

H867

**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 ( $\square$  p. 75).

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

#### 1.1 For whom are these instructions intended?

These instructions are intended for:

#### Operators:

This group is familiar with the machine and has access to the instructions. Specifically, chapter **Operation** ( $\square$  *p.* 15) is important for the operators.

#### Specialists:

This group has the appropriate technical training for performing maintenance on the sewing unit or repairing malfunctions. Specifically, the chapter **Setup** ( $\square$  *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** ( $\square$  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**

Indicates proper setting.





#### Disturbance

Specifies the disturbances that can occur due to an incorrect setting.



#### Cover

Specifies which covers have to be removed 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. 1. First step
- 2. Second step

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

Lists are marked by bullet points.

## Result of performing an operation

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



#### **Important**

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



#### Information

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



#### Order

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



#### References

Reference to another section in these instructions.

Safety

Important warnings for the machine users are specially designated. Since safety is of particular importance, hazard symbols, levels of danger and their signal words are described separately in the chapter **Safety** ( p. 7).

**Orientation** If no other clear location markers are used in a diagram, indications of **right** or **left** are always from the operator'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 these components is described in each manufacturer's instructions.

#### 1.4 Liability

All information in these instructions was compiled with consideration to the state of the art, and applicable standards and regulations.

Dürkopp Adler cannot be held liable for damage resulting from:

- Breakage and damage during transport
- Failure to observe these instructions
- Improper use
- · Unauthorized modifications to the machine
- Use of untrained personnel
- Use of unapproved replacement 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 applies even if the packaging is undamaged.

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. Always follow the information included in this section. Failure to do so can result in serious injury and property damage.



## 2.1 Basic safety instructions

The machine should 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 regulations in 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 spare parts could impair safety and damage the machine. Only use original spare parts from the manufacturer.

#### Transport

Use a sturdy lifting carriage or forklift truck for transporting the machine. Raise the machine max. 20 mm and secure it to prevent it from slipping off.

#### Setup

The power cable must have a plug that is authorized for use in the country in which the machine is being used. The power plug may only be connected to the power cable by qualified specialists.

## Obligations of the operator

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



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

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

## Requirements to be met by the personnel

Only qualified specialists may:

- · set up the machine
- carry out maintenance work and repairs
- · carry out work on electrical equipment

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

#### Operation

Inspect the machine while in use for any externally visible damage. Stop working if you notice any changes to the machine. Report any changes to your supervisor. Machines must no longer be used if they are damaged.

## Safety equipment

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

## 2.2 Signal words and symbols used in warnings

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



## **Signal words** Signal words and the hazard that 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) Non-compliance may result in property damage

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

Symbol	Type of danger
	General
4	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.

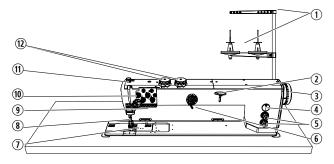




## 3 Machine Description

## 3.1 Components of the machine

Fig. 1: Components of the machine



- (1) Thread guide with thread reel holder
- (2) Stitch adjustment lever
- (3) Handwheel
- (4) Oil level indicator
- (5) Stitch length adjusting wheels
- (6) Winder for the hook thread
- (7) Hook (under the throat plate slides)
- (8) Sewing feet and needle
- (9) Push buttons on the machine arm
- (10) Thread tensions
- (11) Adjusting wheel for the sewing foot pressure
- (12) Adjusting wheels for the sewing foot stroke

## 3.2 Proper use

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

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

The needle thicknesses permissible for the machine are listed in the **Technical data** ( $\square$  *p. 79*) chapter.

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

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

The machine is intended for industrial use.



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

Only authorized persons may work on the machine.

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

#### WARNING



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

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

Observe all instructions provided.

#### NOTICE

Non-observance will lead to property damage!

Improper use can result in material damage at the machine.

Observe all instructions provided.

## 3.3 Declaration of Conformity

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



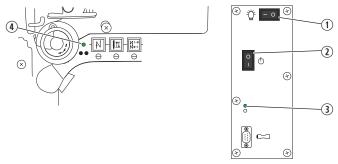


## 4 Operation

## 4.1 Switching on and off the machine

The main switch (2) on the controller is used to switch the machine on and off.

Fig. 2: Switching on and off the machine



- (1) Switch for the sewing lamp
- (2) Main switch

- (3) LED on the controller
- (4) LED on the push buttons

### Switching on the machine

- This is how you switch on the machine:
  - Turn the main switch (2) to the I position.

#### Switch off the machine.

- This is how you switch off the machine:
  - 1. Turn the main switch (2) to the 0 position.
  - ♦ LEDs (3) and (4) turn off.



## 4.2 Inserting and replacing the needle

#### **CAUTION**



## Risk of injury from sharp parts!

Puncture.

Only change the needle with the machine switched off.

#### **NOTICE**

#### Property damage may occur!

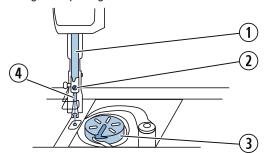
Damage to the hook point or needle possible due to incorrect distance from the hook.

The distance between the hook and the needle only needs to be adjusted if the new needle has a different size.

After changing the needle size, adjust the hook distance.

See A Service Instructions.

Fig. 3: Inserting and replacing the needle



- (1) Needle bar
- (2) Screw

- (3) Hook
- (4) Needle groove

## To insert the needle:

 Turn the handwheel until the needle bar (1) reaches the upper end position.



- 2. Loosen the screw (2).
- 3. Pull the needle out towards the bottom.
- 4. Insert the new needle.

## Ţ

#### **Important**

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

5. Tighten the screw (2).



#### Information

In machines operating with two needles, the  $2^{nd}$  needle is inserted in the same way as the  $1^{st}$  needle.

Align the needles in such a way that the grooves face away from each other. Each groove then faces the hook that belongs to this needle.



## 4.3 Threading the needle thread

#### **CAUTION**



## Risk of injury from sharp parts!

Puncture.

Only thread the needle thread with the machine switched off.

Fig. 4: Thread needle thread I



- (1) Guide on the thread guide(2) Thread reel holder
- (3) Additional guide on the machine arm

#### In 1-needle machines

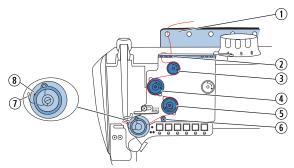


Thread the needle thread as follows in 1-needle machines:

- 1. Fit the thread reel on the reel stand (2).
- 2. Insert the thread from the rear to the front through a hole in the thread guide (1).
- 3. Insert the thread from the right to the left through a hole in the additional guide on the machine arm (3).



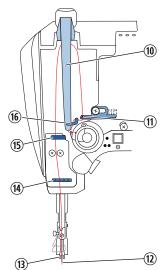
Fig. 5: Thread needle thread II



- (1) 1st Thread guide
- (2) 2<sup>nd</sup> Thread guide
- (3) Pre-tensioner
- (4) Additional tensioner
- (5) Main tensioner
- (6) Additional thread guide bolt
- (7) Thread tensioning spring
- (8) Lug of the guide rail
- 4. Insert the thread from the rear to the front through the left hole in the 1<sup>st</sup> thread guide (1).
- 5. Insert the thread in a wavelike manner through the 3 holes of the 2<sup>nd</sup> thread guide (2). From above to below through the right hole, then from below to above through the hole in the middle and finally from below to above through the left hole.
- 6. Guide the thread clockwise around the pre-tensioner (3).
- 7. Guide the thread counterclockwise around the additional tensioner (4).
- 8. Guide the thread clockwise around the main tensioner (5).
- 9. Guide the thread over the additional thread guide bolt (6) to the thread tensioning spring.
- 10. Guide the thread through the thread reel.
- 11. Lift the thread tensioning spring (7) with the thread.
- 12. Pull the thread under the lug of the guide disk (8).



