

967 PURE
Operating Instructions

IMPORTANT
READ CAREFULLY BEFORE USE
KEEP FOR FUTURE REFERENCE

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1	About these instructions	3
1.1	For whom are these instructions intended?	3
1.2	Representation conventions – symbols and characters	4
1.3	Other documents	5
1.4	Liability	6
2	Safety.....	7
2.1	Basic safety instructions.....	7
2.2	Signal words and symbols used in warnings.....	8
3	Machine description.....	13
3.1	Components of the machine	13
3.2	Proper use.....	14
3.3	Declaration of Conformity	15
4	Operation	17
4.1	Preparing the machine for operation	17
4.2	Switching on and off the machine	18
4.3	Inserting or changing the needle	19
4.4	Threading the needle thread	21
4.5	Winding the hook thread	25
4.6	Changing the bobbin	27
4.7	Thread tension	30
4.7.1	Adjusting the needle thread tension	31
4.7.2	Adjusting the hook thread tension.....	34
4.7.3	Adjusting the needle thread regulator	36
4.8	Positioning the needle	37
4.9	Sewing feet.....	38
4.9.1	Lifting the sewing feet with the pedal	39
4.9.2	Lifting the sewing feet manually	39
4.9.3	Adjusting the sewing foot pressure	40
4.9.4	Adjusting the sewing foot stroke.....	42
4.10	Stitch length.....	44
4.10.1	Adjusting the stitch length	44
4.10.2	Sewing backwards	45
5	Maintenance.....	47
5.1	Cleaning	48
5.2	Lubricating.....	50
5.3	Parts list.....	52
6	Setup	53
6.1	Checking the scope of delivery	53
6.2	Removing the transport locks.....	53

6.3	Assembling the stand	54
6.4	Tabletop	55
6.4.1	Completing the tabletop	55
6.4.2	Assembling the tabletop	56
6.5	Adjusting the working height	57
6.6	Adjusting the pedal	59
6.7	Inserting the machine head	60
6.8	Assembling the reel stand	62
6.9	Electrical connection	63
6.9.1	Connecting the control	63
6.10	Checking the lubrication	64
6.11	Performing a test run	64
7	Decommissioning	65
8	Disposal	67
9	Troubleshooting	69
9.1	Customer Service	69
9.2	Errors in sewing process	70
10	Technical data	73
10.1	Data and characteristic values	73
10.2	Requirements for fault-free operation	73
11	Appendix	75
11.1	Speed limits of the machine according to walking foot stroke	79
11.2	Stroke limits of the walking foot according to material	79

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. 69).


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. 53) 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.

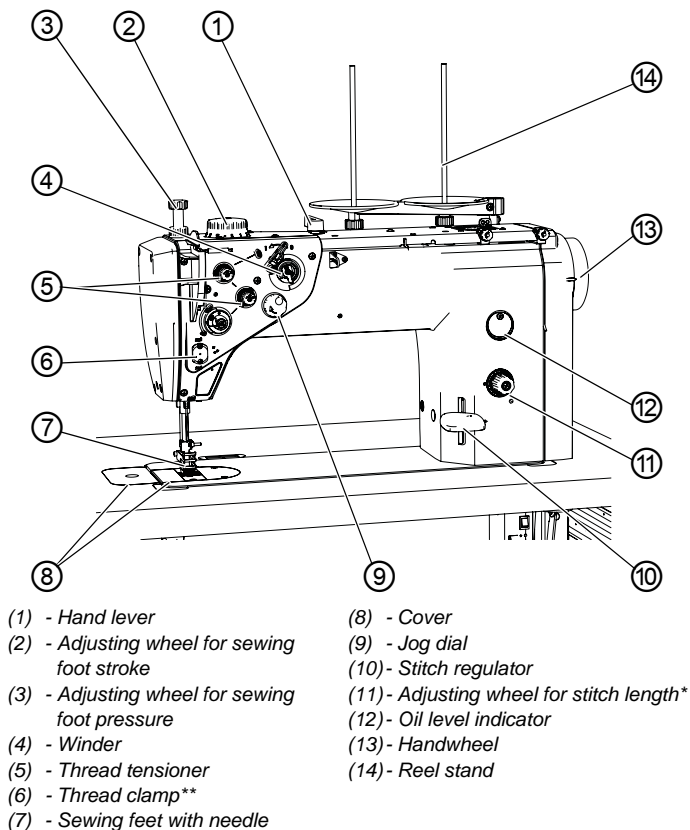
Measures for avoiding the danger.

- ↪ 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), machines with standard arm



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. 73) 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.

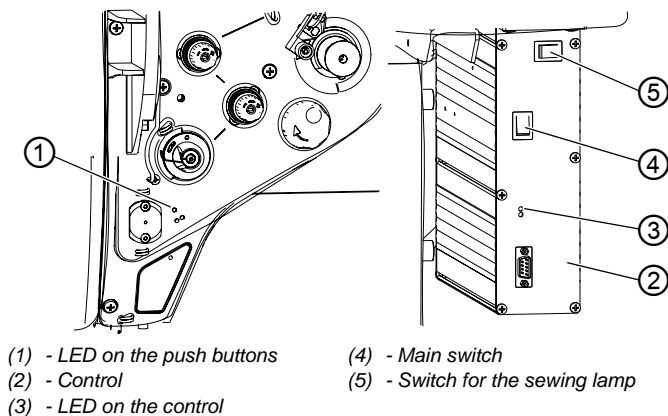
If possible, make preparations only when the machine is switched off.

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

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

4.2 Switching on and off the machine


Fig. 2: Switching on and off the machine



Switching on the machine




To switch on the machine:

1. Press the main switch (4) on the control (2) to position **I**.
 LEDs (1) and (3) illuminate.

Switching off the machine



To switch off the machine:

1. Press the main switch (4) on the control (2) to position **0**.
 LEDs (1) and (3) turn off.

4.3 Inserting or 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

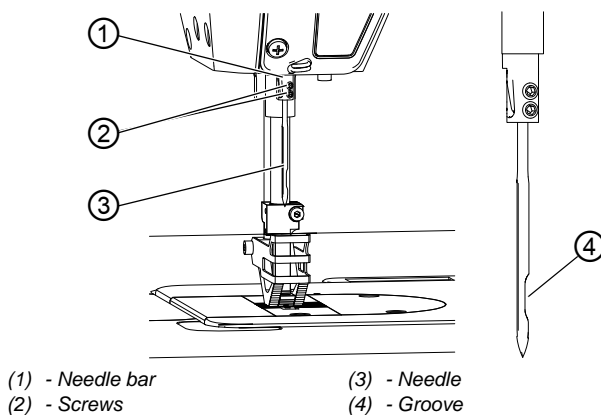
Disturbance after inserting a shorter needle:

- 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 or changing the needle



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!

