



512/532

Operating Manual

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1 About this manual

This operating manual is intended to help the user familiarize themselves with the machine and to enable correct utilization.

The operating manual contains important information on how to operate the machine safely, correctly and economically. Observation of the instructions eliminates danger, reduces costs for repair and downtime, and increases the reliability and service life of the machine.

1.1 Scope of this guide

This manual describes the intended use and installation of the special sewing machines 512 and 532.

1.2 Declaration of conformity

The machine conforms with the European regulations stated in the declaration of conformity or incorporation.

1.3 Applicable documents

The machine contains components by other manufacturers, e.g., drive motors. The respective manufacturers have performed risk assessment for these supply parts and declared the conformity of their design with pertinent European and national regulations. The intended use of the incorporated components is described in the respective third-party manufacturer's guides.

1.4 Transport damage

Dürkopp Adler is not liable for breakage and transport damage. Please check the delivery carefully immediately on receipt. Claim against the forwarder for damage. This also applies if the packaging is undamaged.

Leave the machine device and packaging material in the state it was in when you ascertained the damage. This will help you assert your claim against the forwarder.

Report all other complaints without delay after receipt of delivery to Dürkopp Adler.

1.5 Limited liability

All information and instructions for use in this guide were compiled taking account of the latest state of the art, and applicable standards and regulations.

The manufacturer accepts no liability in case of damage due to:

- failure to observe this guide
- unintended use
- unauthorized modifications to the machine
- use of untrained staff
- breakage and transport damage
- use of non-approved spare parts

1.6 Intended use

The class 512 is a bartacker, the class 532 a button sewer designed for sewing light to moderately heavy material. Such material generally consists of textile fibres, but can also include leather. It is used in the clothing industry and for domestic and motor-vehicle upholstery.

It may also be possible to produce technical seams with this bartacker/button sewer. In this case, however, the operator must assess the possible risks which may arise (DÜRKOPP ADLER AG would be pleased to assist), since such applications are on the one hand relatively unusual and, on the other, so varied that no single set of criteria can cover them all. The outcome of this assessment may require appropriate safety measures to be taken.

As a general rule, only dry material may be sewn with this bartacker/button sewer. The material must not be thicker than 10 mm (512) or 9 mm (532) when compressed by the lowered sewing feet. The material may not contain any hard objects.

The seam is typically sewn with sewing threads made from textile fibres (cotton threads, synthetic threads or core threads) of the following dimensions:

Class 512 Thread thickness dimension 50/3 - 130/3

Class 532 Thread thickness dimension 50/3 - 150/3

Before using any other thread the possible dangers arising must be assessed and appropriate safety measures implemented if necessary.

This automatic sewing machine may only be set up and operated in dry, well-maintained premises. If the automatic sewing machine is used in premises which are not dry and well-maintained, it may be necessary to take further precautions which should be agreed in advance (see EN 60204-31:1999).

2 Safety instructions

This chapter contains basic instructions for your safety.

Read these instructions carefully before you install, program, maintain or operate the machine.

Always follow the provisions in the safety instructions. Failure to observe can lead to severe injury and damage to property.



2.1 General Safety Precautions

Only authorised persons must work on or with the machine. Every person working on or with the machine must read the Operating Guide before doing so.

The machine must only be used as described in this guide.

The Operating Guide must be kept at the machine's place of use.

Please observe all general safety and accident prevention regulations and the legal requirements on occupational safety and environmental protection.

Observe the safety instructions and the operating manual provided by the motor manufacturer for the drive.

All warning signs on the machine must always be kept in legible state and must not be removed. Missing or damaged signs must be replaced immediately.

In the following situations, always de-energise the machine at the main switch or by unplugging the mains plug:

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

Check the machine during use for signs of visible damage. Stop working if you notice any changes to the machine's behaviour. Report all changes to the appropriate supervisor. You must not continue using a damaged machine.

Machines or machine parts that have reached the end of their service life must not be operated. Dispose of these machines in line with environmental legislation.

Only qualified and trained staff are allowed to install the machine.

Only qualified and trained staff are allowed to perform servicing, maintenance and repairs.

Safety devices must not be removed or disabled. If this is unavoidable for repairs, the safety devices must be refitted and re-enabled immediately after completing the repairs.

Work on the machine's electrical equipment must be performed by a qualified electrician.

The connecting cable must have a plug with country-specific approval. Only a qualified electrician is permitted to connect the plug to the power cable.

Work on live parts and assemblies is prohibited. Exceptions are regulated in DIN VDE 0105.

Only use original spare parts by the manufacturer. Incorrect or faulty spare parts can impair safety and damage the machine.

2.2 Marking of safety instructions

Coloured bars highlight the safety instructions in the text.

Signal words indicate the severity of the risk:

- **Danger:** Certainty of serious or fatal injury.
- **Warning:** Risk of serious or fatal injury.
- **Caution:** Risk of moderate or minor injury.
- **Attention:** Risk of damage.

Symbols in the text In case of dangers for persons, these symbols indicate the type of danger:



General danger



Danger due to electric shock



Danger due to pointed objects



Danger due to crushing

Examples Examples for marking of safety instructions in the text:

DANGER



Type and source of danger

Consequences in case of failure to observe

Measures for preventing the danger

Warning notice where failure to observe will lead to fatal or serious injury.

WARNING



Type and source of danger

Consequences in case of failure to observe

Measures for preventing the danger

Warning notice where failure to observe can lead to fatal or serious injury.

CAUTION



Type and source of danger

Consequences in case of failure to observe

Measures for preventing the danger

Warning notice where failure to observe can lead to moderate or minor injury.

CAUTION



Type and source of danger

Consequences in case of failure to observe

Measures for preventing the danger

This is what environmental protection instructions for compliant disposal look like. Failure to observe can lead to environmental damage.

ATTENTION

Type and source of danger

Consequences in case of failure to observe

Measures for preventing the danger

Danger notice where failure to observe can lead to damage to property.

3 Performance description

3.1 Performance characteristics class 512

The Dürkopp Adler 512 is a CNC double lockstitching backtacker. The existing standard backtacking patterns are scalable and can be memorized in this modified form. The machine is equipped with automatic sewing foot raising, a thread cutter, a thread wiper, a needle thread clamp below the sewing plate for a safe sewing start, and integrated DC direct drive including a control panel.

Technical specifications

- The sewing unit is driven by a integrated positioning drive. Besides controlling the sewing drive, a control unit also controls 2 step motors required for the X and Y motions of the seam geometry.
- Clamp lifting is effected by a step motor.
- The maximum size of the sewing field is 40 mm in X direction (transverse direction of arm) and 30 mm in Y direction (longitudinal direction of arm).
- The machine head is oil-free. This removes the risk of oil soiling the material to be sewed.
- The hook is lubricated by a wick lubricator from an oil tank in the operator's field of view.
- 50 pre-programmed backtacks are available. These standard patterns can be temporarily modified (changes to overall length, overall width, speed). When the machine is switched off, the modified values for the last backtack to be used are kept until the machine is powered back on.
- 50 modified standard patterns can also be memorized.
- A maximum of 16,000 stitches can be memorized.
- 25 sequence programs, each with up to 30 sewing patterns per sequence can be memorized.
- The accuracy of the coordinate input 0.1 mm.
- The machine has a bobbin thread counter and daily item counter.
- The arm shaft is directly driven by a brushless DC motor.
- Speeds of up to 3000 rpm can be set in 100 rpm steps.

3.2 Performance characteristics class 532

The Dürkopp Adler 532 is a CNC double lockstitching button sewer. The existing programs are scalable and can be memorized in this modified form. The machine is equipped with automatic sewing foot raising, a thread cutter, a thread wiper, a needle thread clamp below the sewing plate for a safe sewing start, and integrated DC direct drive including a control panel.

Technical specifications

- The sewing unit is driven by a integrated positioning drive. Besides controlling the sewing drive, a control unit also controls 2 step motors required for the X and Y motions of the seam geometry.
- Clamp lifting is effected by a step motor.
- The maximum size of the sewing field is 40 mm in X direction (transverse direction of arm) and 30 mm in Y direction (longitudinal direction of arm).
- The machine head is oil-free. This removes the risk of oil soiling the material to be sewed.
- The hook is lubricated by a wick lubricator from an oil tank in the operator's field of view.
- A maximum of 33 standard button patterns is available. These standard patterns can be temporarily modified (changes to overall length, overall width, speed). When the machine is switched off, the modified values for the last backtack to be used are kept until the machine is powered back on.
- A maximum of 16,000 stitches can be memorized.
- 25 sequence programs, each with up to 30 sewing patterns per sequence can be memorized.
- The accuracy of the coordinate input 0.1 mm.
- The machine has a bobbin thread counter and daily item counter.
- The arm shaft on the button sewer is directly driven by a brush-less DC motor.
- Speeds of up to 3000 rpm can be set in 100 rpm steps.
- Up to 10 user-defined button patterns can be programmed and memorized.
- A total of 50 button patterns can be memorized on the 25 shortcut keys.

3.3 Technical specifications

Class		512	532
Type of stitch		301	301
Hook type		oscillating hook	oscillating hook
number of needles		1	1
Needle system		134 DPx5	135x17 DPx17
Needle size		80 - 130 12 - 20	80 - 110 12 - 18
Stitch length	[mm]	Depending on the seam pattern (0.1 – 10 mm)	Depending on the seam pattern (0.1 – 10 mm)
Max. speed	rpm	3000	3000
Factory set speed	rpm	2700	2700
Sewing field size	[mm]	max. in X direction: 40 max. in Y direction: 30	max. in X direction: 40 max. in Y direction: 30
Number of standard patterns		50	33
Number of storable modified patterns		50	50
Number of sequences		25	25
Number of sewing patterns per sequence		30	30
Soft start		can be enabled/disabled	can be enabled/disabled
Operating pressure	[bar]	--	--
Air consumption	[NL]	--	--
Length, width, height (machine head incl. packaging)	[mm]	870 / 430 / 890	870 / 430 / 890
Length, width, height (machine head only)	[mm]	660 / 230 / 430	660 / 230 / 430
Weight (machine head, without con- trol unit)	[kg]	69	69
Length, width, height (control unit incl. packaging)	[mm]	600 / 450 / 300	600 / 450 / 300
Weight (control unit only)	[kg]	18	18

Ratings

Class		512	532
Voltage	[V]	230	230
Frequency	[Hz]	50 / 60	50 / 60
Output	[W]	500	500

4 Operating manual

4.1 Threading the needle thread

CAUTION

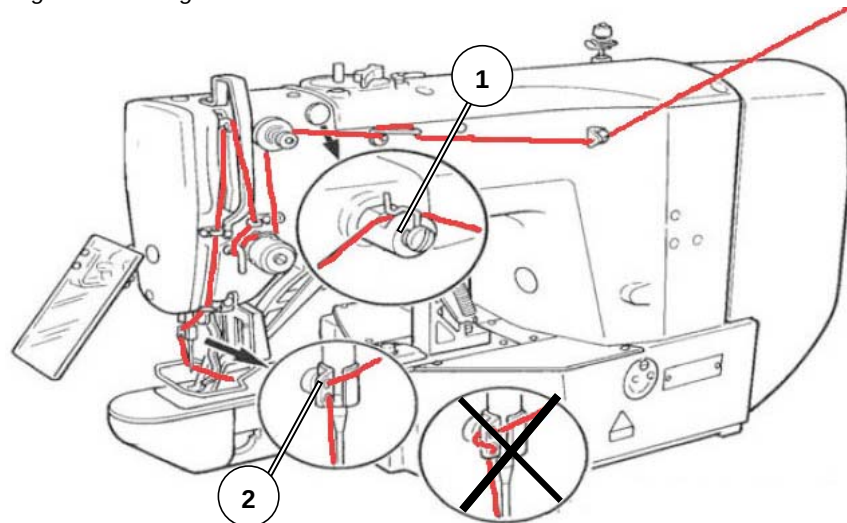


Risk of injury due to the needle tip and moving parts

Only thread the needle thread while the automatic sewing machine is switched off.