Fig. 6: Thread needle thread II



- (10) Thread lever
- (14) lower thread guide
- (11) Thread regulator
- (15) upper thread guide

(12) - Needle eye

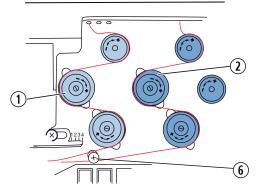
- (16) Hook
- (13) Thread guide needle bar
- 13. Guide the thread under the hook (16).
- 14. Insert the thread from bottom to top through the hole on the thread regulator (11).
- 15. Insert the thread from the right to the left through the thread lever (10).
- 16. Insert the thread through the upper thread guide (15).
- 17. Insert the thread through a hole in the lower thread guide (14).
- 18. Insert the thread through the thread guide on the needle bar (13).
- 19. Insert the thread through the needle eye (12) in such a way that the loose thread end faces the hook.
- Pull the thread through the needle eye (12) until the loose thread end in the highest position at the thread lever (10) has a length of approx. 4 cm.



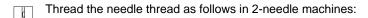
#### In 2-needle machines

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

Fig. 7: Thread needle thread II



- (1) Tensioning screw triangle for the 1<sup>st</sup> needle thread
- (6) Additional thread guide bolt
- (2) Tensioning screw triangle for the 2<sup>nd</sup> needle thread



 Thread the left needle thread as described above for a 1-needle machine ( p. 18).

## •

#### **Important**

Guide the left needle thread through the rear thread reel of the thread tensioning spring (7).

- 2. Insert the right needle thread from the rear to the front through the left hole in the 1<sup>st</sup> thread guide (1).
- 3. Insert the thread in a wavelike manner through the 3 holes of the 2<sup>nd</sup> thread guide (2). From above to below through the right hole, then from below to above through the hole in the middle and finally from below to above through the left hole.
- 4. Guide the thread clockwise around the pre-tensioner of the 2<sup>nd</sup> tensioning screw triangle.
- 5. Guide the thread counterclockwise around the additional tensioner of the 2<sup>nd</sup> tensioning screw triangle.
- Guide the thread clockwise around the main tensioner of the 2<sup>nd</sup> tensioning screw triangle.



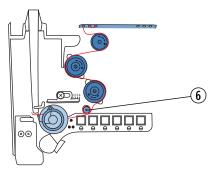
- 7. Guide the thread under the additional thread guide bolt (6) to the thread tensioning spring.
- 8. Guide the thread through the front thread reel.
- 9. Lift the thread tensioning spring (7) with the thread.
- 10. Pull the thread under the lug of the guide disk (8).
- The remaining steps of the threading process are identical to the threading process in 1-needle machines.



#### Information

The accessory pack includes 2 tensioning springs with greater thickness that make it possible to increase the thread tension for heavy sewing material.

To increase the thread tension even further for sewing material that is particularly heavy, wind the needle thread once around the additional thread guide bolt (6) in clockwise direction.



## 4.4 Winding the bobbin thread

#### CAUTION



### Risk of injury from sharp parts!

Puncture.

Only thread the bobbin thread with the machine switched off.



Fig. 8: Winding the bobbin thread I



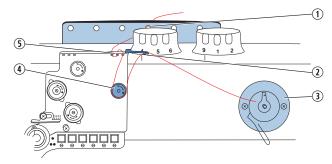
- (1) Guide on the thread guide
- (2) Thread reel holder
- (3) Additional guide on the machine arm



#### You wind the bobbin thread as follows:

- 1. Fit the thread reel on the reel stand (1).
- 2. Insert the thread from the rear to the front through a hole in the thread guide (2).
- 3. Insert the thread from the right to the left through a hole in the additional guide on the machine arm (3).

Fig. 9: Winding the bobbin thread II



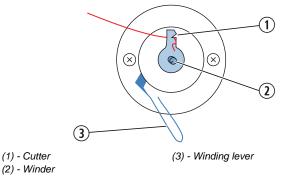
- (1) 1<sup>st</sup> Thread guide
- (2) Bobbin thread guide
- (3) Winder

- (4) Bobbin thread winding tensioner
- (5) 2<sup>nd</sup> Thread guide
- 4. Insert the thread from the rear to the front through the right hole in the 1<sup>st</sup> thread guide (1).
- Insert the thread in a wavelike manner through the 3 holes of the 2<sup>nd</sup> thread guide (5): from top to bottom through the left



- hole, from bottom to top through the hole in the middle and finally from top to bottom through the right hole.
- 6. Guide the thread clockwise around the hook thread winding tensioner (4).
- 7. Insert the thread in a wavelike manner through the 2 holes of the hook thread guide (2): from bottom to top through the left hole and from top to bottom through the right hole.
- 8. Guide the thread to the bobbin (3).

Fig. 10: Winding the bobbin thread III



- Clamp the thread behind the cutter (1) and tear off the loose end behind it.
- 10. Fit the bobbin on the winder (2).
- Turn the bobbin clockwise until it clicks.
- 12. Pull the bobbin lever (3) up.



#### Information

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

### Winding the bobbin thread without sewing

Proceed as follows to wind the bobbin thread without sewing material:

1. Switch on the sewing machine.



- 2. Press the foot pedal forwards.
- The machine sews and winds the hook thread from the thread reel onto the bobbin.
- When the bobbin is full, the machine automatically stops winding. The bobbin lever moves down.
- The cutter is automatically moved into its basic vertical position.
- 3. Pull off the full bobbin.
- 4. Clamp the thread behind the cutter and tear the thread off.
- 5. Insert the full bobbin into the hook ( $\square$  *p. 25*).
- Repeat the winding-on procedure with an empty bobbin, as described above.

## 4.5 Replacing the hook thread bobbin

#### CAUTION

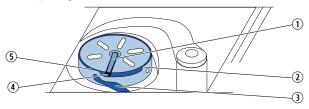


## Risk of injury from sharp parts!

Puncture.

Only change the hook thread bobbin with the machine switched off.

Fig. 11: Replacing the hook thread bobbin I



- (1) Bobbin case retainer
- (2) 1<sup>st</sup> Hook slot
- (3) Hook spring

- (4) Hook flap guide
- (5) 2<sup>nd</sup> Hook slot

Change the hook thread bobbin as follows:

1. Flip the bobbin case retainer up (1).



- 2. Remove the empty bobbin.
- 3. Insert a full bobbin.

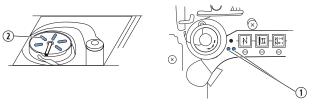
## Important

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

- 4. Guide the hook thread through the 1<sup>st</sup> hook slot (2).
- 5. Pull the hook thread under the hook spring (3).
- 6. Guide the hook thread through the 2<sup>nd</sup> hook slot (5).
- 7. Push the bobbin case retainer (1) down.
- 8. Insert the hook thread through the hook flap guide (4).
- 9. Turn the handwheel until the hook thread comes up.
- Pull the hook thread and needle thread back together and hold them tight when sewing starts, to avoid jamming the threads.

#### For machines with automatic remaining thread monitor

Fig. 12: Changing the hook thread bobbin II



(1) - LEDs for the remaining thread monitor

(2) - Vision slots on the bobbin

If the hook thread needs to be replaced, the LEDs (1) light up on the machine arm. The left LED is for the left-hand hook, and the right LED is for the right-hand hook.

To change the hook thread bobbin in machines with automatic remaining thread monitor:

 Insert the bobbin in the hook in such a way that the vision slots (2) are at the top. Otherwise, the remaining thread monitor will not work.

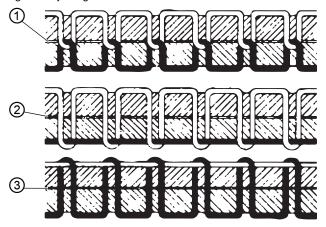


## 4.6 Adjusting the thread tension

The tension of the needle thread and hook thread determines where the thread interlaces.

If the tension of needle thread and hook thread is identical, the thread interlacing lies in the middle of the material to be sewn.

