DÜRKOPP ADLER

767 classic

Operating Instructions

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1 About this manual

1.1 Scope of application of the manual

This manual describes the intended use and the set-up of the special sewing machine 767 classic.
It applies to all submodels listed in Section 🕮 *3 Performance description*.

1.2 Applicable documentation

The device contains built-in components of other manufacturers, e.g. drive motors. The corresponding manufacturers have performed a hazard assessment for these purchased parts and confirmed compliance of the design with the European and national specifications. The intended use of the built-in components is described in the corresponding manuals of the manufacturers.

1.3 Damage during transport

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.

1.4 Limitation of 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:

- Failure to observe the manuals
- Improper use
- Unauthorized modifications to the machine
- The deployment of untrained personnel
- Damage during transport
- Using spare parts not approved

1.5 Used symbols

Correct setting

Indicates how the correct setting should look.

Faults

Indicates faults which could occur in the event of an incorrect setting.

Steps of action for operation (sewing and setting up)

Steps of action for service, maintenance, and assembly

Steps of action using the control panel for the software

The individual steps of action are numbered:

1. 1. First step of action
2. 2. Second step of action

... It is vital that you adhere to the step sequence.

Result of an action

Change to the machine or in the display.

Important

Here, you must take special care when performing a step of action.

Information

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

Sequence

Indicates which work you have to perform before or after a setting.

References

A reference to another text passage follows.

2 Safety instructions

This section contains basic instructions for your safety. Read the instructions carefully before setting up, programming, servicing, 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 damage to the machine.

2.1 General safety instructions

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

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

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

Also observe the safety instructions and the operating manual of the drive motor's manufacturer.

Observe the generally applicable safety and accident prevention regulations and the legal regulations concerning industrial safety and the protection of the environment.

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

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

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

Inspect the machine while in use for any externally visible damage. Interrupt your work if you notice any changes to the machine. Report any changes to your supervisor. A damaged machine may not be used any more.

Machines or machine parts that have reached the end of their service life may not be used any more. They have to be disposed of correctly and in accordance with the applicable statutory provisions.

The machine may only be set up by qualified specialists.

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

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

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

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 electrician.

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

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

2.2 Signal words and symbols used in safety instructions

Color bars enclose the safety instructions in the text.

Signal words specify the severity of a danger:

- **Danger**:Resulting in death or serious injury.
- **Warning**:Death or serious injury possible.
- **Caution**: Moderate to minor injuries possible.
- **Attention**:Damage possible.

In the case of dangers to personnel, the following symbols indicate the type of hazard:


General danger


Danger due to electric shock


Danger due to sharp objects


Danger due to crushing

Examples of the layout of the safety instructions 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 hazard warning looks like for a hazard that will result in serious injury or even death if not

WARNING

Type and source of the danger

Consequences in the event of noncompliance

Measures for avoiding the danger

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

ATTENTION

Type and source of the danger

Consequences in the event of noncompliance

Measures for avoiding the danger

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

3 Performance description

3.1 Features

The Dürkopp Adler 767 classic is a flatbed sewing machine for a double lockstitch.

General technical features

- Oversize vertical hook (XXL)
- Feed: Lower feed, needle feed, and alternating foot-upper feed
- Maximum passage with ventilated sewing feet: 20 mm (DC drive with reversing mechanism required in order to position the needle above the feet)
- Electromagnetically actuated thread cutter with 15 mm residual thread length
- Safety snap-on coupling which prevents any misadjustment or damage to the hook in the event of a thread jamming
- Automatic wick lubrication for machine and hook with oil level indicator at the column
- Integrated winder

3.2 Declaration of conformity

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

3.3 Intended use

The Dürkopp Adler 767 classic is for sewing light to moderately heavy material.

The following needle strengths must be used depending on the material to be sewn:

- Light to moderately heavy material: 90 – 110 Nm
- Moderately heavy material: 110 – 140 Nm
- Heavy material: 140 – 180 Nm

The machine is only intended for processing dry material.

The material to be sewn must contain no hard objects.

The sewing machine is intended for industrial use.

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

3.4 Technical data

Noise levels

Workplace-specific emission value as per DIN EN ISO 10821:

767-180142: **LC = 78 dB (A) ± 1.07 dB (A)**

For: Stitch length: 7.2 mm.
Sewing foot stroke: 1.5 mm.
Number of stitches: 1900 rpm
Material to be sewn: 4x material G1 DIN 23328

Features	**Submodels: 767-180142**
Sewing stitch type	Double lockstitch 301
Hook type	Vertical hook, oversized (XXL)
Number of needles	1
Needle system	134-35
Maximum needle strength [Nm]	180
Maximum sewing thread thickness	80/3 –10/3
Stitch length, forwards / backwards [mm]	9 / 9
Adjustable stitch lengths	1
Maximum number of stitches [rpm]	3000
Number of stitches on delivery [rpm]	3000
Reduction of the number of stitches with stroke exceeding 3 mm	2400
Reduction of the number of stitches with stroke exceeding 5 mm	2000
Reduction of the number of stitches with stroke exceeding 6.5 mm	1800
Maximum fan height (*only with reversing mechanism)	20*
Maximum sewing foot stroke	9
Positive operating pressure [bar]	6
Air consumption [NL]	0.7
Length/width/height [mm]	690/220/460

Features	Submodels: 767-180142
Weight/with direct drive [kg]	55/59
Rated voltage [V/Hz]	Depends on the drive package
Rated voltage on delivery [V/Hz]	Depends on the drive package
Rated power [kVA]	Depends on the drive package

3.5 Additional equipment

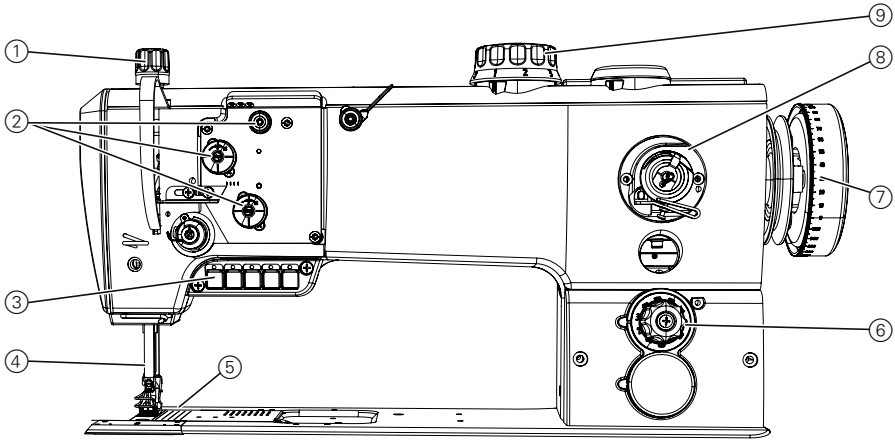
Additional equipment	Material number	Submodels: 767-180142
NK 20-1 electropneumatic needle cooling from above	0867 590014	x
NK 20-2 electropneumatic needle cooling from below	0867 590024	x
RFW 20-3 residual-thread monitor for the hook thread, XXL hook, 1-needle machines	0867 590114	x
WE-8 maintenance unit for additional pneumatic equipment	9780 000108	X
Halogen sewing lamp for upper sewing machine section	9822 510003	X
Sewing lamp attachment set	0907 487519	X
Sewing lamp transformer for halogen sewing lamp	0798 500088	X
1-diode sewing lamp with attachments	9880 867103	X
Power supply unit k for integrated sewing lamp and 1-diode sewing lamp	9850 001089	X
Pneumatic connection package for connecting frames with maintenance unit	0797 003031	X
Edge stop	N800 040367	X
Kit for pneumatic rapid stroke adjustment and 2nd thread tensioner	0767 590500	X
Knee switch for pneumatic rapid stroke adjustment	9880 002005	x
Cable, RS232 DB9ST-DB9BU (extension for setpoint device on height-adjustable frames)	9835 200233	x

Additional equipment	**Material number**	**Submodels: 767-180142**
Frames		
MG 55-3 frame set for motor attached to the upper section, table plate 1060 x 580 m with pedal	MG55 400424	X

● = standard equipment
X = optional additional equipment

4 Device description

Fig. 1: Complete overview



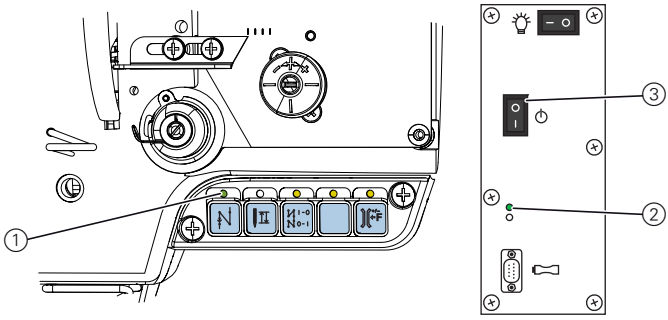
(1) - Adjusting wheel for the sewing foot pressure
(2) - Thread tensioners
(3) - Keypad on the machine arm
(4) - Needle bar
(5) - Hook (under the needle plate)
(6) - Adjusting wheel for the stitch length
(7) - Handwheel
(8) - Winder for the hook thread
(9) - Adjusting wheel for the sewing foot stroke

5 Operating instructions

5.1 Switching the power supply on and off

The lower main switch (2) on the control regulates the power supply.

