

969 PURE
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. 73).


Consider these instructions as part of the product and keep it easily accessible.

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. 51) 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 adjustment.



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 an adjustment.

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 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. 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:

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.

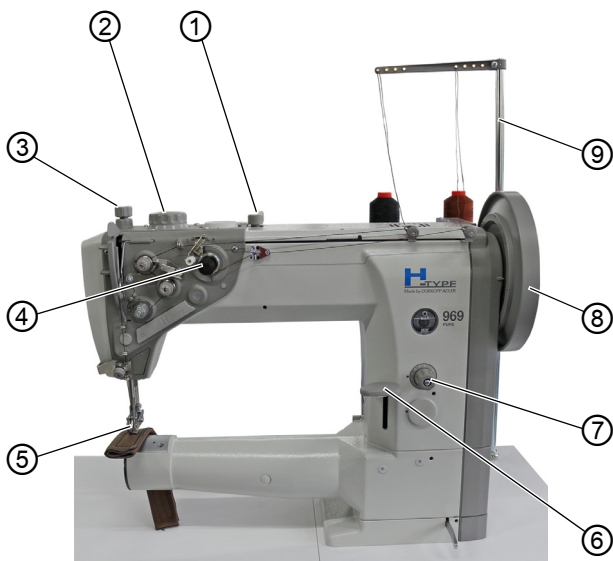
Measures for avoiding the danger.

- ↪ 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) - Hand lever | (6) - Stitch regulator |
| (2) - Adjusting wheel for sewing foot stroke | (7) - Stitch length adjusting wheel |
| (3) - Adjusting wheel for sewing foot pressure | (8) - Handwheel |
| (4) - Winder | (9) - Reel stand |
| (5) - Sewing foot with needle | |

3.2 Proper use

WARNING



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

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

Follow all instructions provided.

NOTICE

Non-observance will lead to property damage!

Improper use can result in material damage at the machine.

Follow all instructions provided.

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

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

The needle thicknesses permissible for the machine are listed in the **Technical data** (📖 p. 77) chapter.

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

The machine is intended for industrial use.

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

Only authorized persons may work on the machine.

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

3.3 Declaration of Conformity

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



4 Operation

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

4.1 Preparing the machine for operation

WARNING



Risk of injury from moving, cutting and sharp parts!

Crushing, cutting and punctures are possible.

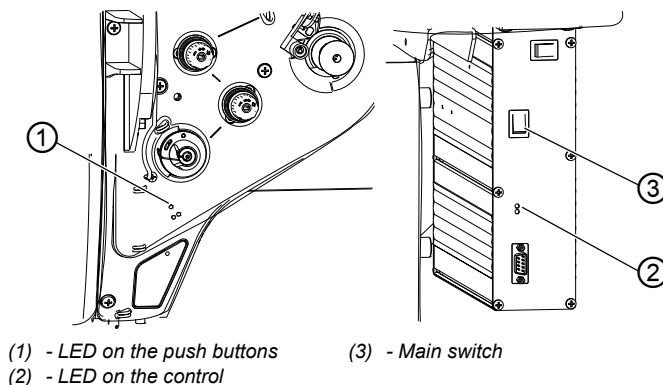
If possible, make preparations only when the machine is switched off.

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

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

4.2 Switching on and off the machine

Fig. 2: Switching on and off the machine



Switching on the machine



To switch on the machine:

1. Turn the main switch (3) to the **I** position.
- ↳ LEDs (1) and (2) illuminate.

Switching off the machine



To switch off the machine:

1. Turn the main switch (3) to the **0** position.
- ↳ LEDs (1) and (2) turn off.

4.3 Inserting/changing the needle

CAUTION



Risk of injury from sharp and moving parts!

Puncture possible.

Switch off the machine before you insert or change 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 if the distance between hook and needle is incorrect.

Check and, if necessary, readjust the distance to the hook tip and the loop support after inserting a needle with a different size.

Check and, if necessary, readjust the height of the needle bar after inserting a needle with a different needle system. Adjust the distance piece between driver and loop support after inserting a needle with a different size ( *Service Instructions*).



Order

After switching to a different needle strength, adjust the distance between hook and needle and change the distance piece for the loop support. If using a different needle system, you need to adjust the height of the needle bar ( *Service Instructions*).



Disturbance

Disturbance after inserting a thinner needle:

- Skip stitches
- Thread damage

Disturbance after inserting a thicker needle:

- Damage to the hook tip
- Damage to the needle
- Damage to the loop support

Disturbance after inserting a shorter needle:

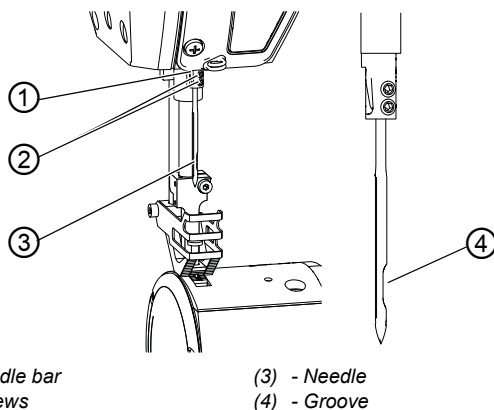
- Damage to the hook tip
- Damage to the needle
- Skip stitches

After inserting a longer needle:

- Damage to the hook tip
- Damage to the needle

Skip stitches

Fig. 3: Inserting/changing the needle



(1) - Needle bar
(2) - Screws

(3) - Needle
(4) - Groove



To insert or change the needle:

1. Turn the handwheel until the needle (3) reaches the upper end position.
2. Loosen the screws (2).
3. Pull the needle (3) down and out.
4. Insert the new needle.



Important

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

5. Tighten the screws (2).

4.4 Threading the needle thread

CAUTION



Risk of injury from sharp and moving parts!

Puncture or crushing possible.

Switch off the machine before threading the needle thread.

Do not reach into the needle tip.

NOTICE

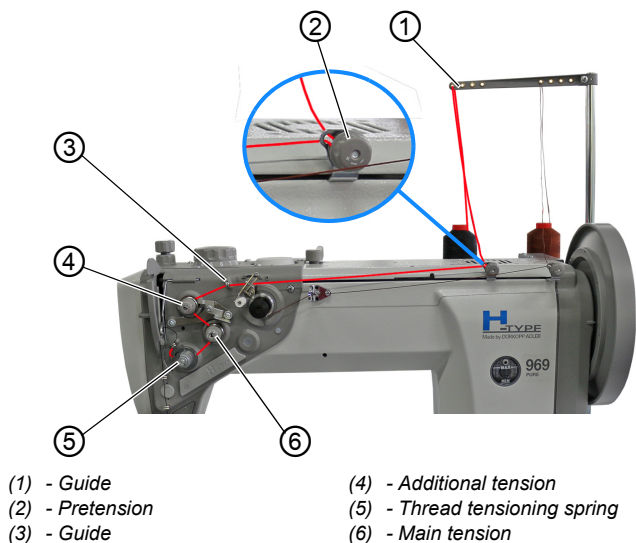
Property damage may occur!

An incorrect tube height setting may lead to tension deviations as a result of the thread becoming caught or jammed.

As a result, the seam becomes uneven, and the needle thread is pulled out of the needle after cutting.

Adjust the height of the tube as specified.

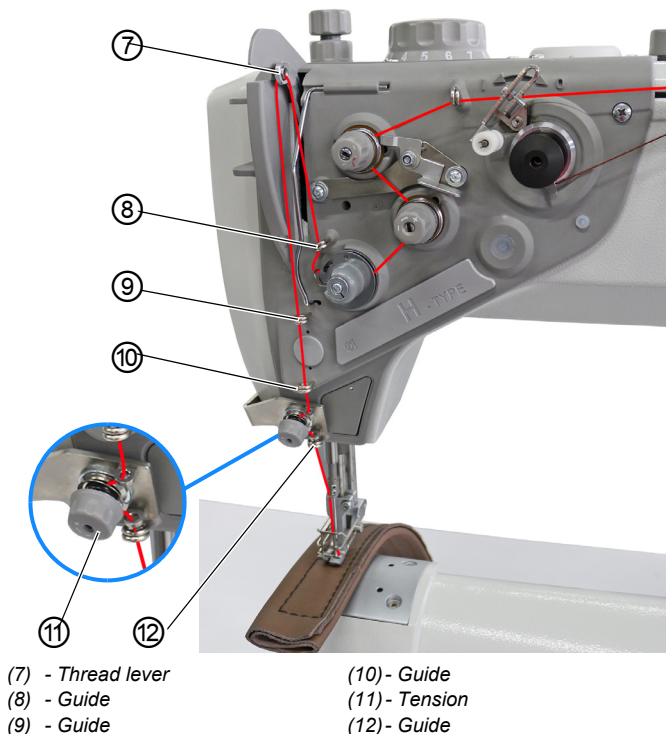
Fig. 4: Threading the needle thread (1)



To thread the needle thread:

1. Switch off the machine.
2. Fit the thread reel on the reel stand.
3. Feed the thread from the rear to the front through the guide (1).
4. Insert the thread from the rear to the front through the slot in the holder of the pretension (2).
5. Guide the thread clockwise around the pretension (2).
6. Insert the thread from the front to the rear through the slot in the holder of the pretension (2).
7. Insert the thread through the guide (3).
8. Guide the thread counterclockwise through the additional tension (4).
9. Guide the thread clockwise around the main tension (6).
10. Insert the thread through the thread tensioning spring (5).

