beisler
SEWING

743-121-01

Operating manual

1 About this operating manual

The operating manual for the 743-121-01 sewing unit was compiled with the utmost care. It contains information and notes in order to make long-term and reliable operation possible.

Should you notice any discrepancies or if you have improvement requests, then we would be glad to receive your feedback, 🕮 *Chapter 6.7*.

Please regard the operating manual as part of the product and keep it in a safe place where it can be easily accessed. Read the operating manual completely prior to using the unit for the first time. Only pass the product on to third parties together with the operating manual.

1.1 Scope of application of the operating manual

This operating manual describes the set-up and intended use of the 743-121-01 sewing unit.

1.2 For whom is this operating manual?

The operating manual is intended for:

- Machine operators:
  This group of employees has been trained in operating the machine and can access the operating manual. Specifically 🕮 *Chapter 5 Operating* is important for this group of employees.
- Technicians:
  This group of employees has the appropriate technical training allowing them to perform maintenance on the sewing unit or to repair faults. Specifically 🕮 *Chapter 6 Installation* is important for this specialized staff.Service instructions are supplied separately.

With regard to minimum qualification and other requirements to be met by the personnel, please also observe 🕮 *Chapter 3 of the Safety instructions*.

1.3 Representational conventions – Symbols and characters

Different information is depicted or highlighted in this operating manual by the following characters for easier and quicker understanding:

Symbol/character	Meaning
•	Lists are identified by bullet points.
1. 2.	Instructions are numbered and have to be performed in the specified order.
🕮	References to further information in this operating manual or other documents are identified by this symbol.

Safety Important warnings for the user of the machine are specifically marked. Because safety constitutes an area of major importance, hazard symbols, levels of risk, and their signal words are described separately in 🕮 *chapter 3 Safety Instructions*.

Location information Information on where something is positioned using the terms “right” or “left” must always be regarded from the operator's point of view if the figure gives no other obvious indication for determining the location.

1.4 Other documents

The device contains built-in components from other manufacturers. The respective manufacturers have carried out hazard assessments for these purchased parts and confirmed compliance of the design with the applicable European and national regulations. The intended use of the built-in components is described in the corresponding manuals of the manufacturers.

1.5 Liability

All information and notes in this operating manual have been compiled in accordance with the latest technology and the applicable standards and regulations.

The manufacturer cannot be held liable for any damage due to:

- Damage during transport
- Failure to observe the operating manual
- Improper use
- Unauthorized modifications to the machine
- The deployment of untrained personnel
- Use of unapproved spare parts

1.5.1 Transportation

Dürkopp Adler cannot be held liable for any damage during transport. Check the delivered product immediately after receiving it. Report any damage to the last transport manager. This also applies if the packaging is not damaged.

Keep the machines, devices and packaging material in the condition they were at the time when the damage was identified. That secures any claims towards the transport company.

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

1.5.2 Intended use

The Beisler 743-121-01 is for sewing light to moderately heavy material.

The machine is only intended for processing dry material. The material must not contain any hard objects.

The seam is produced in general with sewing yarns made from textile fibers. Before using any other threads, it is necessary to estimate the consequential dangers and to take the respective safety measures, if required.

The sewing 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 EN 60204-31:1999.

Only authorized/trained persons may work on the machine.

The manufacturer will not be held liable for damage resulting from improper use.

WARNING

Danger due to high voltage, crushing and sharp objects.

Improper use can result in injuries.

Please follow all instructions in the manual.

ATTENTION!

Improper use could result in material damage.

Please follow all instructions in the manual.

2 Performance description

The Beisler 743-121-01 is a sewing unit for the sewing of single pointed darts and pleats of straight or curved shape in trousers, skirts and the like.

The sewing unit is equipped with a double-chainstitch sewing machine class 935-171-100 with needle thread monitor.

2.1 Features

- Sewing length controlled alternatively by light barrier or by programming
- Seam protection at seam beginning and seam end through stitch condensing and thread chain
- Thread trimming: Controlled chain trimmer
- High sewing performance and short cycle duration due to DAC classic in combination with a stepping motor and an additional control unit for the material feed
- Fully overlapping working method
- Compact, height adjustable sewing unit with transport castors, to be operated in standing or sitting position
- Positioning station, folder station and sewing station are combined in a single swivel-mounted unit for easy maintenance and setting access
- Electronic thread monitoring system
- Designed to process spun and monofilament threads
- Integrated setting disc with positioning marks on the hand wheel for a rapid and precise control of the machine settings
- A template set adapted to the sewing shape retains and guides the workpiece
- The template set can be easily exchanged, upon ordering the sewing unit, one or several template sets have to be selected.
- The dart depth depends on its length, the template set and the setting of the folding table; by adjusting the folding table between 0 and 10°, the dart depth can be altered

2.2 Declaration of conformity

The machine complies with the European regulations specified in the declaration of conformity or in the installation declaration.

CE

2.3 Optional equipment

By means of a flexible system of optional equipment the sewing unit can be equipped optimally and economically corresponding to the respective application.

● = Basic equipment

◆ = required equipment, alternatively

O = Optional equipment

Order No.	Basic equipment	Subclass 743-121-01
1970 991121	Sewing unit 743-121-01	●
0791 743502	Accessories	●
required equipment, to be selected one template set and one folding table is required		
0793 078001 or 0793 078002 or 0793 078034 or 079 078091	template set, straight dart or template set, curved dart or template set, pleats or template set, dart or pleats customized, special design	◆
0792 038504 or 0792 038506 or 0783 080000	folding table for darts or folding table for pleats or vacuum table for darts	◆
Additional equipment		
0794 013631	working method workpiece take-up from the front bundle clamp, positioning table and smoother	O
0794 013731	working method workpiece take-up from the left bundle clamp, positioning table and smoother	O
0794 013333	blower pipe from the top and the right	O
0794 013444	positioning table when using in house bundle clamp carriage	O
0797 003031	pneumatic connection kit	O

2.4 Technical data

Technical data	743-121-01
Sewing stitch type	401/Double-chainstitch
Number of needles	1
Needle system	934 sin
Needle size [Nm]	90
Maximum speed (programmable) [min^{-1}]	4800
Speed at factory setting [min^{-1}]	4800
Stitch length [mm]	2.2
Stitch condensing [mm]	1.0
Number of condensing stitches at seam beginning [mm]	1 - 9
Maximum seam offset	± 13 mm
Max. stitch length [mm]	150
Operating pressure [bar]	6
Air consumption per working cycle (7 sec.) ca. [NL] with blower stimulus	2 12
Table height (infinitely variable) [mm] - min - max	 850 1250
Length, width, height [mm]	2300, 1200, 1350
Weight [kg]	about 130
Nominal voltage [V]	1 x 190-240
Frequency [Hz]	50/60

3 Safety instructions

This section contains basic instructions for your safety. Read the instructions carefully before setting up or operating the machine. Make sure to follow the information included in the safety instructions. Failure to do this can result in serious injury and in damage to the machine.

3.1 Basic safety instructions

The machine may only be used as described in this operating manual.

The operating manual must be available at the machine's location at all times.

Work on live components and equipment is prohibited. Exceptions are defined in the specifications in DIN VDE 0105.

For the following work, the machine must be disconnected from the power supply using the main switch or by disconnecting the power plug:

- Replacing the needle or other sewing tools
- Leaving the workplace
- Performing maintenance work and repairs

Missing or faulty spare parts could impair safety and damage the machine. Therefore only use original spare parts from the manufacturer.

Transportation When the machine is being transported, use a lifting carriage or a forklift. Raise the machine max. 20 mm and secure it against slipping off.

Set-up The connecting cable must have a power plug approved in the specific country. The power plug may only be connected to the power cable by a qualified specialist.

Operator's obligations Observe the country specific safety and accident prevention regulations and the legal regulations concerning industrial safety and the protection of the environment.

All warnings and safety signs on the machine must always be in legible condition and may not be removed. Missing or damaged labels must be replaced immediately.

Requirements to be met by the personnel

The machine may only be set up by qualified specialists.

Maintenance work and repairs may only be carried out by qualified specialists.

Work on electrical equipment may only be carried out by qualified specialists.

Only authorized persons may work on the machine. Every person who works on the machine must have read the operating manual first.

Operation

Inspect the machine while in use for any externally visible damage. Interrupt your work if you notice that the machine has been altered. Report any alterations to your supervisor. A damaged machine must not be operated any more.

Safety equipment

Safety equipment must not be removed or put out of service. If this cannot be avoided for a repair operation, the safety equipment has to be refitted and put back into service immediately afterwards.

