖 *Parameter list*). The machine comes configured so that selecting the button will bring the needle up.
	**Start bartack and end bartack** This button cancels the general setting for sewing start and end bartacks. ↳ If bartacks are on, pressing the button skips the next bartack. ↳ If bartacks are off, pressing the button sews the next bartack. For the general setting of start and end bartacks, see 📖 *Instructions for use of the DACclassic control*.
	**Roller top feed** If the button is selected, the roller top feed is activated (📖 *p. 36*)

4.11.2 Transferring a button function to the favorite button

You can transfer one of the button functions to the favorite button (1). Select a function that you frequently use so that you can switch it on faster while sewing.

Fig. 19: Transferring a button function to the favorite button



(1) - Favorite button
(2) - Screw in initial position
(3) - Screw activates favorite button
(4) - Screws for the assignment of the favorite button

To transfer a button function to the favorite button:

1. Bring all screws (4) to their initial position (2): all slots are horizontal.
2. Turn the screw under the desired button 90° so that the slot is vertical (3).

↳ The function of the selected button can be activated using the favorite button (1).

4.12 Sewing

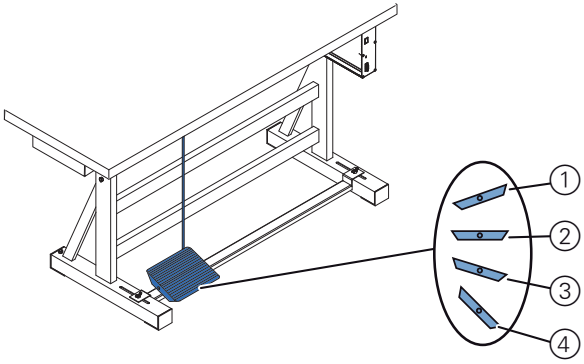
CAUTION

Risk of injury from sharp parts!

Punctures possible.

Take care not to accidentally press the pedal.
Do NOT reach into the needle area.

Fig. 20: Sewing



(1) - Pedal position +1: Sewing active
(2) - Pedal position 0: Rest position
(3) - Pedal position -1: Lifting the sewing feet
(4) - Pedal position -2: Sew end bartack and cut off thread

Initial position:

- Pedal position 0:

↳ Machine stationary, needles up, sewing feet down.

Positioning the sewing material

To position the sewing material:

1. Press the pedal halfway back in pedal position -1.

↳ The sewing feet are lifted.

2. Push the sewing material into the initial position.

Sewing

To sew:

1. Press the pedal forwards in pedal position +1.

↳ The machine sews.
The sewing speed increases the further forward the pedal is pressed.

Interrupt sewing

To interrupt sewing:

1. Release the pedal in pedal position 0:

↳ The machine stops, needles and sewing feet are down.

Continue sewing

To continue sewing:

1. Press the pedal forwards in pedal position +1:

↳ The machine continues to sew.

Sewing an intermediate bartack

To sew an intermediate bartack:

1. Sewing backwards.

Finishing the seam

To finish the seam:

1. Press the pedal back completely in pedal position -2.

↳ The machine sews the end bartack, and the thread cutter cuts the thread.
The machine stops, needles and sewing feet are up.

2. Remove the sewing material.

5 Programming

All software settings are performed using the OP1000 control panel.

The control panel is composed of a display and buttons.

Using the control panel you can:

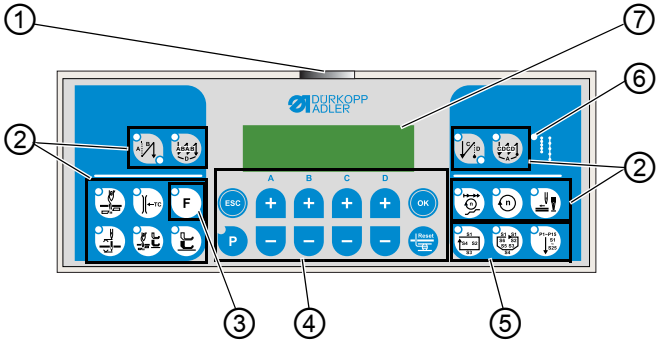
- Use groups of buttons to select machine functions
- Read service and error messages.

Information

This chapter describes the machine-specific functions of the OP1000 control panel.

Refer to the 🕮 *Instructions for use DAC basic/classic* for further information on the control and the OP1000 control panel.

Fig. 21: Programming

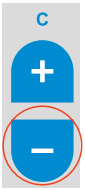


(1) - Power LED
(2) - Thread button group
(3) - Function button
(4) - Programming button group
(5) - Seam program button group
(6) - LED for 2nd Stitch length
(7) - Display

OP1000 buttons and functions

Button		Function
Thread button group		
	Start bartack	• Sets the start bartack
	Multiple start bartack	• Sets the multiple start bartack
	End bartack	• Sets the end bartack
	Multiple end bartack	• Sets the multiple end bartack
	Thread cutter	• Activates or deactivates the thread cutter
	Thread clamp	• Activates or deactivates the thread clamp
	Needle position after sewing stop	• Sets the needle position after sewing stop
	Sewing foot lift after thread cutter	• Activates or deactivates the sewing foot lift after the thread cutter
	Sewing foot lift after sewing stop	• Activates or deactivates the sewing foot lift after sewing stops
	Soft start	• Activates or deactivates the soft start

Button	Function
 Speed	• Reduces the motor speed
 **Function button**	• Activates or deactivates any stored function
Programming button group	
 ESC	• Ends parameter mode
 A+	• Increases parameter • Changes user level • Selects subprogram
 B+	• Increases parameter • Changes to next higher category • Selects subprogram
 C+	• Increases parameter • Selects subprogram
 D+	• Increases parameter • Selects subprogram
 OK	• Calls parameter or saves it
 P	• Starts or ends the parameter mode

Button	Function
 A-	• Decreases parameter • Changes user level • Selects subprogram
 B-	• Decreases parameter • Changes to next lower category • Selects subprogram
 C-	• Decreases parameter • Selects subprogram
 D-	• Decreases parameter • Selects subprogram
 Reset	• Resets the (piece) counter

Button	Function
Seam program button group	
 Seam program I	• Activates seam program I
 Seam program II	• Activates seam program II
 Seam program III	• Sets seam program III

5.1 Setting the electropneumatic switching of the carrier roller

To set the electropneumatic switching of the carrier roller:

1. Press the P button.
2. Enter the parameters for the automatic stitch loosening device: `t 14 00`.
   - Use **A+** to set the value to t.
   - Use **B+** to set the value to 14.
   - Use **D+** to set the value to 00.
3. Press the OK button.
4. Enter the desired mode:
   - Use **D+** to enter the value **0**: do not raise
   - Use **D+** to enter the value **1**: raise on sewing foot lift
   - Use **D+** to enter the value **2**: raise on bartack
   - Use **D+** to enter the value **3**: raise on bartack and sewing foot lift
5. To save the settings, press the OK button.
6. To switch to sewing mode, press the ESC button.

For additional parameter settings, refer to 🕮 *Parameter list*.

5.2 Setting the stitch count before carrier roller is lowered

To set the stitch count before the carrier roller is lowered:

1. Press the P button.
2. Enter the parameters for the number of stitches before the carrier roller is lowered: `t 14 03`.
3. Use the buttons **A+, B+, C+** and **D+** to enter the desired number of stitches.
4. To save the settings, press the OK button.
5. To switch to sewing mode, press the ESC button.

For additional parameter settings, refer to 🕮 *Parameter list*.