1. Put the thread reel on the thread stand and guide the needle thread and the hook thread through the unwinder arm.
 - The unwinder arm must be in a horizontal position above the thread reels.
2. Thread the needle thread as illustrated in the following figure.

Fig. 1: Threading the needle thread



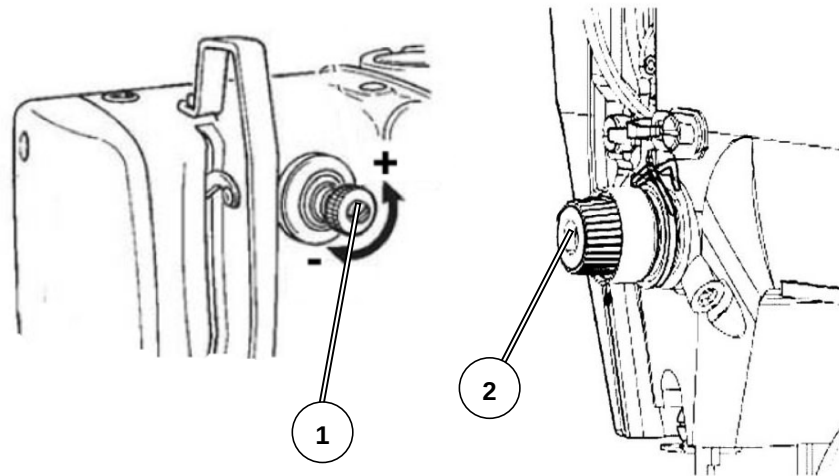
(1) - Silicone oiler (optional)

(2) - Guide

3. After threading, pull about 4 cm of the needle thread out through the needle.
This guarantees a safe start to sewing.
4. If you are using silicone oil, additionally thread the needle thread in through the silicone oiler (1).

4.2 Adjusting the needle-thread tension

Fig. 2: Adjusting the needle-thread tension



(1) - Knurled nut pretension

(2) - Main tensioner

Pre-tension

When the main tensioner (2) is open, the needle thread must be under slight residual tension. This residual tension is produced by the pre-tensioner (1).

The pretension also affects the length of the end of the cut-off needle thread (the starting thread for the next seam).

1. For a shorter starting thread turn the knurled nut (1) clockwise (in the direction of -).
2. For a longer starting thread turn the knurled nut (1) anticlockwise (in the direction of +).

Main tension

1. Set the main tensioner (2) as low as possible.

The cross-over point of the thread should be in the centre of the material. When using thin material, excessive thread tension can cause unwanted gathering and thread breakage.

Opening the thread tension

Main tensioner (2) opens automatically when cutting the thread and lifting the material clamp feet.

4.3 Adjusting the thread regulator

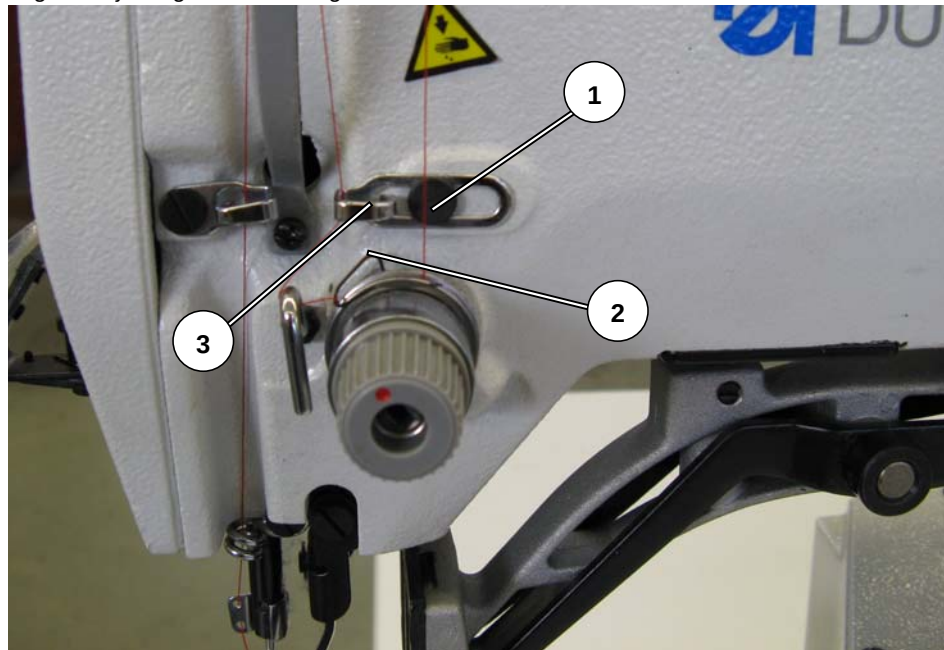
CAUTION



Risk of injury due to the needle tip and moving parts

Only thread the needle thread while the automatic sewing machine is switched off.

Fig. 3: Adjusting the thread regulator



(1) - Screw

(2) - Thread tensioning spring

(3) Thread regulator

The thread regulator (3) controls the quantity of needle thread required for stitch formation. The thread regulator must be precisely adjusted for an optimum result.

With correct setting the needle-thread loop must slide with low tension over the thickest point of the hook.

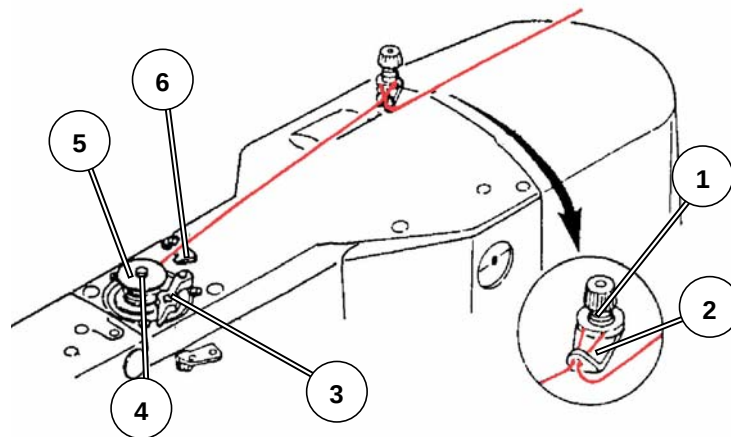
1. Release the screw (1).
2. Adjusting the position of the thread regulator (3).
Thread regulator to the left = more needle thread
Thread regulator to the right = less needle thread
3. Tighten screw (1).

Adjustment information:

If the maximum amount of thread is required, the thread tension spring (2) must be pulled downwards approximately 0.5 mm from its upper end position. This is the case if the needle thread loop passes the maximum hook diameter.

4.4 Winding on the hook thread

Fig. 4: Winding on the hook thread



(1) - Tension

(2) - Guide

(3) - Bobbin-winder lever

(4) - Winder shaft.

(5) - Bobbin

(6) - Thread clamp

1. Place the bobbin (5) on the winder shaft (4).
2. Pull the thread through the guide (2) and around the tensioner (1).
3. Wind the thread approx. 5 x anticlockwise around the bobbin core (5).
4. Press the bobbin-winder lever (3) into the bobbin.
5. Start sewing.
 - After reaching the set bobbin fill quantity (see Service Manual) the bobbin winder switches off automatically.
6. After winding, tear off the thread at thread clamp (6).

Tip

If you want to wind on the thread without sewing, you can set thread winding mode on the control unit.

4.5 Changing the hook thread bobbin

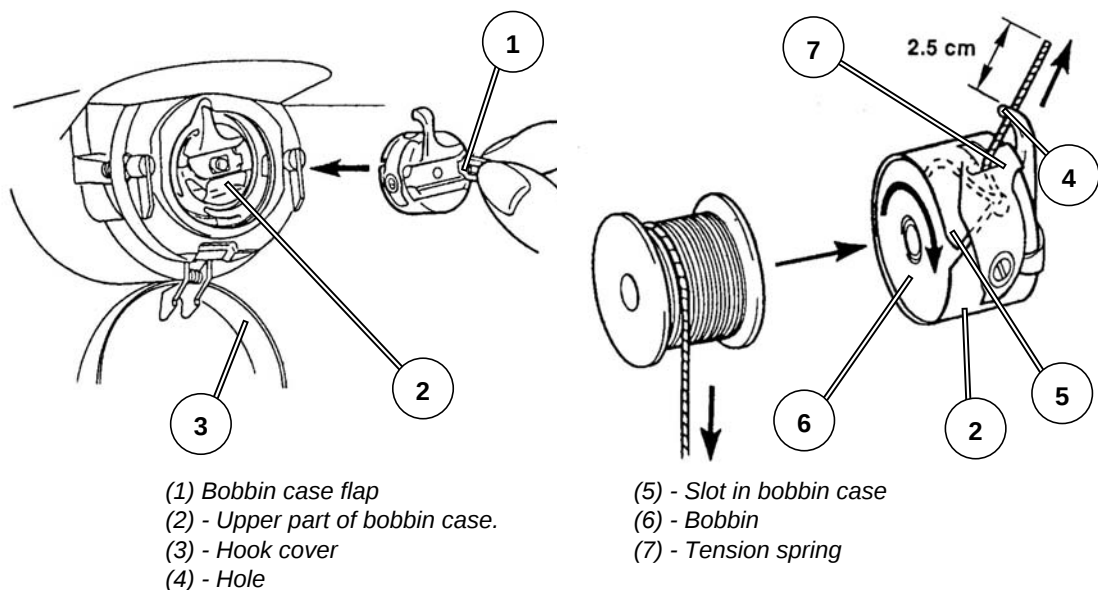
CAUTION



Risk of injury due to the needle tip and moving parts

Only fit the hook thread bobbin while the automatic sewing machine is switched off.

Fig. 5: Changing the hook thread bobbin



Remove the empty bobbin.

1. Slide the hook cover (3) downwards.
2. Lift the bobbin case flap (1).
3. Remove the bobbin case (2) with bobbin (6).
4. Remove the empty bobbin from the upper part of the bobbin case (2).

Insert a full bobbin.

1. Insert a full bobbin (2) into the upper part of the bobbin case.
2. Pull the hook thread through the bobbin case slot (5) below the tension spring (7) and into the hole (4).
3. Pull approx. 2.5 cm of hook thread from the bobbin case (2).
 - When pulling the hook thread, the bobbin must rotate in the direction indicated by the arrow.
4. Insert the bobbin case (2).
5. Close the hook cover (3).

4.6 Setting the hook thread tension

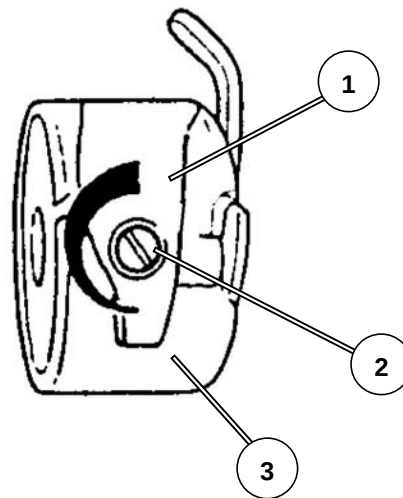
CAUTION



Risk of injury due to the needle tip and moving parts

The hook thread tension may only be adjusted with the sewing unit switched off.

Fig. 6: Setting the hook thread tension



(1) - Tension spring
(2) - Adjusting screw

(3) - Upper part of bobbin case.

The necessary hook thread tension should be generated by the thread tension spring (1). The upper part of the bobbin case (3) slowly drops thanks to its own deadweight if held by the threaded hook thread.

Setting the tension spring

1. Remove the upper part of the bobbin case (3) with the bobbin.
2. Set the tension spring (1) by turning the adjustment screw (2) until the needed tension value is reached.
3. Insert the upper part of the bobbin case.