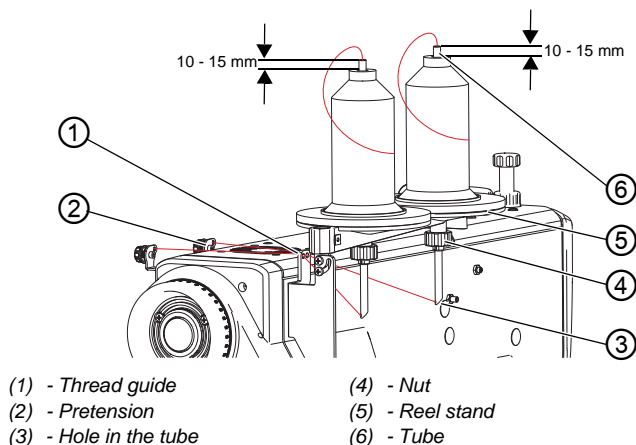
An incorrect tube height setting may lead to tension deviations as a result of the thread becoming caught or jammed.

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

Set the height of the tube as specified above.

Feeding the needle thread from the thread reel to the machine

Fig. 4: Feeding the needle thread from the thread reel to the machine



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

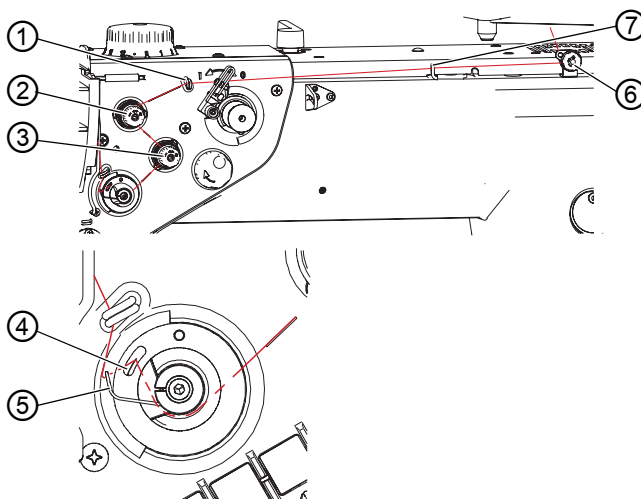


To thread the needle thread:

1. Switch off the machine.
2. Fit the thread reel on the reel stand (5).
3. Loosen the nut (4).
4. Set the tube (6) to the height specified above.
5. Turn the tube so that the opening (3) faces the thread guide (1).
6. Tighten the nut (4).
7. Feed the needle thread to the pretension (2) by inserting it through the tube (6), the opening (3) and the thread guide (1).

Threading the needle thread

Fig. 5: Threading the needle thread (1)



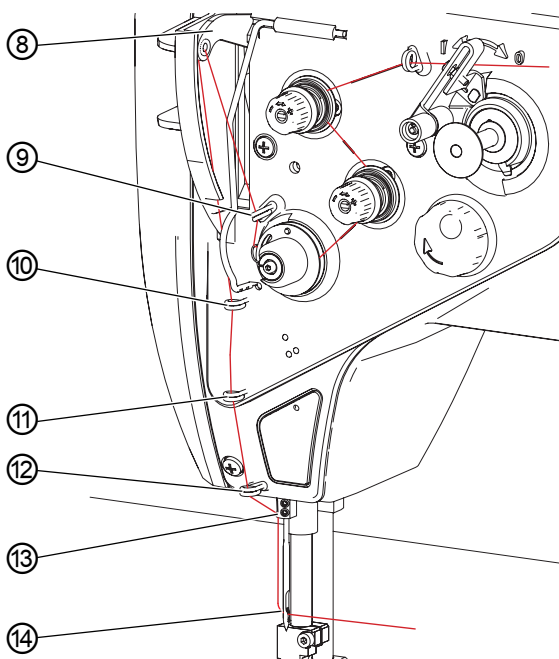
- | | |
|--------------------------|--------------------------------|
| (1) - Thread guide | (5) - Thread tensioning spring |
| (2) - Additional tension | (6) - Pretension |
| (3) - Main tension | (7) - Thread guide |
| (4) - Thread guide | |



8. Turn handwheel until the thread lever is at the top dead center.

9. Thread the needle thread clockwise from the rear around the pretension (7).
10. Feed the needle thread through thread guides (7) and (1).
11. Guide the needle thread counterclockwise through the additional tensioner (2).
12. Feed the needle thread clockwise through the main tensioner (4).
13. Guide the needle thread through the thread guide (5) and under the thread tensioning spring (5).
The thread tensioning spring (5) pulls the needle thread down.

Fig. 6: Threading the needle thread (2)



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

- (12) - Thread guide
(13) - Thread guide on the needle bar
(14) - Needle eye



14. Feed the needle thread through thread guide (9).
15. Feed the needle thread through the thread lever (8).
16. Feed the needle thread through thread guide (10).

17. Feed the needle thread through thread guides (11) and (12).
18. Feed the needle thread through the thread guide on the needle bar (13).
19. Feed the needle thread through the needle eye (14) from the left.
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

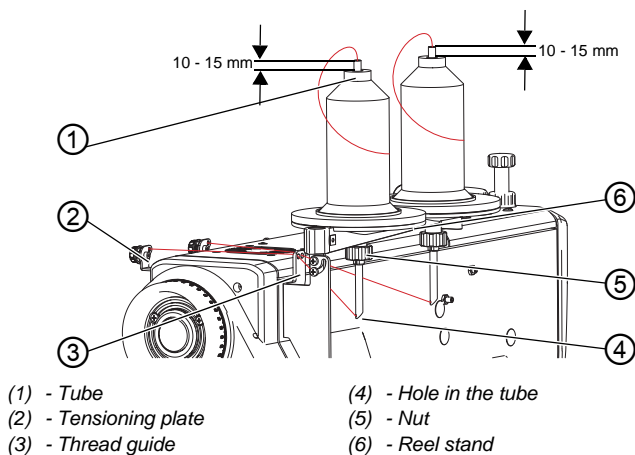
Property damage may occur!

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.

Set the height of the tube as specified above.

Fig. 7: Winding the hook thread (1)

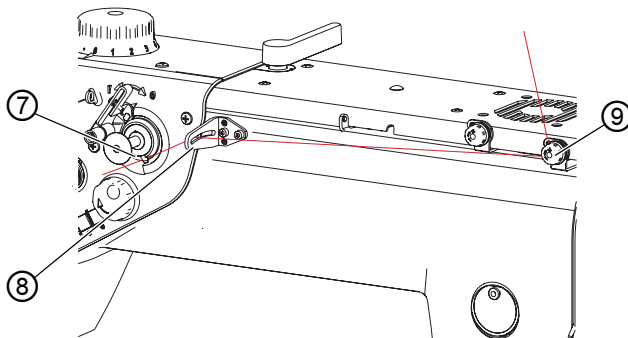


To wind the hook thread:

1. Fit the thread reel on the reel stand (6).
2. Loosen the nut (5).

3. Set the tube (1) to the height specified above.
4. Turn the tube so that the opening (4) faces the thread guide (3).
5. Tighten the nut (5).
6. Feed the hook thread to the tensioning plate (2) by inserting it through the tube (1), the opening (4) and the thread guide (3).

