

Manual, complete

745 - 34 - 1, -3

Sewing Unit for Runstitching of Piped Flap and Welt Pocket Openings and Pocket Corners

Working Methods: A, B, D, F

Operating Instructions

[Installation Instructions](#)

Service Instructions

Instructions for Programming DAC

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Operating Instructions
Installation Instructions
Service Instructions
Instructions for Programming DAC

Interconnection Diagram

9870 745154 B
9890 745002 B

Pneumatic Circuit Plan

9770 745005

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Foreword

This instruction manual is intended to help the user to become familiar with the machine and take advantage of its application possibilities in accordance with the recommendations.

The instruction manual contains important information on how to operate the machine securely, properly and economically. Observation of the instructions eliminates danger, reduces costs for repair and down-times, and increases the reliability and life of the machine.

The instruction manual is intended to complement existing national accident prevention and environment protection regulations.

The instruction manual must always be available at the machine/sewing unit.

The instruction manual must be read and applied by any person that is authorized to work on the machine/sewing unit. This means:

- Operation, including equipping, troubleshooting during the work cycle, removing of fabric waste,
- Service (maintenance, inspection, repair) and/or
- Transport.

The user also has to assure that only authorized personnel work on the machine.

The user is obliged to check the machine at least once per shift for apparent damages and to immediately report any changes (including the performance in service), which impair the safety.

The user company must ensure that the machine is only operated in perfect working order.

Never remove or disable any safety devices.

If safety devices need to be removed for equipping, repairing or maintaining, the safety devices must be remounted directly after completion of the maintenance and repair work.

Unauthorized modification of the machine rules out liability of the manufacturer for damage resulting from this.

Observe all safety and danger recommendations on the machine/unit! The yellow-and-black striped surfaces designate permanent danger areas, eg danger of squashing, cutting, shearing or collision.

Besides the recommendations in this instruction manual also observe the general safety and accident prevention regulations!

General safety instructions

The non-observance of the following safety instructions can cause bodily injuries or damages to the machine.

1. The machine must only be commissioned in full knowledge of the instruction book and operated by persons with appropriate training.
2. Before putting into service also read the safety rules and instructions of the motor supplier.
3. The machine must be used only for the purpose intended. Use of the machine without the safety devices is not permitted. Observe all the relevant safety regulations.
4. When gauge parts are exchanged (e.g. needle, presser foot, needle plate, feed dog and bobbin) when threading, when the workplace is left, and during service work, the machine must be disconnected from the mains by switching off the master switch or disconnecting the mains plug.
5. Daily servicing work must be carried out only by appropriately trained persons.
6. Repairs, conversion and special maintenance work must only be carried out by technicians or persons with appropriate training.
7. For service or repair work on pneumatic systems, disconnect the machine from the compressed air supply system (max. 7-10 bar). Before disconnecting, reduce the pressure of the maintenance unit. Exceptions to this are only adjustments and functions checks made by appropriately trained technicians.
8. Work on the electrical equipment must be carried out only by electricians or appropriately trained persons.
9. Work on parts and systems under electric current is not permitted, except as specified in regulations DIN VDE 0105.
10. Conversion or changes to the machine must be authorized by us and made only in adherence to all safety regulations.
11. For repairs, only replacement parts approved by us must be used.
12. Commissioning of the sewing head is prohibited until such time as the entire sewing unit is found to comply with EC directives.
13. The line cord should be equipped with a country-specific mains plug. This work must be carried out by appropriately trained technicians (see paragraph 8).



It is absolutely necessary to respect the safety instructions marked by these signs.

Danger of bodily injuries !

Please note also the general safety instructions.



Part 2: Installation Instructions 745-34-1 and 745-34-3

(Edition 11/2011)

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1 Scope of delivery

- Basic sewing unit for runstitching of piped, flap and welt pocket openings with rectangular and slanted pocket corners, consisting of:
 - Height-adjustable stand
 - Step motors for sewing drive, material feed, length adjustment of the corner incision device
 - Twin needle lockstitch machine
 - DAC III control with control panel
 - Laser marking lamps
 - Sewing light
 - Compressed air maintenance unit with compressed air pistol
 - Thread reel holder
 - Workpiece boxes for additional parts to the left of the operator and underneath the table top
 - Tools and small parts in the accessories
 - Feeding and sewing equipment according to the working method
 - Optional equipment

2

2 General notes



ATTENTION !

The sewing unit must only be assembled by trained specialist staff. Any work on the electrical equipment of the sewing unit must only be carried out by electricians or correspondingly instructed persons.
The mains plug must be pulled out.
The enclosed operating instructions of the step motor manufacturer have to be observed in any case.

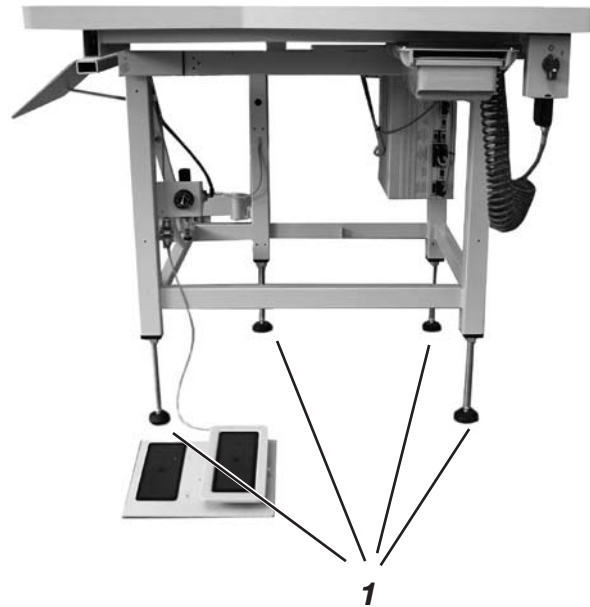
3 Installing the sewing unit

3.1 Transport



ATTENTION !

Do not lift the sewing unit at the table tops.
Use an elevating platform truck or a forklift truck.



ATTENTION!

Before commissioning the sewing unit screw out the stand feet 1 until a secure footing is achieved.

Lifting the sewing unit

- Only with an elevating platform truck or a forklift.

3.2 Transport adjustable stand

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



ATTENTION !

Do not lift the sewing unit at the table tops.
Use an elevating platform truck or a forklift truck.



2



ATTENTION!

Before commissioning the sewing unit screw out the stand feet 2 until a secure footing is achieved.

Lifting the sewing unit

- Only with an elevating platform truck or a forklift.

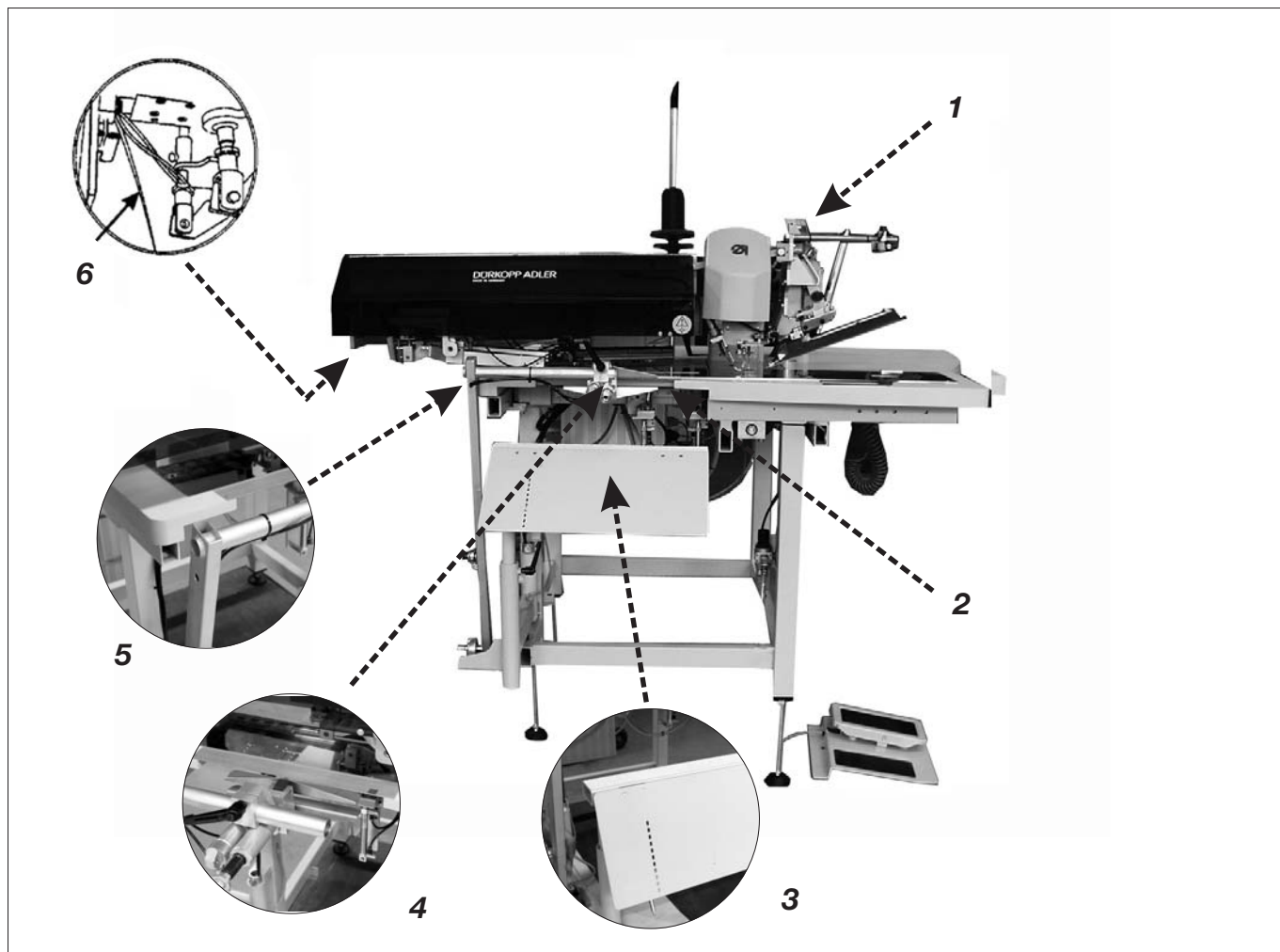
Rolling the sewing unit

- For transport purpose unfasten the nuts 1 of the stand feet 2 and screw them in.
- After transport secure the sewing unit by turning the stand feet 2 out until the castors lift off the ground 3.
- Fasten the nuts 1.