6 Maintenance

WARNING

Risk of injury from sharp parts!

Punctures and cutting possible.

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

WARNING

Risk of injury from moving parts!

Crushing possible.

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

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

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

Maintenance intervals

Work to be carried out	Operating hours			
	8	40	160	500
Cleaning				
Removing lint and thread remnants	●			
Motor fan filter	●			
Lubricating				
Machine head	●			
Hook	●			
Pneumatic system				
Check the operating pressure	●			
Check the water level in the pressure controller		●		
Cleaning the filter element				●

6.1 Cleaning

WARNING

Risk of injury from flying particles!

Flying particles can enter the eyes, causing injury.

Wear safety goggles.
Hold the compressed air gun so that the particles do not fly close to people.
Make sure no particles fly into the oil pan.

NOTICE

Property damage from soiling!

Lint and thread remnants can impair the operation of the machine.

Clean the machine as described.

NOTICE

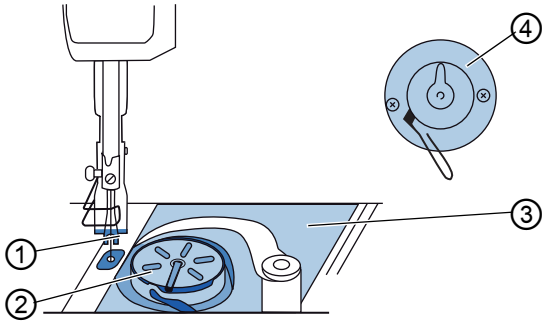
Property damage from solvent-based cleaners!

Solvent-based cleaners will damage paintwork.

Use only solvent-free substances for cleaning.

6.1.1 Cleaning the machine head

Fig. 22: Cleaning the machine head



(1) - Area around the needle
(2) - Hook
(3) - Area under the throat plate
(4) - Cutter on the winder

To clean the machine head:

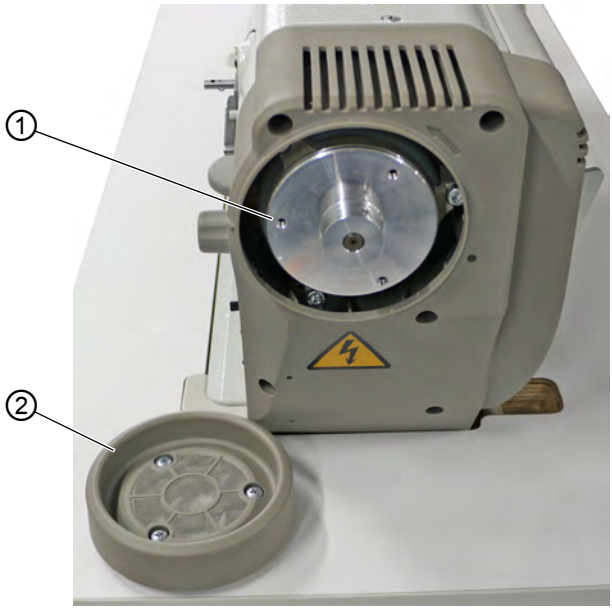
1. Remove any lint and thread remnants using a compressed air gun or a brush.

   Points that need to be cleaned particularly thoroughly:

   - Cutter on the winder for the hook thread (4)
   - Area under the throat plate (3)
   - Hook (2)
   - Area around the needle (1)

6.1.2 Cleaning the direct drive

Fig. 23: Cleaning the direct drive



(1) - Motor shaft *(2) - Hand wheel*

To clean the direct drive:

1. Remove the hand wheel (2).
2. Blow out the net in the hand wheel (2) and the motor shaft (1) with the compressed air gun.
3. Put the hand wheel (2) back on.

6.2 Lubricating

CAUTION

Risk of injury from contact with oil!

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

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

NOTICE

Property damage from incorrect oil!

Incorrect oil types can result in damage to the machine.

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

CAUTION

Risk of environmental damage from oil!

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

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

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

For topping off the oil reservoir, use only lubricating oil **DA 10** or oil of equivalent quality with the following specifications:

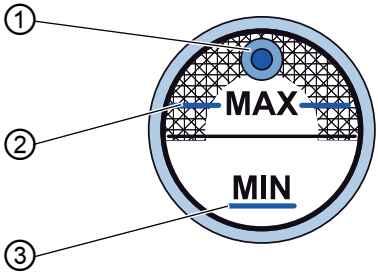
- Viscosity at 40 °C:10 mm^2/s
- Flash point: 150 °C

You can order the lubricating oil from our sales offices using the following part numbers.

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

6.2.1 Lubricating the machine head

Fig. 24: Lubricating the machine head



(1) - Filler opening
(2) - Maximum level marking
(3) - Minimum level marking

Proper setting

The oil level must not rise above the maximum level marking (2) or drop below the minimum level marking (3).

To lubricate the machine head:

1. Fill oil through the filler opening (1) no higher than the maximum level marking (2).

6.2.2 Lubricating the hook

Proper setting

1. Hold a piece of blotting paper next to the hook.
2. Allow the machine to run without thread and sewing material for 10 seconds with the sewing feet lifted and at a high speed.

↳ The blotting paper will show a thin strip of oil when sewing is complete.

Fig. 25: Lubricating the hook

(1) - Screw

To lubricate the hook:

1. Turn the screw (1):
   - counterclockwise: more oil is released
   - clockwise: less oil is released

Important

The released amount of oil does not change until the operating time has run a few minutes. Sew for several minutes before you check the setting again.

6.3 Servicing the pneumatic system

6.3.1 Setting the operating pressure

NOTICE

Property damage from incorrect setting!

Incorrect operating pressure can result in damage to the machine.

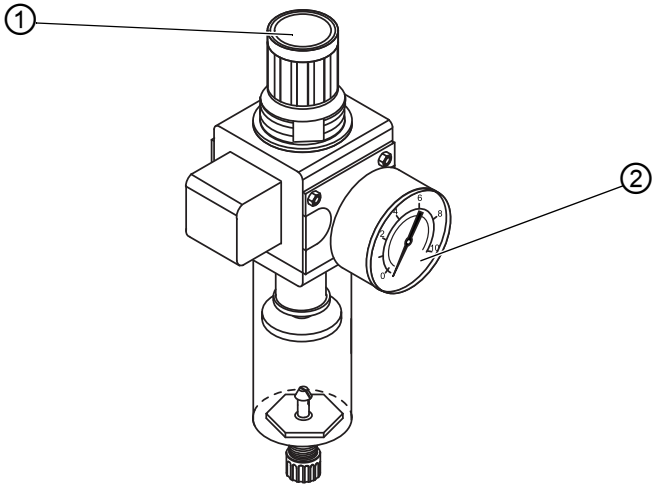
Ensure that the machine is only used when the operating pressure is set correctly.

Proper setting

Refer to the **Technical data** (*p. 103*) chapter for the permissible operating pressure. The operating pressure cannot deviate by more than ± 0.5 bar.

Check the operating pressure on a daily basis.

Fig. 26: Setting the operating pressure



(1) - Pressure controller *(2) - Pressure gage*

To set the operating pressure:

1. Pull the pressure controller (1) up.

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

6.3.2 Draining the water condensation

NOTICE

Property damage from excess water!

Excess water can cause damage to the machine.

Drain water as required.