4.7 Changing the needle

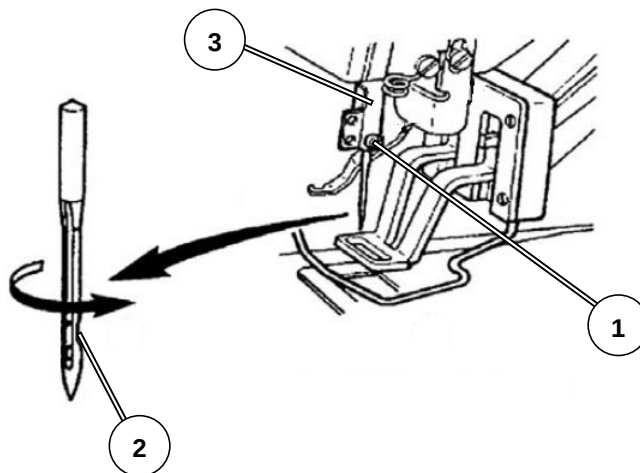
CAUTION



Risk of injury due to the needle tip and moving parts

Only replace the needle while the automatic sewing machine is switched off.

Fig. 7: Changing the needle



(1) - Screw

(2) - Hollow groove

(3) - Needle bar

1. Release the screw (1) and remove the needle.
2. Insert the new needle into the hole in the needle bar (3) and up to the stop. Make sure the hollow groove (2) is pointing towards the hook tip.
3. Tighten the screw (1).
4. When changing to another needle size, the distance between the hook and needle must be readjusted (see service instructions). Otherwise the following faults can occur:
 - Changing to a thinner needle: Missing stitches, damage to the thread
 - Changing to a thicker needle: Damage to the hook tip, damage to the needle

4.8 Adjusting hook feet on the button clamp (class 532)

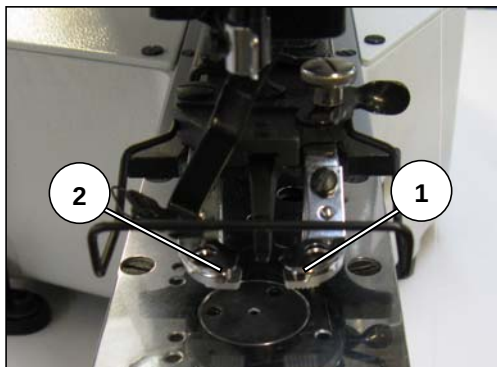
CAUTION



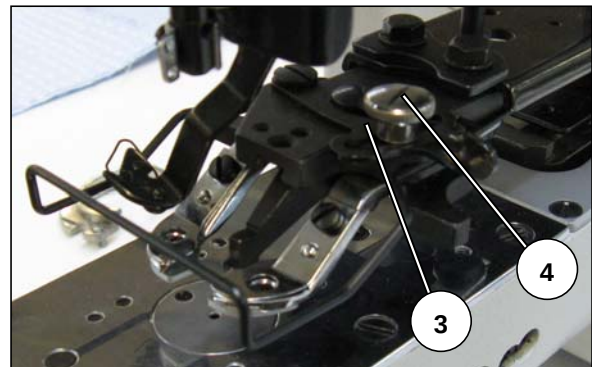
Risk of injury due to the needle tip and moving parts

Exercise caution when adjusting the button clamp with the automatic sewing machine switched on.

Fig. 8: Adjusting the hook feet on the button clamp - standard clamp

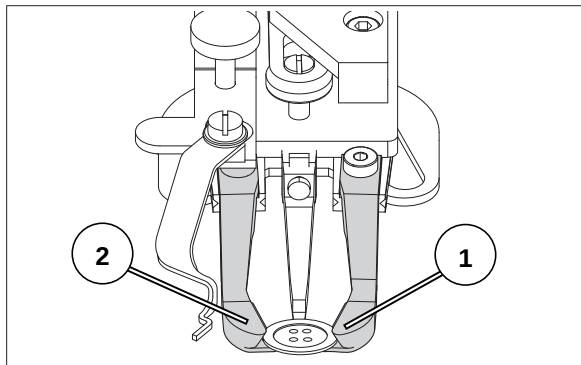


- (1) - Hook foot right
- (2) - Hook foot left

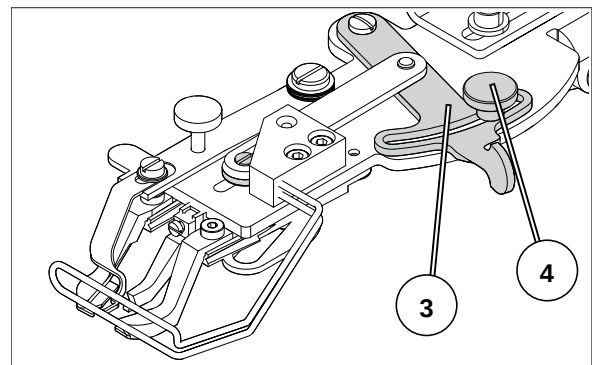


- (3) - Lever
- (4) - Knurled screw

Fig. 9: Adjusting the hook feet on the button clamp - optional button clamp



- (1) - Hook foot right
- (2) - Hook foot left



- (3) - Lever
- (4) - Knurled screw

It should be as easy as possible to push the button between the hook feet on the button clamp and align the button.

However, the button must be safely clamped to avoid it twisting when you feed in the material.

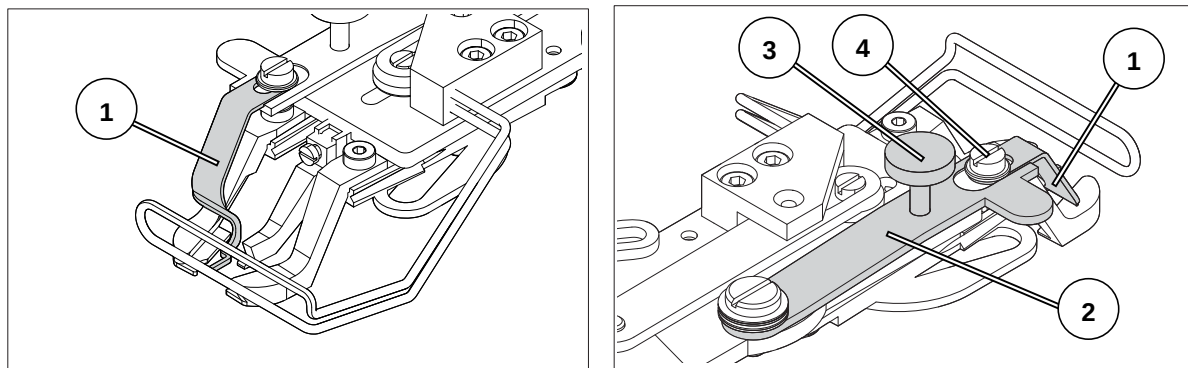
The stop (3) sets the opening width of the hook feet.

1. Switch on the automatic sewing machine.
2. Press the **Ready** button.
The clamp lifts; pedal ready for sewing.
3. Press the **Ready** button.
The clamp remains raised, pedal locked.
4. Release the knurled screw (4).

5. Use the lever (3) to open the hook feet appropriately.
6. Insert a button.
7. Tighten knurled screw (4).
8. Remove the button.
9. Adjust the hook feet appropriately by loosening the knurled screw (4) and slightly moving the lever (3) so that the button is safely held.

4.9 Button shank shaper (optional)

Fig. 10: Button shank shaper



(1) - Button shank shaper
(2) - Pivot lever

(3) - Adjusting screw
(4) - Screw

The button clamp is optionally equipped with a button shank shaper (1).

Swivelling the button shank shaper in/out

1. Manually swivel the button shank shaper in or out with the button clamp raised using the swivel lever (2).

adjust shank height

1. Turn the adjusting screw (3):
 - clockwise = shank is longer
 - anticlockwise = shank is shorter

Setting up the button shank shaper

The button shank shaper position can be adjusted to match various button diameters.

1. Release the screw (4).
2. Adjust the button in Y direction.
3. Tighten screw (4).

4.10 Sewing

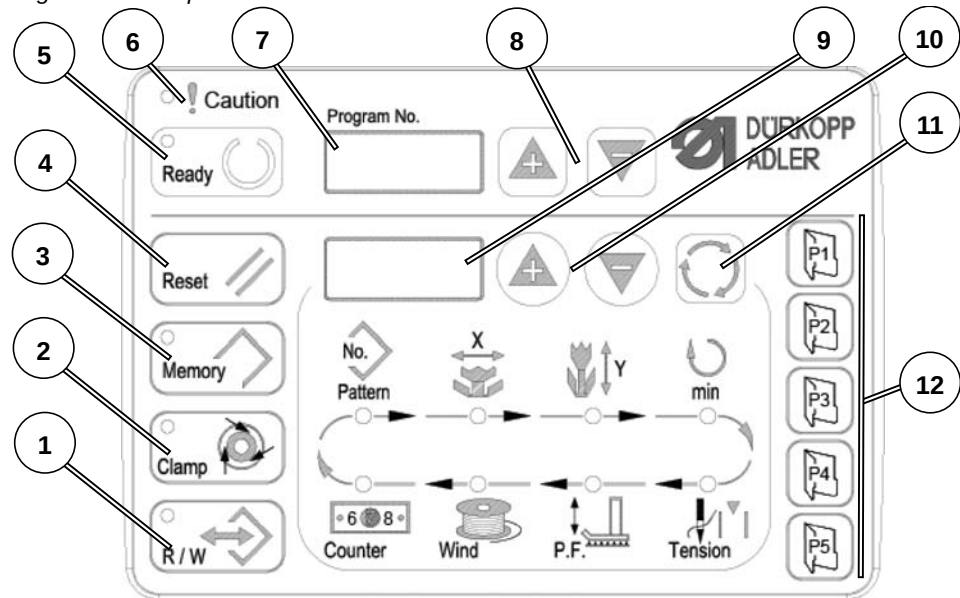
Operating and function sequence:

Sewing operation, sewing action	Operation / Explanation
Initial position prior to sewing	Pedal in rest position. Automatic sewing machine idle. Needle up. LED in Ready button is lit.
Sewing	• Insert the material • Push pedal forward to stage 1. Clamp lowers. • Relieve the pedal. Clamp raises. • Position the material. • Push the pedal completely forward. The automatic sewing machine sews at the preset speed.
Interrupting the sewing procedure in the sewing cycle.	Push the pedal back or press the Reset button. The automatic sewing machine stops. The clamp remains lowered.
Continuing sewing in the sewing cycle.	Push the pedal completely forward, or press the Reset button.

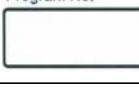
5 Settings via software

5.1 Control panel

Fig. 11: Control panel



Control panel buttons:

Button/LED	Pos.	Function
	(1)	USB button with LED Memorizes/loads sewing patterns/from a USB stick.
	(2)	Needle thread clamp button with LED LED on = Needle thread clamp on LED off = Needle thread clamp off
	(3)	Memory button Edits storage functions.
	(4)	Reset button Deletes and error and reinstates the settings
	(5)	Ready button with LED Toggles between programming and sewing mode. LED on = Sewing mode LED off = Programming mode
	(6)	LED error LED on = error
	(7)	Display program Shows parameters

Button/LED	Pos.	Function
	(8)	Buttons +/- Program Changes parameters and navigates forward/backward.
	(9)	Display function Shows values of selected functions/programs.
	(10)	Buttons +/- function Changes values of functions/programs.
	(11)	Selection button Selects various functions. The corresponding function LED is lit.
	(12)	Sewing pattern memory buttons Memorizes seam patterns.

5.2 Switching on the sewing machine

1. Main switch ON.

- The last sewing pattern to be sewn is loaded and the sewing pattern number shown in the **Program** display.

5.3 Selecting sewing patterns

CAUTION

Damage to the needle if the sewing pattern size does not match the clamping foot.

Check the clamping foot, adjust if needed.

Preconditions:

- The machine is in programming mode; the LED in the **Ready** button is unlit.

1. Press the **+/- Function** button until the display shows required sewing pattern number in the **Function** display.



5.4 Scaling axes

5.4.1 Changing the X-axis



1. Press the **Selection** button until the **X-axis** LED is lit.
2. Press the **+/- Function** key until you reach the X-axis value.
100 % corresponds to the stated dimensions for the selected sewing pattern.

5.4.2 Changing the Y-axis



1. Press the **Selection** button until the **Y-axis** LED is lit.
2. Press the **+/- Function** button until you reach the Y-axis value.
100 % corresponds to the stated dimensions for the selected sewing pattern.