Fig. 13: Adjusting the 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

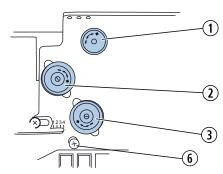
## 4.6.1 Setting the needle thread tension

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

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



Fig. 14: Setting the needle thread tension



(1) - Pre-tensioner

- (3) Main tensioner
- (2) Additional tensioner
- (6) Additional thread guide bolt

The main tensioner (3) determines the normal tension during sewing. The additional tensioner (2) increases the tension during sewing, e.g. for thickened seams. The additional tensioner (2) is switched on and off using the push buttons.

The pre-tensioner (1) holds the thread in position if the main tensioner (3) and additional tensioner (2) are completely open.



#### **Important**

The additional tension (2) must always be selected lower than the main tension (3).



You set the needle thread tension as follows:

- · To increase the tension: Turn adjusting wheel clockwise
- To reduce the tension: Turn adjusting wheel counterclockwise

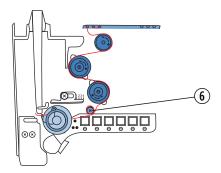




#### Information

The accessory pack includes 2 tensioning springs with greater thickness that make it possible to increase the thread tension for heavy sewing material.

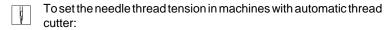
To increase the thread tension even further for sewing material that is particularly heavy, wind the needle thread once around the additional thread guide bolt (6) in clockwise direction.



(6) - Additional thread guide bolt

#### For machines with automatic thread cutter

The pre-tensioner (1) also determines the length of the initial thread for the new seam:



- Short initial thread: Turn the adjusting screw of the pre-tensioner (1) clockwise.
- Long initial thread: Turn the adjusting screw of the pre-tensioner (1) counterclockwise.



## 4.7 Setting hook thread tension

#### CAUTION

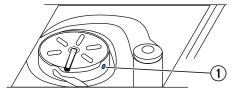


## Risk of injury from sharp parts!

Puncture.

Only set the hook thread tension with the machine switched off.

Fig. 15: Setting hook thread tension



(1) - Screw

You set the hook thread tension as follows:

- 1. Turn the screw (1).
  - To increase the tension: Turn screw (1) clockwise.
  - To reduce the tension: Turn screw (1) counterclockwise.

## 4.8 Setting the needle thread regulator

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

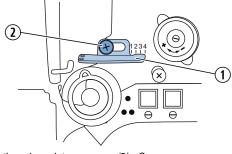


#### Proper setting

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



Fig. 16: Setting the needle thread regulator



(1) - Needle thread regulator

(2) - Screw

d l

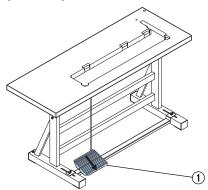
To set the needle thread regulator:

- 1. Loosen the screw (2).
  - To increase the tension: Slide the thread regulator (1) to the right
  - To reduce the tension: Slide the thread regulator (1) to the left.
- 2. Tighten the screw (2) again.

## 4.9 Lifting the sewing feet

The foot pedal is used while sewing to lift the sewing feet, e.g. to move the sewing material.

Fig. 17: Lifting the sewing feet



(1) - Foot pedal



Lift the sewing feet as follows:

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

## i

#### Information

If the foot pedal is pressed back completely, the machine sews an end strip and stops sewing.

Machines with automatic thread cutter cut the thread off.

## 4.10 Locking the sewing feet at top dead center

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

#### CAUTION



Risk of injury when lowering the sewing feet! Crushing.

Do not hold your hands under the sewing feet when top dead center is released via the pedal or lever.

Fig. 18: Locking the sewing feet at top dead center



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



d	To lock the sewing feet at top dead center:
	1. Push the lever down.
	To remove the positional lock:

1. Push the lever up.

OR

1. Press the foot pedal (1) halfway back.

## 4.11 Setting sewing foot pressure

The adjusting wheel at the top left of the machine arm determines the contact pressure of the sewing feet on the sewing material.

The pressure can be adjusted continuously by turning the adjusting wheel.

#### **NOTICE**

#### Property damage may occur!

Damage to the sewing material possible if the sewing foot pressure setting is incorrect.

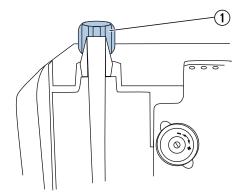
If the sewing foot pressure is too high, the sewing material could tear.

If the sewing foot pressure is too weak, the sewing material could slip.

Adjust the sewing foot pressure in such a way that the sewing material slides smoothly over the base without slipping.



Fig. 19: Setting sewing foot pressure



(1) - Adjusting wheel for sewing foot pressure



To set the sewing foot pressure:

- To increase presser foot pressure: Turn the adjusting wheel (1) clockwise
- To reduce the sewing foot pressure: Turn the adjusting wheel (1) counterclockwise

## 4.12 Sewing foot stroke

## 4.12.1 Setting sewing foot stroke

The two adjusting wheels in the middle of the machine arm determine how high the sewing feet are lifted during sewing. The height can be adjusted continuously on a scale from 1 to 9 by turning the wheels. With 1 the sewing foot is lifted the least and with 9 it is lifted the highest.

The left adjusting wheel (1) sets normal sewing foot stroke.

The right adjusting wheel (2) sets elevated sewing foot stroke.

Elevated sewing foot stroke is activated, for example, when sewing thicker parts of the material.



#### **NOTICE**

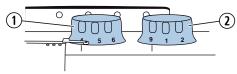
#### Property damage may occur!

Machine can be damaged if the adjusting wheels are forced.

The machine is designed in such a way that the sewing foot stroke at the right adjusting wheel cannot be set lower than at the left adjusting wheel.

Do not attempt to use force to set a smaller sewing foot stroke at the right adjusting wheel.

Fig. 20: Setting sewing foot stroke



- (1) Adjusting wheel for normal sewing foot stroke
- (2) Adjusting wheel for elevated sewing foot stroke



To set the sewing foot stroke:

- To increase the sewing foot stroke: Turn adjusting wheel clockwise
- To reduce the sewing foot stroke: Turn adjusting wheel counterclockwise



#### Information

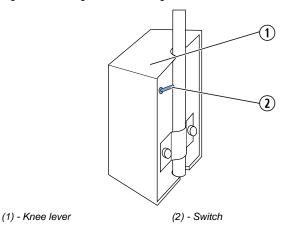
The machine automatically adapts the number of stitches to the sewing foot stroke. If you increase the sewing foot stroke, the number of stitches will be reduced.



### 4.12.2 Activating elevated sewing foot stroke

The elevated sewing foot stroke is activated using the knee lever (1). There is a switch (2) at the back of the knee lever (1). This switch determines whether the sewing foot stroke is applied continuously or only as long as the knee lever is pressed.

Fig. 21: Activating elevated sewing foot stroke



#### **Continuous activation**

To activate elevated sewing foot stroke continuously:

- 1. Turn the switch (2) up.
  - To activate elevated sewing foot stroke: Push the knee lever (1) to the right.
  - To switch elevated sewing foot stroke off: Push the knee lever (1) to the right again.

### Temporary activation

To activate elevated sewing foot stroke temporarily:

- Turn the switch (2) down.
  - To activate elevated sewing foot stroke: Push the knee lever (1) to the right and keep it pressed.
  - The elevated sewing foot stroke remains switched on as long as the knee lever is pushed to the right.



# 4.13 Adjusting the stitch length

The 2 adjusting wheels on the machine column determine the stitch length. The stitch length can be adjusted continuously between 0 and 12 mm. The mark (3) on the left of the adjusting wheel indicates the stitch length selected.

#### NOTICE

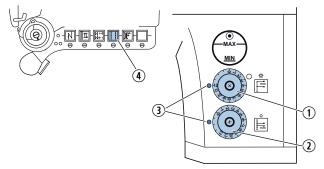
#### Property damage may occur!

Damage to the machine if the adjusting wheels are forced.