Fig. 2: Switching the power supply on and off



(1) - Indicator lamp on the keypad

(2) - Indicator lamp on the control

(3) - Main switch for power supply

To switch on the power:

1. Press the main switch (3) down to the "I" position.

↳ The indicator lamps (1) and (2) light up.

To switch off the power:

1. Press the main switch (3) up to the "0" position.

↳ The indicator lamps (1) and (2) go out.

5.2 Inserting and replacing the needle

WARNING

Risk of injury by the needle point and moving parts.
Switch off the sewing machine before replacing the needle.
Do not touch the needle point.

Sequence

After changing to another needle strength, adjust the distance between the hook and needle (📖 *Service instructions, sect. 11.1 Adjusting the lateral hook distance*).

ATTENTION

Damage to the machine, needle breakage, or thread damage possible due to incorrect distance between the needle and hook point.
After inserting a needle with a new size, check the distance to the hook point. Reset the distance if necessary.

Faults when the hook distance is incorrect

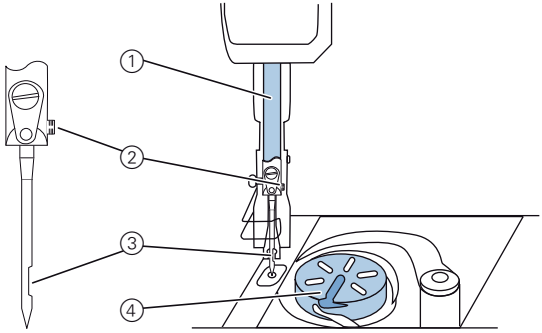
After inserting a thinner needle:

- Faulty stitches
- Damage to thread

After inserting a thicker needle:

- Damage to the hook point
- Damage to the needle

Fig. 3: Inserting and replacing the needle



(1) - Needle bar
(2) - Fastening screw
(3) - Groove
(4) - Hook

1. Turn the handwheel until the needle bar (1) reaches the upper end position.
2. Loosen the fastening screw (2).
3. Pull the needle out towards the bottom.
4. Insert the new needle.

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

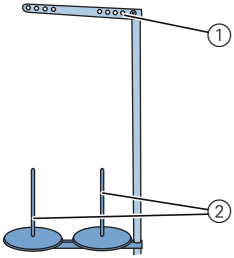
5. Tighten the fastening screw (2).

5.3 Threading in the needle thread

WARNING

Risk of injury by the needle point and moving parts.
Switch off the sewing machine before inserting the thread.

Fig. 4: Thread guide on the unwinding bracket and machine arm

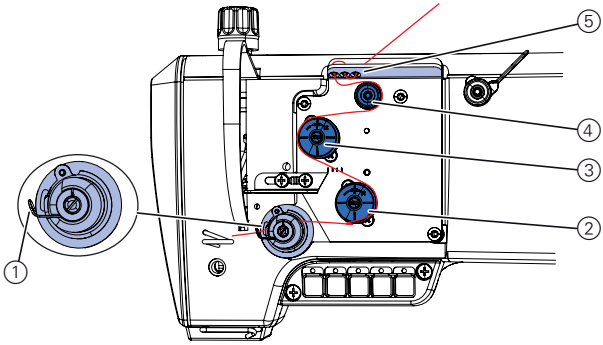


(1) - Guide on the unwinding bracket
(2) - Thread reel holder

1. Fit the thread reel on the thread reel holder.
2. Insert the thread from the rear to the front through a hole in the guide on the unwinding bracket.

Important: The unwinding bracket must be parallel to the thread reel holder.

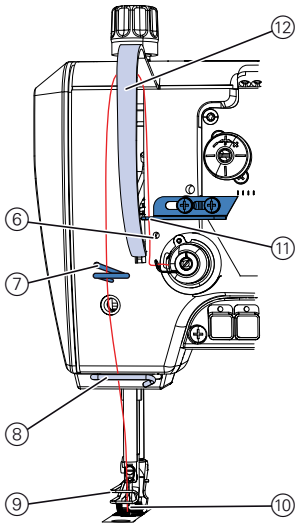
Fig. 5: Threading procedure for needle thread – part 1



(1) - Thread tensioning spring
(2) - Main tensioner
(3) - Additional tensioner
(4) - Pre-tensioner
(5) - Thread guide

3. Insert the thread in a wavelike manner through the three holes of the thread guide (5): From top to bottom through the right hole, then from bottom to top through the hole in the middle, and finally from top to bottom through the left hole.
4. Guide the thread clockwise around the pre-tensioner (4).
5. Guide the thread counterclockwise around the additional tensioner (3).
6. Guide the thread clockwise around the main tensioner (2).
7. Pull the thread under the thread tensioning spring (1).

Fig. 6: Threading procedure for needle thread – part 2



(6) - Thread guide
(7) - Thread guide
(8) - Lower thread guide
(9) - Thread guide on the needle bar
(10) - Needle eye
(11) - Thread regulator
(12) - Thread lever protection

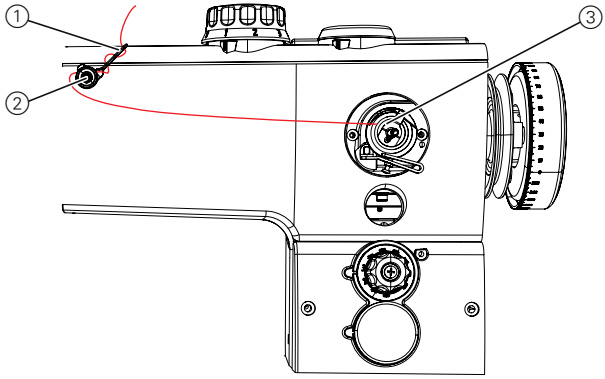
8. Guide the thread under the thread guide (6).
9. Insert the thread from bottom to top through the hole on the thread regulator (11).
10. Insert the thread from the right to the left through the thread lever behind the thread lever protection (12).
11. Insert the thread through the thread guide (7).
12. Insert the thread through the lower thread guide (8).
13. Insert the thread through the thread guide on the needle bar (9).
14. Insert the thread through the needle eye (10) in such a way that the loose thread end faces the hook.

5.4 Inserting and winding on the hook thread

WARNING

Risk of injury by the needle point and moving parts.
Switch off the sewing machine before inserting the thread.

Fig. 7: Winding on the hook thread – part 1



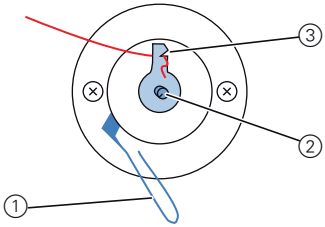
(1) - Thread guide
(2) - Pre-tensioner
(3) - Winder

1. Fit the thread reel on the thread reel holder.
2. Insert the thread from the rear to the front through a hole in the guide on the unwinding bracket.

Important: The unwinding bracket must be parallel to the thread reel holder.

3. Insert the thread in a wavelike manner through the three holes of the thread guide (1): From top to bottom through the uppermost hole, from bottom to top through the hole in the middle, and finally from top to bottom through the lowest hole.
4. Guide the thread counterclockwise around the pre-tensioner (2).
5. Guide the thread to the winder (3).

Fig. 8: Winding on the hook thread – part 2



(1) - Bobbin lever
(2) - Bobbin shaft
(3) - Cutter

6. Clamp the thread behind the cutter (3) and tear off the loose end behind it.
7. Fit the bobbin on the bobbin shaft (2).
8. Turn the bobbin clockwise until it clicks.
9. Pull the bobbin lever (1) up.

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

ATTENTION

Damage to the sewing feet or needle plate possible if the thread is wound on without material.
Lock the sewing feet in place in the highest position and adjust the sewing foot stroke to the smallest value if you wind on the hook thread without sewing the material.

Winding-on procedure

1. Switch on the sewing machine.
2. Press the foot pedal forwards.

↳ The machine sews and winds the hook thread from the thread reel onto the bobbin. When the bobbin is full, the machine automatically stops winding. The bobbin lever moves down. The cutter is automatically moved into its basic vertical position.

3. Pull off the full bobbin.
4. Tear off the thread behind the cutter.

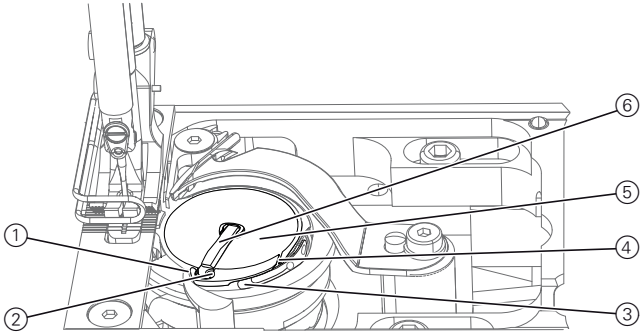
5. Insert the full bobbin into the hook (sect. *5.5 Replacing the hook thread bobbin*, p. 25).
6. Repeat the winding-on procedure with an empty bobbin, as described above.