5.4.3 Converting the buttonhole gap (class 532)

The buttonhole gap is factory set to 3.4 mm (3.4 mm = 100 %). You can change the percentage value to set the buttonhole gap.

Buttonhole gap [mm]	Value [%]	Buttonhole gap [mm]	Value [%]	Buttonhole gap [mm]	Value [%]
1	29	2.9	85	4.8	141
1.1	32	3	88	4.9	144
1.2	35	3.1	91	5	147
1.3	38	3.2	94	5.1	150
1.4	41	3.3	97	5.2	153
1.5	44	3.4	100	5.3	156
1.6	47	3.5	103	5.4	159
1.7	50	3.6	106	5.5	162
1.8	53	3.7	109	5.6	165
1.9	56	3.8	112	5.7	168
2	59	3.9	115	5.8	171
2.1	62	4	118	5.9	174
2.2	65	4.1	121	6	176
2.3	68	4.2	124	6.1	179
2.4	71	4.3	126	6.2	182
2.5	74	4.4	129	6.3	185
2.6	76	4.5	132	6.4	188
2.7	79	4.6	135	6.5	191
2.8	82	4.7	138		

5.4.4 Converting backtack dimensions (class 512)

To convert the preset dimensions to the desired dimensions, apply the following formula:

Value to be set = (100 % : preset dimension) * desired value

Example Preset dimension in X direction = 16 mm
Desired value in X direction = 10 mm
Value to be set = (100 % : 16 mm) * 10 mm = **62.5 %**

5.5 Setting the speed



1. Press the **Selection** button until the LED in the **Speed** icon is lit.
2. Press the **+/- Function** button until the desired speed is reached.

5.6 Checking sewing patterns



1. Press the **Selection** button until the LED in the **Sewing pattern shape** icon is lit.
The **Program** display shows the current sewing pattern shape.
2. Press the **Ready** button to confirm the sewing pattern.
The LED in the **Ready** button is lit.
3. Push the foot pedal forward.
The clamp is lowered.
4. Press the **+/- Function** buttons to sew 1 stitch each.
The **Function** display shows the current number of stitches.
5. Press the **Reset** button.
The clamp is raised.
6. Press the **Selection** button until the LED in the **Sewing pattern shape** icon is lit.

5.7 Changing sewing patterns



1. Press the **Selection** button until the LED in the **No. Pattern** icon is lit.
2. Press the **+/- Function** buttons until the **Function** display shows the desired sewing pattern number.
3. Press the **Ready** button.

5.8 Winding

Preconditions:

- Needle removed.
- Needle thread not threaded.



1. Press the **Ready** button.
The LED in the Ready button is lit.
2. Press the **Ready** button.
The LED in the button is unlit.
3. Press the **Selection** button until the LED in the **Wind** icon is lit.
4. Press the **Ready** button.
The LED in the button is lit; the clamp is lowered.
5. Push the pedal forward.
Winding starts.
6. To stop winding, push the pedal fully to the front.
7. Press the **Ready** button.
The LED in the button is unlit; the clamp is raised.

5.9 Sewing

Preconditions:

- The machine is in sewing mode; the LED in the **Ready** button is lit.
- Needle fitted.
- Needle thread threaded.
- Sewing pattern selected.

1. Insert the material.
2. Push the foot pedal forward to the first position.
The clamp is lowered.
If you release the pedal, the clamp is raised.
3. Push the foot pedal fully forward.
The sewing process starts. At the end of sewing, the clamp is automatically raised.

5.10 Counter

The counter can be used as a unit counter (parameter number U020) or as an automatic stop counter (parameter number U076).

Preconditions:

- The machine is in programming mode; the LED in the **Ready** button is unlit.



1. Press the **Selection** button until the LED in the **Counter** icon is lit.
2. Press the **Reset** button to set the counter to 0.
3. Press the **+/- Function** buttons to set the cycle count.
Each sewing end decrements the counter by 1.
After reaching the preset number of cycles, a message appears in the display.
4. Insert a new bobbin.
5. Press the **Reset** button.
The counter is reset

5.11 Interrupting sewing

1. Press the **Reset** button or push the pedal back.
The sewing process is interrupted; the display shows error message E-50.
2. To continue sewing, press the **Reset** button or push the pedal forward.

5.12 Editing parameters in memory

5.12.1 Editing parameters in level M1

Preconditions:

- The machine is in programming mode; the LED in the **Ready** button is unlit.
1. Press the **Memory** button for 3 s.
The controller buzzes 1x; the LED in the button is lit.
The **Program** display shows the parameter numbers; the **Function** display shows the parameter values.
 2. Press the **+/- Program** buttons to select other parameters.
 3. Press the **Ready** button to confirm the parameter.
The LED in the button is lit.
 4. Press the **+/- Function** buttons to change values.
 5. Press the **Reset** button to reset a changed value.
 6. Press the **Ready** button to memorize a change.
The LED in the button is unlit.
 7. Press the **Memory** button.
The LED in the button is unlit.

5.12.2 Editing parameters in level M2

Preconditions:

- The machine is in programming mode; the LED in the **Ready** button is unlit.
1. Press the **Memory** button for 6 s.
The controller buzzes 2x; the LED in the button is lit.
The **Program** display shows the parameter numbers; the **Function** display shows the parameter values.
 2. Press the **+/- Program** buttons to select other parameters.
 3. Press the **Ready** button to confirm the parameter.
The LED in the button is lit.
 4. Press the **+/- Function** buttons to change values.
 5. Press the **Reset** button to reset a changed value.
 6. Press the **Ready** button to memorize a change.
The LED in the button is unlit.
 7. Press the **Memory** button.
The LED in the button is unlit.

5.13 Protecting standard sewing patterns

Standard sewing patterns can be protected so that they are no longer displayed.

Preconditions:

- The machine is in programming mode; the LED in the **Ready** button is unlit.
1. Press the **Memory** and **P1** buttons in quick succession.
The **Program** display shows the parameter numbers; the **Function** display shows 0 or 1:
0 = Sewing pattern is shown.
1 = Sewing pattern is protected.
 2. Press the **+/- Program** buttons to select another sewing pattern.
 3. Press the **Ready** button to confirm the sewing pattern.
 4. Press the **+/- Function** buttons to change between 0 and 1.
 5. Press the **Ready** button to confirm the value.
 6. Press the **Memory** button.

5.14 Storing sewing patterns

Standard sewing patterns can be memorized on the sewing pattern memory keys **P1** to **P5**, 50 memory slots are available for this.

The storage slots are accessed using the **+/- Function** buttons; the storage slots up to 25 can also be accessed using the sewing pattern memory keys and combinations of them.

Keyboard shortcuts sewing pattern storage buttons

Memory slot no.	Keyboard combination	Memory slot no.	Keyboard combination	Memory slot no.	Keyboard combination	Memory slot no.	Keyboard combination
P1	P1	P8	P1 + P4	P15	P4 + P5	P22	P2 + P3 + P4
P2	P2	P9	P1 + P5	P16	P1 + P2 + P3	P23	P2 + P3 + P5
P3	P3	P10	P2 + P3	P17	P1 + P2 + P4	P24	P2 + P4 + P5
P4	P4	P11	P2 + P4	P18	P1 + P2 + P5	P25	P3 + P4 + P5
P5	P5	P12	P2 + P5	P19	P1 + P3 + P4		
P6	P1 + P2	P13	P3 + P4	P20	P1 + P3 + P5		
P7	P1 + P3	P14	P3 + P5	P21	P1 + P4 + P5		

5.14.1 Mapping memory buttons

Preconditions:

- The machine is in programming mode; the LED in the **Ready** button is unlit.
1. Press the **Memory** and **P2** buttons at the same time.
 2. Press the **+/- Program** buttons to select a memory slot.

3. Press the **Ready** button to confirm the memory slot.
4. Set the sewing pattern details.
5. Press the **Ready** button to confirm the settings.
6. Press the **Memory** button to quit memory mode.

5.14.2 Sewing with memory buttons

1. Pressing sewing pattern buttons (combinations).
2. Press the **Ready** button.
3. Checking a sewing pattern shape
4. Sewing

5.14.3 Deleting the memory button assignments

Preconditions:

- The machine is in programming mode; the LED in the **Ready** button is unlit.
1. Press the **Memory** and **P2** buttons at the same time.
 2. Press the **+/- Program** buttons to select a memory slot.
 3. Press the **Ready** button to confirm the memory slot.
 4. Press the **Reset** button to delete the memory assignment.
 5. Press the **Ready** button to confirm the deletion.
 6. Press the **Memory** button to quit memory mode.

5.15 Storing sewing pattern sequences

Besides the sewing patterns in memory slots P1 - P50, the automatic sewing machine also lets you use memory slots C01 - C25.

Preconditions:

- The machine is in programming mode; the LED in the **Ready** button is unlit.
1. Press the **Memory** and **P3** buttons at the same time.
 2. Press the **+/- Program** buttons to select a memory slot (C01 - C25).
 3. Press the **Ready** button to memorize a sewing pattern sequence.
 4. Press the **+/- Function** buttons to select the 1st sewing pattern.
 5. Press the **+/- Program** buttons to select the 2nd sewing pattern.
 6. Press the **+/- Function** buttons to select the 3rd sewing pattern.
 7. Press the **+/- Program** buttons to select the 4th sewing pattern, etc.
 8. Press the **Ready** button to confirm the sewing pattern sequence.
The **Program** display shows the memory slot, the **Function** display shows the number of sewing patterns.
 9. Press the **Memory** button to quit memory mode.

5.16 Sewing sewing pattern sequences

Preconditions:

- The machine is in programming mode; the LED in the **Ready** button is unlit.
1. Press the **+/- Function** buttons to select a sewing pattern sequence.
 2. Press the **Ready** button to confirm the sewing pattern sequence.
The **Program** display shows the sewing pattern sequence, e.g. <1.1>; the **Function** display shows the sewing pattern number.
 3. Push the foot pedal fully forward.
The sewing pattern is sewn. After completing sewing, the **Program** display shows further the sewing pattern sequence, e.g. <1.2>; the **Function** display shows the next sewing pattern number, etc.
 4. To change between sewing patterns in a sequence, press the **+/- Program** buttons and select the sewing pattern.

5.17 Deleting sewing pattern sequences

Preconditions:

- The machine is in programming mode; the LED in the **Ready** button is unlit.
1. Press the **Memory** and **P3** buttons at the same time.
 2. Press the **+/- Function** buttons to select a sewing pattern sequence (C01 - C25).
 3. Press the **Ready** button to confirm the sewing pattern sequence.
 4. Press the **Reset** button to delete the sewing pattern sequence.
 5. Press the **Ready** button to confirm the deletion.
 6. Press the **Memory** button to quit memory mode.

5.18 Stopping sewing

CAUTION



Risk of injury due to the needle tip and moving parts

Do not reach in below the raised clamp.



1. Press the **Ready** button.
The LED in the button is lit.
The control unit is in sewing mode.
2. Main switch OFF.

Tip

If you switch off the automatic sewing machine without pressing the **Ready** button, changed values are not memorized.

5.19 Resetting parameters to the factory settings

Preconditions:

- The machine is in programming mode; the LED in the **Ready** button is unlit.
1. Press the **Memory** button for 6 s.
The LED in the button is lit.
 2. Select parameter number U098 using the **+/- Program** buttons.
 3. Press the **Ready** button.
 4. Enter the function value 1 with the **+/- Function** buttons.
 5. Press the **Selection** button.
The controller beeps 1x. If the controller beeps 3x, the reset was unsuccessful.

5.20 Editing sewing patterns externally

5.20.1 MS Excel or text editor

Sewing patterns can be created and edited externally on a PC, e.g. using MS Excel or a text editor.