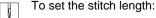
The machine is designed so the top adjusting wheel cannot be set at a lower stitch length than the bottom adjusting wheel.

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

Fig. 22: Setting stitch length I



- (1) Adjusting wheel for the larger stitch length
- (2) Adjusting wheel for the shorter stitch length
- (3) Adjusting marks for stitch length indication
- (4) Push button for the stitch length on the keypad



- To reduce stitch length: Turn adjusting wheel clockwise
- To increase stitch length: Turn adjusting wheel counterclockwise





#### Information

You can select two different stitch lengths.

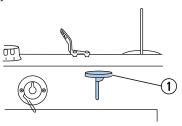
The upper adjusting wheel (1) is for the larger stitch length, and the lower adjusting wheel (2) is for the smaller stitch length.

The larger stitch length is switched on using the stitch length push button on the keypad ( $\square p$ . 39). When the larger stitch length is active the stitch length push button (4) on the keypad lights up.

### Stitch adjustment lever

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

Fig. 23: Stitch adjustment lever



(1) - Stitch adjustment lever



To use the stitch adjustment lever:

- 1. Slowly push the stitch adjustment lever (1) down.
- ♦ The stitch length becomes smaller.
- In the lower end position, the machine sews backwards with the set stitch length.

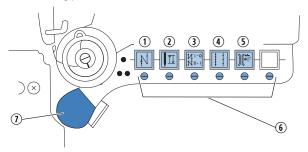


### 4.14 Push buttons on the machine arm

### 4.14.1 Activating push buttons

The push buttons activate specific functions during sewing.

Fig. 24: Activating push buttons



- (1) Sewing backwards
- (2) Needle position
- (3) Start bartack/end bartack
- (4) Stitch length

- (5) Auxiliary thread tension
- (6) Screws for the assignment of the favorite button (7)
- (7) Favorite button

# To enable a push button:

- 1. Press the push button.
- The function is activated. The push button illuminates.

# To disable a push button:

- 1. Press the push button again.
- 🔖 The function is deactivated. The push button turns off.

### Reverse sewing push button (1)

When this push button (1) is activated, the machine sews in reverse.

### Needle position push button (2)

When the needle position push button (2) is activated, the needle moves to a specific position.

This position is determined via the parameter settings. For more information, read the  $\square$  *Service Instructions*. The machine comes configured so that selecting the needle position push button (2) will bring the needle up.



### Start bartack/end bartack push button (3)

The start bartack/end bartack push button (3) cancels the general setting for sewing start and end bartacks. If bartacks are on, pressing the start bartack/end bartack push button (3) skips the next bartack.

If bartacks are off, pressing the start bartack/end bartack push button (4) sews the next bartack.

For the setting for sewing start and end bartacks, refer to the Instructions for use for DAC basic/classic.

### Stitch length push button (4)

When the stitch length push button (5) is selected, the machine sews with the greater stitch length.

### Auxiliary thread tensioning push button

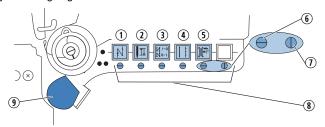
If the auxiliary thread tensioning push button (5) is selected, the auxiliary thread tension is activated.

### 4.14.2 Assigning functions to the favorite button

You can assign push button functions to the favorite button.

Assign a function that you use frequently to the favorite button to that you can activate it quickly during sewing.

Fig. 25: Assigning functions to the favorite button



- (1) Sewing backwards
- (2) Needle position
- (3) Start bartack/end bartack
- (4) Stitch length
- (5) Auxiliary thread tension
- (6) Screw in basic position: slot horizontal
- (7) Screw activates the favorite button: slot vertical
- (8) Screws for the assignment of the favorite button (9)
- (9) Favorite button





#### Order

Before you can assign a new push button function to the favorite button, you need to bring all screws under the push buttons to the horizontal position (6).

d

To assign a function to the favorite button:

1. Set the screw (8) under the push button with the desired function to the vertical position (7).



#### Information

You can only assign one push button function at a time to the favorite button.



# 4.15 Sewing

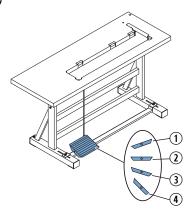
#### CAUTION



# Risk of injury from sharp parts! Puncture.

Do not reach into the needle tip area.

Fig. 26: Sewing



- (1) Position +1: sewing active
- (2) Position 0: rest position
- (3) Position -1: Lifting the sewing feet
- (4) Position -2: sewing the end bartack and cutting off the thread

The foot pedal starts and controls the sewing process.

### Sewing process

Home position of the machine before sewing starts.

- · The main switch is switched on.
- The pedal is in rest position (2).
- · The machine is at a standstill.
- The needle is up.
- · The sewing feet are down.
- The last sewing process is completed by cutting off the thread.



# ģ

#### Sew as follows:

- 1. Press the pedal to position 0 (3).
- ♥ Lift the sewing feet.
- 2. Slide the sewing material up to the needle.
- 3. Press the pedal to position +1 (1) and keep it there.
- The machine sews. The sewing speed increases the further forward the pedal is pressed.

### Options during sewing

Process	Description	Reference
Stopping sewing	Press the pedal to position 0 (2).  The machine stops. The needle is down. The sewing feet are down.	
Continue sewing	Press the pedal to position +1 (1).  The machine sews.	
Activate elevated sewing foot stroke	Press the push button on the machine arm	🖺 p. 36
Activate 2 <sup>nd</sup> stitch length	Press the push button on the machine arm	🖺 p. 40
Switch on the auxiliary thread tension	Press the push button on the machine arm	🖺 p. 40
Sewing backwards	Push button	☐ p. 38 ☐ p. 39

# d

### To remove the sewing material:

- 1. Press the pedal to position -2 (4).
- ♦ The machine sews the end bartack.
- ♦ The thread is cut off.
- The machine stops, needles and sewing feet are up.
- 2. Release the pedal and remove the sewing material.





### 5 Maintenance

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

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

Work to be carried out	Operating hours			
	8	40	160	500
Removing lint and thread remnants	•			
Checking the oil level	•			
Checking the operating pressure				
Checking the water level	•			

# 5.1 Cleaning

Lint and thread remnants should be removed after every 8 operation hours using a compressed air gun or a brush.

In case of very fluffy sewing material, the machine must be cleaned more frequently.

#### **WARNING**



### Risk of injury from flying particles!

Cleaning with compressed air can cause injuries to the eyes or respiratory organs.

NEVER blow particles towards other persons. Make sure no particles fly into the oil pan



#### **NOTICE**

### Property damage may occur!

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

Clean the machine on a regular basis.

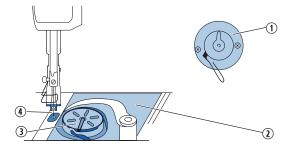
#### NOTICE

#### Property damage may occur!

Solvent-based cleaners will damage paintwork on the machine.

Use only solvent-free cleaners.

Fig. 27: Cleaning



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



Clean the machine as follows:

- 1. Shut off power by turning off main switch.
- 2. Remove any lint and thread remnants using a compressed air gun or a brush.

Areas that require special cleaning:

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



# 5.2 Lubricating

#### WARNING



### Risk of injuries from contact with oil!

Contact with oil can cause irritation, rashes, allergies or skin injuries.

ALWAYS avoid long-term contact with oil.
ALWAYS thoroughly wash the affected areas if contact with oil occurs.

#### NOTICE

### Property damage may occur!

Machine damage possible due to incorrect oil level.

Too little or too much oil can damage the machine.

Check the oil level every day.

The oil level must always be between the MAX and the MIN markings.

#### NOTICE

#### Property damage may occur!

Incorrect oil types can result in damage to the machine.

Only use oil that complies with the specifications given in the operating instructions.



#### **CAUTION**



Risk of environmental damage from used oil! Incorrect handling of used oil can result in severe environmental damage.

ALWAYS observe the legally prescribed regulations for handling and disposal of mineral oil.

Take care to ensure that oil is NEVER spilled.