3.2 Signal words and symbols used in warnings

Warnings in the text are distinguished by color bars. The color scheme reflects the severity of the danger. Signal words specify the severity of a danger:

Signal words

Signal words and the endangerment that they describe:

Signal word	Endangerment
DANGER	Resulting in death or serious injury.
WARNING	Death or serious injury possible.
CAUTION	Minor to moderate injuries possible.
ATTENTION!	Material damage possible.

Symbols In the case of danger to persons, the following symbols indicate the type of hazard:

Symbol	Type of danger
	General danger
	Danger due to electric shock
	Danger due to sharp objects
	Danger due to crushing

Examples Examples for the layout of the warnings in the text:

DANGER

Type and source of the danger

Consequences in the event of noncompliance

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 not complied with.

WARNING

Type and source of the danger

Consequences in the event of noncompliance

Measures for avoiding the danger

This is what a warning looks like for a hazard that could result in serious injury or even death if not complied with.

CAUTION

Type and source of the danger

Consequences in the event of noncompliance

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 not complied with.

CAUTION

Type and source of the danger

Measures for avoiding the danger

This is what a warning looks like for a hazard that could result in environmental damage if not complied with.

ATTENTION!

Type and source of the danger

Measures for avoiding the danger

This is what a warning looks like for a hazard that could result in material damage if not complied with.

4 Machine description 743-121-01

The Beisler 743-121-01 is a sewing unit for the sewing of single pointed darts and pleats of straight or curved shape in trousers, skirts and the like.

The correct operating principle involves a sequence of different steps and requires precise knowledge of all operating controls.The correct operating principle involves a sequence of different steps and requires precise knowledge of all operating controls.

4.1 Sewing unit 743-121-01

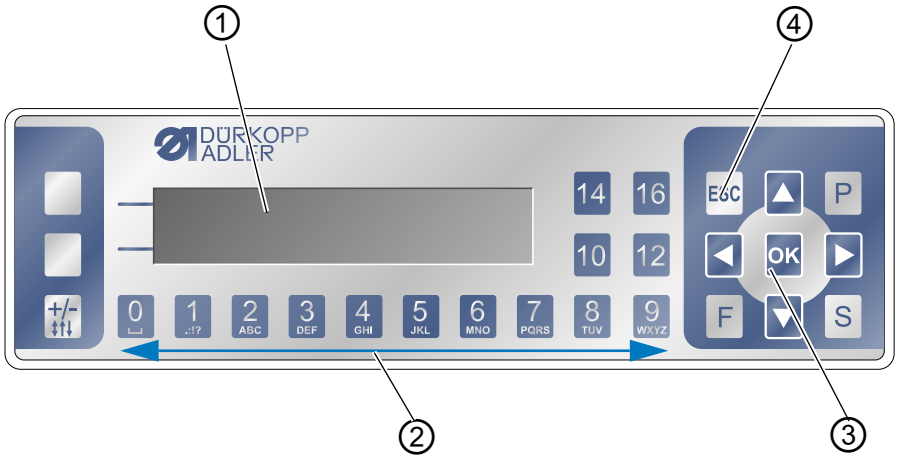
The illustration below shows the sewing unit 743-121-01.

Fig. 1: General overview of the 743-121-01

4.2 Software description

At this point only a short overview of the operating panel with its keys and corresponding functions is given.

Fig. 2: Operating panel OP 3000



(1) - Display
(2) - Numeric keys
(3) - Escape key
(4) - "OK" key

The settings of the control unit are effectuated via the operating panel OP3000. Here is a summary of some important possibilities for navigation:

Key/key group	Function
1 to 6	Switching the function that is depicted on the display right above the key on or off.
Arrow keys (◄,►)	Navigating in the main menu
Arrow keys (▼,▲)	Increasing or decreasing values/parameters
OK	Short keystroke confirms a selection Long keystroke resets f.e. the piece counter
ESC	No function in the main menu, but relevant in the sub-menu

5 Operating the sewing unit

The Beisler 743-121-01 is a sewing unit for the sewing of single pointed darts and pleats of straight or curved shape in trousers, skirts and the like.

The correct operating principle involves a sequence of different steps and requires precise knowledge of all operating controls.

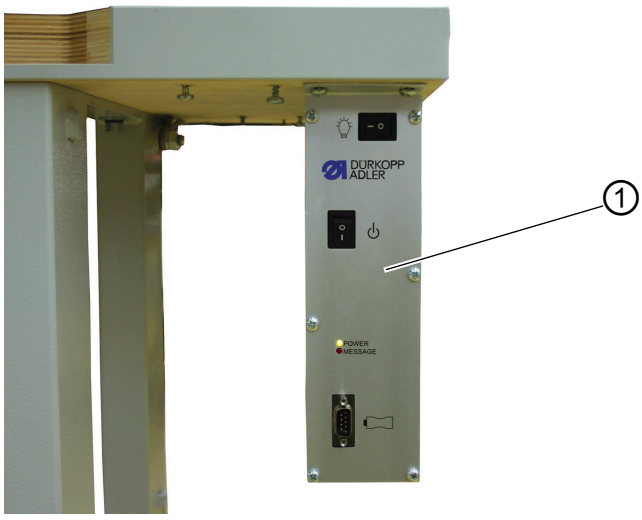
5.1 Switching on and off

ATTENTION!

Caution: Danger of injury!

Do not reach into the area of moving machine parts.

Fig. 3: Switching the machine on and off



(1) - Main switch

Switching on

1. Turn on the main switch (1).

↳ The control unit is initialized.
The message “Reference” is displayed:
The sewing unit calls for a reference run.

2. Press the key “OK” on the control panel.

↳ The reference run is carried out.
The machine is ready for operation.

Switching off

Turn off the main switch (1).

↳ The sewing unit is cut off the power supply.
It is **no longer** ready for operation.

5.2 Threading the thread

ATTENTION!

Caution: Danger of injury!

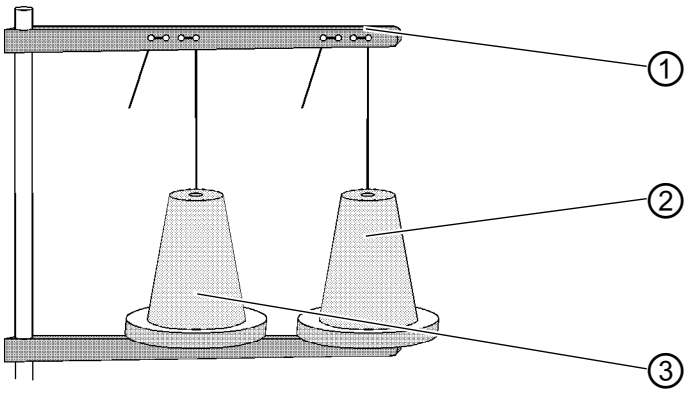
Turn off the main switch.

The needle thread and looper thread may only be threaded with the sewing unit switched off.

The template set has to be in the left final position.

5.2.1 Threading the looper thread

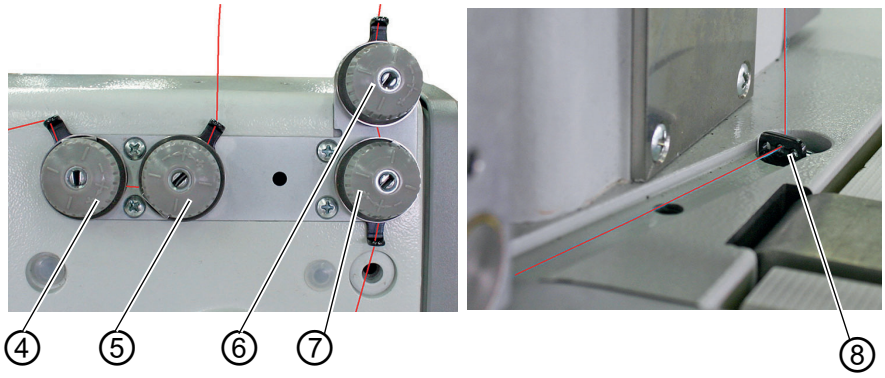
Fig. 4: Threading the thread into the thread reel holder



(1) - Unwinder arm
(2) - Looper thread reel
(3) - Needle thread reel

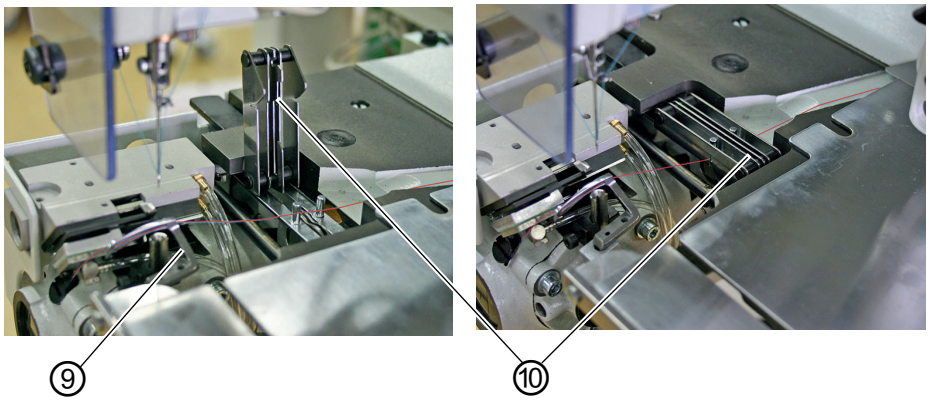
1. Put the thread reel (2) on the thread reel holder.
2. Pass the thread alternately through the 4 guide eyelets of the unwinder arm (1).