Fig. 5: Threading the needle thread (2)



11. Feed the thread through the guide (8) from the bottom.
12. Feed the thread from the right to the left through the thread lever (7).
13. Feed the thread from top to bottom through guide (9) and guide (10).
14. Feed the thread through the upper slot at the holder of the tension (11).
15. Feed the thread counterclockwise around the tension (11).
16. Insert the thread through the lower slot at the holder of the tension (11).
17. Insert the thread through the guide (12).
18. Feed the thread through the needle eye.
To ensure proper sewing, the needle thread should be at least 70 mm long.

4.5 Winding the hook thread

CAUTION



Risk of injury from sharp and moving parts!

Puncture or crushing possible.

Switch off the machine before winding the hook thread.

Do not reach into the needle tip.

NOTICE

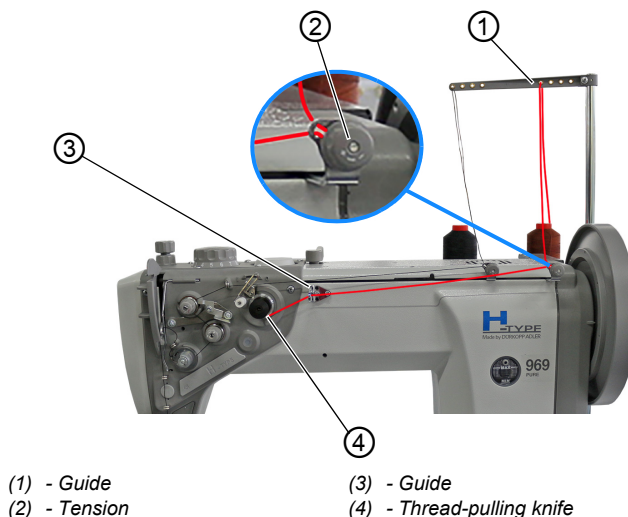
Property damage may occur!

An incorrect tube height setting may lead to tension deviations as a result of the thread becoming caught or jammed.

The hook thread is wound on unevenly.

Adjust the height of the tube as specified.

Fig. 6: Winding the hook thread (1)

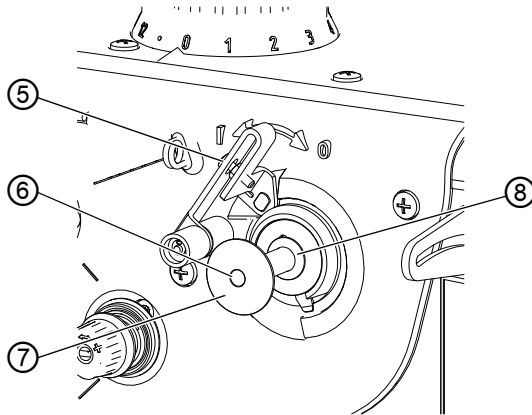




To wind the hook thread:

1. Fit the thread reel on the reel stand.
2. Insert the thread from the rear to the front through the slot in the holder of the tension (2).
3. Feed the thread clockwise around the tension (2).
4. Insert the thread from the front to the rear through the slot in the holder of the tension (2).
5. Insert the thread through the guide (3).
6. Clamp the thread under the thread-pulling knife (4) and tear off the protruding remaining thread.

Fig. 7: Winding the hook thread (2)



(5) - Winder lever
(6) - Bobbin shaft

(7) - Bobbin
(8) - Drive dog



7. Fit the bobbin (7) onto bobbin shaft (6) and drive dog (8).
8. Switch on the machine.
9. Press the bobbin lever (5) to the I position.

4.6 Changing the bobbin

CAUTION

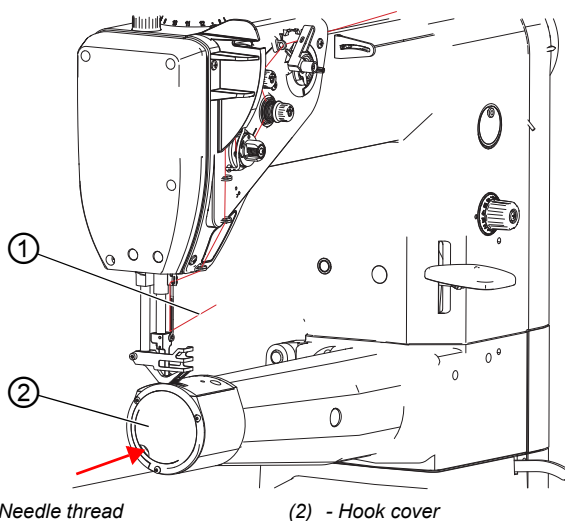


Risk of injury from sharp and moving parts!

Puncture or crushing possible.

Switch off the machine before changing the bobbin.

Fig. 8: Changing the bobbin (1)



(1) - Needle thread

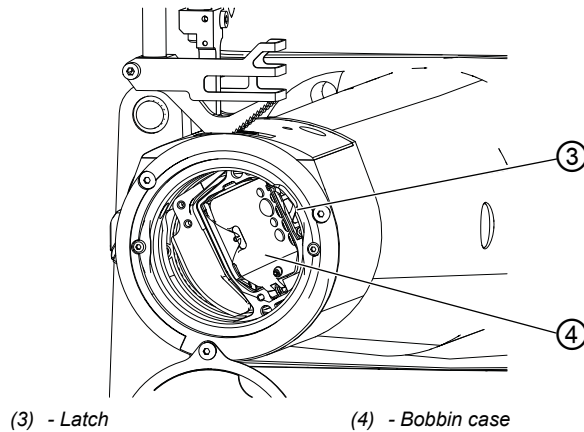
(2) - Hook cover



To change the bobbin:

1. Switch off the machine.
2. Slightly depress the hook cover (2) at the slot and push it to the right.

Fig. 9: Changing the bobbin (2)



(3) - Latch

(4) - Bobbin case

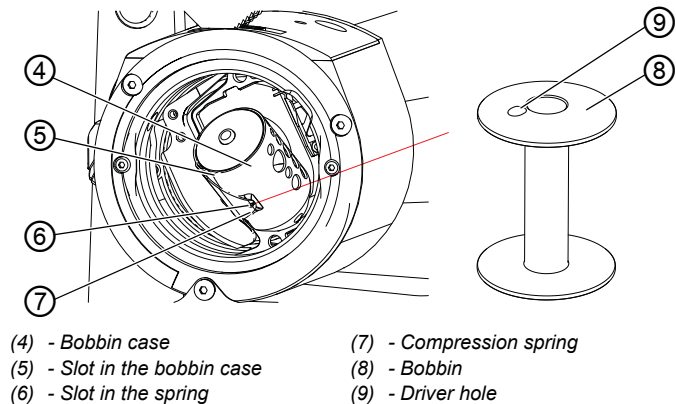


3. Press the latch (3).



The bobbin case (4) is tilted out, causing the interior spring to push the bobbin up and out.

Fig. 10: Changing the bobbin (3)



(4) - Bobbin case

(7) - Compression spring

(5) - Slot in the bobbin case

(8) - Bobbin

(6) - Slot in the spring

(9) - Driver hole



4. Remove the empty bobbin (8).

5. Insert the full bobbin into the bobbin case (4).
Make sure that the driver hole (9) is pointing to the bobbin case.

6. Depress the bobbin case (4) until the latch (3) engages.

7. Feed the hook thread through the slot (5).

8. Feed the hook thread under the compression spring (7) and to the slot (6).
9. Pull the hook thread out 100 mm to 150 mm through the slot (6).
10. Turn the hook cover (2) back to its initial position.
11. Hold the needle thread in place and turn the handwheel until the thread lever is at top dead center and the hook thread is tied to the needle thread.
12. Elongate needle thread and hook thread.
13. Shorten needle thread and hook thread to 70 mm.
14. Switch on the machine.



Important

Hold both threads in place when starting to sew for the first time.

4.7 Thread tension

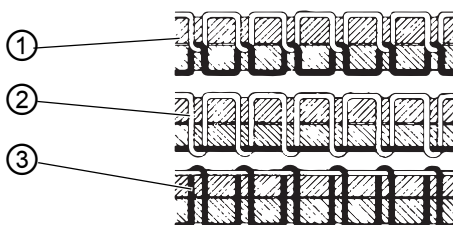
Together with the hook thread tension, the needle thread tension influences the final seam pattern. With thin sewing material, excessive thread tension can lead to undesired ruffing and thread breaking.



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. 11: Thread tension



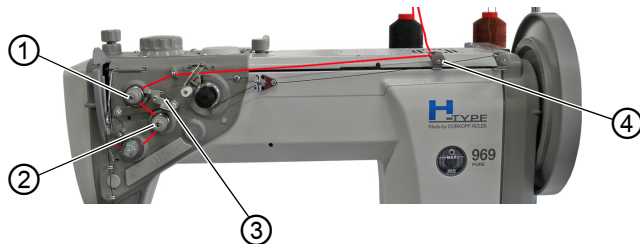
- (1) - Identical needle thread and hook thread tension
- (2) - Hook thread tension higher than needle thread tension
- (3) - Needle thread tension higher than hook thread tension

4.7.1 Adjusting the needle thread tension

The needle thread tension is determined by the 3 adjusting wheels of the tensioning screws.

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

Fig. 12: Adjusting the needle thread tension



(1) - Additional tension

(3) - Lever

(2) - Main tension

(4) - Pretension



To adjust the needle thread tension:

1. Turn the adjusting wheel to the desired tension.
 - To increase the tension: Turn the adjusting wheel clockwise
 - To reduce the tension: Turn the adjusting wheel counterclockwise

Checking the needle thread tension



To check the needle thread tension:

1. Sew a seam and check the following.
Deviations require an adjustment of the individual tensioner elements.

Pretension

The pretension (4) holds the thread in position if main tension (2) and additional tension (1) are completely open.