2 MIN

(1) - Refill opening
(2) - MAX marking



#### Lubricate the machine as follows:

- 1. Check the oil level indicator every day.
- The oil level must be between the MIN (3) and the MAX (2) marking.
- 2. Pour in oil through the filling point (1) as required:



#### Information

### For machines with CLASSIC equipment

If the oil level drops below the minimum level mark on a CLASSIC machine, the oil level indicator will show red.



1. Turn the machine off and back on after refilling oil.

♦ The red light will turn off.

### Required oil:

For lubricating the machine, 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

DA 10 can be obtained from DÜRKOPP ADLER AG sales offices using the following part number:

Container	Part no.
250 ml	9047 000011
11	9047 000012
21	9047 000013
51	9047 000014

## 5.3 Servicing the pneumatic system

# 5.3.1 Checking the operating pressure

#### NOTICE

#### Property damage may occur!

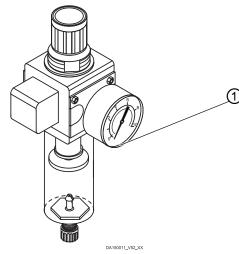
Machine damage possible due to incorrect pressure.

Check the operating pressure every day.

Have the operating pressure reset by qualified specialists if it deviates from the standard value, see Service Instructions.



Fig. 29: Checking the operating pressure



(1) - Pressure gage



To check the operating pressure:

Check the operating pressure on the pressure gage (1).



#### **Important**

The operating pressure must never deviate from the standard value ( $\square$  *p. 79*) by more than 1 bar.

# 5.3.2 Checking the water level

Water condensation accumulates in the water separator of the pressure controller.

#### **NOTICE**

#### Property damage may occur!

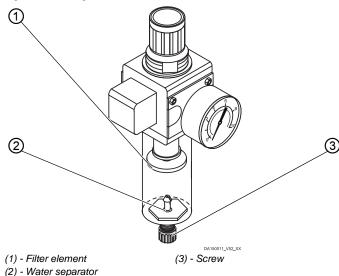
Machine damage possible if there is too much water.

Check the water level every day.

Drain the water condensation if there is too much water in the water separator.



Fig. 30: Checking the water level



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### To check the water level:

- Check the water level in the water separator (2) on a daily basis.
- Water condensation must not rise up to the level of the filter element (1).
- 2. Drain water as required:
  - · Switch off the machine.
  - Place the collection tray under the screw (3).
  - Loosen the screw (3) completely.
  - · Allow water condensation to drain into the collection tray.
  - Tighten the screw (3)



# 5.4 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!

Crushing.

The machine may be installed only by trained specialists.

Wear safety gloves and safety shoes.

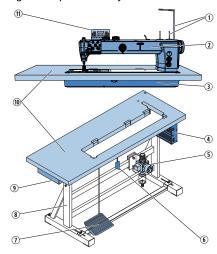
# 6.1 Checking the scope of delivery

The delivery scope depends on the order.



1. Check that all parts required are present.

Fig. 31: Checking the scope of delivery



- (1) Thread reel holder
- (2) Machine head
- (3) Oil pan
- (4) Controller
- (5) Pneumatic unit
- (6) Knee lever

- (7) Pedal
- (8) Stand
- (9) Drawer
- (10) Tabletop
- (11) Control panel



### Standard equipment

- Machine head (2)
- Oil pan (3)
- Thread reel holder with thread guide (1)
- Controller (4)
- Control panel for the controller (11)
- Knee lever (6)

### Additional equipment

- Tabletop (10)
- Drawer (9)
- Stand (8)
- Pedal (7)
- Pneumatic unit (5)
- Sewing lamp (not illustrated)

## 6.2 Removing the transport locks

All transport securing devices must be removed prior to setup.



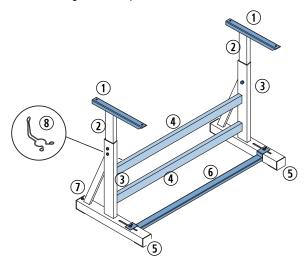
To remove the transport locks:

- Remove lashing straps and wooden blocks from the machine head. Remove table and stand.
- 2. Remove the support wedges between the machine arm and throat plate.



# 6.3 Assembling stand components

Fig. 32: Assembling stand components



- (1) Head sections of the inner bars
- bars (5) Foot struts of the stand
- (2) Inner bars

(6) - Cross strut

(3) - Stand bars (4) - Cross bars

- (7) Adjusting screw
- (8) Holder for the oil can



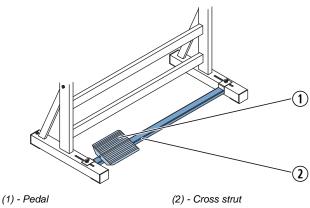
#### To assemble the stand components:

- 1. Screw the cross bars (4) to the stand bars (3).
- 2. Screw the holder (8) at the rear to the upper cross bar (4).
- 3. Screw the cross strut (6) to the foot struts (5).
- Insert the inner bars (2) in such a way that the longer end of the head section (1) is above the longer end of the foot struts (5).
- 5. Tighten the inner bars (2) down so that both head sections (1) are at the same height.
- 6. Turn the adjusting screw (7) so that the stand has even contact with the ground.



# 6.4 Fitting the pedal

Fig. 33: Fitting the pedal





### To fit the pedal:

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

# 6.5 Completing the tabletop

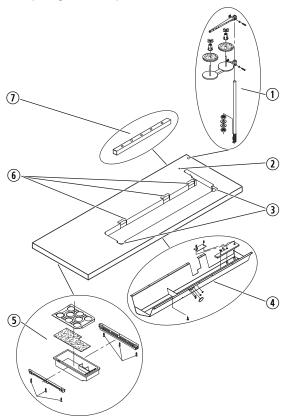


# Information Making your own tabletop

The tabletop is optional. If you want to make your own tabletop, drawings with the dimensions are available in the appendix ( $\square$  *p.* 81).



Fig. 34: Completing the tabletop



- (1) Thread reel holder
- (2) Hole in the tabletop
- (3) Corner protrusions
- (4) Oil pan

- (5) Drawer
- (6) Recesses for the rubber mounts of the hinge
- (7) Cable duct



### To complete the tabletop:

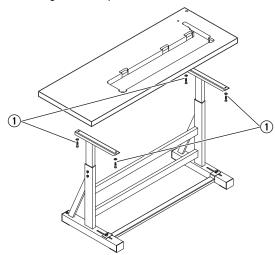
- 1. Screw the drawer (5) with the left-hand bracket to the underside of the tabletop.
- 2. Screw the oil pan (4) in place under the recess for the machine.
- 3. Screw the cable duct (7) to the underside of the tabletop.
- 4. Insert the reel stand (1) into the hole.
- 5. Fasten the reel stand (1) with nut and washer.



- Tighten the thread reel holder and the thread guide on the reel stand (1) in such a way that they are exactly opposite each other.
- 7. Insert the plug (2) in the hole.
- 8. Insert the rubber mounts of the hinge into the recesses (6).
- Insert the rubber corners into the corner protrusions (3) of the recess for the machine.

# 6.6 Fastening the tabletop to the stand

Fig. 35: Fastening the tabletop to the stand



(1) - Screw holes and screws



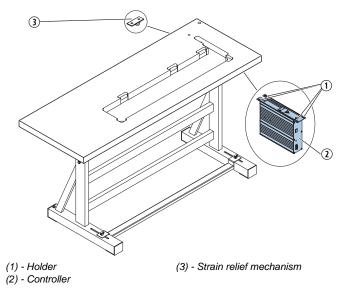
Attach the tabletop to the stand as follows:

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



# 6.7 Fitting the controller

Fig. 36: Fitting the controller





#### Information

If you have a sewing lamp that can be attached as additional equipment: Fit the sewing lamp to the controller first.