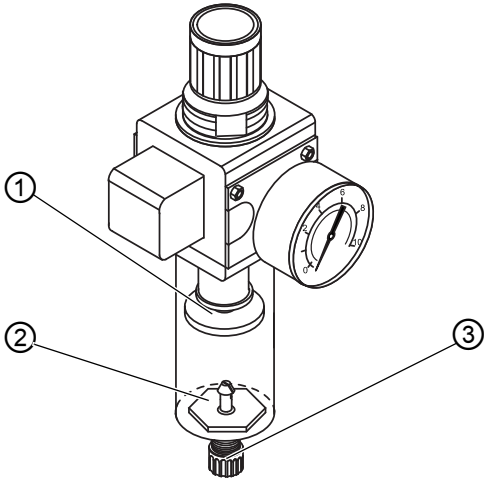
Water condensation accumulates in the water separator (2) of the pressure controller.

Proper setting

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

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

Fig. 27: Draining the water condensation



(1) - Filter element
(2) - Water separator
(3) - Drain screw

To drain water condensation:

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

6.3.3 Cleaning the filter element

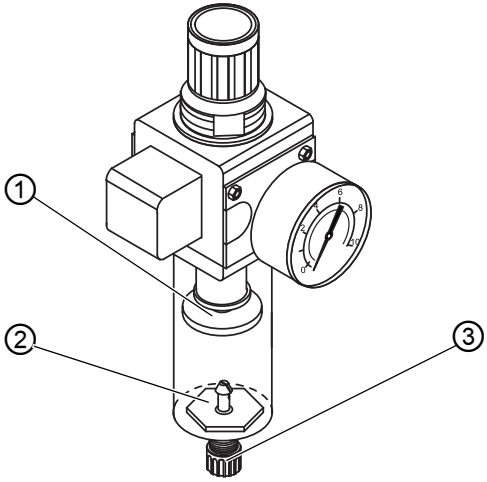
NOTICE

Damage to the paintwork from solvent-based cleaners!

Solvent-based cleaners damage the filter.

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

Fig. 28: Cleaning the filter element



(1) - Filter element
(2) - Water separator
(3) - Drain screw

To clean the filter element:

1. Disconnect the machine from the compressed air supply.
2. Drain the water condensation (📖 *p. 60*).
3. Loosen the water separator (2).
4. Loosen the filter element (1).
5. Blow out the filter element (1) using a compressed air gun.
6. Wash out the filter tray using benzine.
7. Tighten the filter element (1).
8. Tighten the water separator (2).

9. Tighten the drain screw (3).
10. Connect the machine to the compressed air supply.

6.4 Parts list

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

www.duerkopp-adler.com

7 Setup

WARNING

Risk of injury from cutting parts!

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

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

WARNING

Risk of injury from moving parts!

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

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

7.1 Checking the scope of delivery

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

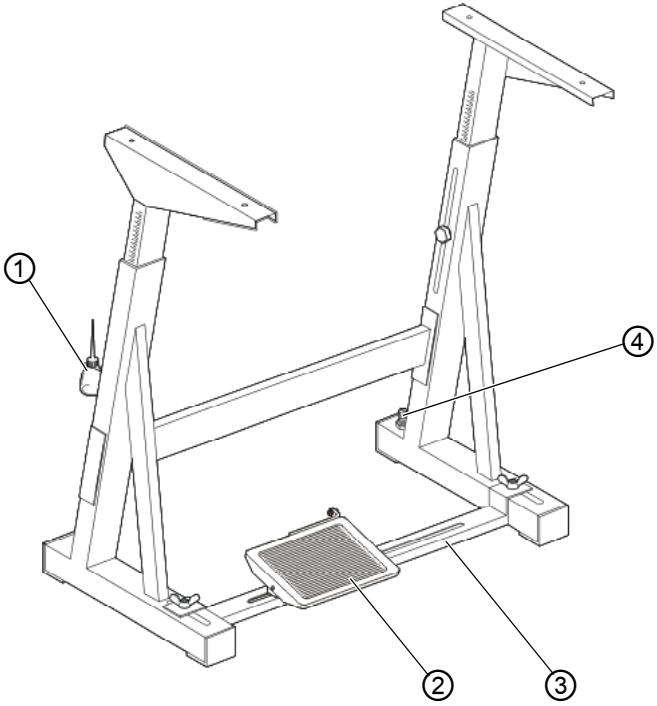
7.2 Removing the transport locks

Remove all transport locks before setting up the machine:

- Lashing straps and wooden blocks from the machine head
- Lashing straps and wooden blocks from the tabletop
- Lashing straps and wooden blocks from the stand
- Restrain block and lashing straps from the sewing drive

7.3 Assembling the stand

Fig. 29: Assembling the stand



(1) - Oil can
(2) - Pedal
(3) - Cross strut
(4) - Adjusting screw

To assemble the stand:

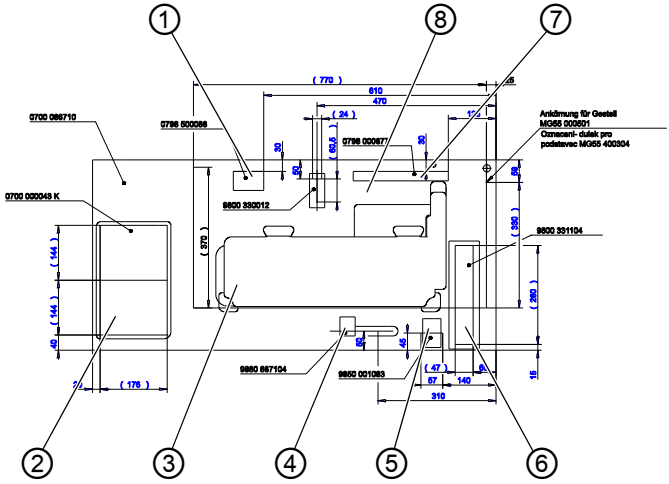
1. Assemble the pedal (2) to the cross strut (3).
2. Assemble the cross strut (3) to the stand.
3. After the machine has been fully assembled, adjust the pedal (*p. 68*)
4. Tighten the oil can holder (1).
5. Turn the adjusting screw (4) to ensure that the stand is positioned securely.
   All 4 feet of the stand must be in contact with the floor.

7.4 Tabletop

Ensure that the tabletop has sufficient load-bearing capacity and strength. If you want to make your own tabletop, use the dimensions given in the diagram **Appendix** (📖 *p. 105*) as a template.

7.4.1 Completing the tabletop

Fig. 30: Completing the tabletop



(1) - Sewing lamp transformer
(2) - Drawer
(3) - Setpoint device
(4) - Knee button
(5) - Power supply
(6) - Motor control
(7) - Cable duct
(8) - Tabletop

To complete the tabletop:

1. Flip the tabletop (8) over.
2. Tighten the cable duct (7).
3. Tighten the power supply (5).
4. Tighten the knee button (4).
5. Tighten the setpoint device (3).
6. Tighten the drawer (2) and brackets.
7. Tighten the sewing lamp transformer (1).