Fig. 8: Winding the hook thread (2)



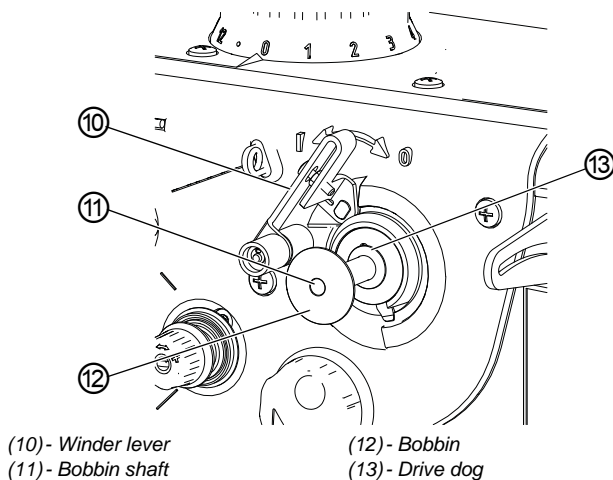
(7) - Thread-pulling knife
(8) - Thread guide

(9) - Thread tension plate



7. Feed the hook thread clockwise through the thread tension plate (9).
8. Feed the hook thread through thread guide (8).
9. Clamp the hook thread under the thread-pulling knife (7) and tear off the protruding remaining thread.

Fig. 9: Winding the hook thread (3)



10. Fit the bobbin (12) onto bobbin shaft (11) and drive dog (13).
11. Switching on the machine
12. Press the bobbin lever (10) to the I position.

4.6 Changing the bobbin

CAUTION

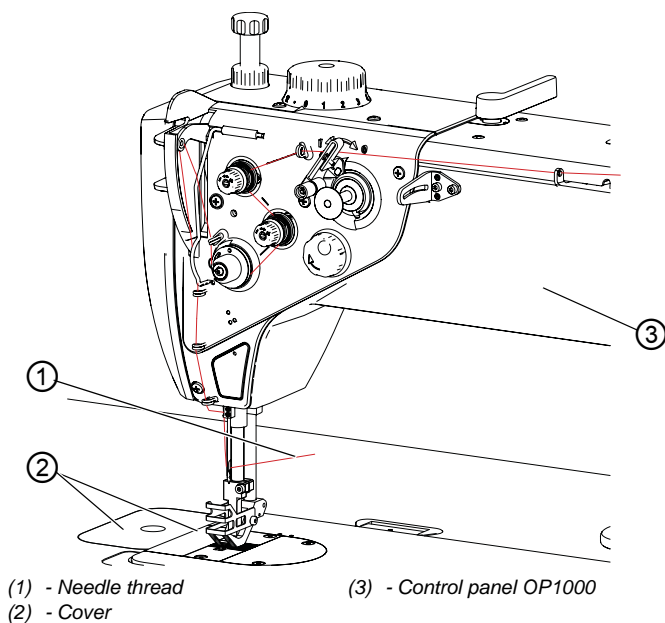


Risk of injury from sharp and moving parts!

Puncture or crushing possible.

Switch off the machine before changing the bobbin.

Fig. 10: Changing the bobbin (1)



To change the bobbin:


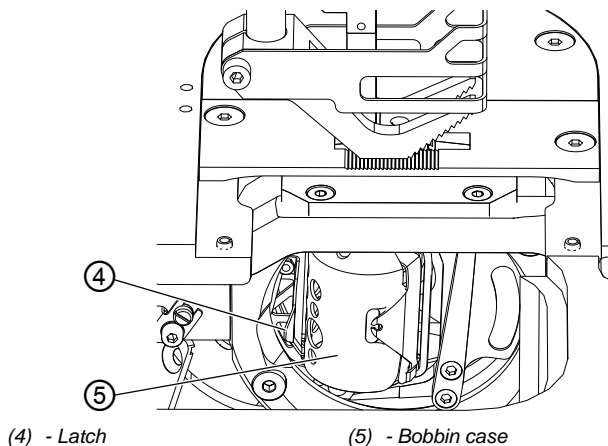
1. Press the **F** button on the OP1000 control panel (3).
 The machine rotates automatically to the position necessary for the bobbin change.
2. Switch off the machine.
3. Remove the cover (2).



Fig. 11: Changing the bobbin (2)




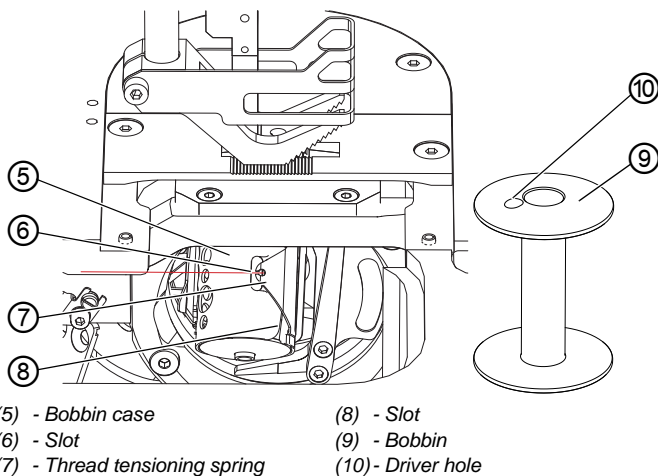

4. Open the latch (4).
-  The bobbin case (5) opens, and the bobbin is pushed out.

Fig. 12: Changing the bobbin (3)



- 
- Remove the empty bobbin (9).
 - Insert the full bobbin into the bobbin case (5).
Make sure that the driver hole (10) is pointing to the bobbin case.

7. Press in the bobbin case (5) until the latch (4) engages.
8. Feed the hook thread through the slot (8).
9. Feed the hook thread under the thread tensioning spring (7) and to the slot (6).
10. Pull the hook thread out 100 mm to 150 mm through the slot (6).
11. Put the cover back on.
12. 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.
13. Elongate needle thread and hook thread.
14. Shorten needle thread and hook thread to 70 mm.
15. Switch on the machine.