Fig. 12: Example of sewing pattern

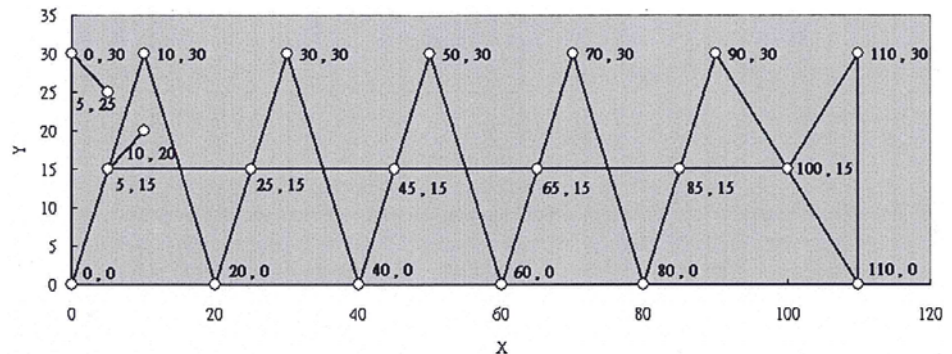
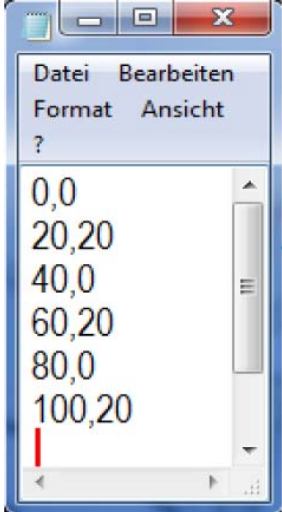


Fig. 13: Stitch coordinates in MS Excel or in a text editor

	A	B	C
1	10	20	
2	5	15	
3	25	15	
4	45	15	
5	65	15	
6	85	15	
7	100	15	
8	110	30	
9	110	0	
10	90	30	
11	80	0	
12	70	30	
13	60	0	
14	50	30	
15	40	0	
16	30	30	
17	20	0	
18	10	30	
19	0	0	
20	0	30	
21	5	25	



1. Entering stitch coordinates.

The coordinates are accurate to a precision of 0.1 mm and are thus separated in an MS Excel table, or comma-separated in a text editor.

Note: For stitch coordinates in the text editor, the last line of coordinates must be terminated with a line end so that the cursor sits in the next empty line.

2. Memorize the file.

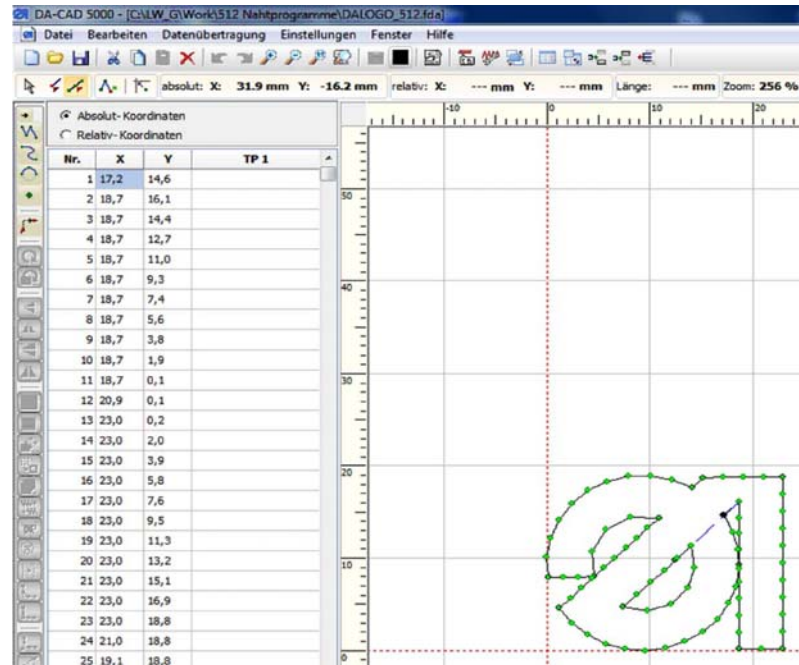
- File name: HSR2000 ~ HSR2099
- File format: CSV

3. Memorize the file on a USB stick.

5.20.2 DA-CAD 5000

Sewing patterns can be created in DA-CAD 5000. They are then memorized in MS Excel. The sewing pattern size is 0.0 mm ~ 40.3 mm.

Fig. 14: DA-CAD 5000



1. Creating stitch coordinates.
2. Select the first stitch and press CTRL + ALT + A.
This selects the table.
3. Press CTRL + ALT + A to copy the table.
4. Open MS Excel and insert the table by pressing CTRL + V.
5. Multiply the stitch coordinates by 10; e.g. 17.2 becomes 172.
6. Memorize the file.
 - File name: HSR2000 ~ HSR2009
 - File format: .CSV
7. Memorize the file on a USB stick.

5.21 Working with a USB stick

You can memorize up to 10 of your own sewing patterns on the controller using a USB stick.

Preconditions:

- The machine is in programming mode; the LED in the **Ready** button is unlit.
1. Insert the USB stick into the USB port on the controller.
The controller beeps briefly.
 2. Press the **USB** button.

The LED in the button is lit; the **Program** display shows the parameter number U01.

3. Press the **Ready** button.
The **Function** display shows values from 1 to 4.
 - 1: Load sewing pattern from USB stick.
 - 2: Memorize sewing pattern on USB stick.
 - 3: Delete sewing pattern on controller.
 - 4: Edit sewing pattern.
4. Press the **+/- Program** buttons and select a memory slot (U01 ~ U10).

Storing a sewing pattern from the USB stick on the controller: value 1

1. Press the **+/- Function** buttons to set the value 1.
2. Press the **Selection** button and select the sewing pattern file (HSR2000.csv ~ HSR2099.csv).
3. Press the **Selection** button to load the sewing pattern from the USB stick.
The **Function** display shows the value **ok**; the controller beeps; the sewing pattern is memorized.
4. Press the **Reset** button 2x.

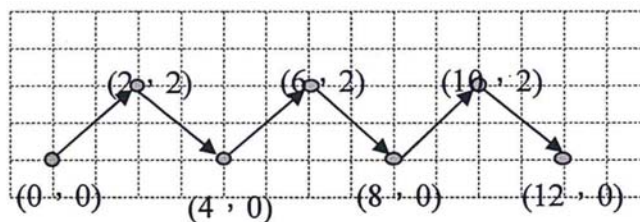
Storing a sewing pattern from the controller on the USB stick: value 2

1. Press the **+/- Function** buttons to set the value 2.
2. Press the **Selection** button to memorize the sewing pattern on the USB stick (HSW2001.scv = U01 ~ HSW2010.scv = U10).
3. Press the **Ready** button to confirm storing.
The **Function** display shows the value **ok**; the controller beeps; the sewing pattern is memorized.
4. Press the **Reset** button 2x.

Deleting a sewing pattern from the controller: value 3

1. Press the **+/- Function** buttons to set the value 3.
2. Press the **Selection** button.
3. Press the **Reset** button to confirm the deletion.
 - The Function display shows "-----".

Editing a sewing pattern/contour test: value 4



1. Press the **+/- Function** buttons to set the value 4.
2. Press the **Selection** button.
The **Program** display shows a 1 for the first stitch; the **Function** display shows the value for the X-axis; the LED in the **X-Axis** icon is lit.
3. Press the **+/- Function** buttons to set the coordinates for the 1st stitch on the X-axis.
4. Press the **Selection** button.
The LED in the **Y-Axis** icon is lit; the **Function** display shows the value for the Y-axis.
5. Press the **+/- Function** buttons to set the coordinates for the 1st stitch on the Y-axis.
6. Press the **+/- Program** buttons to select the next stitch.
7. Repeat steps 3 to 5 for all further stitches.
8. Press the **Ready** button to memorize the modified sewing pattern.
9. Press the **Reset** button.
The LED in the button is unlit.
10. Press the **USB** button.
The LED in the button is unlit.

5.22 Error messages

In case of error, the LED in the **Error** button is lit.

Error message					Description	Potential cause	Remedy
E				8	Error Table data	Unable to read the table data	Memorize the table data again.
E			1	0	Error Sewing pattern number	The selected sewing pattern is not memorized in ROM, or set to non-readable. The sewing pattern is "0".	Press the Reset button to confirm the sewing pattern number.
E			3	0	Error Needle bar position top	The needle bar is not at the top position	- Check the connections. - Turn the needle bar to the top dead centre position.
E			4	0	Error Sewing field	Sewing field exceeded	- Press the reset button - Check X/Y scaling.
E			4	2	Error scaling	The sewing length is below 10 mm	- Press the reset button - Check the sewing pattern and the X/Y scaling.
E			4	5	Error Seam pattern data	Seam pattern data are implausible	- Press the reset button - Check ROM.
E			5	0	Pause	Reset button pressed while sewing. Automatic sewing machine stopped.	- Press the reset button - Actuate the thread trimmer. - Restart the sewing operation.

Error message					Description	Potential cause	Remedy
E		3	0	2	Error Machine head	Machine head is folded back.	• Fold back the machine head.
E		3	0	5	Error thread trimmer position	The thread trimmer blade is not at home position	• Main switch OFF. • Check sensor.
E		3	0	6	Error thread catcher position	The thread catcher is not at home position	• Main switch OFF. • Check sensor.
E		3	3	2	Error clamp foot position.	The clamp is not in home position	• Main switch OFF. • Check sensor.
E		5	0	1	Data read error	Data do not exist or memorized in wrong format	• Memorize the data again on a USB stick.
E		5	0	2	USB read error	MOT file error	• Memorize the data again on a USB stick.
E		5	0	3	SUM read error	CHECKSUM data error in MOT file	• Restore the CHECKSUM file on a USB stick.
E		5	0	4	End block error	No end block in the MOT file	• Restore the end block file on a USB stick.
E		5	0	5	USB read error	USB stick not found	• Main switch OFF. • Main switch ON. • Reinsert the USB stick.
E		5	0	6	USB read error	Unable to read U01 ~ U10	• Main switch OFF. • Main switch ON. • Reinsert the USB stick.
E		5	0	7	Read error own sewing patterns	U01 ~ U10 read error	• Download the data again.
E		5	0	8	File error own sewing patterns	U01 ~ U10 read error	• Check file type.
E		5	0	9	File error own sewing patterns	U01 ~ U10 read error	• Check file type.
E		5	1	0	File error own sewing patterns	U01 ~ U10 read error	• Check file type. • Memorize the data again on a USB stick.
E		5	1	1	Write error USB	File of same name already exists	• Delete or rename the file.
E		5	1	2	USB read error	Data cannot be loaded from USB stick	• Check USB stick. • Reinsert the USB stick.
E		5	1	3	Write error USB	Data cannot be copied to the USB stick	• Check USB stick. • Reinsert the USB stick.
E		5	5	0	Data write error	Flash memory transfer error	• Main switch OFF. • Repeat the procedure. • Replace the mainboard.
E		5	5	1	Internal process error.	Software error	• Main switch OFF. • Repeat the procedure. • Replace the mainboard. • Replace the software.
E		7 7	0 3	7 5	Motor signal error	Encoder/motor has no signal	• Check encoder/motor

Error message					Description	Potential cause	Remedy
E		7	3	6	Error motor speed	Motor stops after some time/encoder has no signal	• Check encoder/motor
E		7	3	7	Error Z phase	Z signal not changing	• Check encoder/motor
E		7	3	8	Error Z phase	Z signal imprecise/encoder has no signal	• Check encoder/motor
E		9	0	7	Error search X axis	X axis sensor not responding	• Main switch OFF. • Check sensor.
E		9	0	8	Error search Y axis	Y axis sensor not responding	• Main switch OFF. • Check sensor.
E		9	1	0	Error Clamp foot search	Clamp foot sensor not responding	• Main switch OFF. • Check sensor.
E		9	1	1	Error clamp foot motor	Clamp foot motor not running correctly	• Main switch OFF. • Check motor and connection.
E		9	1	3	Error Thread catcher search	The thread catcher sensor is not responding	• Main switch OFF. • Check sensor.
E		9	1	4	Error Thread catcher motor	Thread catcher motor not running correctly	• Main switch OFF. • Check motor and connection.

6 Maintenance

6.1 Cleaning and inspection

CAUTION



Risk of injury due to the needle tip and moving parts

The automatic sewing machine must be switched off for all maintenance.

WARNING



Risk of injury due to flying particles!

