Contents **page:**

Part 2: Setting-up Instructions, Class 768

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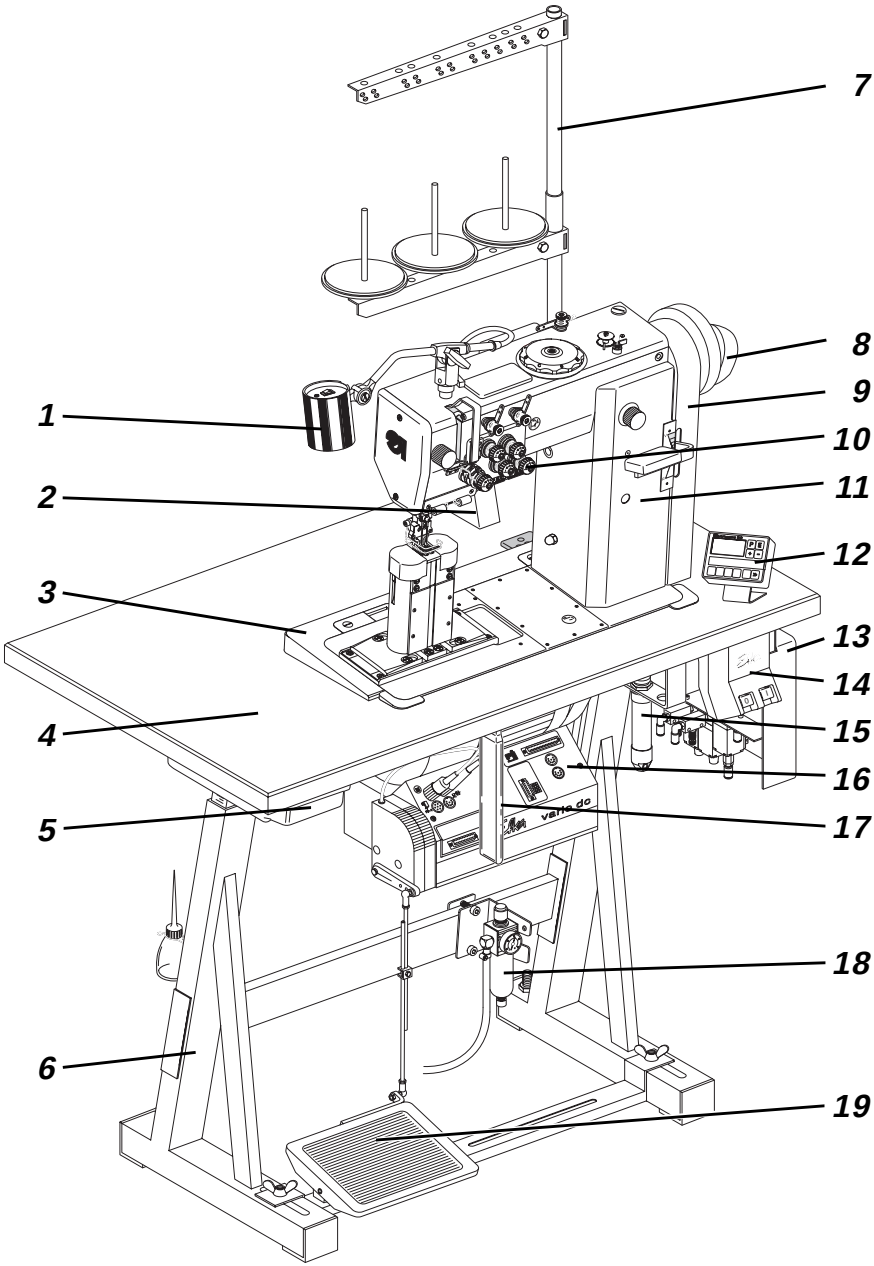
Ausg./Edition: 07/99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1. Items supplied

What items are **supplied depends on your order**.
Before setting-up please check that all the required components are present.
This description applies to a sewing machine of which **DÜRKOPP ADLER AG** has supplied all the components.

- **1** sewing lamp with sewing-light transformer (ancillary equipment)
- **2** upper-part support
- **3** angled support
- **4** table plate
- **5** drawer
- **6** frame
- **7** reel stand
- **8** proximity switch
- **9** belt guard
- **10** keypad
- **11** upper part of the sewing machine
- **12** Efka V810 operating panel
- **13** pneumatic distributor
- **14** main switch
- **15** electro-pneumatic sewing-foot lift (FLP)
- **16** Efka DC 1600/DA 82 GA sewing drive
- **17** knee-switch
- **18** WE-6 filter controller (ancillary equipment)
- **19** pedal
- belt pulley and V-belt
- minor components in the accessory pack

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2. General and transport packing