Fig. 5: Thread tension and thread guide



(4) - Thread tension 1
(5) - Thread tension 2
(6) - Thread tension 3
(7) - Thread tension 4
(8) - Thread guide

Fig. 6: Threading the looper thread

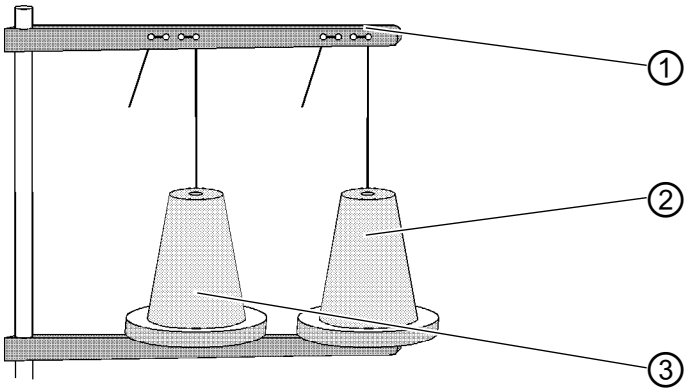


(9) - Looper
(10) - Flap

3. Release the sliding plate and pull it to the side.
4. Conduct the thread in counter-clockwise direction through the thread tension (6) and in clockwise direction through the thread tension (7).
5. Conduct the thread through the center hole of the thread guide (8).
6. Swing up the flap (10) above the thread take-up disc.
7. Guide the thread to the right past the pins.
8. Conduct the thread through the rear hole in the looper (9).
9. Conduct the thread from the right to the left through the front hole in the looper (9) and tension it.
10. Close the flap (10) above the thread take-up disc. The thread should be tucked in the slot of the flap (10).
11. Push the sliding plate back into its initial position and make the spring leaf snap in.

5.2.2 Threading in the needle thread

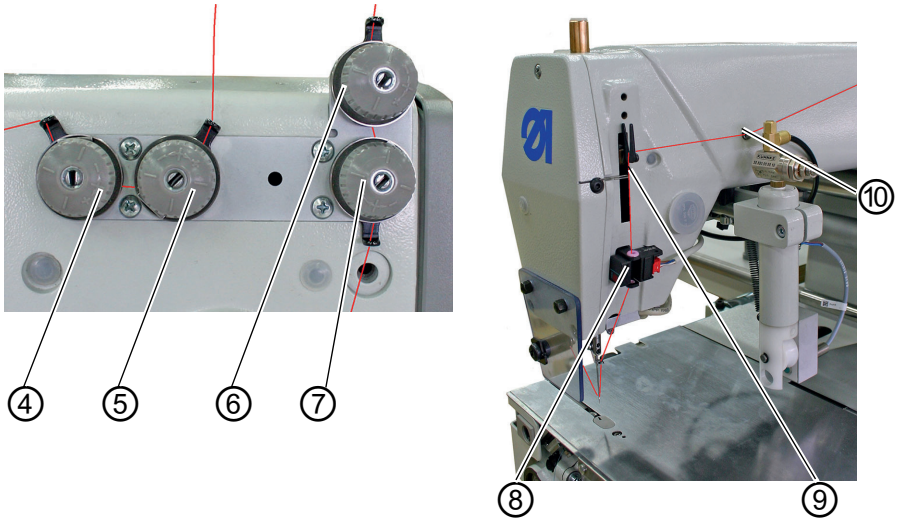
Fig. 7: Threading the thread into the thread reel holder



(1) - Unwinder arm
(2) - Looper thread reel
(3) - Needle thread reel

1. Put the thread reel (3) on the thread reel holder.
2. Pass the thread alternately through the 4 guide eyelets of the unwinder arm (1).

Fig. 8: Thread tension and thread guide



(4) - Thread tension 1
(5) - Thread tension 2
(6) - Thread tension 3
(7) - Thread tension 4
(8) - Thread monitor
(9) - Thread take-up spring
(10) - Thread guide

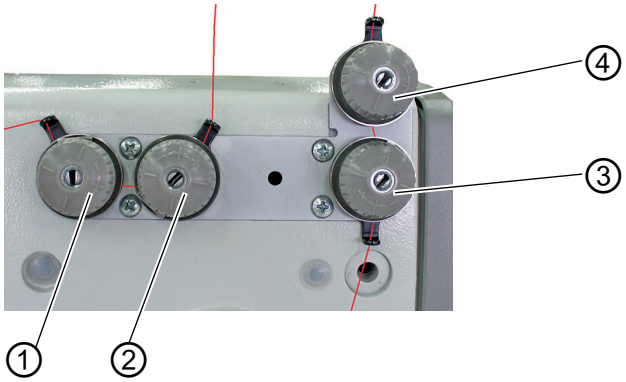
3. Pass the thread in counterclockwise direction through the thread tension (5) and in clockwise direction around the thread tension (4).
4. Then pass the thread through the thread guide (10), the thread take-up spring (9) and the thread monitor (8).
5. Pass the thread through the thread guide in front of the needle and the needle.
6. Pass the thread through the thread clamp and cut off the protruding end at the thread trimmer.

5.3 Adjusting the thread tension

Two different tensions have to be set for each tensioning device of needle and looper thread.

- **regular**: The **regular** tension is always exerted.
- **additional**: The **additional** tension is only activated for stitch condensing. It is activated pneumatically via the machine.

Fig. 9: Adjusting the thread tension



(1) - Thread tension 1
(2) - Thread tension 2
(3) - Thread tension 3
(4) - Thread tension 4

Needle thread tension

regular (4): 70 g

additional (3): 120 g

Looper thread tension

regular (2): 15 g

additional (1): 40 g

The value indicated for the **additional** value, is the total of the two individual tensions.

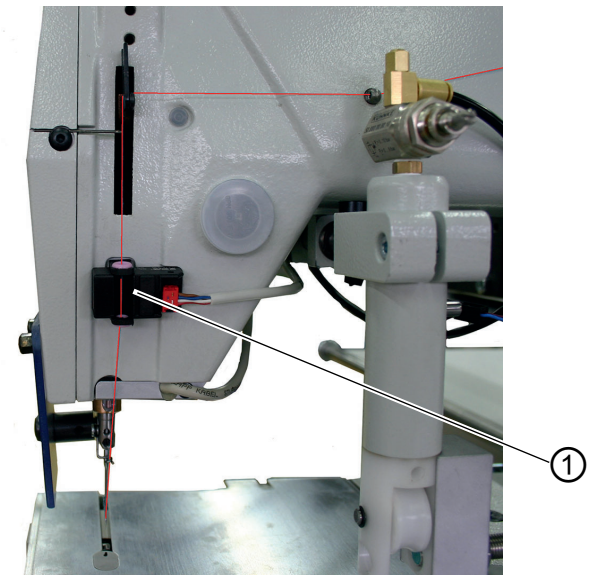
5.4 Needle thread monitor

ATTENTION!

Caution: Danger of injury!

Turn off the main switch before threading in the needle. A restart is only possible after switching the main switch off and on again.

Fig. 10: Needle thread monitor



(1) - Thread monitor

At needle thread rupture, a rupture message will appear on the display and the machine stops.

1. Turn the machine off at the main switch.
2. Remove the unfinished workpiece.
3. Thread in the thread again, 📖 *5.2 Threading the thread*, p. 18.
4. Turn on the machine at the main switch.
5. Start a new sewing cycle.

5.5 Changing the needle

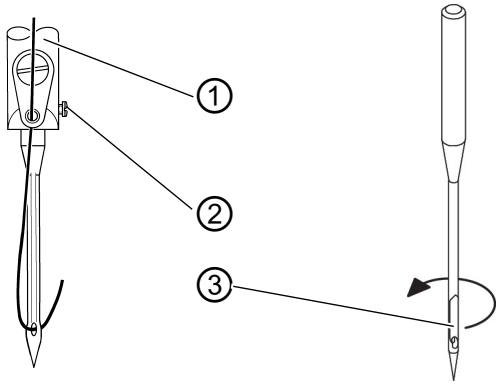
ATTENTION!