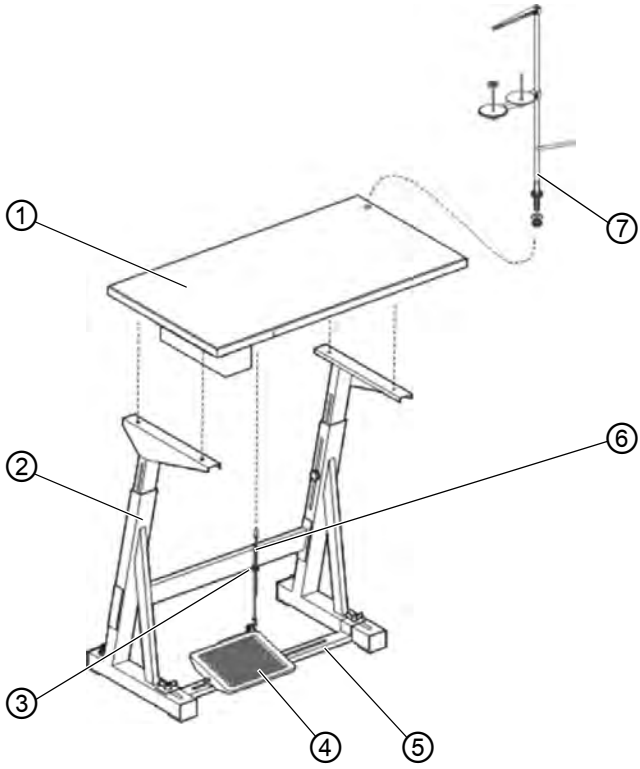
Information
You will find a larger-scale figure in the appendix (📖 *p. 105*).

7.4.2 Making your own tabletop

When making our own tabletop, refer to the figures included in the **Appendix** (📖 *p. 105*) for the dimensions.

7.4.3 Assembling the tabletop and the pedal to the stand

Fig. 31: Assembling the tabletop and the pedal to the stand



(1) - Tabletop
(2) - Stand
(3) - Screw
(4) - Pedal
(5) - Cross strut
(6) - Rod
(7) - Reel stand

To assemble the tabletop and the pedal to the stand:

1. Drill holes for the wood screws.
2. Using wood screws (6x30), assemble the stand (2) to the tabletop (1). Observe the center marks for the stand (see **Appendix** (📖 *p. 105*)).
3. Erect the stand (2).
4. Slip the rod (6) onto the pedal (4) and the setpoint device.
5. For ergonomic reasons, align the pedal laterally so that the center of the pedal is directly below the needle.
   The cross strut (5) is provided with slotted holes to allow alignment of the pedal (4).
6. Loosen the screw (3).
7. Adjust the height of the rod (6) so that the slope of the released pedal is approx. 10°.
8. Tighten the screw (3).
9. Insert the reel stand (7) into the hole in the tabletop (1) and secure it with a nut and washer.
10. Align thread reel holder and thread guide.

Important

The thread guide must be positioned vertically above the thread reel holder.

7.5 Setting the working height

WARNING

Risk of injury from moving parts!

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

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

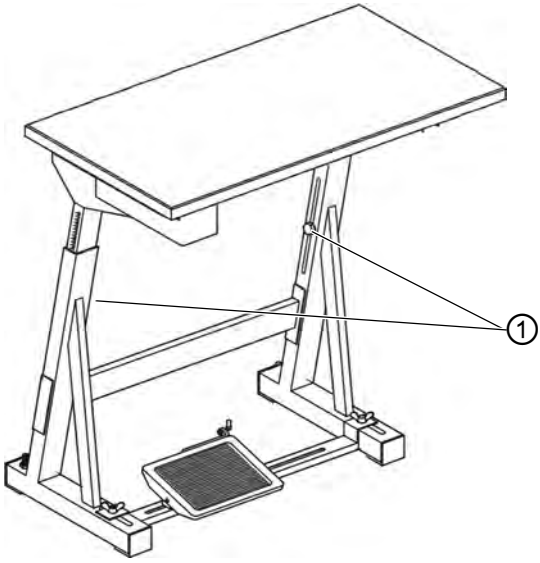
CAUTION

Risk of musculoskeletal damage from incorrect setting!

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

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

Fig. 32: Setting the working height



(1) - Screws

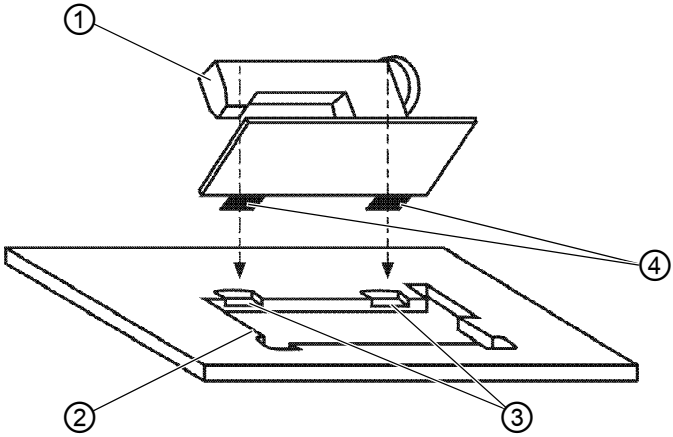
The working height can be adjusted between 750 mm and 900 mm (measured to the upper edge of the tabletop).

To set the working height:

1. Loosen the screws (1).
2. Set the tabletop to the desired working height.
   To avoid jamming, make sure to slide the tabletop in or out evenly at both sides.
3. Tighten the screws (1).
4. Set the length of the pedal rod.
   Set the height of the pedal rod so that the slope of the released pedal is approx. 10°.

7.6 Inserting the machine head

Fig. 33: Inserting the machine head



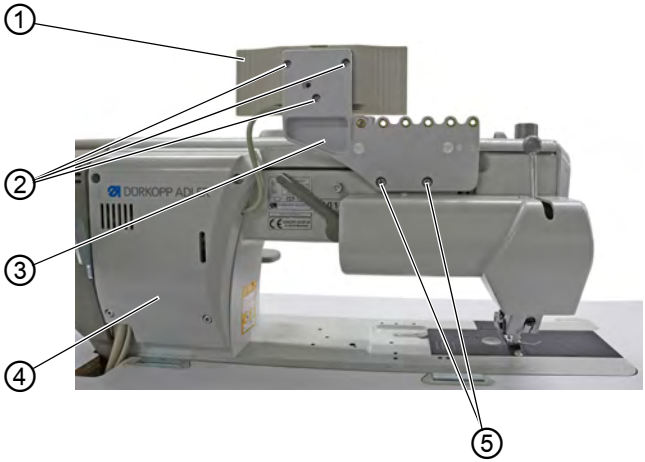
(1) - Machine head
(2) - Tabletop cutout
(3) - Rubber inlays
(4) - Upper hinge parts

To insert the machine head:

1. Insert the machine head (1) into the tabletop cutout (2) at a 45° angle.
2. Insert the upper hinge parts (4) into the rubber inlays (3).
3. Tilt the machine head.

7.7 Assembling the control panel

Fig. 34: Assembling the control panel (1)



(1) - Control panel
(2) - Screw
(3) - Bracket
(4) - Valve cover
(5) - Screws

To assemble the control panel:

1. Tighten the control panel (1) to the bracket (3) using the screw (2).
2. Tighten the bracket (3) to the machine arm using the screws (5).
3. Remove the valve cover (4).

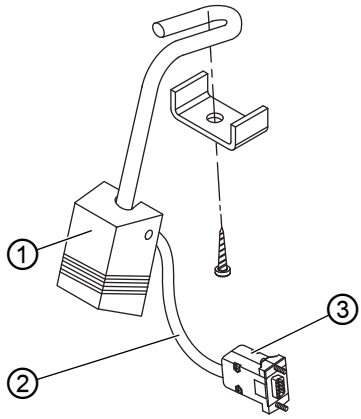
Fig. 35: Assembling the control panel (2)

(6) - Tabletop cutout *(7) - Control panel cable*

4. Install the control panel cable (7) in the machine arm and feed it downwards through the tabletop cutout (6).
5. Insert the plug of the control panel cable (7) into socket **B776** of the control.
6. Place the valve cover (4).