3.3 Removing the securing devices

Before installing the sewing unit all six securing devices have to be removed.

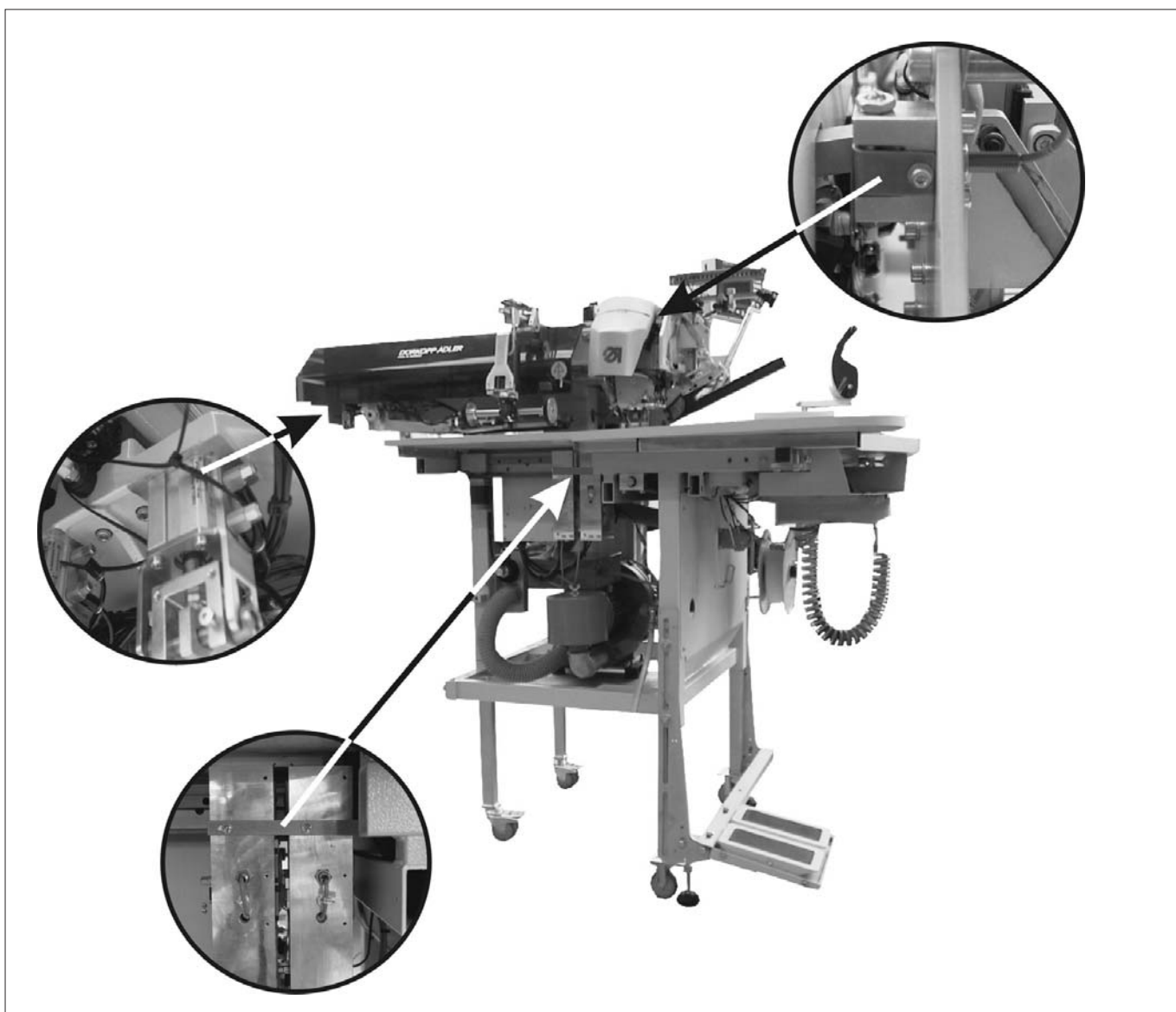
If the sewing unit has to be transported to another place, please use the securing devices again.



3.3 Removing the securing devices with an adjustable stand

Before installing the sewing unit all three securing devices have to be removed.

If the sewing unit has to be transported to another place, please use the securing devices again.



3.5 Setting the working height



The working height can be set between 79 cm and 110 cm (measured up to the upper edge of the table top).
The sewing unit is set to the lowest working height of 79 cm by the manufacturer.

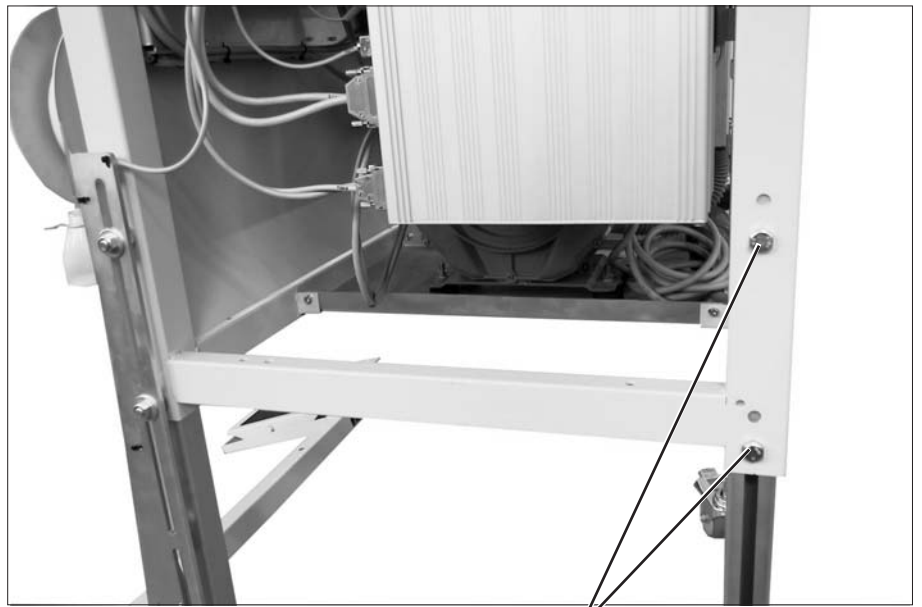
- Set the sewing unit to the desired height by equally screwing out the stand feet 1.

3.6 Setting the working height with an adjustable stand



1

2



3

The working height can be set between 79 cm and 110 cm (measured up to the upper edge of the table top). The sewing unit is set to the lowest working height of 79 cm by the manufacturer.

2



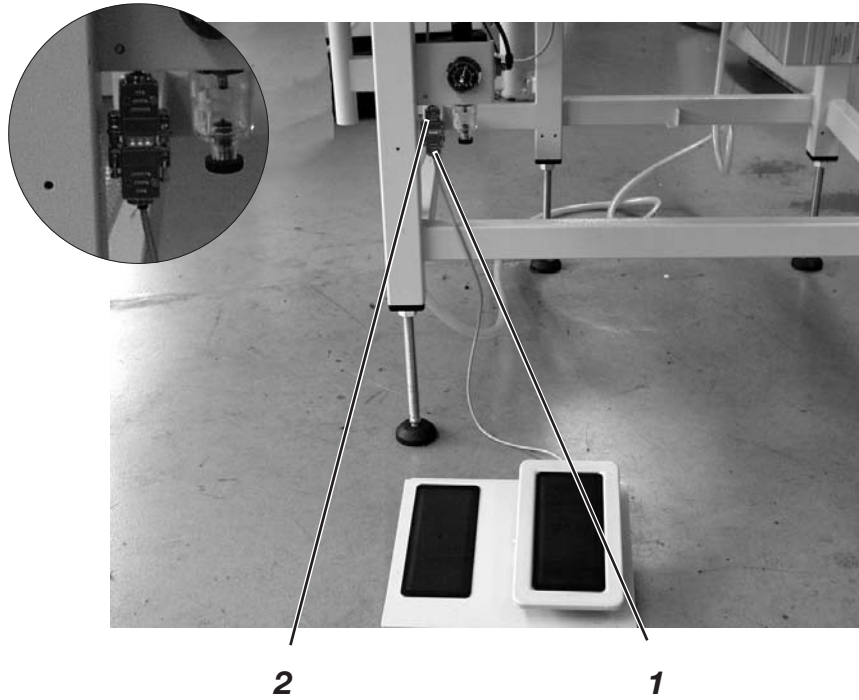
ATTENTION: Danger of breakage !

When loosening the securing screws. The sewing unit may overturn when the tubular feet of the frame are pulled out.

Set the height of the sewing unit by pulling equally the tubular feet of the frame.

- Loosen the nut 1 (4x) and the shoulder bolts 2 (4x) (clamping of the front tubular foot).
- Loosen screws 3 (4x) (clamping of the rear tubular foot).
- Set the table top to the desired height to be flush.
- To avoid a tilting, pull out / push in the tubular feet uniformly on both side.
- Tighten the shoulder bolts 2 and the screws 3.
- Tighten the nuts 1, unless the foot pedals still need to be set.