5.5 Replacing the hook thread bobbin

WARNING

Risk of injury by the needle point and moving parts.
Switch off the sewing machine before replacing the hook thread bobbin.

Fig. 9: Replacing the hook thread bobbin



(1) - Slot
(2) - Guide
(3) - Tension spring
(4) - Slot
(5) - Bobbin
(6) - Spool housing flap

1. Move the spool housing flap (6) up.
2. Remove the empty bobbin.
3. Insert a full bobbin:

Important: Insert the bobbin in such a way that it moves in the opposite direction of the hook when the thread is withdrawn.

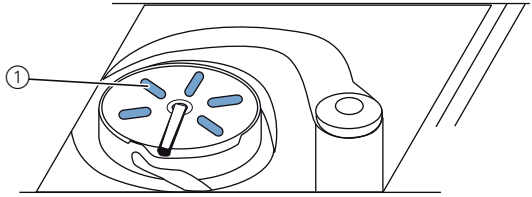
4. Guide the hook thread through the slot (4) in the spool housing.

5. Pull the hook thread under the tension spring (3).
6. Guide the hook thread through the slot (1) and tighten up approx. 3 cm.
7. Close the spool housing flap (6).

Automatic residual thread monitor

Machines with automatic residual thread monitor:
If the hook thread needs to be replaced, the note *3217* appears on the display of the control panel.

Fig. 10: Residual thread monitor



(1) - Vision slot on the bobbin

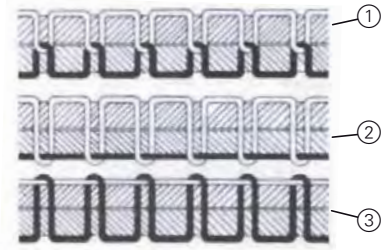
The bobbin plate has vision slots (1) on one side.

Important: Insert the bobbin in the hook in such a way that the vision slots (1) are at the top. Otherwise the residual thread monitor will not work.

5.6 Thread tension

The tension of needle thread and hook thread determines the position of the thread interlacing. If the tension of needle thread and hook thread is equally high, the thread interlacing lies in the middle of the material to be sewn.

Fig. 11: Thread interlacing

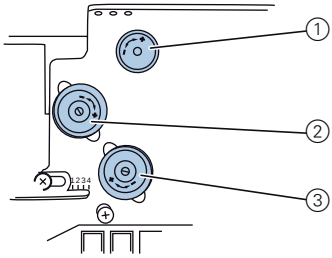


(1) - Identical needle thread and hook thread tension
(2) - Hook thread tension higher than needle thread tension
(3) - Needle thread tension higher than hook thread tension

5.6.1 Adjusting the needle thread tension

The three adjusting wheels of the tensioning screws in triangular arrangement determine the needle thread tension.

Fig. 12: Tensioning triangle for the needle thread



(1) - Pre-tensioner
(2) - Additional tensioner
(3) - Main tensioner

Main tensioner

The main tensioner (3) determines the normal tension during sewing.

Correct setting

The main tensioner should be set as low as possible. The thread interlacing should be exactly in the center of the material to be sewn.

Faults if the tension is too high

- Curling up
- Thread breakage

Pre-tensioner

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

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

Short initial thread:

1. Turn the adjusting screw of the pre-tensioner (1) clockwise.

Long initial thread:

1. Turn the adjusting screw of the pre-tensioner (1) counterclockwise.

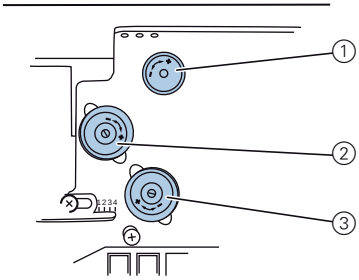
Additional tensioner

The additional tensioner (2) increases the tension during sewing, e.g. for thickened seams.

Correct setting

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

Fig. 13: Adjusting the needle thread tension



(1) - Pre-tensioner
(2) - Additional tensioner
(3) - Main tensioner

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

To increase the tension:

1. Turn the adjusting wheel clockwise.

To reduce the tension:

1. Turn the adjusting wheel counterclockwise.

Opening the needle thread tension

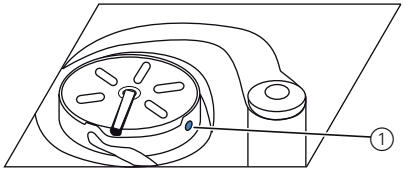
The needle thread tension is opened automatically when the thread is cut.

5.6.2 Adjusting the hook thread tension

WARNING

Risk of injury by the needle point and moving parts.
Switch off the sewing machine before adjusting the hook thread tension.

Fig. 14: Adjusting the hook thread tension



(1) - Adjusting screw

The hook thread tension is adjusted using the adjusting screw (1).

To increase the tension:

1. Turn the adjusting screw (1) clockwise.

To reduce the tension:

1. Turn the adjusting screw (1) counterclockwise.

5.7 Setting the thread regulator

WARNING

Risk of injury by the needle point and moving parts.
Switch off the sewing machine before setting the thread regulator.

The thread regulator determines the needle thread quantity to be guided around the hook. The required thread quantity depends on the thickness of the material to be sewn, thread strength, and stitch length.

Larger thread quantity for

- thick material
- high thread strengths
- large stitch lengths

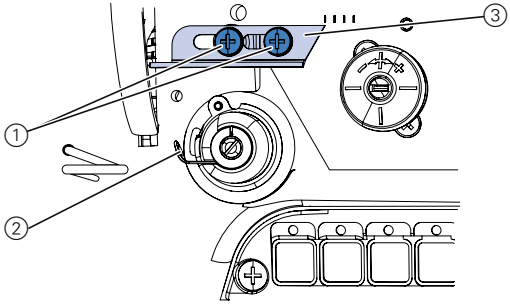
Lower thread quantity for

- thin material
- low thread strengths
- small stitch lengths

Correct setting:

The loop of the needle thread slides at low tension over the thickest point of the hook.
If the needle thread loop passes the maximum hook diameter, then the largest thread quantity will be required. If the setting is correct, then the thread tensioning spring (2) will be pulled up approx. 0.5 mm out of its lower end position.

Fig. 15: Setting the thread regulator



(1) - Screws
(2) - Thread tensioning spring
(3) - Thread regulator

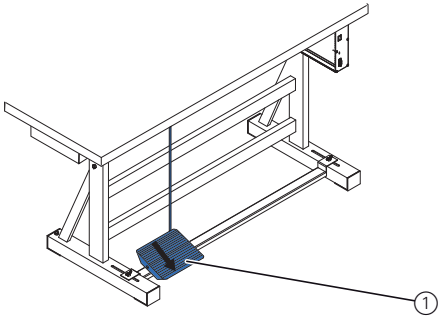
1. Loosen the screws (1).
2. Move the thread regulator (3):
   - **Lower thread quantity:**
     Turn the thread regulator (3) clockwise
   - **Larger thread quantity:**
     Turn the thread regulator (3) counterclockwise
3. Tighten the screws (1).

5.8 Ventilating the sewing feet

CAUTION

Risk of crushing when lowering the sewing feet.
Do not put your hands underneath the ventilated sewing feet.

Fig. 16: Sewing foot ventilation with foot pedal



(1) - Foot pedal

1. Press the foot pedal (1) half the way back.

↳ The machine stops and ventilates the sewing feet.
The sewing feet remain up as long as the foot pedal is pressed back half the way.

or

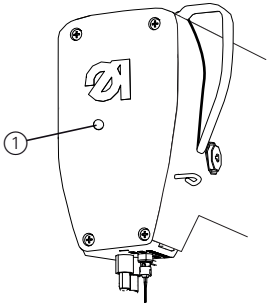
1. Press the foot pedal (1) completely back.

↳ Thread cutting is activated and the sewing feet are ventilated.

5.9 To hold the sewing feet in the upper position

The pushbutton (1) on the machine head can be used to hold the ventilated sewing feet in the upper position, e. g. in order to wind on the hook thread.

Fig. 17: Holding the sewing feet in the upper position using the push-button



(1) - Pushbutton for locking the ventilated sewing feet

To hold the sewing feet in the upper position:

1. Ventilate the sewing feet (sect. *5.8 Ventilating the sewing feet*, p. 33):
2. Press the pushbutton (1) and keep it pressed.
3. Release the pedal.
4. Release the pushbutton (1).

The sewing feet remain in the upper position.

CAUTION

Risk of crushing when lowering the sewing feet.
Do not put your hands underneath the sewing feet if the upper position is canceled by the pedal or lever.

To cancel the lock:

1. Press the foot pedal back half the way again.

↳ The sewing feet are lowered.
The lock is canceled.

5.10 Setting the sewing foot pressure

The adjusting wheel at the top left of the machine arm determines the contact pressure of the sewing foot on the material to be sewn. The pressure can be adjusted continuously by turning the wheel.

The correct pressure depends on the material:

- Lower pressure for soft materials, e.g. cloth
- Greater pressure for strong materials, e.g. leather

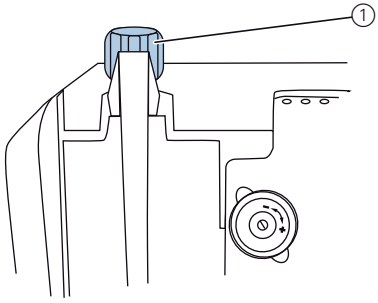
Correct setting

The material to be sewn does not slip and is fed smoothly.