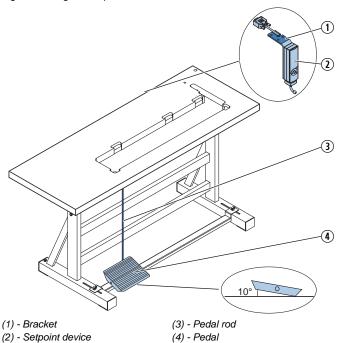
#### To fit the controller:

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



#### 6.8 Fitting the setpoint device

Fig. 37: Fitting the setpoint device





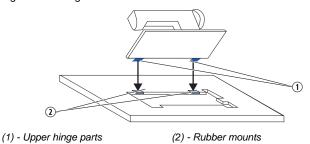
#### To fit the setpoint device:

- Screw the bracket (1) under the tabletop. 1.
- Screw the setpoint device (2) onto the bracket (1). 2.
- Pull the pedal rod (3) to the correct length: 3. 10° inclination with pedal (4) released
- 4. Attach the pedal rod (3).



# 6.9 Inserting the machine head

Fig. 38: Inserting the machine head





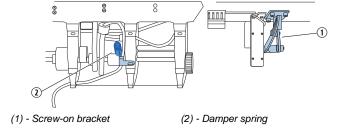
To mount the machine head:

- 1. Screw the upper hinge parts (1) onto the machine head.
- 2. Insert the upper hinge parts (1) into the rubber inlays (2).
- 3. Fold the machine head down and insert it in the recess.

### 6.10 Fitting the damper

The damper cushions the machine's weight when it is folded over.

Fig. 39: Fitting the damper





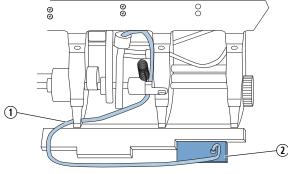
To fit the damper:

- Fold the machine head back.
- 2. Fasten the damper spring (2) in the oil pan.
- Connect the damper components and guide them through the hole in the back of the oil pan.
- 4. Tighten the bracket (1) under the tabletop.



# 6.11 Fitting the oil extraction line

Fig. 40: Fitting the oil extraction line



(1) - Oil extraction line hose

(2) - Felt mat



To fit the oil extraction line:

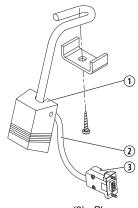
- 1. Fold the machine head back.
- 2. Tighten the felt mat (2) into the oil pan with the plastic adapter on the right.
- 3. Insert the tube of the oil extraction line (1) into the plastic adapter.



# 6.12 Fitting the knee lever

### 6.12.1 Fitting the electric knee lever

Fig. 41: Fitting the electric knee lever



- (1) Knee lever
- (2) Connecting cable

(3) - Plugs



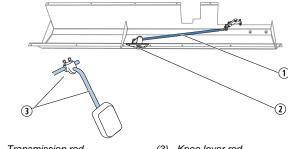
#### To fit the electric knee lever:

- 1. Tighten the knee lever (1) in front of the oil pan under the tabletop.
- 2. Guide the connecting cable (2) to the back between the oil pan and the controller.
- 3. Insert the plug (3) of the connecting cable into the socket of the controller.



# 6.12.2 Fitting the mechanical knee lever

Fig. 42: Fitting the mechanical knee lever



- (1) Transmission rod
- (2) Hole in the oil pan

(3) - Knee lever rod

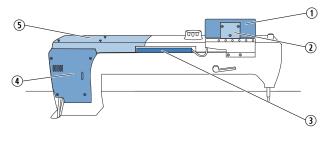


To fit the mechanical knee lever:

- Fold the machine head back.
- 2. Fit the transmission rod (1) in the oil pan.
- 3. Screw the knee lever (3) rods together.
- 4. Guide the rods (3) through the hole in the oil pan (2) and connect them to the transmission rod (1).

# 6.13 Fitting the control panel

Fig. 43: Fitting the control panel I



- (1) Control panel
- (2) Control panel bracket
- (3) Cable duct

- (4) Valve cover
- (5) Upper machine cover

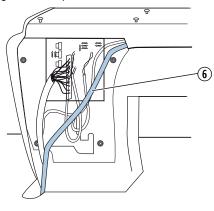




#### To fit the control panel:

- 1. Unscrew the valve cover (4) and upper machine cover (5).
- 2. Screw the control panel bracket (2) to the machine arm.
- 3. Tighten the control panel (1) on the control panel bracket (2).
- 4. Install the connecting cable through the cable duct (3).

Fig. 44: Fitting the control panel II



(6) - Connecting cable



- 5. Install the connecting cable (6) in the machine arm.
- 6. Guide the cable through the hole in the tabletop.
- 7. Insert the plug of the connecting cable in the socket of the controller.



#### Information

### For machines with sewing lamp

If you have a sewing lamp that can be attached as additional equipment: Leave the cover open until the sewing lamp has been fitted and the sewing lamp cable has been laid.

8. Tighten the valve cover (4) and machine head cover (5).



### 6.14 Electrical connection

#### **DANGER**



### Risk of death from live components!

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

Work on the electrical system must ONLY be performed by qualified electricians or appropriately trained and authorized personnel. ALWAYS pull the power plug before working on the electrical equipment.

### 6.14.1 Fitting the sewing lamp

The sewing lamp is an additional component that is not part of the standard delivery package.



To fit the sewing lamp:

1. Fit the sewing lamp according to the wiring diagram.

### 6.14.2 Fitting the sewing lamp transformer



To fit the sewing lamp transformer:

 Fit and connect the sewing lamp transformer as specified in the wiring diagram.

# 6.14.3 Connecting the direct drive

See Instructions for use for DAC basic/classic.



Connecting the direct drive consists of the following work:

- Insert the plug of each connecting cable into the sockets on the back of the controller.
- 2. Connect the cable for equipotential bonding.
- 3. Connect the controller using the power cable.



### 6.15 Pneumatic connection

### 6.15.1 Fitting the maintenance unit

The pneumatic unit is an additional component that is not part of the standard delivery package.

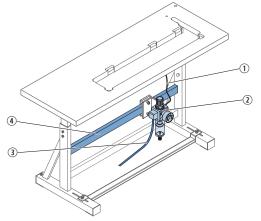
#### **NOTICE**

### Property damage may occur!

Machine damage possible due to incorrect pressure.

The system pressure for the pneumatic unit is 8-10 bar. Make sure that the system pressure is set correctly.

Fig. 45: Fitting the maintenance unit



- (1) Machine hose
- (2) Maintenance unit
- (3) System connection hose
- (4) Cross bar



#### To fit the maintenance unit:

- 1. Attach the maintenance unit (2) to the upper cross bar (4) of the stand using the bracket, screws and clip.
- 2. Connect the machine hose (1) coming out of the machine head to the maintenance unit (2) at the top right.
- Connect the system connection tube (3) to the pneumatic system.



### 6.15.2 Setting operating pressure

#### NOTICE

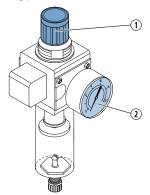
### Property damage may occur!

Machine damage possible due to incorrect pressure.

The operating pressure is 6 bar.

Make sure that the operating pressure is set correctly.

Fig. 46: Setting operating pressure



(1) - Pressure controller

(2) - Pressure gage



To set the operating pressure:

- 1. Pull the pressure controller (1) up.
- Turn the pressure controller until the pressure gage (2) indicates 6 bar.
  - Setting a higher operating pressure: Turn the pressure controller (1) clockwise
  - Setting a lower operating pressure: Turn the pressure controller (1) counterclockwise
- 3. Push the pressure controller (1) back down.



# 6.16 Checking the lubrication

All wicks and felt bits of the machine head are soaked in oil at the factory. This oil is conveyed to the reservoir during use. This is why you should avoid filling too much oil during initial filling  $(\square p. 47)$ .

# 6.17 Performing a sewing test

Conduct a sewing test before starting up the machine. Adjust the machine to the sewing material requirements.