3.7 Connecting the foot pedal

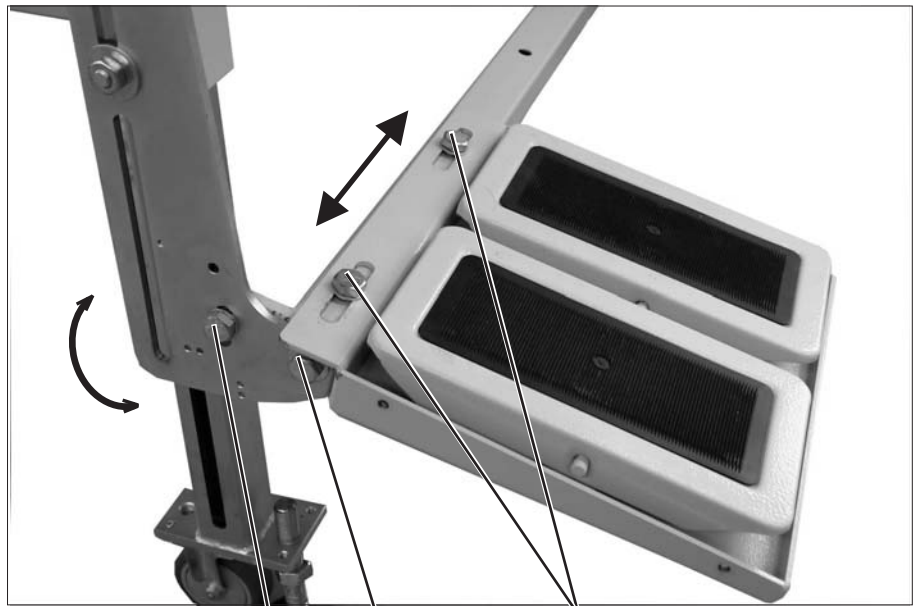


- Insert the plug 1 of the foot pedal into the socket 2 on the stand.

3.8 Adjusting the foot pedals with an adjustable stand



1 2 4 3



4 3 5

The height of the foot pedals can also be set, independently of the height of the sewing unit.
The angle of slope and the lateral position of the foot pedals are also adjustable.

2

Setting the height

- Loosen nut 1 and shift both guides 2 in the slotted hole. Loosen the screws 3 additionally, in order to displace them in the next slotted hole. Make sure to have the same height in both guides 2.
- Tighten the nut 1.

Setting the angle of slope

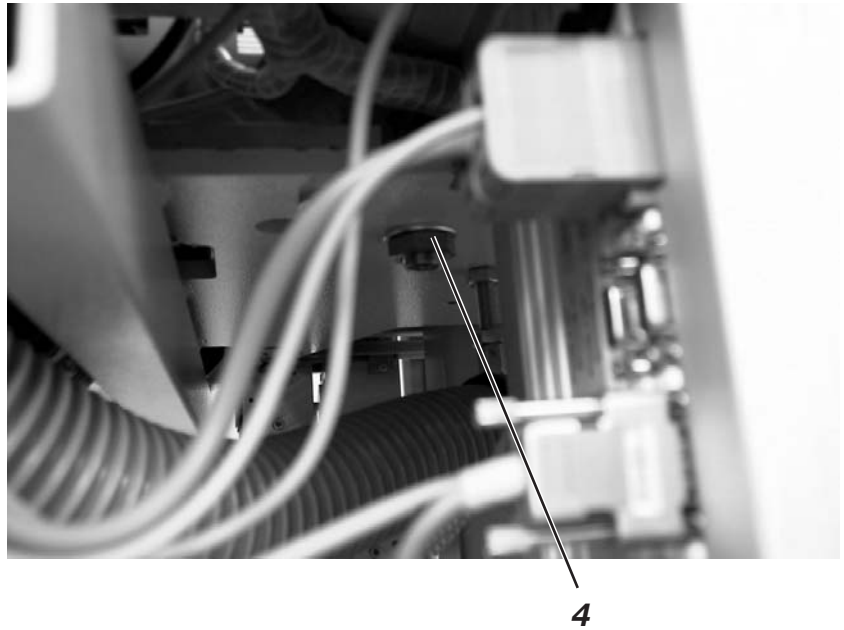
- Unscrew the screw 4 and swivel the pedal.
- Adjust the angle of slope of the pedal.
- Tighten the screws 3 (2x) and screw 4 with the pedal at the desired position.

Setting the lateral position

- Loosen the screws 5 and shift the pedal laterally.
- Tighten screws 5 again.

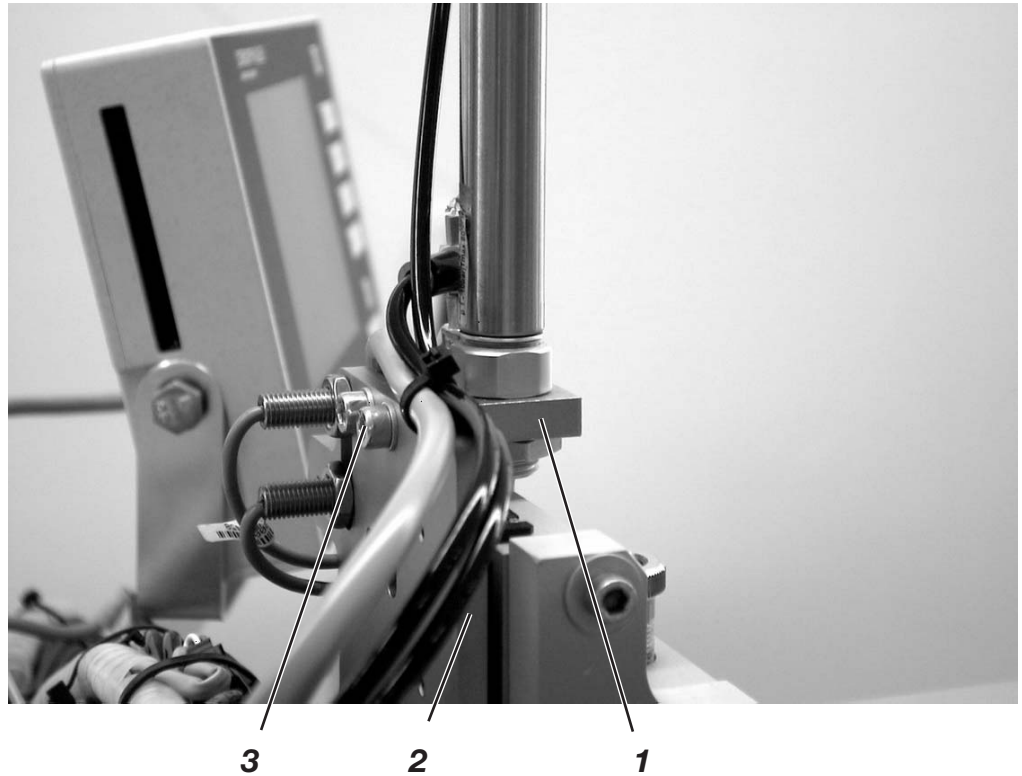
4 Attaching the machine parts removed for shipping

4.1 Thread reel holder



- Insert the thread reel holder 2 in the drill-hole of the table top and fasten it with nut 4 underneath the table top.
- Mount and align the reel plate 1 and the unwinding arms 3 as shown in the illustration.

4.2 Cylinder for pick-up folder stroke



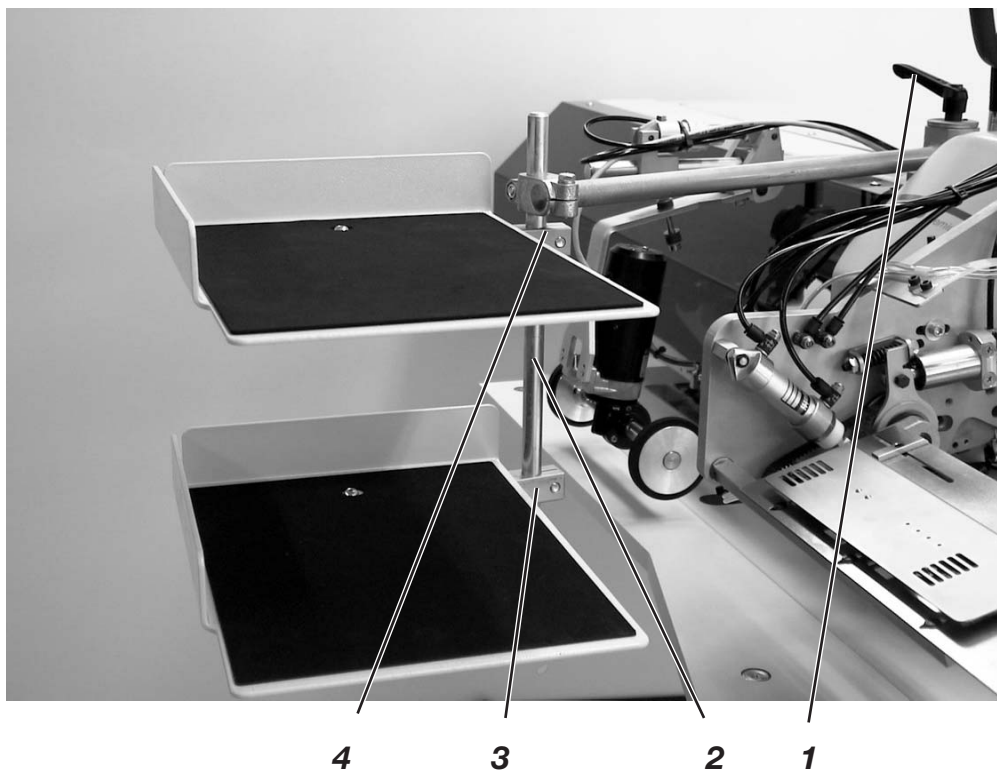
2

- Remove the securing device and swivel the cylinder upwards.
- Fasten the cylinder fixture 1 to plate 3 with screws 4.
- Move the fixture for the pick-up folder by hand.
The movement must be fingertip easy over the whole cylinder stroke.