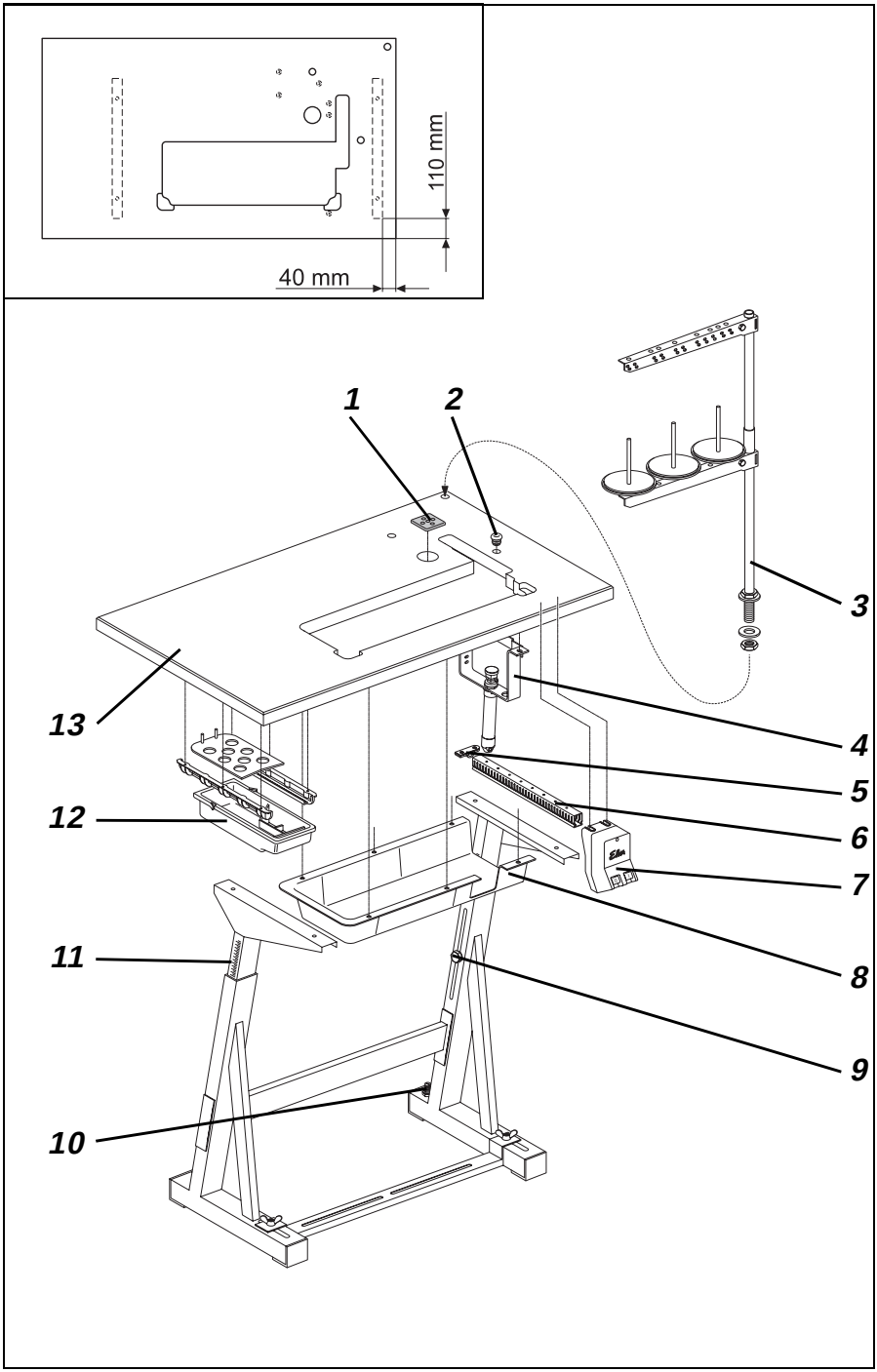
CAUTION!

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

Transport packing

If the special sewing machine you have bought is already set up, the following transport packing must be removed:

- safety straps and battens on the upper part of the machine, table and frame
- safety block and straps on the sewing drive


110 mm
40 mm
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3. Assembling the frame

3.1 Assembling the frame components

- Assemble the frame components as shown in the illustration.
- Adjust set screw 10 so that the frame is stable.
  All four of the frame supports must be firmly on the ground!

3.2 Assembling the table plate and fitting it on the frame

- Screw the **drawer 12** with its brackets beneath the table plate.
- Screw the **main switch 7** on the right-hand side beneath die table plate.
- Screw the **cable conduit 6** behind the main switch 7 beneath die table plate.
- Screw the **holder 5 for the mains-lead cleat** behind the cable conduit 6 under the table plate.
- Attach **bracket 4** with the electro-pneumatic sewing-foot lift (FLP) with screws and washers beneath the table plate.
  The table plate is factory-fitted with three screw nuts for this purpose.
- Attach **oil collector 8** with nails beneath the table-plate opening.
- Attach **table plate 13** to the frame with wood screws (8 x 32).
  Its alignment on the frame is indicated by the dimensions in the sketch.
- Insert **reel stand 3** in the hole in the table plate and attach with screws and washers.
  Fit and align the thread holders and guides.
  The thread holders and guides must be vertically in line.
- Insert **stoppers 1 and 2** in the cable-grommet holes.

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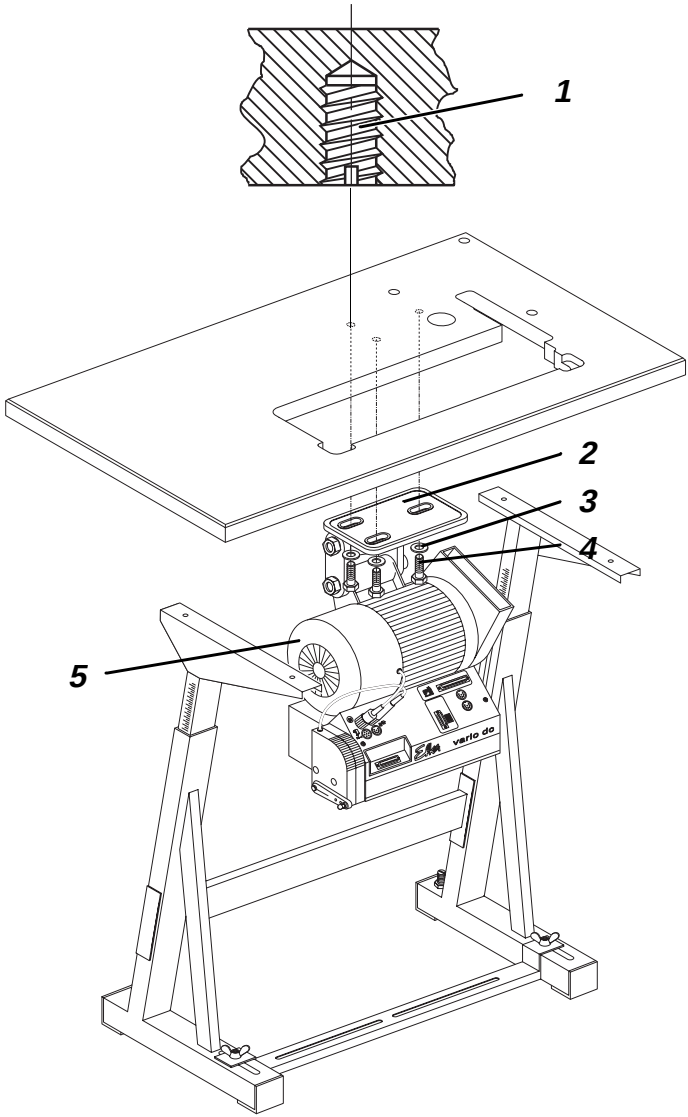
3.3 Adjusting the working height

The working height can be adjusted between 750 and 950 mm
(measured to the upper edge of the table plate).

