



G767

Operating Instructions

IMPORTANT
READ CAREFULLY BEFORE USE
KEEP FOR FUTURE REFERENCE

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1 About these instructions



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

Should you notice any discrepancies or if you have improvement requests, then we would be glad to receive your feedback through **Customer Service** ( p. 107).


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

1.1 For whom are these instructions intended?

These instructions are intended for:

- **Operators:**
This group is familiar with the machine and has access to the instructions. Specifically, chapter **Operation** ( p. 17) is important for the operators.
- **Specialists:**
This group has the appropriate technical training for performing maintenance or repairing malfunctions. Specifically, the chapter **Setup** ( p. 83) 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 are represented or highlighted by the following characters in order to facilitate easy and quick understanding:



Proper setting

Specifies proper setting.



Disturbances

Specifies the disturbances that can occur from an incorrect setting.



Cover

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



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



Steps to be performed for service, maintenance, and installation



Steps to be performed via the software control panel

The individual steps are numbered:

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



Result of performing an operation

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



Important

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



Information

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



Order


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

References



Reference to another section in these instructions.

Safety

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

Location information

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

1.3 Other documents

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

1.4 Liability

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

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

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

Transport

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

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

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

2 Safety

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



2.1 Basic safety instructions

The machine may only be used as described in these instructions. 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 stacker to transport the machine. Raise the machine max. 20 mm and secure it to prevent it from slipping off.

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

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

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

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

Requirements to be met by the personnel

Only qualified specialists may be used for:

- Setting up the machine
- Performing maintenance work and repairs
- Performing work on electrical equipment

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

Operation

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

Safety equipment

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



2.2 Signal words and symbols used in warnings




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

Signal words Signal words and the hazard they describe:

Signal word	Meaning
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:

Icon	Type of danger
	General
	Electric shock

Icon	Type of danger
	Puncture
	Crushing
	Environmental damage

Examples Examples of the layout of warnings in the text:

DANGER



Type and source of danger!

Consequences of non-compliance.

Measures for avoiding the danger.

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

WARNING



Type and source of danger!

Consequences of non-compliance.

Measures for avoiding the danger.

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

CAUTION



Type and source of danger!

Consequences of non-compliance.

Measures for avoiding the danger.

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

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.

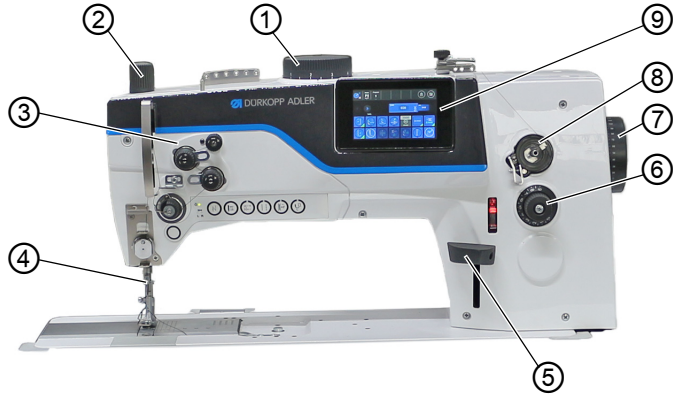
Measures for avoiding the danger.

- ↪ 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) - Adjusting wheel for sewing foot stroke | (6) - Stitch length adjusting wheel |
| (2) - Adjusting wheel for sewing foot pressure | (7) - Handwheel |
| (3) - Thread tensions | (8) - Winder |
| (4) - Needle bar | (9) - Control panel |
| (5) - Stitch regulator | |

3.2 Proper use

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. 111) 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.

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.

3.3 Declaration of Conformity

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



4 Operation

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

4.1 Preparing the machine for operation

WARNING



Risk of injury from moving, cutting and sharp parts!

Crushing, cutting and punctures are possible.

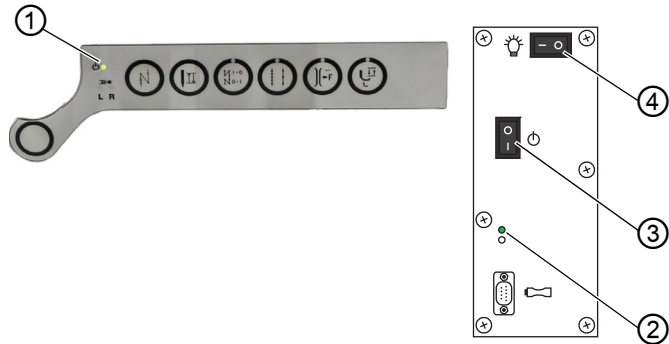
If possible, make preparations only when the machine is switched off.

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

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

4.2 Switching on and off the machine

Fig. 2: Switching on and off the machine



- (1) - Indicator lamp on Push buttons (3) - Main switch
 (2) - Indicator lamp on the Control (4) - Switch for the sewing light



To switch on the machine:

1. Press the main switch (3) down to position **I**.
- ↳ The indicator lamps (1) and (2) light up.



To switch off the machine:

1. Press the main switch (3) up to position **0**.
- ↳ The indicator lamps (1) and (2) go out.

4.3 Inserting or changing the needle

WARNING



Risk of injury from sharp parts!

Puncture possible.

Switch off the machine before changing the needle.
DO NOT reach into the needle tip.

NOTICE

Property damage may occur!

There is a risk of machine damage, needle breakage or damage to the thread.

Check the distance to the hook tip after inserting a needle with a different thickness.

If necessary, readjust the distance between needle tip and hook tip.



Order

After switching to a different needle thickness, adjust the distance between hook and needle ( *Service Instructions*).



Disturbance if hook clearance is incorrect

After inserting a thinner needle:

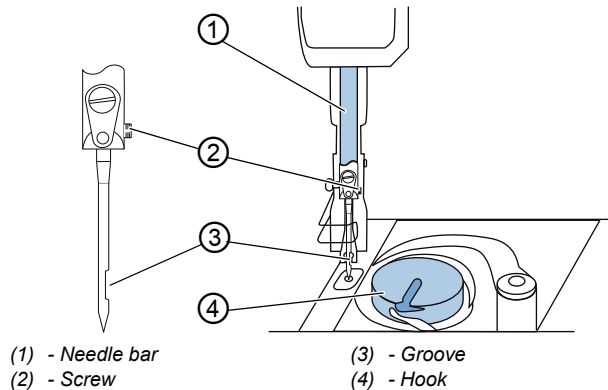
- Skip stitches
- Damage to the thread

After inserting a thicker needle:

- Damage to the hook tip
- Damage to the needle

4.3.1 Inserting or changing needles on 1-needle machines

Fig. 3: Inserting or changing needles on 1-needle machines



To change or insert the needle on 1-needle machines:

1. Turn the handwheel until the needle bar (1) is at the top dead center.
2. Loosen the screw (2).
3. Pull the needle out towards the bottom.
4. Insert the new needle.



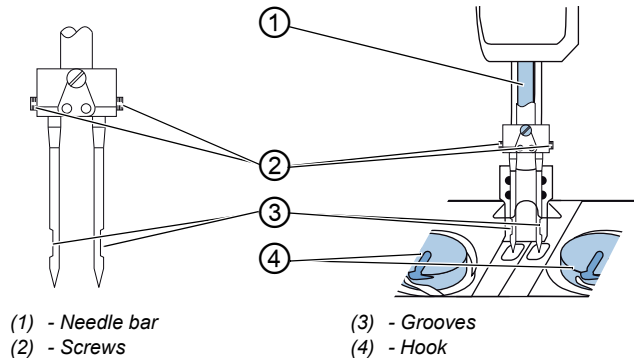
Important

Align the needle in such a way that the groove (3) faces the hook (4).

5. Tighten the screw (2).

4.3.2 Inserting or changing needles on 2-needle machines

Fig. 4: Inserting or changing needles on 2-needle machines



To change or insert the needle on 2-needle machines:

1. Turn the handwheel until the needle bar (1) is at the top dead center.
2. Loosen the screws (2) on both sides.
3. Pull each of the needles out towards the bottom.
4. Insert new needles on both sides.



Important

When inserting the needles, align them such that the grooves (3) face away from each other. Each groove must point to the hook that belongs to this needle.

5. Tighten the screws (2) on both sides.

4.4 Threading the needle thread

WARNING



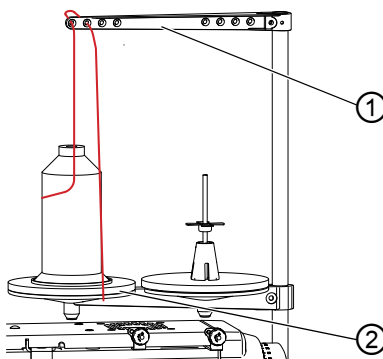
Risk of injury from sharp parts!

Puncture possible.

Switch off the machine before threading the needle thread.

In all machines the thread from the thread reel is fed to the machine via the thread guide.

Fig. 5: Threading the needle thread



(1) - Thread guide

(2) - Reel stand

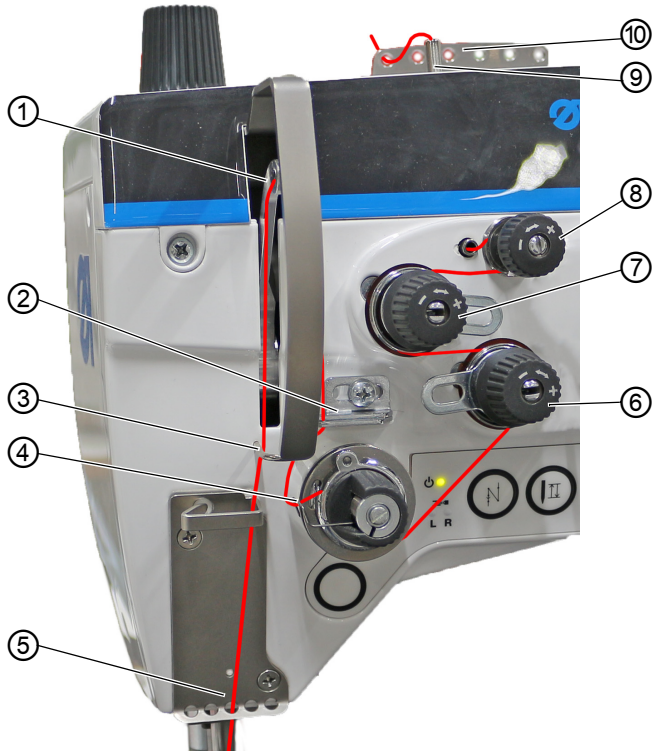


To thread the needle thread:

1. Fit the thread reel on the reel stand (2).
2. Insert the needle thread through the slots of the thread guide (1) as shown above.

4.4.1 Needle thread threading on 1-needle machines

Fig. 6: Needle thread threading on 1-needle machines (1)



- | | |
|--------------------------------|--------------------------|
| (1) - Thread lever | (6) - Main tension |
| (2) - Thread regulator | (7) - Additional tension |
| (3) - Thread guide | (8) - Pretension |
| (4) - Thread tensioning spring | (9) - Tube |
| (5) - Thread guide | (10) - Thread guide |

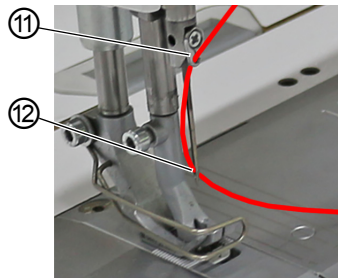


To thread the needle thread in 1-needle machines:

1. As shown above, feed the thread through the 1st hole of the thread guide (10).
2. Feed the thread through the tube (9).
3. Guide the thread clockwise around the pretension (8).
4. Guide the thread counterclockwise around the additional tensioner (7).
5. Guide the thread clockwise around the main tensioner (6).