Correction

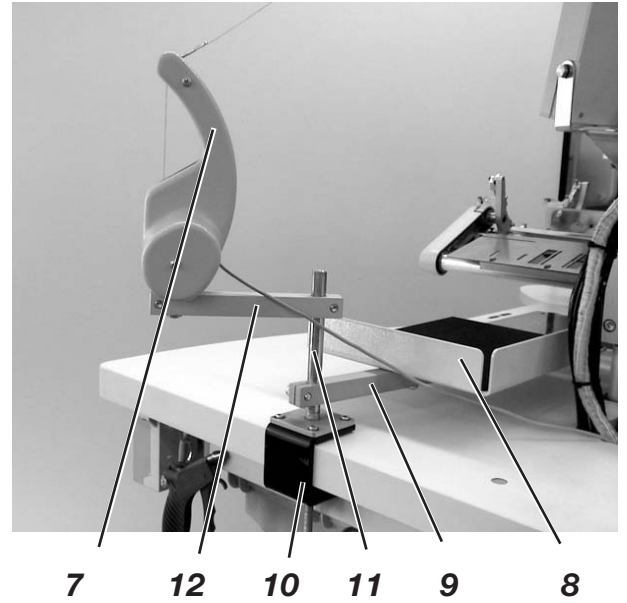
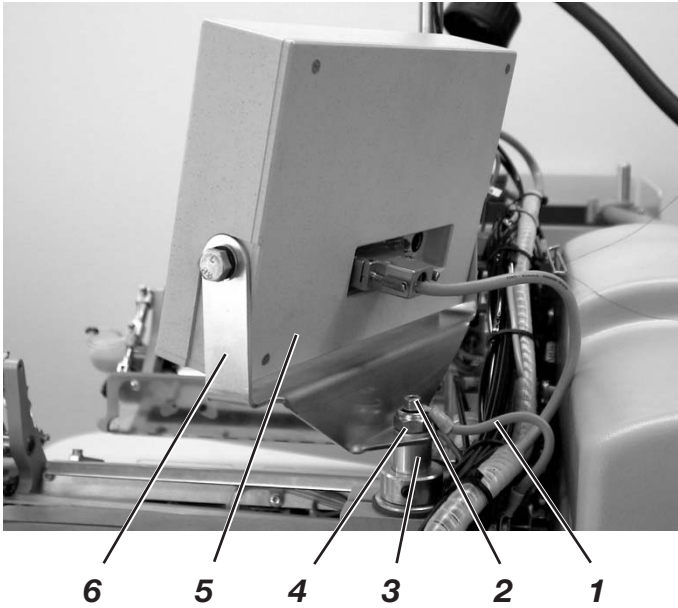
- Loosen screws 3 a little and move the fixture for the pick-up folder over the whole cylinder stroke.
In the course of this the cylinder fixture aligns itself.
- Tighten screws 3.
- Check the free movement once again.

4.3 Workpiece boxes (optional equipment)



- Fasten the workpiece boxes onto rod 2.
For this purpose push the clamping pieces 4 and 3 on rod 2, align the height and clamp them firmly by tightening the screws.
- Loosen the screw at clamping lever 1 and align the workpiece boxes to the sewing station.
- Tighten the screw at clamping lever 1.

4.4 Fastening the holder for control panel, bobbin winder and right-hand tray



Control panel

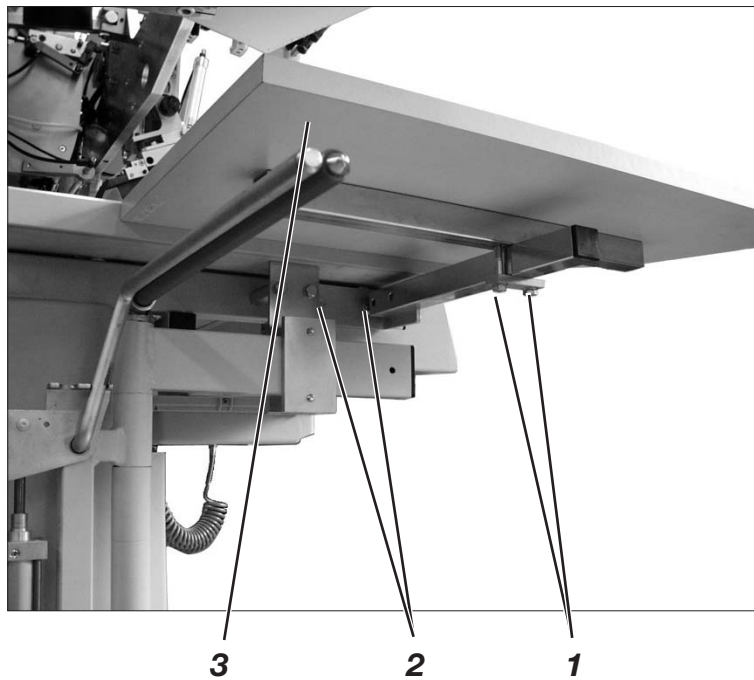
- Fasten angle 6 and control panel 5 to bolt 3 with nut 4.
- Fasten cable 1 to bolt 3 with screw 2.

Bobbin winder and tray

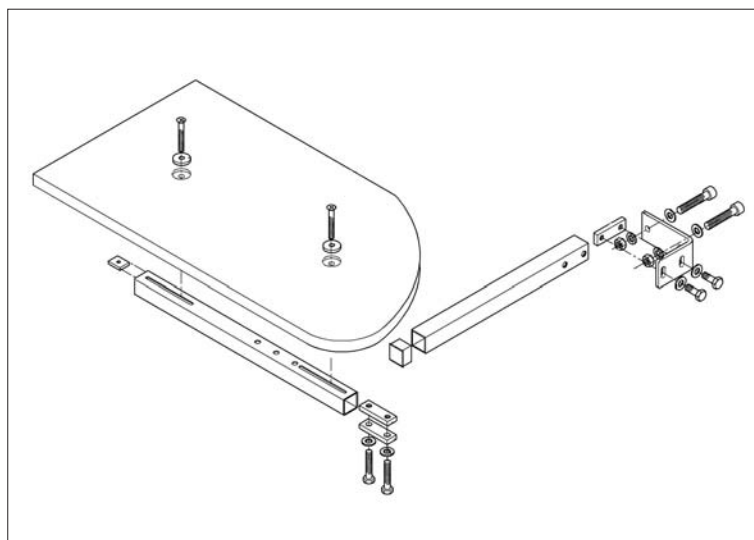
- Push holder 11 with angle 10 onto the table top and tighten with the screw.
- Align the arms 9 and 12.
- Fasten the tray 8 to the lower arm.
- Fasten the bobbin winder 7 to the upper arm.
See chapter 5.2 for connecting the bobbin winder.

4.5 Table extensions (optional equipment)

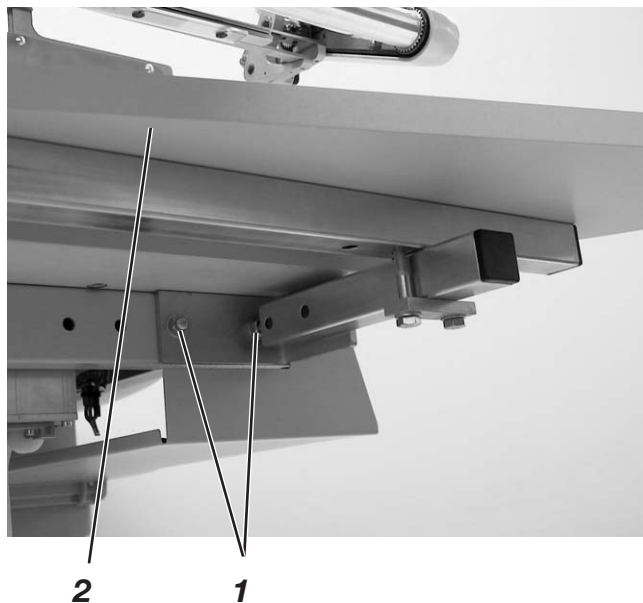
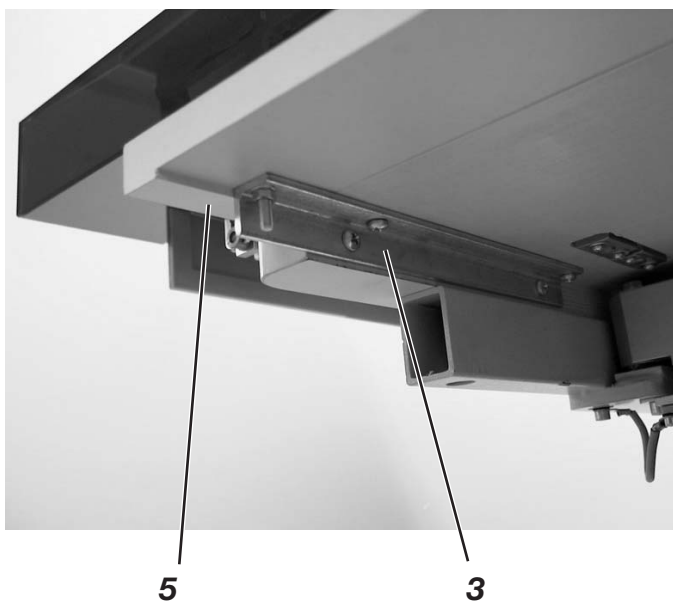
4.5.1 Table extension for working method with bundle clamp carriage (Order No. 0745 597674)



- Fasten the table extension 3 onto the table top brace with the screws 2.
- Loosen screws 1 slightly.
Create a clearance to the table top by shifting the table extension 3. This clearance is required for the free passage of the positioned pocket bag.