- Undo screws 9 on both frame spars.
- Adjust the table plate vertically to the desired working height.
  Top prevent tilting, pull the table plate out or it push in by the same distance on both sides.
  The scales 11 on the outside of the spars serve as adjustment aids.
- Tighten both screws 9.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4. Sewing Drives

A direct-current positioning drive (DC1600/DA82GA) are available for the classes 768.

4.1 Drive Packages

Class	Drive package	Sewing drive type	Control panel	Design voltage
768	9889 076801 8	DC1600/DA82GA	V810	1x190-240V 50/60Hz

4.2 Components of the Drive Packages:

Direct-current positioning drive	Clutch coupling positioning drive
DC1600/DA82GA sewing drive	
V810 control panel *	
Main switch with connection leads	
Pedal rods	
Belt pulley	
V-belt	
Connection diagram	
Mounting material	

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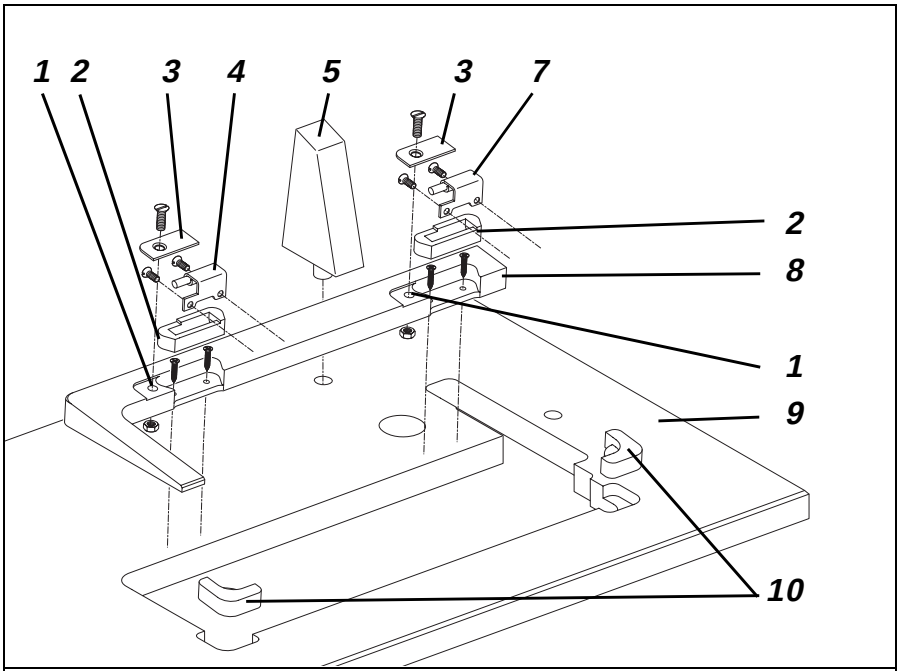
* The DC1600/DA82GA sewing drive can also be operated with the V820 control panel.

4.3 Mounting the Sewing Drive

– Mount sewing drive 3 with its base 2 on the underside of the table top.
For this, screw the 3 hexagonal screws 6 (M8x35) with washers 5 into the nuts 1 in the table top.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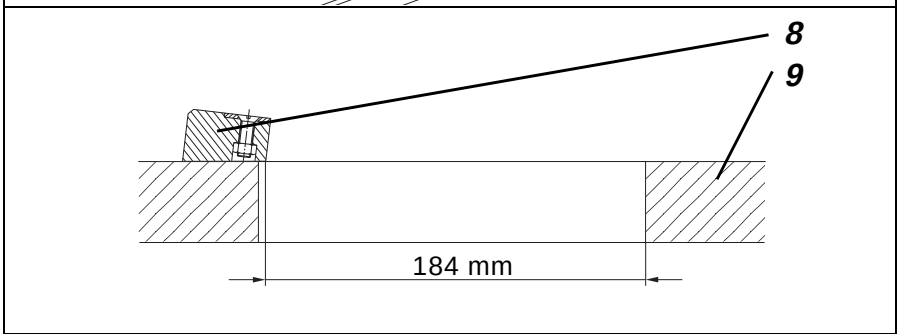
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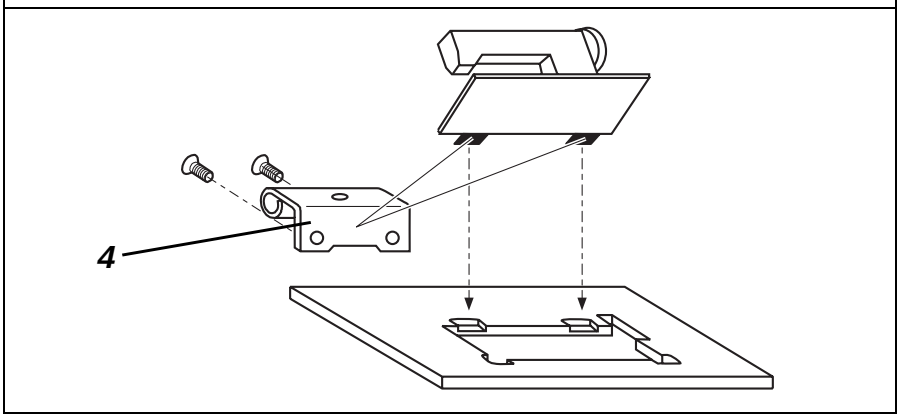
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5. Fitting the upper part of the sewing machine

5.1 Fit the angled support and mount the upper part of the sewing machine

The minor components required to mount the upper part of the sewing machine will be found in the special sewing machine's accessory pack.

