

**CNC-controlled sewing unit with large
sewing area**

Operating Instructions

Installation Instructions

Service Instructions

1**2****3**

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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.

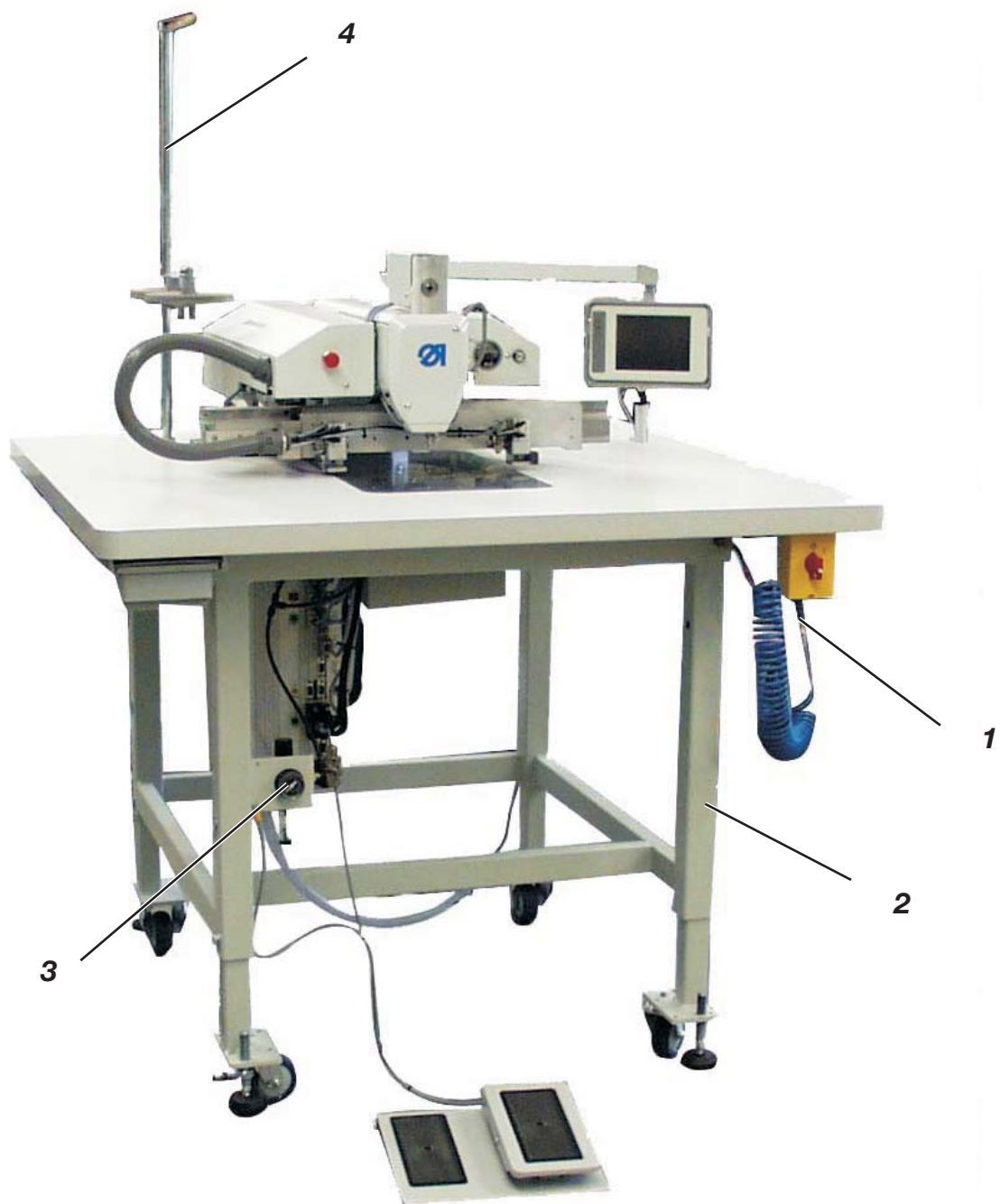
Danger of bodily injuries !

Please note also the general safety instructions.



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1. Scope of delivery

CNC-controlled sewing unit/pattern stitcher (max. sewing field size 300 x 200 mm) based on the machine head class 867 and a control unit DAC III with a special software.

Double-lockstitch machine equipped with: automatic sewing foot and clamp lifting, sewing stroke adjustment.