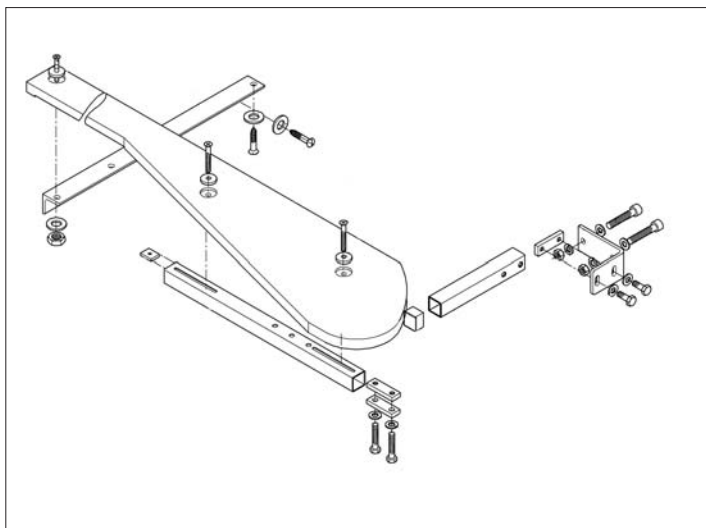
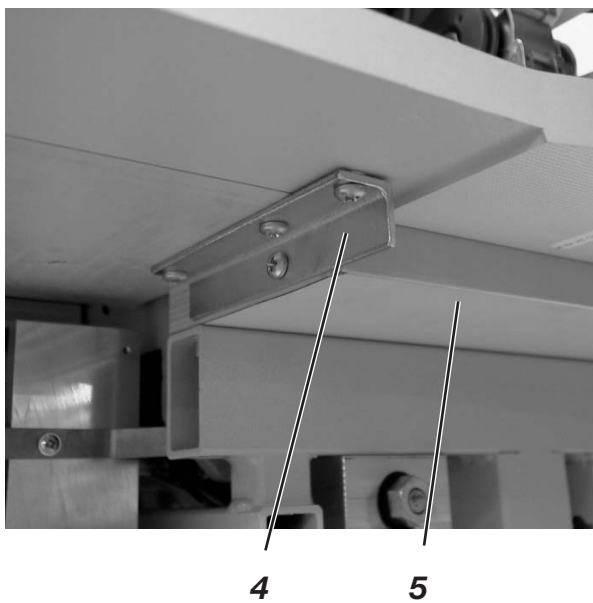


4.5.2 Table extension for stacking to the side (Order No. 0745 597684)

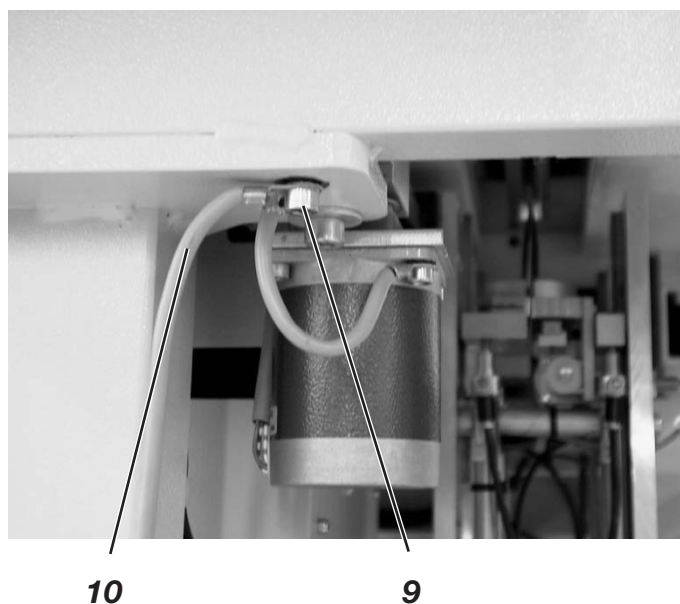
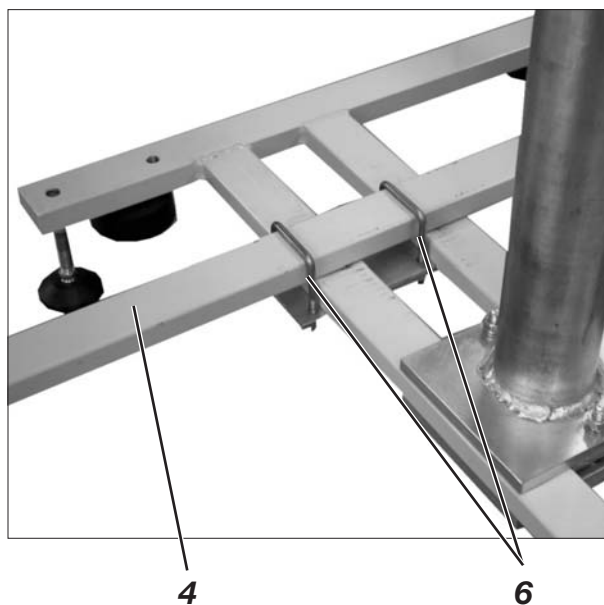
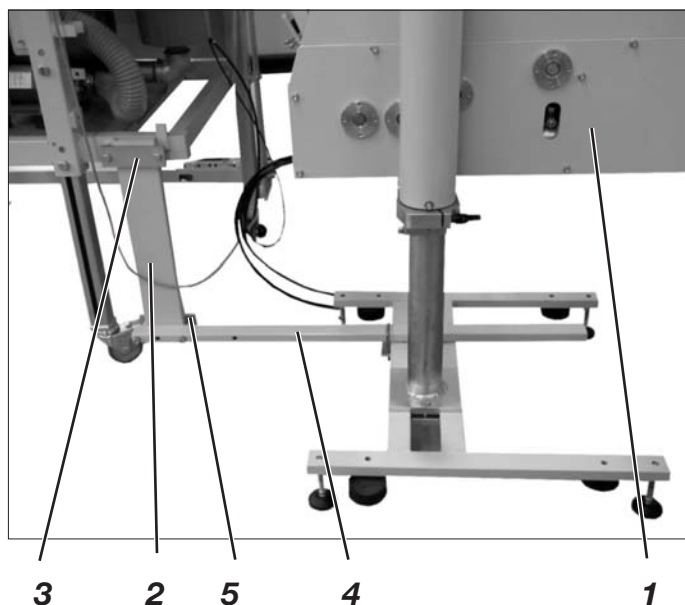


- Fasten the table extension 2 to the front of the rest table brace with the screws 1.
- Screw angles 3 and 4 on the table top 5 with two screws.

2



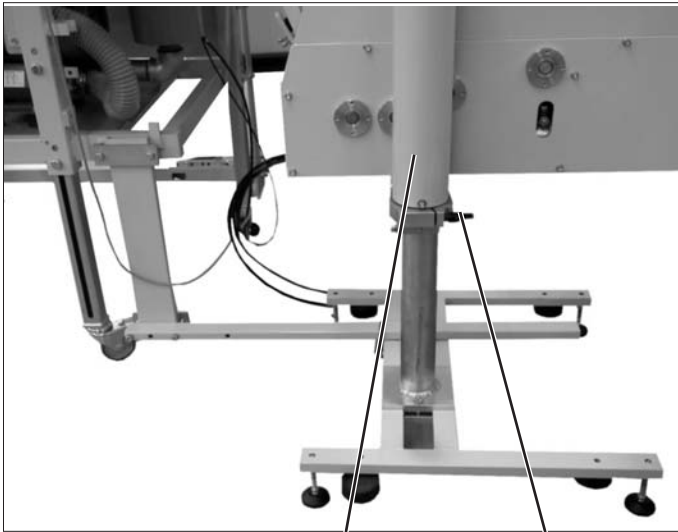
4.6 Throw-over stacker (optional equipment)



The throw-over stacker 1 (Order No. **0745 597554**) is fastened to the stand of the sewing unit with mounting pipe 2.

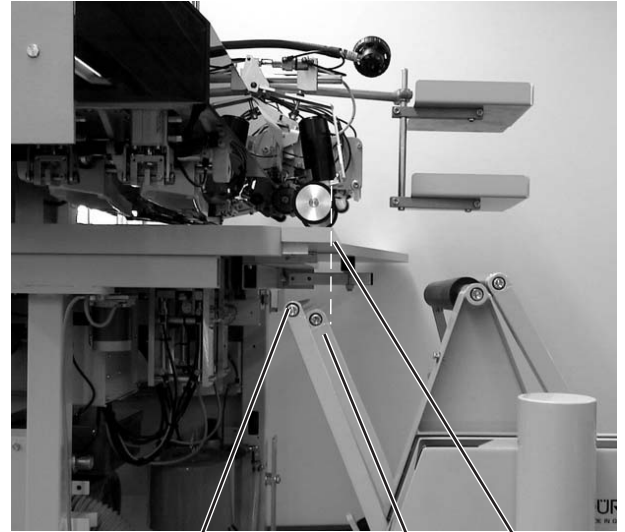
- Fasten the mounting spar 2 with screws and shackle 3 onto the stand.
- Fasten spar 4 with shackle 5 and screws onto the mounting spar 2.
- Fasten spar 4 onto the stacker 1 with a shackle and two brackets 6.
- Insert the coupling plug of the compressed air hose (thick hose) into the coupling 7.
- Insert the coupling plug of the control cable (thin hose) into coupling 8.
- Fasten cable 10 with screw 9 on the stand.

Aligning the stacker



15

14



12

11

13

- Shift the stacker laterally in such a way that spar 11 is flush with the table top edge 13.
- Loosen the clamping lever 14.
- Move the stacker up on cylinder 15 so that the smoother 12 does not hit the table top when moving.
- Tighten the clamping lever 14.