2. Turn the pretension adjusting wheel (4)
 - Shorter initial thread: Turn the adjusting wheel clockwise
 - Longer initial thread: Turn the adjusting wheel counterclockwise

✎ The length of the initial thread should be approx. 60 - 80 mm.

Main tension

The main tension (2) determines the normal thread tension during sewing.

**Proper setting**

The main tension (2) should be adjusted as low as possible. The thread interlace should be exactly in the middle of the sewing material.

**Disturbance**

Due to excessively high tension:

- Ruffing on the seam
- Thread breaking
- The needle thread pops out of the tensioning plate

Additional tension

The additional tension (1) increases the needle thread tension during sewing, e.g. for thickened seams.

**Proper setting**

The additional tension (1) must always be adjusted lower than the main tension (2).

**Disturbance**

Due to excessively high tension:

- Ruffing on the seam
- Thread breaking
- The needle thread pops out of the tensioning plate



To open and close the additional tension:

1. To open the additional tension (1), press the lever (3) into the tension.
2. To close the additional tension (1), press the lever (3) out of the tension.

4.7.2 Adjusting the hook thread tension

CAUTION



Risk of injury from moving parts!

Crushing possible.

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

NOTICE

Property damage may occur!

If adjusted incorrectly, the thread pulling direction can result in faulty tensioning results.

Be sure to pull the hook thread in the proper direction.

NOTICE

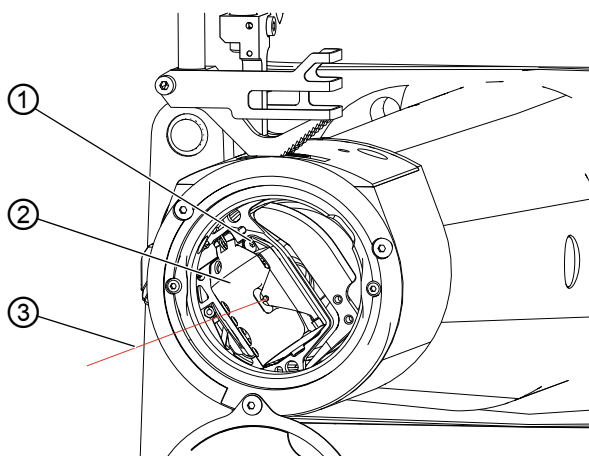
Property damage may occur!

If the hook thread tension is adjusted too low, the thread interlace will shift from the middle of the sewing material. This may result in sewing issues and loose stitches when operating at increased sewing speed.

Adjust a sufficient hook thread tension or reduce the sewing speed.

The hook thread tension has been adjusted to 350 to 400 cN at the factory (1 cN = 1 g).

Fig. 13: Adjusting the hook thread tension



(1) - Adjusting wheel

(3) - Hook thread

(2) - Bobbin case

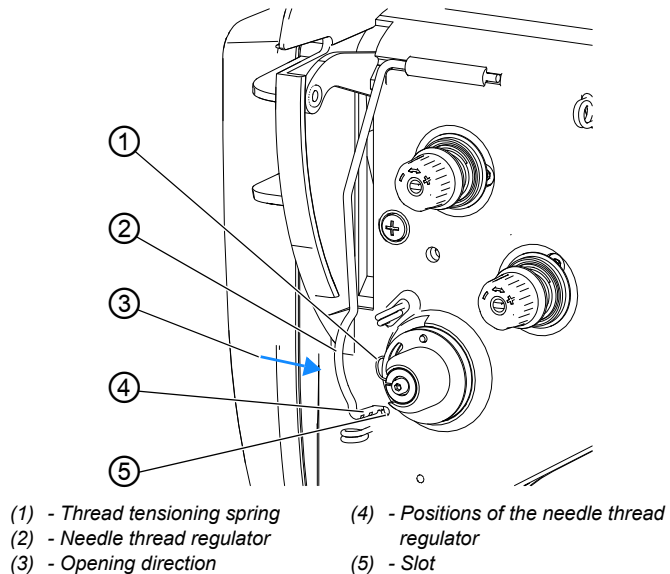


To adjust the hook thread tension:

1. Open the hook cover.
2. Turn the handwheel until the bobbin case (2) has reached the position shown above.
3. Pull the hook thread (3) off the bobbin.
Ensure that the hook thread is, as shown above, pulled off as close to the bobbin case (2) as possible.
4. Turn the adjusting wheel (1).
 - Increase the hook thread tension: Turn the adjusting wheel (1) clockwise
 - Reduce the hook thread tension: Turn the adjusting wheel (1) counterclockwise.

4.7.3 Adjusting the needle thread regulator

Fig. 14: 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.



To adjust the needle thread regulator:

1. Press the needle thread regulator (2) toward the opening (5) in opening direction (3).
2. Adjust the needle thread regulator (2).
 - To increase the tension: Pull out the needle thread regulator (2)
 - To reduce the tension: Push in the needle thread regulator (2)
3. Move the needle thread regulator to the desired position (4).

4. Press the needle thread regulator against the opening direction (3) to lock it.
5. Check the setting of the needle thread regulator by sewing.

4.8 Positioning the needle

CAUTION



Risk of injury from sharp and moving parts!

Puncture or crushing possible.

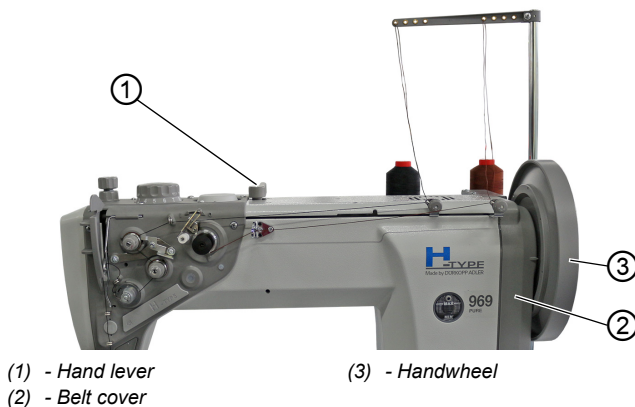
Do not reach into the needle tip.

Do not reach into the thread lever.

Do not reach into the sewing feet.

The machine is equipped with manual needle positioning.

Fig. 15: Positioning the needle



To position the needle manually:

1. Use the hand lever (1) to lift the sewing feet and remove the existing sewing material.
2. Turn the handwheel (3) until the desired position has been reached.

**Important**

The proper direction of rotation is counterclockwise.
The position is indicated by the scale on the handwheel and an arrow marking on the belt cover (2).

4.9 Sewing feet

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

Crushing possible.

Do not reach under the sewing feet.

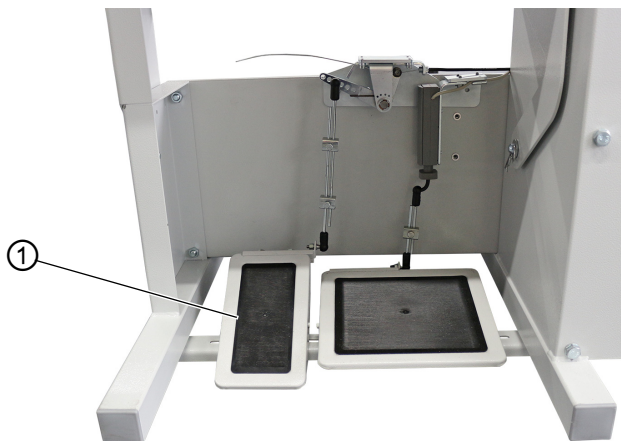
NOTICE**Property damage may occur!**

Possible collision with the needle bar.

Before lifting the sewing feet, set the needle bar to the top or bottom dead center.

4.9.1 Lifting the sewing feet with the pedal

Fig. 16: Lifting the sewing feet with the pedal



(1) - Pedal

Lifting the sewing feet



To lift the sewing feet:

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



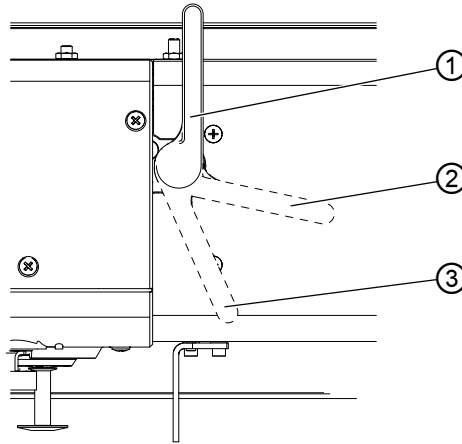
To lower the sewing feet:

1. Release the pedal (1).
- ✚ The sewing feet are lowered.

4.9.2 Lifting the sewing feet manually

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

Fig. 17: Lifting the sewing feet manually



(1) - Lever in position 0



(2) - Lever in position 1

(3) - Lever in position 2

Lifting the sewing feet




To lift the sewing feet:

1. Turn the lever to position 1 (2).
 The sewing feet are raised by 14 mm.
2. Turn the lever to position 2 (3).
 The sewing feet are raised by 20 mm.

Lowering the sewing feet



To lower the sewing feet:

1. Turn the lever to position 0 (1).
 The lock is canceled.

4.9.3 Adjusting the sewing foot pressure



Proper setting

The sewing material does not slip and is correctly transported.