Thread trimmer, needle thread monitoring, thread pulling device and multiple thread tension device, made of the following:

- **3** Compressed air maintenance unit with compressed air gun **1**
- **2** Stand (adjustable in height)
- **4** Thread stand
- Tools and small parts in the accessories.
- Additional equipment (optional)

2. General



ATTENTION!

The sewing unit must be set up by trained specialist personnel.

All work on the electrical equipment of this special sewing unit may only be carried out by qualified electricians or other appropriately trained persons.

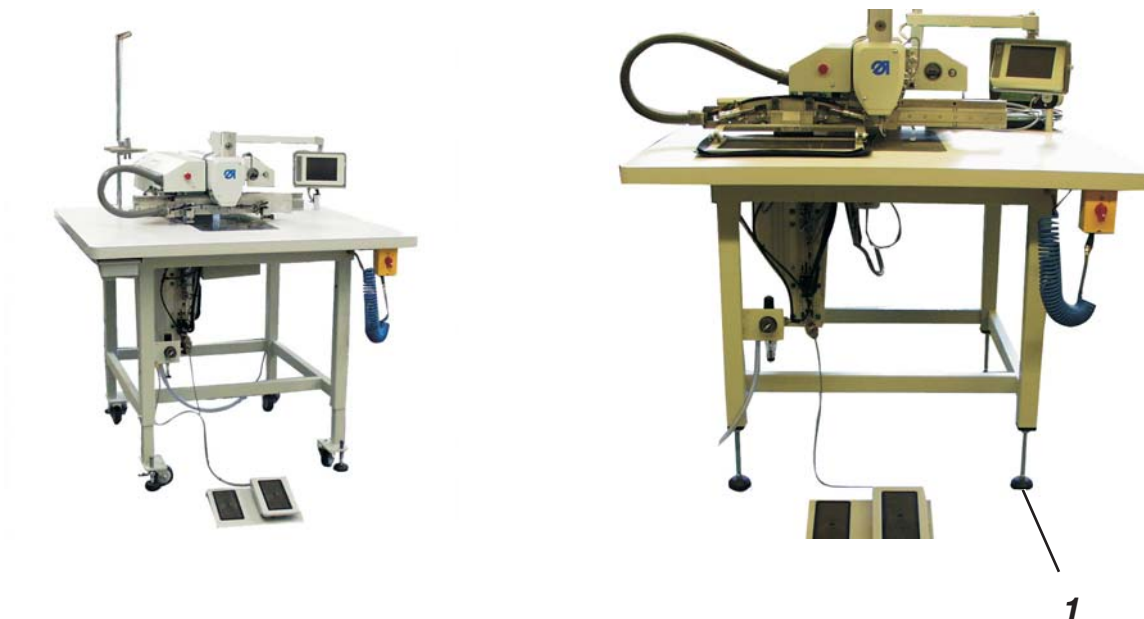
The mains plug must be pulled out.

The enclosed operating instructions of the motor manufacturer have to be observed without fail.

3. Installing the sewing unit

3.1 Transport

Transport the sewing unit using a lifting cart or a forklift, or its own castors if available.



ATTENTION!

Before putting the sewing unit into operation, screw out the height adjustable legs 1 until good stability is reached.

Lifting the sewing unit

- Use only a lifting cart or a forklift.

Moving the sewing unit

- In order to move the sewing unit via its own castors, loosen the nuts 3 of the legs 1 and screw in the legs.
- After the transport, screw out the legs 1 until the castors 2 lift off.
- Fasten the nuts 3.



3.2 Removing the security devices

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 remount the securing devices again.



3.3 Setting the working height

3.3.1 Sewing units with rollers



The working height can be set between 760 mm and 910 mm (measured up to the upper edge of the table top).



Caution: Risk of injury!