2

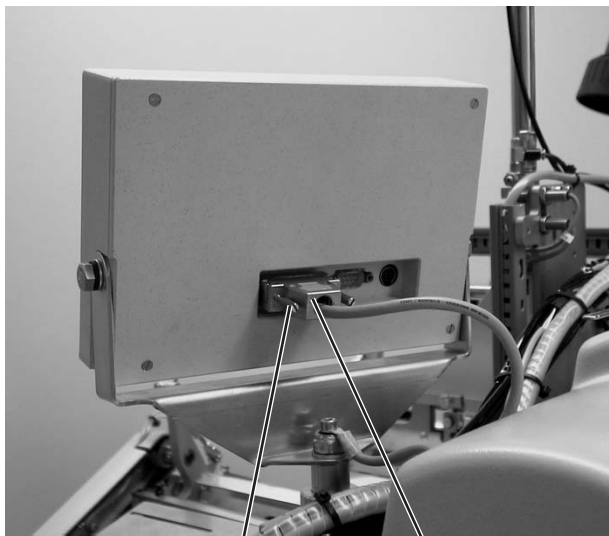
5 Electrical connection



ATTENTION!

Any work on the electrical equipment of the sewing unit must only be carried out by electricians or correspondingly instructed persons.
The mains plug must be pulled out.

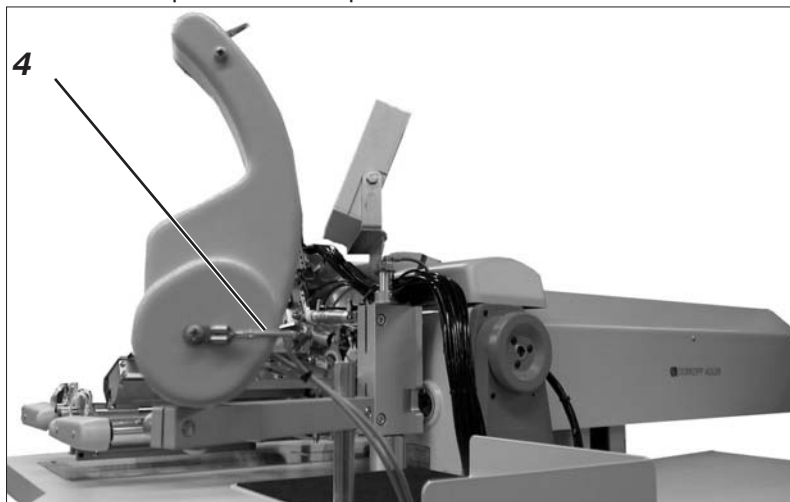
5.1 Connecting the control panel DACIII



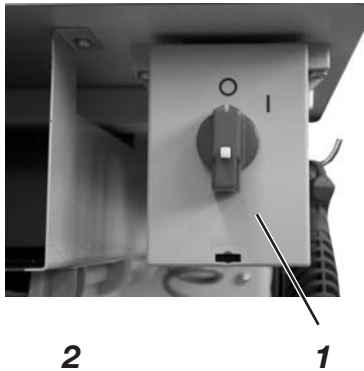
- Carefully insert plug 1 into the rear panel of the control panel.
- Tighten the screws 2 of plug 1.

5.2 Connecting the external bobbin winder

- Insert the plug of the bobbin winder into the socket 3 underneath the table top and secure with a cap nut.
- Connect the potential compensation cable 4.

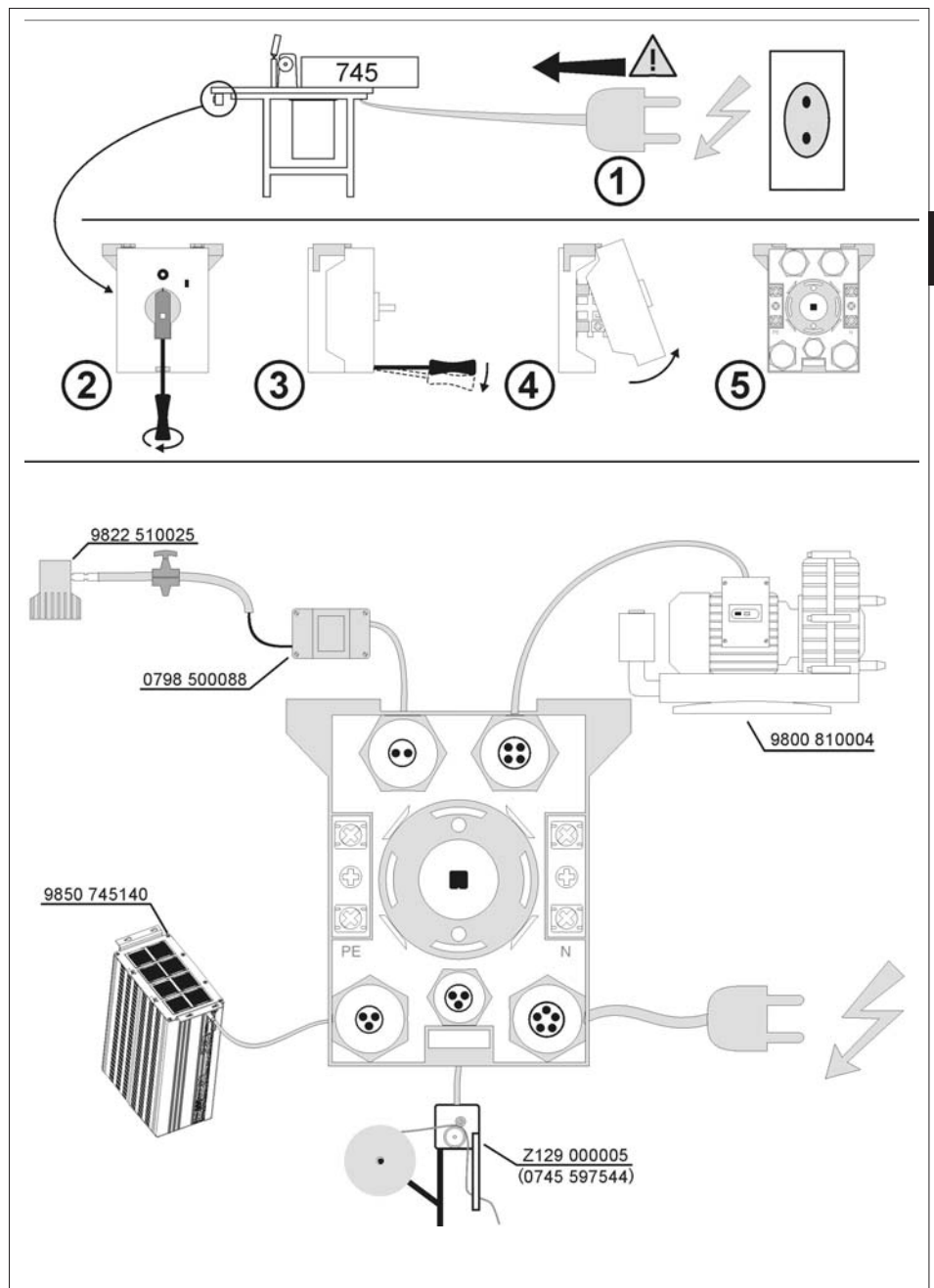


5.3 Checking the nominal voltage and connecting to the mains

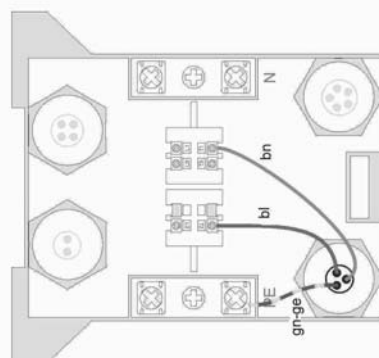
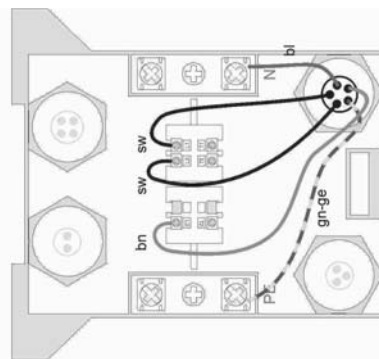
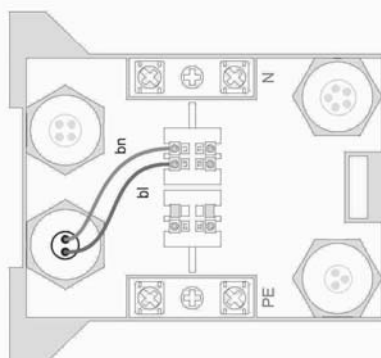
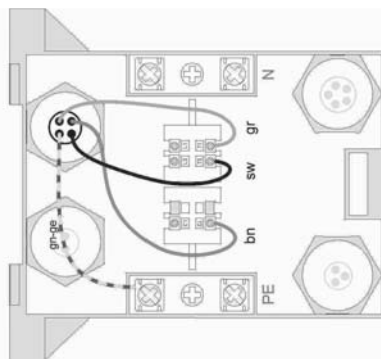
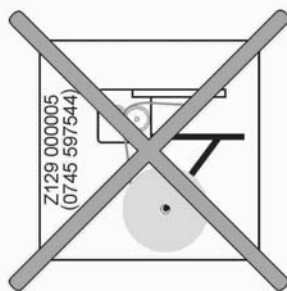
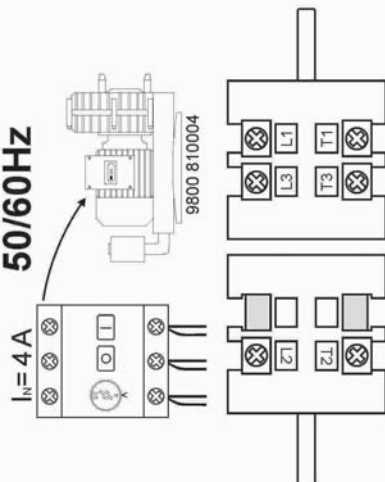


The adaptation to the local mains voltage has to be done. The switch element 2 of the main switch 1 has to be corrected accordingly.