Disturbance

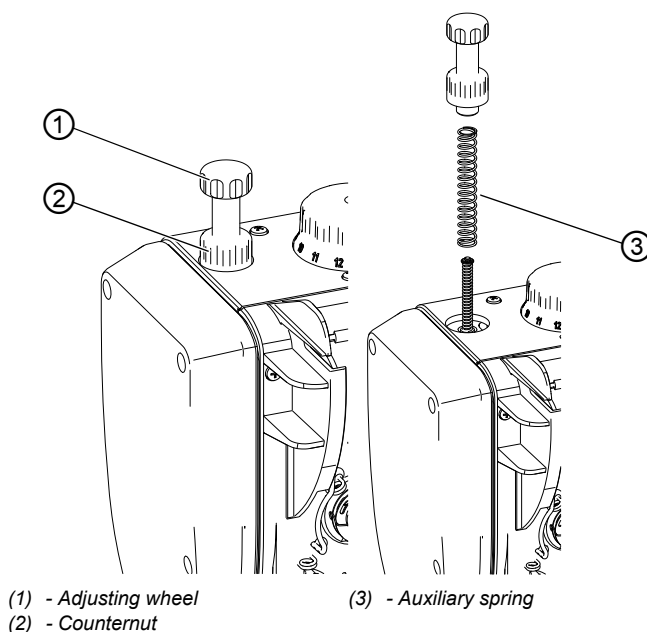
Excessively high sewing foot pressure:

- Tearing of the sewing material
- Sewing feet impressions on the sewing material

Excessively low sewing foot pressure:

- Slipping of the sewing material

Fig. 18: Adjusting the sewing foot pressure



To adjust the sewing foot pressure:

1. Loosen the counternut (2).

2. Turn the adjusting wheel (1).
 - Increase sewing foot pressure: turn clockwise
 - Reduce sewing foot pressure: turn counterclockwise
3. Tighten the counternut (2).

**Information**

If the sewing foot pressure is insufficient, an auxiliary spring (3) can be used to increase the sewing foot pressure.

WARNING**Risk of injury from spring force!**

Risk of injuries to the eyes.

When removing the adjusting wheel, make sure that it will not pop out toward you on account of the spring force.

ALWAYS hold the sewing feet in place at the lower position.

1. Unscrew the adjusting wheel (1).
2. Insert the auxiliary spring (3).
3. Screw in the adjusting wheel (1) and adjust the desired sewing foot pressure.

4.9.4 Adjusting the sewing foot stroke

The sewing foot stroke is continuously adjustable over a range of 1–12 mm by turning the adjusting wheel.



Proper setting

The sewing foot stroke should be adjusted as low as possible. The material is transported with a consistent stitch length.



Disturbance

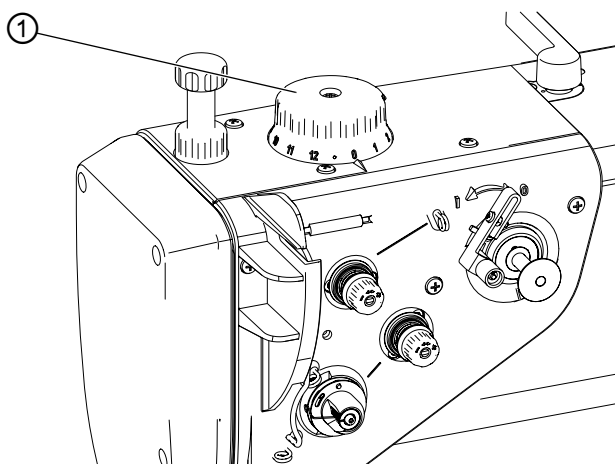
Excessively high sewing foot stroke:

- abrupt impact of the sewing feet
- increased noise level
- the machine is damaged by the excess stress

Excessively low sewing foot stroke:

- Stitch shortening
- Hindered transport of the sewing material
- Damage to the sewing material

Fig. 19: Adjusting the sewing foot stroke



(1) - Adjusting wheel



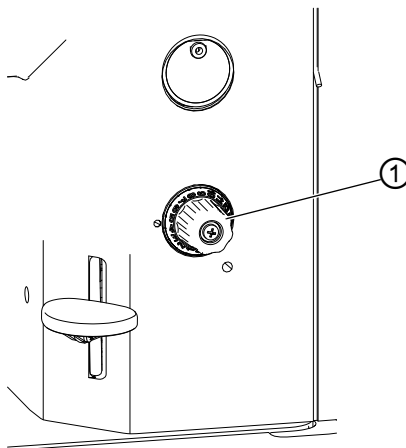
1. Turn the adjusting wheel (1).
 - Increase sewing foot stroke: turn clockwise
 - Reduce sewing foot stroke: turn counterclockwise

4.10 Stitch length

4.10.1 Adjusting the stitch length

The stitch length can be adjusted continuously between 0 and 12 mm.

Fig. 20: Adjusting the stitch length



(1) - Adjusting wheel

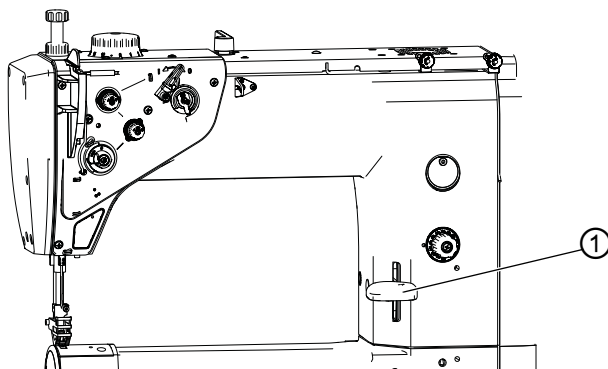


To adjust the stitch length:

1. Turn the adjusting wheel.
 - Reduce stitch length: turn clockwise
 - Increase stitch length: turn counterclockwise

4.10.2 Sewing backwards

Fig. 21: Sewing backwards



(1) - Stitch regulator



To sew backwards:

1. Push the stitch regulator (1) down.
- ↪ Reverse sewing will remain active for as long as the stitch regulator (1) is pushed down.

4.11 Swiveling the tabletop down

CAUTION



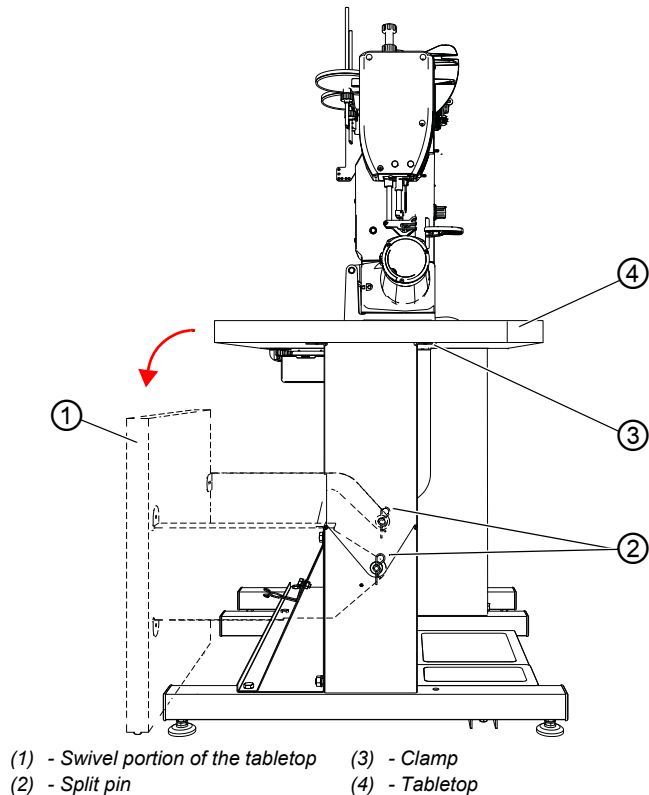
Risk of injury from moving parts!

Crushing possible.

Switch off the machine before swiveling down the tabletop.

The tabletop on machines with a swivel stand can be swiveled down, making it possible to increase the space below the free arm.

Fig. 22: Swiveling the tabletop down





To swivel the tabletop down:

1. Loosen the clamp (3).
2. Swivel back the swivel portion of the tabletop (1).
The tabletop is centered by pins and must be pulled off the pins before it can be swiveled.
3. Loosen the split pin (2) and pull the swivel portion off the tabletop (1).



Important

Position the clamp (3) in such a way that no collisions will occur when the swivel portion of the tabletop (1) is swiveled down. Make sure to guide the centering pins into the designated holes of the tabletop.

5 Maintenance

WARNING



Risk of injury from sharp parts!

Punctures and cutting possible.

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

WARNING




Risk of injury from moving parts!

Crushing possible.

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

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

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

Maintenance intervals

Work to be carried out	Operating hours			
	8	40	160	500
Remove sewing dust and thread residues	●			
Check the oil level	●			

5.1 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.