Faults with incorrectly set sewing foot pressure

- If the pressure is too high: The material could tear
- If the pressure is too weak: The material could slip

Fig. 18: Adjusting wheel for the sewing foot pressure



(1) - Adjusting wheel for the sewing foot pressure

To increase the sewing foot pressure:

1. Turn the adjusting wheel (1) clockwise.

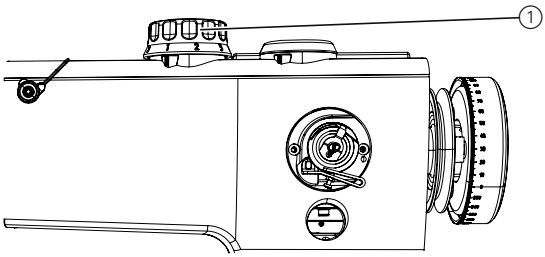
To reduce the sewing foot pressure:

1. Turn the adjusting wheel (1) counterclockwise.

5.11 Setting the sewing foot stroke

The adjusting wheel on the machine arm determines how high the sewing feet are raised during sewing. The sewing foot stroke can be adjusted continuously from 1 – 9 mm by turning the adjusting wheel.

Fig. 19: Setting the sewing foot stroke



(1) - Adjusting wheel for the sewing foot stroke

To increase the sewing foot stroke:

1. Turn the adjusting wheel clockwise.

To reduce the sewing foot stroke:

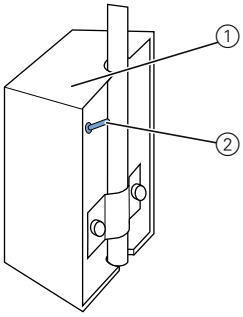
1. Turn the adjusting wheel counterclockwise.

Machines with pneumatic rapid stroke adjustment

In machines with the additional equipment for pneumatic rapid stroke adjustment, the knee switch can be used to switch on an elevated sewing foot stroke. It is needed for example when sewing over thickened seams. The elevated sewing foot stroke always has the maximum stroke height of 9 mm.

The elevated sewing foot stroke is activated using the knee switch. The flip switch on the rear side of the knee switch determines whether the elevated sewing foot stroke is activated permanently or only for as long as the knee switch remains pressed down.

Fig. 20: Rapid stroke adjustment via the knee switch



(1) - Knee switch
(2) - Flip switch

For the permanent adjustment:

1. Flip the switch (2) up.
   - **To switch on the elevated sewing foot stroke:** Press the knee switch (1) to the right.
   - **To switch off the elevated sewing foot stroke:** Press the knee switch (1) to the right once more.

For the temporary adjustment:

1. Flip the switch (2) down.
   - **To switch on the elevated sewing foot stroke:**
     Press the knee switch (1) to the right and keep it pressed.

↳ The elevated sewing foot stroke is retained as long as the knee switch is pushed to the right.

- **To switch off the elevated sewing foot stroke:**
  Release the knee switch (1).

Information
The number of stitches is automatically adapted to the sewing foot stroke: If you increase the sewing foot stroke, the number of stitches will be reduced accordingly.

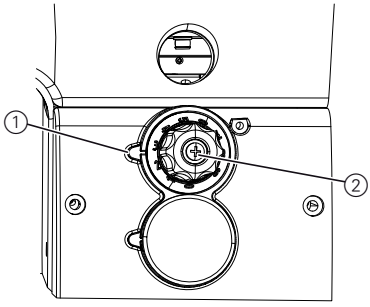
5.12 Adjusting the stitch length

The adjusting wheel on the machine column determines the stitch length.

The stitch length can be adjusted continuously from 1 to 9 mm by turning the adjusting wheel.

The adjusting mark (1) on the left on the wheel indicates the stitch length selected.

Fig. 21: Adjusting the stitch length



(1) - Adjusting mark for indicating the stitch length selected
(2) - Adjusting wheel for the stitch length

To reduce the stitch length:

1. Turn the adjusting wheel (2) clockwise.

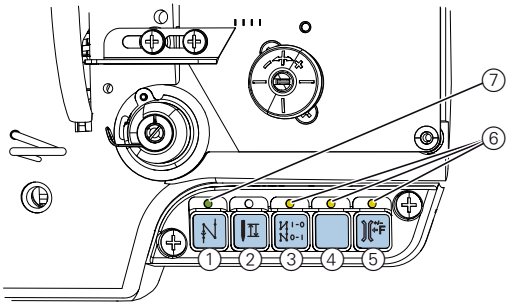
To increase the stitch length:

1. Turn the adjusting wheel (2) counterclockwise.

5.13 Keypad on the machine arm

Each button activates a function during the sewing operation.

Fig. 22: Keypad for quick functions



(1) - Key for sewing backwards
(2) - Key for the position of the needle
(3) - Key for the start and end strips
(4) - Key for rapid stroke adjustment and additional thread tension (optional)
(5) - Key for additional thread tension
(6) - LEDs for the relevant key
(7) - LED for the power supply

Key for sewing backwards (1):

1. Press the key (1) and keep it pressed.

↳ The machine sews backwards for as long as the key (1) is pressed.

2. Release the key (1).

↳ The machine sews forwards again.

Key for the position of the needle (2):

1. Press the key (2).

↳ The needle moves to the upper position.

Operating function keys (3) - (5):

Activating a function:

1. Press the key.

↳ The function is activated. The LED above the key lights up.

Switching a function off:

1. Press the key again.

↳ The function is deactivated. The LED does not light up any more.

Key for the start and end strips (3):

This key (3) cancels the general setting for sewing start and end strips. If strips are switched on, pressing the key (3) disables the next strip. If no strips are switched on, pressing the key (3) sews the next strip. For the general setting for sewing start and end strips, refer to the 🕮 *operating manual* for the DAC CLASSIC control system.

Key for the 2nd thread tensioner and rapid stroke adjustment (4):

Important: The key is only active if the relevant additional equipment is installed.

If the key (4) is selected, the additional thread tension and the elevated sewing foot stroke is activated.

Key for the 2nd thread tensioner (5):

If the key (5) is selected, the additional thread tension is activated.

5.14 Operating the control system

The machine is operated using the DAC CLASSIC control system. Operating the control system is described in an individual 🕮 *operating manual*.

The operating manual can be found in the accessory kit for the control system upon delivery. You can also find the operating manual in the download area at *www.duerkopp-adler.com*

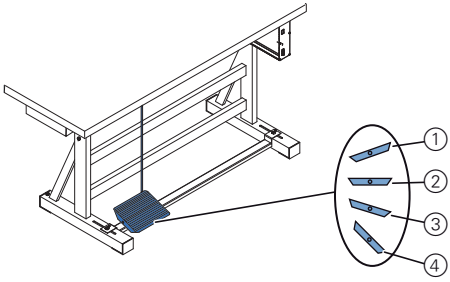
5.15 Sewing

WARNING

Risk of injury by the needle point if sewing is started unintentionally.
Take care not to accidentally actuate the foot pedal if your fingers are in the vicinity of the needle point.

The foot pedal starts and controls the sewing process.

Fig. 23: Sewing with the foot pedal



(1) - Pedal position +1: sewing active
(2) - Pedal position 0: rest position
(3) - Pedal position -1: moves the sewing feet up
(4) - Pedal position -2: sewing the end strip and cutting off the thread

Initial position:

- Pedal position 0:

↳ Machine stationary, needles up, sewing feet down.

To position the material to be sewn:

1. Press the foot pedal back half the way to the pedal position -1:

↳ The sewing feet are lifted.

2. Push the material to be sewn into the initial position.

Sewing:

1. Press the foot pedal forwards to the pedal position +1:

↳ The machine sews.
The sewing speed increases the further forward the pedal is pressed.

To interrupt sewing:

1. Release the foot pedal in pedal position 0:

↳ The machine stops, needles and sewing feet are down.

To continue sewing:

1. Press the foot pedal forwards to the pedal position +1:

↳ The machine continues to sew.

To sew over thickened seams:

1. Activate the elevated sewing foot stroke using the knee switch (additional equipment) or key 4 on the keypad.
(🕮 sect. *5.11 Setting the sewing foot stroke*, p. 36) or
(🕮 sect. *5.13 Keypad on the machine arm*, p. 39).

To change the stitch length:

1. Turn the adjusting wheel for the stitch length
(🕮 sect. *5.12 Adjusting the stitch length*, p. 38).

To increase the thread tension:

The additional equipment for the 2nd thread tensioner has to be installed for this function.

1. Switch on the additional tension using the quick function key (sect. *5.13 Keypad on the machine arm*, p. 39).

To sew intermediate strips:

1. Sewing backwards using the quick function key (sect. *5.13 Keypad on the machine arm*, p. 39).

To finish a seam:

1. Press the foot pedal back completely to the pedal position -2:

↳ The machine sews the end strip and the thread cutter cuts the thread.
The machine stops, needles and sewing feet are up.