Caution: Danger of injury!

Turn off the main switch.

Change the needle only with the sewing machine switched off.

Fig. 11: Changing the needle



(1) - Needle bar
(2) - Screw
(3) - Groove

1. Turn the hand wheel until the needle bar (1) reaches its highest position.
2. Loosen screw (2).
3. Pull the needle downwards out of the needle bar (1).
4. Push the new needle into the drill-hole of the needle holder (1) as far as it will go.

Attention! Seen from the machine operator's side the needle scarf (3) should point to the back.

5. Tighten screw (2).

5.6 Changing the template set

A template set adapted to the desired sewing shape has to be inserted. It allows for the sewing of straight and curved darts, pleats or, on request, also special customer requirements can be realized,📖 *2.3 Optional equipment*, p. 8.

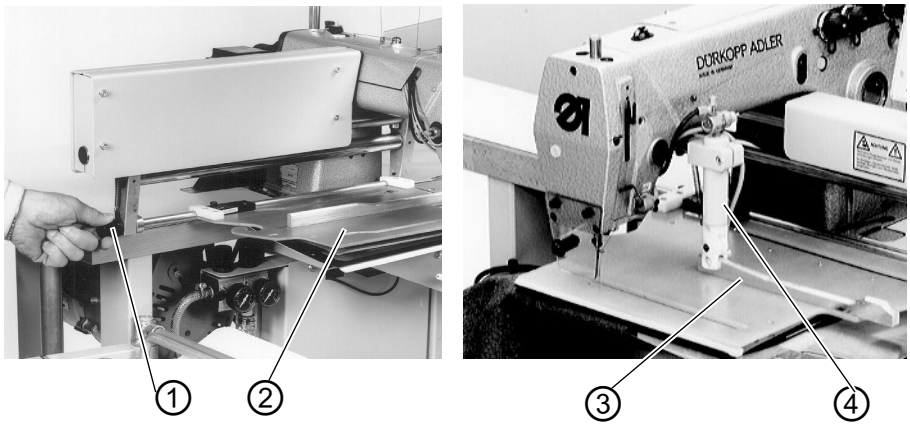
ATTENTION!

Caution: Danger of injury!

Turn off the main switch.

The template set may only be changed with the sewing machine being switched off.

Fig. 12: Changing the template set



(1) - Handle
(2) - Template set
(3) - Control cam
(4) - Hold-down cylinder

Removing the template set

1. Turn the hand wheel until the needle stands in the 2nd position (UDC).
2. Slide the template set (2) into the left end position.
3. Turn the handle (1) about 90° in counter-clockwise direction.
4. Lift the template set (2) at the left side and carefully detach it from the transport carriage.
5. Remove the template set.

Inserting the template set

1. Turn the hand wheel until the needle stands in the 2nd position (UDC).
2. Move the transport carriage to the left end position.
3. Bear the template set (2) with the right side carefully onto the transport carriage.
4. Turn the handle (1) 90° in counter-clockwise direction and lay the template set completely onto the transport carriage.
5. Turn back the handle (1).

↳ The template set is locked and safely fastened to the transport carriage.

6. Position the hold-down cylinder (4) with the guide roller on the control cam (3).
7. Slide the template set to the right as far as it will go.

5.7 Working range, angle and length

The dart depth depends on:

- the individual template set
- the dart length
- the position of the folding table

The folding table can be continuously adjusted from 0-10°.

The dart depths for different inclinations and lengths are indicated in the diagrams.

The curve for the curved darts template set is also indicated.

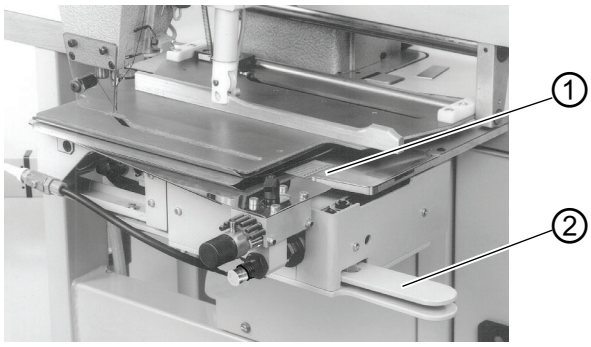
ATTENTION!

Caution: Danger of injury!

Turn off the main switch.

The inclination may only be set with the sewing machine switched off

Fig. 13: Setting the inclination



(1) - Scale *(2) - Handle*

Setting the inclination

1. Retract the folding table
2. Press the handle (2) together and adjust the folding table according to the scale (1).

3. Release the handle.

↳ The angle is set.

4. Pull out the folding table.

.

Setting the length

Maximum **dart length** 150 mm.

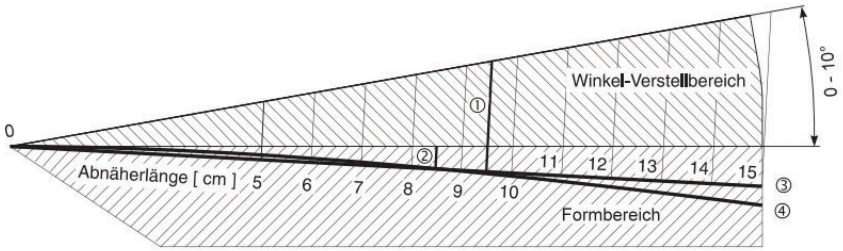
The seam length is regulated by programming it in the main menu or by the light barrier.

The variant to be used, light barrier or set value, can be selected in the main menu, 🕮 *5.14 Setting the control unit*.

With transparent sewing material it is recommended to regulate the seam length by programming.

Example **Template set, straight darts**

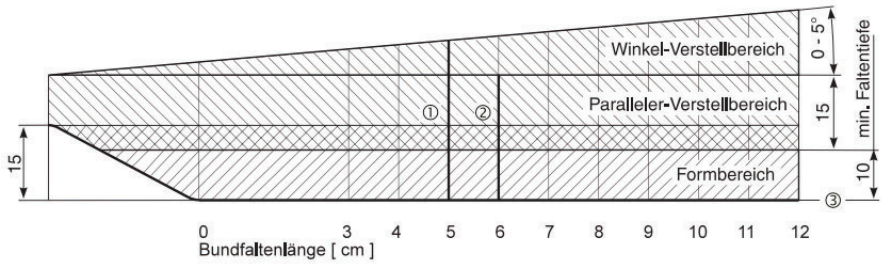
Fig. 14: Working range for darts



(1) - Dart depth max. 2.1 cm at 10°, length 9.5 cm
(2) - Dart depth max. 0.4 cm at 0°, length 8.5 cm
(3) - Template set, straight darts
(4) - Template set, curved darts

Example **Template set pleats**

Fig. 15: Working range for pleats



(1) - Pleat depth max. 3.2 cm at 5°, length 5 cm
(2) - Pleat depth max. 2.5 cm at 0°, length 6 cm
(3) - Template set for pleats

5.8 Setting the insertion depth of the folding table

ATTENTION!

Caution: Danger of injury!

Turn off the main switch.

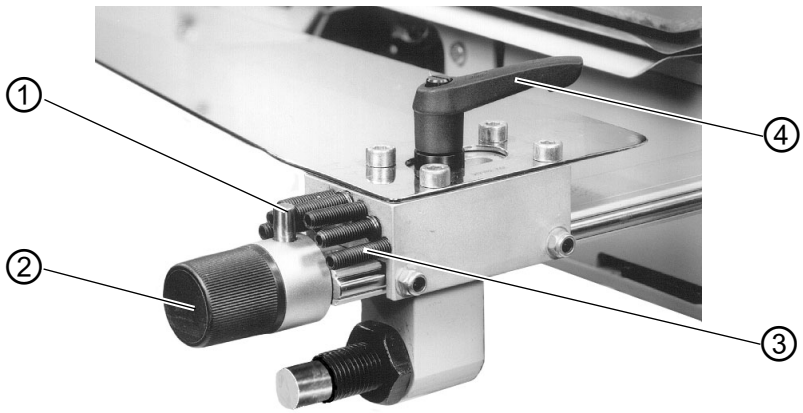
The insertion depth may only be set or altered when the sewing machine is switched off.

The first needle entry in the material should be as close as possible to the fold edge.

In order to achieve an evenly slim dart point with material of varied thickness, the machine is equipped with a fine adjustment.

Up to 7 different insertion depths can be set by using the stops (4).