- Remove the mains plug.
- Loosen the screw in the switch handle and remove the cover (steps 2-5).
- Check the configuration of the connections at the switch element and change the connections accordingly (see interconnection-diagram, sheet 1, e.g. next figure).
- Attach the cover again and fasten the screw.
- Connect the mains plug.

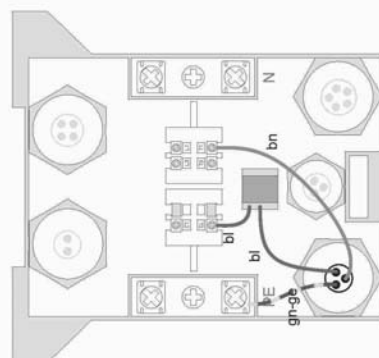
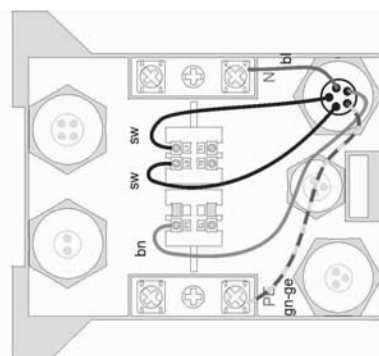
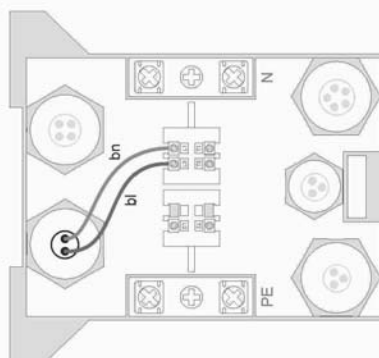
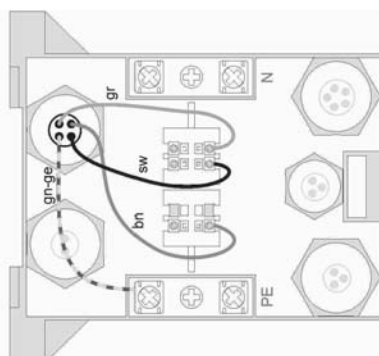
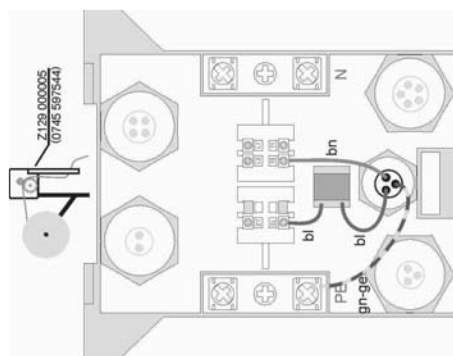
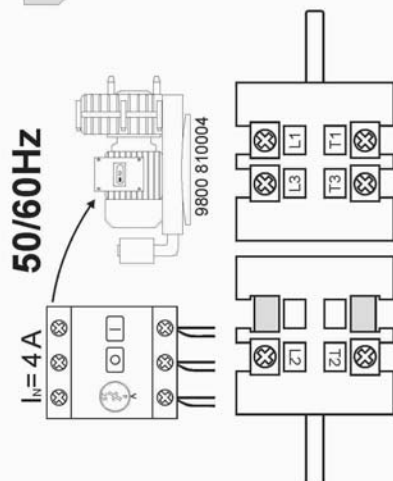


**3 x 220 - 240V
50/60Hz**

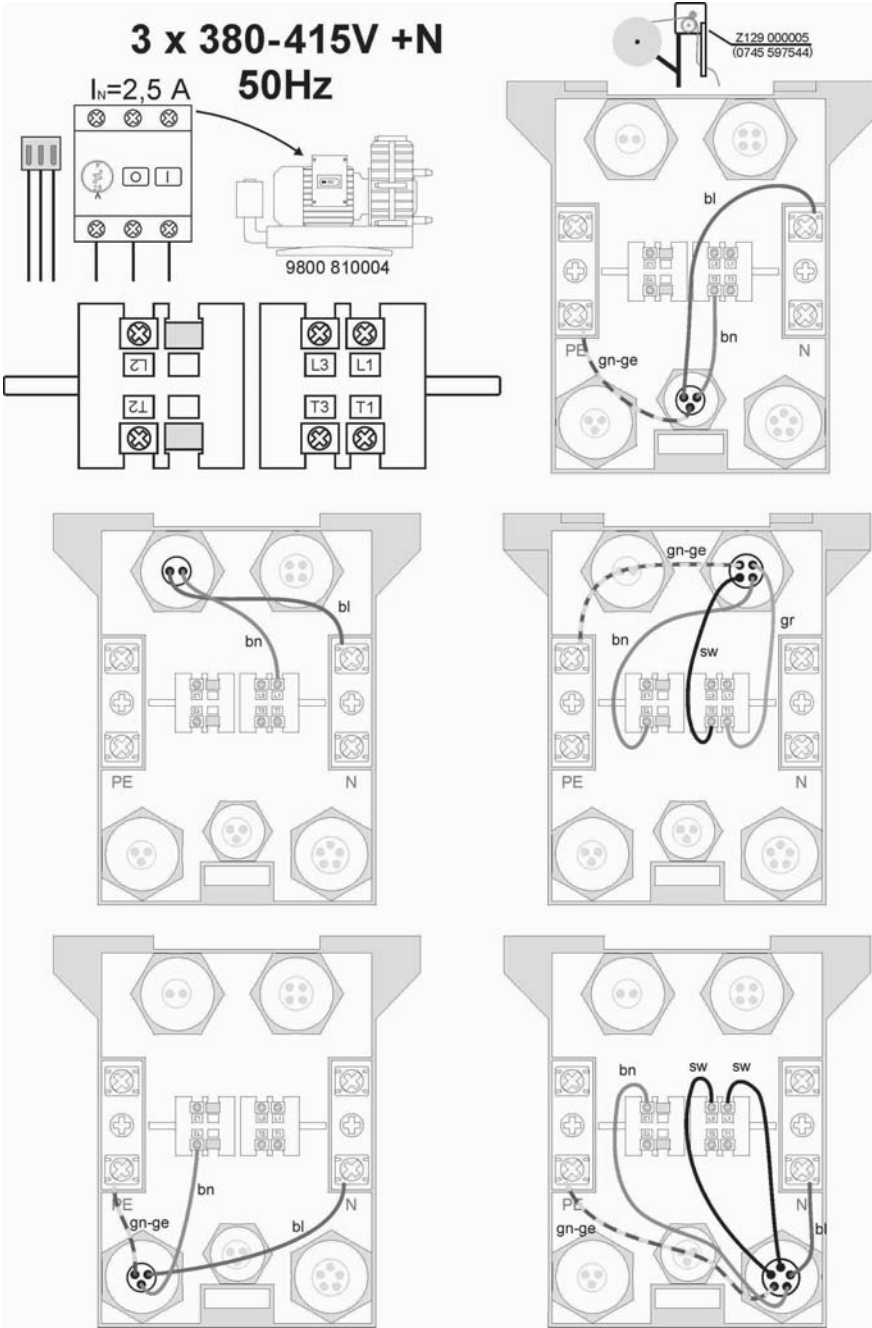


Legend: bl= blue / sw= black / bn= brown / gn-ge= green, yellow

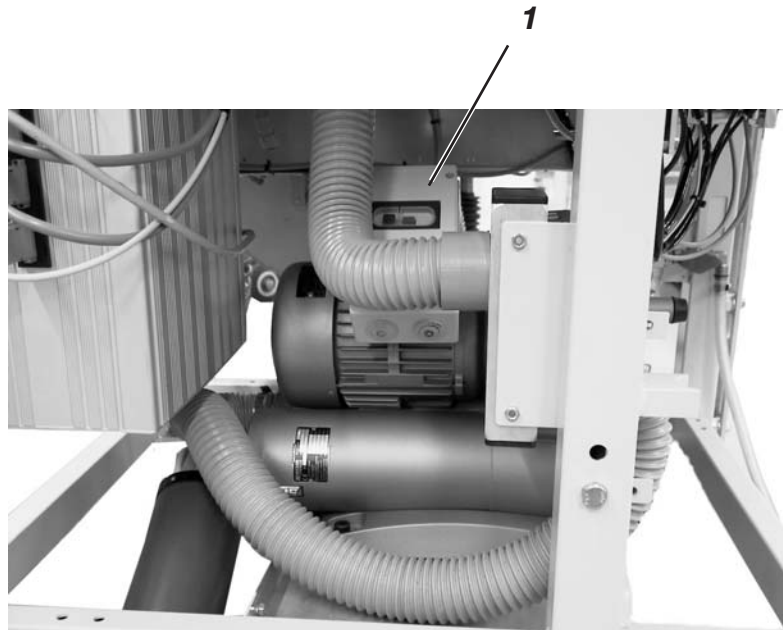
**3 x 220 - 240V
50/60Hz**



Legend: bl= blue / sw= black / bn= brown / gn-ge= green, yellow

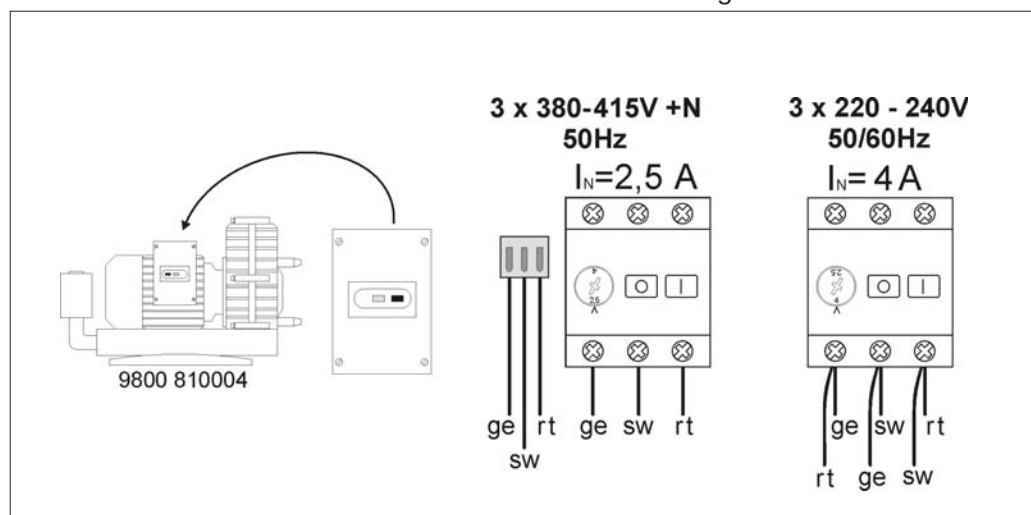


5.4 Checking the nominal voltage of the vacuum device (optional equipment)



The adaptation to the local mains voltage has to be done at the terminal strip in control box 1.