6. Guide the thread clockwise from below around the thread tensioning spring (4).
7. Feed the thread through the thread guide (3) and then from bottom to top through the hole of the thread regulator (2).
8. Feed the thread from the right to the left through the lower guide of the thread lever (1).
9. Insert the thread through thread guide (3).
10. Optional: Insert the thread into the thread clamp (14) from the right so that the thread is held in place inside the hook of the clamp.
The thread is supposed to run through the clamp almost without touching it and in such a way that it only makes contact with the guides above and below the thread clamp.
11. Insert the thread through thread guide (5).

Fig. 7: Needle thread threading on 1-needle machines (2)



(11) - Thread guide

(12) - Needle eye



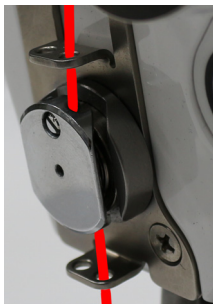
12. Insert the thread through the thread guide (11) on the needle bar block.
13. Insert the thread through the needle eye (12) (towards the groove) in such a way that the loose thread end faces the hook.



Important

Check the thread length.

If the loose thread end is too long, the needle thread may be caught by the hook and cause a disturbance. If the loose thread end is too short, the machine cannot start sewing.

For machines with a short thread trimmer*Fig. 8: Needle thread threading on 1-needle machines (3)*

14. Insert the needle thread through the right hole of the guide above the thread clamp.

15. Insert the needle thread through the right hole of the guide below the thread clamp.

16. Insert the needle thread into the needle thread clamp from the right so that the thread is held in place inside the hook of the clamp.

↳ The needle thread is supposed to run through the clamp almost without touching it and in such a way that it only makes contact with the guides above and below the needle thread clamp.

17. Insert the needle thread through the thread guide on the needle bar (11).

18. Insert the needle thread through the needle eye (12) in such a way that the loose thread end faces the hook.

19. Pull the needle thread through the needle eye (12) until the loose thread end has a length of approx. 4 cm with the thread lever (1) at the highest position.

**Important**

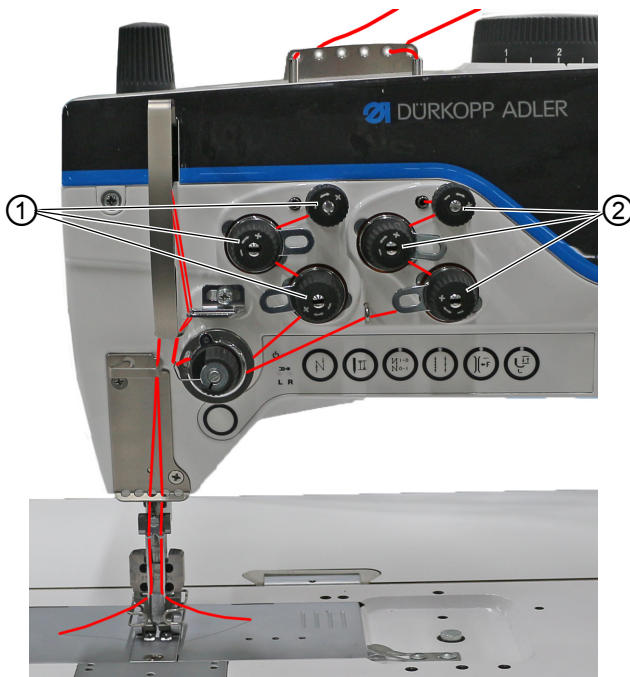
Check the thread length.

If the loose thread end is too long, the needle thread may be caught by the hook and cause a disturbance. If the loose thread end is too short, the machine cannot start sewing.

4.4.2 Needle thread threading on 2-needle machines

2-needle machines are equipped with a second tensioning screw triangle for the 2nd needle thread. The threading procedure is the same as for the 1st needle thread (📖 p. 23).

Fig. 9: Needle thread threading on 2-needle machines



- (1) - Tensioning screws in triangular arrangement for the first needle thread (2) - Tensioning screws in triangular arrangement for the second needle thread



To thread the needle thread in 2-needle machines:

1. First, guide the left-hand needle thread through the left-hand guide holes and around the left-hand tensioning screw triangle (1).
2. Guide the right-hand needle thread through the right-hand guide holes and around the right-hand tensioning screw triangle (2).



Important

Guide the threads through the guides and around the tensioning screws in such a way that the threads do not intersect.



Important

Check the thread length.

If the loose thread end is too long, the needle thread may be caught by the hook and cause a disturbance. If the loose thread end is too short, the machine cannot start sewing.

4.5 Winding the hook thread

4.5.1 Threading the hook thread

WARNING

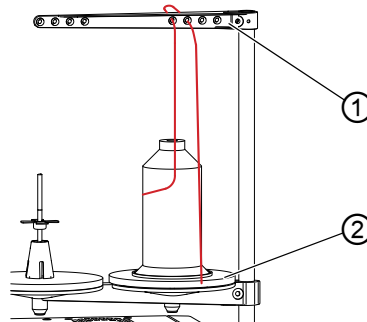


Risk of injury from sharp parts!

Puncture possible.

Switch off the machine before threading the thread.

Fig. 10: Threading the hook thread (1)



(1) - Thread guide

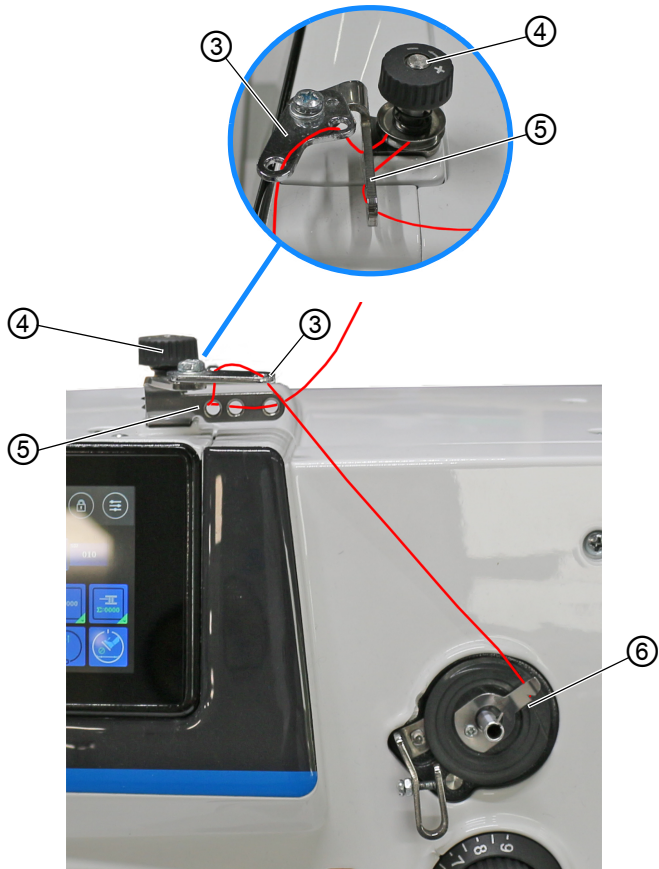
(2) - Reel stand



To wind the hook thread:

1. Fit the thread reel on the reel stand (2).
2. Thread the hook thread through the slots of the thread guide (1) as shown above.

Fig. 11: Threading the hook thread (2)



(3) - Thread guide
(4) - Pretension

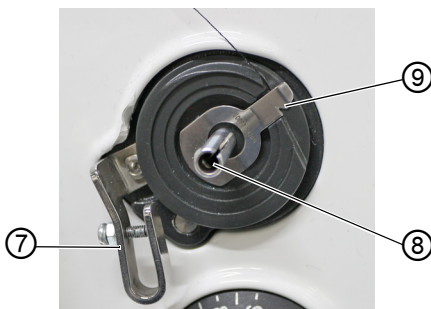
(5) - Thread guide
(6) - Winder



3. Insert the hook thread from the rear to the front through the 3rd hole of the thread guide (5).
4. Feed the hook thread from the front to the rear through the 2nd hole of the thread guide (5).
5. Guide the hook thread counterclockwise around the pretension (4).
6. Insert the hook thread from the rear to the front through the 1st hole of the thread guide (5).
7. Insert the hook thread from bottom to top through the hear hole of the thread guide (3).

8. Feed the hook thread from top to bottom through the front hole of the thread guide (3).
9. Guide the hook thread to the winder (6).

Fig. 12: Threading the hook thread (3)



- (7) - Bobbin winder lever (9) - Knife
(8) - Bobbin shaft



10. Clamp the hook thread behind the knife (9) and tear off the loose end behind it.
11. Fit the bobbin on the bobbin shaft (8).
12. Turn the bobbin clockwise until it clicks.
13. Pull the bobbin winder lever (7) up.

4.5.2 Winding the hook thread

The hook thread is normally wound on when sewing is in progress. However, you can also wind on the hook thread without sewing, e. g. if you require a full bobbin in order to start sewing.

NOTICE


Property damage may occur!

Damage to the sewing feet or throat plate possible if the thread is wound on without sewing material.

Lock the sewing feet in place at the highest position and set the sewing foot stroke to the smallest value if you wind on hook thread without sewing material.



To wind the hook thread:

1. Switch on the machine.
2. Press the pedal forwards.
 - ↳ The machine sews and winds the hook thread from the thread reel onto the bobbin.
When the bobbin is full, the machine automatically stops winding. The bobbin winder lever moves down.
The knife is automatically moved to its initial position.
3. Pull off the full bobbin.
4. Tear off the thread behind the knife.
5. Insert the full bobbin into the hook ( p. 31).
6. Repeat the winding procedure with an empty bobbin, as described above.

4.6 Replacing the hook thread bobbin

WARNING

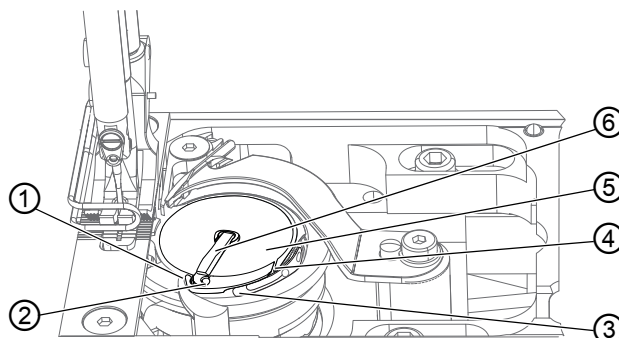


Risk of injury from sharp parts!

Puncture possible.

Switch off the machine before changing the hook thread bobbin.

Fig. 13: Replacing the hook thread bobbin (1)



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



To change the hook thread 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

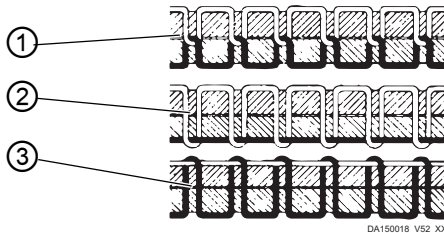
Together with the hook thread tension, the needle thread tension influences the final seam pattern. With thin sewing material, excessive thread tension can lead to undesired ruffing and thread breaking.



Proper setting

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

Fig. 14: Thread tension



DA150018_V52_XX

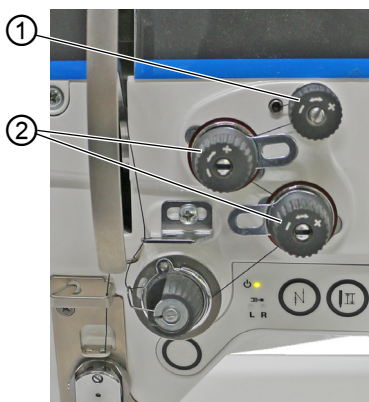
- (1) - Identical needle thread and hook thread tension
- (2) - Hook thread tension higher than needle thread tension
- (3) - Needle thread tension higher than hook thread tension

4.7.1 Adjusting the needle thread tension

The 3 adjusting wheels on the tensioning screw triangle determine the needle thread tension.

In the basic position, the top of the adjusting wheel is flush with the screw in the center.

Fig. 15: Adjusting the needle thread tension



(1) - Pretension

(2) - Main tensions

Main tension



Proper setting

The main tensions (2) determine the normal needle thread tension during sewing.

Adjust the main tension as low as possible.



Disturbance due to excessively high needle thread tension

- Ruffing on the seam
- Thread breaking



To adjust the main tension:

1. Turn the adjusting wheels (2).
 - Increase the needle thread tension: Turn the adjusting wheels (2) clockwise
 - Reduce the needle thread tension: Turn the adjusting wheels (2) counterclockwise

Pretension

The pretension (1) holds the thread in position if main tension (3) and additional tension (2) are open completely.

The pretension (1) also determines the length of the initial thread for the new seam.



To adjust the pretension:

1. Turn the adjusting wheel (1).
 - Short initial thread: Turn the adjusting wheel (1) clockwise
 - Longer initial thread: Turn the adjusting wheel (1) counter-clockwise

4.7.2 Adjusting the hook thread tension

WARNING

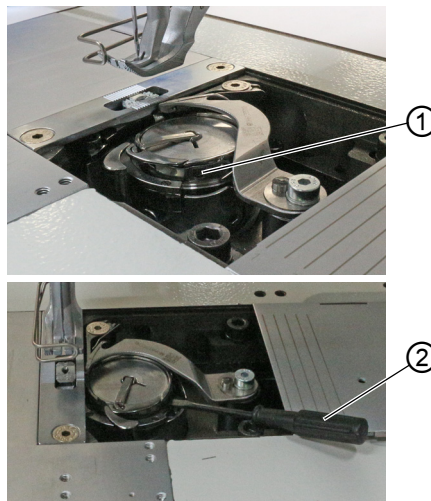


Risk of injury from sharp parts!

Puncture possible.

Switch off the machine before you adjust the hook thread tension.

Fig. 16: Adjusting the hook thread tension



(1) - Adjusting wheel

(2) - Screwdriver



To adjust the hook thread tension:

1. Turn the adjusting wheel (1) using a screwdriver (part number 9081 500000).
 - Increase the hook thread tension: Turn the adjusting wheel (1) clockwise
 - Reduce the hook thread tension: Turn the adjusting wheel (1) counterclockwise

4.8 Adjusting the needle thread regulator

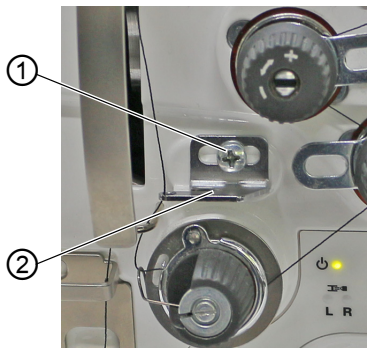
The needle thread regulator determines the tension applied to guide the needle thread around the hook.



Proper setting

The loop of the needle thread slides at low tension over the thickest point of the hook.

Fig. 17: Adjusting the needle thread regulator



(1) - Screw

(2) - Needle thread regulator



To adjust the needle thread regulator:

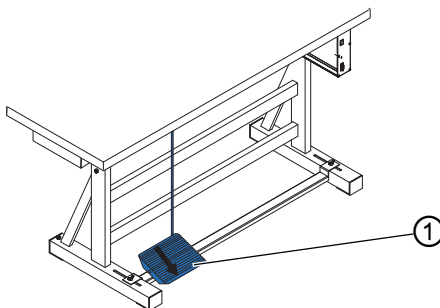
1. Loosen the screw (1).
2. Move the needle thread regulator (2).
 - Increase the needle thread tension: Slide the needle thread regulator (2) to the right
 - Reduce the needle thread tension: Slide the needle thread regulator (2) to the left
3. Tighten the screw (1).

4.9 Sewing feet

4.9.1 Lifting the sewing feet

The sewing feet are lifted electro-pneumatically using the pedal.

Fig. 18: Lifting the sewing feet



(1) - Pedal



To lift the sewing feet:

1. Press the pedal (1) halfway back.
 - ↳ The machine stops and lifts the sewing feet. The sewing feet remain up as long as the pedal (1) is pressed halfway back.

OR



1. Press the pedal (1) fully back.
 - ↳ Thread cutting is activated, and the sewing feet are raised.

4.9.2 Locking the sewing feet at top dead center

CAUTION



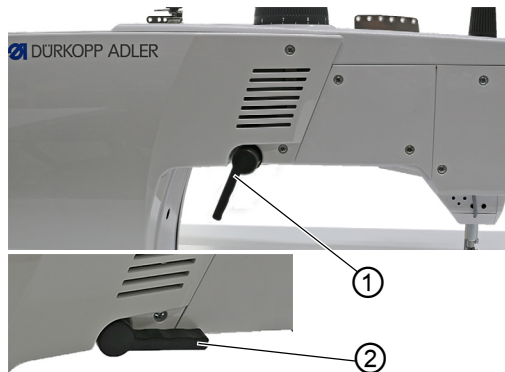
Risk of injury from moving parts!

Crushing possible.

Do NOT put your hands underneath the sewing feet when the lock is being canceled.

There is a lever at the back of the machine for holding the sewing feet at top dead center.

Fig. 19: Locking the sewing feet at top dead center



(1) - Sewing feet at top dead center (2) - Top dead center removed



To lock the sewing feet at top dead center:

1. Push the lever on the rear of the machine up or down.
 - Locking the sewing feet at top dead center: Push the lever down (1)
 - Canceling the lock of the sewing feet: Push the lever up (2)



You can also use the pedal to cancel the upper position:

1. Press the pedal halfway back.
 - ☞ The lever swivels back up, and the lock is canceled.

4.9.3 Adjusting the sewing foot pressure

The adjusting wheel at the top left of the machine arm determines the pressure the sewing foot exerts on the sewing material. The pressure can be adjusted continuously by turning the adjusting wheel.

The correct pressure depends on the sewing material:

- Lower pressure for soft materials, e.g. cloth
- Higher pressure for hard materials, e.g. leather



Proper setting

The sewing material does not slip and is correctly transported.



Disturbance from incorrectly adjusted sewing foot pressure

- Excessively high pressure: Tearing of the sewing material
- Excessively low pressure: Slipping of the sewing material

Fig. 20: Adjusting the sewing foot pressure



(1) - Adjusting wheel for the sewing foot pressure



To adjust the sewing foot pressure:

1. Turn the adjusting wheel (1).
 - To increase pressure: Turn the adjusting wheel (1) clockwise
 - To reduce pressure: Turn the adjusting wheel (1) counterclockwise

4.9.4 Adjusting the sewing foot stroke

Limiting of number of stitches with an increased sewing foot stroke



Information

The machine has a potentiometer on the arm shaft. The potentiometer automatically adapts the number of stitches to the sewing foot stroke: If you increase the sewing foot stroke, the number of stitches is automatically reduced.

NOTICE

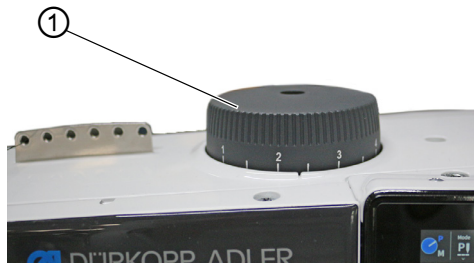
Property damage may occur!

Damage to the machine through an excessively high number of stitches with an increased sewing foot stroke.

Ensure that the number of stitches specified in the appendix tables for the respective combination of stitch length and sewing foot stroke is not exceeded.

Do not change the setting of the potentiometer.

Fig. 21: Adjusting the height of the sewing foot stroke



(1) - Sewing foot stroke adjusting wheel



To adjust the height of the sewing foot stroke:

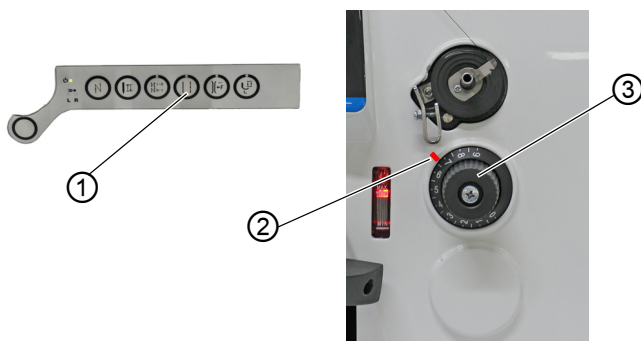
1. Turn the adjusting wheel (1).
 - Increase the sewing foot stroke: Turn the adjusting wheel (1) clockwise
 - Reduce the sewing foot stroke: Turn the adjusting wheel (1) counterclockwise

4.10 Adjusting the stitch length

Depending on the equipment, the machine has 1 or 2 adjusting wheels for stitch length.

The stitch length can be adjusted continuously between 0 and 9 mm.

Fig. 22: Adjusting the stitch length



- (1) - Button for the stitch length on the Push buttons
- (2) - Adjusting mark for indicating the stitch length selected
- (3) - Adjusting wheel for the stitch length

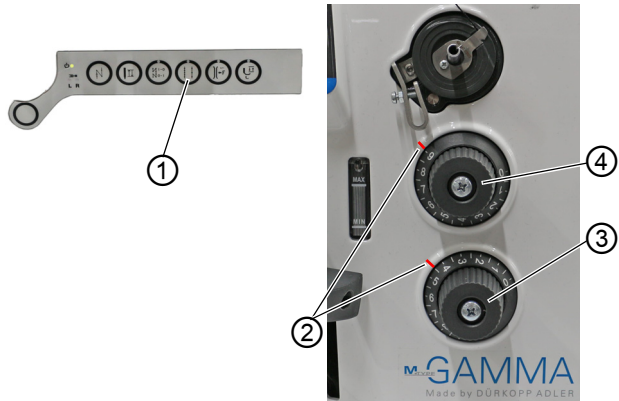


To adjust the stitch length:

1. Turn the adjusting wheel (3).
 - To increase stitch length: Turn adjusting wheel counterclockwise
 - To reduce stitch length: Turn adjusting wheel clockwise

4.10.1 Adjusting the stitch length with 2 adjusting wheels

Fig. 23: Adjusting the stitch length



(1) - Button

(2) - Adjusting marks

(3) - Adjusting wheel

(4) - Adjusting wheel



To adjust the stitch length:

Setting the stitch length on the adjusting wheel (3)

1. Turn the adjusting wheel (3) counterclockwise until you reach the desired stitch length.
The marking (2) on the left of the adjusting wheel indicates the stitch length selected.

Setting the stitch length on the adjusting wheel (4)

1. Turn the adjusting wheel (4) clockwise until you reach the desired stitch length.
The marking (2) on the left of the adjusting wheel indicates the stitch length selected.

4.10.2 Sewing with 2 stitch lengths

NOTICE

Property damage may occur!

The machine can be damaged if the adjusting wheels are forced. The machine is designed in such a way that the stitch length at the top adjusting wheel cannot be set to a lower level than at the bottom adjusting wheel.

Do not attempt to force the top adjusting wheel to set a lower stitch length than at the bottom adjusting wheel.

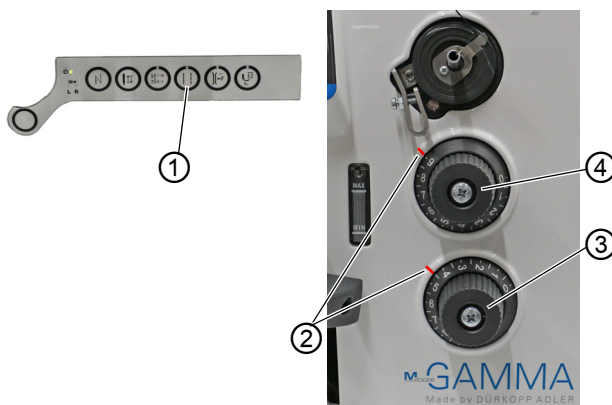
NOTICE

Property damage may occur!

Risk of breakage.

The stitch length at adjusting wheel (3) must NOT be greater than the stitch length at adjusting wheel (4).

Fig. 24: Sewing with 2 stitch lengths



- (1) - Button
- (2) - Adjusting marks

- (3) - Adjusting wheel
- (4) - Adjusting wheel

Depending on its subclass the machine may be fitted with 2 adjusting wheels for the adjustment of the stitch length. These can be used to sew two different stitch lengths and can be activated with a press of button (1).

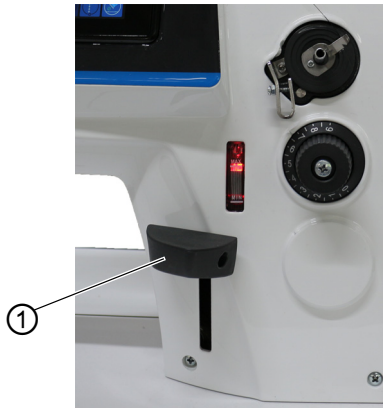
The stitch lengths are set using the adjusting wheels (3) and (4).

- Button (1) is lit: Adjusting wheel (4) is activated.
- Button (1) is not lit: Adjusting wheel (3) is activated.

4.11 Sewing backwards

The stitch regulator on the machine arm reduces the stitch length down to sewing backwards in the lower end position.

Fig. 25: Sewing backwards



(1) - Stitch regulator



To sew backwards:

1. Slowly push the stitch regulator (1) down.
↳ The stitch length becomes smaller.
When at bottom dead center, the machine sews in reverse with the stitch length currently set at the adjusting wheels.

4.12 Setting short stitch (on KFA and 2-needle machines only)

By default, the thread lengths of hook thread and needle thread are approximately the same after thread cutting by the short thread trimmer (KFA). However, the stitch length of the last stitch prior to thread cutting can be adjusted.

Fig. 26: Short stitch (1)



(1) - Hole

(2) - Allen key

(3) - Allen screw (covered)



To adjust the stitch length of the last stitch:

1. Insert the allen key (2) through the hole (1) and into the allen screw (3).
 2. Turn the screw (3) to adjust the stitch length.
 - To increase stitch length: Turn screw (3) clockwise.
 - To reduce stitch length: Turn screw (3) counterclockwise.
- ↳ The last stitch should be visible on the material with a length of 1 - 2 mm.

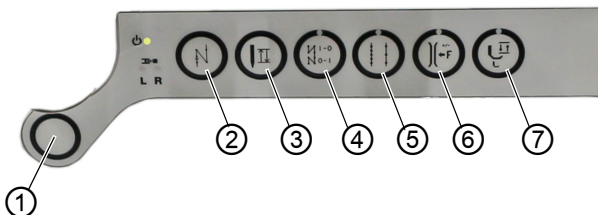
Fig. 27: Short stitch (2)



4.13 Quick functions on the push buttons

Depending on the subclass, the machine has push buttons on the machine arm for activating specific functions while sewing.

Fig. 28: Quick functions on the push buttons



(1) - Favorite button

Buttons for:

(2) - Sewing backwards

(3) - Needle position

(4) - Bartack suppression

(5) - 2nd stitch length (optional)

(6) - 2nd needle thread tension (optional)

(7) - Increased sewing foot stroke (optional)



To activate the function buttons:

1. Press the desired button.

↳ The function is activated.
The LED next to the button lights up.


2. Press the button again.

↳ The function is deactivated.
The LED next to the button is no longer lit.

Button for sewing backwards (2):

When this button (2) is activated, the machine sews backwards.


Button for the needle position (3):

When the button (3) is activated, the needle moves to a specific position. This position is determined individually via the parameter settings. Please read the  *Service Instructions*.


The machine comes configured so that selecting the button (3) will bring the needle up.

Bartack suppression button (4):


This button (4) cancels the general setting for sewing start and end bartacks.

If bartacks are on, pressing the button (3) skips the next bartack. If bartacks are off, pressing the button (4) sews the next bartack. For the general adjustment for sewing start and end bartacks, see chapter **Programming** ( p. 51).


Button for the 2nd stitch length (5, optional):

If the button is activated, the machine sews with the greater stitch length. For adjusting the stitch length, see chapter **Adjusting the stitch length** ( p. 42).

Button for the 2nd needle thread tension (6, optional).

If the button is activated, the machine sews with the 2nd needle thread tension. For adjusting the needle thread tension, see chapter **Adjusting the needle thread tension** ( p. 34).

Button for an increased sewing foot stroke (7, optional):

When this button is activated, the machine sews with an increased sewing foot stroke. For adjusting the sewing foot stroke, see chapter **Adjusting the sewing foot stroke** ( p. 41).

4.14 Sewing

WARNING



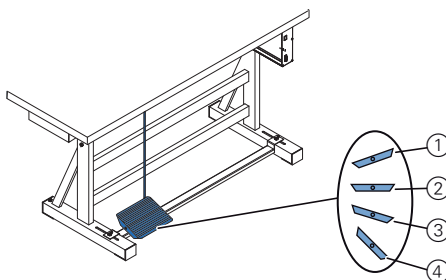
Risk of injury from sharp parts!

Puncture possible.

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

The pedal starts and controls the sewing process.

Fig. 29: Sewing



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

Initial position:

- Pedal position 0:
- ☞ The machine is at a standstill, the needles are up, and the sewing feet are down.




To position the sewing material:

1. Press the pedal halfway back to pedal position -1.
- ☞ The sewing feet are lifted.
2. Push the sewing material into the initial position.



Positioning the sewing material with the Point position function:

1. Press the pedal halfway back to pedal position -1.
 - ↳ The sewing feet are lifted.
2. Insert the sewing material.
3. Press the pedal forwards in pedal position +1.
 - ↳ Needle lowers to the set point position ( p. 62).
4. Press the pedal halfway back to pedal position -1.
 - ↳ The sewing feet are lifted.
5. Position the sewing material towards the needle.



Sewing:

1. Press the pedal forwards in pedal position +1.
 - ↳ The machine sews.
The sewing speed increases the further forward the pedal is pressed.



To interrupt sewing:

1. Release the pedal in pedal position 0:
 - ↳ The machine stops, needles and sewing feet are down.





To continue sewing:

1. Press the pedal forwards in pedal position +1:
 - ↳ The machine continues to sew.



To sew intermediate bartacks:

1. Sew backwards with the stitch regulator ( p. 42) or with the quick function button ( p. 47).



To finish a seam:

1. Press the pedal back completely in pedal position -2.
 - ↳ The machine sews the end bartack, and the thread trimmer cuts the thread.
The machine stops, needles and sewing feet are up.
2. Remove the sewing material.

5 Programming

All settings are performed using the control panel.

5.1 OP4000 control panel

Fig. 30: OP4000 control panel









5.1.1 Navigating the control panel

You navigate the control panel by tapping the screen with your fingers. There is no need for an input device. You can open menus by pressing the corresponding button with your finger.

5.1.2 Symbols and tiles

Explanation of recurring symbols:

Icon	Meaning
	<p>The blue letter indicates the active mode. A = Automatic mode M = Manual mode To switch between the modes, press on the symbol.</p>
	<p>Settings Open this menu to access the settings.</p> <ul style="list-style-type: none"> • Parameter settings • User configuration • Service • Data Transfer
	<p>Value tiles Parameters for which you can/must enter a numerical value. Values can be input by pressing.</p>
	<p>Function tiles (stored) You can activate or deactivate the blue tiles encircled by a white line by pressing. You cannot set any values.</p>
	<p>Multi functional tiles You can activate or deactivate blue tiles encircled by a line and showing a lower green corner by pressing. A long press opens a menu that lets you input values.</p>
	<p>Function tiles (not stored) You cannot enter any values for blue tiles surrounded by a square line. The function assigned to the tile is only active for as long as you press the tile.</p>



5.2 Software operating modes

The software of the control panel offers various operating modes:

- **Manual mode** ( p. 54)

Manual mode is the simplest operating mode. There are no seam programs and no inputs for individual seam sections.

All programmable sewing parameters can be changed manually during the sewing process.



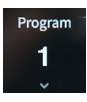


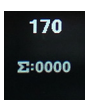
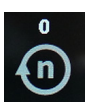






- **Automatic mode** ( p. 54 &  p. 64)










Automatic mode allows you to complete seam programs in 3 different modes:












- Label (4 segments)
- Pocket (6 segments)
- Custom programs P1-P15

All programmable sewing parameters can be set individually for each segment.

5.3 Functions of the tiles

Tile	Function	Reference
	Mode <ul style="list-style-type: none"> Select the mode in Automatic mode 	 p. 64
	Program <ul style="list-style-type: none"> Select the program in Automatic mode 	 p. 64
	Bobbin stitch counter <ul style="list-style-type: none"> Indicates the current value 	
	Piece counter <ul style="list-style-type: none"> Indicates the current value 	
	Speed <ul style="list-style-type: none"> Indicates the current speed 	
	Start bartack <ul style="list-style-type: none"> Adjusts the start bartack 	 p. 57
	End bartack <ul style="list-style-type: none"> Adjusts the end bartack 	 p. 58
	Function key <ul style="list-style-type: none"> Activates or deactivates any stored function 	
	Threading mode <ul style="list-style-type: none"> Opens the instructions on how to thread the needle thread Turns on the operation lock of the machine 	

Title	Function	Reference
 <p>Bobbin stitch counter</p>	<ul style="list-style-type: none"> • A long press adjusts the value at which the bobbin is to be changed • A short press resets the bobbin stitch counter 	<p> p. 59</p>
 <p>Piece counter</p>	<ul style="list-style-type: none"> • Activates or deactivates the piece counter or resets the piece counter 	<p> p. 60</p>
 <p>Speed</p>	<ul style="list-style-type: none"> • Defines the maximum permissible speed 	<p> p. 61</p>
 <p>Soft start</p>	<ul style="list-style-type: none"> • Activates or deactivates the soft start • Soft start refers to starting the machine at a slower speed. This function ensures that the sewing process starts reliably. After a certain number of stitches, the machine runs at the set speed. 	
 <p>Sewing foot lift after thread trimmer</p>	<ul style="list-style-type: none"> • Activates or deactivates the sewing foot lift after thread trimmer • The sewing foot lift after thread trimmer lifts the sewing foot after the thread is cut. 	
 <p>Sewing foot lift after sewing stop</p>	<ul style="list-style-type: none"> • Activates or deactivates the sewing foot lift after sewing stop • The sewing foot lift after sewing stop lifts the sewing foot after a sewing stop. 	

Title	Function	Reference
 Needle position after sewing stop	<ul style="list-style-type: none"> • Adjusts the needle position after sewing stop 	 p. 62
 Point position	<ul style="list-style-type: none"> • Activates or deactivates the Point position function for more effortless needle alignment 	 p. 62
 Thread trimmer	<ul style="list-style-type: none"> • Activates or deactivates the thread trimmer • The thread trimmer cuts the thread at the seam end automatically. 	
 Thread clamp	<ul style="list-style-type: none"> • Activates or deactivates the thread clamp • The thread clamp holds the needle thread firmly to pull it down while sewing on. 	
 Backwards	<ul style="list-style-type: none"> • Activates or deactivates the Backwards function 	
 Screen lock	<ul style="list-style-type: none"> • Activates the screen lock 	 p. 63
 Light barrier	<ul style="list-style-type: none"> • Activates the (optional) Light barrier function • Detects the end of the material and activates end bartack and thread trimmer automatically. 	
	<ul style="list-style-type: none"> • Activates sewing stop at segment switch • To continue with the seam, the pedal must be released in pedal position 0. 	

5.3.1 Adjusting the start bartack

The start bartack secures the seam at the seam beginning. If a seam consists of backward stitches only, it is called a single bartack. A seam made up of forward and backward stitches is called a double bartack.



Single bartack

To adjust the single bartack:



1. Perform a long press on the tile  .

↳ The interface *Start Backtacking settings* opens.

2. Use  and  to adjust stitches *A* and *B* and the number of repeats *n*.
 - $n = 1$ for single bartack
 - $n = 2$ for double bartack
 - $n > 2$ for multi-bartack

3. Press  to return to the main screen.

↳ The new values are adopted.



You can begin sewing; press the pedal forward to pedal position +1 (📖 p. 49).

5.3.2 Adjusting the end bartack

The end bartack secures the seam at the seam end. If a seam consists of backward stitches only, it is called a single bartack. A seam made up of forward and backward stitches is called a double bartack.

To adjust the single bartack:




1. Perform a long press on the tile .

↳ The interface *Start Backtacking settings* opens.


2. Use  and  to adjust stitches *A* and *B* and the number of repeats *n*.

- $n = 1$ for single bartack
- $n = 2$ for double bartack
- $n > 2$ for multi-bartack

3. Press  to return to the main screen.

↳ The new values are adopted.



You can begin sewing; press the pedal forward to pedal position +1. At the end of the seam, press the pedal back to pedal position -2 ( *p.* 49).

5.3.3 Adjusting the bobbin piece counter



Bobbin supply capacity in stitches. This is a very variable value, which depends on the size of the bobbin and the thickness of the thread.

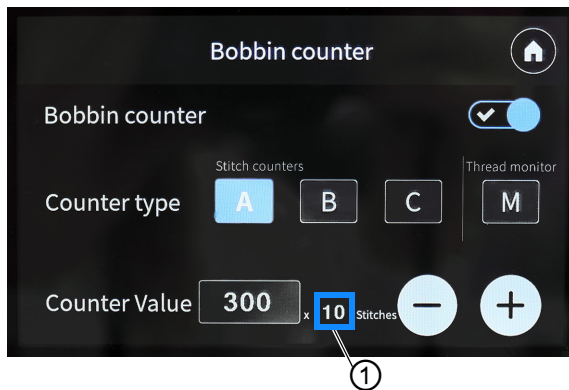
The bobbin piece counter outputs a message when the entered number of stitches is reached. The number of stitches should approximately determine when the hook thread is depleted. Thus you avoid having to repeat work processes.

The bobbin stitch counter must be set for every thread type. The value to be set (i.e. 30000) is the product of the default value (reset value) and the number of stitches (factor):

$$3000 \times 10 = 30000$$

You can adjust the factor (1) in the *Operator parameters* (📖 p. 69).


Fig. 31: Bobbin stitch counter




(1) - Factor



To adjust the bobbin stitch counter:

1. Activate *Bobbin counter*.
2. Select the type:
 - *Thread monitor M*: Activate the optical remaining thread monitor (optional)
 - *A, B* and *C*: Fully customizable
3. If necessary, adjust the number of stitches using 




and .


4. Press  to return to the main screen.
- ↳ The new value is indicated in the tile.

5.3.4 Piece counter



To reset the piece counter:

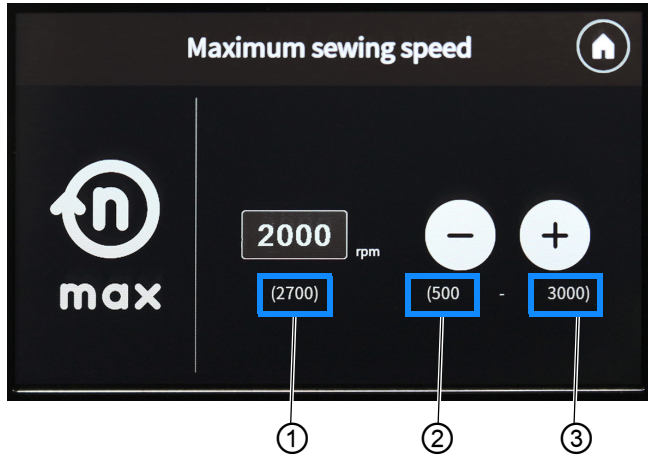
1. Perform a long press on the tile .
 2. Press  to set the counter value to 0.
 3. Press  to return to the main screen.
- ↳ The new value is indicated in the tile.
- OR

4. Perform a short press on the tile .
- ↳ The counter value is reset.

5.3.5 Maximum sewing speed

A reduced speed protects the motor with an ongoing lower speed. Reduced speed is set at the factory as the default.





Fig. 32: Maximum sewing speed



(1) - Default value
 (2) - Minimum value

(3) - Maximum value

To adjust the maximum sewing speed:

1. Press .
 2. Use  and  to adjust the value.
 3. Press  to return to the main screen.
- ↳ The new value is indicated in the tile.

5.3.6 Adjusting the needle position after sewing stop

You can determine where the needle is positioned after a sewing stop.

There are two options:

- Top dead center (needle position 2)
- Bottom dead center (needle position 1)


To activate the top dead center after a sewing stop:



1. Press .

↳ The round line is white.

↳ The function is activated, i.e. the needle is raised after a sewing stop.


2. If the needle is to be in the bottom dead center after a sewing stop, press  again.

5.3.7 Point position

The point position allows you to lower the needle in order to align the sewing material prior to sewing.




To adjust the point position:

1. Perform a long press on the .

2. Use  and  to adjust the value.

Another option is to turn the handwheel to set the desired needle position.


3. Press  to return to the main screen.

↳ The set value is adopted.

5.3.8 Screen lock




To activate the screen lock:

1. Press the tile  .

↳ The screen is locked to prevent inadvertent touches.



To deactivate the screen lock:

1. Perform a long press on the tile  .

↳ The screen lock is canceled.

5.4 Automatic mode



To sew in Automatic mode:


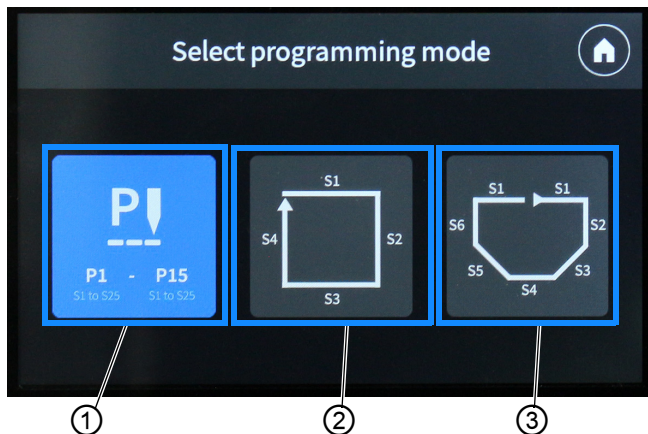
1. Press  to select a mode.
- ↳ The selection menu opens:

Fig. 33: Automatic mode (1)



- (1) - Fully customizable programs (P1 - P15) with up to 25 segments
- (2) - Preset program with 4 segments
- (3) - Preset program with 6 segments


2. If you selected Fully customizable programs (P1 - P15) with up to 25 segments (1), press  to select one of the programs:

Fig. 34: Automatic mode (2)

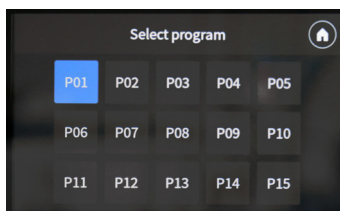


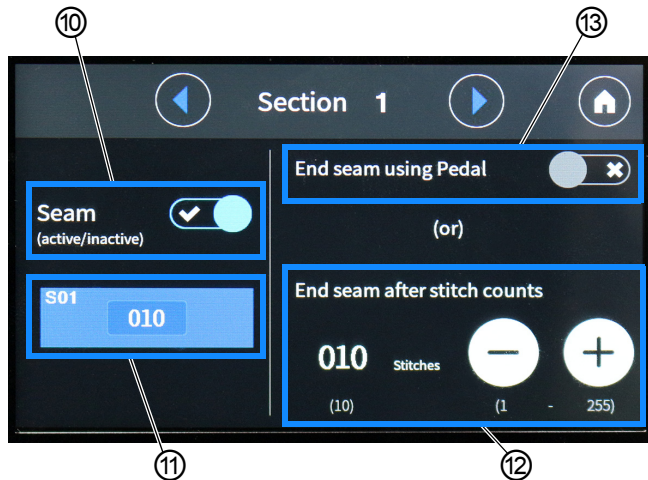
Fig. 35: Automatic mode (3)



- (4) - Arrow keys
- (5) - Start bartack active
- (6) - Sewing stop at segment switch active
- (7) - Thread trimmer active
- (8) - End bartack active
- (9) - Active segment display active







3. Use the arrow keys (4) to select the active segment.
4. Press the Active segment display (9).

Fig. 36: Automatic mode (4)



(10) - Activate/deactivate segment
(11) - Active segment display

(12) - Segment switch after number
of stitches
(13) - Segment switch by pedal

5. Activate segment switch by pedal (13).
Or:
Adjust the number of stitches for Segment switch after number of stitches (12) using  and .
6. Press  to return to Automatic mode.
 - ↳ The setting for the active segment is adopted.
7. Adjust the settings using tiles ( p. 54) and buttons ( p. 47).
 - ↳ All settings only apply to the active segment.
8. Start sewing ( p. 49).



**Information**

If you activated Segment switch after number of stitches (12), but do not want the machine to continue automatically with the next

segment, activate the tile



. This setting is without effect in the last segment. The seam is finished automatically with end bartack and thread trimmer after the set number of stitches.




To switch segments based on number of stitches and by pedal:

1. To start sewing, press the pedal forwards to pedal position +1.
 - ↳ The machine keeps sewing until the specified number of stitches has been reached.
2. Release the pedal in pedal position 0.
 - ↳ The switch to the next segment is carried out.
3. Align the sewing material if necessary.
4. To start sewing in the next segment, press the pedal forwards to pedal position +1.






5.5 Settings



To open the *Settings*:

1. Press the symbol .

↳ The *Settings* menu opens:

Menu item	Explanation
Parameter settings	<ul style="list-style-type: none"> • Operator parameters ( p. 69) • Technician parameters ( Service Instructions) • Developer parameters ( Service Instructions)
User configuration	<ul style="list-style-type: none"> • Language • Display brightness • Display volume • Panel version
Service	<ul style="list-style-type: none"> •  Service Instructions
Data Transfer	<ul style="list-style-type: none"> •  Service Instructions

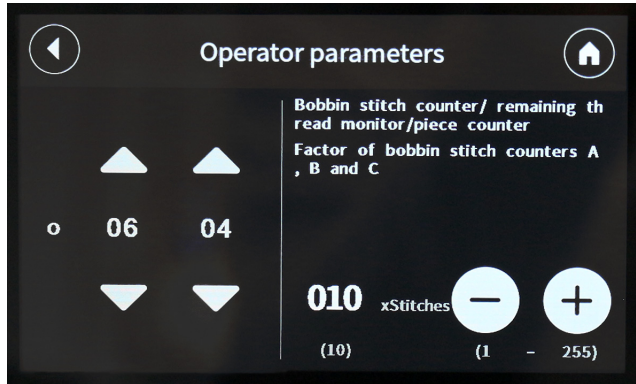
5.5.1 Operator parameters










To adjust the factor of the bobbin stitch counter:

1. Open *Settings* > *Parameter settings* > *Operator parameters*.


Fig. 37: Operator parameters



2. Use the arrows  and  to set parameter *o 06 04*.
 3. Adjust the value of the factor using  and .
 4. Press  to return to the *Parameter settings* or press  to return to the main screen.
- ↳ The new value is adopted as the factor for the bobbin stitch counter ( p. 59).

6 Maintenance

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*).

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.

Maintenance intervals

Work to be carried out	Operating hours			
	8	40	160	500
Machine head				
Remove fluff, sewing dust and thread residues	●			
Clean the motor fan mesh			●	
Check oil level		●		

Work to be carried out	Operating hours			
	8	40	160	500
Pneumatic system				
Check the water level in the pressure regulator	●			
Check the filter element in the maintenance unit				●
Check the tightness of the system				●

6.1 Cleaning

WARNING



Risk of injury from flying particles!

Flying particles can enter the eyes, causing injury.

Wear safety goggles.

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

Make sure no particles fly into the oil pan.

NOTICE

Property damage from soiling!

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

Clean the machine as described.

NOTICE

Property damage from solvent-based cleaners!

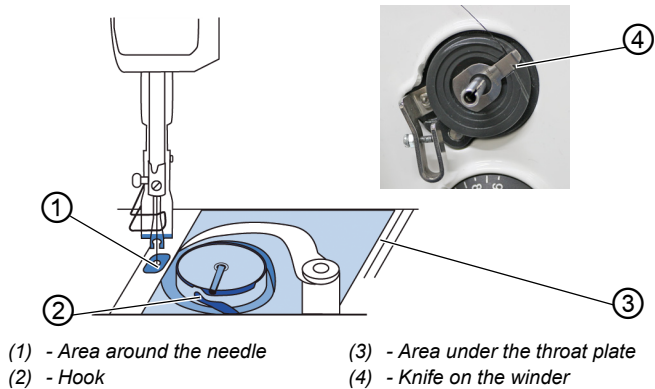
Solvent-based cleaners will damage paintwork.

Use only solvent-free substances for cleaning.

6.1.1 Areas requiring special cleaning

Sewing dust and thread residues should be removed after every 8 operating hours using a compressed air gun or a brush. If very fluffy sewing material is being sewn, the machine must be cleaned even more frequently.

Fig. 38: Areas requiring special cleaning



Check and clean daily:

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



To clean areas that are susceptible to soiling:

1. Switch off the machine.
2. Remove any lint and thread remnants using a compressed air gun or a brush.

6.1.2 Cleaning the motor fan mesh

The motor fan mesh must be cleaned every 100 - 200 operating hours using a compressed air gun. If very fluffy sewing material is being sewn, the motor fan mesh must be cleaned even more frequently.

Fig. 39: Cleaning the motor fan mesh (1)



(1) - Motor



To clean the motor fan mesh:

1. Switch off the machine.
2. Remove the arm cover.
3. Remove any lint and thread remnants using a brush.

Fig. 40: Cleaning the motor fan mesh (2)



(2) - Ventilation slots

4. Clean the ventilation slots (2) in the motor cover.

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:

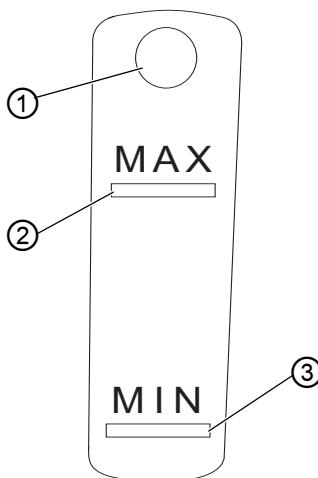
- Viscosity at 40 °C: 10 mm²/s
- Flash point: 150°C

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 Checking the oil level

Fig. 41: Checking the oil level



(1) - Refill opening

(2) - Maximum level marking

(3) - Minimum level marking



To check the oil level:

1. Check the oil level indicator every day.
 - The oil level must be between the minimum level marking (3) and the maximum level marking (2).

Topping off the oil



To top off the oil:

1. Pour in oil through the refill opening (1).
- ↳ Add oil up to but not past the maximum level marking (2).

6.2.2 Checking the hook lubrication

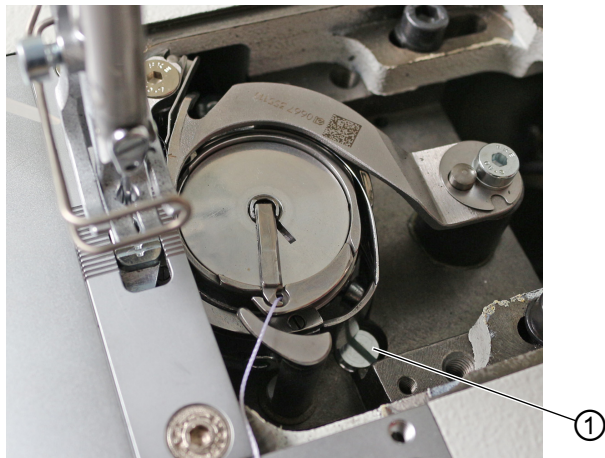
The approved oil quantity for hook lubrication is a factory specification.



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. 42: Checking the hook lubrication



(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 Adjusting the operating pressure

NOTICE


Property damage from incorrect adjustment!

Incorrect operating pressure can result in damage to the machine.

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

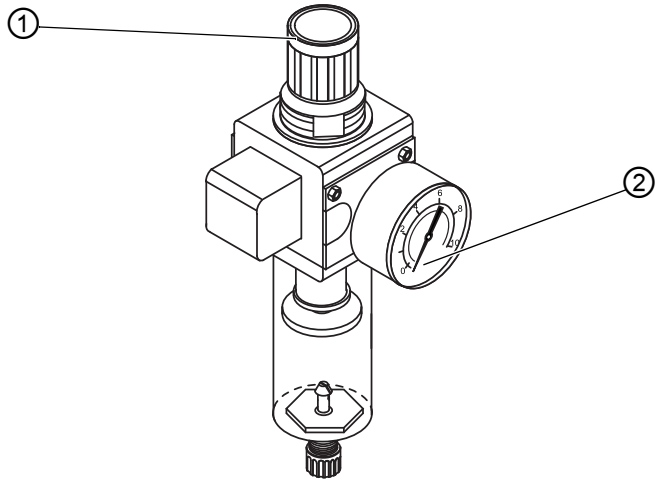


Proper setting

Refer to the **Technical Data** ( p. 111) 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. 43: Adjusting the operating pressure



(1) - Pressure regulator

(2) - Pressure gage



To adjust the operating pressure:

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

6.3.2 Draining the water condensation

NOTICE

Property damage from excess water!

Excess water can cause damage to the machine.

Drain water as required.

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

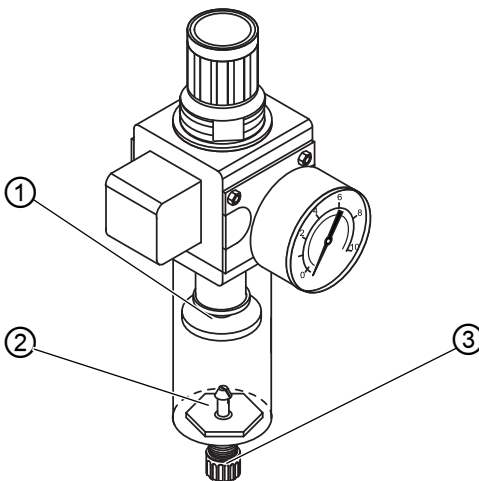


Proper setting

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

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

Fig. 44: 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 a 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

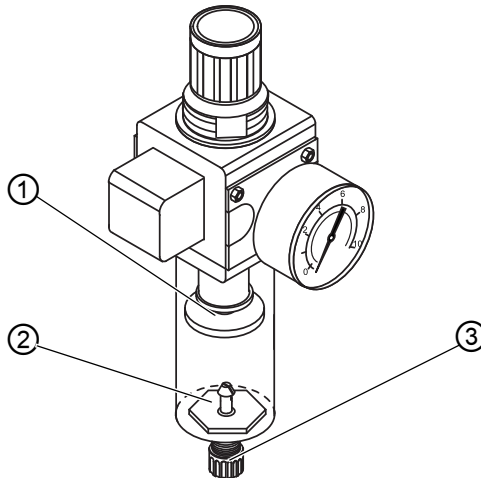
NOTICE

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. 45: 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. 80).
3. Loosen the water separator (2).

4. Unscrew 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.

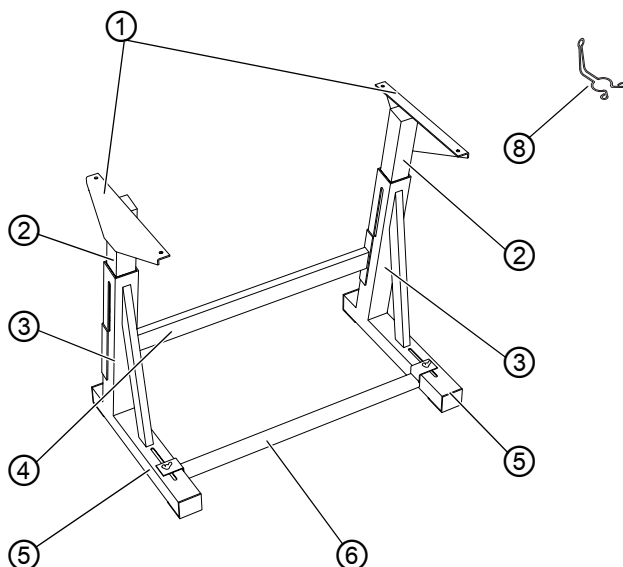
7.2 Removing the transport locks

Remove all transport locks before setting up the machine:

- Lashing straps and wooden blocks from the machine head, the table and the stand
- Supporting wedges between machine arm and throat plate

7.3 Assembling the stand

Fig. 46: Assembling the stand



- | | |
|---------------------------------------|-----------------------------------|
| (1) - Head sections of the inner bars | (5) - Foot struts of the stand |
| (2) - Inner bars | (6) - Cross strut |
| (3) - Stand bars | (7) - Adjusting wheel (not shown) |
| (4) - Cross bar | (8) - Holder for oil can |



To assemble the stand:

1. Screw the cross bar (4) to the stand bars (3).
2. Screw the oil can holder (8) at the rear to the cross bar (4).
3. Screw the cross strut (6) to the foot struts (5).
4. Insert the inner bars (2) in such a way that the longer end of the head section (1) is above the longer end of the foot struts (5).
5. Tighten the inner bars (2) down so that both head sections (1) are at the same height.



Important

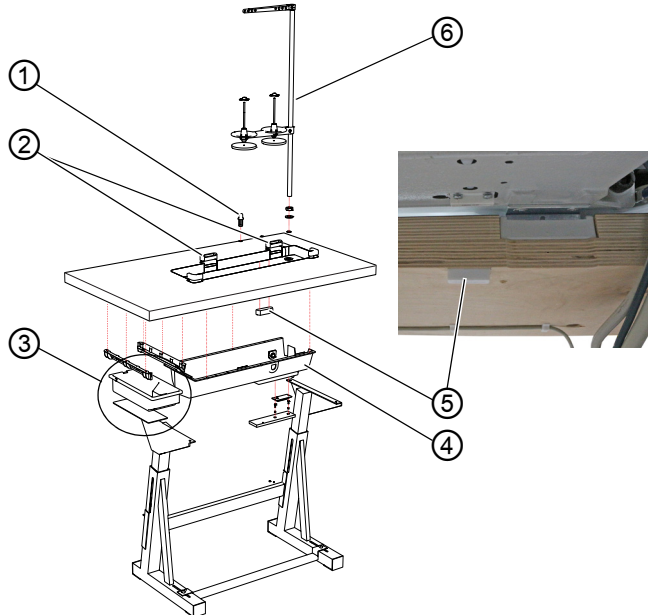
Turn the adjusting wheel (7) so that the stand has even contact with the ground.

7.4 Tabletop

Ensure that the tabletop has sufficient load-bearing capacity and strength.

7.4.1 Completing the tabletop


Fig. 47: Completing the tabletop



- | | |
|-----------------------------------|--------------------------|
| (1) - Machine head support | (4) - Oil pan |
| (2) - Slots for lower hinge parts | (5) - Tilt sensor magnet |
| (3) - Drawer | (6) - Reel stand |



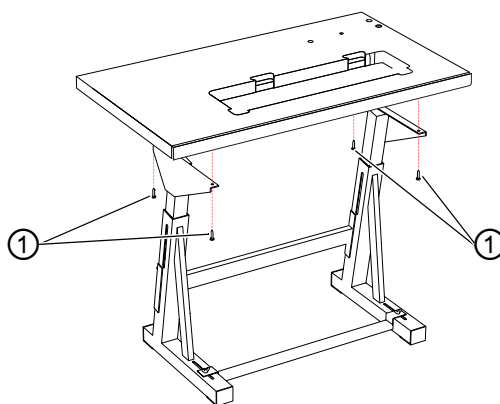
To complete the tabletop:

1. Screw the drawer (3) with the left-hand bracket to the underside of the tabletop.
2. Assemble the tilt sensor magnet (5) under the tabletop. Dimension: 265 mm, see tabletop arrangement ( p. 113).
3. Screw the oil pan (4) in place under the slot for the machine.
4. Insert the reel stand (6) into the hole.

5. Assemble the reel stand (6) with the nut and the washer.
6. Tighten the reel stand and the thread guide on the reel stand (6) in such a way that they are exactly opposite each other.
7. Insert the machine head support (1) into the hole.
8. Insert the lower hinge parts into the slots (2) and tighten.
9. Insert the rubber corners into the corner protrusions.

7.4.2 Assembling the tabletop to the stand

Fig. 48: Assembling the tabletop to the stand



(1) - Screw holes and screws



To assemble the tabletop to the stand:

1. Place the tabletop on the head sections of the inner bars.
2. Tighten the tabletop at the screw holes (1).

7.5 Adjusting the working height

WARNING



Risk of injury from moving parts!

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

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

CAUTION



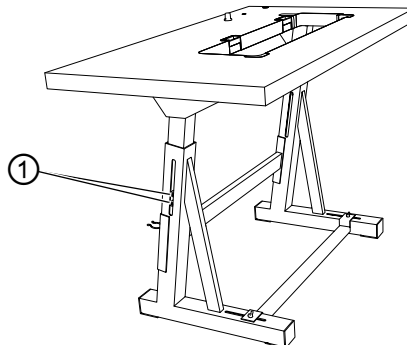
Risk of musculoskeletal damage from incorrect setting!

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

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

The working height is continuously adjustable between 750 and 900 mm (clearance between the floor and upper edge of the tabletop).

Fig. 49: Adjusting the working height



(1) - Screws



To adjust the working height:

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



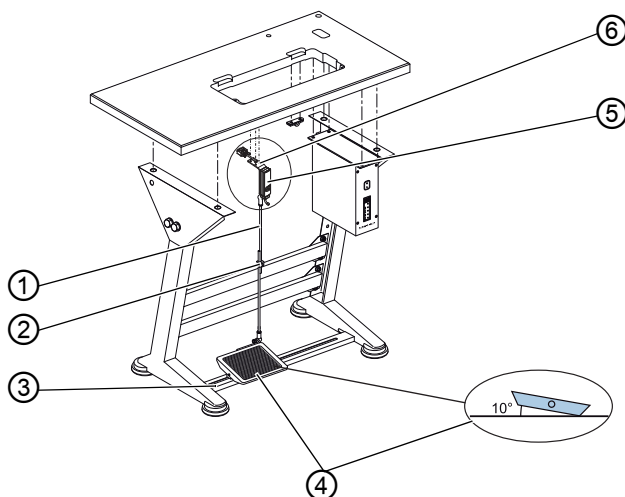
Important

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

3. Tighten the screws (1) on the stand bars.

7.6 Assembling the pedal and setpoint device

Fig. 50: Assembling the pedal and setpoint device



- (1) - Pedal rod
- (2) - Screw
- (3) - Cross strut

- (4) - Pedal
- (5) - Setpoint device
- (6) - Bracket



To assemble pedal and setpoint device:

1. Fit the pedal (4) on the cross strut (3) and align it in such a way that the middle of the pedal is under the needle. The cross strut has elongated holes to allow for the alignment of the pedal.
2. Tighten the pedal (4) on the cross strut (3).

3. Screw the bracket (6) under the tabletop so that the pedal rod (1) runs to the pedal (4) at right-angles to the setpoint device (5).
4. Screw the setpoint device (6) onto the bracket (5).
5. Attach the pedal rod (1) with the ball sockets to the setpoint device (5) and to the pedal (4).
6. Pull the pedal rod (1) to the correct length.



Proper setting

- 10° inclination with pedal released.
7. Tighten the screw (2).

7.7 Inserting the machine head

CAUTION



Risk of injury from heavy parts!

Crushing possible.

Take care not to jam your hands when inserting the machine head.

Fig. 51: Inserting the machine head (1)



(1) - Belt

(2) - Ring bolt

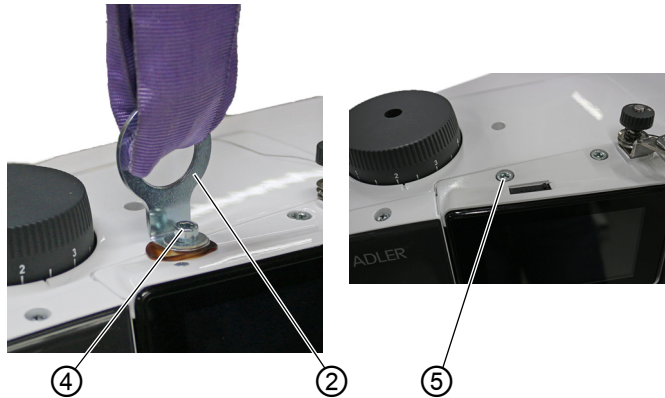
(3) - Machine head



To insert the machine head:

1. Guide the belt (1) through the ring bolt (2) and insert the machine head (3) into the tabletop cutout using a crane.

Fig. 52: Inserting the machine head (2)



(2) - Ring bolt
(4) - Screw

(5) - Screw



2. Loosen the screw (4).
3. Disassemble the ring bolt (2) and close the hole with the screw (5).

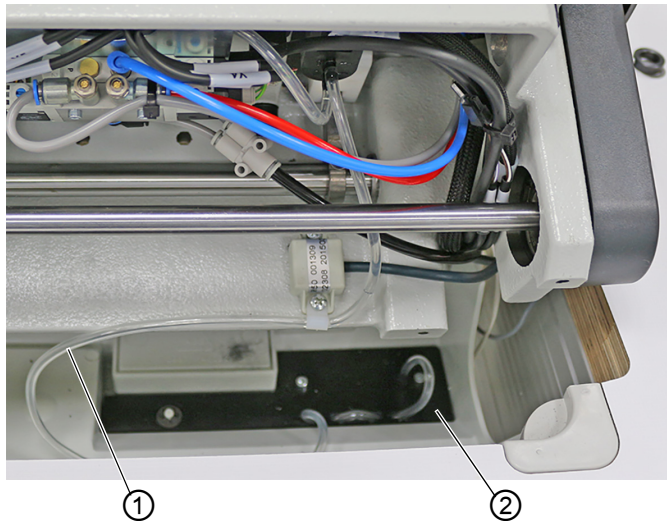


Important

Keep the ring bolt including screw and washers in case the machine head is to be lifted out of the tabletop cutout again.

7.8 Assembling the oil extraction line

Fig. 53: Assembling the oil extraction line



(1) - Hose

(2) - Filter



To assemble the oil extraction line:

1. Tilt the machine head.
2. Tighten the filter (2) inside the oil pan with the plastic adapter to the right.
3. Insert the tube (1) of the oil extraction line through the guides and into the plastic adapter.

7.9 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.

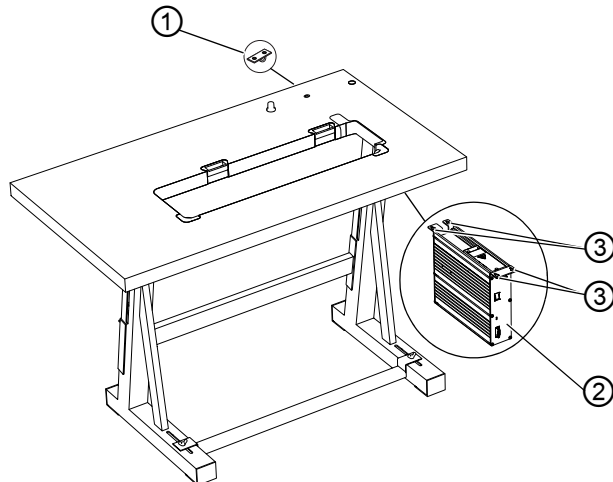


Important

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

7.9.1 Assembling the control

Fig. 54: Assembling the control



(1) - Strain relief mechanism
(2) - Control

(3) - Screw holder

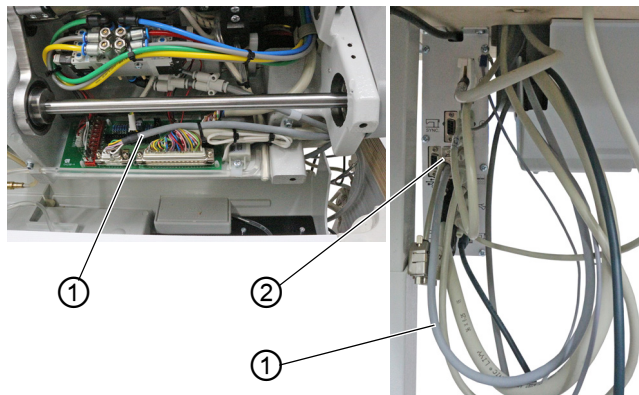


To assemble the control:

1. Screw the control (2) onto the 4 screw holders (3) under the tabletop.
2. Clamp the power cable of the control (2) into the strain relief mechanism (1).
3. Screw the strain relief mechanism (1) under the tabletop.

7.9.2 Connecting the control

Fig. 55: Connecting the control



(1) - Cable

(2) - Socket

Connect the control as follows:

- Insert the plug of each connecting cable into the sockets on the back of the control.
Connect all marked cables to the corresponding marked sockets.
Connect the cable (1) from the PCB to the socket (2).
- Connect the control to the power supply using the power cable.

The connection of the control is described in each case in separate instructions.

7.9.3 Connecting the machine head



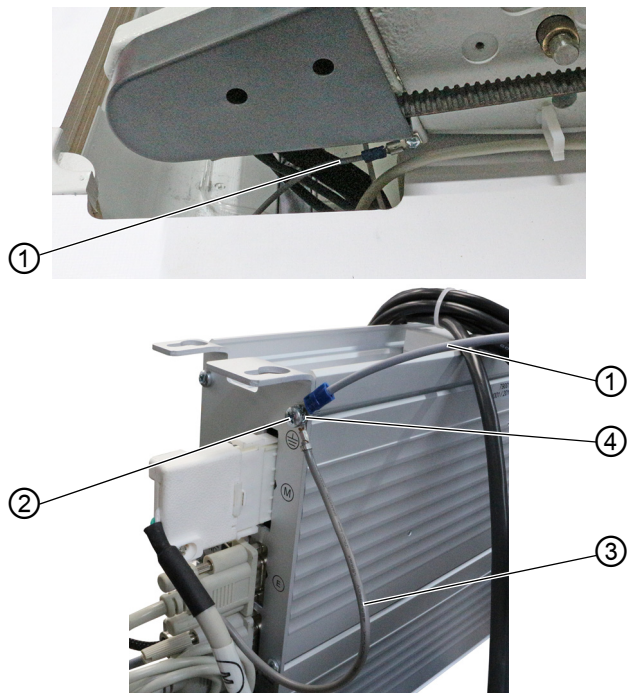
To connect the machine head:

1. Insert the plug on the connecting cable for the machine head into the socket of the respective control.

7.9.4 Establishing equipotential bonding

The grounding wire conducts away any static charging of the machine head.

Fig. 56: Establishing equipotential bonding



(1) - Control grounding wire

(2) - Screw

(3) - Motor grounding wire

(4) - Toothed lock washer



To establish equipotential bonding:

1. Tilt the machine head.
2. Loosen the screw (2).

3. Remove the toothed lock washer (4).
4. Guide the grounding wire of the control (1) to the rear of the control through the cutout in the tabletop.
5. Tighten the grounding wire of the control (1) along with the grounding wire of the motor (3) under the toothed washer (4) using the screw (2).

7.9.5 Assembling the sewing light (optional)

Fig. 57: Assembling the sewing light (1)



(1) - Cover
(2) - Cover

(3) - Arm cover



To assemble the sewing light:

1. Switch off the machine.
2. Disassemble covers (1) and (2)
3. Disassemble the arm cover (3).

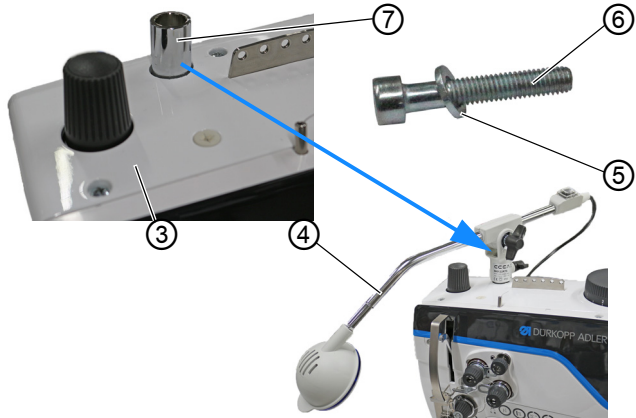
Fig. 58: Assembling the CCEA sewing light (2)





4. Drill a hole (Ø 24 mm) corresponding to the grain on the inside of the arm cover (3).
5. Assemble the arm cover (3).

Fig. 59: Assembling the CCEA sewing light (3)

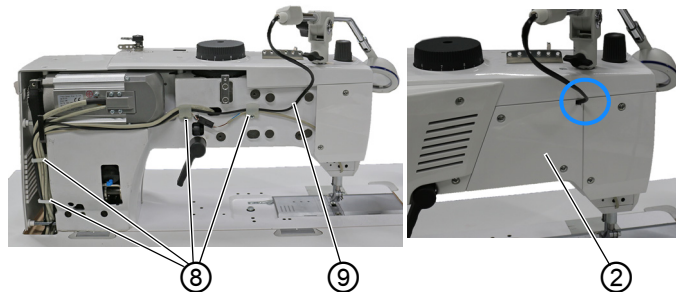


- | | |
|--------------------|--------------|
| (3) - Arm cover | (6) - Screw |
| (4) - Sewing light | (7) - Holder |
| (5) - Washer | |



6. Tighten the holder (7) in the hole of the arm cover (3) using the screw (6) and washer (5) (from the accessories).
7. Slide the sewing light (4) onto the holder (7) and tighten it.


Fig. 60: Assembling the CCEA sewing light (4)



- | | |
|-------------|-------------|
| (2) - Cover | (9) - Cable |
| (8) - Clips | |



8. Lay the cable (9) through the clips (8) in the machine arm.

9. Lay the cable (9) down through the tabletop cutout.
10. Connect the sewing light to the control (see  *Operating Instructions DAC basic/classic*).
11. Assemble covers (1) and (2).
Cut out a corner of the cover (2) to keep the cable (9) from becoming damaged.

7.10 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

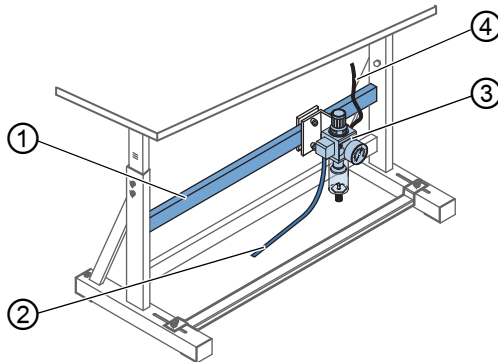
Property damage from incorrect adjustment!

Incorrect system pressure can result in damage to the machine.

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

7.10.1 Assembling the compressed air maintenance unit

Fig. 61: Assembling the compressed air maintenance unit



(1) - Cross bar

(2) - Connection hose

(3) - Compressed air maintenance unit

(4) - Machine hose



To assemble the compressed air maintenance unit:

1. Assemble the compressed air maintenance unit (3) to the cross bar (1) of the stand using the bracket, screws and clip.
2. Connect the machine hose (4) coming out of the machine head to the compressed air maintenance unit (3) at the top right.
3. Connect the connection hose (2) to the compressed air supply using a hose coupling R 1/4".

7.10.2 Adjusting the operating pressure

NOTICE

Property damage from incorrect adjustment!

Incorrect operating pressure can result in damage to the machine.

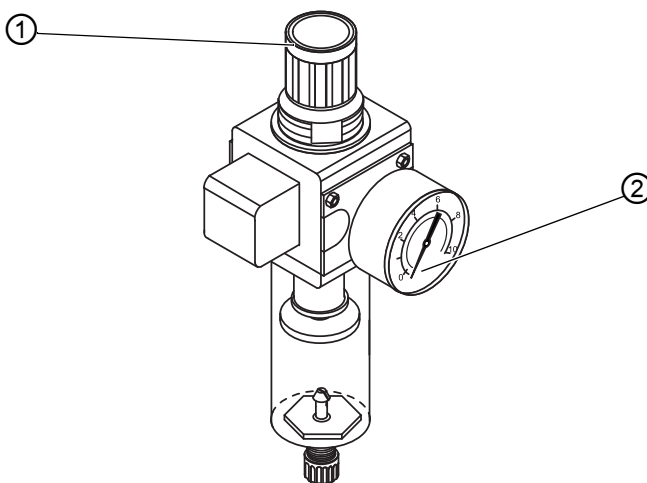
Ensure that the machine is only used when the operating pressure is set correctly.



Proper setting

Refer to the **Technical Data** (📖 p. 111) chapter for the permissible operating pressure. The operating pressure cannot deviate by more than ± 0.5 bar.

Fig. 62: Adjusting the operating pressure



(1) - Pressure regulator

(2) - Pressure gage



To adjust the operating pressure:

1. Pull the pressure regulator (1) up.

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

7.11 Checking the lubrication

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!

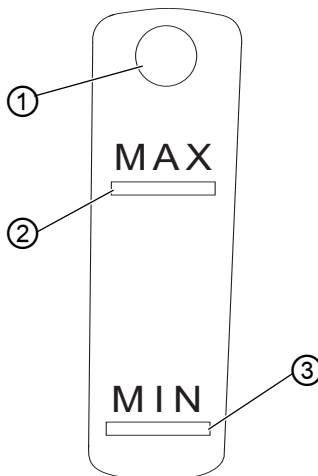
Incorrect oil types can result in damage to the machine.

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

All wicks and felt bits of the machine head are soaked in oil at the factory. This oil is conveyed to the reservoir during use. This is why you should avoid filling too much oil during initial filling.

Checking the oil level

Fig. 63: Checking the oil level



(1) - Refill opening

(2) - Maximum level marking

(3) - Minimum level marking



To check the oil level:

1. Check the oil level indicator every day.
 - The oil level must be between the minimum level marking (3) and the maximum level marking (3).

Topping off the oil



To top off the oil:

2. Pour in oil through the refill opening (1).
Add oil up to but not past the maximum level marking (2).

7.12 Performing a test run

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

8 Decommissioning

You need to perform a number of activities if the machine is to be shut down for a longer period of time or completely decommissioned.

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

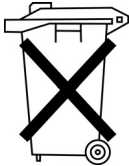
CAUTION



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 Errors in sewing process

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

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

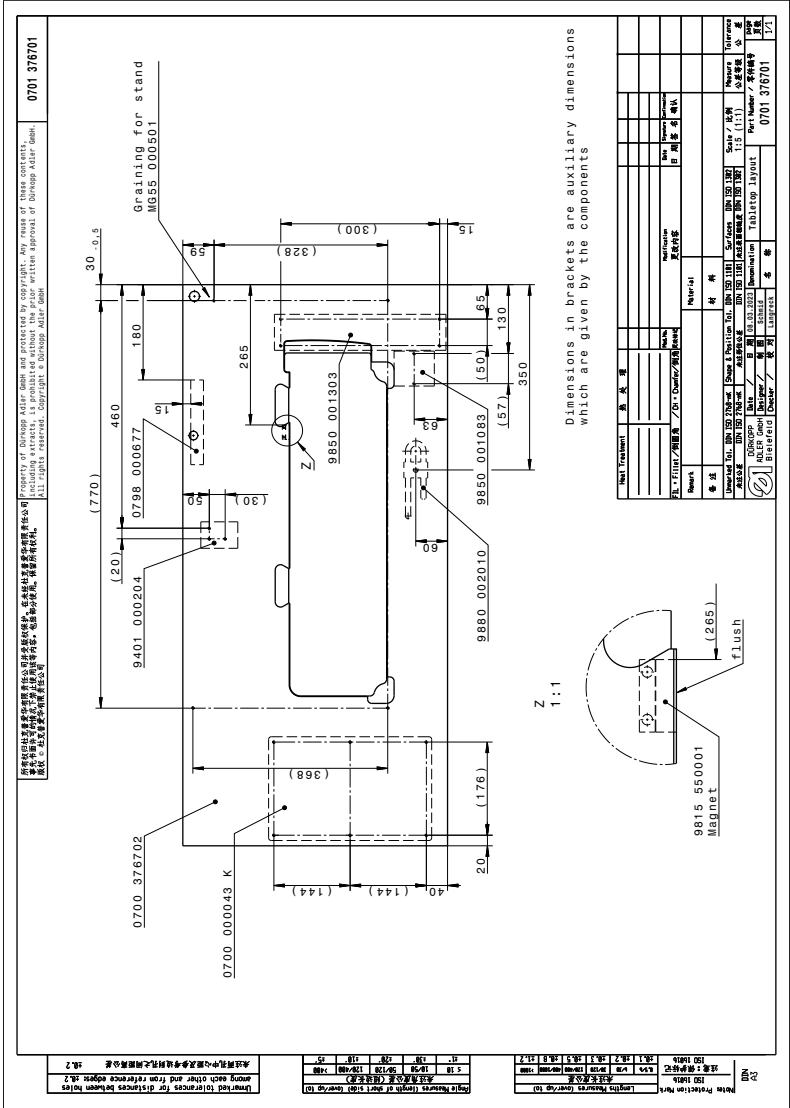
Data and characteristic values

Technical data	Unit	G767-180142	G767-180145	G767-180342	G767-280142	G767-2803421
Stitch type		Double lockstitch 301				
Hook type		Vertical hook, XXL				
Number of needles		1	1	1	2	2
Needle system		134-35				
Needle strength	[Nm]	90-180				
Thread strength	[Nm]	120/3 - 10/3	120/3 - 15/3	120/3 - 10/3	120/3 - 10/3	120/3 - 10/3
Stitch length	[mm]	9/9				
Speed maximum	[min ⁻¹]	3000				
Speed on delivery	[min ⁻¹]	3000				
Mains voltage	[V]	230				
Mains frequency	[Hz]	50/60				
Operating pressure	[bar]	6				
Length	[mm]	675				
Width	[mm]	255				
Height	[mm]	445				
Weight	[kg]	59			60	
Power input	[kVA]	0.646				

12 Appendix

12.1 Tabletop arrangement

Fig. 64: Tabletop arrangement





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