7.8 Assembling the electric knee button

Fig. 36: Assembling the electric knee button



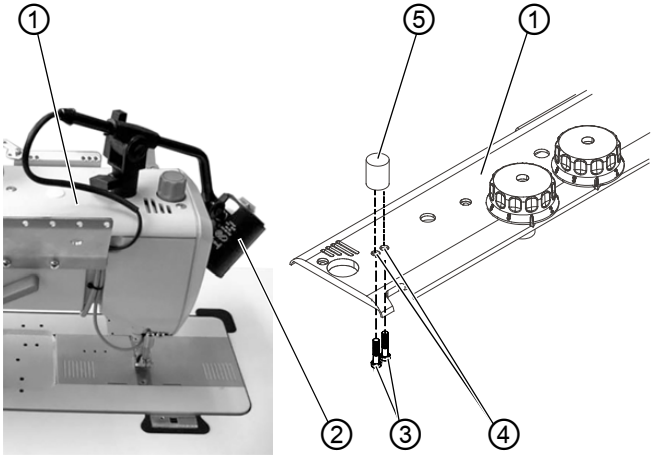
(1) - Knee button
(2) - Connecting cable
(3) - Plug

To assemble the electric knee button:

1. Screw the knee button (1) in front of the oil pan firmly in place under the tabletop.
2. Guide the connecting cable (2) to the back between the oil pan and the control.
3. Insert the plug (3) of the connecting cable (2) into the socket of the control.

7.9 Assembling the sewing lamp

Fig. 37: Assembling the sewing lamp



(1) - Machine arm
(2) - Sewing lamp
(3) - Screws
(4) - Mounting holes
(5) - Retainer plate

To assemble the sewing lamp:

1. Remove the arm cover (1).
2. Drill the mounting holes (4) using a drill (Ø 4.5 mm).
3. Tighten the retainer plate (5) using the screws (3).
4. Place the arm cover.
5. Assemble the sewing lamp (2) to the retainer plate (5).

7.10 Electrical connection

DANGER

Risk of death from live components!

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

Only qualified specialists may perform work on electrical equipment.

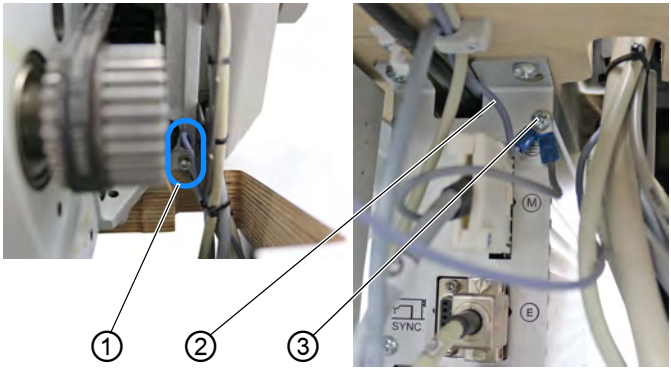
Important

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

7.10.1 Establishing equipotential bonding

Establishing equipotential bonding at the machine head

Fig. 38: Establishing equipotential bonding at the machine head



(1) - Tab connector
(2) - Grounding wire
(3) - Screw

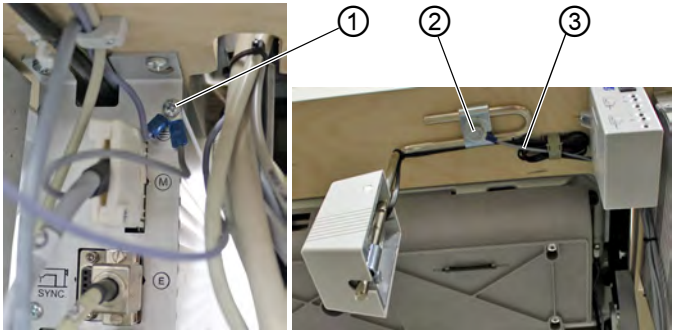
To establish equipotential bonding at the machine head:

1. Slip the grounding wire (2) onto the tab connector (1) on the machine head.

2. Route the grounding wire (2) to the control through the cable duct.
3. Tighten the grounding wire (2) to the control using the screw (3).

Establishing the equipotential bonding at the knee button

Fig. 39: Establishing the equipotential bonding at the knee button



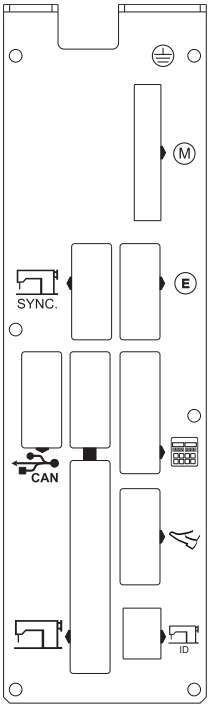
(1) - Screw
(2) - Screw
(3) - Grounding wire

To establish equipotential bonding at the knee button:

1. Assemble the large eye of the grounding wire (3) to the knee button using the screw (2).
2. Tighten the grounding wire (3) to the control using the screw (1).

7.10.2 Connecting the control

Fig. 40: Connecting the control

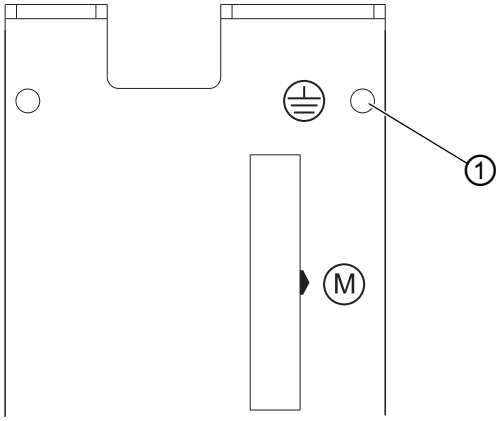


To connect the control:

1. Connect the cables to the control.
   The cables and the correct plugs are each marked with a symbol.

7.10.3 Connecting the knee button

Fig. 41: Connecting the knee button



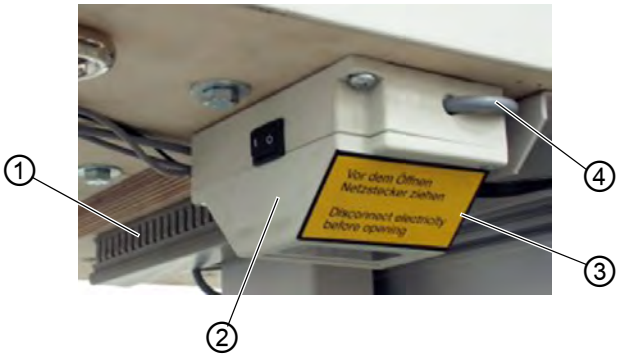
(1) - Grounding connection

To connect the knee button:

1. Connect the grounding connection of the knee button to the rear of the control (1).
2. Insert the plug of the knee button into the connecting socket of the control.