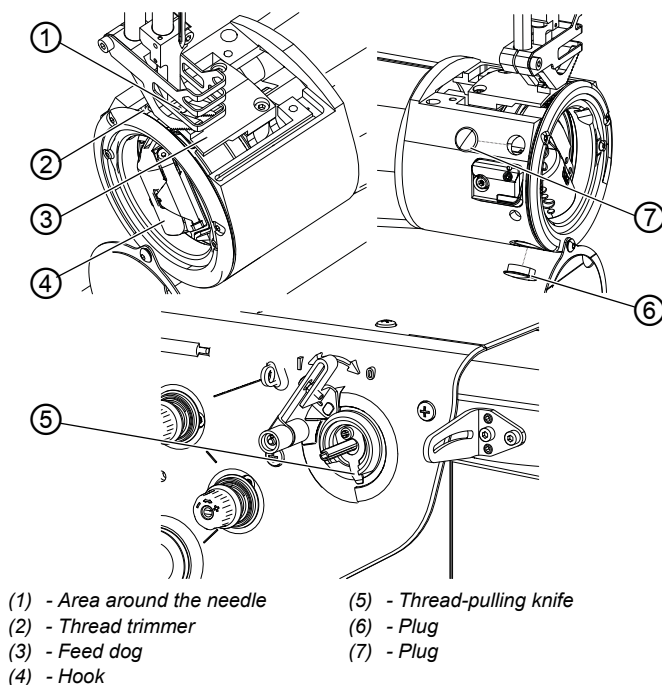
NOTICE

Property damage from solvent-based cleaners!

Solvent-based cleaners will damage paintwork.

Use only solvent-free substances for cleaning.

Fig. 23: Cleaning

**Points that need to be cleaned particularly thoroughly:**

- Area around the needle (1)
- Thread trimmer (2)
- Hook (4)
- Thread-pulling knife (5)
- Area between throat plate and feed dog (3)



To clean the machine:

1. Switch off the machine.
2. Disassemble the throat plate (3).
3. Remove the plugs (6) and (7).
4. Remove any dust and thread residues using a brush or compressed air gun.

5.2 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:

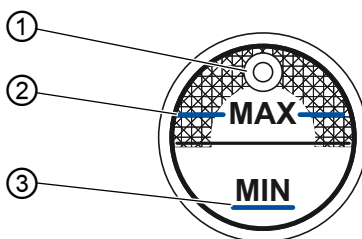
- Viscosity at 40 °C: 10 mm²/s
- Flash point: 150 °C

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

Checking the oil level

Fig. 24: Checking the oil level



(1) - Oil filler opening

(2) - Maximum level marking

(3) - Minimum level marking



Proper setting

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



To top off the oil:

1. Switch off the machine.
2. Fill oil through the oil filler opening (1) no higher than the maximum level marking (2).
3. Switch on the machine again.

5.3 Parts list

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

www.duerkopp-adler.com



6 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.

6.1 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.

6.2 Removing the transport locks

Remove all transport locks before setting up the machine:

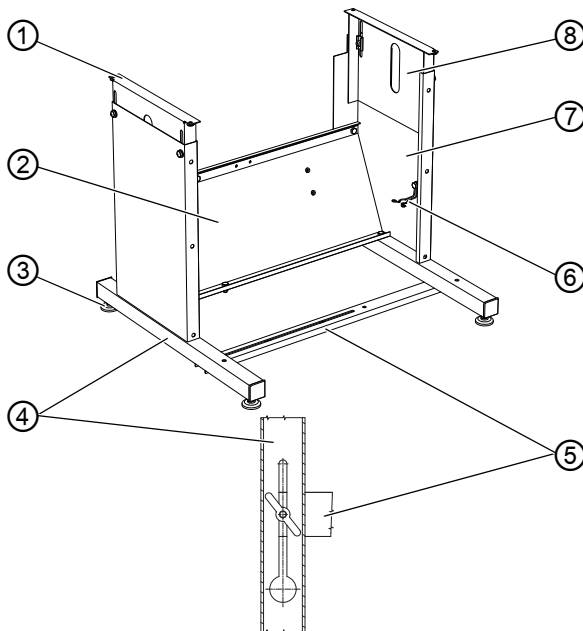
- Lashing straps and wooden blocks from the machine head
- Lashing straps and wooden blocks from the table
- Lashing straps and wooden blocks from the stand
- Supporting wedges between machine arm and throat plate

6.3 Assembling the stand

The machine can be combined with the standard stand including fixed tabletop or with an optional swivel stand whose tabletop can be swiveled down.

6.3.1 Assembling the standard stand

Fig. 25: Assembling the standard stand



- (1) - Head section
- (2) - Cross member
- (3) - Foot
- (4) - Foot strut

- (5) - Cross strut
- (6) - Oil can holder
- (7) - Stand bar
- (8) - Inner bar



To assemble the standard stand:

1. Screw the cross member (2) to the stand bars (7).
2. Screw the oil can holder (6) to the stand bar (7).
3. Screw the cross strut (5) to the foot strut (4).
4. Tighten the inner bar (8) to the stand bar (7) so that the head sections (1) are at the same height.

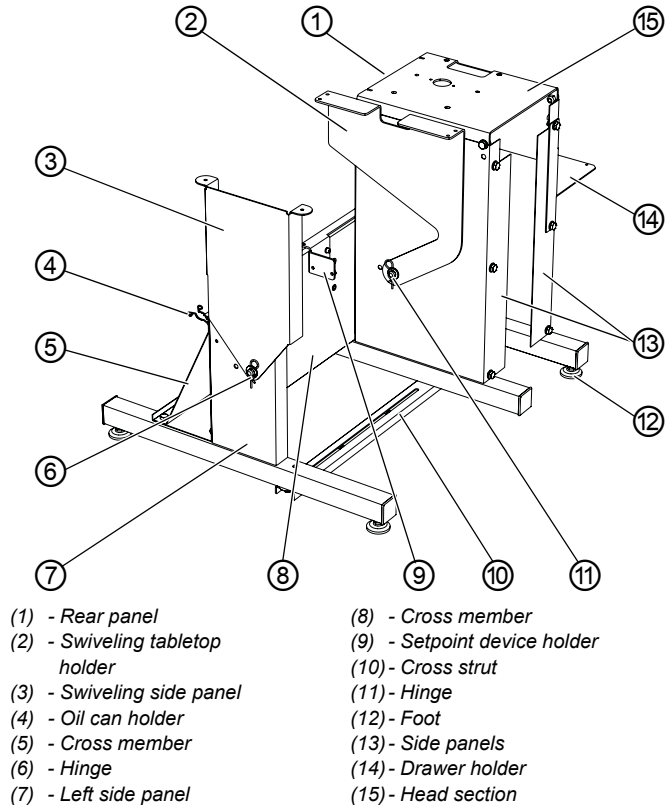


Important

Turn the feet (3) so that the stand has even contact with the ground.

6.3.2 Assembling the swivel stand

Fig. 26: Assembling the swivel stand



To assemble the swivel stand:

1. Screw the side panels (13) to the rear panel (1) and the cross member (8).
2. Screw the bolted parts to the left side panel (7) and the cross member (5).
3. Tighten the head section (15).


4. Tighten the rear panel (1) using all screws.
5. Tighten the hinge (11) and the swiveling tabletop holder (2).
6. Tighten the hinge (6).
7. Tighten the setpoint device holder (9).
8. Rotate the stand and tighten the cross member (10) to the outer side panels.

**Important**

Turn the feet (12) so that the stand has even contact with the ground.

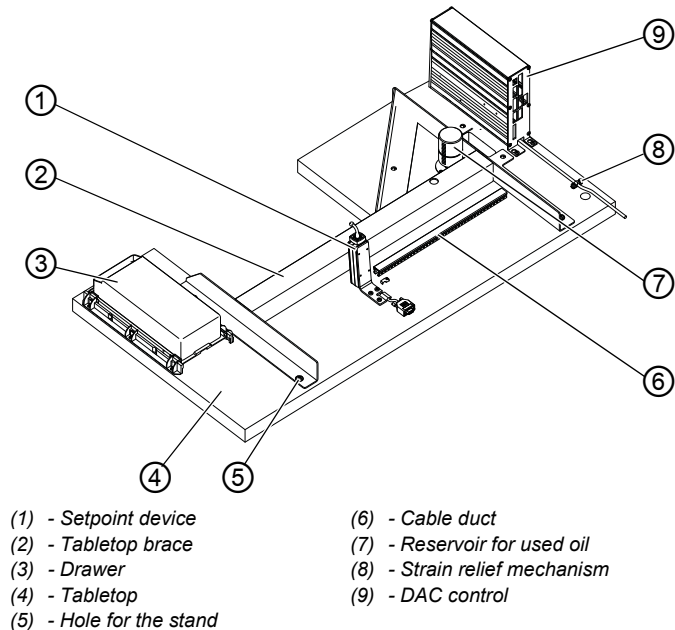
9. Tighten the oil can holder (4) on the rear at the left side panel (7).
10. Attach the drawer holder (14) to the right side panel (13).

6.4 Tabletop

Ensure that the tabletop has sufficient load-bearing capacity and strength. If you want to make your own tabletop, use the dimensions given in the diagram in the **Appendix** ( p. 79) as a template.

6.4.1 Completing the standard tabletop

Fig. 27: Completing the standard tabletop

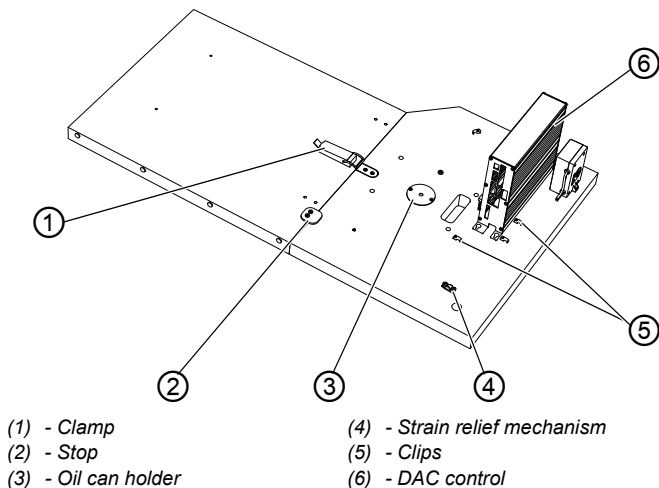


To complete the standard tabletop:

1. Turn the tabletop over so that the underside is facing up.
2. Assemble all components to the underside of the tabletop as shown above.
3. Secure all components using the strain relief mechanism (10).
4. Use cable clamps (11) to attach the connecting cable to the underside of the tabletop.
5. Drill the holes for the stand (7) as provided in the drawing.