#### CAUTION



# Risk of injury from sharp parts! Puncture.

Switch off the machine before

- · Changing the needle
- · Threading the needle thread
- · Inserting the hook thread reel
- Setting hook thread tension
- Setting the thread regulator



### To perform a sewing test:

- 1. Insert needle ( p. 16).
- 2. Thread needle thread ( p. 18).
- 3. Wind bobbin thread ( p. 22).
- 4. Insert hook thread reel ( p. 25).
- Set needle thread tension to the sewing material being sewn (☐ p. 27).
- 6. Set needle thread regulator to the sewing material being sewn ( $\square$  p. 30).



- Set sewing foot pressure to the sewing material being sewn ( p. 33).
- 8. Set sewing foot stroke to the sewing material being sewn ( p. 34).
- 9. Set stitch length ( p. 37).
- 10. Transfer the desired quick function from the push buttons on the machine arm to the favorite button ( $\square$  *p.* 39).
- 11. Start sewing test at low speed.
- 12. Gradually increase sewing speed until working speed is reached.



## 7 Decommissioning

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

#### WARNING



### Risk of injury from a lack of care!

A lack of care or a lack of sufficient technical knowledge when decommissioning the machine can result in serious injuries.

Only clean the machine when it is switched off. Avoid contact with oil residues. Allow only qualified specialists to disconnect the machine.



Decommission the machine as follows:

- 1. Switch off the main switch.
- 2. Unplug the power plug.
- 3. Disconnect the pneumatic connection.
- Remove residual oil from the oil pan under the sewing material support using a cloth.
- 5. Cover the control panel.
- 6. Cover the machine.









Do not dispose of the machine in the general household waste.

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

#### CAUTION



Risk of environmental damage from improper disposal!

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

ALWAYS comply with the legal regulations regarding disposal.

When disposing of the machine, be aware that it consists of a range of different materials (steel, plastic, electronic components, etc.). Observe the applicable national regulations when disposing of 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	Remedy
Unthreading at seam beginning	Needle thread tension is too firm	Check needle thread tension ( p. 27)



Error	possible cause	Remedy	
Thread breakage	Needle thread is not threaded properly	Threading path of needle thread ( p. 18)	
	Needle is	Insert new needle (\(\mathref{\Pm}\) p. 16)	
	Yarn is • knobby • hard • too thick	Use recommended yarn (□ p. 79)	
	Thread tension is set too firm	Check thread tension (\(\mu\) p. 27)	
	Thread-guiding parts are sharp-edged	Check the thread path	
	Throat plate or hook has been damaged by the needle	Have parts replaced	
Skip stitch	Needle is	Insert new needle ( p. 16)	
	Needle thread is not threaded properly	Check threading path of needle thread ( p. 18)	
	Thread tension is set too firm	Check thread tension (\$\to\$ p. 27)	
	Sewing material is not held correctly	Check sewing foot pressure ( p. 33)	
	Needle thickness is incorrect	Use recommended needle thickness ( p. 79)	
	Throat plate or hook has been damaged by the needle	Have parts replaced	
	Hook is set incorrectly	Service Instructions	



Error	possible cause	Remedy	
Loose stitch	Thread tension not adjusted to • Sewing material • Sewing material thickness • Thread	Check thread tension (☐ p. 27)	
	Needle thread is not threaded properly	Check threading path of needle thread ( p. 18)	
Needle breakage	Needle thickness not suitable for • Sewing material • Sewing material thickness • Thread	Alter needle thickness (\(\mathref{\Pmathref{P}}\) \(\phi\). 79)	





## 10 Technical data

### **Data and parameters**

Technical data	Unit	H867	
Machine type		Long arm machine	
Stitch type		Lockstitch 301	
Hook type		Vertical, oversize (3XL)	
Number of needles		1-2	
Needle system		7x23,328,794 (with needle adapter)	
Needle thickness	[Nm]	140-230	
Thread strength	[Nm]	8/3	
Stitch length	[mm]	12	
Max. speed	[min <sup>-1</sup> ]	1800	
Speed on delivery	[min <sup>-1</sup> ]	1800	
Mains voltage	[V]	230	
Mains frequency	[Hz]	50/60	
Operating pressure	[bar]	6	
Length	[mm]	1090	
Width	[mm]	220	
Height	[mm]	500	
Weight	[kg]	94	
Rated power	[W]	375	



#### Characteristics

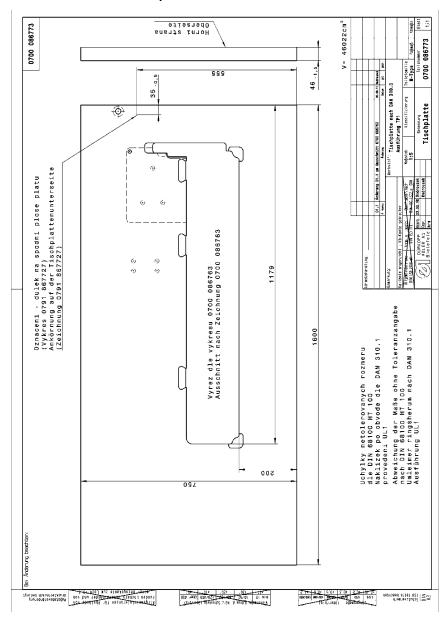
- Extra-large 3XL hook with 40 mm bobbin diameter
- Maximum passage with lifted sewing feet: 25 mm
- DC drive
- · Positioning at seam end
- Electropneumatic foot lifter above the sewing pedal
- Remaining thread length with automatic thread cutter: approx. 15 mm
- Safety snap-on coupling for preventing any misadjustment of or damage to the hook in the event of a thread jamming
- Automatic wick lubrication for machine and hook with oil level indicator at the column
- Possible needle spacing with thread cutter: 3 40 mm
- Possible needle spacing without thread cutter: 3 50 mm

The H867 is available as 1-needle machine or 2-needle machine and with or without automatic thread cutter. Submodels with thread cutter have push buttons on the machine arm for quick functions. The keypad functions can be assigned to an additional key near the handle as an option.