**Important**

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

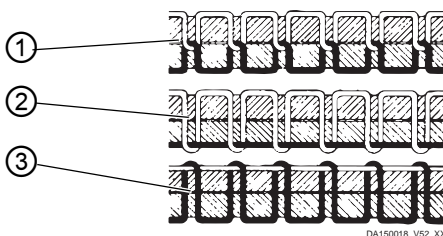
4.7 Thread tension

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. 13: thread tension



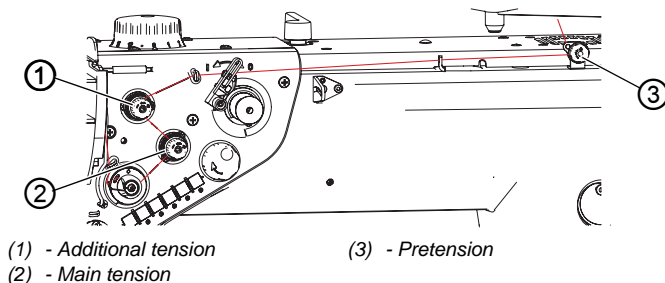
- (1) - Identical needle thread and hook thread tension
 (2) - Hook thread tension higher than needle thread tension
 (3) - Needle thread tension higher than hook thread tension

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. 14: Adjusting the needle thread tension

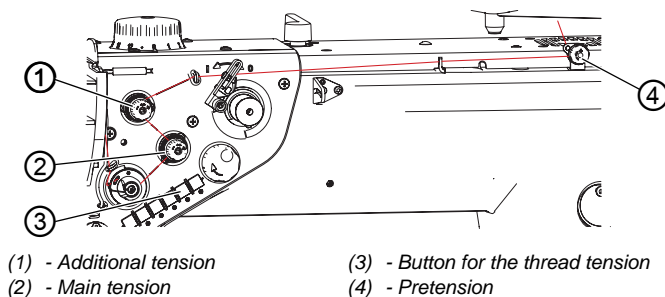


To adjust the needle thread tension:

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 counter-clockwise

Check needle thread tension

Fig. 15: Check 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 counter-clockwise
- ✎ 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

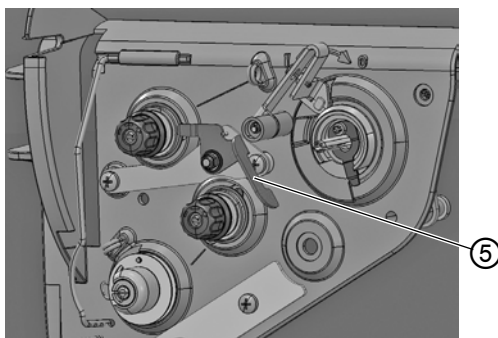
Due to excessively high tension:

- Ruffing on the seam
- Thread breaking
- 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. It can be switched on or off manually via the release lever (5).

Fig. 16: Additional tension



(5) - Release lever



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.

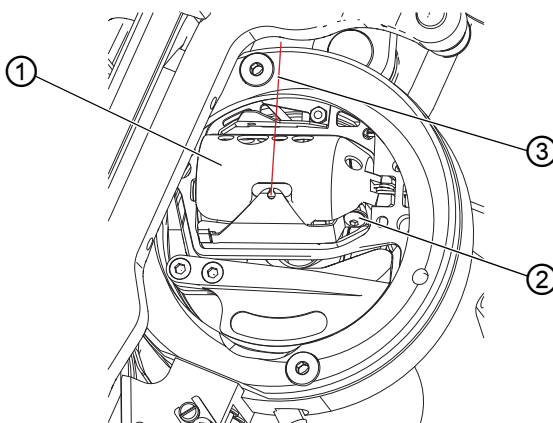
NOTICE**Property damage may occur!**

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. 17: Adjusting the hook thread tension



(1) - Bobbin case
(2) - Adjusting wheel

(3) - Hook thread



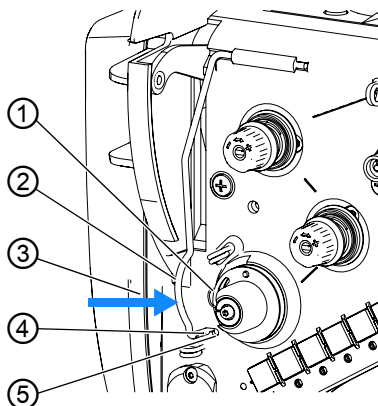
To adjust the hook thread tension:

1. Tilt the machine head.
2. Turn the handwheel until the bobbin case (1) 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 (1) as possible.

4. Turn the adjusting wheel (2).
 - Increase the hook thread tension: Turn the adjusting wheel (2) clockwise
 - Reduce the hook thread tension: Turn the adjusting wheel (2) counterclockwise.

4.7.3 Adjusting the needle thread regulator

Fig. 18: Adjusting the needle thread regulator



- | | |
|--------------------------------|--|
| (1) - Thread tensioning spring | (4) - Positions of the needle thread regulator |
| (2) - Needle thread regulator | (5) - Slot |
| (3) - Opening direction | |

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.

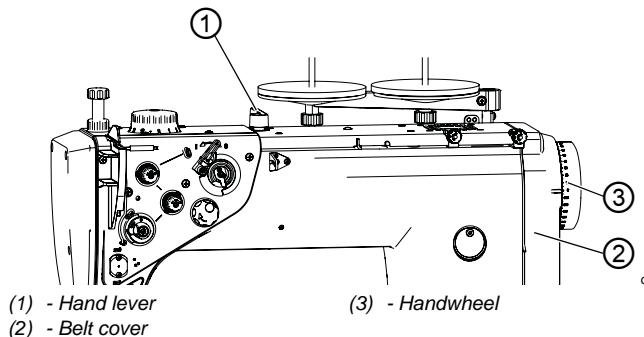
Do not reach into the needle tip.

Do not reach into the thread lever.

Do not reach into the sewing feet.

Manual positioning of the needle is possible on machines with 9880 969002 drive package.

Fig. 19: Machines with standard arm





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. 20: Lifting the sewing feet with the pedal



(1) - Pedal



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).

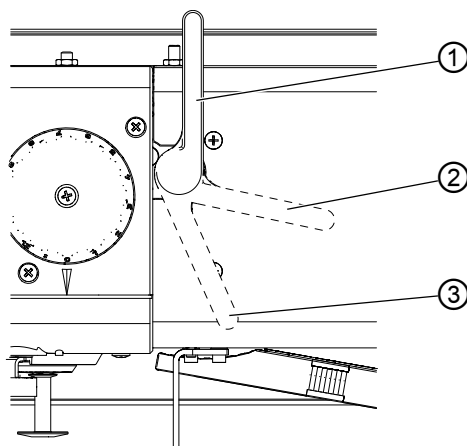


The sewing feet are lowered.