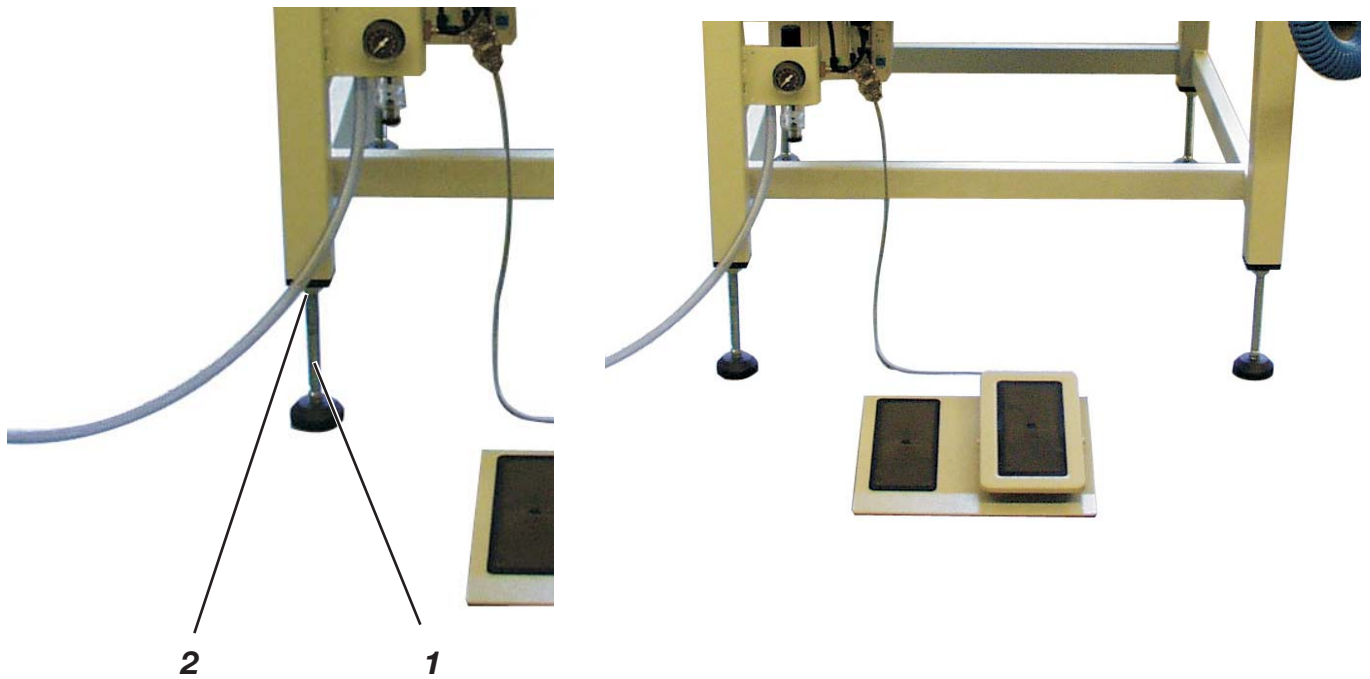
Do not lift the sewing unit using the table top.

Put a lifting cart or a forklift underneath the sewing unit before loosening the clamping screw.

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

- Loosen screws 1 (8x).
- Set the table top to the desired height to be level.
To avoid a tilting, pull out / push in the tubular feet equally on both sides.
- Fasten screws 1.

3.3.2 Sewing units without rollers



The working height can be set between 760 mm and 910 mm (measured up to the upper edge of the table top).

2



Caution: Risk of injury!

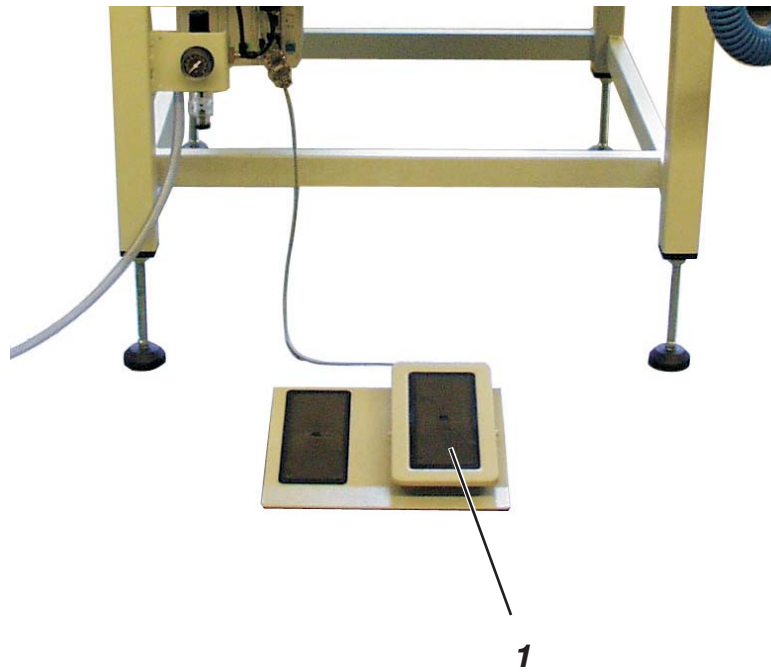
Do not lift the sewing unit using the table top.