Cleaning with compressed air can cause eye injuries or damage the respiratory system.

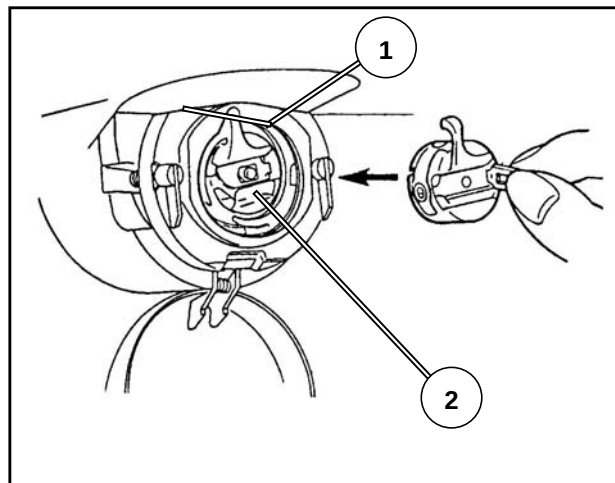
NEVER blow particles in the direction of other persons.

Maintenance work must be carried out at the specified intervals.

Maintenance intervals may need to be shorter when processing heavy-shedding materials.

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

Fig. 15: Cleaning and inspection



(1) - Underside of needle plate

(2) - Hook

Maintenance works

Maintenance work	Explanation	Operating hours
Remove lint and thread waste (e.g. by using a compressed air gun) from the machine head.	Areas that particularly require cleaning: • Area underneath the needle plate (1) • Area around the hook (2) • Bobbin casing and interior • Thread cutter, thread trimmer • Area around the needle	8
Control box	Keep the fan screens free	8

6.2 Lubricate

WARNING



Risk of injury due to contact with oil!

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

ALWAYS avoid extended contact with oil.

After contact, ALWAYS clean the affected skin areas thoroughly.

CAUTION



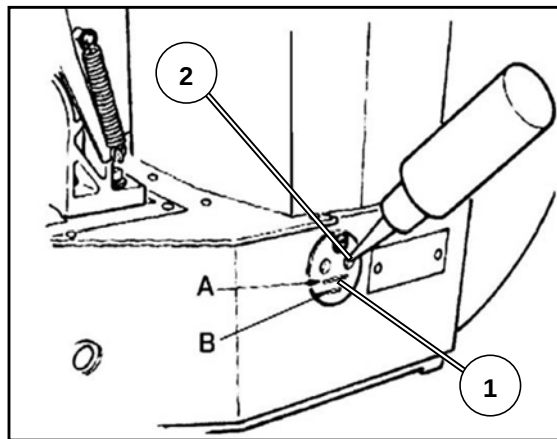
Risk of environmental damage due to used oil!

Improper handling of used oil can cause severe environmental damage.

ALWAYS follow legal regulations on the handling and disposal of mineral oils.

Make sure that you NEVER spill oil.

Fig. 16: Topping up with oil.



(1) - Oil reservoir

(2) - Oil filler opening

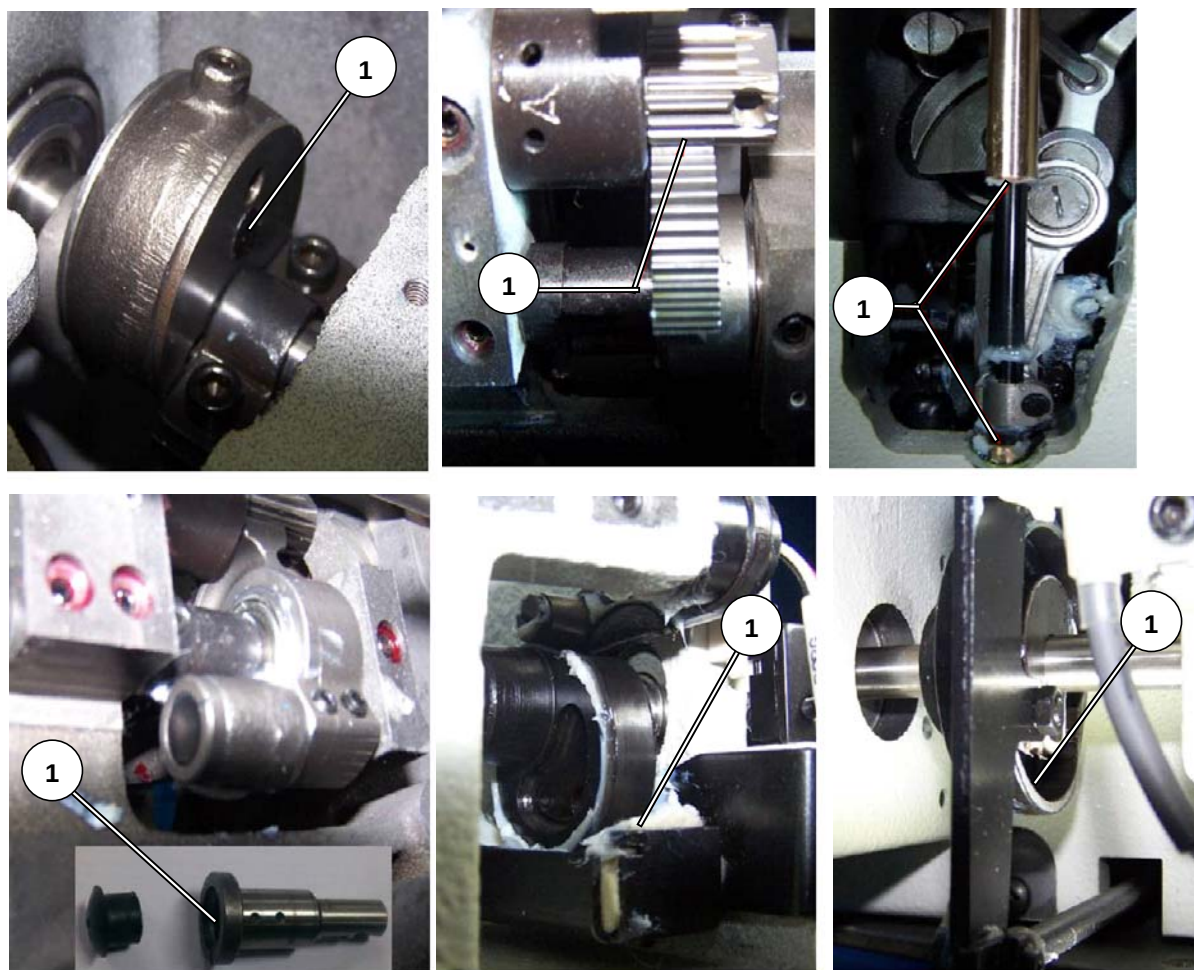
To lubricate the sewing unit use only DA-10 lubricating oil or an equivalent oil with the following specifications:

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

DA -10 can be purchased from DÜRKOPP ADLER AG retail outlets under the following part numbers:

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

Fig. 17: Lubricating the automatic sewing machine



(1) - Lubrication points

Special grease for lubricating the machine components is available in the accessory kit. It can also be purchased from DÜRKOPP ADLER AG retail outlets under the following part number:

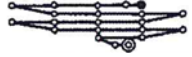
- 9047 098004

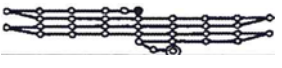
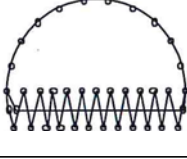
Maintenance works

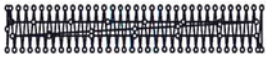
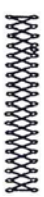
Maintenance work	Explanation	Operating hours
Top up with oil.	The automatic sewing machine is equipped with central oil wick lubrication. Oil is supplied to the bearing points from the oil reservoir (1). • The oil level must not drop below the B mark on the oil reservoir. • Top up with oil through the oil filler opening (2) up to the A mark.	8
Lubricating the automatic sewing machine	Grease the points shown (1) on the automatic sewing machine with special grease.	1000

7 Sewing patterns

7.1 Standard sewing patterns class 512

No.	Stich diagram	Number of stitches	Size (mm) X x Y
1		42	16x2
2			10x2
3			16x2.5
4			24x3
5		28	10x2
6			16x2
7		36	10x2
8			16x2.5
9		56	24x3
10		64	24x3
11		21	6x2.5
12		28	6x2.5
13		36	6x2.5
14		14	8x2
15		21	8x2
16		28	8x2
17		21	10x0.1

No.	Stich diagram	Number of stitches	Size (mm) X x Y
18		28	10x0.1
19			25x0.1
20		36	25x0.1
21		41	25x0.1
22		44	35x0.1
23		28	4x20
24		36	
25		42	
26		56	
27		18	0.1x20
28		21	0.1x10
29			0.1x20
30		28	0.1x20
31		52	10x7
32		63	12x7
33		24	10x6
34		31	12x6
35		48	7x10

No.	Stich diagram	Number of stitches	Size (mm) X x Y
36		48	7x10
37		90	24x3
38		28	8x2
39		28	Ø 12
40		48	
41		29	2.5x20
42		39	2.5x25
43		45	2.5x25
44		58	2.5x30
45		75	2.5x30
46		42	2.5x30
47		91	Ø 8
48		99	
49		148	
50		164	

7.2 Standard sewing patterns class 532

No.	Stitch patterns	Stitch distribution	Size (mm) X x Y	No.	Stitch patterns	Stitch distribution	Size (mm) X x Y
1 / 34		6 - 6	3.4x3.4	18 / 44		6	3.4x0
2 / 35		8 - 8		19 / 45		8	
3		10 - 10		20		10	
4		12 - 12		21		12	
5 / 36		6 - 6	3.4x3.4	22		16	0x3.4
6 / 37		8 - 8		23 / 46		6	
7		10 - 10		24		10	
8		12 - 12		25		12	
9 / 38		6 - 6	3.4x3.4	26 / 47		6 - 6	3.4x3.4
10 / 39		8 - 8		27		10 - 10	
11		10 - 10		28 / 48		6 - 6	3.4x3.4
12 / 40		6 - 6	3.4x3.4	29		10 - 10	
13 / 41		8 - 8		30 / 49		5 - 5 - 5	3x2.5
14		10 - 10		31		8 - 8 - 8	
15 / 42		6 - 6	3.4x3.4	32 / 50		5 - 5 - 5	3x2.5
16 / 43		8 - 8		33		8 - 8 - 8	
17		10 - 10					

8 Installation Instructions

8.1 Scope of delivery

The scope of delivery depends on your order. Check the scope of delivery for completeness.

This description refers to an automatic sewing machine whose individual components are supplied directly and completely by Dürkopp Adler.

- Machine head

Accessory kit with:

- Thread stand
- Protective cover
- Fastening material

Control unit parts set, complete:

- Main switch
- Control panel
- Control unit

Optional equipment

- Frame with table top, drawer and linkage
- Pedal

8.2 General information and transport safety

The automatic sewing machine must be set up by trained specialist personnel.