- Hammer upper-part support 5 into the hole in the table plate.
- Insert the (M8) hexagonal nuts from below into the two holes 1 in the angled support 8. The function of the hexagonal nuts is to secure the retaining plates 3.
- Screw the angled support 8 to the table plate 9 with four (5.0x30) chipboard screws (see sketch).
- Press the hinge bases 2 into the recesses in the angled support.
- Press the upper-part supports 10 into the recesses in the table plate 9.
- Attach hinges 7 with (M6x8) countersunk screws to the base plate of the upper part of the sewing machine.
- Place the upper part of the sewing machine in the opening in the table plate. The hinges 7 must be in the hinge bases 2.
- Screw the retaining plates 3 to the angled support 8 with (M8x25) countersunk screws.
- Place the oil-return felt of the upper part of the sewing machine in the hollow of the oil collector.
  Caution!
  The return hose must not be in contact with any moving parts.

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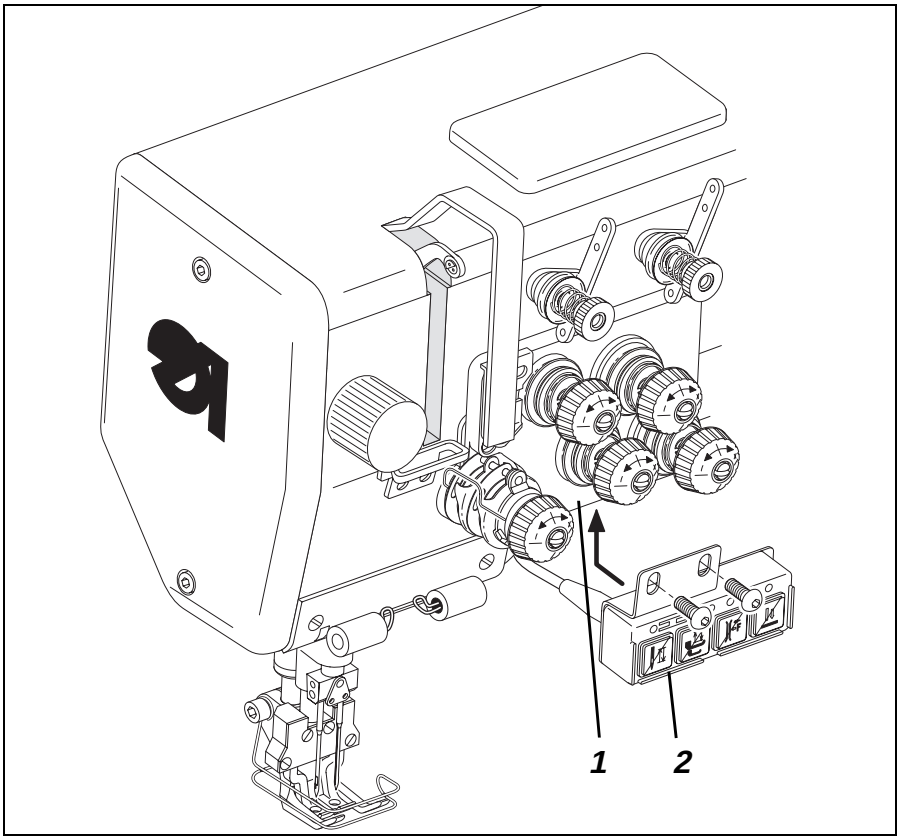
CAUTION!

Do not rotate the upper part of the machine unless the sewing foot is locked in the up position!
This will damage the sewing-foot lifting mechanism and the table plate.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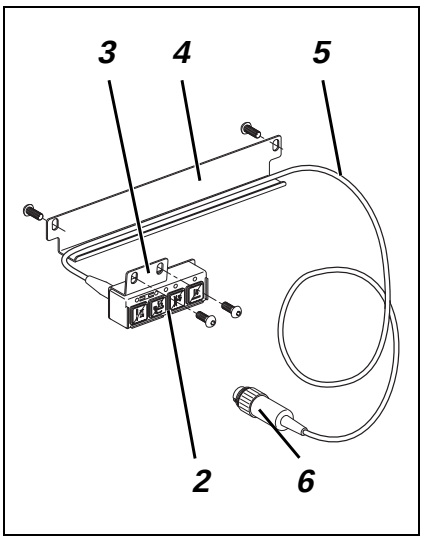
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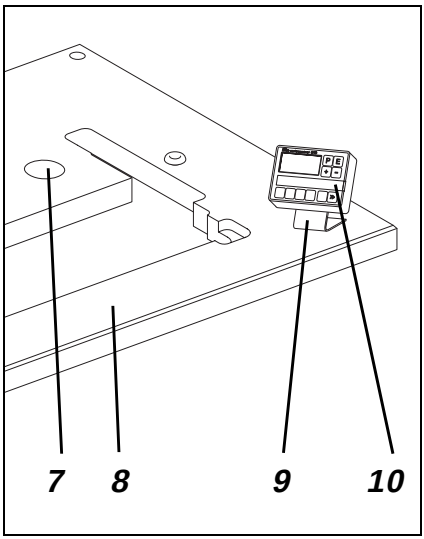
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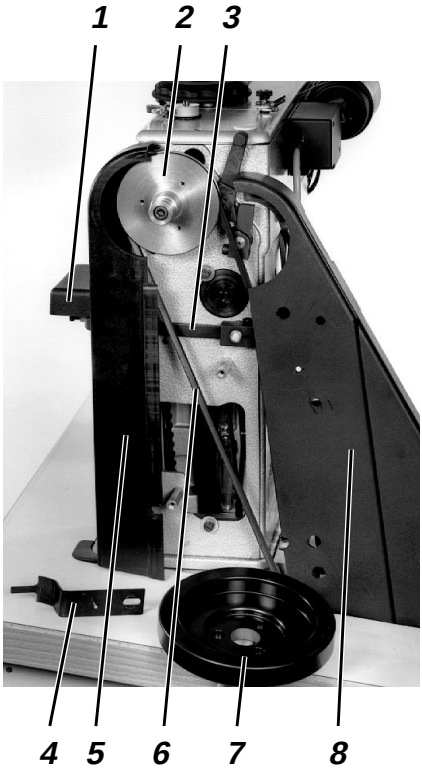
5.2 Fitting the keypad to the sewing-machine arm

The keypad 2 and guard 4 will be found in the special sewing machine's accessory pack. There are tapped holes on the operator's side of the sewing-machine arm for the attachment of the keypad 2.