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. 21: Lifting the sewing feet manually



(1) - Lever in position 0



(3) - Lever in position 2

(2) - Lever in position 1

Lifting the sewing feet




To lift the sewing feet manually:

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

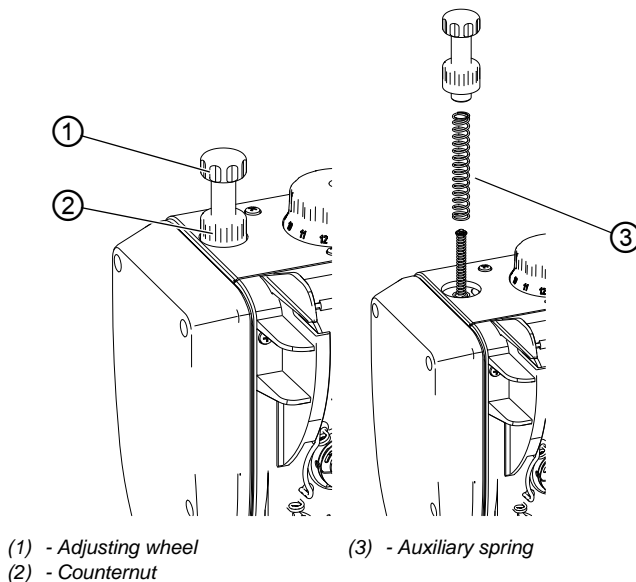
Excessively high sewing foot pressure:

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

Excessively low sewing foot pressure:

- Slipping of the sewing material

Fig. 22: 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 set 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

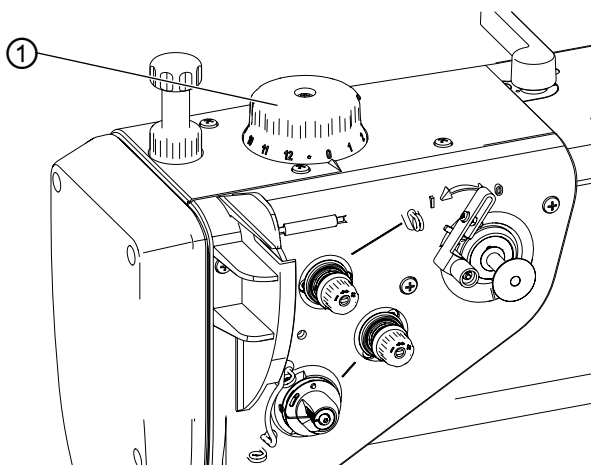
Excessively high sewing foot stroke:

- 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. 23: Adjusting the sewing foot stroke



(1) - Adjusting wheel



To set the sewing foot stroke:

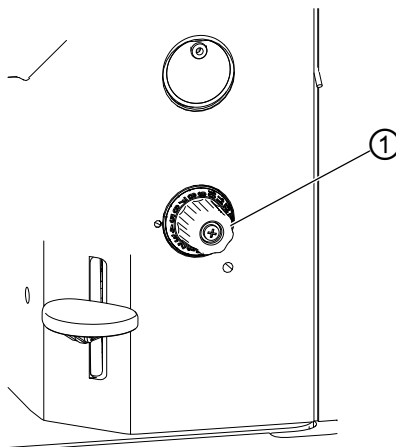
1. Turn the adjusting wheel (1).
 - Increase sewing foot stroke: turn clockwise
 - Reduce sewing foot stroke: turn counterclockwise

4.10 Stitch length

4.10.1 Adjusting the stitch length

The stitch length can be adjusted continuously between 0 and 15 mm.

Fig. 24: Adjusting the stitch length



(1) - Adjusting wheel

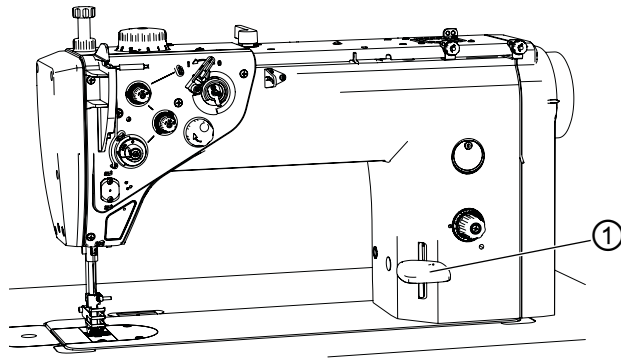


To adjust the stitch length:

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

4.10.2 Sewing backwards

Fig. 25: 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.

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
Removing sewing dust and thread residues	●			
Checking 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.

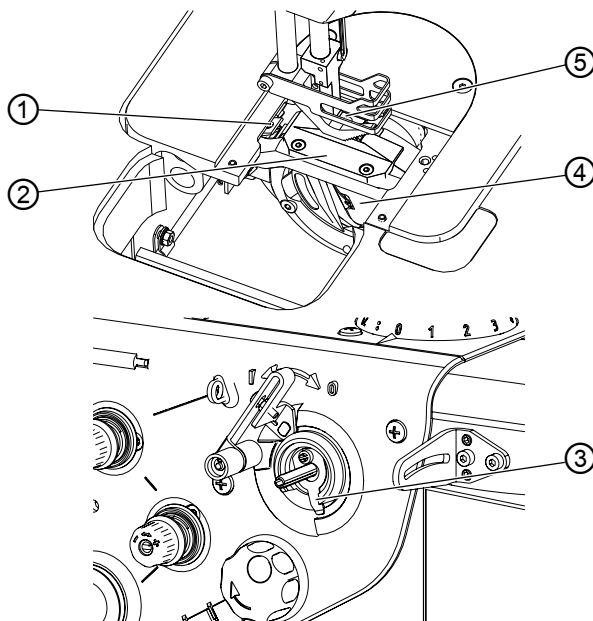
NOTICE

Property damage from solvent-based cleaners!

Solvent-based cleaners will damage paintwork.

Use only solvent-free substances for cleaning.

Fig. 26: Cleaning



(1) - Thread trimmer

(2) - Feed dog

(3) - Thread-pulling knife

(4) - Hook

(5) - Area around the needle

Points that need to be cleaned particularly thoroughly:

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



To clean the machine:

1. Switch off the machine.
2. Remove the throat plate.
3. 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:

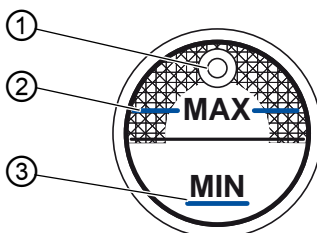
- Viscosity at 40 °C: 10 mm²/s
- Flash point: 150 °C

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. 27: Checking the oil level



(1) - Oil filler opening

(3) - Minimum level marking

(2) - Maximum 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.