1. Remove the following transport locks

- Safety straps and battens on the machine head
- Safety straps and battens on the table top
- Safety straps and battens on the frame

8.3 Installation

8.3.1 Checking table tops

CAUTION



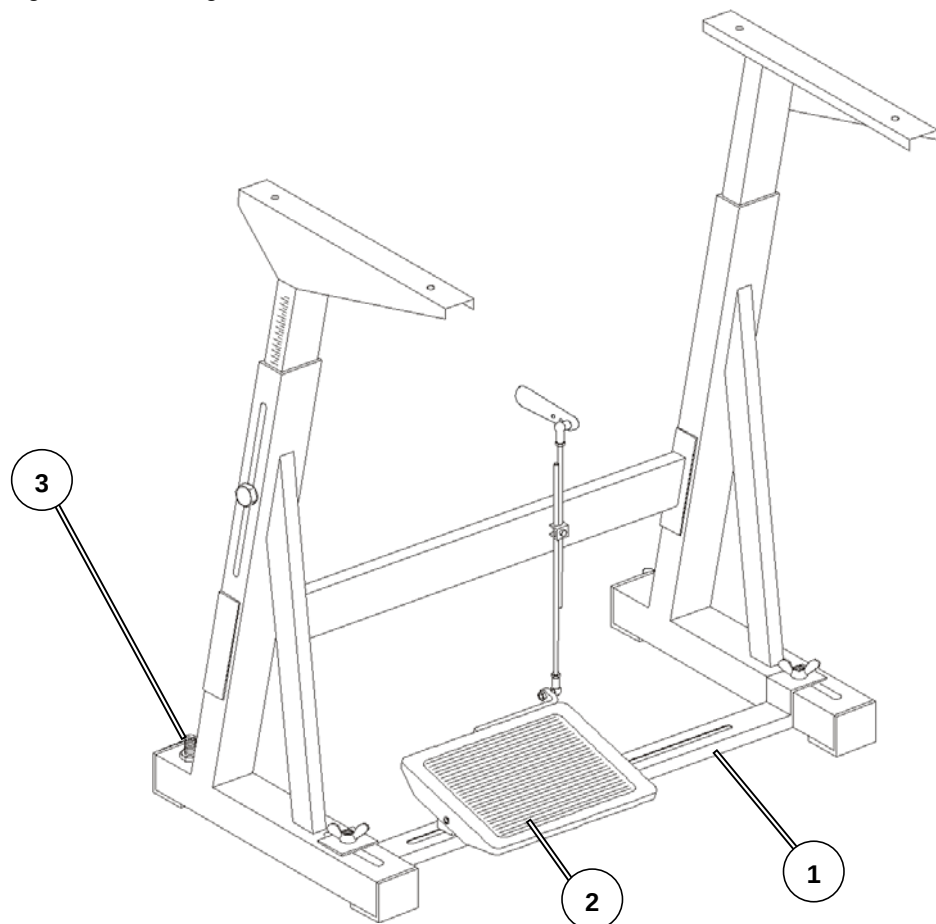
Risk of injury due to insufficient load-bearing capacity of self-made table top

Make sure that the table top has the required load-bearing capacity and strength.

Cut-outs in any table tops you create yourself must have the dimensions given in the drawing (see Appendix).

8.3.2 Assembling the frame

Fig. 18: Assembling the frame



(1) - Frame strut
(2) - Pedal

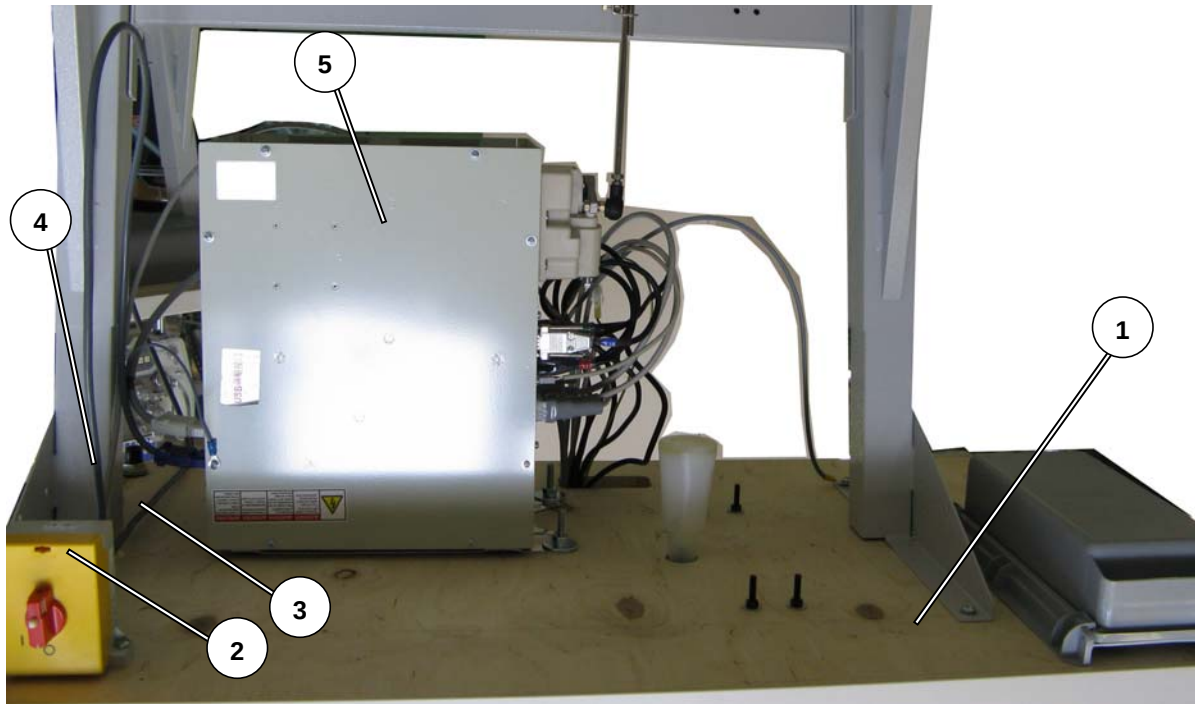
(3) - Adjusting screw

Assembling the individual frame components.

1. Turn the adjusting screw (3) to ensure the stability of the frame. The frame must rest with all 4 feet on the floor.
2. Bolt the pedal (2) onto the frame strut (1).
3. Adjust the pedal (2) laterally until it is aligned with the centre of the frame strut (1). The frame strut (1) has slots that let you adjust the pedal.

8.3.3 Completing the table top

Fig. 19: Completing the table top I

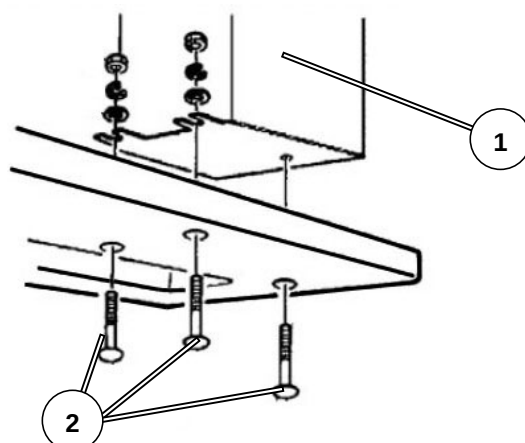


(1) - Table top
(2) - Main switch
(3) - Connecting cable

(4) - Connecting cable
(5) - Control box

1. Lay the table top (1) on its back on a work surface.
2. Bolt the main switch (2) onto the left underside of the table top.
3. Connect the connecting cables (3) and (4) to the control box (5) on the table top; where possible, use nail clamps and strain relief.

Fig. 20: Completing the table top II



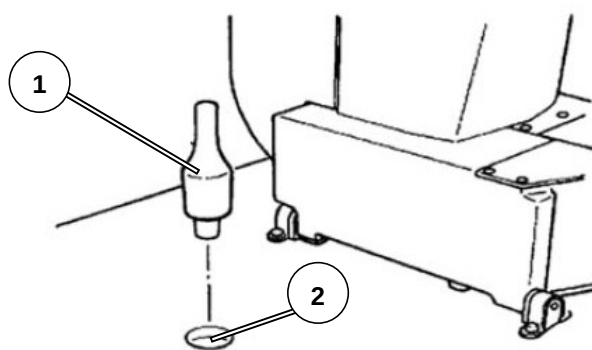
(1) - Control box

(2) - Screws

1. Place the control box (1) on the underside of the table top.
2. Bolt the control box (1) onto the underside of the table top using 3 screws (2), washers, circlips and nuts.

8.3.4 Assembling the machine head support

Fig. 21: Assembling the machine head support



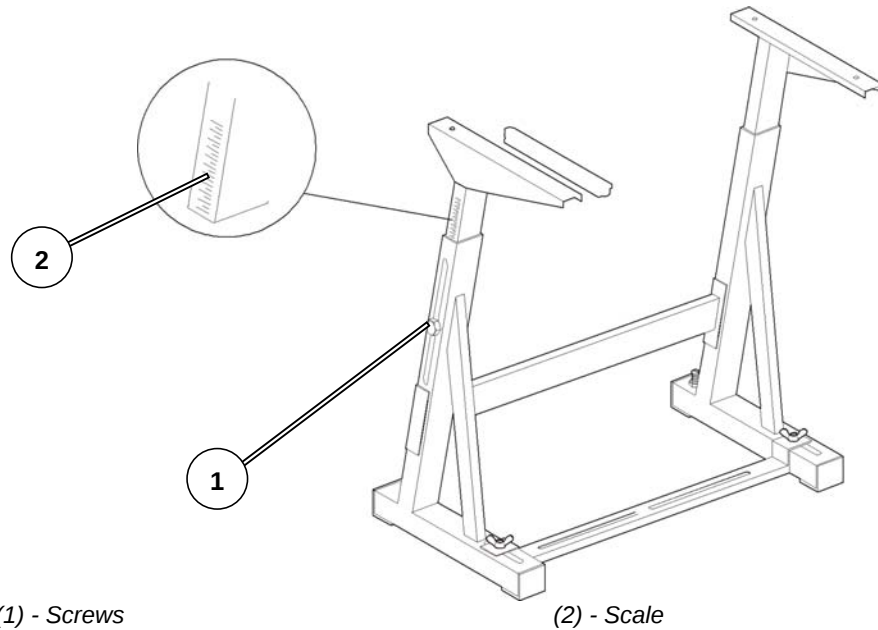
(1) - Machine head support

(2) - Hole

1. Insert the machine head support (1) into drill hole (2) on the table top.

8.3.5 Adjusting the working height

Fig. 22: Adjusting the working height



(1) - Screws

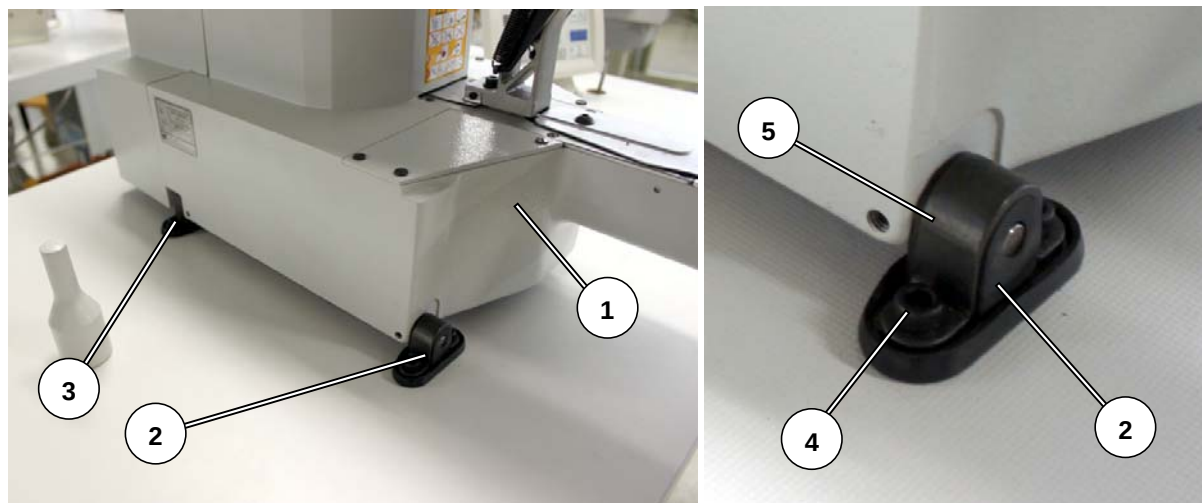
(2) - Scale

The working height is adjustable between 750 and 950 mm (measured to the upper edge of the table top). The frame height should match the operator's size.

1. Loosen the screws (1) on both frame braces.
2. To avoid tilting, pull out, or push in, the table top evenly on both sides.
The scales (2) on the outer sides of the braces act as an adjustment aid.
3. Tighten both screws (1).