6.4.2 Completing the swiveling tabletop

Fig. 28: Completing the swiveling tabletop

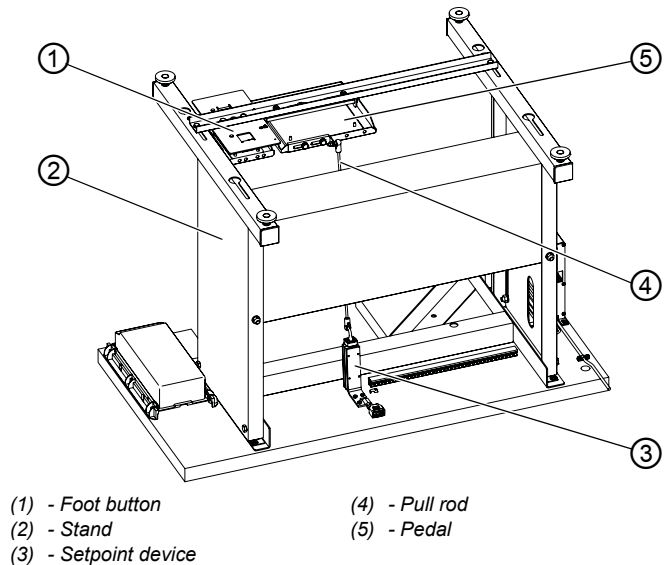


To complete the swiveling tabletop:

1. Turn the tabletop over so that the underside is facing up.
2. Assemble all components to the underside of the tabletop as shown above.
3. Tighten the stop (3).
4. Attach the oil can holder (4).
5. Secure the connecting cable with the strain relief mechanism (5).
6. Attach loose cables to the tabletop using clips (6).

6.4.3 Assembling the standard tabletop

Fig. 29: Assembling the standard tabletop

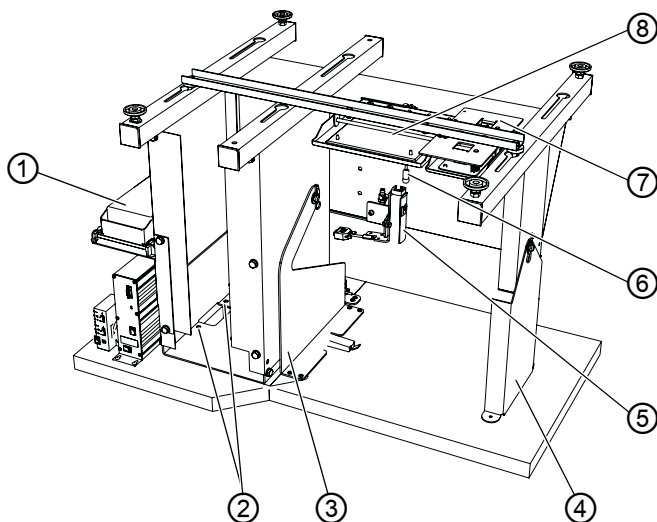


To assemble the standard tabletop:

1. Place the stand (2) on the tabletop as shown above.
2. Screw the stand (2) into the previously drilled holes.
3. Screw the foot button (1) in as close to the left bar of the stand's cross member as possible.
4. Press the lugs at the end of the pull rod (4) onto the round pin of the setpoint device (3) and the pedal (5).
5. Tighten the pedal (5).

6.4.4 Assembling the swiveling tabletop

Fig. 30: Assembling the swiveling tabletop



- | | |
|---------------------------------|-----------------------|
| (1) - Drawer | (5) - Setpoint device |
| (2) - Holes | (6) - Pull rod |
| (3) - Swiveling tabletop holder | (7) - Foot button |
| (4) - Left side panel | (8) - Pedal |



To assemble the tabletop:

1. Tighten the stand and the swiveling tabletop holder (3) in such a way that the holes (2) are aligned with the tabletop.
2. Tighten the foot button (8) as close to the left side panel (4) as possible.
3. Press the lugs at the end of the pull rod (6) onto the round pin of the setpoint device (5) and the pedal (8).
4. Tighten the pedal (8) as close to the foot button (7) as possible.
5. Assemble the drawer (1) at the designated holder.

6.5 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



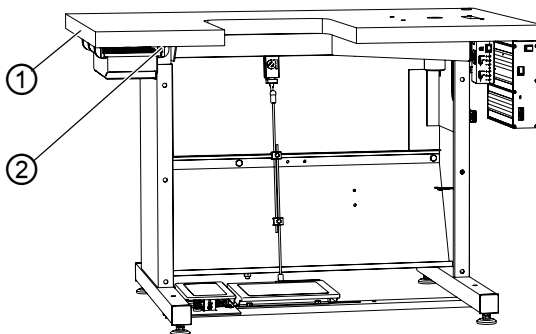
Risk of musculoskeletal damage from incorrect setting!

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 can be adjusted continuously at the fixed tabletop within a range between 770 mm and 910 mm.

Fig. 31: Adjusting the working height



(1) - Tabletop

(2) - Screw



To adjust the working height:

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

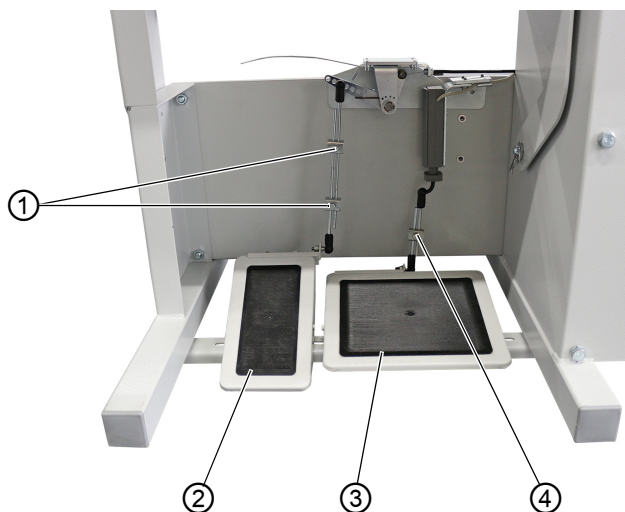


Important

- Ensure that the tabletop is level.
3. Tighten the screws (2).

6.6 Adjusting the pedal

Fig. 32: Adjusting the pedal



(1) - Connecting piece on the pull rod

(2) - Pedal



To adjust the pedal:

1. Adjust the pedal (3) so that it is centered relative to the axis of the needle.
2. Adjust the connecting piece of the pull rod (4) so that the pedal (3) has the desired angular position.
3. Adjust the connecting piece of the pull rod (1) so that the pedal (2) has the desired angular position.

6.7 Inserting the machine head

WARNING



Risk of injury from moving parts!

Crushing possible.

Ensure that your hands are not jammed when inserting the machine head.

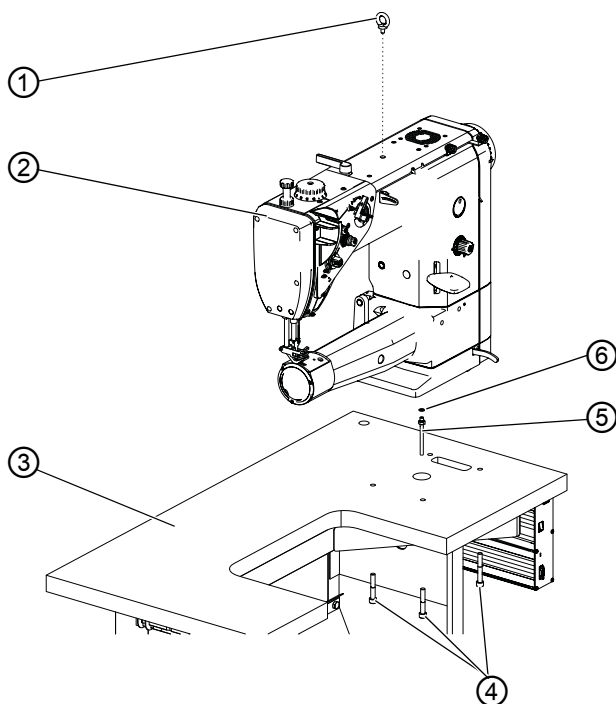
NOTICE

Property damage may occur!

Possible damage to the machine head from impact with the tabletop or the ground.

After it has been inserted, the machine head must not tip until securely screwed to the tabletop.