7.10.4 Assembling and connecting the sewing lamp transformer (optional)

Fig. 42: Assembling and connecting the sewing lamp transformer (1)



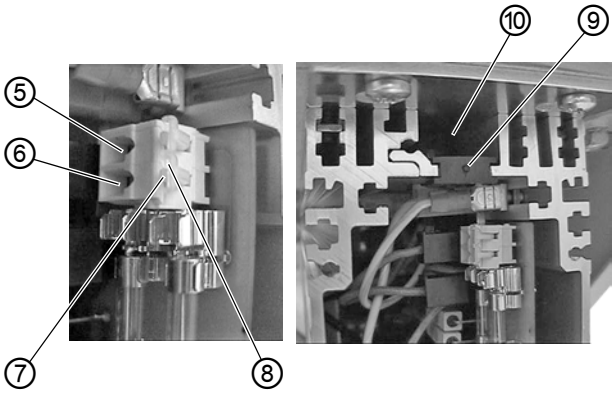
(1) - Cable duct
(2) - Sewing lamp transformer
(3) - Adhesive label
(4) - Electrical connection cable

To assemble and connect the sewing lamp transformer:

Important

1. Pull out the power plug.
2. Assemble the sewing lamp transformer (2) on the left of the control under the tabletop.
3. Route the electrical connection cable (4) to the main switch through the cable duct (1).
4. Connect the electrical connection cable (4) on the electrical connection side of the main switch as specified in the wiring diagram (📖 *p. 105*).
5. Apply the adhesive label (3) on the front side of the sewing lamp transformer (2).

Fig. 43: Assembling and connecting the sewing lamp transformer (2)

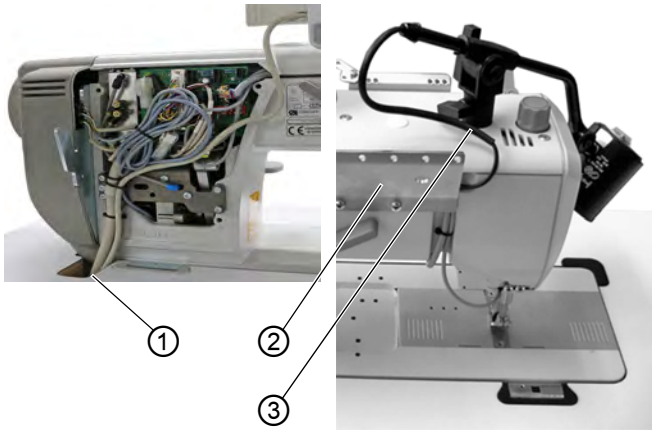


(5) - Terminal
(6) - Terminal
(7) - Terminal opening
(8) - Terminal opening
(9) - Rubber grommet
(10) - Cable duct

6. Loosen the 4 screws from the control front panel.
7. Remove the control front panel.
8. Feed the electrical connection cable (4) from the rear through the cable duct (10) into the control.
9. Remove the black rubber grommet (9).
10. Pierce the round slot of the rubber grommet (9) with a screwdriver.
11. Insert the rubber grommet (9) again.
12. Press a narrow screwdriver into terminal openings (7) or (8) to open terminals (6) and (5).
13. Connect the blue cable to the terminal (5).
14. Connect the brown cable to the terminal (6).
15. Assemble the front panel again.

7.10.5 Connecting the sewing lamp to the sewing lamp transformer

Fig. 44: Connecting the sewing lamp to the sewing lamp transformer (1)



(1) - Tabletop cutout
(2) - Bracket
(3) - Cable

To connect the sewing lamp to the sewing lamp transformer:

1. Remove the valve cover.
2. Guide the cable (3) along behind the bracket (2).
3. Feed the cable (3) downwards through the machine arm and through the tabletop cutout (1).

Fig. 45: Connecting the sewing lamp to the sewing lamp transformer (2)

(4) - Sewing lamp transformer

4. Guide the cable (3) with cable clamps under the tabletop.
5. Connect the cable (3) with the sewing lamp transformer (4).

7.11 Pneumatic connection

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

NOTICE

Property damage from oily compressed air!

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

Ensure that no oil particles enter the compressed air supply.

NOTICE

Property damage from incorrect setting!

Incorrect system pressure can result in damage to the machine.

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

7.11.1 Assembling the compressed air maintenance unit

To assemble the compressed air maintenance unit:

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

7.11.2 Setting the operating pressure

NOTICE

Property damage from incorrect setting!

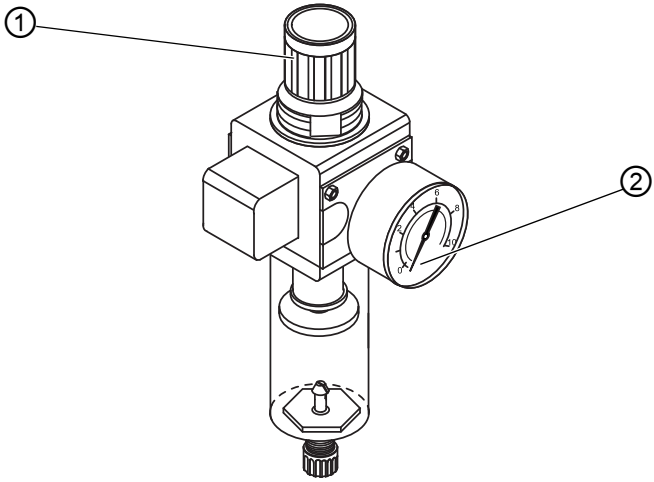
Incorrect operating pressure can result in damage to the machine.

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

Proper setting

Refer to the **Technical data** (📖 *p. 103*) chapter for the permissible operating pressure. The operating pressure cannot deviate by more than ± 0.5 bar.

Fig. 46: Setting the operating pressure



(1) - Pressure controller *(2) - Pressure gage*

To set the operating pressure:

1. Pull the pressure controller (1) up.

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

7.12 Performing a test run

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

8 Decommissioning

WARNING

Risk of injury from a lack of care!

Serious injuries may occur.

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

CAUTION

Risk of injury from contact with oil!

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

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

To decommission the machine:

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

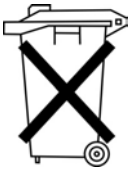
9 Disposal

CAUTION

Risk of environmental damage from improper disposal!

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

ALWAYS comply with the national regulations regarding disposal.



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

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

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

10 Troubleshooting

10.1 Customer Service

Contact for repairs and issues with the machine:

Dürkopp Adler GmbH

Potsdamer Str. 190
33719 Bielefeld, Germany

Tel. +49 (0) 180 5 383 756
Fax +49 (0) 521 925 2594
Email: service@duerkopp-adler.com
Internet: www.duerkopp-adler.com

10.2 Messages of the software

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

10.2.1 Information messages

Code	Possible cause	Remedial action
1203	Position not reached (during thread cutting, reversal, etc.)	• Check and, if necessary, change controller settings • Mechanical changes to the machine (e.g. thread cutting setting, belt tension, etc.) • Check the position (thread lever at top dead center)
2020	DACextension box not responding	• Check connection cables • Check LEDs of DACextension box • Perform software update
2021	Sewing motor encoder plug (Sub-D, 9-pin) not connected to DACextension box	• Connect encoder cable to DACextension box using the correct connection
2120	DA stepper card 1 not responding	• Check connection cables • Check LEDs of DACextension box • Perform software update
2121	DA stepper card 1 encoder plug (Sub-D, 9-pin) not connected	• Connect encoder cable to the control, use correct connection
2122	DA stepper card 1 flywheel position not found	• Check connection cables • Check stepper motor 1 for stiff movement
2220	DA stepper card 2 not responding	• Check connection cables • Check LEDs of DACextension box • Perform software update