- Screw the keypad 2 with mounting bracket 4 onto the sewing-machine arm behind the thread-tensioning plate 1.
- Lay the connection cable 5 behind the guard 4 and screw the guard to the rear of the sewing-machine arm.
- Pass the connection cable 5 down through the cable-holder on the sewing-machine pillar.
- Pass the connection cable 5 down through hole 7 in the table plate.
- Insert plug 6 of the connection-cable 5 into socket D of the control cabinet. (See section 6.4)

5.3 Fitting the operating panel

- Screw the operating panel 10 with bracket 9, screws and washers to the table plate 8.
- Pass the connection cable down through hole 7 in the table plate.
- Insert the connection cable into the cable conduit beneath the table plate at the side and pass it forwards.
- Insert the connection-cable plug into socket **b776** of the control cabinet. (See section 6.6)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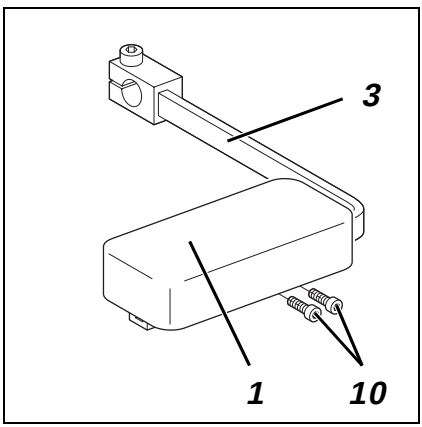
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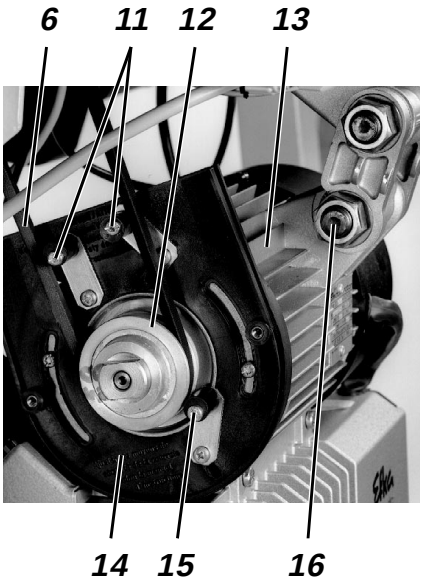
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5.4 Fitting and tensioning the V-belt

The V-belt 6, V-belt pulley 2 and sewing-drive belt guard 14 are parts of the drive kit. Both belt-guard parts 5 and 8, the position holder 4 and the pad 1 will be found in the special sewing machine's accessory pack.

Removing the guards

If the guards for the V-belt 6 are already in place on delivery, they must be removed for the V-belt to be fitted.

- Unscrew position holder 4.
- Remove pad 1 after undoing the two screws 10 from the stitch-regulator lever 3.
- Undo attachment screws of both belt-guard parts 5 and 8.
  The screws are accessible through the holes in the belt-guard parts.
- Remove the rear belt guard 8.
- Remove front belt guard 5 over stitch-regulator lever 3.
- Remove the belt-guard cover 14 on the sewing drive.

  NB:
  In the illustration the handwheel 7 has only been removed to improve visibility.
  It need not be removed in order to fit the V-belt 6.

Fitting the V-belt and mounting the belt guard on the upper part

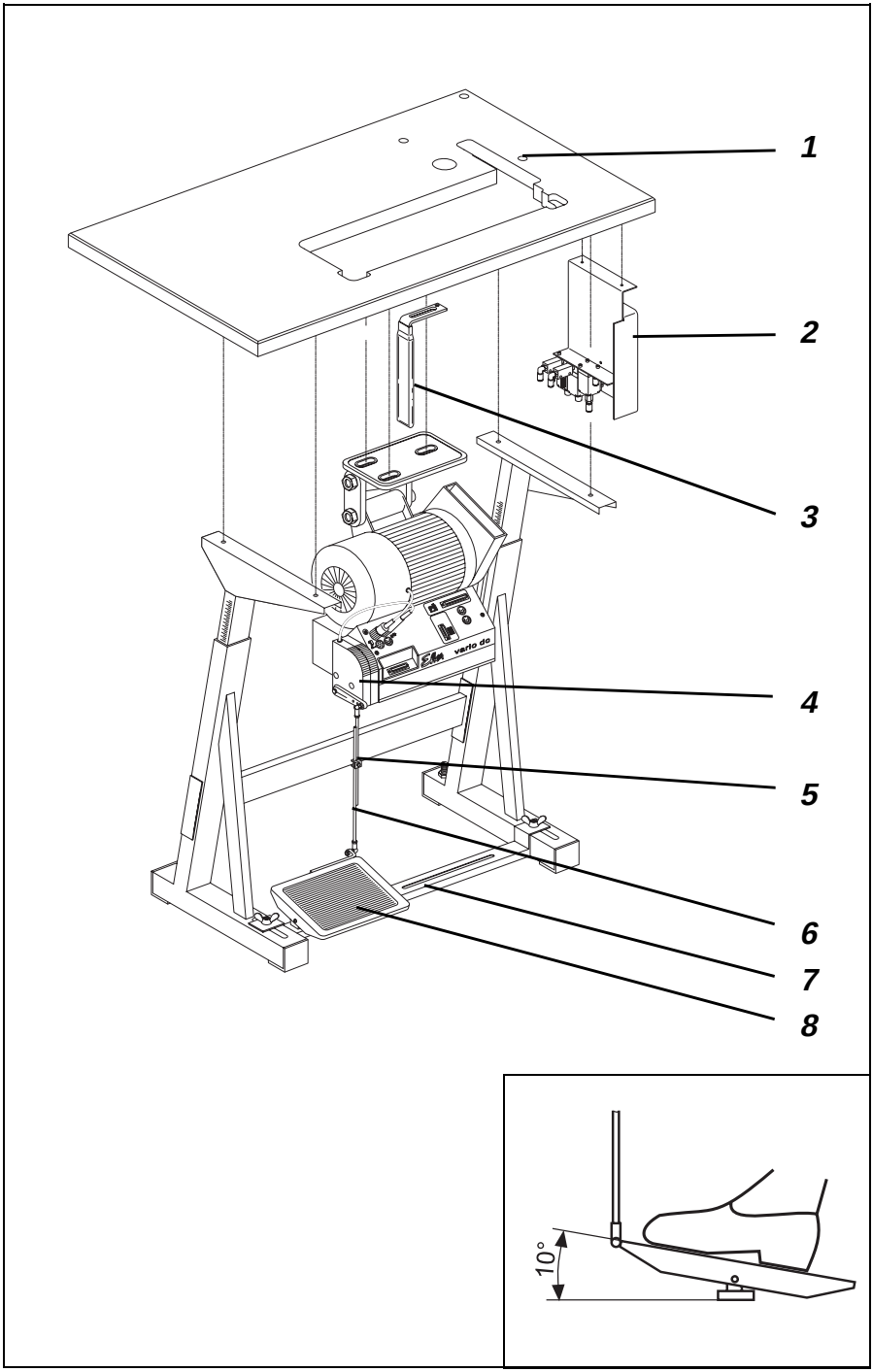
- Attach V-belt pulley 12 to the shaft of the sewing drive 13.
- Place the V-belt 6 on the belt pulley 2 on the upper part of the sewing machine.
- Pass the V-belt 6 down through the opening in the table plate.
- Fold back the upper part of the sewing machine.
- Place the V-belt 6 on the belt pulley 12 of the sewing drive.
- Return the upper part of the sewing machine to its original position.
- Fit the two-part belt guard 5 and 8 to the upper part of the sewing machine, placing the slit in the front guard 5 over the stitch-regulator lever 3.
- Attach the pad 1 to the stitch-regulator lever 3 with screws 10.
- Attach position holder 4 to the rear belt guard 8.
  The function of the position holder is to stop the proximity switch 9 from twisting.