2. Remove the sewn material.

6 Maintenance

This section describes simple maintenance work that needs to be carried out on a regular basis. This maintenance work can be carried out by the operating personnel. Advanced maintenance work may only be carried out by qualified specialists. Advanced maintenance work is described in the 🕮 *service manua*l.

6.1 Cleaning work

6.1.1 Cleaning the machine

Sewing dust and thread remains must be removed every 8 operating hours using a compressed-air pistol or a brush. In the case of very fluffy material to be sewn, the machine must be cleaned more frequently.

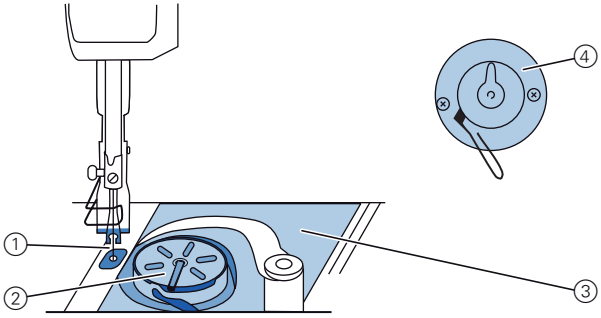
WARNING

Risk of injury due to flying particles.
Switch the machine off at the main switch before you start cleaning.
Flying dirt particles can get in the eyes, causing injury.
Hold the compressed-air pistol in such a way that no particles fly near persons.
Take care that no particles fly into the oil pan.

ATTENTION

Malfunctions possible due to machine contamination.
Sewing dust and thread remains can impair the operation of the machine.
Clean the machine at regular intervals as described in the manual.

Fig. 24: Points that need to be cleaned particularly thoroughly



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

Areas particularly susceptible to soiling:

- Cutter on the bobbin winder for the hook thread (4)
- Area under the needle plate (3)
- Hook (2)
- Area around the needle (1)

Cleaning steps:

1. Switch off the power supply at the main switch.
2. Remove any sewing dust and thread remains using a compressed-air pistol or a brush.

ATTENTION

Damage to paintwork possible due to solvent-based cleaners.
Solvent-based cleaners damage the paintwork on the machine.
Only use solvent-free substances when cleaning the machine.

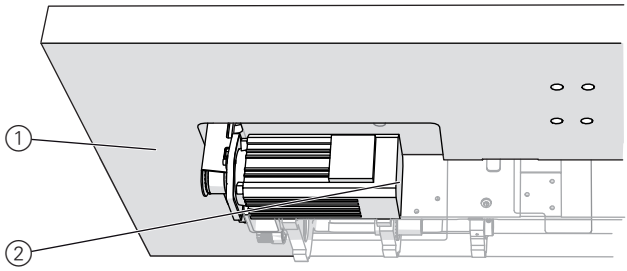
6.1.2 Cleaning the motor fan sieve

The motor fan sieve must be cleaned once a month using a compressed-air pistol. In the case of very fluffy material to be sewn, the motor fan sieve must be cleaned more frequently.

WARNING

Risk of injury due to flying particles.
Switch the machine off at the main switch before you start cleaning the motor fan sieve.
Flying dirt particles can get in the eyes, causing injury.
Hold the compressed-air pistol in such a way that no particles fly near persons.
Take care that no particles fly into the oil pan.

Fig. 25: Cleaning the motor fan sieve



(1) - Table plate

(2) - Motor fan sieve

Cleaning steps:

1. Switch off the power supply at the main switch.
2. Remove any sewing dust and thread remains using a compressed-air pistol or a brush.

6.2 Checking the oil level

WARNING

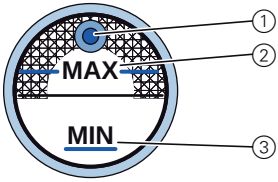
Skin injuries due to contact with oil.
Oil can cause a rash if it comes into contact with the skin.
Avoid any skin contact with the oil.
If oil gets on your skin, wash the affected skin areas

ENVIRONMENTAL

Harm to the environment due to oil possible.
Oil is a harmful substance and must not get into the sewer system or the ground.
Collect waste oil carefully and dispose of it and oily machine parts in accordance with the applicable statutory regulations.

6.2.1 Lubrication of the upper part of the machine

Fig. 26: Oil level indicator



(1) - Refill opening
(2) - Maximum level marking
(3) - Minimum level marking

Checking the oil level

1. Check the oil level indicator every day:

Important: The oil level must always be between the minimum level marking (3) and the maximum level marking (2).

Topping up the oil

Pour in oil through the refill opening (1) as required:

1. Switch off the sewing machine at the main switch.
2. Pour in oil, up to but not past the maximum level marking (2)
3. Switch on the sewing machine at the main switch.

ATTENTION

Machine damage possible due to incorrect oil level.
Too little or too much oil can cause damage to the machine.
Make sure that the oil level is always between the minimum and maximum level markings.

Oil to be used:

The upper part of the machine and the hook may only be filled with lubricating oil DA 10 or an oil of equivalent quality which has the following properties:

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

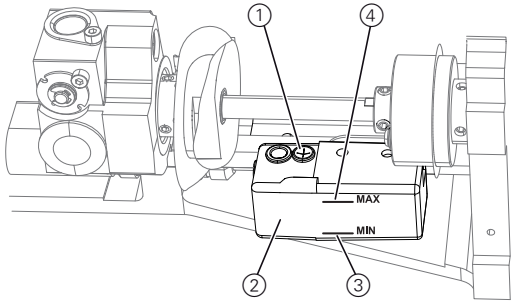
ATTENTION

Machine damage possible due to incorrect oil.
An incorrect oil type can cause damage to the machine.
Only use oil that complies with the data in the operating manual.

6.2.2 Hook lubrication

Check the oil level for hook lubrication approx. once every week.

Fig. 27: Hook lubrication



(1) - Refill opening
(2) - Reservoir
(3) - Minimum level marking
(4) - Maximum level marking

Checking the oil level

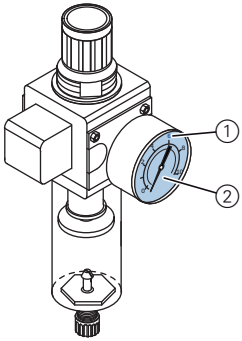
1. Tilt the upper part of the machine backwards.
2. Check the quantity of oil in the reservoir (2).

Important: The oil level must always be between the minimum level marking (3) and the maximum level marking (4).

3. Pour in oil through the refill opening (1) as required:

6.3 Checking the pneumatic system

Fig. 28: Pressure indicator on the maintenance unit



(1) - Reference value: 6 bar
(2) - Pressure indicator

Checking the pressure:

1. Check the pressure at the pressure indicator (2) every day.
   Reference value: 6 bar.

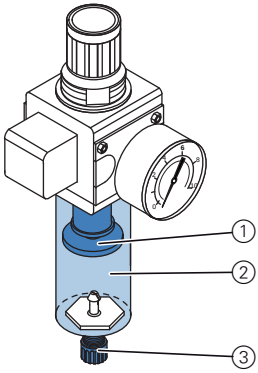
Important: The pressure must not deviate from the reference pressure by more than 1 bar.

ATTENTION

Machine damage possible due to incorrect pressure.
An incorrect pressure can cause damage to the machine.
Check the pressure on a daily basis.
Have the pressure adjusted by a qualified specialist if the pressure deviates from the reference value.

Condensed water may accumulate in the water separator for the maintenance unit.

Fig. 29: Water level in the maintenance unit



(1) - Filter element
(2) - Water separator
(3) - Drain screw

Checking the water level:

1. Check the water level every day.

Important: The condensed water must not rise up to the level of the filter element (1).

Drain water as required:

1. Switch off the sewing machine at the main switch.
2. Place the collection tray under the drain screw (3).
3. Disconnect the compressed air hose from the supply of compressed air.
4. Unscrew the drain screw (3) completely.
5. Allow water to drain into the collection tray.
6. Re-tighten the drain screw (3).
7. Connect the compressed air hose to the supply of compressed air.
8. Switch on the sewing machine at the main switch.

ATTENTION

Machine damage possible if there is too much water.
Too much water can cause damage to the machine.
Check the water level every day and drain condensed water if there is too much water in the water separator.

6.4 Repairs

Contacts for repair in the event of damage to the machine:

Dürkopp Adler AG
Potsdamer Str. 190
33719 Bielefeld
Tel. +49 (0) 180 5 383 756
Fax +49 (0) 521 925 2594
E-mail: service@duerkopp-adler.com
Internet: www.duerkopp-adler.com

7 Set-up instructions

WARNING

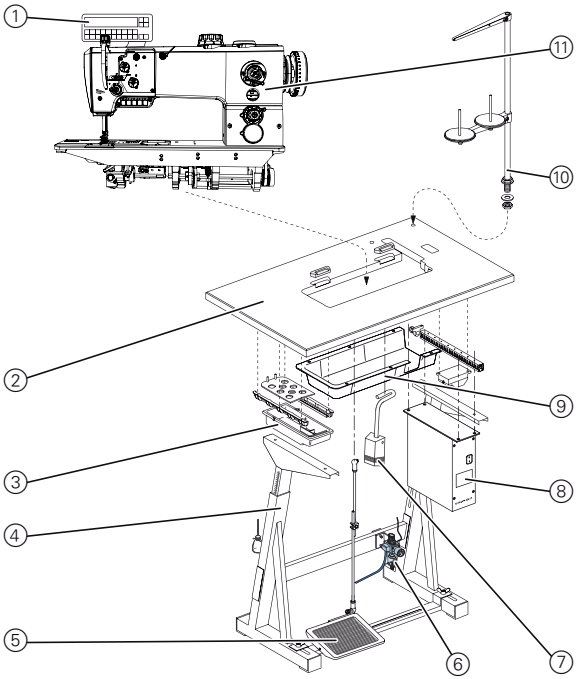
Risk of injury
The machine may only be set up by trained specialists.
Wear safety gloves and safety shoes when unpacking and setting up.