Code	Possible cause	Remedial action
2221	DA stepper card 2 encoder plug (Sub-D, 9-pin) not connected	• Connect encoder cable to the control, use correct connection
2222	DA stepper card 2 flywheel position not found	• Check connection cables • Check stepper motor 2 for stiff movement
3103	Low voltage warning (1st threshold) (mains voltage < 180 V AC)	• Check the mains voltage • Stabilize the mains voltage • Use generator
3104	Pedal is not in position 0	• When switching the control on, take your foot off the pedal
3108	Speed limited due to insufficient mains voltage	• Check the mains voltage
3109	Operation lock	• Check tilt sensor on machine
3150	Maintenance necessary	• Information on lubricating the machine
3151	Maintenance necessary (operation cannot continue unless parameter `t 51 14` is reset)	• Service is urgently required
3155	No release for sewing process	• Parameter `t 51 20` - `t 51 33` = 25 • Input signal for sewing process release required
3160	Stitch loosening device, stitch loosening cannot be performed	
3215	Bobbin stitch counter (info value 0 reached)	• Change bobbin, set counter value, press counter reset button
3216	Remaining thread monitor left	• Change the left bobbin
3217	Remaining thread monitor right	• Change the right bobbin

Code	Possible cause	Remedial action
3218	Remaining thread monitor left and right	• Change left and right bobbin
3223	Skip stitch detected	
3224	Bobbin failed to rotate	
6360	No valid data on external EEprom (internal data structures are not compatible with the external data storage device)	• Perform software update
6361	No external EEprom connected	• Connect machine ID
6362	No valid data on internal EEprom (internal data structures are not compatible with the external data storage device)	• Check machine ID connection • Switch off the control, wait until the LEDs are off and then switch on again • Perform software update
6363	No valid data on internal and external EEprom (software version is not compatible with the internal data storage device, emergency operating features only)	• Check machine ID connection • Switch off the control, wait until the LEDs are off and then switch on again • Perform software update
6364	No valid data on internal EEprom and no external EEprom connected (the internal data structures are not compatible with the external data storage device, emergency operating features only)	• Check machine ID connection • Switch off the control, wait until the LEDs are off and then switch on again • Perform software update
6365	Internal EEprom defective	• Replace the control
6366	Internal EEprom defective and external data not valid (emergency operating features only)	• Replace the control

Code	Possible cause	Remedial action
6367	Internal EEprom defective and external EEprom not connected (emergency operating features only)	• Replace the control
7202	DACextension box boot error	• Check connection cables • Perform software update • Replace DACextension box
7203	Checksum error during update	• Check connection cables • Perform software update • Replace DACextension box
7212	DA stepper card 1 boot error	• Check connection cables • Perform software update • Replace DACextension box
7213	Checksum error occurred while updating DA stepper card 2	• Check connection cables • Perform software update • Replace DACextension box
7222	DA stepper card 2 boot error	• Check connection cables • Perform software update • Replace DACextension box
7223	Checksum error occurred while updating DA stepper card 2	• Check connection cables • Perform software update • Replace DACextension box
7801	Software version error (DAC classic only; only the functions of the DAC basic will remain available)	• Perform software update • Replace the control
7802	Software update error (DAC classic only; only the functions of the DAC basic will remain available)	• Perform software update again • Replace the control
7803	Communication error (DAC classic only; only the functions of the DAC basic will remain available)	• Restart the control • Perform software update • Replace the control

10.2.2 Error messages

Code	Possible cause	Remedial action
1000	Sewing motor encoder plug (Sub-D, 9-pin) not connected	• Connect encoder cable to the control, use correct connection
1001	Sewing motor error: Sewing motor plug (AMP) not connected	• Check connection and plug in, if necessary • Test sewing motor phases (R = 2.8 Ω, high impedance to PE) • Replace the encoder • Replace sewing motor • Replace the control
1002	Sewing motor insulation fault	• Check motor phase and PE for low-impedance connection • Replace the encoder • Replace sewing motor
1004	Sewing motor error: Incorrect sewing motor direction of rotation	• Replace the encoder • Check plug assignment and change, if necessary • Check wiring in machine distributor and change it, if necessary • Test motor phases and check for correct value
1005	Motor blocked	• Eliminate stiff movement in the machine • Replace the encoder • Replace the motor
1006	Maximum speed exceeded	• Replace the encoder • Perform reset • Check class (parameter `t 51 04`)
1007	Error in the reference run	• Replace the encoder • Eliminate stiff movement in the machine
1008	Encoder error	• Replace the encoder

Code	Possible cause	Remedial action
1010	External synchronizer plug (Sub-D, 9-pin) not connected	• Connect cable of external synchronizer to control, use correct connection (Sync)
1011	Encoder Z pulse missing	• Switch off the control, use handwheel to turn, and switch on the control again If error is not corrected, check encoder
1012	Synchronizer fault	• Replace the synchronizer
1052	Sewing motor overcurrent, internal current increase > 25 A	• Check selection of class • Replace the control • Replace sewing motor • Replace the encoder
1053	Sewing motor overvoltage	• Check selection of class • Replace the control
1054	Internal short circuit	• Replace the control
1055	Sewing motor overload	• Eliminate stiff movement in the machine • Replace the encoder • Replace sewing motor
2101	DA stepper card 1 reference run timeout	• Check reference sensor
2103	DA stepper card 1 step losses	• Check machine for stiff movement
2155	DA stepper card 1 overload	• Check machine for stiff movement
2201	DA stepper card 2 reference run timeout	• Check reference sensor
2203	DA stepper card 2 step losses	• Check machine for stiff movement
2255	DA stepper card 2 overload	• Check machine for stiff movement

Code	Possible cause	Remedial action
3100	AC-RDY timeout, intermediate circuit voltage did not reach the defined threshold in the specified time	• Check the mains voltage If the mains voltage is OK, replace the control
3101	High voltage fault, mains voltage, longer duration >290 V	• Check the mains voltage If nominal voltage is continuously exceeded, stabilize it or use a generator
3102	Low voltage failure (2^{nd} threshold) (mains voltage < 150 V AC)	• Check the mains voltage • Stabilize the mains voltage • Use generator
3105	U24 V short circuit	• Disconnect 37-pin plug If the error is not corrected: Replace the control • Test inputs and outputs for 24 V short circuit
3106	U24 V (I^2T) overload	• One or several magnets defective
3107	Pedal not connected	• Connect the pedal
6353	Internal EEprom communication error	• Switch off the control, wait until the LEDs are off and then switch on again
6354	External EEprom communication error	• Switch off the control, wait until the LEDs are off, check connection for machine ID, and switch on control again
8401	Watchdog	• Perform software update • Perform a machine ID reset • Replace the control

Code	Possible cause	Remedial action
8402 - 8405	Internal error	• Perform software update • Perform a machine ID reset • Replace the control
8406	Checksum error	• Perform software update • Replace the control
8501	Software protection	• The DA tool must always be used for software updates

10.3 Errors in sewing process

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

Error	Possible causes	Remedial action
Missing stitches	Needle thread and hook thread have not been threaded correctly	Check threading path
	Needle is blunt or bent	Replace the needle
	Needle is not inserted correctly into the needle bar	Insert the needle correctly into the needle bar
	The needle thickness used is unsuitable	Use recommended needle thickness
	The reel stand is assembled incorrectly	Check the assembly of the reel stand
	Thread tensions are too tight	Check thread tensions
	Throat plate, hook or spread have been damaged by the needle	Have parts reworked by qualified specialists
Loose stitches	Thread tensions are not adjusted to the sewing material, the sewing material thickness or the thread used	Check thread tensions
	Needle thread and hook thread have not been threaded correctly	Check threading path
Needle breakage	Needle thickness is unsuitable for the sewing material or the thread	Use recommended needle thickness