Fig. 16: Setting the insertion depth



(1) - Stop
(2) - Adjustment knob
(3) - Set screw
(4) - Lever

Setting the insertion depth

1. Release the lever (4).
2. Slide the folding table on its guiding a little to the front.
3. Set one of the set screws (3) (7 pieces) to the desired insertion depth.
4. Turn the adjustment knob (2) to the desired insertion depth (until it stops).
5. Slide the folding table back to the rear.
   The adjustment knob (3) has to abut on the stop (1).
6. Tighten the lever (4) again.

Altering the insertion depth

1. Release the lever (4).

2. Slide the folding table on its guiding a little to the front.
3. Turn the adjustment knob (2) to the desired insertion depth (until it stops).
4. Slide the folding table back to the rear.
   The adjustment knob (3) has to abut on the stop (1).
5. Tighten the lever (4) again.

5.9 Setting the control unit

At this point only the settings needed for sewing will be mentioned. Additional settings on the technician level are described in the 🕮 *Service Instructions*.

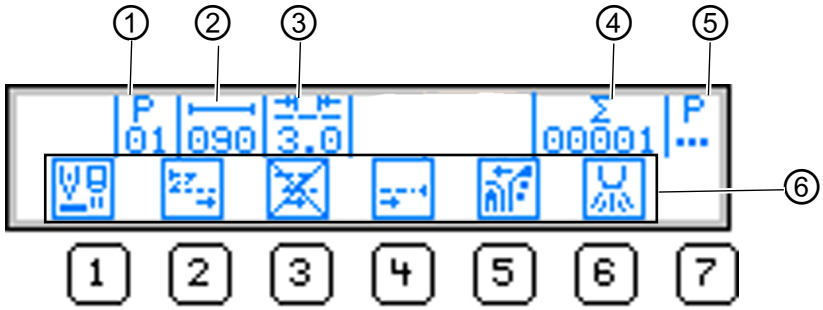
The control unit is operated via the operating panel OP3000, 🕮 p. 17.

After switching on the machine the firmware and software versions will briefly be displayed. After this start the reference run by pressing the “OK” key, 🕮 p. 17.

After the reference run the main menu is displayed.

5.9.1 Functions in the main menu

Fig. 17: Main menu



(1) - Program selection
(2) - Seam length
(3) - Stitch length
(4) - Seam counter
(5) - Submenu
(6) - Switching additional functions on/off

Main menu - Top line	
• Select the desired parameter with the arrow keys (◄,►). ↳The activated parameter is highlighted. • Enter the desired value by using the arrow keys (▼,▲). ↳The value is directly applied and memorized for the particular program.	
P 01	**Program selection** Program number entry Range of values: 1 - 20
090	**Seam length** Seam length entry in mm Range of values: 19 - 150 **Important:** The seam length can only be entered if the light barrier (🕮 p. 30) is disabled.
3.0	**Stitch length** Stitch length entry in mm Range of values: 0.5 - 3.0

Main menu - Top line	
	**Seam counter** Display of the seam segments that have been sewn so far **Resetting the seam counter:** • Long stroke on the “OK” key
	**Submenu** Access to the submenu with the “OK” key

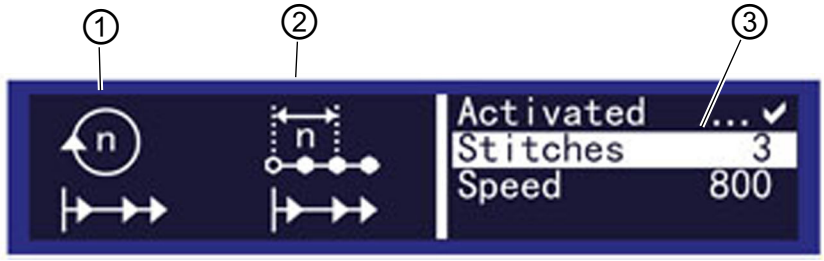
Main menu - Bottom line	
In the bottom line additional functions are activated or disabled. • Press the numerical key below the symbol of the desired function. ↳ You can switch between “activated” and “disabled”. When the function is disabled the symbol is crossed out. The setting is directly applied and memorized for the particular program.	
	**Light barrier** Switch the light barrier on or off with the numerical key “1”. **Important:** If the light barrier is activated, the program will automatically stop the seam upon reaching the bottom edge of the fabric. Disable the function for the manual setting of the seam length (📖 p. 29).
	**Seam beginning** Switch the stitch condensing at the seam beginning on or off with the numerical key “2”.
	**Seam midsection** Switch the stitch condensing at the seam midsection on or off with the numerical key “3”.
	**Seam end** Switch the stitch condensing at the seam end on or off with the numerical key “4”.
	**Smoother** Switch the smoother on or off with the numerical key “5”.
	**Blow-out device** Switch the blow-out device on or off with the numerical key “6”.

5.9.2 Functions in the submenu

Submenu structure		
Symbol	**Menu item**	**Settings**
	Speed	
	Soft Start	Activated, Stitches, Speed
	Advance	Length, Speed
	Seam Begin	Stitches, Speed, Stitchlength
	Seam Between	Stitches, Speed, Stitchlength, Start at
	Seam End	Stitches, Speed, Stitchlength
	Thread Chain	Length, Speed
	Stacker	TimeTillStart, TimeTillStop

Navigating in the submenu

Fig. 18: Setting in the submenu



(1) - Symbol for the menu item
(2) - Symbol for the setting
(3) - Selected entry: highlighted

Selecting the menu item

1. Select the desired menu item by using the arrow keys (▼,▲).

↳ The menu item is highlighted.

2. Activate the menu item with the “OK” key.

↳ The symbol for the menu item (1) appears on the left side of the display.
On the right side the settings of the menu item are listed.

Selecting the setting

3. Select the desired setting by using the arrow keys (▼,▲).

↳ The setting is highlighted (3).

4. Activate the setting with the “OK” key.

↳ In addition to the symbol for the menu item (1),
the symbol for the setting (2) appears on the left side of the display.

Changing the value

5. Change the value for the setting by using the numerical keys or the arrow keys (▼,▲).
6. Confirm the desired value with the “OK” key.

↳ The value is applied and memorized for the particular program.

Return

7. Use the arrow key ◄ to return to the previous level in the submenu.
8. Use the escape key to return to the main menu.

Settings in the submenu

	**Menu item Speed** Number of revs for the sewing speed	
Symbol	**Explanation**	**Range of values**
	There are no further settings for this menu item. Directly enter the value for the speed.	500 – 4000

	**Menu item Soft start** Settings for the soft start at seam beginning		
Symbol	**Setting**	**Explanation**	**Range of values**
	**Activated**	Switch the soft start on or off with the “OK” key. • On: display shows “✓“ff: blank display	On/Off
	**Stitches**	Number of stitches for the soft start	1 – 9
	**Speed**	Number of revs for the sewing speed at soft start	500 – 2000

	**Menu item Advance** Settings for the advance at seam beginning		
Symbol	**Setting**	**Explanation**	**Range of values**
	**Length**	Length of the advance in mm	0 – 50
	**Speed**	Number of revs for the sewing speed at advance	500 – 4800

	**Menu item Seam Begin** Settings for the stitch condensing at seam beginning		
Symbol	**Setting**	**Explanation**	**Range of values**
	**Stitches**	Number of stitches with stitch condensing	1 – 9
	**Speed**	Number of revs for the sewing speed when sewing with stitch condensing	500 – 1500
	**Stitchlength**	Stitch length of the stitch condensing in mm	0.5 – 2.0

	**Menu item Seam Between** Settings for the stitch condensing at seam midsection.		
Symbol	**Setting**	**Explanation**	**Range of values**
	**Stitches**	Number of stitches with stitch condensing	1 – 9
	**Speed**	Number of revs for the sewing speed when sewing with stitch condensing	500 – 1500
	**Stitchlength**	Stitch length of the stitch condensing in mm	0.5 – 2.0
	**Start at**	Indicates the seam segment in mm, after which the stitch condensing will start.	10 – 130

	**Menu item Seam End** Settings for the stitch condensing at seam end		
Symbol	**Setting**	**Explanation**	**Range of values**
	**Stitches**	Number of stitches with stitch condensing	1 – 9
	**Speed**	Number of revs for the sewing speed when sewing with stitch condensing	500 – 1500
	**Stitchlength**	Stitch length of the stitch condensing in mm	0.5 – 2.0

	**Menu item Thread Chain** Settings for a thread chain at seam end		
Symbol	**Setting**	**Explanation**	**Range of values**
	**Length**	Length of the thread chain in mm	8 – 25
	**Speed**	Number of revs for the sewing speed when sewing the thread chain	500 – 3000

	**Menu item Stacker** Settings for the stacker		
Symbol	**Setting**	**Explanation**	**Range of values**
	**TimeTillStart**	Time span in milliseconds after the seam end, before the smoother is activated.	10 – 1000
	**TimeTillStop**	Time span in milliseconds from the activation of the smoother until the shackle of the smoother moves upwards again.	10 – 1000

5.9.3 Error messages

After certain incidents like f. e. a thread rupture the sewing process has to be interrupted. An error number will appear on the display.