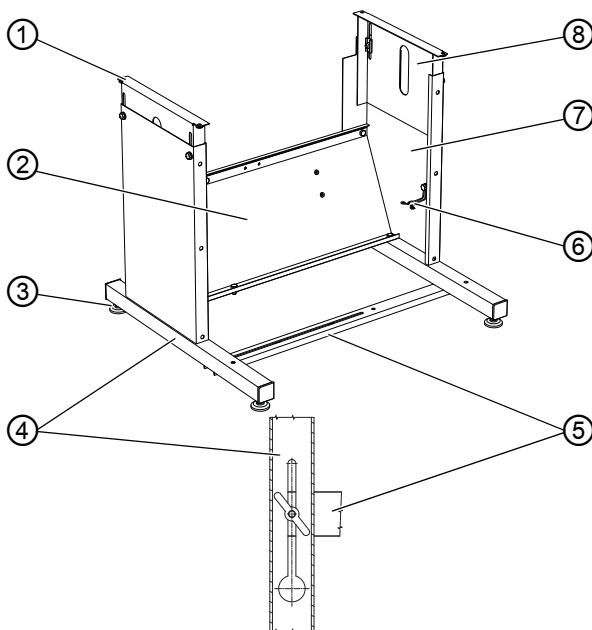
6.2 Removing the transport locks

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

Fig. 28: Assembling the 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 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

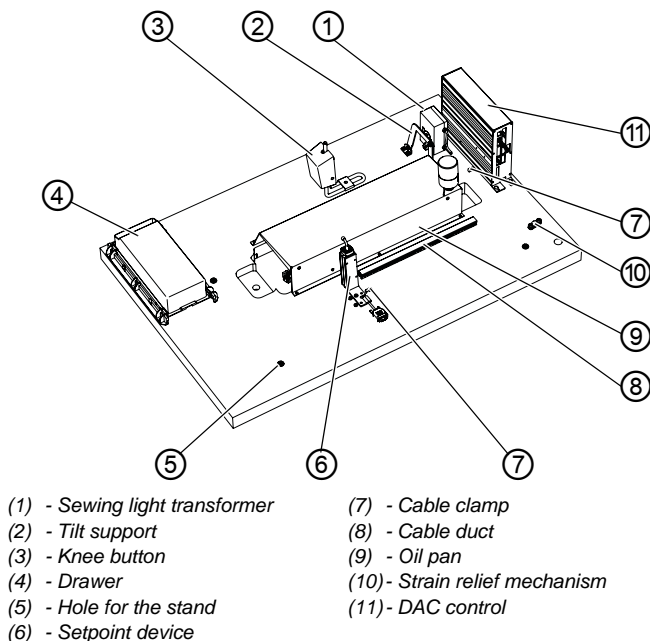
Turn the feet (3) so that the stand has even contact with the ground.

6.4 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. 75) as a template.

6.4.1 Completing the tabletop

Fig. 29: Completing the tabletop (1)



Information

If the machine is equipped with a sewing lamp, start by connecting the sewing lamp transformer (1) to the control (11).

The connection terminal strip is only accessible when removed.

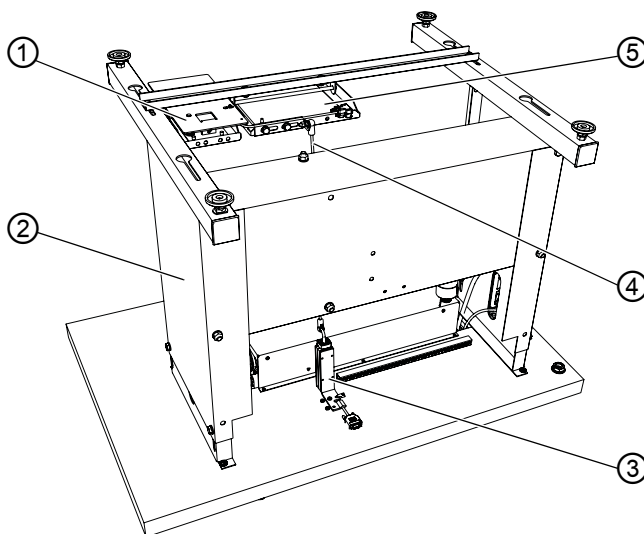


To complete the tabletop:

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. Assemble the connecting cable with strain relief mechanism (10) to the tabletop.
4. Assemble loose cables (7) to the tabletop using cable clamps.
5. Drill the holes for the stand (5) as provided in the drawing.

6.4.2 Assembling the tabletop

Fig. 30: Assembling the tabletop



- (1) - Foot button
(2) - Stand
(3) - Setpoint device

- (4) - pull rod
(5) - Pedal



To assemble the 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).

6.5 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



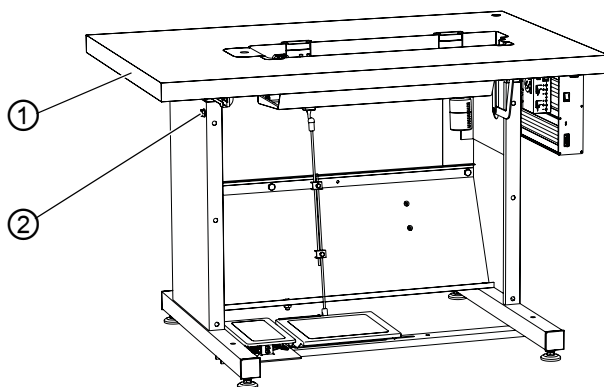
Risk of musculoskeletal damage from incorrect setting!

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 set continuously 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.



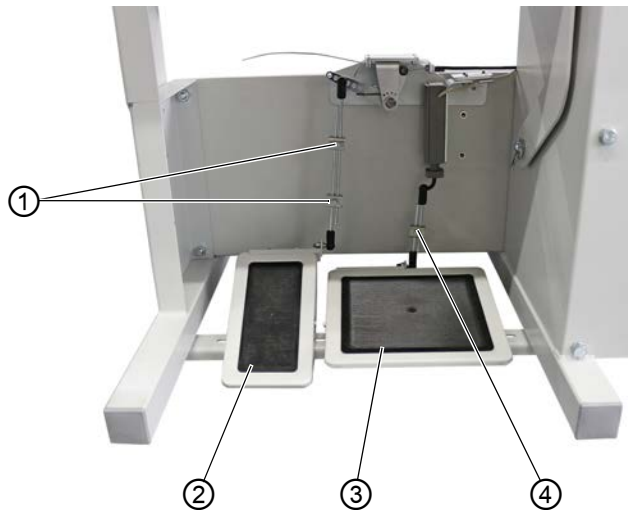
Important

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.

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.