Put a lifting cart or a forklift underneath the sewing unit before loosening the clamping screw.

Set the height of the sewing unit by equally screwing out the feet of the stand.

- Loosen the nuts 2 (4x).
- Turn the threaded rods 1 accordingly.
- Fasten the nuts 2.

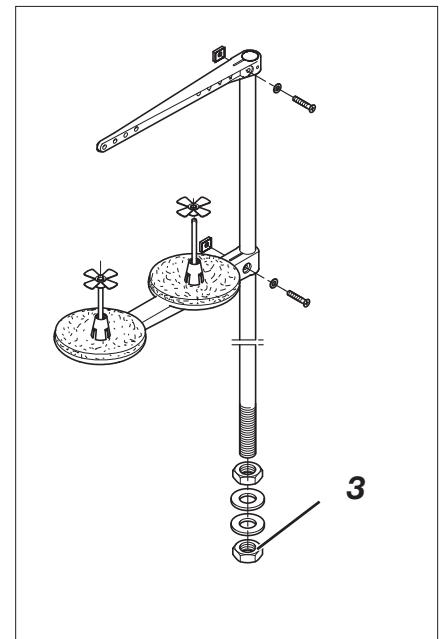
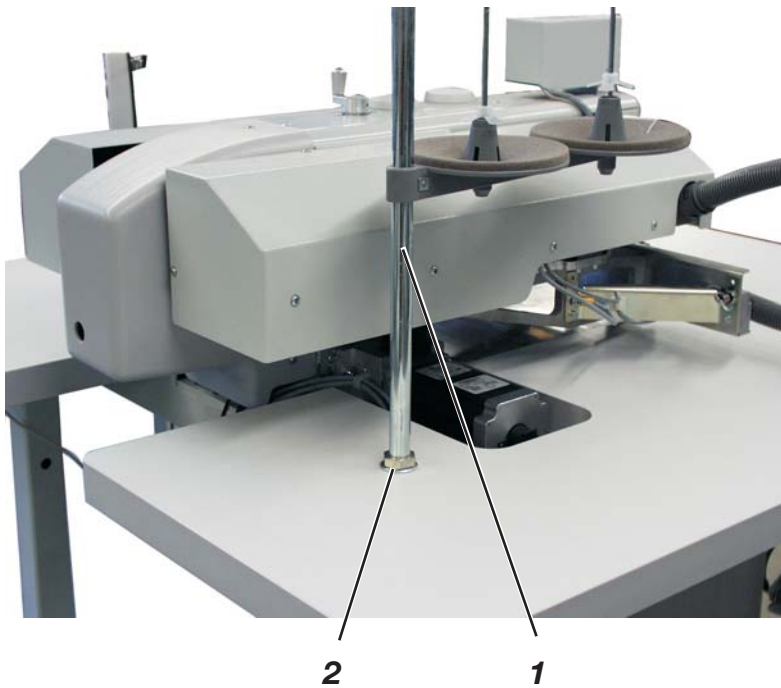
3.4 Fitting the foot pedal



The foot pedal can be placed as needed before the sewing unit.

4. Attaching the machine parts removed for shipping

4.1 Thread stand



2

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

5. Electrical connection



ATTENTION!

All work on the electrical equipment of this sewing unit may only be carried out by qualified electricians or other appropriately trained persons.
The mains plug must be pulled out.

5.1 Connecting to the mains

- Plug the mains cable into the socket.

230V -50/60 Hz

5.2 Checking the nominal voltage



ATTENTION!

The nominal voltage indicated at the type plate and the mains voltage must correspond!

5.3 Direction of rotation of the sewing motor

The sewing unit is equipped with the newest step motor technology. It is **not** necessary to check the direction of rotation, this being set automatically by the control unit.