The following table lists the error numbers and their explanation as well as the troubleshooting.

Number	Meaning	Troubleshooting
3210	Needle thread rupture	Thread in a new needle thread, 📖 p. 18.
3302	No pressure available	Check the pressure at the maintenance unit, 📖 p. 47.
3303	Folding table in wrong position	Pull out the folding table.
3304	No template set inserted	Insert a template set. Check the contact pressure, if a template set is already inserted.
3330	Sliding plate open	Close the sliding plate.
3340	Contact pressure too low	Correct the contact pressure for the template set by setting the screw at the top on the hold-down cylinder.

5.10 Sewing

In order to start sewing, certain requirements have to be fulfilled. Below you will find the description of a typical sewing process.

Before sewing start, all dart lengths have to be marked on the folding plate (1) with adhesive tape (flat and as thin as possible).

ATTENTION!

Caution: Danger of injury!

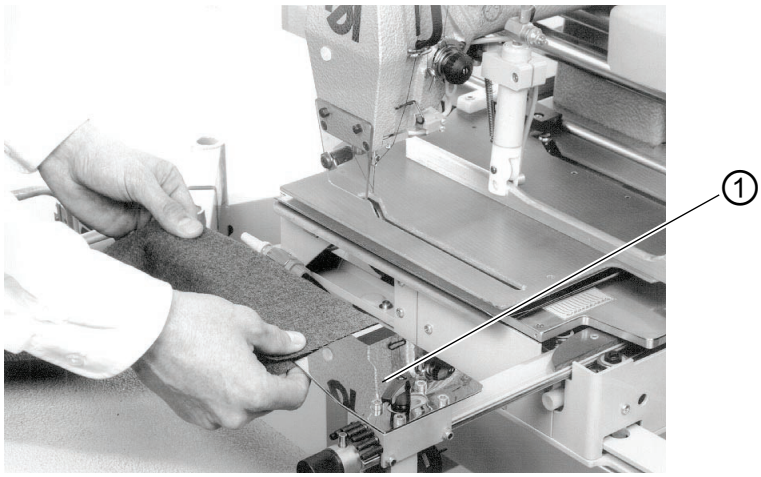
Only mark the dart length with the sewing machine being switched off.

ATTENTION!

Material damage

Do not slide in the folding table without sewing material on it. The friction surfaces of the template set could get damaged.

Fig. 19: Sewing process



(1) - Folding plate

1. Turn on the machine at the main switch.
2. Start the reference run by pressing the OK key.

↳ The machine is ready for operation after carrying out a reference run. It is in its initial position.

3. Select a program in the main menu,
   📖 *5.9 Setting the control unit*, p. 29.

↳ The selected program is activated.

4. Put the workpiece with both hands around the edge of the folding plate.

5. Align the cut edges with the right hand to come on top of each other.
6. Adjust the notch for the dart length exactly at the rear edge of the folding plate.
7. Fix the workpiece by holding it with the right hand and slide in the folding plate.

↳ The workpiece is kept in place by the template set.
The folding plate slides back.
The sewing process is carried out.

5.11 Maintenance of the sewing unit

ATTENTION!

Caution: Danger of injury!

Turn off the main switch.

The maintenance of the sewing machine must only be carried out when the machine is switched off.

5.11.1 Swinging up the machine head.

ATTENTION!

Caution: Danger of injury!

Turn off the main switch.

Swing the machine head up only when the sewing unit is switched off.

For maintenance work the machine head can be swung up.

Fig. 20: Swinging up the machine head

(1) - Positioning table
(2) - Template set
(3) - Handle

1. Swivel the positioning table (1), the bundle clamp and the smoother aside
2. Slide the template set (2) into the left end position.

3. Carefully swing up the machine head with the handle (3) and make it rest against the support.

↳ The machine's gravity center keeps it in position.

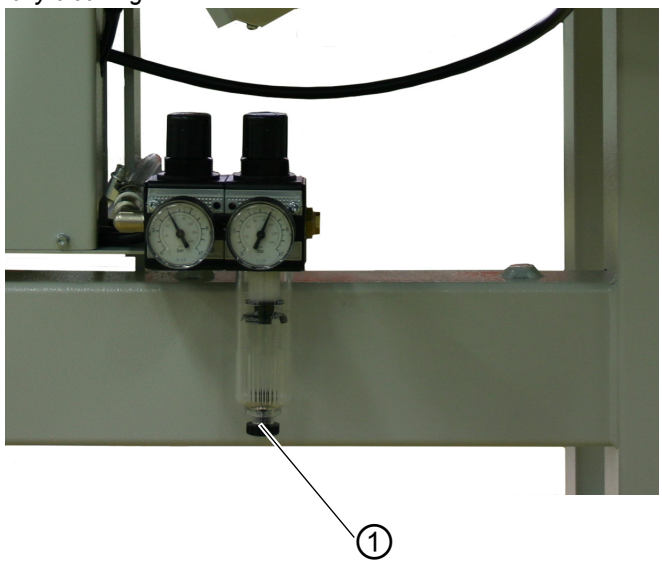
4. Swing back the machine in the same way.

5.11.2 Cleaning

A clean sewing unit is a trouble-free sewing unit.

Daily Cleaning

Fig. 21: Daily cleaning

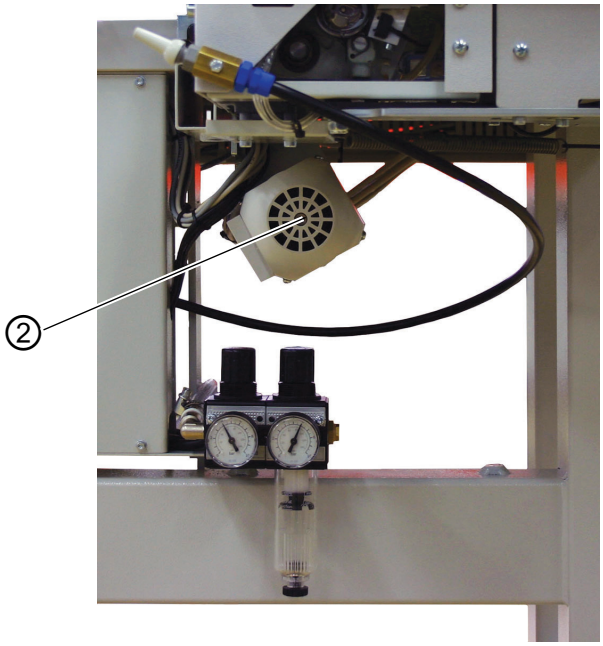


(1) - Drain screw

1. Remove all fluff balls.
2. Clean the lenses of the light barrier with a soft cloth.
3. Check the water level in the pressure regulator.
   The water level must not reach the filter element.
4. After screwing in the drain screw (1) blow out the water under pressure.

Depending on the amount of fluff

Fig. 22: Cleaning as the need arises



(2) - Motor fan grille

Clean the motor fan grille (2).

5.11.3 Oil lubrication

ATTENTION!

Caution: Danger of injury!

Oil can cause skin rashes.

Avoid a longer skin contact with the oil.

After contact wash yourself thoroughly.

ATTENTION!

Environmental hazards:

The handling and disposal of mineral oils is subject to legal regulations.
Deliver used oil to an authorized collecting station.
Protect your environment.
Pay attention not to spill any oil.

To lubricate the sewing unit use only **DA -10** lubricating oil or an equivalent oil with the following specifications:

Viscosity at 40° C:10 mm²/s

Ignition point:150° C

DA-10 lubricating oil is available from the **DÜRKOPP ADLER AG** sales offices under the following parts numbers:

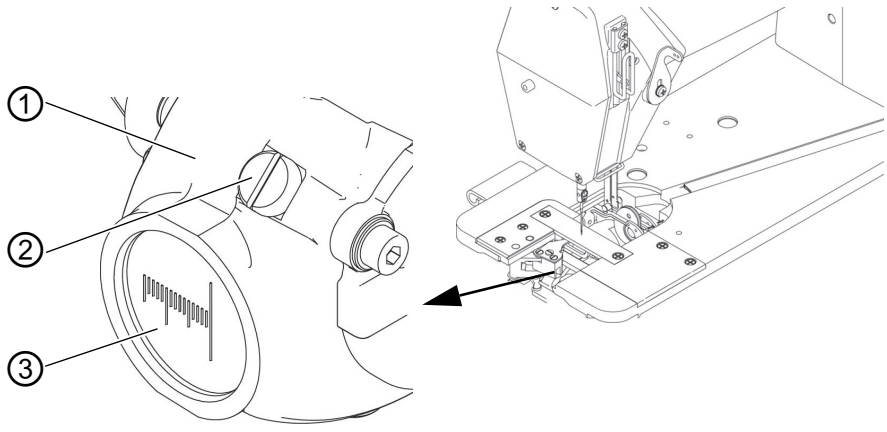
250-ml container:	9047 000011
1-liter container	9047 000012
2-liter container	9047 000013
5-liter container	9047 000014

Looper lubrication

Check the oil level after each working shift.