11 Technical data

Data and characteristic values

Technical data	Unit	827-160122	827-260122
Type of stitches		Lockstitch 301	
Hook type		Vertical hook	
Number of needles		1	2
Needle system		134-35	
Needle strength	[Nm]	130	
Thread strength	[Nm]	20/3	
Stitch length	[mm]	7/7	
Speed maximum	[min^{-1}]	3800	
Speed on delivery	[min^{-1}]	3400	
Mains voltage	[V]	230	
Mains frequency	[Hz]	50 - 60	
Operating pressure	[bar]	6	
Length	[mm]	690	
Width	[mm]	220	
Height	[mm]	460	
Weight	[kg]	62	

Characteristics

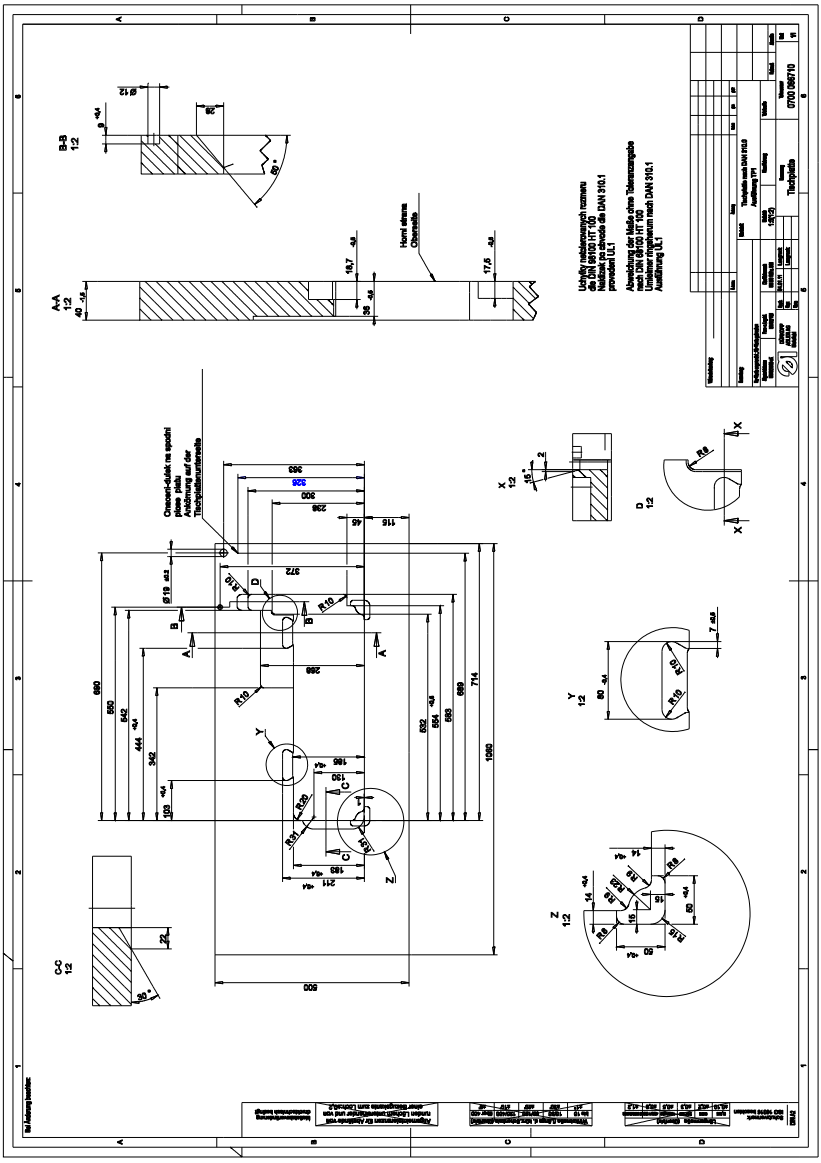
Single and twin-needle double lockstitch flatbed sewing machine with bottom feed and needle feed. For light to moderately heavy sewing material with needle thickness of Nm 80-130.

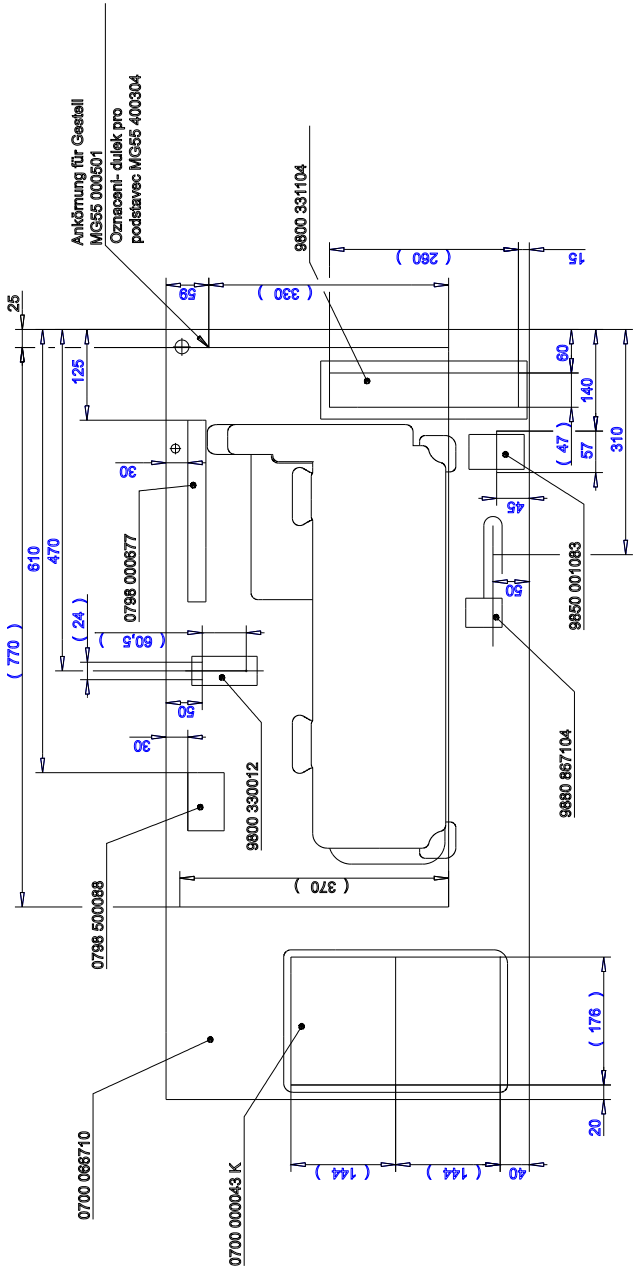
Technical features:

- Stitch length max. 7mm
- With electromagnetically actuated thread cutter
- The clearance under the sewing feet when lifted is max. 16 mm (can only be achieved in combination with DC drives)
- The machines are equipped with new, ergonomically positioned buttons for intermediate bartacks, bartack suppression and needle up/down
- DLC coating of needle bar, presser foot bar and feeding foot bar for oil-reduced operation
- Anti-friction coating on throat plate and throat plate slide to reduce the friction between sewing material and the sewing equipment during sewing
- Automatic wick lubrication with inspection glasses for oil level indication
- Large vertical hook with CTB bobbins
- Safety snap-on coupling prevents any misadjustment or damage to the hook in the event of a thread jamming

12 Appendix

Tabletop drawings




Ankörnung für Gestell
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Označení- důlek pro
podstavec MG55 400304
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(144)
(144)
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