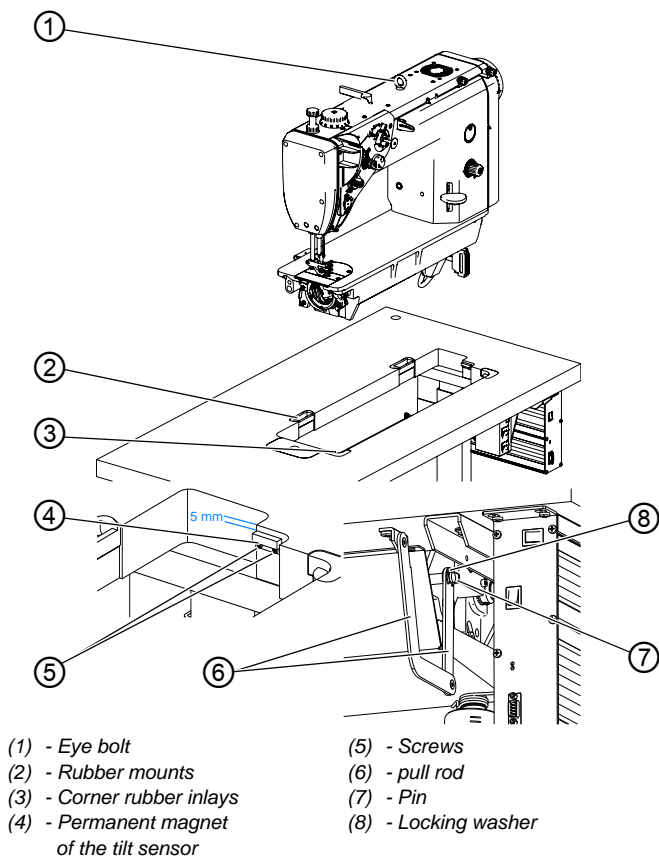
NOTICE

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 the tilt mechanism has been assembled.

Fig. 33: Inserting the machine head (1)

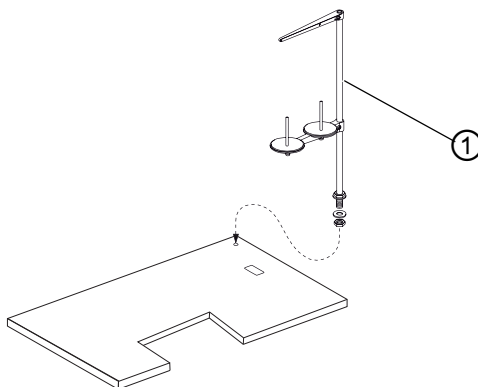


To insert the machine head:

1. Insert the rubber mounts (2) and tighten.
2. Insert the rubber corner inlays (3).
3. Tighten the permanent magnet of the tilt sensor (4) using the screws (5).
4. Insert the eye bolt (1) into the machine head.
5. Use a crane to insert the machine head into the tabletop cutout.
6. Connect the pull rod (6) of the tilt mechanism to the pin (7) of the machine and secure it using the locking washer (8).

6.8 Assembling the reel stand

Fig. 34: Assembling the reel stand



(1) - Reel stand



To assemble the reel stand:

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.

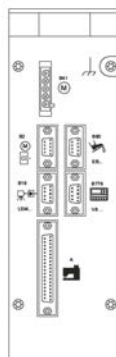


6.9.1 Connecting the control

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. 35: 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. 47).

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

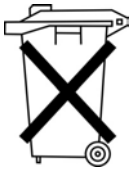
CAUTION



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 cause	Remedial action
Unthreading at seam beginning	Needle thread tension is too firm	Check pretension
	Needle thread was cut at the wrong time	 <i>Service Instructions</i>
	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 of needle thread and hook thread
	Needle is <ul style="list-style-type: none"> • bent • sharp-edged • not properly inserted 	Insert new needle
	Yarn is <ul style="list-style-type: none"> • knobby • hard • too thick 	Use recommended yarn
	Thread tension is set too firm	Check thread tension
	Thread-guiding parts are sharp-edged	Check the thread path
	Throat plate or hook has been damaged by the needle	Have parts replaced

Error	Possible cause	Remedial action
Skip stitch	Needle is <ul style="list-style-type: none"> • blunt • bent • not properly inserted 	Insert new needle
	Needle thread and hook thread have not been threaded correctly	Check threading path of needle thread and hook thread
	Thread tension is set too firm	Check thread tension
	Sewing material is not held correctly	Check sewing foot pressure
	Needle thickness is incorrect	Use recommended needle thickness
	Throat plate or hook has been damaged by the needle	Have parts replaced
	Hook is set incorrectly	 <i>Service Instructions</i>
Loose stitch	Thread tension not adjusted to <ul style="list-style-type: none"> • Sewing material • Sewing material thickness • Thread 	Check thread tension
	Needle thread and hook thread have not been threaded correctly	Check threading path of needle thread and hook thread
	Thread tensioning spring not working	 <i>Service Instructions</i>
Needle breakage	Needle thickness not suitable for <ul style="list-style-type: none"> • Sewing material • Sewing material thickness • Thread 	Alter needle thickness