8.3.6 Fitting the machine head

Fig. 23: Fitting the machine head



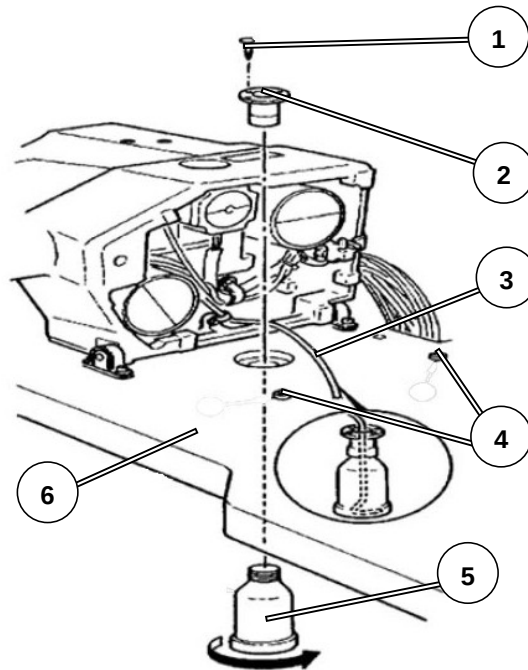
(1) - Automatic sewing machine
(2) - Bracket
(3) - Bracket

(4) - Screw
(5) - Bar

1. Place the automatic sewing machine (1) on the table top.
2. Fasten the automatic sewing machine on the left and right using the brackets (2) and (3).
To do so, bolt on the two brackets using the bolts (4), the clamp (5) and nuts.

8.3.7 Fitting the collecting container

Fig. 24: Fitting the collecting container



(1) - Screw
(2) - Bracket
(3) - Oil line

(4) - Rubber support (in the oil catchment tray)
(5) - Oil catchment container

1. Place the bracket (2) in the drill hole on the table top (6) and fasten with 3 screws (1).
2. Bolt the oil catchment container (5) onto bracket (2).
3. Insert the oil line (3) into the oil catchment container (5)
4. Push the rubber supports (4) into the table top (6).

8.4 Electrical connections

DANGER



Risk of injury due to electrical current!

Unprotected contact with electrical current can cause severe to fatal injuries.

ONLY qualified electricians, or persons with equivalent training, may work on the electrical equipment.

ALWAYS unplug from the mains before performing any work on the electrical equipment.

8.4.1 Checking mains voltage

The mains voltage must comply with the rated voltage specified on the control unit's rating plate.

8.4.2 Connecting the cables to the control unit

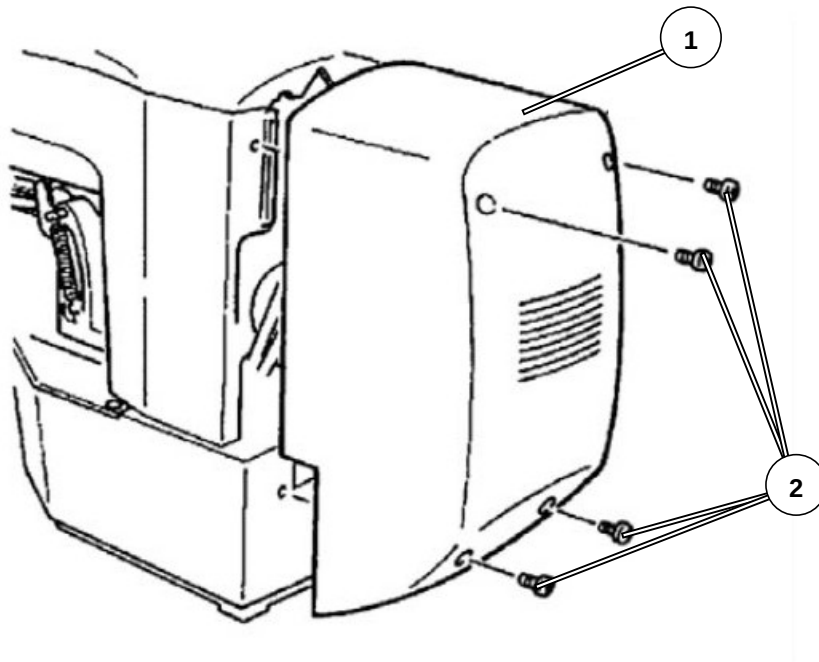
Fig. 25: Connecting the cables to the control unit



1. Connect the cables.
All cables are labelled.
2. Route the cables to the control box and bundle with cable ties.
3. Connect the plugs on the cables.
4. Connect the equipotential bonding cables to the control box at the point marked with an earth sign

8.5 Fitting the cover

Fig. 26: Fitting the cover



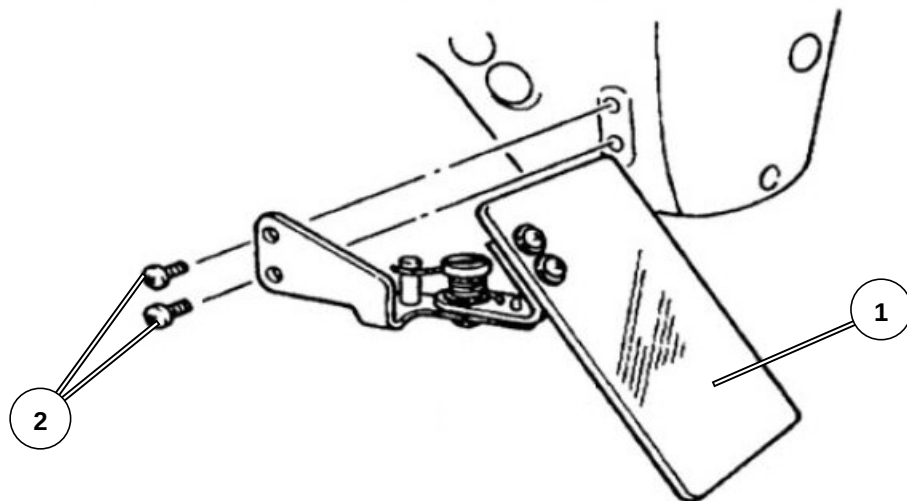
(1) - Protective cover

(2) - Screw

1. Bolt the cover (1) onto the machine head using 4 screws (2).

8.6 Fitting the eye guard

Fig. 27: Fitting the eye guard



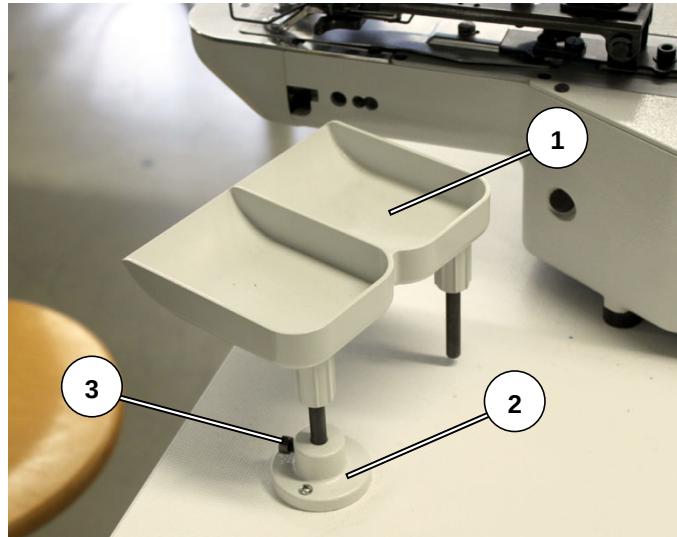
(1) - Eye guard

(2) - Screw

1. Bolt the eye guard (1) onto the machine head using 2 screws (2).

8.7 Fastening the button holder (class 532)

Fig. 28: Fastening the button holder



(1) - Button holder
(2) - Bracket

(3) - Screw

1. Bolt the bracket (2) onto the table top.
2. Push the button holder (1) into the bracket (2) and fasten with a screw (3).

8.8 Sewing test

Carry out a sewing test after completing the installation work.

CAUTION



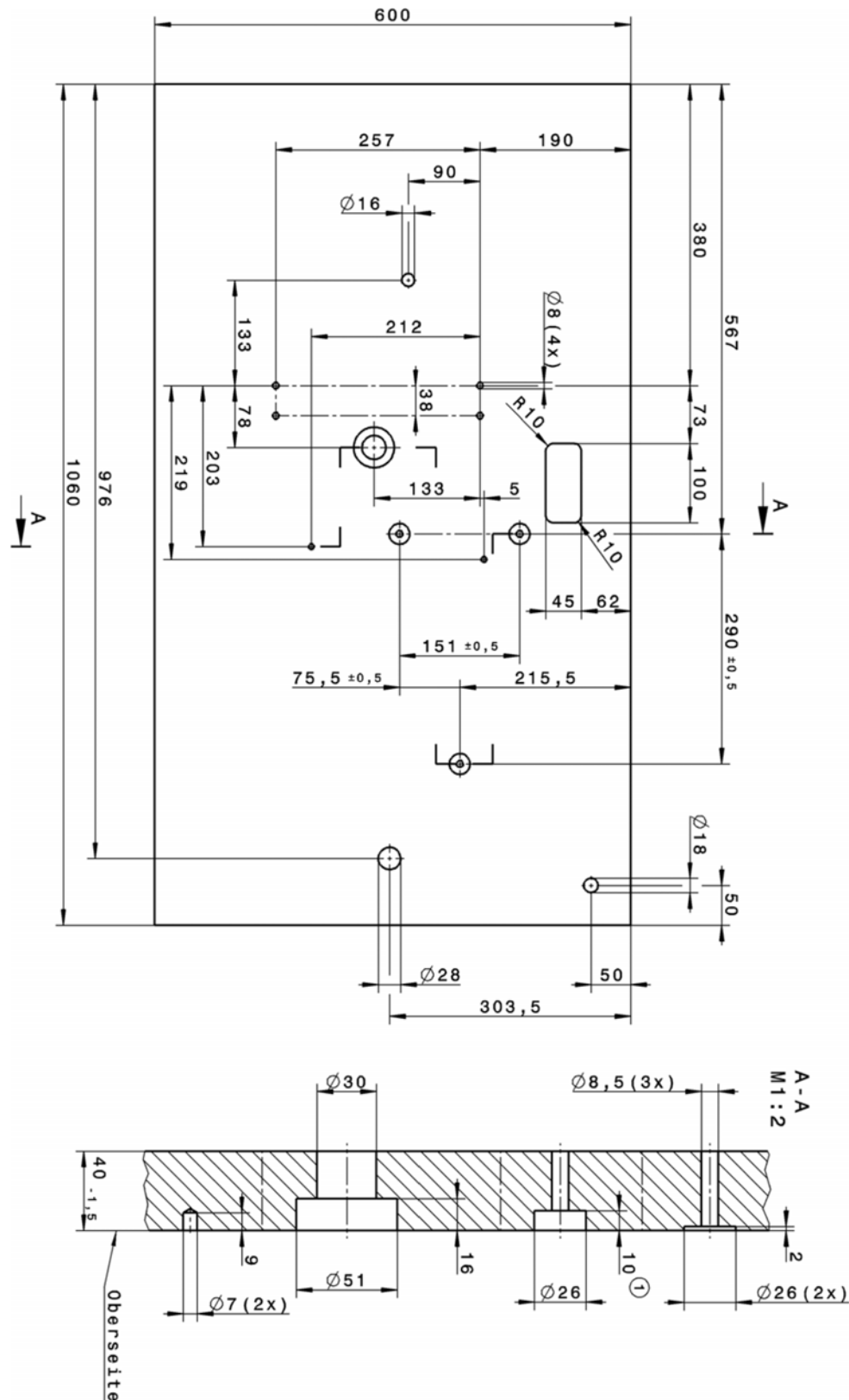
Risk of injury due to the needle tip and moving parts

Only thread the needle and hook thread while the automatic sewing machine is switched off.

1. Plug the mains cable into the socket.
2. Main switch OFF.
3. Thread in the bobbin thread.
4. Main switch ON.
5. Fill the bobbin at medium speed.
6. Main switch OFF.
7. Thread in the needle and hook thread.
8. Select material.
9. Start a sewing test at low speed and continuously increase the speed.
10. Check to make sure the seams are of the required quality. If not see "Adjusting the needle-thread tension" on page 14.

9 Appendix

9.1 Drawings





DÜRKOPP ADLER AG
Potsdamer Str. 190
D-33719 Bielefeld
Germany
Phone +49 (0) 521 925 00
E-Mail: service@duerkopp-adler.com
www.duerkopp-adler.com