Tensioning the V-belt

- Undo screw 16 on the base of the sewing drive 13.
- Tension the V-belt 6 by swivelling the sewing drive 13.
  When the belt is correctly tensioned It must be possible to depress it by about 10 mm by gently pressing on it with a finger at its mid-point.
- Tighten screw 16.

Fitting the belt guard to the sewing drive

- Adjust the anti-throw protectors 11 and belt-gripping device 15 of the belt guard 14.
  The V-belt 6 must remain on the belt pulleys when the upper part of the sewing machine is folded back. See the motor manufacturer's operating manual!
- Screw on the cover of the belt guard 14.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5.5 Fitting the pedal

- Attach the pedal 8 to the frame brace 7.
- Align the pedal 8 laterally as follows:
  When the pedal linkage 6 is attached it must be vertical.
  There are slots in the frame brace 7 to help align the pedal.
- Attach the pedal linkage 6 with ball sockets to the pedal 8 and the set-point generator 4.
- Slightly undo screw 5.
- Adjust the height of the pedal linkage 6:
  When not under load the pedal 8 must be at an angle of approx. 10°.
- Tighten screw 5.

5.6 Fitting the knee-switch

The knee-switch 3 (in the accessory pack) is used to activate maximum sewing-foot stroke during sewing (electro-pneumatic rapid stroke adjustment).

- Screw the knee-switch 3 beneath the table plate with woodscrew.
- Move the knee-switch 3 sideways until it can be comfortably operated with the right knee.
- Insert the plug of the knee-switch connection cable into socket **b4** of the control cabinet. (See section 6.6)

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5.7 Fitting the pneumatic distributor

- Screw the distributor 2 with bracket to the right of the frame spar beneath the table plate.
- Pass the connection cable from the distributor cabinet on the sewing-machine arm down through the cable holders on the pillar.
- Pass the connection cable down through hole 1 in the table plate.
- Insert the connection-cable plug into the distributor socket.

6. Electrical connection

6.1 General

NOTE !

All work on the electrical equipment of the special sewing machine may only be conducted by skilled electricians or appropriately instructed persons.
The mains plug must be pulled out!

It is absolutely necessary to note the Operating Instructions of the manufacturer, supplied together with the sewing motor!

6.1.1 Connections package and grounding kit

The electrical connections package and the grounding kit are to be found in the accessories pack of the special sewing machine.

The electrical connections package contains all parts necessary for the electrical connection of the sewing machine head to the sewing drive.

The grounding kit serves for the grounding of the sewing machine head, the knee switch and the mounting plate of the distributor.

6.2 Checking the Mains Voltage

NOTE !

The design voltage listed on the rating plate of the sewing drive and the mains voltage must agree.

6.3 Connecting the Sewing Drive

The **direct-current positioning drive** is operated with single-phase-alternating voltage.
By connection with a 3-phase mains of 3 x 380V, 3 x 400V or 3 x 415V the sewing drive is connected to one phase and the neutral.
By connection with a 3-phase mains of 3 x 200V, 3 x 220V, 3 x 230V or 3 x 240V the sewing drive is connected to two phases.
When multiple sewing machines are connected to a 3-phase mains, the connections should be distributed equally among the phases in order to avoid the overburdening of a phase.
See connection diagram 9800 139001 B