7.1 Checking the delivery scope

Important: The delivery scope depends on your order.

1. Prior to set-up, check that all parts are present.

Fig. 30: Delivery scope



(1) - Control panel
(2) - Table plate
(3) - Drawer
(4) - Frame
(5) - Pedal
(6) - Maintenance unit
(7) - Knee switch
(8) - Control
(9) - Oil pan
(10) - Thread reel holder
(11) - Upper part of the machine

Standard equipment:

- Upper part of the machine (11)
- Oil pan (9)
- Thread reel holder with unwinding bracket (10)
- Control (8)
- Control panel for the control (1)

Optional additional equipment:

- Table plate (2)
- Drawer (3)
- Frame (4)
- Pedal (5)
- Knee switch (7)
- Maintenance unit (6)
- Sewing lamp (not illustrated)

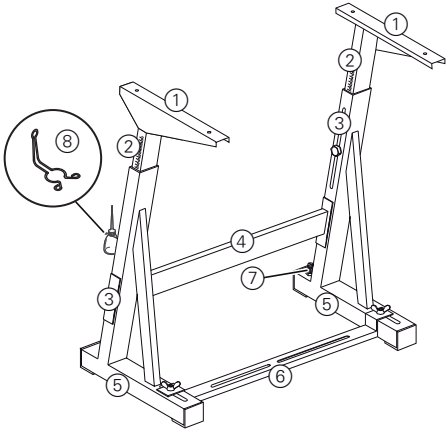
7.2 Removing the transport securing devices

All transport securing devices must be removed prior to set-up.

1. Remove the lashing straps and wooden blocks from the machine upper section, the table and the frame.
2. Remove the supporting wedges between the machine arm and needle plate.

7.3 Fitting the frame components

Fig. 31: Fitting the frame components



(1) - Head sections of the inner bars
(2) - Inner bars
(3) - Frame bars
(4) - Cross bar
(5) - Foot struts of the frame
(6) - Cross strut
(7) - Adjusting screw
(8) - Holder for the oil can

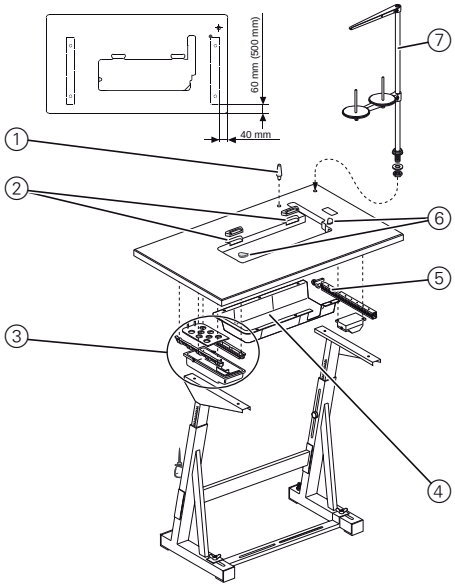
1. Screw the cross bar (4) onto the frame bars (3).
2. Screw the oil can holder (8) at the rear to the frame bar (3).
3. Screw the cross strut (6) onto the foot struts (5).
4. Insert the inner bars (2) in such a way that the longer end of the head section (1) is above the longer end of the foot struts (5).
5. Screw the inner bars (2) tight in such a way that both head sections (1) have the same height.

Important: Turn the adjusting screw (7) in such a way that the frame has even contact with the ground.

7.4 Completing the table plate

The table plate belongs to the optional delivery scope.
To prepare the table plate yourself, please refer to the drawings in the 🕮 *Appendix*.

Fig. 32: Completing the table plate



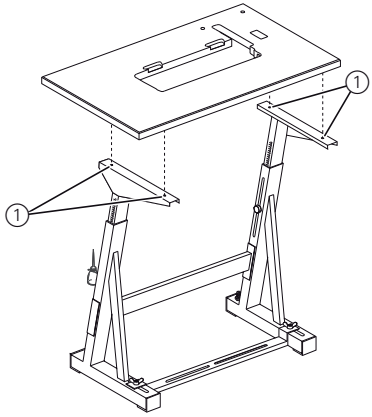
(1) - Upper section support
(2) - Recesses for the lower hinge parts
(3) - Drawer
(4) - Oil pan
(5) - Cable duct
(6) - Corner protrusions for the rubber corners
(7) - Thread reel holder

1. Screw the drawer (3) with the left-hand bracket to the underside of the table plate.
2. Screw the oil pan (4) under the machine recess.
3. Screw the cable duct (5) to the underside of the table plate.
4. Insert the thread reel holder (7) in the hole.
5. Fasten the thread reel holder (7) with nut and washer.
6. Screw the thread real holder and the unwinding bracket onto the thread reel holder (7) in such a way that they are exactly opposite each other.

7. Insert the upper section support (1) in the hole.
8. Insert the lower hinge parts in the recesses (2) and tighten.
9. Insert the rubber corners in the corner protrusions (6).

7.5 Fastening the table plate to the frame

Fig. 33: Fastening the table plate to the frame



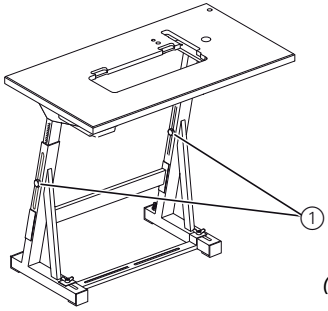
(1) - Screw holes

1. Place the table plate on the head sections of the inner bars.
2. Screw the table plate firmly in place at the screw holes (1).

7.6 Setting the working height

The working height can be adjusted continuously between 750 and 900 mm (distance from the floor to the top edge of the table plate).

Fig. 34: Setting the working height



(1) - Screws

WARNING

Risk of crushing
When loosening the screws on the frame bars, the table plate may be lowered through its own weight. This applies even more if the machine upper section is already in place.
When loosening the screws, make sure that your hands do not get trapped.

1. Loosen the screws (1) on the frame bars.
2. Set the table plate to the required height.

Important: Remove or push in the table plate evenly on both sides in order to avoid tilting or twisting.

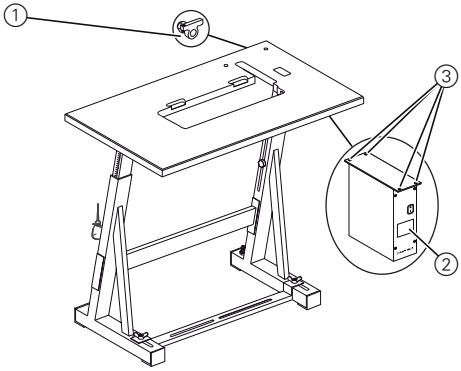
3. Tighten the screws (1) on the frame bars.

7.7 Control

The machine is operated using the DAC CLASSIC control system.

7.7.1 Fitting the control

Fig. 35: Fitting the control



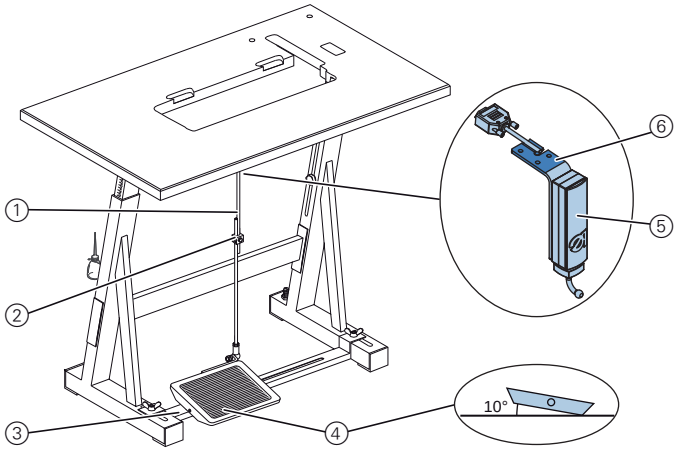
(1) - Strain relief mechanism

(2) - Control
(3) - Screw holder

1. Screw the control (2) onto the four screw holders (3) under the table plate.
2. Clamp the power cable of the control into the strain relief mechanism (1).
3. Screw the strain relief mechanism (1) under the table plate.