6. Pneumatic connection

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



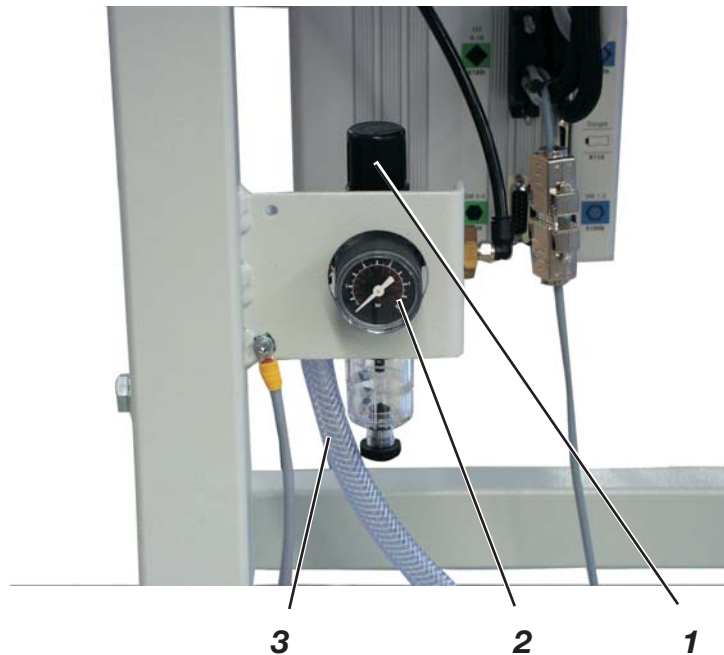
ATTENTION!

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 important drop of the air pressure:

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



2

Connecting the maintenance unit for compressed air

- Connect the unit to the compressed-air supply with the connection hose 3 (Order no. 0797 003031) and connector R1/4".

Adjusting the operating pressure

- The operating pressure is 6 bar.
It can be read off at the manometer 2.
- To adjust the operating pressure raise and turn handle 1.
 - Turn clockwise = increase pressure
 - Turn counter-clockwise = reduce pressure

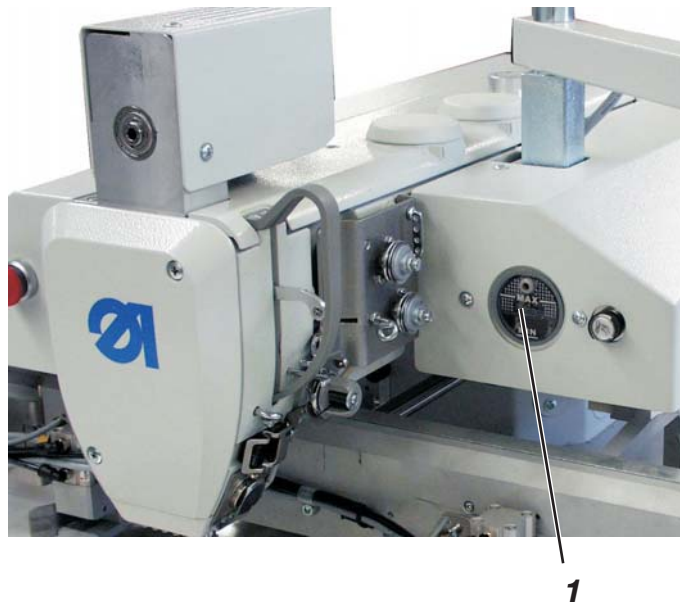


ATTENTION!

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

The cleaned compressed air after the filter is used 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. Oil lubrication



Caution: Risk 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.

For filling up the oil reservoirs use only **DA 10** lubricating oil or an equivalent oil with the following specifications:

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

DA 10 is available from **DÜRKOPP ADLER AG** retail outlets under the following part numbers:

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

Oil reservoir for the lubrication of the machine head

- Fill oil reservoir 1 with oil through the drill-hole 2 in the inspection glass.
The oil level must be between the “Min” and “Max” markings.

8. Putting into operation

A sewing test should be carried out when setting-up is complete.

- Plug the mains cable into the socket.



Caution: Risk of injury!

Turn off the main switch.

The needle and hook threads may only be threaded with the sewing unit switched off.

- Threading the needle thread (see operating instructions chapter 6.4).
- Threading the hook thread (see operating instructions chapter 6.7).
- Turn on the main switch.
The control unit will be initialised.
- Step the pedal forward.
The reference run begins.
The carriage moves to the reference point.
The reference run is necessary in order to define a starting position for the transport carriage.
- Through stepping the pedal forward, the various steps of the feeding process are initiated one after the other and the sewing process is started.



ATTENTION!

Please make sure that material is positioned under the transport clamps at the sewing start.

Moving the transport carriage without material will damage the coating of the transport clamps.

- For the selection of the sewing program and for further settings of the control unit see chapter 7 of the operating instructions.

Notes: