DÜRKOPP ADLER

195

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. 15*) 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. 7*).

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. 7*).

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.

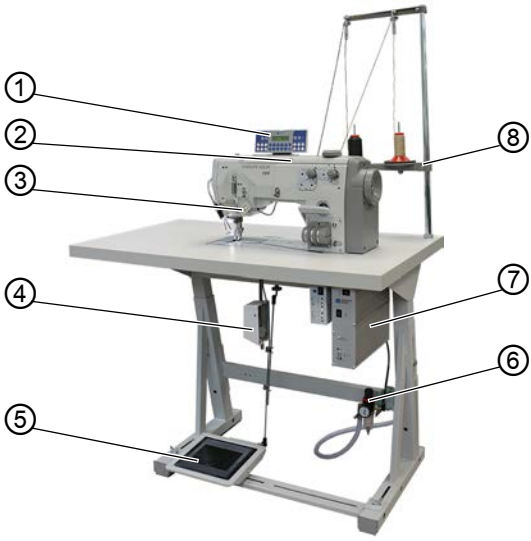
Measures for avoiding the danger.

↳ 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) - Machine head
(3) - Push buttons
(4) - Knee button
(5) - Pedal
(6) - Compressed air maintenance unit
(7) - Control
(8) - Reel stand

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. 95*) 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.

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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
- Threading the hook thread
- Setting the thread tension

4.2 Switching on and off the machine

Before the machine can be switched on and off, the pneumatic connection (📖 *p. 82*) must have been established.

Fig. 2: Switching on and off the machine

(1) - POWER LED on the control *(2) - Main switch power supply*

Switching on the power supply

To switch on the machine:

1. Set the main switch (2) to position **I**.

↳ POWER LED (1) illuminates, and the MESSAGE LED flashes briefly.

Switching off the power supply

To switch off the machine:

1. Set the main switch (2) to position **0**.

↳ The control panel shuts down. When the POWER LED (1) goes out, the machine and the control are disconnected from the power supply.

4.3 Inserting/changing the needle

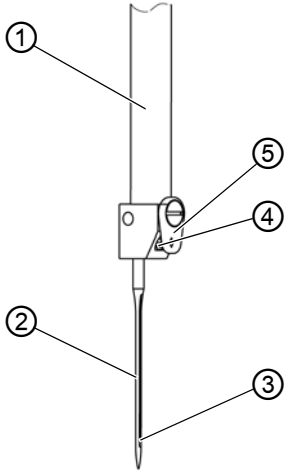
WARNING

Risk of injury from moving, cutting and sharp parts!

Crushing, cutting and punctures are possible.

Only insert or change the needle with the machine switched off.

Fig. 3: Inserting/changing the needle



(1) - Needle bar
(2) - Needle
(3) - Groove
(4) - Threaded pin
(5) - Thread guide

To change the needle:

1. Turn handwheel until the needle (2) is at the top dead center.
2. Loosen the threaded pin (4) through the hole in the thread guide (5).

   This requires that the thread guide (5) be assembled completely straight to the needle bar (1).
3. Pull the needle (2) down and out.
4. Insert the new needle (2) into the hole in the needle bar (1) until it reaches the end stop.

Important

Align the needle (2) in such a way that the groove (3) is pointing to the rear.

5. Tighten the threaded pin (4) through the hole in the thread guide (5).

   This requires that the thread guide (5) be assembled completely straight to the needle bar (1).

Order

Always adjust the clearance between the hook and the needle (2) after changing to a different needle thickness (📖 *Service Instructions*).

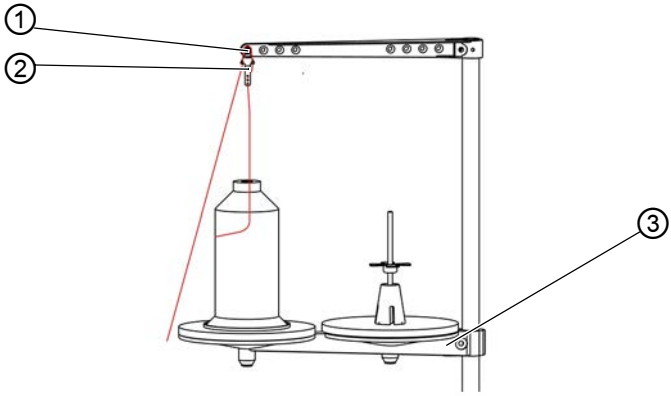
Disturbance

An incorrect hook distance can cause the following disturbances:

- Changing to a thinner needle:
  - Missing stitches
  - Thread damage
- Changing to a thicker needle:
  - Damage to the hook tip
  - Damage to the needle

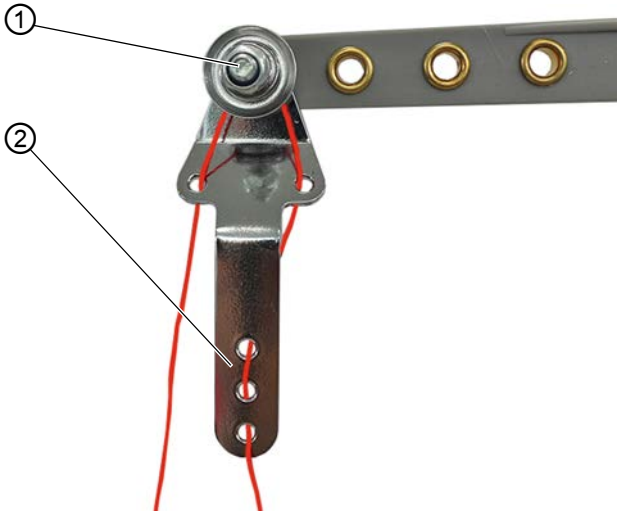
4.4 Threading the needle thread

Fig. 4: Threading the needle thread (1)



(1) - Pre-tensioner
(2) - Thread guide
(3) - Thread reel holder

Fig. 5: Threading the needle thread (2)



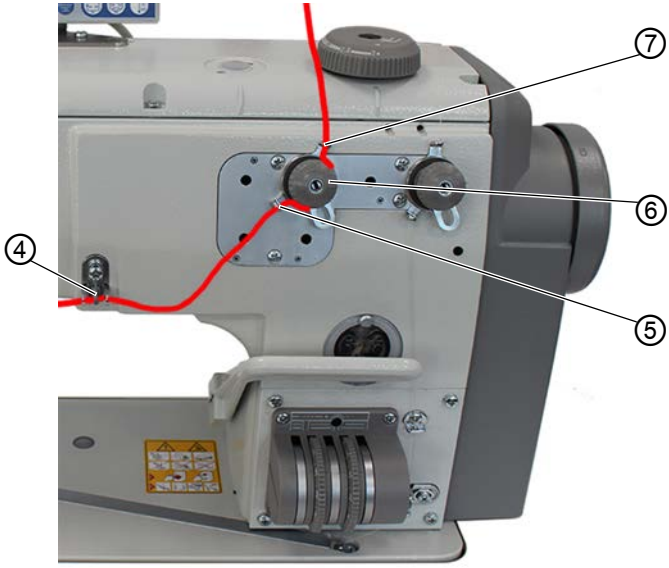
(1) - Pre-tensioner
(2) - Thread guide

To thread the needle thread:

1. Fit the thread reel onto the left plate of the thread reel holder (3) on the reel stand.
2. Thread the needle thread as shown in the figure.

Important
The thread guide (2), the pre-tensioner (1) and the thread reel holder (3) must be positioned vertically above one another.

Fig. 6: Threading the needle thread (3)



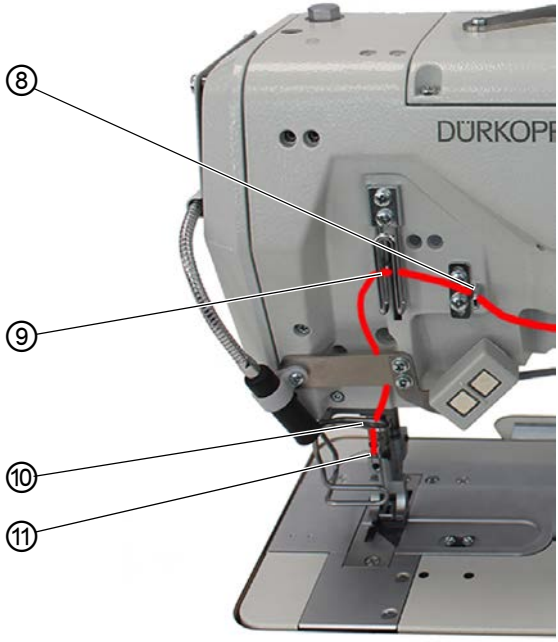
(4) - Thread advancing device
(5) - Thread guide
(6) - Needle thread tensioner
(7) - Thread guide

3. Feed the needle thread from above downwards through the thread guide (7) on the needle thread tensioner (6).
4. Feed the needle thread clockwise around the needle thread tensioner (6).

Important
The needle thread must always be fed around the appropriate tension disk in such a way that it follows the longer path from thread guide (7) to thread guide (5).

5. Insert the needle thread through thread guide (5).
6. Insert the needle thread from the right to the left through the thread advancing device (4).

Fig. 7: Threading the needle thread (4)



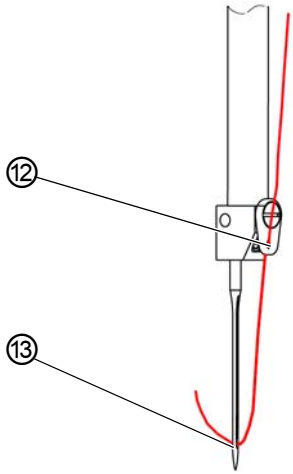
(8) - Thread guide
(9) - Thread lever
(10) - Thread guide
(11) - Thread guide

7. Feed the needle thread from the right to the left through the thread guide (8).
8. Insert the needle thread from the right to the left through the thread lever (9):

Important
Pay attention to thread tension and thread quantity (📖 *p. 27*)!

9. Feed the needle thread from top to bottom through the thread guide (10) on the machine head.
10. Feed the needle thread through the thread guide (11) on the needle bar.
11. Insert the needle thread from the front to the back through the needle eye.

Fig. 8: Threading the needle thread (3)

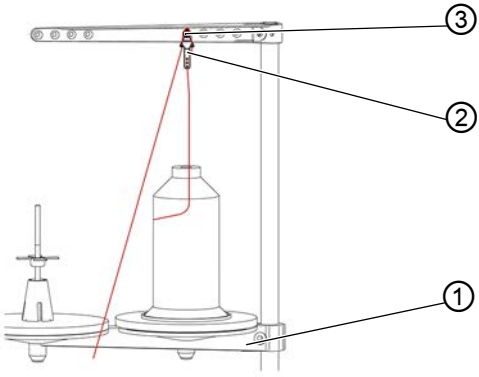


(12) - Thread guide, needle bar *(13) - Needle eye*

12. Feed the needle thread from the top front to the bottom rear through the thread guide (12) on the needle bar.
13. Run the needle thread through the needle eye (13) from front to rear.

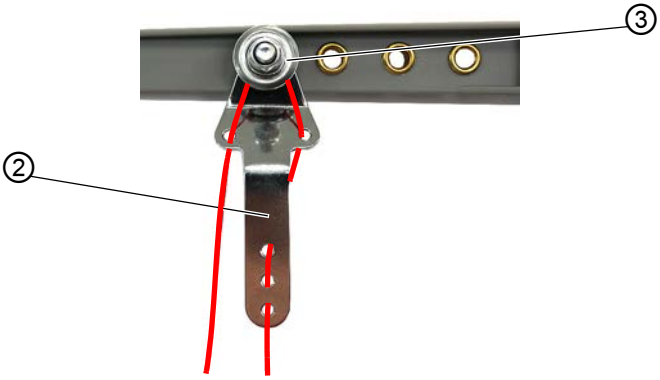
4.5 Threading the hook thread

Fig. 9: Threading the hook thread (1)



(1) - Thread reel holder
(2) - Thread guide
(3) - Pre-tensioner

Fig. 10: Threading the hook thread (2)



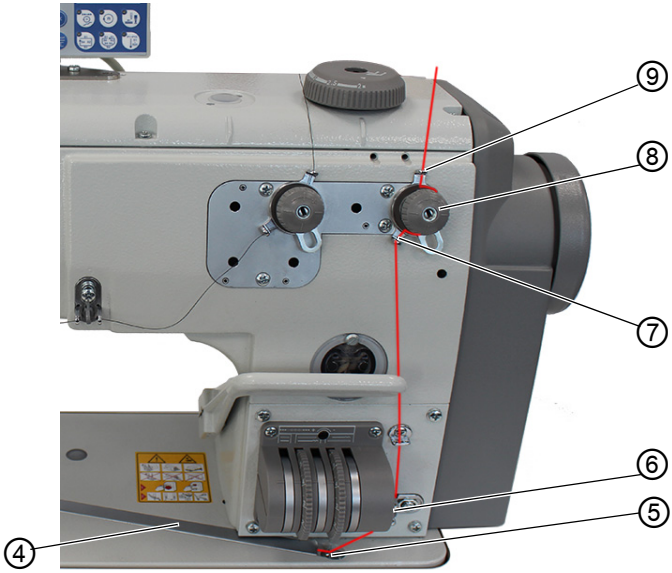
(2) - Thread guide
(3) - Pre-tensioner

To thread the hook thread:

1. Fit the thread reel onto the right plate of the thread reel holder (1) on the reel stand.
2. Thread the hook thread as shown in the figure.

Important
The thread guide (2), the pre-tensioner (3) and the thread reel holder (1) must be positioned vertically above one another.

Fig. 11: Threading the hook thread (2)



(4) - Thread channel
(5) - Thread guide
(6) - Thread advancing device
(7) - Thread guide
(8) - Hook thread tensioner
(9) - Thread guide

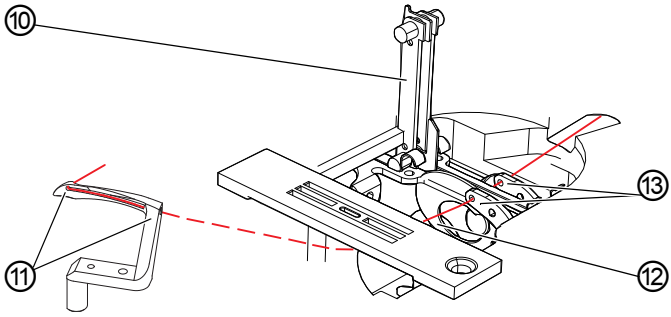
3. Feed the hook thread from top to bottom through the thread guide (9).
4. Feed the hook thread clockwise around the hook thread tensioner (8) and the thread guide (7).

Important
The hook thread must always be fed around the appropriate tension disk in such a way that it follows the longer path from thread guide (9) to thread guide (7).

5. Feed the hook thread from top to bottom through the thread advancing device (6).
6. Feed the hook thread through thread guide (5).
7. Feed the hook thread through the thread channel (4).

8. Pull the hook thread from the rear under the cover plate of the thread channel (4).

Fig. 12: Threading the hook thread (3)



(10) - Hook thread bobbin case retainer
(11) - Hook holes
(12) - Thread take-up disk
(13) - Hook thread guide

9. Remove the cover plates to the right and left of the throat plate.
10. Lift the hook thread bobbin case retainer (10) from its latching.
11. Turn the handwheel to position **D** in such a way that the thread take-up disk (12) is set accordingly.
12. Insert the hook thread from the right to the left through the holes of the hook thread guide (13).
13. Turn the handwheel until the hook hole (11) is accessible.
14. Insert the hook thread from the right to the left through the hook holes (11) before pulling it out by approx. 3 cm.
15. Press down and lock into place the hook thread bobbin case retainer (10).
16. Insert the cover plates of the throat plate on the right and the left.

4.6 Tilting and re-erecting the machine head

#

WARNING

Risk of injury from electricity!

Parts of the machine may be energized.

Turn off the main switch of the machine. Interrupt the power supply and disconnect the power plug.

NOTICE

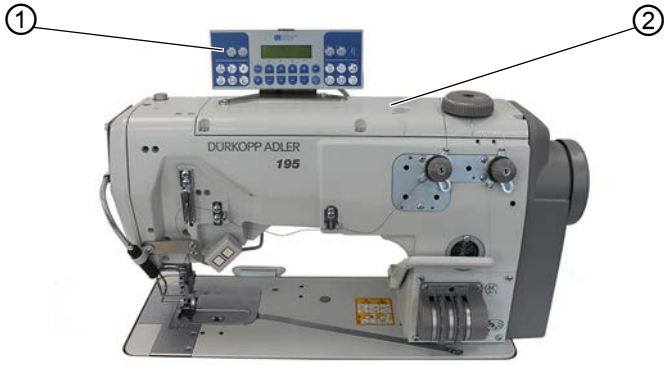
Property damage may occur!

Damage to the control panel.

Do not grab the machine at the control panel, but directly at the machine head when tilting and erecting the machine head.

The machine head can be tilted for maintenance work.

Fig. 13: Tilting and re-erecting the machine head



(1) - Control panel *(2) - Machine head*

Tilting the machine head

To tilt the machine head:

1. Grab the machine at the machine head (2) and carefully tilt it down to the support.

Erecting the machine head

To erect the machine head:

1. Grab the machine at the machine head (2) and erect it slowly.

4.7 Thread tension and quantity

Together with the hook thread tension, the needle thread tension influences the final seam pattern.

Proper setting

The needle thread tension must be tighter than the hook thread tension. To ensure the proper setting, the hook thread tensioner is equipped with a spring made of thinner wire.

Disturbance from incorrectly set thread tension

- Too tight: Crimping of the sewing material or thread breakage when using thin sewing material
- Too loose: Missing stitches

4.7.1 Setting the thread tension

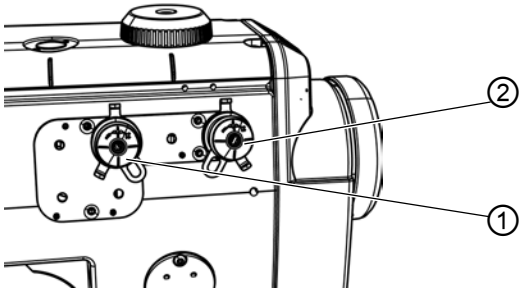
NOTICE

Production of loose stitches!

When sewing corners with active tensioner lift and simultaneous sewing foot lift, the machine will produce a loose stitch.

Do not activate the pneumatic tensioner lift when lifting the sewing feet unless the sewing feet are NOT lifted during the seam.

Fig. 14: Setting the thread tension



(1) - Needle thread tension *(2) - Hook thread tension*

The needle thread tension must be tighter than the hook thread tension. To ensure the proper setting, the hook thread tensioner is equipped with a spring made of thinner wire

Increasing the thread tension

- Turn the tensioner element clockwise

Reducing the thread tension

- Turn the tensioner element counterclockwise

For information on how to set a larger amount of thread in the seam, see 📖 *p. 29*.

As an alternative, you can also operate with or without the pneumatic tensioner lift during the sewing foot lift.

The tensioner lift is required whenever sewing material with threads is supposed to be advanced under the sewing foot.

4.7.2 Setting the needle thread quantity

WARNING

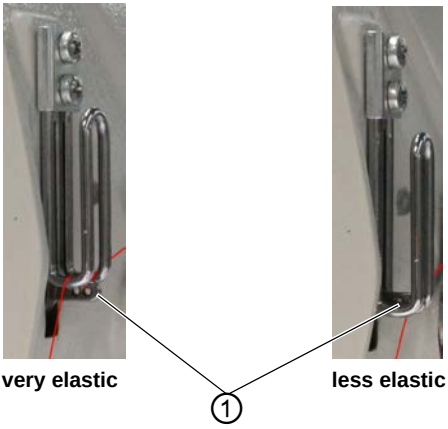
Risk of injury from moving parts!
Crushing possible.

Switch off the machine before setting the needle thread regulator.

The needle thread quantity released for stitch formation is determined by the position of the needle thread regulator. The required needle thread quantity depends on the thickness of the sewing material, the thread strength, and the seam type.

In addition, the threading procedure varies with the needle threads and the types of seams used.

Fig. 15: Setting the needle thread quantity (1)

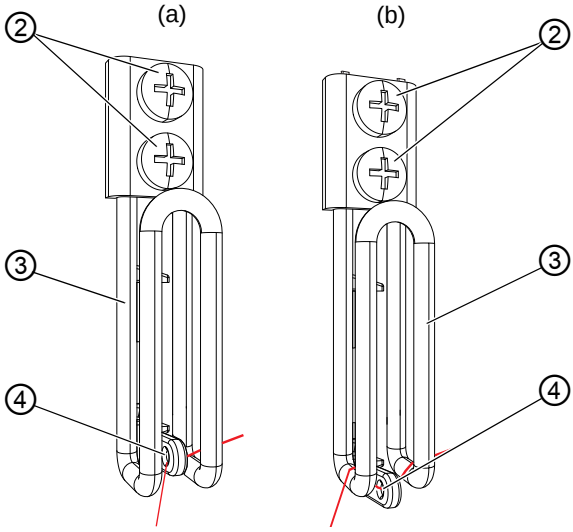


(1) - Thread lever

Proper setting

- **less elastic needle threads:**
  The thread lever (1) is visible just above the needle thread regulator when at bottom dead center.
- **very elastic needle threads:**
  The thread lever (1) is visible just above the needle thread regulator when at bottom dead center.

Fig. 16: Setting the needle thread quantity (2)



(2) - Screws
(3) - Needle thread regulator
(4) - Hole of the thread lever

To set the needle thread quantity:

1. Turn the handwheel until the thread lever (1) reaches its lower end position.
2. Loosen the screws (2) of the needle thread regulator (3).
3. Move the needle thread regulator (3) to the correct position.
   - **For tight and normal seams (detail image (a)):**
     Feed the needle thread over the right bar of the needle thread regulator (3), through the hole of the thread lever (4), and then straight down.
   - **For elastic seams (detail image (b)):**
     Feed the needle thread over the right bar of the needle thread regulator (3), through the hold of the thread lever (4), over the left bar of the needle thread regulator (3), and then down.
4. Tighten the screws (2) for the needle thread regulator (3).

4.7.3 Setting the hook thread quantity

The hook thread quantity released is determined by the position of the hook thread take-up. The hook thread take-up adapts the hook thread quantity to each set stitch length to allow for the best possible stitch pull at any length and even with stitch condensing enabled.

The hook thread take-up can be adjusted continuously on a scale from 0 to 5. The larger the value, the greater the released thread quantity and the more elastic the seam.

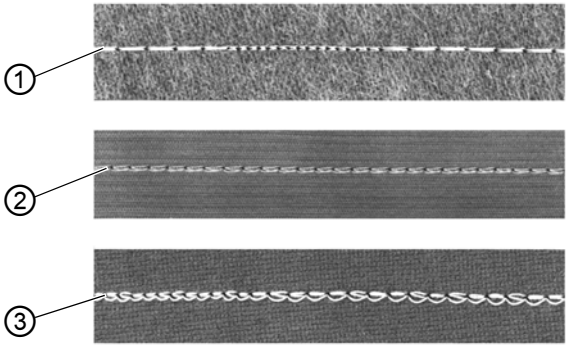
Proper setting

The proper setting is dependent on the stitch length and the seam type.

You need to ensure, especially when applying extreme settings, that the needle reliably plunges into the thread triangle:

- Elastic seam (3) with a very short stitch length = scale 5
- Tighter seam (1) with a significantly increased stitch length = scale 0

Fig. 17: Setting the hook thread quantity (1)



(1) - Tight seam
(2) - Normal seam
(3) - Highly elastic seam (balloon stitch)

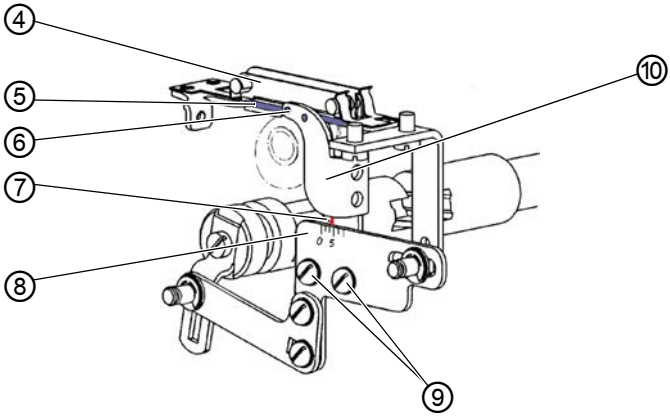
Disturbance if hook thread quantity to too high

- Missing stitches
- Hook thread pops out of the thread take-up disk

Cover

Tilt the machine head (📖 *p. 26*)

Fig. 18: Setting the hook thread quantity (2)

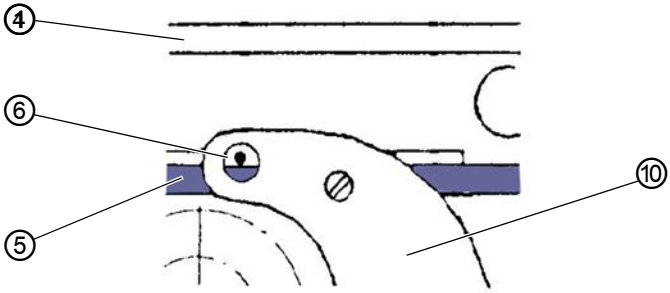


(4) - Thread bobbin case retainer
(5) - Lower bar
(6) - Hole
(7) - Front edge
(8) - Scale
(9) - Screws
(10) - Hook thread take-up

To set the hook thread take-up (10):

1. Loosen the screws (9).
2. Move the hook thread take-up (10).
   - tighter seam = move the front edge (7) towards the **0** on the scale (8)
   - more elastic seam = move the front edge (7) towards the **5** on the scale (8)

Fig. 19: Setting the hook thread quantity (3)



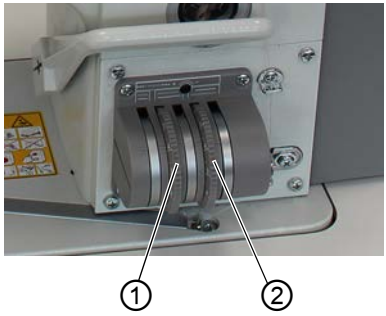
(4) - Thread bobbin case retainer
(5) - Lower bar
(6) - Hole
(10) - Hook thread take-up

Important
Make sure not to alter the height of the hook thread take-up (10)! The hole (6) must always remain above the bar (5) of the thread bobbin case retainer (4).

3. Tighten the screws (9).

4.8 Setting the stitch length

Fig. 20: Setting the stitch length



(1) - Stitch length adjusting wheel Bottom feed

(2) - Stitch length adjusting wheel Top feed

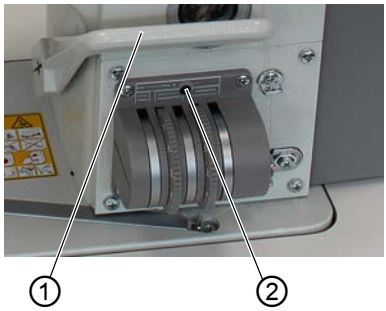
You can set the desired stitch length using the two adjusting wheels (1) and (2) for the top and the bottom feed. The setting must be adapted to the specific application at hand.

- Smooth sewing: Top and bottom feed identical
- Sewing fullness: Top and bottom feed different

4.9 Setting the stitch condensing

For machines equipped with stitch condensing, you can set the stitch length to be applied for stitch condensing using the screw (2).

Fig. 21: Setting the stitch condensing



(1) - Manual stitch condensing lever (2) - Stitch condensing screw

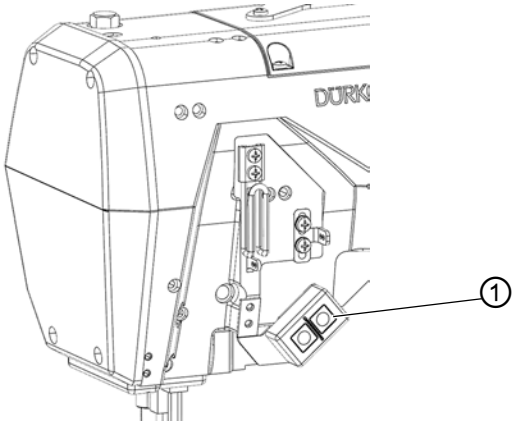
There are 3 versions of stitch condensing:

Stitch condensing version	Setting
Stitch condensing at the beginning of the seam	Setting via control panel
Stitch condensing at the seam end	Setting via control panel
Manual stitch condensing while sewing	• Always possible using the hand lever (1) • Function can be assigned at the push button panel

4.10 Push buttons on the machine arm

Depending on the equipment, there may be a push button panel on the machine arm that can be used to quickly call up various functions. You can assign the functions of your choice to the buttons via the software of the control panel (🕮 *p. 51*).

Fig. 22: Push buttons on the machine arm



(1) - Push buttons

Possible function assignment of the buttons

- Suppress stitch condensing
- Manual stitch condensing
- Single stitch
- Needle up/down
- Edge cutting
- Quick stroke adjustment

4.11 Switching the edge cutter on and off

CAUTION

Risk of injury at exposed blade!

When the machine is switched on or the finger guard has been removed, there is a risk of sustaining injuries at the exposed blades.

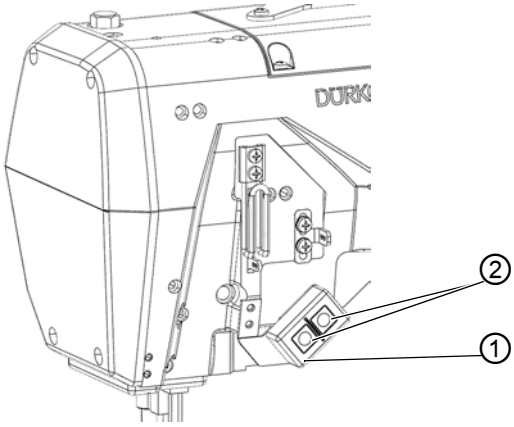
Do not reach into the cutting area.

Do not remove the finger guard unless for repairs and replace it immediately if damaged.

The edge cutter is activated by pressing one of the fully customizable buttons (2) on the push button panel (1).

The edge cutter can be activated at any time. Its top blade is designed such that it will penetrate reliably even if activated while the seam is being sewn.

Fig. 23: Switching the edge cutter on and off



(1) - Push buttons *(2) - Buttons*

To switch the edge cutter on:

1. Assign one of the two fully customizable buttons the function edge cutter (📖 *p. 51*).
2. Press the assigned button.

↳ The edge cutter is switched on.

To switch the edge cutter off:

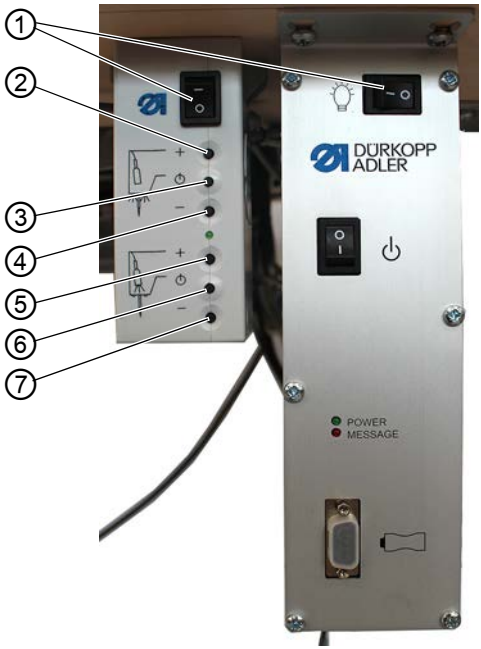
1. Press the assigned button.

↳ The edge cutter is switched off.

4.12 Switching on and off the sewing lamp

The sewing lamp switches on and off independent of the main switch.

Fig. 24: Switching on and off the sewing lamp



(1) - Switch
(2) - Button
(3) - Button
(4) - Button
(5) - Button
(6) - Button
(7) - Button

To switch on the sewing lamp:

1. Set both switches (1) to position **I**.

↳ The sewing lamp transformer is now powered on.

2. Press the button (6).

↳ The sewing lamp illuminates.

3. Use the (5) or (7) button to set the brightness level.

To switch off the sewing lamp:

1. Press the button (6).

↳ The sewing lamp goes out.

2. Set both switches (1) to position **0**.

↳ The sewing lamp transformer is now powered off.

Information
The sewing lamp transformer allows for the connection of a second LED light. The buttons (2), (3) and (4) are used to switch the additional LED light on and off and to set the brightness level.

The scope of delivery does not include a second LED light.

4.13 Lifting the sewing feet

WARNING

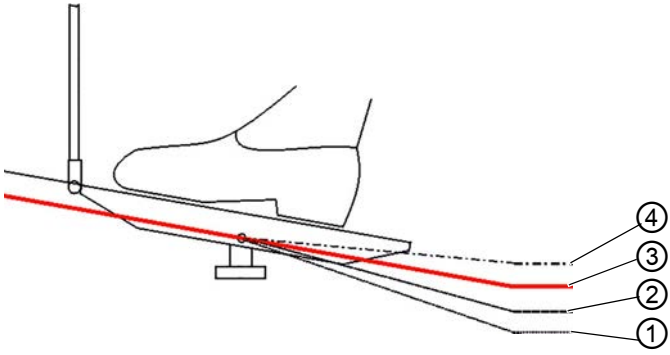
Risk of injury from moving parts!

Crushing injuries may be sustained while lowering the sewing feet.

Do NOT put your hands under the lifted sewing feet.

The sewing feet can be lifted electro-pneumatically using the pedal to insert or move the sewing material.

Fig. 25: Lifting the sewing feet (1)



*(1) - Position **-2***
*(2) - Position **-1***
*(3) - Position **0***
*(4) - Position **1***

To lift the sewing foot:

1. Press the pedal halfway back to position **-1**.

↳ The sewing foot is lifted and remains up as long as the pedal is kept in position **-1**.

To lift the sewing foot at the seam end:

1. Press the pedal all the way back to position **-2**.

↳ The thread is cut, and the sewing foot is lifted.

Lowering sewing foot

To lower the sewing foot:

1. Press the pedal to position **0**.

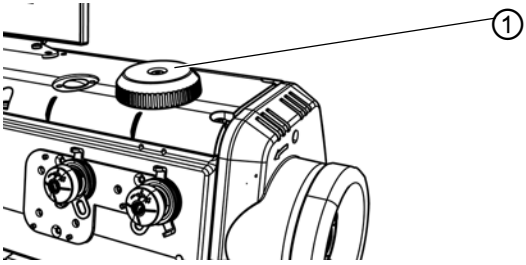
↳ The sewing foot lowers.

4.14 Setting the sewing foot stroke

Use the adjusting wheel to set the stroke of the sewing foot in mm.

The speed is automatically reduced for large sewing foot strokes.

Fig. 26: Setting the sewing foot stroke

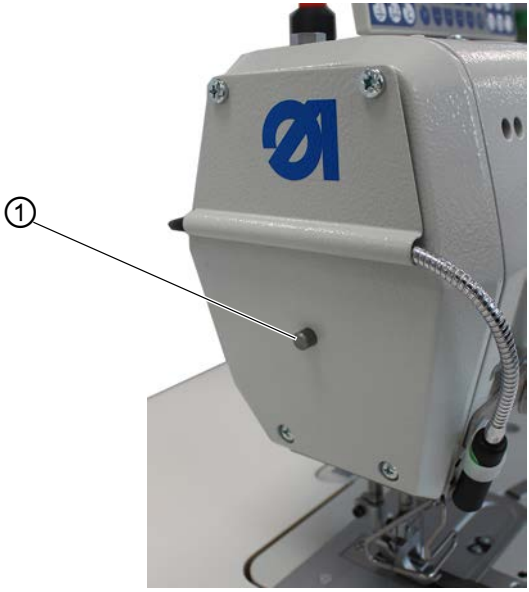


(1) - Adjusting wheel

4.15 Locking the sewing foot in top dead center

You can use the locking button (1) on the machine head to lock the lifted sewing foot in place in top dead center.

Fig. 27: Locking the sewing foot in top dead center



(1) - Locking button

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

1. Lift the sewing foot using the pedal (📖 *p. 39*).
2. Press the locking button (1).
3. Release the pedal.

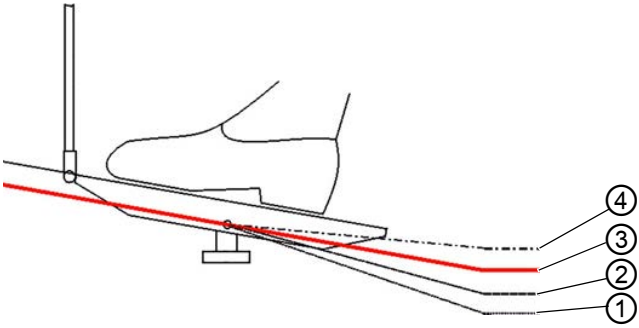
↳ The sewing foot is locked in place in top dead center.

You can remove the lock by pressing the pedal all the way back to position **-2** (📖 *p. 39*).

4.16 Sewing

The pedal starts and controls the sewing process.

Fig. 28: Sewing



*(1) - Position **-2***
*(2) - Position **-1***
*(3) - Position **0***
*(4) - Position **1***

INITIAL POSITION

The pedal is in position **0**:

- The machine is at a standstill.
  Needle and sewing foot are up / down.

To position the sewing material:

1. Press the pedal halfway back to position **-1**.
- The sewing foot is lifted.
2. Push the sewing material into the initial position.
3. Press the pedal to position **0**.
- The sewing foot lowers onto the sewing material.

AT SEAM BEGINNING

To start a seam:

1. Press the pedal forward to position **1**.
- The machine sews. The speed increases the further forward the pedal is pressed.

WHEN SEWING

To interrupt the seam:

1. Press the pedal to position **0**.

↳ The machine stops.
Needle and sewing foot are up / down.

To continue the seam:

1. Press the pedal forward to position **1**.

↳ The machine continues to sew.

AT THE SEAM END

To finish the seam:

1. Press the pedal all the way back to position **-2** and keep it there.

↳ The thread is cut.
The machine stops.
Needle and sewing foot are raised.

2. Remove the sewing material.

5 Programming

Fig. 29: Programming

(1) - Control panel OP1000

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:

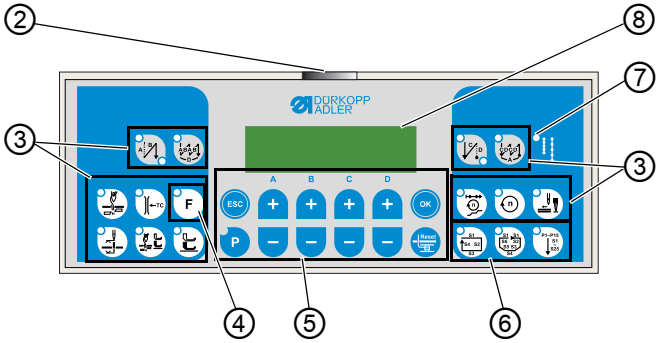
- Use groups of buttons to select machine functions
- Read service and error messages.

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.

5.1 Buttons on the control panel

Fig. 30: Buttons on the control panel

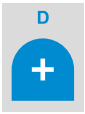


(2) - Power LED
(3) - Thread button group
(4) - Function button
(5) - Programming button group
(6) - Seam program button group
(7) - LED for 2nd Stitch length
(8) - Display

OP1000 buttons and functions

Button	Function
Thread button group	
 Stitch condensing at seam beginning	• Sets stitch condensing at seam beginning
 Stitch condensing at seam end	• Sets stitch condensing at seam end
 Thread cutter	• Activates or deactivates the thread cutter
 Needle position after sewing stop	• Sets the needle position after sewing stop

Button	Function
 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
 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

Button		Function
	D+	• Increases parameter • Selects subprogram
	OK	• Calls parameter or saves it
	P	• Starts or ends the parameter mode
	A-	• Decreases parameter • Changes user level • Selects subprogram
	B-	• Decreases parameter • Changes to next lower category • Selects subprogram
	C-	• Decreases parameter • Selects subprogram

Button	Function
 D-	• Decreases parameter • Selects subprogram
 Reset	• Resets the (piece) counter
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

5.2 Activating stitch condensing

Stitch condensing can be set for the beginning and/or the end of the seam using the control panel.

The stitch length with which the machine is supposed to sew during stitch condensing must be set mechanically (📖 *p. 34*).

To set stitch condensing at the seam beginning:

1. Press the  button.

↳ The LED at the bottom right on the button lights up.

2. Use the B+/-- buttons to set the desired number of stitches.
3. Begin sewing.
4. To deactivate stitch condensing at the beginning, press the  button again.

To set stitch condensing at the seam end:

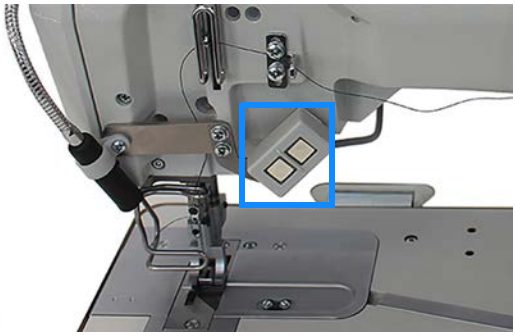
1. Press the  button.

↳ The LED at the bottom right on the button lights up.

2. Use the B+/-- buttons to set the desired number of stitches.
3. Begin sewing.
4. To deactivate stitch condensing at the beginning, press the  button again.

5.3 Assigning functions to buttons on the push button panel

Fig. 31: Assigning functions to buttons on the push button panel



The two buttons on the push button panel can be assigned different functions. Possible function assignments are:

- Suppress stitch condensing
- Manual stitch condensing
- Single stitch
- Needle up/down
- Edge cutting (function module 1)
- Quick stroke adjustment

To assign a function to a button on the push button panel:

1. Press the P and Reset buttons at the same time.

↳ You are on the technician level.

2. Press the button on the push button panel that you wish to assign a function until the display on the control panel changes.

↳ The control panel shows the value currently set for the button.

3. Use **+/-** to enter the desired value; see Parameter list 195, parameter **t 51 20**, for information on which function is assigned which value.

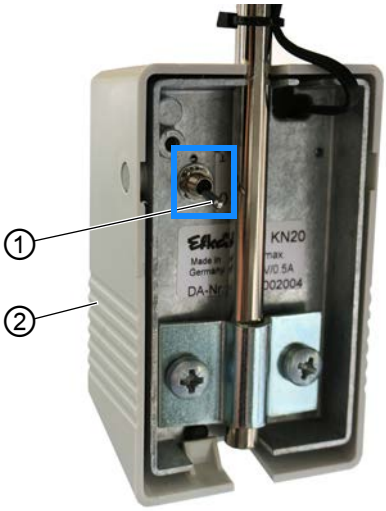
4. Confirm with OK.

5. Press the ESC button.

↳ The machine is ready to sew again.

5.3.1 Assigning a function to the knee button

Fig. 32: Assigning a function to the knee button



(1) - Toggle switch *(2) - Knee button*

The knee button (2) can be assigned 2 different functions.
The functions are selected in sewing mode via the position of the toggle switch (1) (**1** or **0**).

To assign a function to the knee button (2):

1. Press the P button.
2. Set the toggle switch (1) to the desired position (**1** or **0**).

   If the toggle switch (1) is, for instance, set to the bottom position, the new function is saved to the **0** position.
3. Keep the knee button (2) pressed for a few seconds.

   P flashes.

   The display shows a numerical value / the parameter (📖 *Parameter list 195*).
4. Use the buttons **+** or **-** to set the numerical value to the desired value associated with the new function (📖 *Parameter list 195*).
5. Confirm with OK.

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, cf. 🕮 *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 lint accumulations: • Underside of throat plate • Feed dog rows • Area around the hook	●			
Check the oil level in the reservoir		●		
Pneumatic system				
Check the operating pressure	●			
Check the water level in the water separator	●			
Check oil level in the mist lubricator			●	
Check the oil supply of the mist lubricator			●	
Clean the filter element in the compressed air 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!

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.

To clean the machine:

1. Remove any lint and thread remnants using a compressed air gun or a brush.
2. Remove any lint and cutting waste from the oil pan.

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 must be lubricated at regular intervals (📖 *p. 53*). Complete the following steps when lubricating the machine:

- Checking the oil level
- Lubricating the machine head
- Lubricating the hook

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

NOTICE

Property damage from incorrect oil level!

Too little or too much oil can cause damage the machine.

Check the oil level as described and top off oil

Fig. 33: Lubricating the machine head

(1) - Filler openings
(2) - Maximum level marking
(3) - Minimum level marking
(4) - Inspection glass

Checking the oil level

Proper setting

The oil level must always be between the minimum level marking (3) and the maximum level marking (2) at the inspection glass (4).

Topping off the oil

NOTICE

Property damage from incorrect oil!

Incorrect oil types can result in damage to the machine.

Use only oil that corresponds to the following specifications.

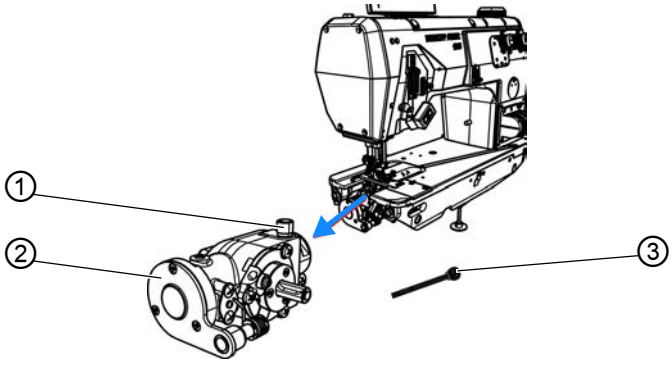
To top off the oil when necessary:

1. Fill oil through the filler opening (1) to a maximum of 2 mm below the maximum level marking (2).

6.2.2 Lubricating the hook

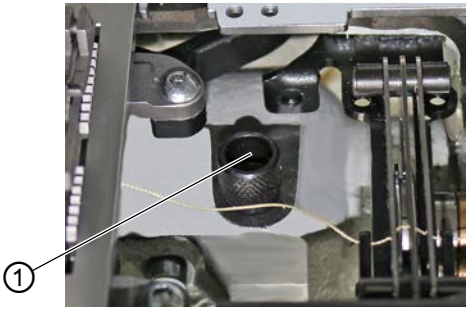
Hook drive housing and screw plug can be accessed under the right hook cover.

Fig. 34: Lubricating the hook (1)



(1) - Screw plug
(2) - Hook drive housing
(3) - Dipstick

Fig. 35: Lubricating the hook (2)



(1) - Screw plug

Checking the oil level

NOTICE

Property damage from incorrect oil level!

Too little or too much oil can cause damage the machine.

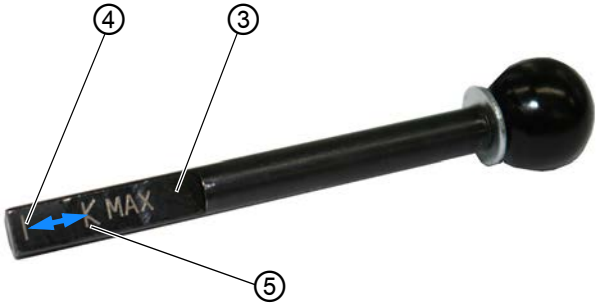
Top off oil as described.

To measure the oil level, you will need the dipstick (3) included in the accessory pack.

To check the oil level:

1. Keep the dipstick (3) ready.
2. Open the right hook cover.
3. Loosen the screw plug (1) on the filler opening.
4. Insert the dipstick (3) into the hook drive housing (2).
5. After a few seconds, pull the dipstick (3) out of the hook drive housing (2).

Fig. 36: Lubricating the hook (3)



/3) - Dipstick
(4) - Minimum level marking
(5) - Maximum level marking

6. Check if the oil level is between the minimum level marking (4) and the maximum level marking (5).
7. Tighten the screw plug (1) if the oil level is sufficient.
8. Top off the oil if the oil level is low.

Topping off the oil

To top off the oil in the hook drive housing:

1. Loosen the screw plug (1) on the filler opening.

Important

Only top off the oil a little at a time. When finished, check the oil level. If necessary, repeat these 2 steps several times until the oil level is just below the maximum level marking (5) of the dipstick (3). There must not be too much oil in the hook drive housing.

2. Carefully refill oil through the filler opening no higher than the maximum level marking (5) of the dipstick (3).
3. Check the oil level again.
4. If necessary, repeat step 2 and 3 until the oil level is just below the maximum level marking (5) of the dipstick (3).
5. Tighten the screw plug (1).

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.

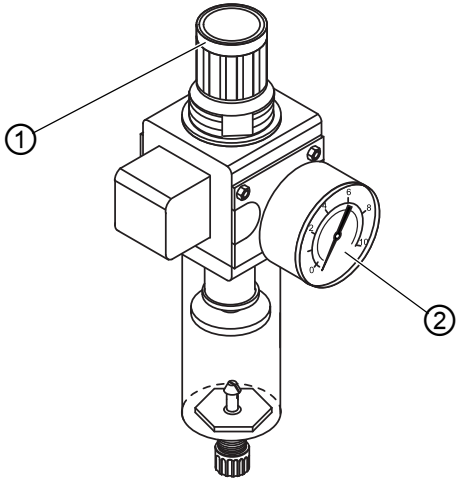
Ensure that the machine is only used when the operating pressure is set correctly.

Proper setting

Refer to the **Technical data** chapter for the permissible operating pressure (📖 *p. 95*). The operating pressure cannot deviate by more than ± 0.5 bar.

Check the operating pressure on a daily basis. You can read the operating pressure on the pressure gage (2).

Fig. 37: 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.

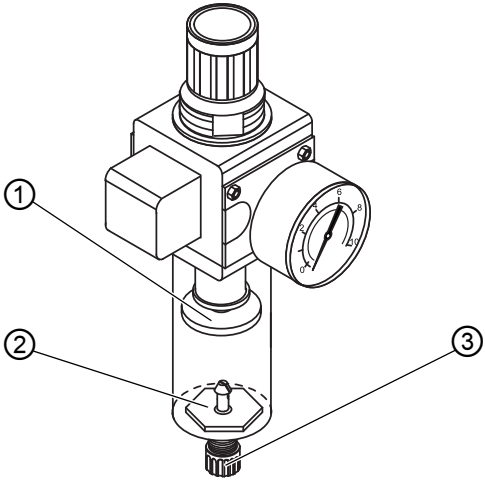
Water condensation accumulates in the water separator (2) of the pressure controller.

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. 38: Draining the water condensation



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

To drain water condensation:

1. Disconnect the machine from the compressed air supply.
2. Place the collection tray under the drain valve (3).
3. Press in the drain valve (3).
4. The water drains into the collection tray.
5. When the water has drained, release the drain valve (3).
6. Connect the machine to the compressed air supply.

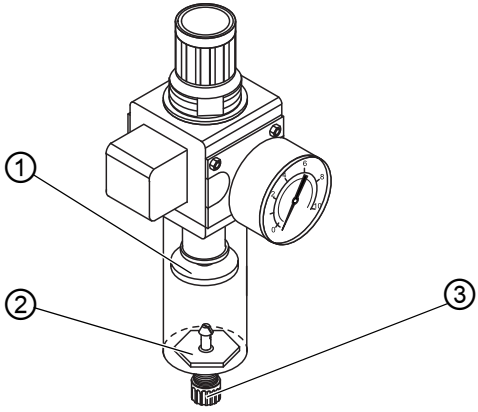
6.3.3 Cleaning the filter element

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. 39: Cleaning the filter element



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

To clean the filter element:

1. Disconnect the machine from the compressed air supply.
2. Drain the water condensation (📖 *p. 62*).
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 valve (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.

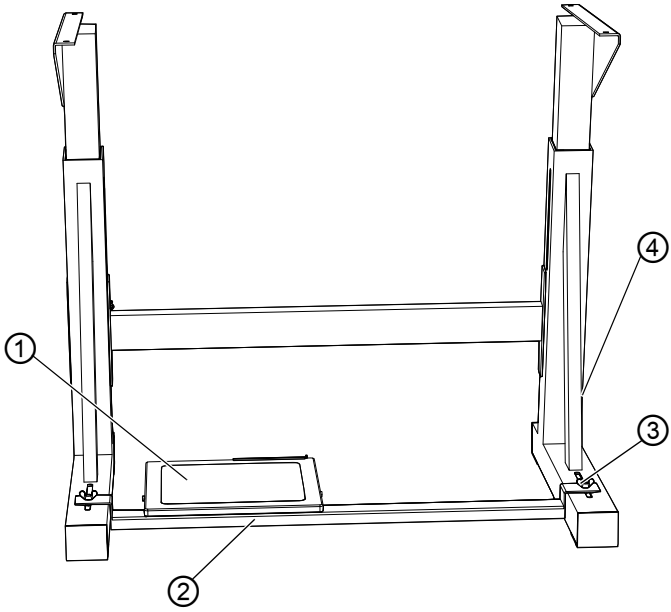
7.2 Removing the transport locks

Remove all transport locks before setting up the machine:

- Wooden blocks on the machine head
- Safety clips on the stand feet

7.3 Assembling the stand

Fig. 40: Assembling the stand



(1) - Pedal
(2) - Cross strut
(3) - Wing nut
(4) - Screw (not visible)

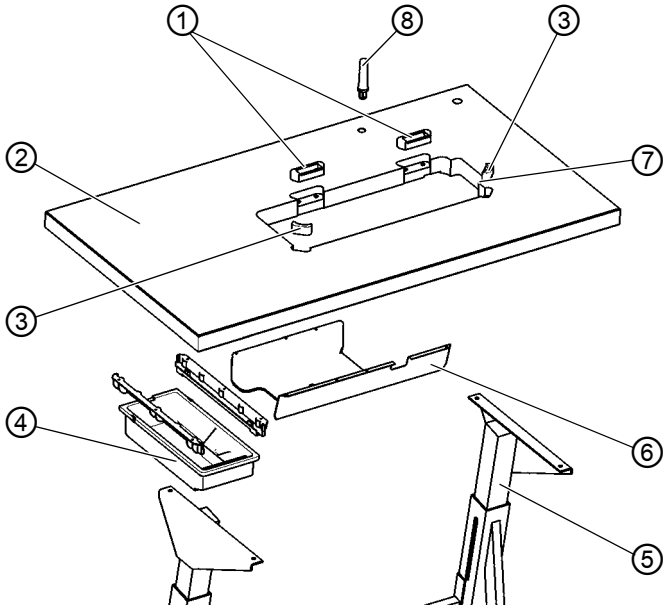
To assemble the stand:

1. Tighten the pedal (1) on the cross strut (2).
2. Tighten the cross strut (2) to the stand using the screw and the wing nut (3).
3. Assemble the tabletop (📖 *p. 67*).
4. After the machine has been fully assembled, adjust the pedal (📖 *p. 79*).
5. Turn the 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 Completing the tabletop

Ensure that the tabletop has sufficient load-bearing capacity and strength. If you want to make your own tabletop, use the dimensions provided in the diagram included in the Appendix as a template (📖 *p. 99*).

Fig. 41: Completing the tabletop (1)



(1) - Lower hinge part
(2) - Tabletop
(3) - Rubber corners
(4) - Drawer
(5) - Stand
(6) - Oil pan
(7) - Permanent magnet for tilt sensor
(8) - Tilt protection device

To complete the underside of the tabletop:

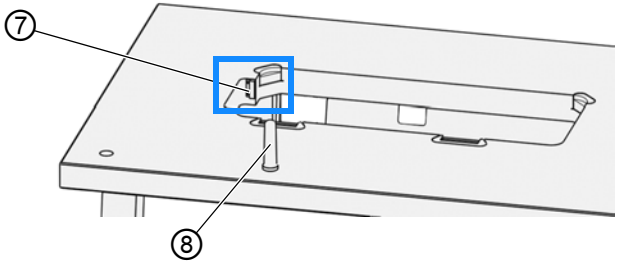
1. Tighten the oil pan (6) under the tabletop (2).
2. Tighten the drawer (4) with the bracket.
3. Tighten the tabletop (2) on top of the stand (5) using B8X35 screws.

   The center mark on the underside of the tabletop marks the position of the tabletop (2) on the stand (5).

To complete the upper side of the tabletop:

1. Press the lower hinge parts (1) into the rear slots in the tabletop cutout.
2. Press the rubber corners (3) into the front slots in the tabletop cutout.

Fig. 42: Completing the tabletop (2)



(7) - Tilt sensor *(8) - Tilt protection device*

3. Tighten the permanent magnets of the tilt sensor (7) in the tabletop cutout using 2 screws.

Information
The permanent magnet is included in the accessory pack.
The tilt sensor has been pre-assembled on the machine head at the factory. As long as the tilt sensor is assembled without the permanent magnet (7), the machine remains locked and cannot be used for sewing.

4. Knock the tilt protection device (8) into the tabletop (2) using a hammer.

You can now assemble the following parts:

- Main switch
- Pedal and setpoint device (📖 *p. 72*)
- If applicable, the sewing lamp transformer
- If applicable, the knee button (📖 *p. 74*)
- Control (📖 *p. 69*)
- Reel stand (📖 *p. 70*)

Use each of the center marks on the underside of the tabletop (2) for orientation.

7.4.1 Assembling the control

Fig. 43: Assembling the control

(1) - Screws *(2) - Control*

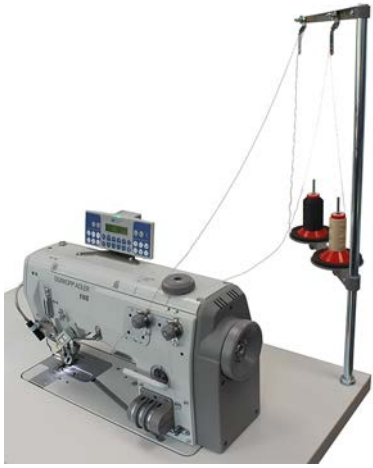
To assemble the control:

1. Screw the control (2) in place at the underside of the tabletop using two screws (1) at the front and two screws (1) at the back (not visible).

   The side housing the type plate will be pointing to the left.

7.4.2 Assembling the reel stand

Fig. 44: Assembling the reel stand (final state)

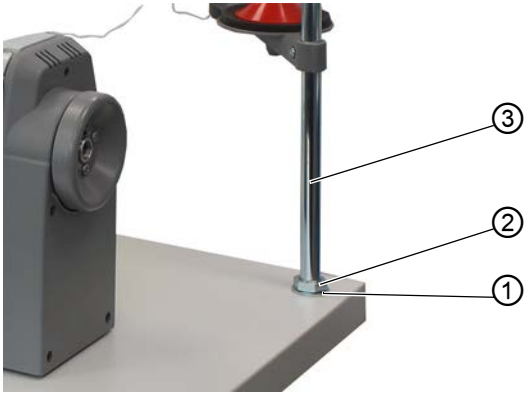


To assemble the reel stand:

1. Insert the reel stand tube (3) into the hole of the tabletop.
2. Assemble the reel stand tube (3) using the included nuts (2) and washers (1).
3. Align thread reel holder and thread guide.

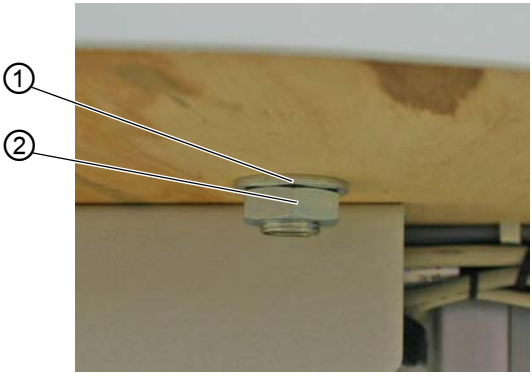
Important
The thread reel holder and the unwinding bracket must be positioned on top of each other.

Fig. 45: Assembling the reel stand (tabletop upper side)



(1) - Washer
(2) - Nut
(3) - Reel stand tube

Fig. 46: Assembling the reel stand (tabletop underside)



(1) - Washer
(2) - Nut

7.5 Assembling the pedal and setpoint device

CAUTION

Risk of injury!

Crushing possible.

Take care not to crush your fingers at the pedal rod or the pedal.

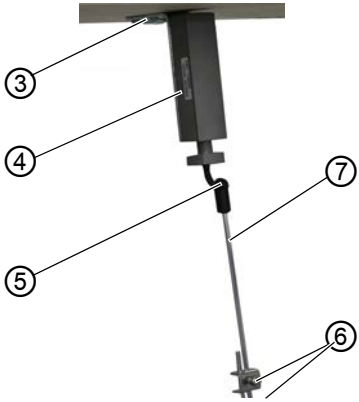
Fig. 47: Assembling the pedal and setpoint device (1)

(1) - Pedal *(2) - Cross strut*

To assemble pedal and setpoint device:

1. Fit the pedal (1) on the cross strut (2) and align it in such a way that the middle of the pedal is under the needle.
2. Tighten the pedal (1) on the cross strut (2).

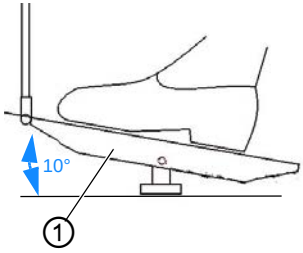
Fig. 48: Assembling the pedal and setpoint device (2)



(3) - Bracket
(4) - Setpoint device
(5) - Ball joints
(6) - Screw (only the 1st one is visible)
(7) - Pedal rod

3. Screw the bracket (3) under the tabletop so that the pedal rod (7) runs to the pedal (1) in alignment with the setpoint device (4).
4. Screw the setpoint device (4) onto the bracket (3).
5. Attach the pedal rod (7) with the ball joints (5) to the setpoint device (4) and to the pedal (1).
6. Slightly loosen the 2 screws (6).

Fig. 49: Assembling the pedal and setpoint device (3)



7. Pull the pedal rod (7) to the correct length:

Proper setting: 10° inclination with pedal (1) released

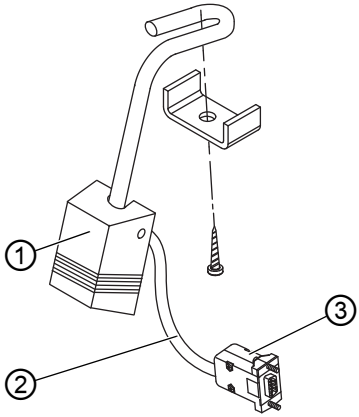
8. Tighten both screws (6).

The pedal (1) and the setpoint device (4) have been fully assembled.

7.6 Assembling the knee button

Depending on its equipment, the machine may be equipped with an electronic knee button.

Fig. 50: Assembling the knee button (1)



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

To assemble the electric knee button:

1. Screw the knee button (1) in place on the left next to the control and, if applicable, next to the sewing lamp transformer in front of the oil pan under the tabletop.
2. Feed the connecting cable (2) in front of the oil pan to the control towards the rear.
3. Insert the plug (3) of the connecting cable (2) into the socket of the control.

Fig. 51: Assembling the knee button (2)

7.7 Inserting the machine head

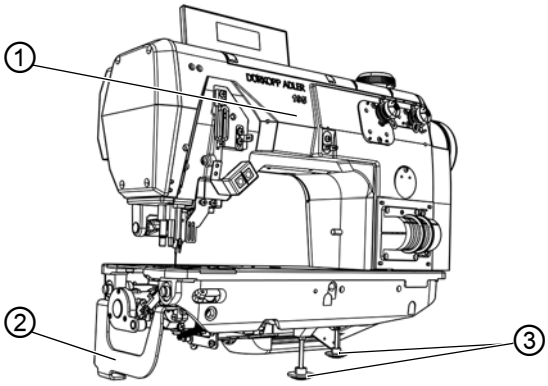
WARNING

Risk of crushing!

Crushing injuries may be sustained while inserting the machine head.

DO NOT reach into the cutout in the tabletop while the machine head is being inserted.

Fig. 52: Inserting the machine head (1)



(1) - Machine head
(2) - Protective bar
(3) - Support

To insert the machine head:

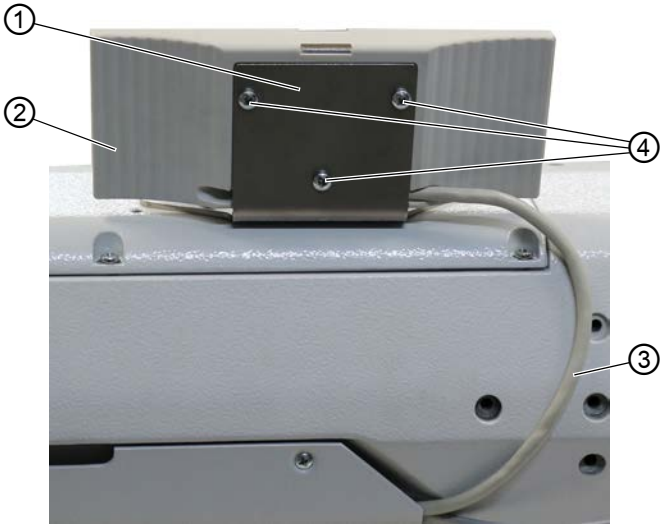
1. Tilt the machine head (1) and remove the protective bar (2) and the supports (3).
2. Insert the machine head (1) into the tabletop cutout.

7.8 Assembling the control panel

To protect it during transport, the control panel is packaged separately and must be assembled to the bracket prior to commissioning.

The 3 screws required for this purpose have been included.

Fig. 53: Assembling the control panel



(1) - Bracket
(2) - Control Panel
(3) - Cable
(4) - Screw

To assemble the control panel:

1. Place the control panel (2) onto the bracket (1), making sure not to kink the cable (3).
2. Tighten the control panel (2) to the bracket (1) using the 3 screws (4).

7.9 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

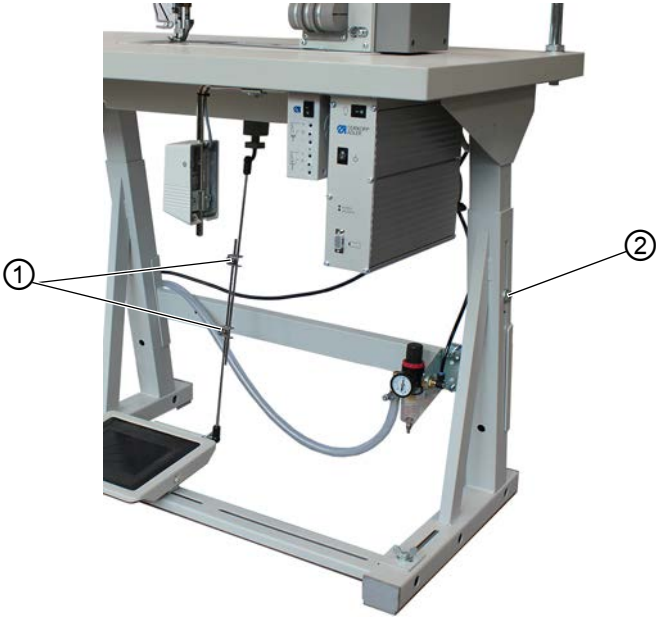
Risk of musculoskeletal damage from incorrect setting!

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.

The working height can be adjusted between 750 mm and 950 mm (measured to the upper edge of the tabletop).

Fig. 54: Setting the working height



(1) - Screw *(2) - Screw*

To set the working height:

1. Loosen the screws (1) on the pedal rod.
2. Loosen the screws (2) on both stand bars.
3. To avoid jamming, slide the tabletop in or out evenly at both sides.

   The scales on the outer sides of the stand bars serve as an adjustment aid.
4. Tighten the screw (2) on both bars of the stand.
5. Tighten the screws (1) on the pedal rod.
6. Set the pedal (📖 *p. 79*).

7.10 Setting the pedal

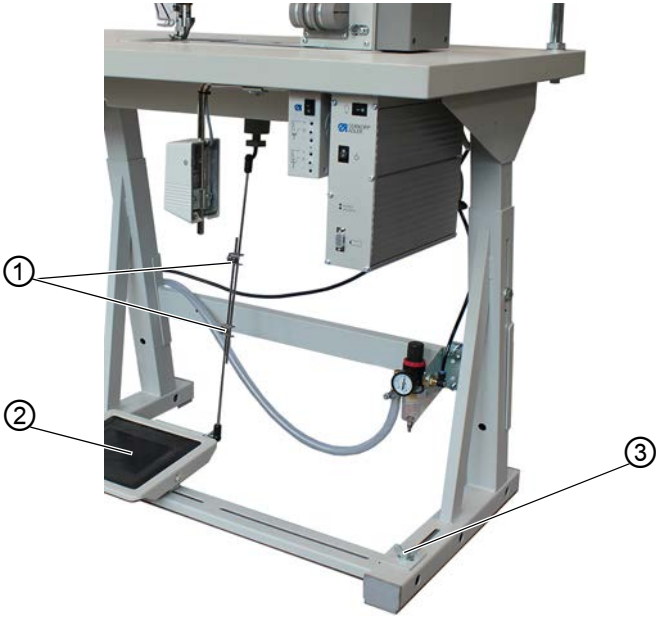
CAUTION

Risk of injury!

Crushing possible.

Take care not to crush your fingers at the pedal rod or the pedal.

Fig. 55: Setting the pedal



(1) - Screw
(2) - Pedal
(3) - Wing nut

Inclination of the pedal

The pedal (2) should be tilted to a degree that allows the operator to move the pedal forward and backward without a problem.

To set the inclination of the pedal:

1. Loosen the screw (1).
2. Set pedal (2) accordingly.
3. Re-tighten the screw (1).

Position of the pedal

The pedal (2) is assembled to the cross strut of the stand. You can adjust the position of the pedal as needed by moving the cross strut.

To set the position of the pedal:

1. Loosen the screw with wing nut (3) on both sides of the stand.
2. Slide the cross strut that holds the pedal (2) forward or backward.
3. Tighten the screw with a wing nut (3) on both sides of the stand.

7.11 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

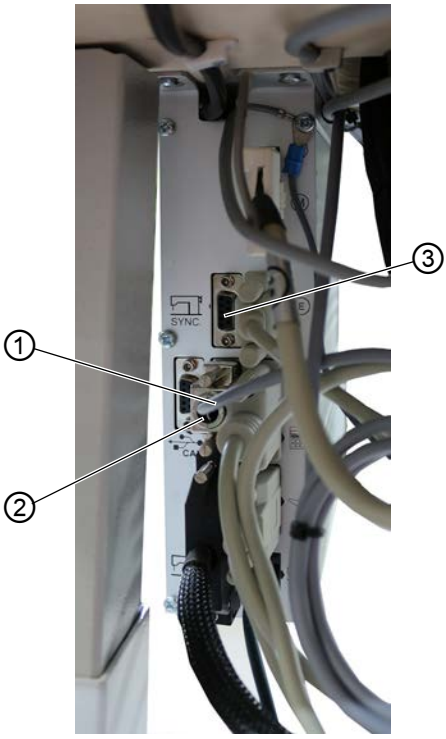
The voltage on the type plate of the sewing motor must correspond to the mains voltage.

To establish the electrical connection:

1. Connect the machine as specified in the wiring diagram; see Appendix (📖 *p. 99*).

7.11.1 Connecting the control

Fig. 56: Connecting the control



(1) - Cable
(2) - Plug
(3) - Connection

To connect the control:

1. Lay all cables (1) to the control and fix them in place with cable ties.
2. Insert all plugs (2) following the marking on the rear of the control.

Important
Cable (1) and connection (3) have the same designation / symbol!

3. Screw all plugs (2) to the connections (3).

7.11.2 Establishing equipotential bonding

Important

Before putting the machine into operation, you must establish equipotential bonding in all necessary places.

To establish equipotential bonding:

1. Establish equipotential bonding as specified in the wiring diagram (📖 *p. 99*).

7.12 Pneumatic connection

NOTICE

Property damage from oily compressed air!

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

Ensure that no oil particles enter the compressed air supply.

NOTICE

Property damage from incorrect setting!

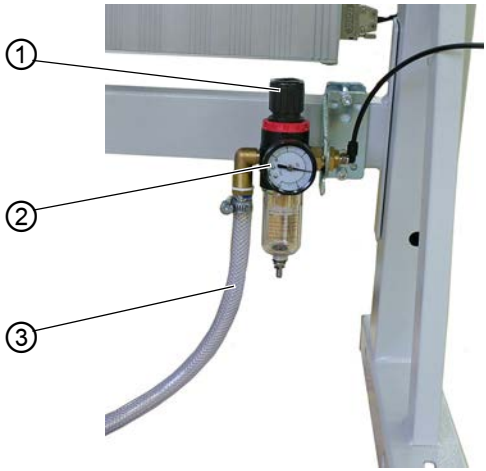
Incorrect system pressure can result in damage to the machine.

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

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

7.12.1 Assembling the compressed air maintenance unit

Fig. 57: Assembling the compressed air maintenance unit



(1) - Pressure controller
(2) - Pressure gage
(3) - Connection hose

To assemble the compressed air maintenance unit:

1. Connect the connection hose (3) to the compressed air supply using a hose coupling R 1/4”.

7.12.2 Setting the operating pressure

NOTICE

Property damage from incorrect setting!

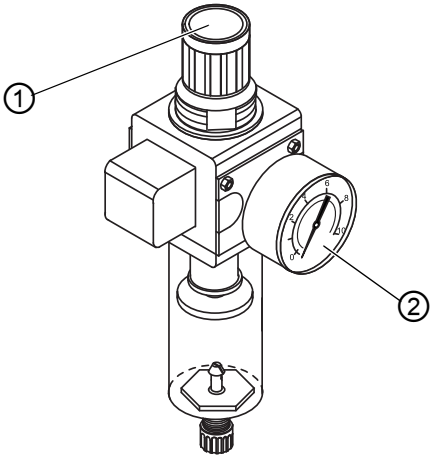
Incorrect operating pressure can result in damage to the machine.

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

Proper setting

Refer to the **Technical data** (📖 *p. 95*) chapter for the permissible operating pressure. The operating pressure cannot deviate by more than ± 0.5 bar.

Fig. 58: 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.

7.13 Performing a test run

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

To perform a test run:

1. Insert the power plug.
2. Thread needle thread (📖 *p. 19*).
3. Thread hook thread (📖 *p. 23*).
4. Switch on the machine.
5. Position the sewing material.
6. Start the sewing process at low speed and then continuously increase the speed.
7. Check that the seams conform to the desired requirements. If they are not, set the thread tension (📖 *p. 27*).

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 (📖 *p. 16*).
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.

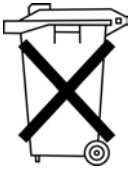
9 Disposal

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

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

For more information on the messages of the software, refer to the 🕮 *Instructions for use DAC basic/classic* or the 🕮 *Parameter list 195*.

10.3 Errors in sewing process

Meaning	Possible causes	Remedial action
Thread breakage	• Needle thread and hook thread have not been threaded correctly	• Check the thread path (📖 *p. 15*)
	• Needle is bent or sharp-edged • Needle is not inserted correctly into the needle bar	• Replace the needle • Insert the needle into the needle bar
	• The thread used is unsuitable	• Use recommended thread
	• Thread tensions are too tight for the thread used	• Check thread tensions (📖 *p. 27*)
	• Thread-guiding parts such as thread tube, thread guide or thread-takeup disk are sharp-edged	• Check the thread path
	• Throat plate, hook or spread have been damaged by the needle	• Have parts reworked by qualified specialists
Missing stitches	• Needle thread and hook thread have not been threaded correctly	• Check the thread path (📖 *p. 15*)
	• Needle is blunt or bent • Needle is not inserted correctly into the needle bar	• Replace the needle • Insert the needle into the needle bar
	• The needle thickness used is unsuitable	• Use recommended needle thickness (📖 *p. 95*)
	• The reel stand is assembled incorrectly	• Check thread reel holder (📖 *p. 70*)
	• Thread tensions are too tight	• Check thread tensions (📖 *p. 27*)

Meaning	Possible causes	Remedial action
Missing stitches	• Sewing material is not held correctly	• Check clamping pressure
	• The loop stroke was not corrected when changing the zigzag stitch width	• Set the loop stroke
	• Incorrect parts used for the desired sewing equipment	• Check the parts based on the equipment sheet
	• 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 (📖 *p. 27*)
	• Needle thread and hook thread have not been threaded correctly	• Check the thread path (📖 *p. 15*)
Needle breakage	• Needle thickness is unsuitable for the sewing material or the thread	• Use recommended needle
Seam beginning not secure	• Residual tension is too tight for the needle thread	• Adjust residual tension

11 Technical data

Data and characteristic values

Technical data	Unit	195-171120-01	195-171521-01	195-671120-01
Machine type		Special sewing machine		
Type of stitches		Double chain stitch 401		
Hook type		Crossline		
Number of needles		1		
Needle system		933		
Needle strength (depending on equipment)	[Nm]	110-160		
Thread strength	[Nm]	Up to 20/3		
Maximum clearance under the sewing feet: • During sewing • During lifting	 [mm] [mm]	 10 17		
Knife stroke (convertible)	[mm]			6 and 8
Cutting margin (depending on E-No.)	[mm]			4.5-12
Stitch length (depending on equipment)	[mm]	Max. bottom feed length 8 mm, Max. top feed length 10 mm,		
Speed maximum, (depending on the sewing foot stroke)	[min^{-1}]	4000 (automatic speed reduction depending on sewing foot stroke)		
Speed on delivery	[min^{-1}]	4000		
Feed dog stroke above the throat plate	[mm]	0.5		

Technical data	**Unit**	**195-171120-01**	**195-171521-01**	**195-671120-01**
Seam clearance (depending on two-needle equipment)	[mm]	3.2 mm, 6 mm or 8 mm		
Needle bar stroke	[mm]	35		
Sewing foot stroke	[mm]	2.5-7		
Mains voltage	[V]	230		
Mains frequency	[Hz]	50/60		
Operating pressure	[bar]	6		
Air consumption [per cycle]	[NL]	0.8		
Length	[mm]	550		
Width	[mm]	210		
Height	[mm]	470		
Weight	[kg]	90		

Characteristics

- Max. number of stitches 4000/min., depending on stitch length and sewing foot stroke
- No “drifting” of the sewing material at high number of stitches, i.e. constant stitch lengths at different numbers of stitches
- Particularly smooth operation and non-marking sewing material transport, particularly for thin sewing material, thanks to innovative set-down pressure reduction
- Max. bottom feed length 8 mm, max. top feed length 10 mm, Can be set independently using adjusting wheels
- Sewing foot stroke (alternate lifting of the feet) max. 7 mm, depending on the number of stitches; the sewing foot stroke can be set using an adjusting wheel
- Clearance under the sewing feet
  During lifting, max.17 mm
  During sewing, max.10 mm
- Automatic, central oil wick lubrication with inspection glass for checking the oil level in the reservoir
- Hook drive operating in the oil bath
- Simple thread paths
- No automatic opening of the thread tensioner when sewing corners, i.e. proper stitch pull when sewing corners
- Automatic adaptation of the hook thread quantity to the stitch length; also adjustable for balloon stitch
- Built-in adjusting disk with position marks on the handwheel for quick and precise checking of the machine settings
- New, compact construction thanks to DA modular design
- Integrated cable duct on the back of the arm
- Single-piece belt guard
- Particularly easy to service thanks to removable head and arm cover
- Base plate dimensions 477 x 178 mm

12 Appendix

Fig. 59: Tischplatte Anordnung

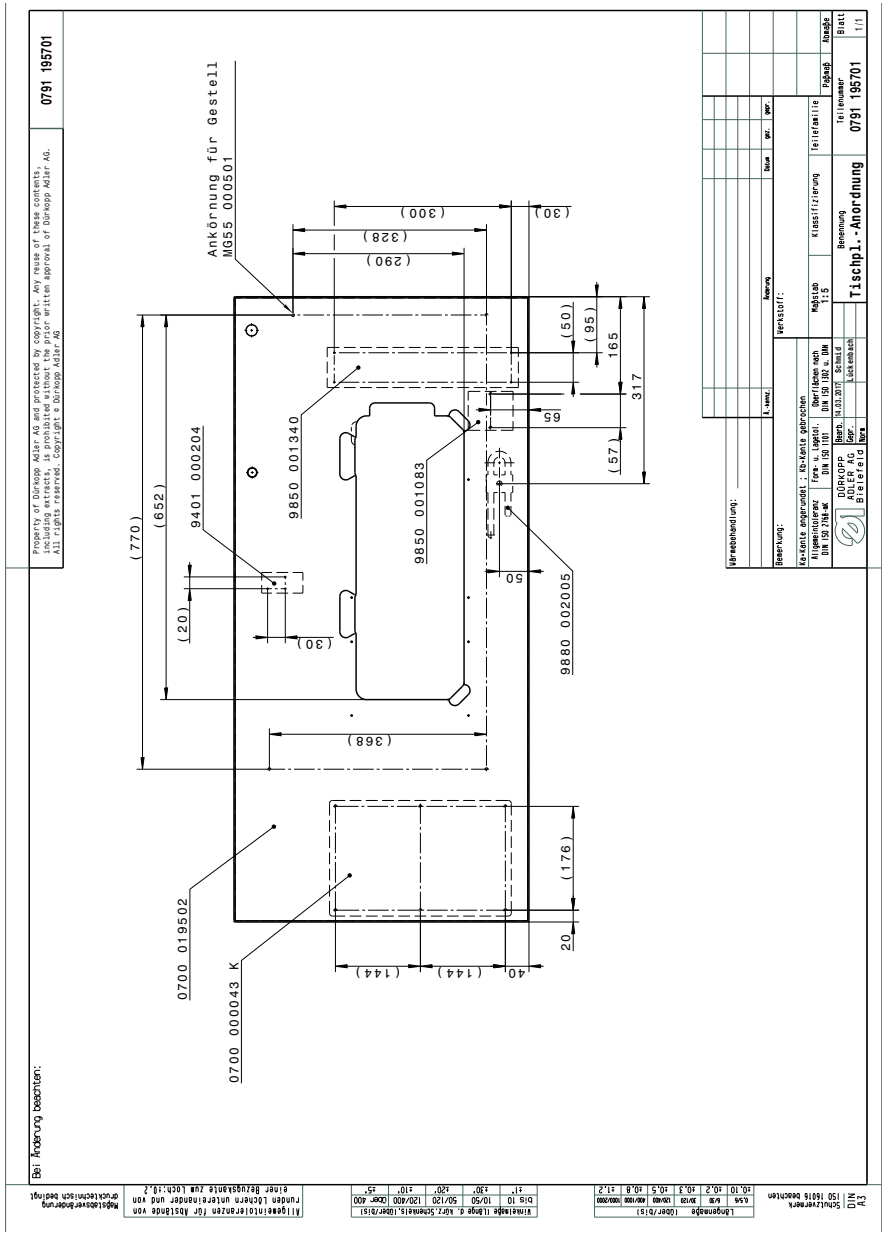


Fig. 60: Tabletop drawing

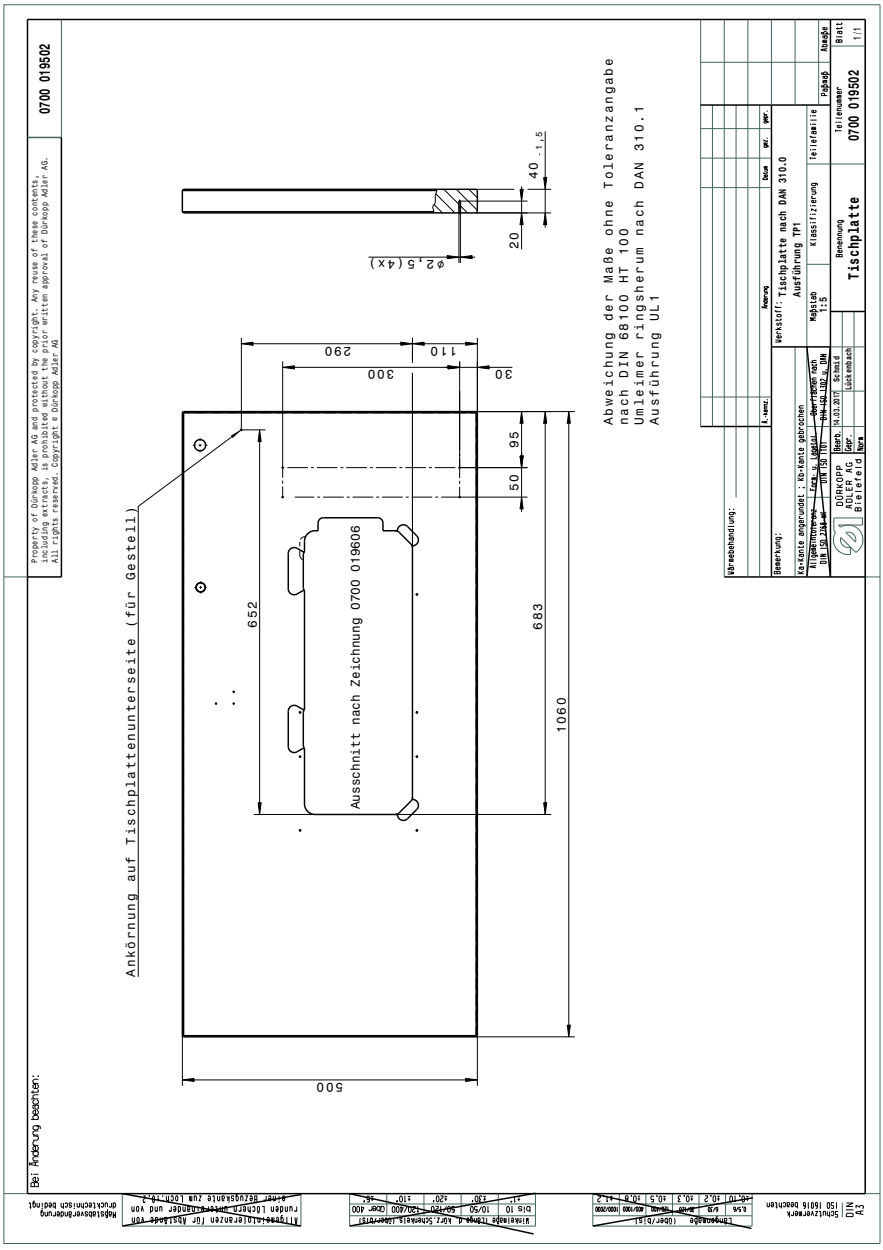


Fig. 61: Tabletop cutout

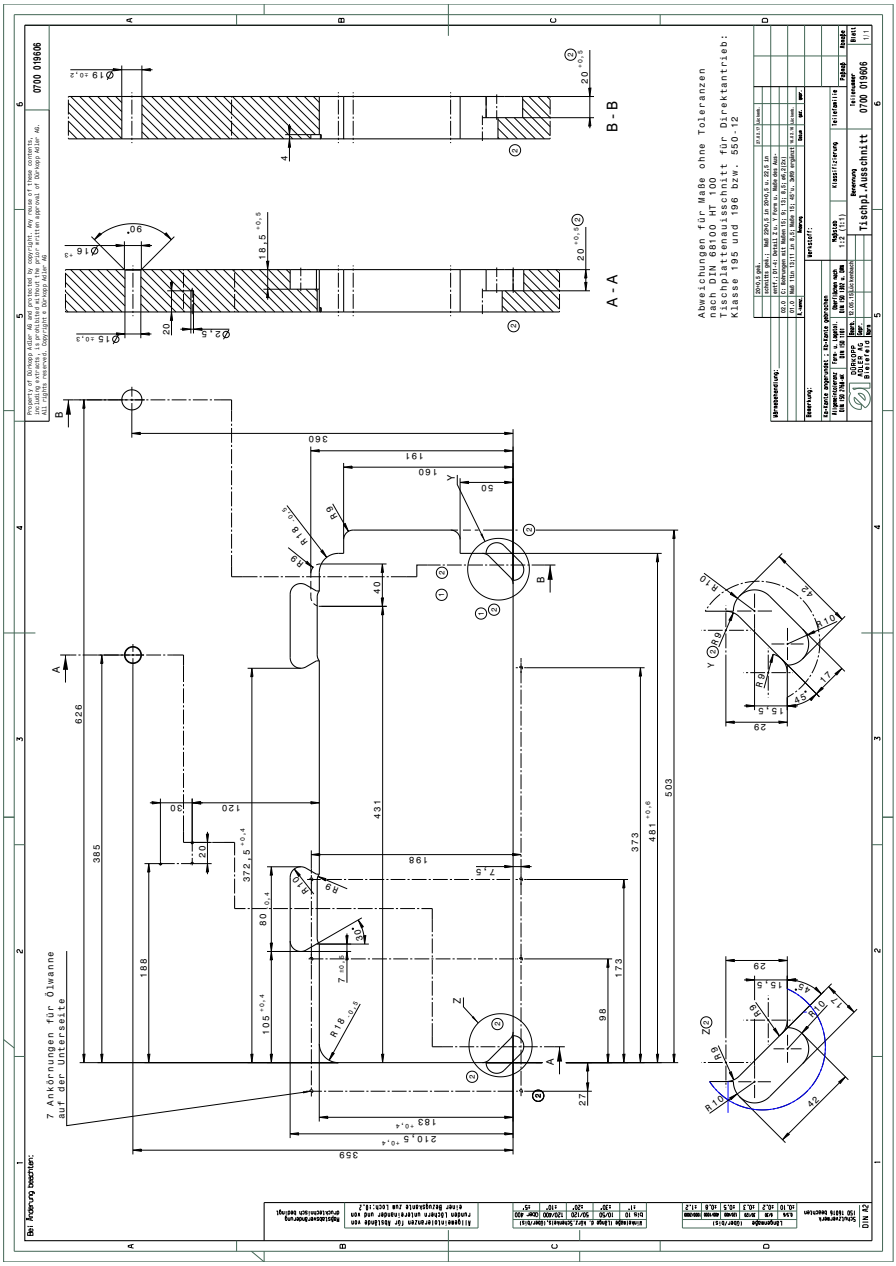


Fig. 62: Wiring diagram

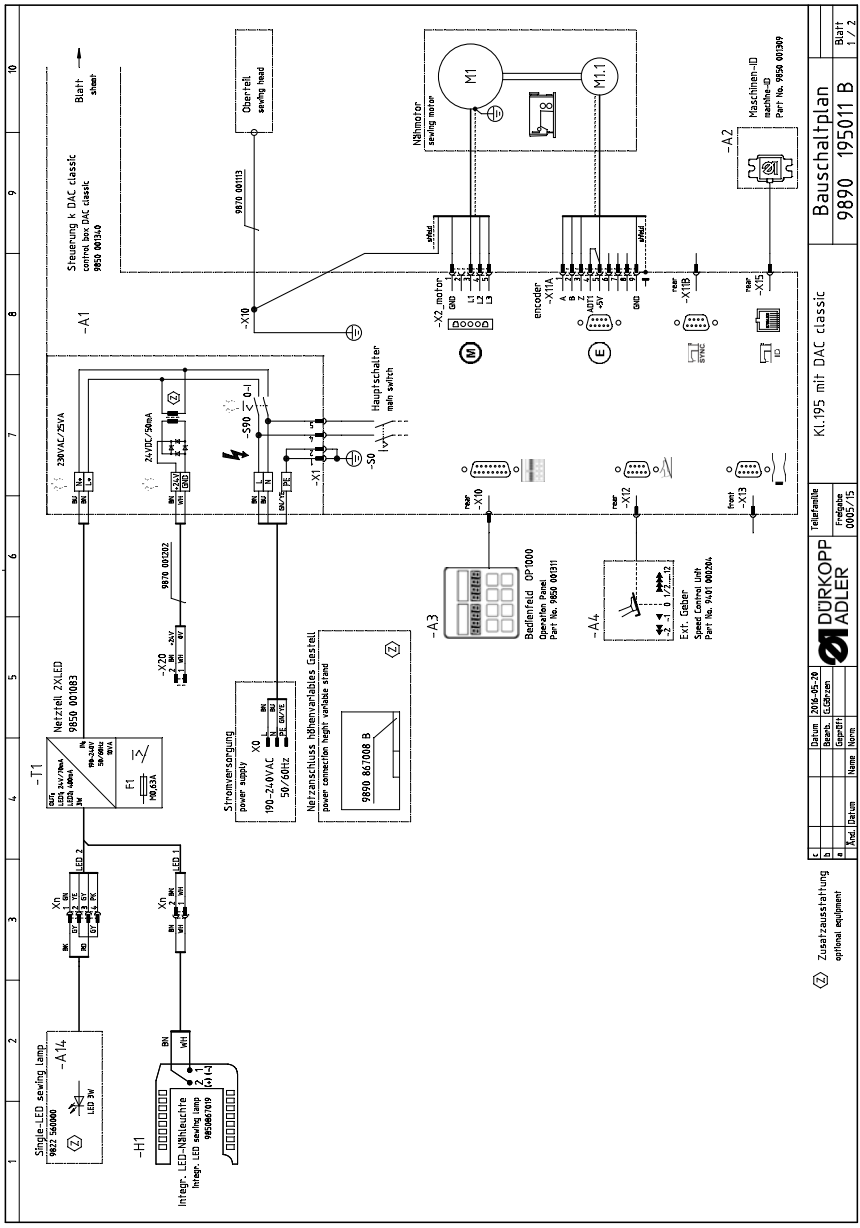
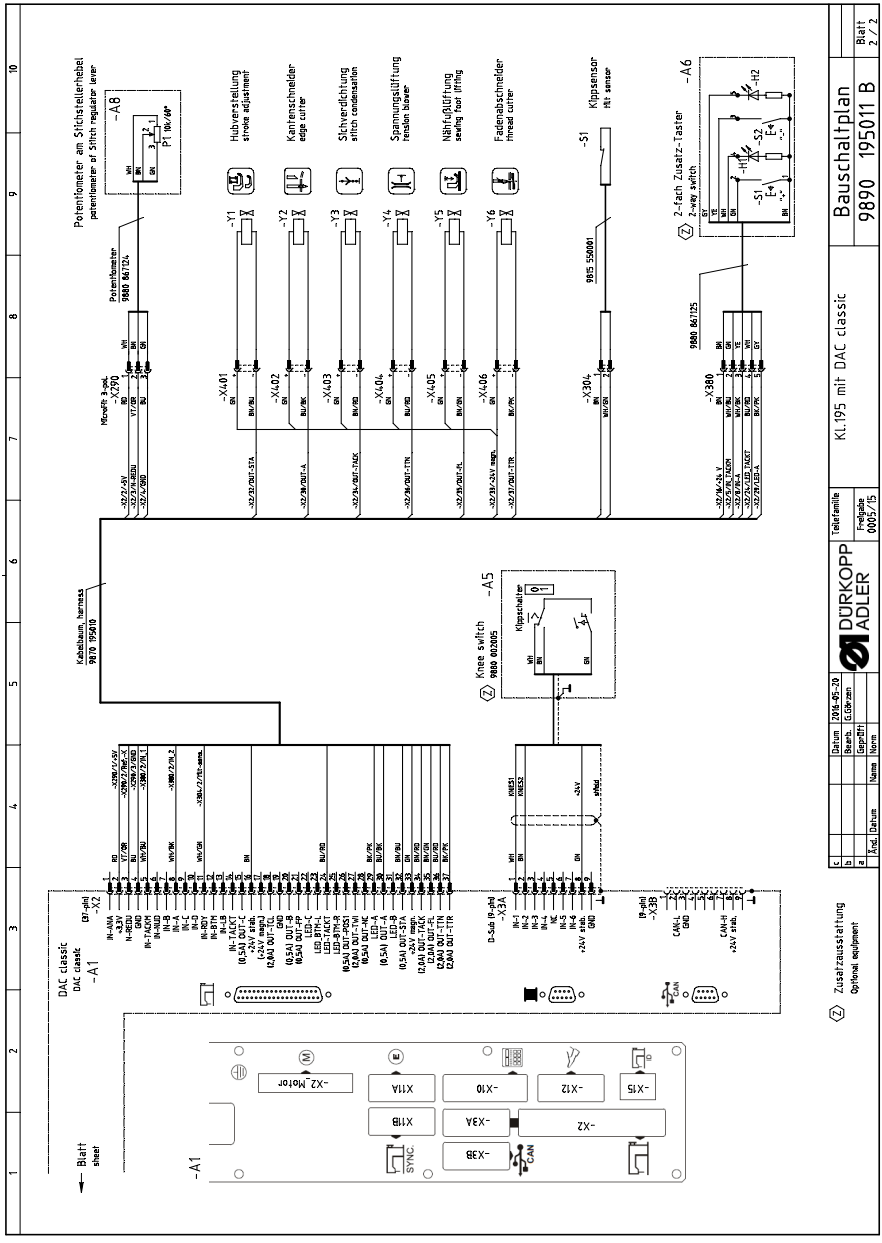


Fig. 63: Wiring diagram



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