7.7.2 Fitting the pedal and setpoint device

Fig. 36: Fitting the setpoint device



(1) - Pedal rod
(2) - Screw
(3) - Cross strut
(4) - Pedal
(5) - Setpoint device
(6) - Angle

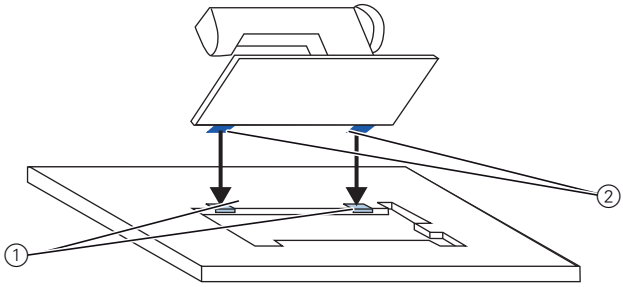
1. Place the pedal (4) on the cross strut (3) and align it in such a way that the middle of the pedal is under the needle. The cross strut is equipped with slots for aligning the pedal.
2. Screw the pedal (4) firmly on the cross strut (3).
3. Screw the setpoint device (5) onto the angle (6).
4. Screw the angle (6) under the table plate such that the pedal rod (1) runs vertically from the setpoint device (5) to the pedal (4).
5. Attach the pedal rod (1) with the ball sockets to the setpoint device (5) and to the pedal (4).
6. Pull the pedal rod (1) to the correct length:

Correct setting: 10° inclination with pedal (4) released

7. Tighten the screw (2).

7.8 Inserting the machine upper section

Fig. 37: Inserting the machine upper section



(1) - Rubber inlays *(2) - Hinge upper parts*

WARNING

Risk of crushing

The machine upper section is very heavy.

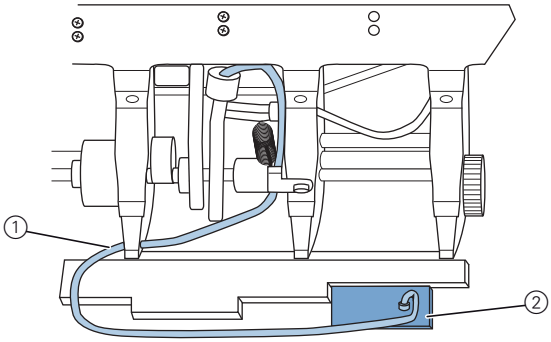
When inserting the machine upper section, make sure that your hands do not get trapped.

This mainly applies when inserting the upper hinge parts into the rubber inlays.

1. Screw the upper hinge parts (2) onto the machine upper section.
2. Insert the machine upper section from above at a 45° angle.
3. Insert the upper hinge parts (2) into the rubber inlays (1).
4. Fold the machine upper section down and insert it in the recess.

7.9 Fitting the oil extraction line

Fig. 38: Fitting the oil extraction line

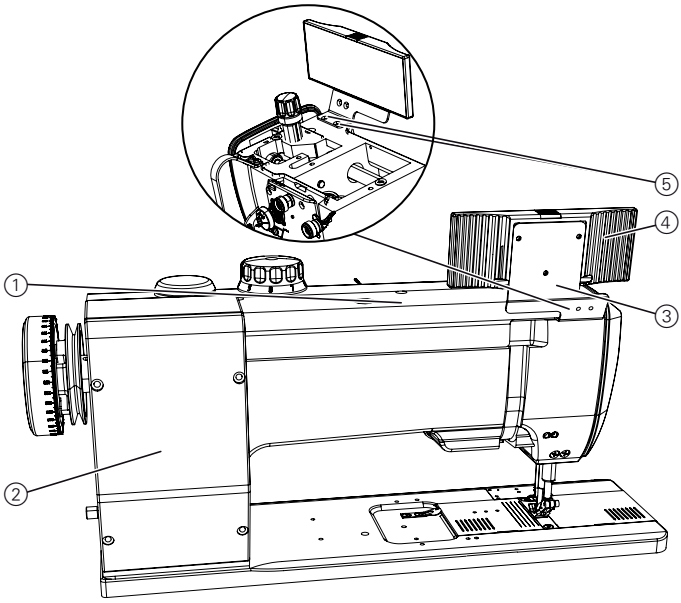


(1) - Tube of the oil extraction line *(2) - Filter*

1. Fold the machine upper section back.
2. Screw the filter (2) into the oil pan with the plastic adapter on the right.
3. Insert the tube of the oil extraction line (1) into the plastic adapter.

7.10 Fitting the control panel

Fig. 39: Fitting the control panel



(1) - Arm cover
(2) - Valve cover
(3) - Control panel bracket
(4) - Control panel
(5) - Screw holes

1. Unscrew the arm cover (1) and valve cover (2).
2. Screw the control panel (4) firmly in place at the two screw holes (5) on the machine arm using the control panel bracket (3).
3. Install the connecting cable for the control panel in the machine arm.
4. Guide the connecting cable downwards towards the control.
5. Insert the plug of the connecting cable in socket B776 for the control.
6. Tighten the arm cover (1) and valve cover (2).

7.11 Electrical connection

DANGER

Danger to life due to electric shock
The machine may only be connected by a trained electrician.
Disconnect the power plug before carrying out work on the electrical equipment.
Make sure the power plug cannot be unintentionally reinserted.
The voltage on the type plate of the sewing drive must correspond to the mains voltage.

7.11.1 Checking the mains voltage

Important: The voltage on the type plate of the sewing drive must correspond to the mains voltage.

1. Check the mains voltage before connecting the machine.

7.11.2 Connecting the control

DANGER

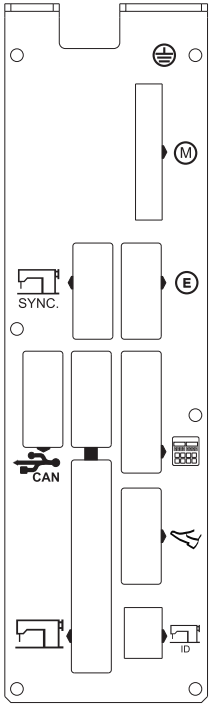
Danger to life due to electric shock
Disconnect the power plug before connecting the control.
Make sure the power plug cannot be unintentionally reinserted.

Connecting the control consists of the following work:

- Insert the plugs of all connecting cables in the sockets on the back of the control.
- Connect the control to the power supply using the power cable.

To do this, read the 🕮 *operating manual* for the DAC CLASSIC control system. The manual can be found in the accessory kit for the control system.
You can also find the operating manual in the download area at *www.duerkopp-adler.com*.

Fig. 40: Connection diagram for DAC CLASSIC



7.11.3 Connecting the sewing machine upper section

1. Insert the plug of the connecting cable for the sewing machine upper section in the socket of the control.
   The connection diagram can be found in the 🕮 *operating manual* for the DAC CLASSIC control system.

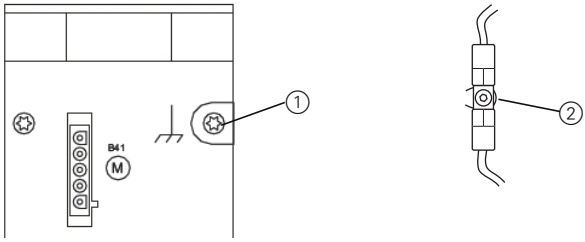
7.11.4 Establishing equipotential bonding

DANGER

Danger to life due to electric shock
Disconnect the power plug before establishing equipotential bonding.
Make sure the power plug cannot be unintentionally reinserted.

The ground conductor conducts static charges on the machine upper section to the ground.

Fig. 41: Establishing equipotential bonding



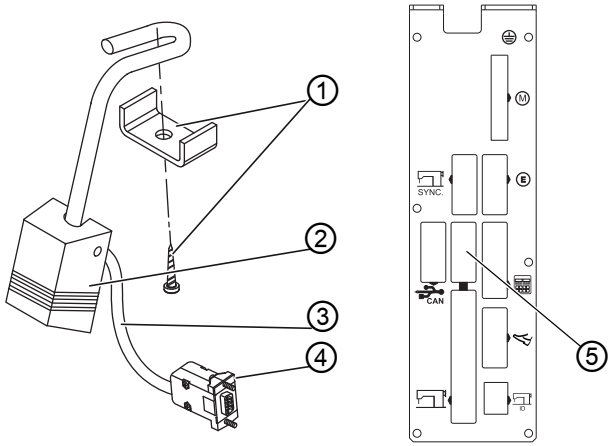
(1) - Connection on the control *(2) - Flat plug*

1. Tilt the machine upper section.
2. Guide the ground conductor from connection (1) on the back of the control through the opening in the table plate and guide it to the flat plug (2) on the base plate.

7.11.5 Fitting and connecting the knee switch

Information
The knee switch is an additional component that is not part of the standard delivery package.

Fig. 42: Fitting and connecting the knee switch



(1) - Fastening elements
(2) - Knee switch
(3) - Connecting cable

1. Screw the knee switch (2) in front of the oil pan under the table plate using the fastening elements (1).
2. Connect the ground cable for the knee switch on the back of the control.
3. Guide the connecting cable (3) to the back between the oil pan and the control.
4. Insert the plug (4) of the connecting cable in the socket (5) of the control.