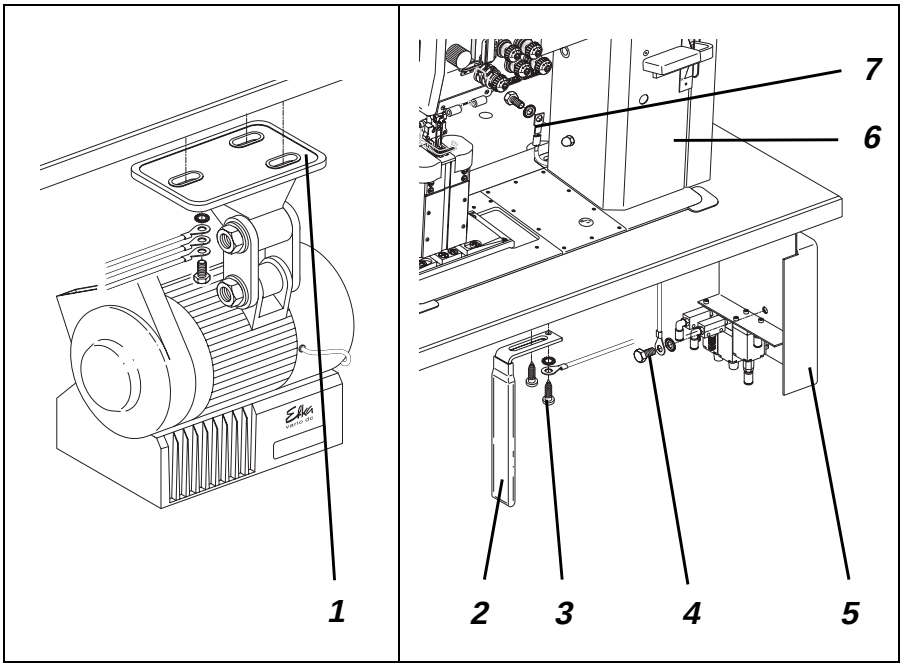
- Lay the connection cable from the main switch through the cable duct to the sewing drive and connect to the sewing drive.
- Lay the mains cable from the main switch through the cable duct and fasten with the mains lead cleat.
- Insert the lead from the commutation adjuster into socket **b2** of the drive controls. (Only with a direct-current positioning drive) (See section 6.6)
- Insert the lead from the set-point adjuster into socket **b80** of the drive controls. (Only with a direct-current positioning drive) (See section 6.6)

– The connection to the mains via a plug connection may only occur when all ground cables (see Chapter 6.4) are attached and the work on the electrical equipment (e.g. connection of the sewing light transformer, Chapter 6.5) is finished.

NOTE !

The connection of the sewing machine to the mains must occur via a plug connection.

6.4 Potential compensation



The grounding kit is found in the accessories pack of the special sewing machine. The grounding cable conducts static charges from the sewing machine head 6. the knee switch 2 and the distributor 5 to ground via the sewing drive 1.

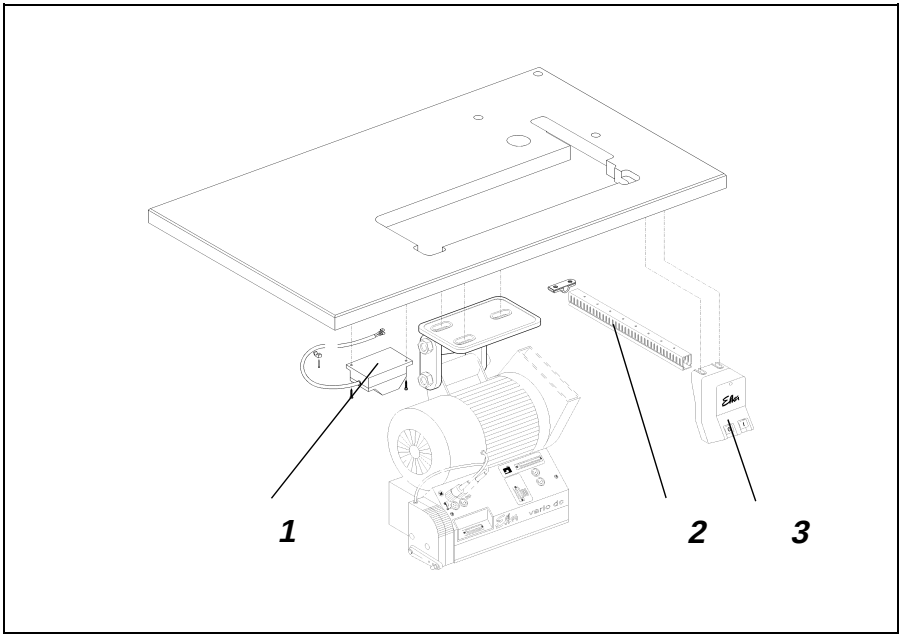
– Attach the grounding cable 7 to the sewing machine head 6 with attachment plug, flat plug and tooth lock washer at the prepared drilled hole with a screw. Lead the grounding cable 7 down through the hole in the table top.

– Attach the cable bracket of the grounding cable 4 to the distributor 5 with a screw and tooth lock washer. Lay grounding cable 4 through the cable duct to the foot of the sewing drive

– Attach the cable bracket of the grounding cable 3 to the knee switch 2 with a screw and tooth lock washer.
Lay grounding cable 3 through the cable duct to the foot of the sewing drive.

– Attach the cable brackets of the three grounding cables 3, 4 and 7 to the foot of the sewing drive 1 with a screw (M5) and washer.

6.5 Connecting the Sewing Light Transformer (Optional Equipment)

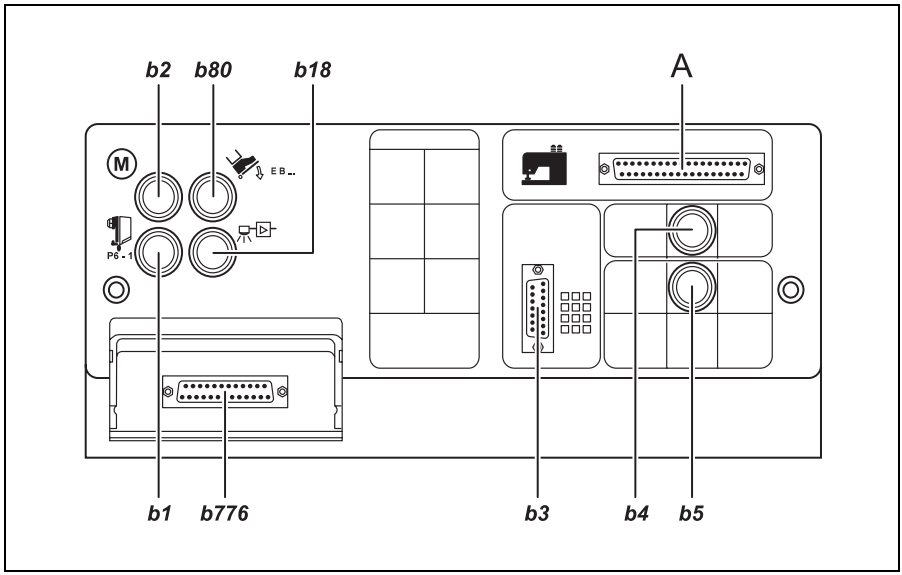


- Pull the sewing machine mains plug out!
- Lay the mains connection cable of the sewing light transformer 1 through the cable duct 2 to the main switch 3.
- The connection occurs on the mains input side of the main switch.
  (See connection diagram 9800 139001 B)

NOTE !