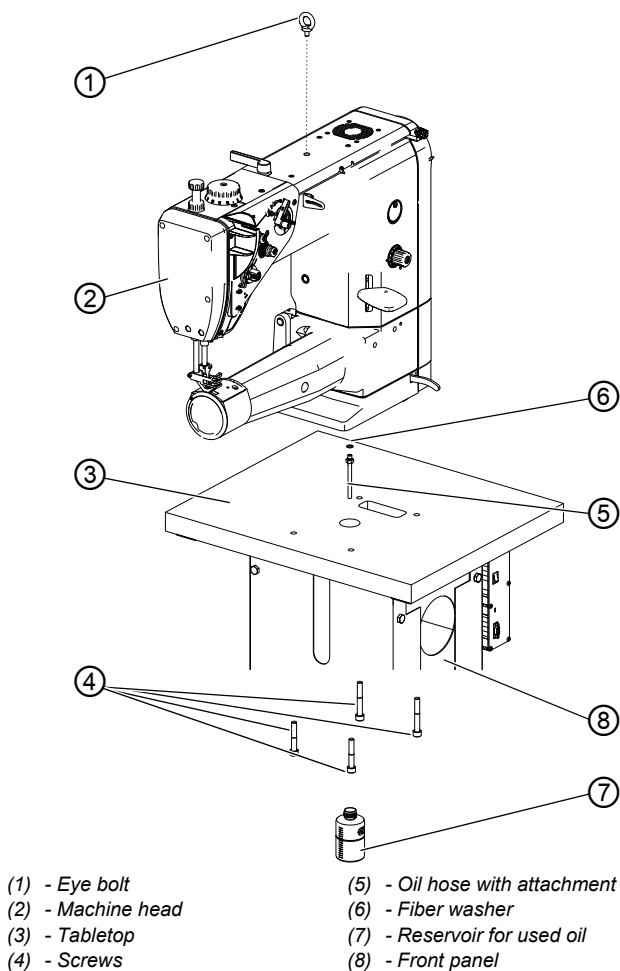
Fig. 33: Inserting the machine head (1), standard tabletop



- (1) - Eye bolt
- (2) - Machine head
- (3) - Tabletop

- (4) - Screws
- (5) - Oil hose with attachment
- (6) - Fiber washer

Fig. 34: Inserting the machine head (2), swiveling tabletop



To insert the machine head:

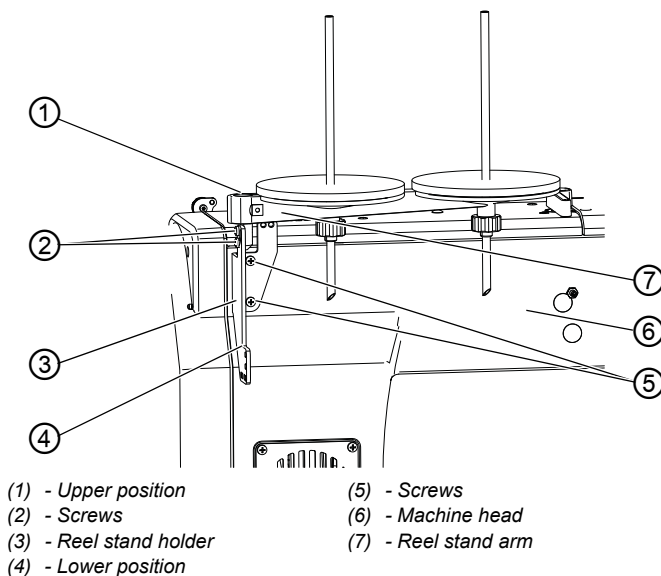
1. Insert the eye bolt (1) into the machine head (2).
2. Use a crane to lift the machine head.
3. Insert the oil hose with attachment (5) and the fiber washer (6).
4. Place the machine head (2) onto the tabletop and attach it using the screws (4).

5. Feed the reservoir for used oil (7) through the slot in the front panel (8) and tighten it under the tabletop.
6. Tilt the reservoir for used oil (7) and screw it to the front panel (8).

6.8 Reel stand

6.8.1 Assembling the reel stand to the machine head

Fig. 35: Assembling the reel stand to the machine head

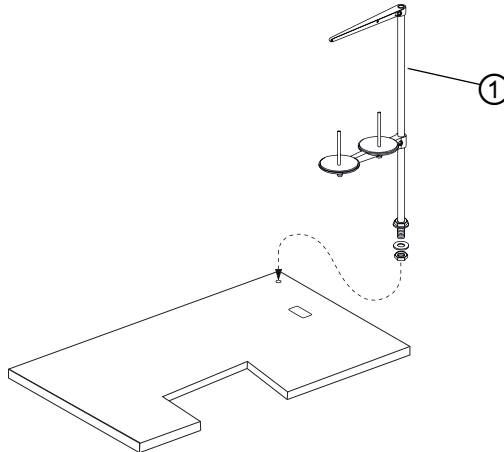


To assemble the reel stand to the machine head:

1. Tighten the reel stand holder (3) to the machine head (6) using screws (5).
2. Fit the reel stand arm (7) to the reel stand holder (3).
 - upper position (1): with inclination adjustment
 - lower position (4): without inclination adjustment
3. Tighten the reel stand arm (7) using the screws (2).
4. Adjust the desired angle of inclination at the upper position (1).

6.8.2 Assembling the reel stand at the tabletop

Fig. 36: Assembling the reel stand at the tabletop



(1) - Reel stand



To assemble the reel stand at the tabletop:

1. Assemble the reel stand (1).
2. Insert the reel stand (1) into the hole in the tabletop and attach it with the nut below the tabletop.

6.9 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

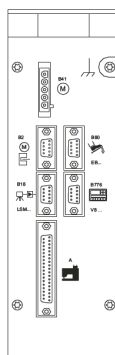
The voltage on the type plate of the sewing motor must correspond to the mains voltage.

Connecting the control

Connect the control as follows:

- Insert the plug of all cables into the sockets on the back of the control
- Connect the equipotential bonding
- Use the power cable to connect the control to the mains grid


Fig. 37: Connecting the control



The pictograms on the control correspond to the pictograms of the corresponding cables.

6.10 Checking the lubrication

All wicks and felt bits of the machine head are soaked in oil at the factory. The oil is conveyed to the reservoir during use.

This is why you should avoid filling too much oil during initial filling ( p. 48).

6.11 Performing a test run

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

7 Decommissioning

WARNING



Risk of injury from a lack of care!

Serious injuries may occur.

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

CAUTION



Risk of injury from contact with oil!

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

Avoid skin contact with oil.

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



To decommission the machine:

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

8 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.

9 Troubleshooting

9.1 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



9.2 Errors in sewing process

Error	Possible causes	Remedial action
Unthreading at seam beginning	Needle thread tension is too firm	Check needle thread tension
	Needle thread was cut at the wrong time	
	Needle thread tension too high during cutting	 <i>Service Instructions</i>
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	Remedial action
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
	Thread tensioning spring not working	 <i>Service Instructions</i>
Needle breakage	Needle thickness is unsuitable for the sewing material or the thread	Use recommended needle thickness

10 Technical data

10.1 Data and characteristic values

Technical data	Unit	969 PURE
Machine type		Lockstitch 301
Hook type		Barrel shuttle, XL large
Number of needles		1
Needle strength	[Nm]	140-280
Thread strength	[Nm]	43/3-5/3 (needle thread) 60/3-8/3 (hook thread)
Stitch length	[mm]	12/12
Speed maximum	[min ⁻¹]	800
Speed on delivery	[min ⁻¹]	800
Mains voltage	[V]	230
Mains frequency	[Hz]	50/60
Length	[mm]	700
Width	[mm]	250
Height	[mm]	420
Weight	[kg]	92