1. Fold back the machine head as described.
2. Check the oil level in the inspection glass (3) of the looper drive housing (1). The oil level must not drop below the lower, long cue on the inspection glass (3).
3. If the oil reserve is to low, the oil needs to be topped up.
4. Loosen screw (2).
5. Fill up the oil reserve at most to the upper cue.
6. Tighten screw (2).
7. Raise the machine head again.

Fig. 23: Oil reservoir 1 - looper lubrication

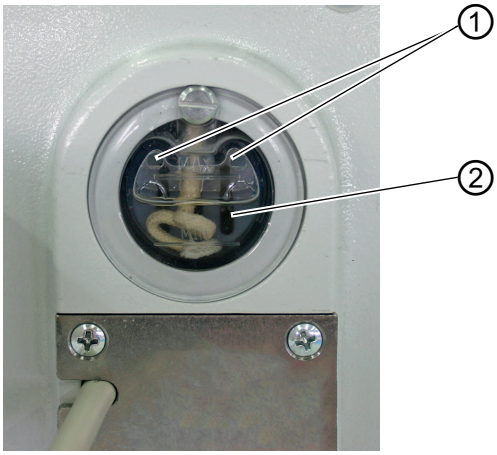


(1) - Looper drive housing
(2) - Screw
(3) - Inspection glass

Machine head lubrication

1. The oil level in the oil reservoir (2) must not drop below the marking **min**.
2. If necessary, fill oil through the drill-hole (1) in the inspection glass up to the marking **max**.

Fig. 24: Oil reservoir 2 - machine head



(1) - Drill-holes *(2) - Oil reservoir 2*

6 Installation instructions

In the following, the steps are listed in chronological order. The structure of the chapter is oriented towards this sequence.

The manufacturer will not be held liable for damage resulting from improper use.

WARNING

Danger of injury due to insufficient technical knowledge

During the installation of the machine, insufficient technical knowledge can lead to serious injuries.

The machine should be installed ONLY by trained personnel.

DANGER

Risk of injury due to electric power!

Unprotected contact with electric power can cause dangerous injuries to life and limb.

All work on the electrical equipment may ONLY be carried out by qualified electricians or other appropriately trained persons.

ALWAYS disconnect the power plug before carrying out work at the electrical equipment.

6.1 Delivery scope

What items are supplied depends on your order. Prior to set-up, please check that all parts required are present.

- Standard equipment
- Optional equipment
- Small parts in the accessories

6.2 Installing the sewing unit

6.2.1 Transportation

.

CAUTION

Risk of injury due to incorrect transportation!

Do NOT lift the sewing unit at the table tops.

ALWAYS use an elevating platform truck or a forklift

CAUTION

Risk of injury due to unstable footing!

Before putting the sewing unit into operation screw in the castors until the unit attains a secure standing.

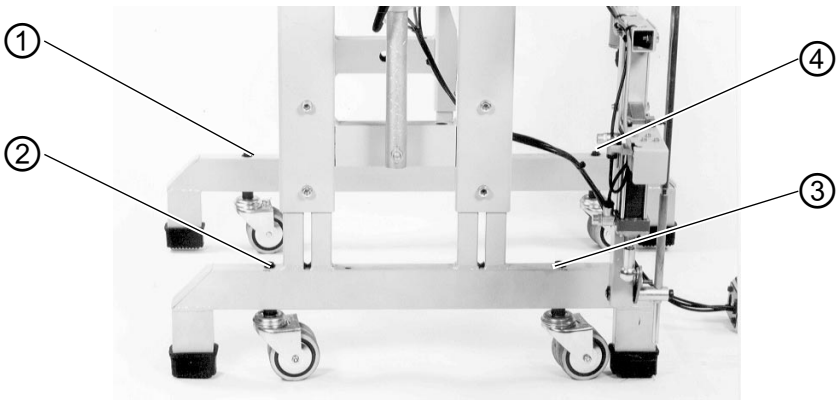
Lifting the sewing unit

- Only with an elevating platform truck or a forklift.

For in-house transport the stand is equipped with four castors.

Rolling the sewing unit

Fig. 25: Transport on castors



(1) - Adjusting screw
(2) - Adjusting screw
(3) - Adjusting screw
(4) - Adjusting screw

1. In order to transport the unit on its castors, turn the setting screws (1) to (4) counter-clockwise. The feet must have sufficient ground clearance for transportation
2. Transporting the sewing unit
3. To lower the sewing unit turn the setting screws (1) to (4) in clockwise direction. The feet must stand firmly on the ground.

6.2.2 Removing the transport securing devices

Before installing the sewing unit, you have to remove any securing devices.

All movable parts have to be unlocked:

- Positioning table
- Smoother and bundle clamp
- Transport carriage

If the sewing unit has to be transported to another place, you have to attach the securing devices again.

6.2.3 Setting the working height

The working height is adjustable between 850 and 1250 mm (measured to the upper edge of the table plate).

CAUTION

Be careful when loosening the attachment screws.

The sewing unit may keel over when the tubular feet of the frame are pulled out.

Fig. 26: Setting the working height

(1) - Screw
(2) - Screw
(3) - Screw
(4) - Screw

1. Loosen screws (1) to (4).
2. Level out the unit to the desired height.
3. Tighten screws (1) to (4) again.

6.3 Attaching the machine parts removed for shipping

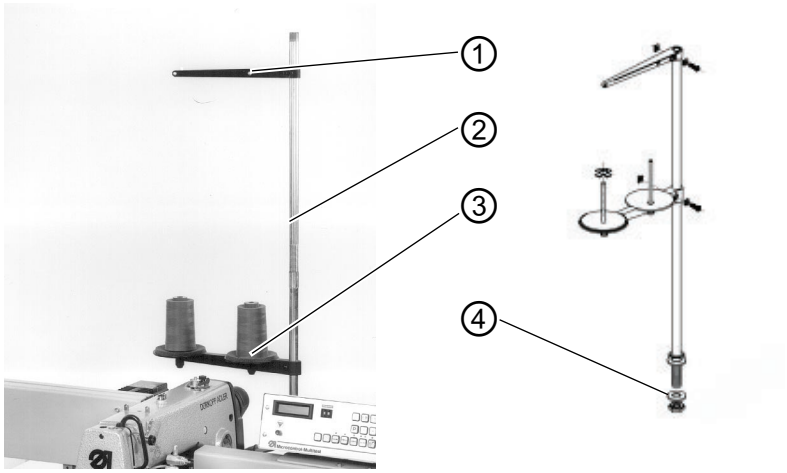
Some parts of the machine had to be removed or shifted in their position for shipment. These parts have to be attached correctly before start of work.

6.3.1 Thread reel holder

The thread reel holder is loosely added for shipment. In order to connect the machine to the power supply from the top, the connection cable can be run through the tube (2) of the thread reel holder.

Guide the compressed air supply pipe upwards through the second bore hole in the table top and then attach it to the thread reel holder with cable ties.

Fig. 27: Attaching the thread reel holder

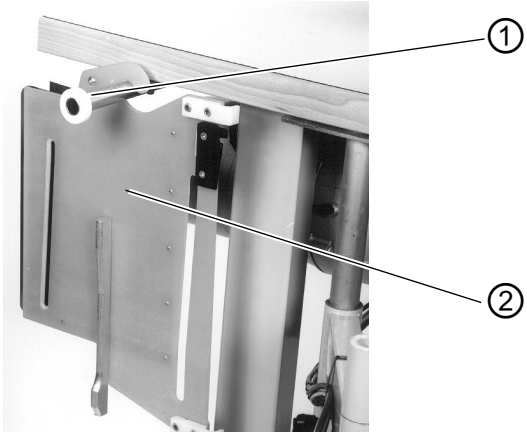


(1) - Unwinding bracket
(2) - Thread reel holder
(3) - Reel plate
(4) - Nut

1. Insert the thread reel holder (2) into the bore hole of the table top.
2. Fix it with screw (4) underneath the table top.
3. Align the reel plate (3) and the unwinding brackets (1) parallel to the rear table edge. Reel plate (3) and the unwinding brackets (1) have to point into the same direction.