- Screw off the cover of control box 1.
- Check the arrangement of the connections to the terminal strip. (see circuit diagram).
- If necessary, change the connections according to the local mains voltage.
- Put the cover on the control box 1 again and screw on.



Legend: bl= blue / sw= black / bn= brown / gn-ge= green, yellow

5.5 Direction of rotation of the sewing motor and the vacuum blower

- The sewing unit is equipped with the latest step motor technology. A check of the direction of rotation of the sewing motors is **not** required because it is automatically set by the control.
- The direction of rotation of the vacuum blower can be inverted by exchanging the phase (plug).

6 Pneumatic connection

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



ATTENTION !

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

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

In case of a too high loss of pressure:

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



2

Connecting the maintenance unit for compressed air

- Connect the connection hose 1 (Order No. **0797 003031**) to the cut-off cock 2 and the compressed air line by means of a hose coupling $\frac{1}{4}$ “.

Adjusting the operating pressure

- The operating pressure amounts to 6 bar. It can be read off at the manometer 4.
- For adjusting the operating pressure lift the twist handle 3 and turn it.
 - Turning in clockwise direction = the pressure is increased
 - Turning counter-clockwise = the pressure is reduced



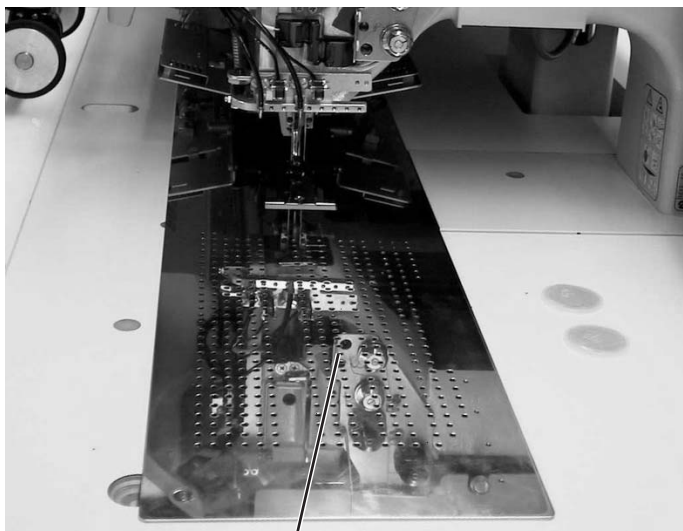
ATTENTION !

No oil-bearing compressed air must be fed from the compressed air line.

Behind the filter cleaned compressed air is withdrawn as blowing air for cleaning machine parts and for blowing workpieces out.

Oil particles contained in the blowing air lead to malfunctions and stains on the workpieces.

7 Connection to the in-house vacuum unit



1



3

2

The suction unit facilitates the precise feeding and positioning of the workpiece on the work table 1.

- Connect the hose of the factory-own vacuum unit to the connection valve 3.

Note:

In case no factory-own vacuum unit is available, the vacuum device (Order No. **0745 597964**) has to be ordered in addition.



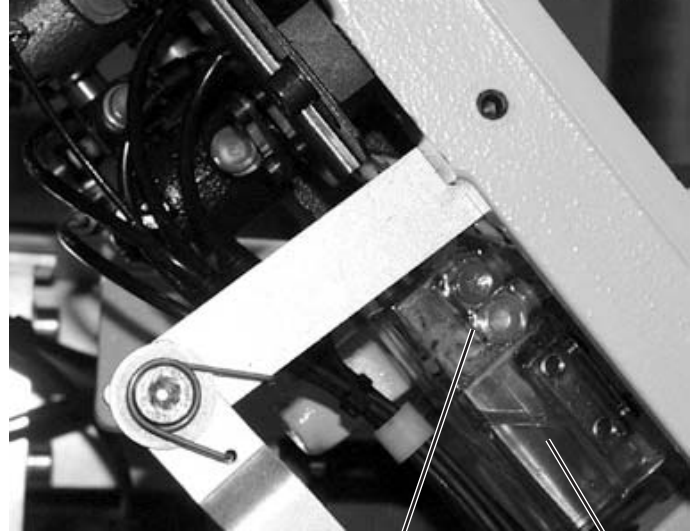
ATTENTION !

When mounting the vacuum device (side-channel blower) it is absolutely necessary to exchange the joint ring 2 (black) at the connection valve against a filter ring (white) included in the accessories.

8 Oil lubrication



1



3

2



Caution: Danger of injury !

Oil can cause skin rashes.
Avoid longer skin contact.
After contact wash yourself thoroughly.



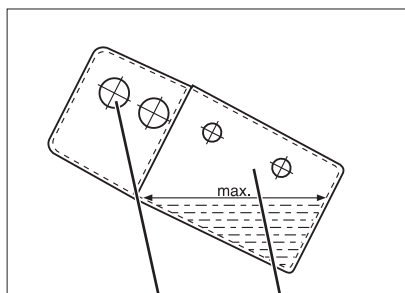
ATTENTION !

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

2

For filling up the oil reservoirs use nothing but **DA 10** lubricating oil or an equivalent oil with the following specification:

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



2

3

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

250 ml-Container:	9047 000011
1 l - Container:	9047 000012
2 l - Container:	9047 000013
5 l - Container:	9047 000014

Oil reservoir for the lubrication of the machine head

- Fill oil reservoir 1 with oil through the drill-holes in the inspection glass.
The oil level must be between the “Min” and “Max” markings.

Oil reservoir for the hook lubrication

- Tilt the machine head up (see Operating Instructions, chapter 2.3).
- Fill the oil reservoir 2 with oil up to the “max.” marking through nipple 3 (see sketch).

9 Commissioning

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

- Plug in the mains plug.



Caution: Danger of injury !

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

Laser light.

Do not look into the light source.

- Thread in the needle thread (see Operating Instructions, chapter 2.5).
- Thread in the hook thread (see Operating Instructions, chapter 2.8).
- Switch on the main switch.
The control is initialized.
- Step back on the left pedal.
The reference run starts.
The transport carriage moves in its rear end position.
The reference run is necessary in order to get a defined initial position of the transport carriage.
- By actuating the left pedal the various steps of the positioning procedure are triggered sequentially and the sewing cycle is started.



ATTENTION !

At the sewing start the workpiece must lie under the feeding clamps. Movement of the transport carriage without material damages the coating of the feeding clamps.

- For selecting the sewing program and for the further settings of the control unit see Part 4: Programming Instructions 745-34-1, 745-34-3.
- Positioning and operation are described in Part 1: Operating Instructions 745-34-1, 745-34-3.

10 Installing the software

10.1 General

Loading a specific sewing software in the DACIII control unit is possible with the help of the “Programmed Dongle”.

The “Programmed Dongle” has a label indicating the class and software version. Such a loading (booting) may be used in order to provide several DACIII control unit with a sewing software (first installation) or to install a newer machine software (update).

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

In such a case use a PC with a loader cable.



Hint:

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

CAUTION !

Turn off the main switch before connecting the dongle.

10.2 Loading the program



745-34
A 01
15.09.2004

OK ? ->



- Turn the machine off at the main switch.
- Insert the dongle **2** into the socket X110 (TEST-Interface) **1** of the control unit (see pictures).
- Switch on the main switch. The Software will be loaded. The loading process takes less than 60 seconds.
- During the loading process do not remove the dongle and do not switch off the machine (otherwise you will damage the software) !
- During this time, the version of the control panel will be displayed , e.g. **"BF1 C A 03"** (blue screen).
- When the loading process is finished, the program version will be displayed e.g. **"745 A01"**.
- The new operating system must be confirmed via the **"OK"** key. Then the operating system will be started.
- Remove the dongle **2** from the socket X110..
- Confirm the software version by pressing the **"OK"** key.
- The machine is ready for operation.

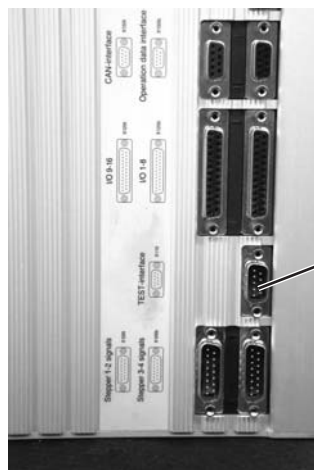
2

Hint!

Remove the dongle before re-starting the machine, otherwise it will load the sewing program again.

After a replacement (first installation) of the DAC III control, the error message Error 9900 or Error 9901 or Error 9902 will be displayed after loading the operating system.

An initialization must first be carried out (see part 4 chapter 6).



10.3 Dongle-Update via Internet

Dongles can be updated with programs available from the Dürkopp Adler homepage. Please visit our homepage "www.duerkopp-adler.com" where you will find the relevant programs in the "Download" - section. Prerequisite is our auxiliary download software "Dongle Copy" which is available in the same section together with instructions for easy use.



If you want to overwrite the machine software on it, the dongle will first be deleted (formatted).

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

The required software "Dongle Copy" is available in the "Download Area" of our web site.