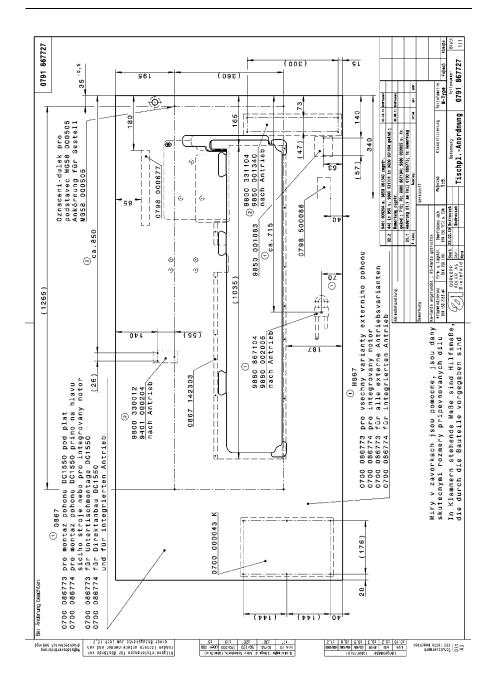


# 11 Appendix

### **Tabletop dimensions**

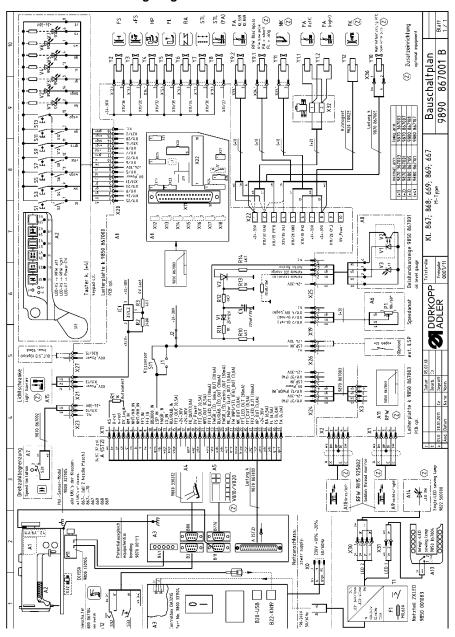






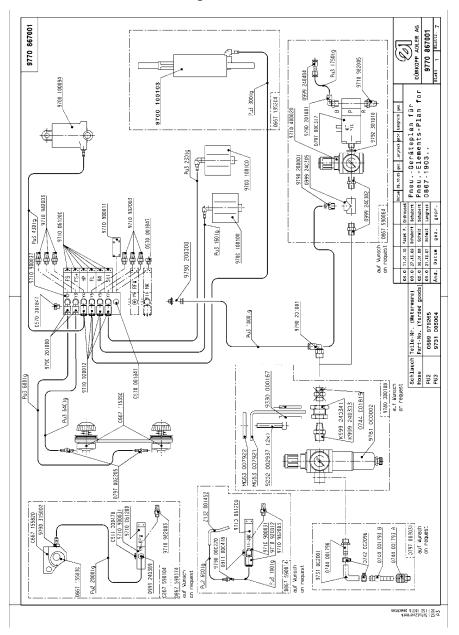


### Wiring diagram

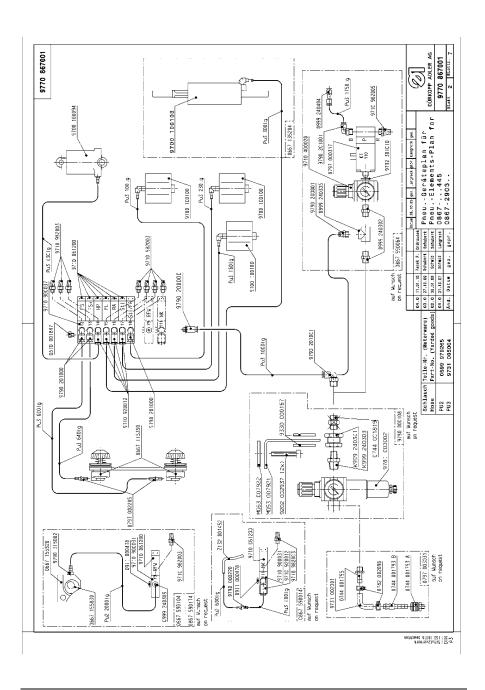




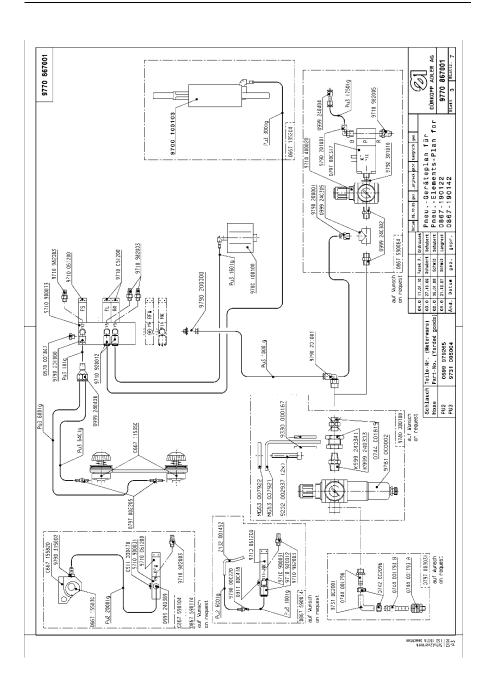
## Pneumatic diagrams



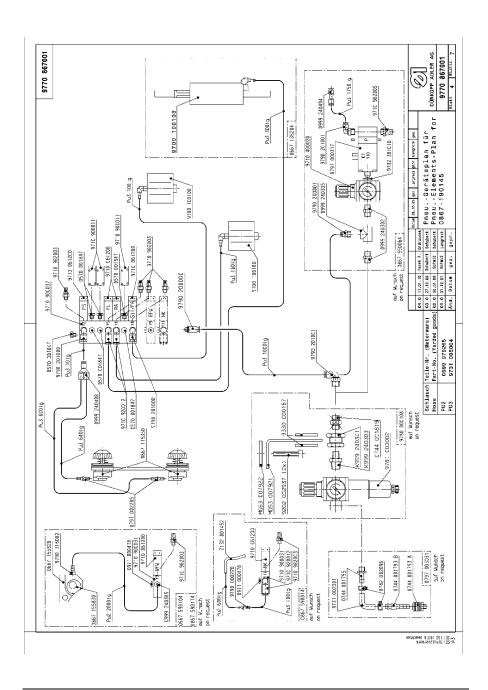




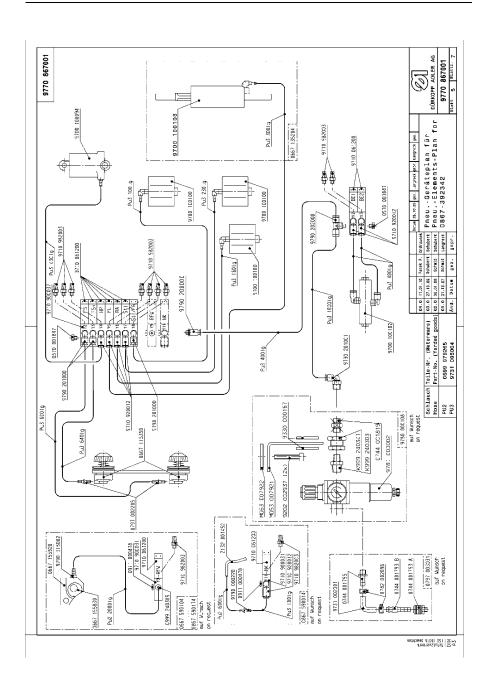




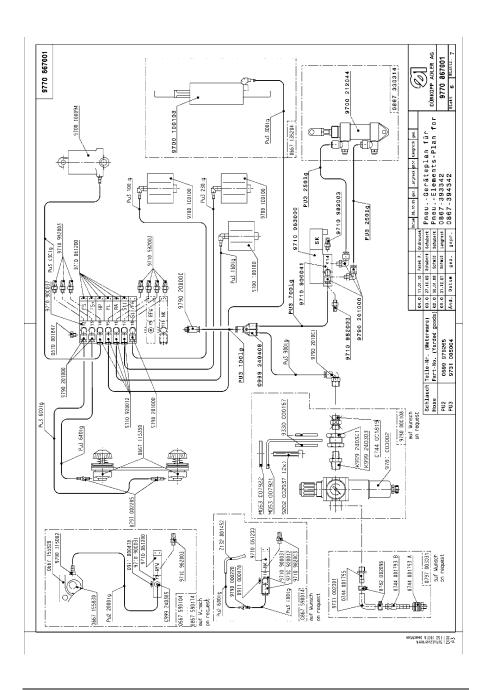




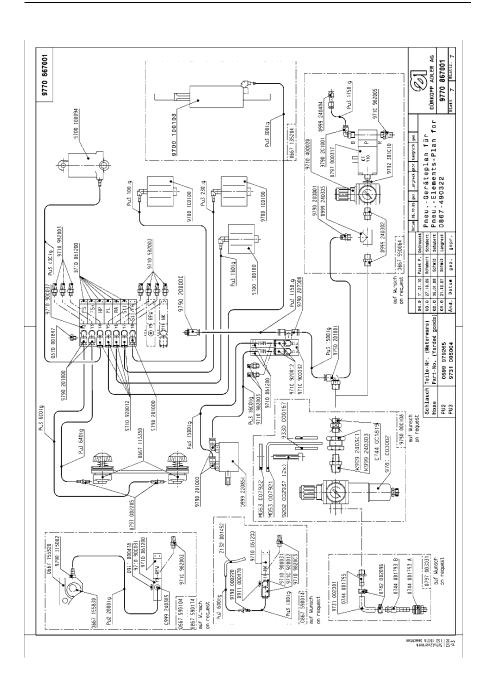














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