6.3.2 Holding device for the template set

Fig. 28: Holding device



(1) - Holding device
(2) - Template set

During the transport the holding device (1) for the template set (2) is underneath the table top.

1. Remove the fastening screws.
2. Rotate the holding (1) device by 180°.
3. Fix the fastening screws again.

6.4 Pneumatic connection

For the operation of the pneumatic components the sewing unit has to be supplied with anhydrous compressed air.

ATTENTION!

Material damage!

For a trouble-free function of the pneumatic control procedures the compressed air supply must operate as follows:

Even at the moment of the highest air consumption the minimum operating pressure (2) must not drop below **6 bar**.

ATTENTION!

Material damage!

No oil-bearing compressed air must be fed from the compressed air line. Behind the filter cleaned compressed air is withdrawn as blowing air for cleaning machine parts and for blowing out workpieces. Oil particles contained in the blowing air lead to malfunctions and stains on the workpieces.

In case of a too high loss of pressure:

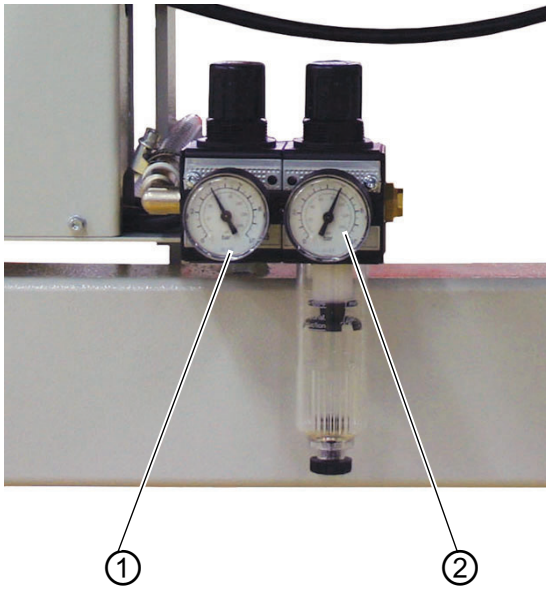
- Increase the compressor output.
- Increase the diameter of the compressed air hose.

The connection to the compressed air supply is effectuated with the accessory delivered as optional equipment or with in-house fitting material.

Operating pressure (2) = 6 bar

Blowing pressure (1) = has to be adjusted according to the sewing material;
standard setting 3 bar

Fig. 29: Pneumatic connection



(1) - Blowing pressure *(2) - Operating pressure*

To adjust the pressure lift the corresponding rotary handle and twist it.

- Turning in clockwise direction = the pressure is increased
- Turning counter-clockwise = the pressure is reduced

6.4.1 Oil lubrication

ATTENTION!

Caution: Danger of injury!

Oil can cause skin rashes.

Avoid a longer skin contact with the oil.

After contact wash yourself thoroughly.

ATTENTION!

Environmental hazards

The handling and disposal of mineral oils is subject to legal regulations.
Deliver used oil to an authorized collecting station.
Protect your environment.
Pay attention not to spill any oil.

To lubricate the sewing unit use only **DA -10** lubricating oil or an equivalent oil with the following specifications:

Viscosity at 40° C: 10 mm²/s

Ignition point: 150° C

DA -10 lubricating oil is available from the **DÜRKOPP ADLER AG** sales offices under the following parts numbers:

250-ml container:	9047 000011
1-liter container	9047 000012
2-liter container	9047 000013
5-liter container	9047 000014

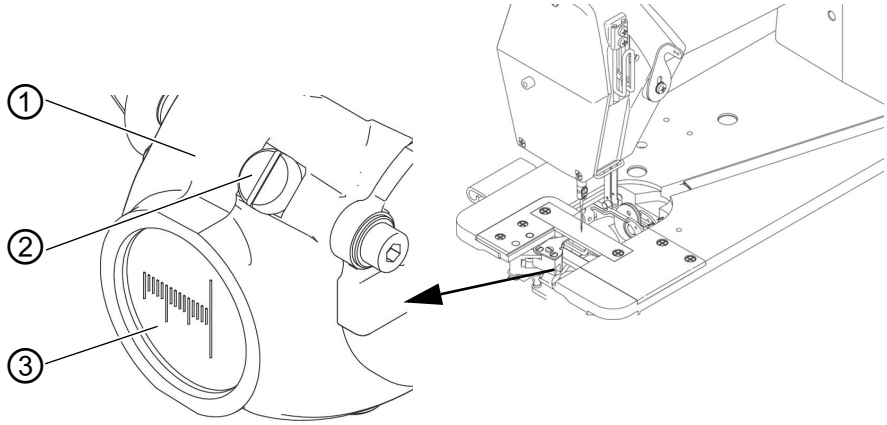
Looper lubrication

Check the oil level after each working shift.

1. Fold back the machine head as described.
2. Check the oil level in the inspection glass (3) of the looper drive housing (1). The oil level must not drop below the lower, long cue on the inspection glass (3).
3. If the oil reserve is to low, the oil needs to be topped up.
4. Loosen screw (2).
5. Fill up the oil reserve at most to the upper cue.

6. Tighten screw (2).
7. Raise the machine head again.

Fig. 30: Oil reservoir 1 - looper lubrication

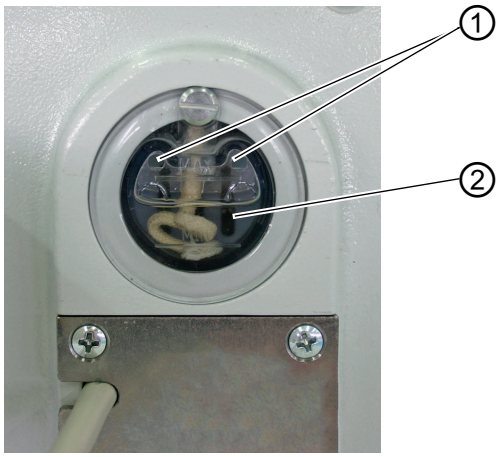


(1) - Looper drive housing
(2) - Screw
(3) - Inspection glass

Machine head lubrication

1. The oil level in the oil reservoir (2) must not drop below the marking **min**.
2. If necessary, fill oil through the drill-hole (1) in the inspection glass up to the marking **max**.

Fig. 31: Oil reservoir 2 - machine head



(1) - Drill-holes
(2) - Oil reservoir 2

6.5 Putting into operation

After completion of the installation work a sewing test should be made.

- Plug in the mains plug.

DANGER

Risk of injury due to pointed items and glare

Turn off the main switch before threading in the needle and hook thread.

Do not look into the light source.

- Threading in the needle thread
- Threading the looper thread
- Turn on the main switch.
  The control unit is initialized.
- Starting the sewing cycle, 🕮 *5.10 Sewing*, p. 35.

6.6 Installation of the software

6.6.1 General information

Loading a specific sewing software in the DAC classic control unit is possible with the help of the “Programmed Dongle”. The “Programmed Dongle” has a label indicating the machine class and software version.

Such a loading (booting) may be used in order to provide an individual DAC classic control unit with a sewing software (first installation) or to install a newer machine software (update).

With the delivery of the machine only the test software (allowing the loading of sewing software) is installed in the control unit. The test software offers no further functions. If the test software gets damaged during the loading process, it is no longer possible to load a software using a dongle. In such a case use a PC with a loader cable.

ATTENTION!

Material damage!

The sewing unit is delivered with a machine software installed on it.

ATTENTION!

Turn off the main switch before connecting the dongle.

The instructions for the DAC classic control unit is enclosed with the machine.

6.6.2 Loading the program

ATTENTION!

Material damage!

During the loading process do not remove the dongle and do not switch off the machine (otherwise you will destroy the software).

Fig. 32: Connecting the dongle

(1) - Dongle *(2) - Plug-in position*

1. Turn off the main switch.
2. Insert the dongle (1) into the plug-in position (2) of the control unit.
3. Turn on the main switch. The Software will be loaded. The loading process takes less than 60 seconds.
4. Turn off the main switch.
5. Disconnect the dongle (1).
6. Switch the machine on again.

6.6.3 Dongle-Update via Internet

ATTENTION!

Material damage!

When transferring the machine software onto the dongle, it will first be deleted (formatted).

The programs (sequences, parameters) saved on the dongle will then be deleted.If still needed, please make a backup of the files into a computer (desktop, notebook).

The required software “Dongle Copy” is available in the “Download Area”.

Dongles can be updated by means of Internet. In order to do so, visit the Dürkopp Adler AG homepage “www.duerkopp-adler.com”. In the sections “Download Area” and “Software” you will find the auxiliary download software and the appropriate machine software. The instructions also available on the website, describe the complete update procedure of the dongle.

6.7 Customer service

If you have any questions regarding the machine, damage occurring, or wear, please contact

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