10.2 Requirements for fault-free operation

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

11 Appendix

11.1 Tabletop drawings

Fig. 38: Fixed tabletop with slot

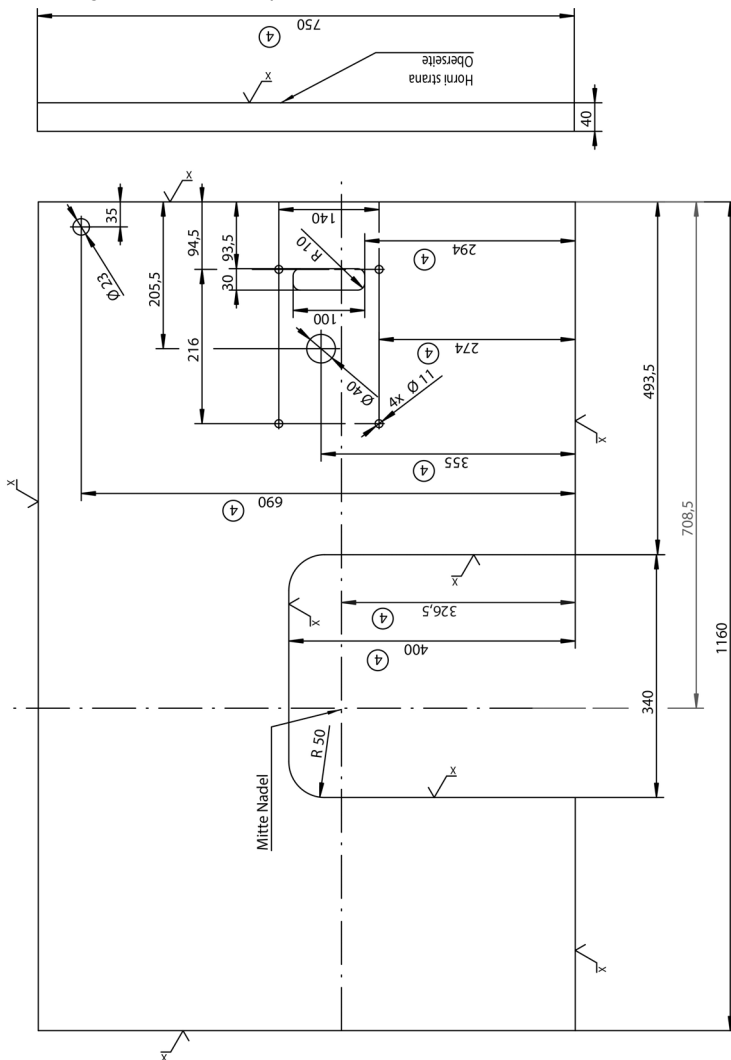
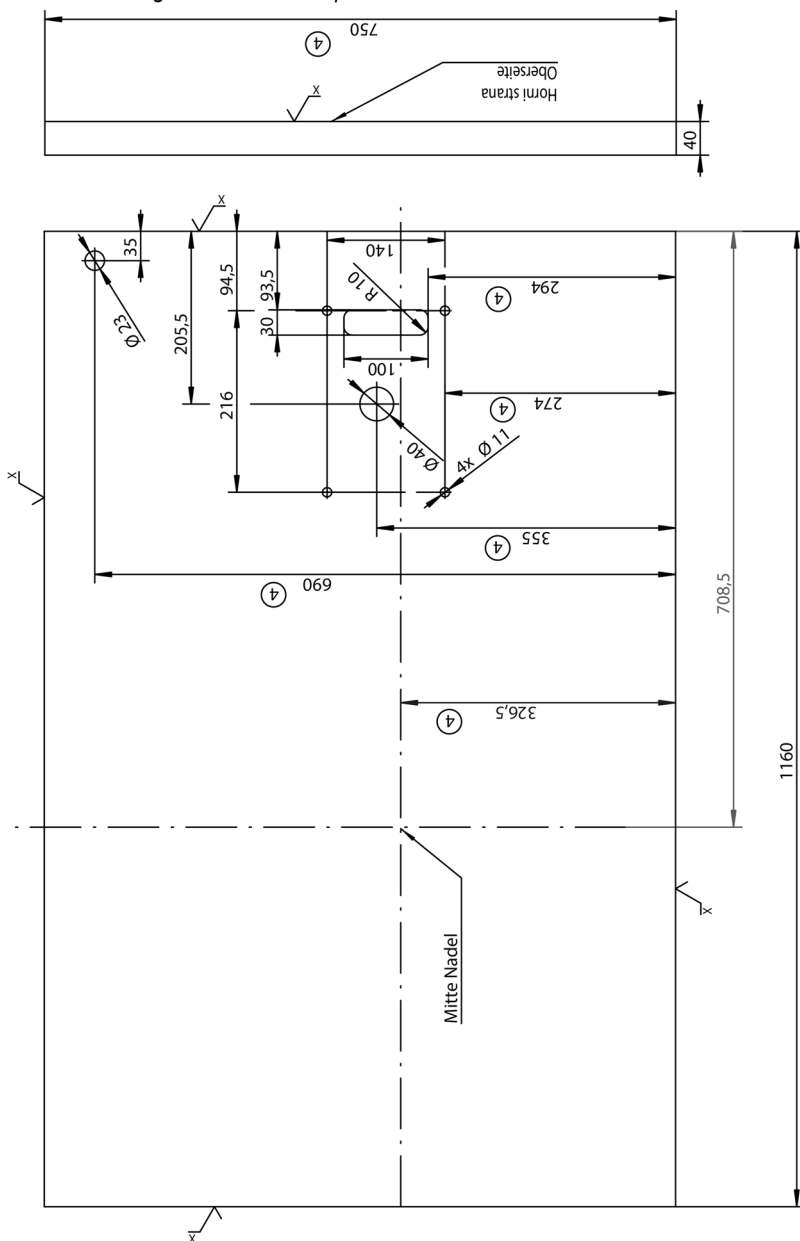


Fig. 39: Fixed tabletop without slot



[illegible]

11.2 Components on the underside of the tabletop

Fig. 41: Fixed tabletop with or without slot

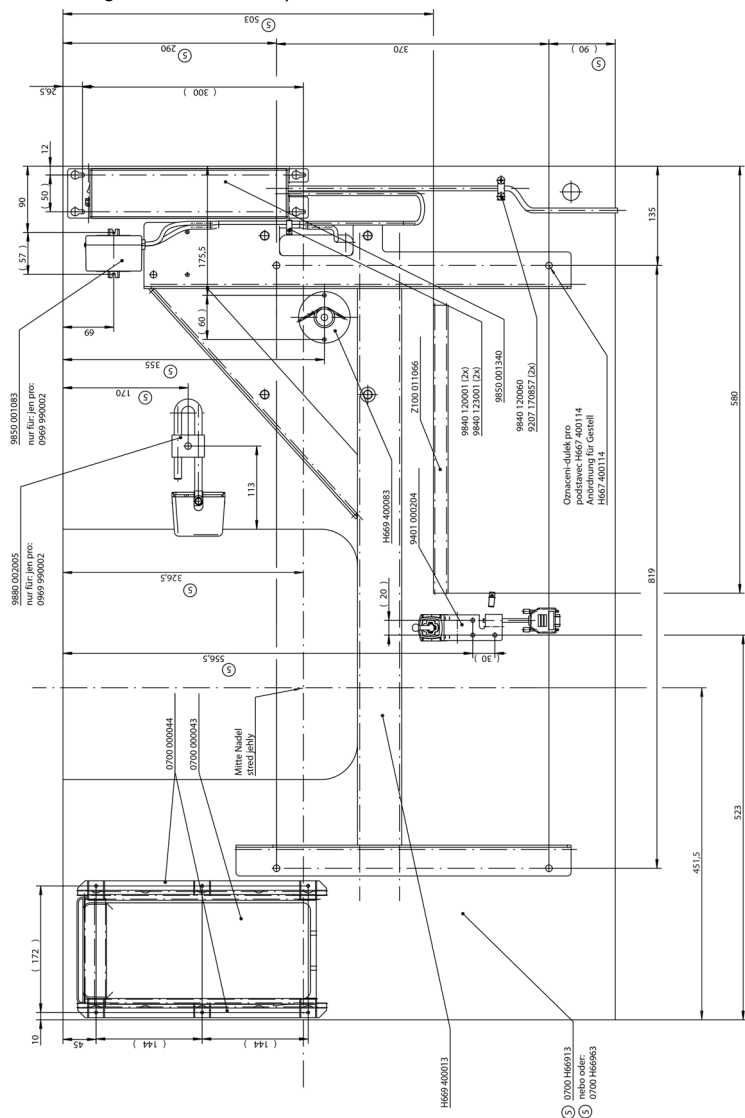
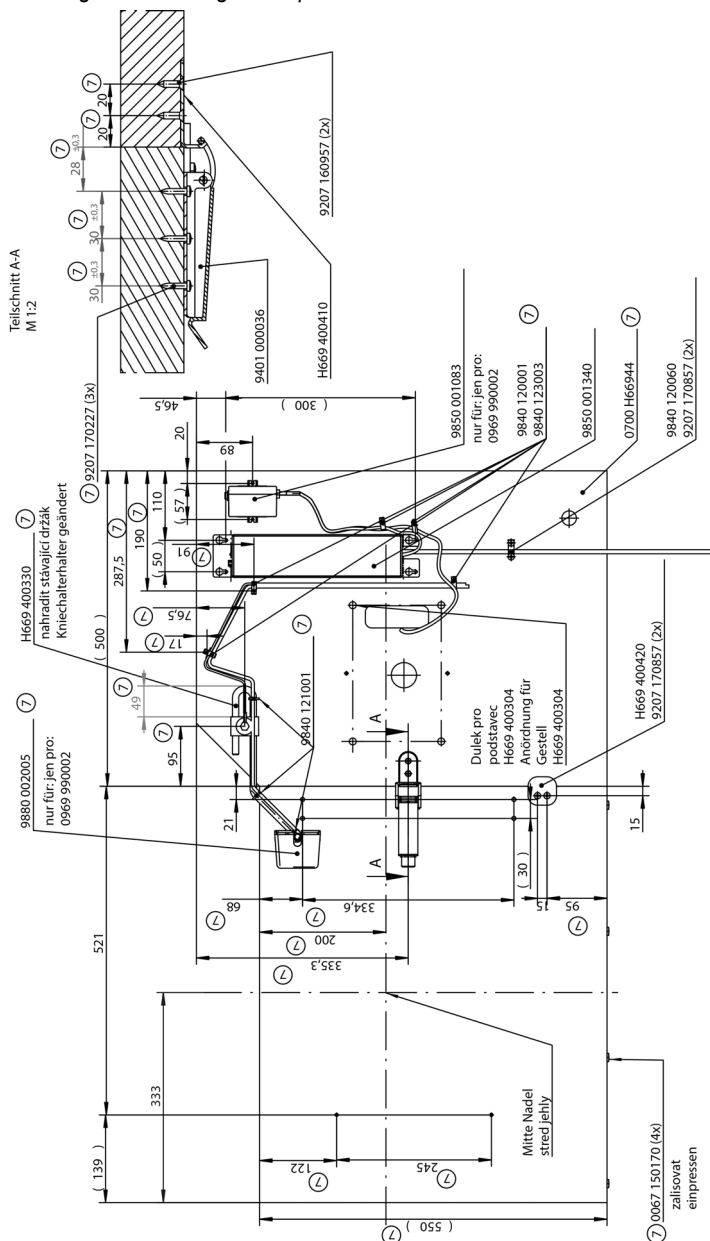


Fig. 42: Swiveling tabletop



11.3 Speed limits of the machine according to walking foot stroke

Walking foot stroke [mm]	Maximum revolutions of the machine [1/min]
2 - 7	1250
7 - 9	1100
9 - 11	900
11 - 12	700

11.4 Stroke limits of the walking foot according to material

Sewing material thickness [mm]	Maximum stroke of the walking foot [mm]
2 - 3	3.5
3 - 5	5
5 - 8	6
8 - 20	7



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