10 Technical data

10.1 Data and characteristic values

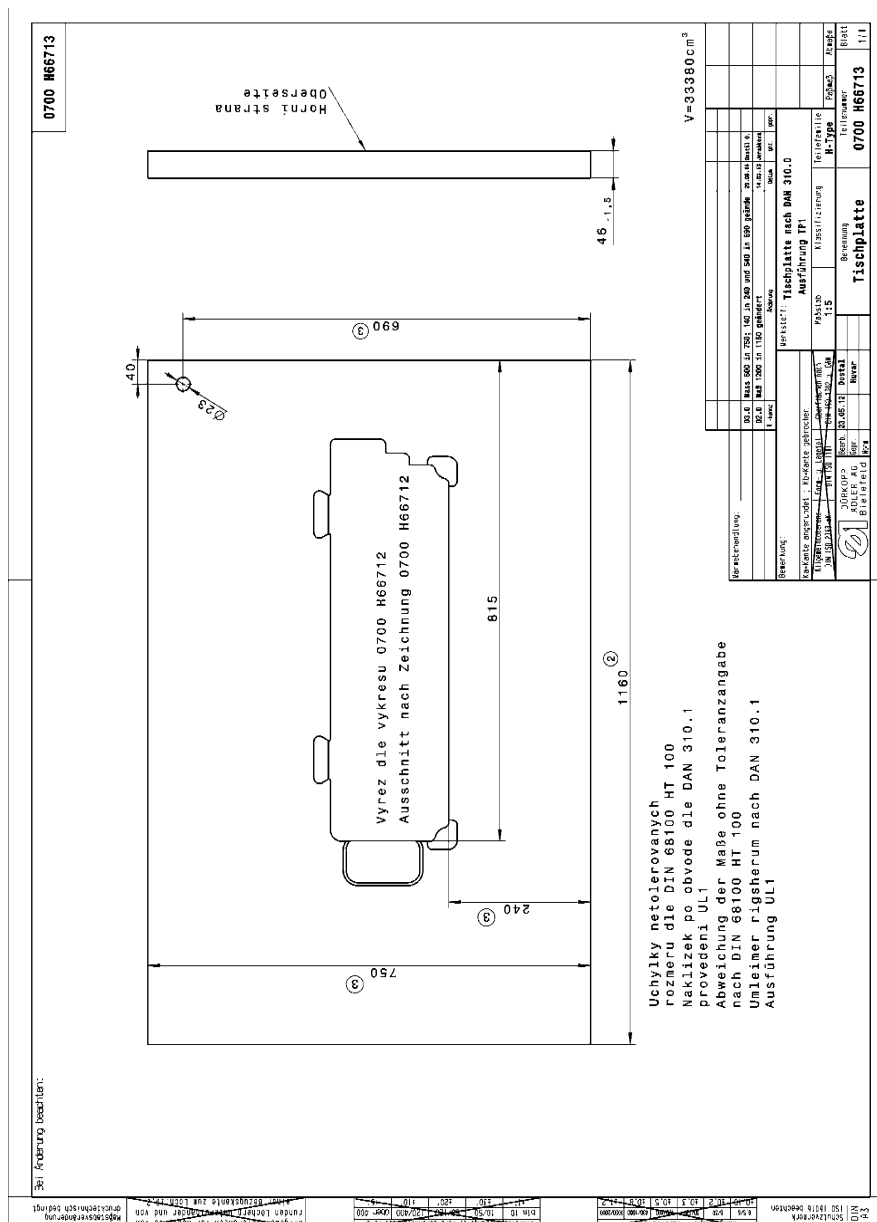
Technical data	Unit	967 PURE
Machine type		Lockstitch 301
Hook type		Barrel shuttle, XL large
Number of needles		1
Needle strength	[Nm]	120-280
Thread strength	[Nm]	40/3-5/3 (needle thread) 60/3-8/3 (hook thread)
Stitch length	[mm]	15/15
Speed maximum	[min ⁻¹]	800
Speed on delivery	[min ⁻¹]	800
Mains voltage	[V]	230
Mains frequency	[Hz]	50/60
Length	[mm]	700
Width	[mm]	250
Height	[mm]	420
Weight	[kg]	90

10.2 Requirements for fault-free operation

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

11 Appendix

Fig. 36: Tabletop drawing (1)

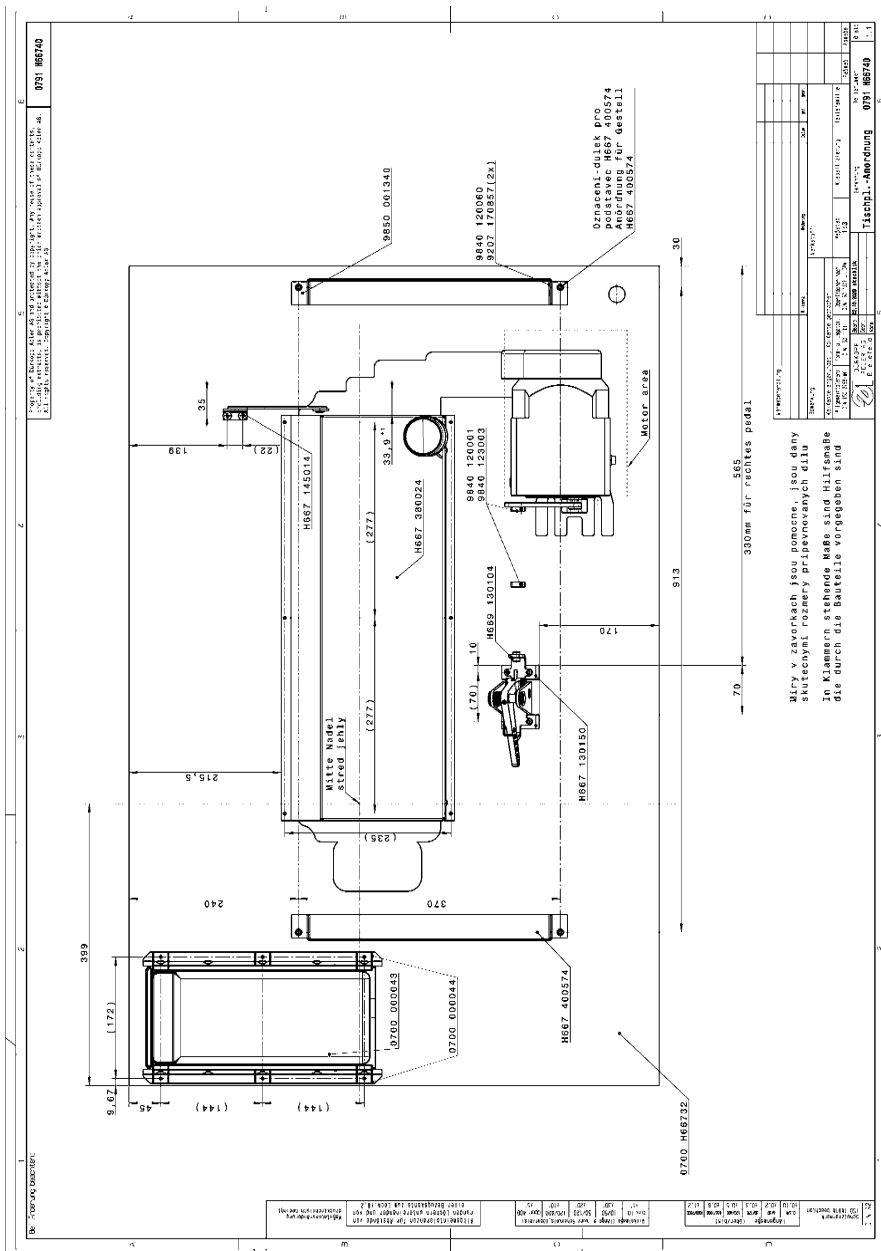


Technical drawing of a rectangular table with dimensions 750x1160x46. The drawing shows a top view and a side view. The top view is a rectangle with a width of 750 and a length of 1160. The side view shows a thickness of 46. The table has a central rectangular cutout with a width of 690 and a length of 815. The cutout has rounded corners with a radius of 240. The text "Vyrez die vykresu 0700 H66731 Ausschnitt nach Zeichnung 0700 H66731" is written inside the cutout. The drawing is labeled "Horní strana" (top side) and "Dobrá strana" (good side).

967 PURE - 00.0 - 12/2020



Fig. 39: Tabletop arrangement (2)



11.1 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

11.2 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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