7.12 Pneumatic connection

7.12.1 Fitting the maintenance unit

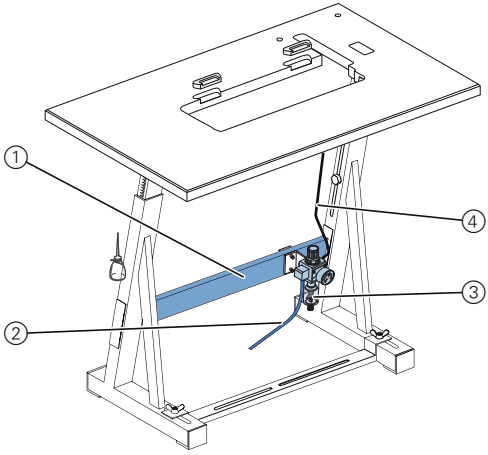
Correct setting

The system pressure for the pneumatic unit is 8 - 10 bar.

ATTENTION

Machine damage possible due to incorrect pressure.
An incorrect pressure can cause damage to the machine.
Make sure that the system pressure is set correctly before fitting the pneumatic unit.

Fig. 43: Fitting the pneumatic unit – maintenance unit



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

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

7.12.2 Setting the operating pressure

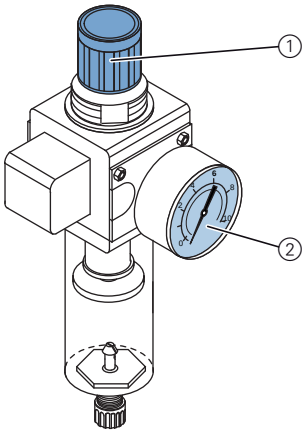
Correct setting

The operating pressure for the pneumatic unit is 6 bar.

ATTENTION

Machine damage possible due to incorrect pressure.
An incorrect pressure can cause damage to the machine.
Make sure that the operating pressure is set correctly before putting the machine into operation.

Fig. 44: Setting the operating pressure



(1) - Turning handle
(2) - Pressure indicator

1. Pull the turning handle (1) up.
2. Set the operating pressure in such a way that the pressure indicator (2) indicates 6 bar:
   - **To increase the pressure:** Turn the turning handle (1) clockwise.
   - **To reduce the pressure:** Turn the turning handle (1) counterclockwise.
3. Push the turning handle (1) down.

7.13 Lubrication

WARNING

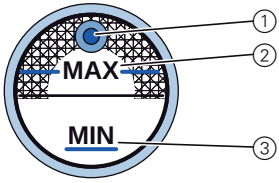
Skin injuries due to contact with oil
Oil can cause a rash if it comes into contact with the skin.
Avoid any skin contact with the oil.
If oil gets on your skin, wash the affected skin areas

ENVIRONMENTAL PROTECTION

Harm to the environment due to oil possible.
Oil is a harmful substance and must not get into the sewer system or the ground.
Collect waste oil carefully and dispose of it and oily machine parts in accordance with the applicable statutory regulations.

7.13.1 Lubrication of the upper part of the machine

Fig. 45: Oil level indicator



(1) - Refill opening
(2) - Maximum level marking
(3) - Minimum level marking

Checking the oil level

1. Check the oil level indicator every day:

Important: The oil level must always be between the minimum level marking (3) and the maximum level marking (2).

Topping up the oil

Pour in oil through the refill opening (1) as required:

1. Switch off the sewing machine at the main switch.
2. Pour in oil, up to but not past the maximum level marking (2)
3. Switch on the sewing machine at the main switch.

ATTENTION

Machine damage possible due to incorrect oil level.
Too little or too much oil can cause damage to the machine.
Check the oil level on a daily basis and top up oil so that the oil level is always between the minimum and maximum markings.

Oil to be used:

The upper part of the machine and the hook may only be filled with lubricating oil DA 10 or an oil of equivalent quality which has the following properties:

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

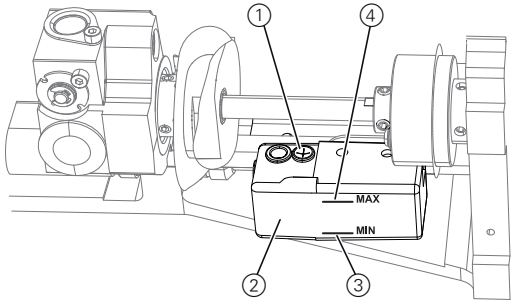
ATTENTION

Machine damage possible due to incorrect oil.
An incorrect oil type can cause damage to the machine.
Only use oil that complies with the data in the operating manual.

7.13.2 Hook lubrication

Check the oil level for hook lubrication approx. once every week.

Fig. 46: Hook lubrication



(1) - Refill opening
(2) - Reservoir
(3) - Minimum level marking
(4) - Maximum level marking

Checking the oil level

1. Tilt the upper part of the machine backwards.
2. Check the quantity of oil in the reservoir (2).

Important: The oil level must always be between the minimum level marking (3) and the maximum level marking (4).

3. Pour in oil through the refill opening (1) as required:

7.14 Sewing test

Carry out a sewing test before starting up the machine. Adjust the machine to the requirements of the material to be sewn.

To do this, read the corresponding sections of the 🕮 *operating manual*. Read the corresponding sections in the 🕮 *service instructions* to change the machine settings if the sewing result does not meet the requirements.

WARNING

Risk of injury by the needle point and moving parts
Switch off the sewing machine before replacing the needle, inserting the thread, inserting the hook thread reel, or adjusting the hook thread tension and the thread regulator.

Carrying out the sewing test

1. Insert the needle.
2. Wind on the hook thread.
3. Insert the hook thread reel.
4. Thread in the hook thread.
5. Thread in the needle thread.
6. Adjust the thread tension to the material to be sewn.
7. Adjust the thread regulator to the material to be sewn.
8. Adjust the sewing foot pressure to the material to be sewn.
9. Adjust the sewing foot stroke to the material to be sewn.
10. Adjust the stitch length.
11. Start the sewing test at low speed.
12. Increase the sewing speed continuously until the working speed is reached.

8 Disposal

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

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

CAUTION

Risk of environmental damage from improper disposal!

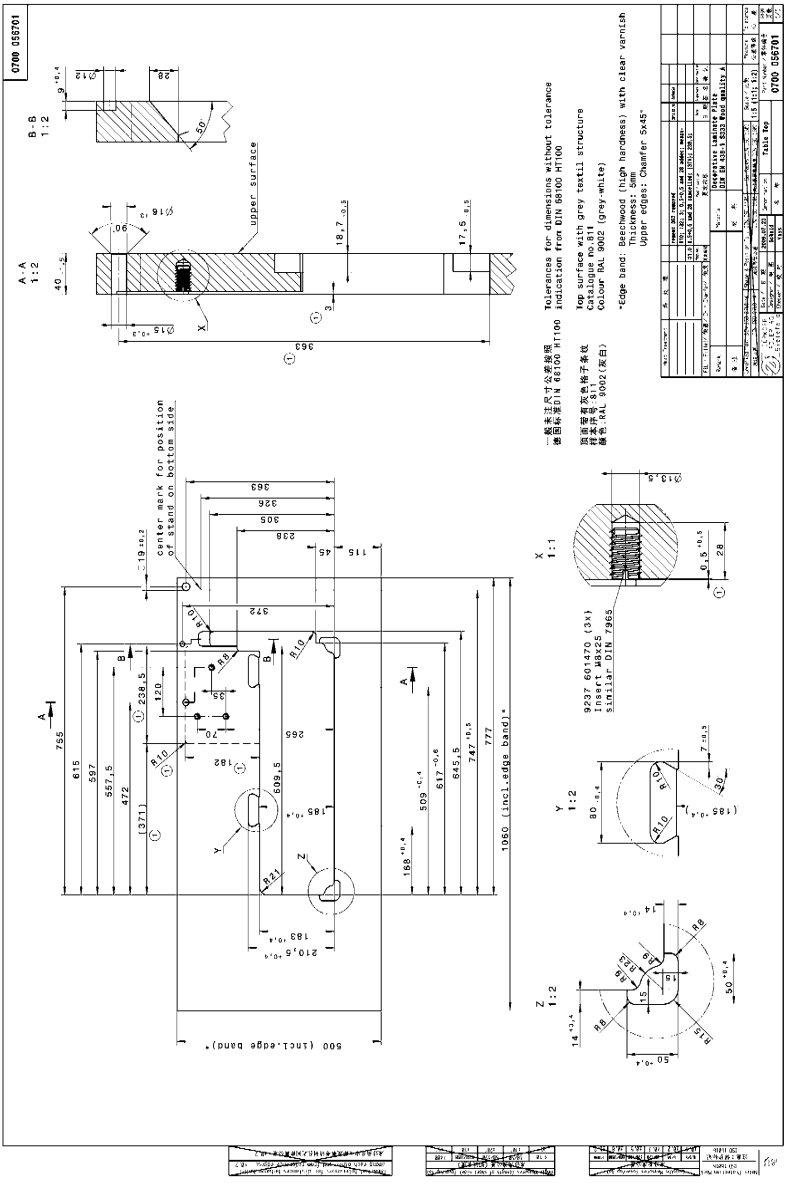
Improper disposal of the machine can result in serious environmental damage.

ALWAYS comply with the national regulations regarding disposal.

When disposing of the machine, be aware that it consists of a range of different materials (steel, plastic, electronic components, etc.). Comply with the national regulations when disposing of these materials.

9 Appendix

Dimensions for manufacturing a table plate



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