The sewing light transformer is connected directly to the mains and is still under current when the main switch is switched off.
Work on the sewing light transformer, e.g. replacing the fuse, is only to be conducted with the mains plug pulled.

6.6 Connection Sockets on the Drive Controls DA82GA



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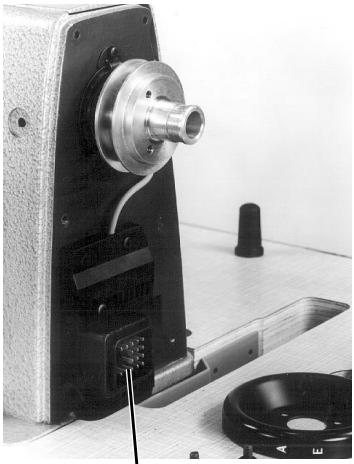
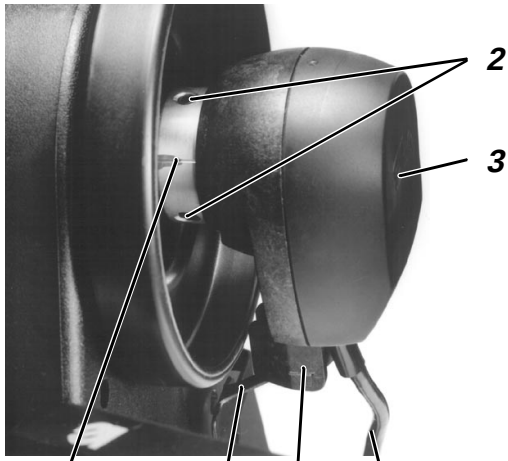




1

6.7 Mounting the Synchronizer

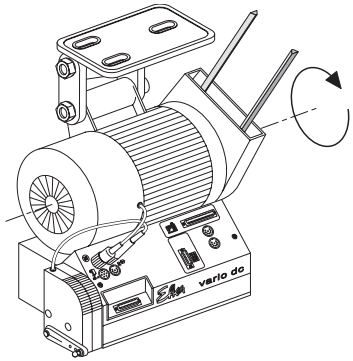
- Place the synchronizer 3 on the handwheel flange.
  The groove 6 on the housing of the synchronizer must lock over the twist barrier 5 on the belt guard.
- Tighten both set screws 2 on the synchronizer ring 4.
- Guide lead 7 of the synchronizer down through the cutout in the table top
- Faire passer le câble de raccordement du transmetteur de position latéralement dans la conduite de câbles sous la tablette et le poser vers l'avant.
- Insert the plug of the synchronizer into the socket **b1** of the drive controls.
  (See section 6.6)

6.8 Connecting the Sewing Machine Head

The electrical connection to the sewing machine head occurs via the central plug connection 1.

- Insert the plug (16-pin) of the connection lead into the socket of the sewing machine head.
- Guide the connection lead down through the cutout in the table top.
- Insert the plug (37-pin) into the socket **A** of the drive controls.
  (See section 6.6)

6.9 Direction of Turn of the Sewing Drive



NOTE !

Before commissioning the special sewing machine it is essential to check the direction of turn of the sewing drive. The operation of the special sewing machine with an incorrect direction of turn can lead to damage.

The illustration shows the normal direction of turn of the sewing drive.
(Counterclockwise rotation = Counterclockwise when viewing the belt pulley)

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6.9.1 Checking the Direction of Turn with a DC1600/DA82GA Direct-current Positioning Drive.

The direction of turn of the direct-current positioning drive is set to counterclockwise rotation via the factory setting of the preset value (= 1) of the parameter F-161. However, the first action during commissioning must be to check the direction of turn. For this proceed e.g. as follows:

- The synchronizer must be mounted. See Chapter 6.7
- The plugs of the set-point adjuster, commutation adjuster, synchronizer and control panel must be inserted. See picture 6.6
- Do not insert the 37-pin plug of the sewing machine head.
- Turn the main switch on.
  The control panel shows "Info A5" , this means that no valid autoselect resistor was found and the maximum speed is thus limited.
- Press the pedal forward slightly; the drive turns; check the direction of turn.
- Insert the 37-pin plug of the sewing machine head again.

6.9.2 Changing the Direction of Turn with a DC1600/DA82GA Direct-current Positioning Drive.

If the sewing drive runs with an incorrect direction of turn, the parameter **F-161** of the "Technician Level" must be set to the value 1.
With V810 control panel see Chapter 6.11.4
With V820 control panel see Chapter 6.11.5

NOTE !

After a change in the direction of turn the positions must be reset. See Chapter 6.10

6.10 Positioning

6.10.1 Definition of the Positions

Reference position
The reference position is the initial position for all further positions. It is defined as the needle position in which the needle point, with lowered needle in normal direction of turn, lies at the level of the top of the needle plate. After a removal of the synchronizer only the reference position must be reset, all further positions, with correctly set controls, are then automatically correct again.

Position 1
In the 1st Position the lower edge of the needle eye of the lowering needle 1 in the normal direction of turn lies at the same height as the hook cover ring 2.

Position 1A
This position is only required for internal functions of the controls, it should lie at least 60 increments after position 1.

Position 2
In the 2nd position the needle bar lies at the upper dead center.

Position 2A
This position is only required for internal functions of the controls, it should lie at least 60 increments after position 2.

Position 3
This position is not required for the classe 768.

Position 3A
This position is not required for the classe 768.

6.10.2 Setting Positions with a DC1600/DA82GA Direct-current Positioning Drive

6.10.2.1 General
The digital synchronizer sends the controls 512 impulses (increments) and an additional impulse once per revolution. All needle positions are determined by these impulses and by the values of the parameters F-170 and F-171.

No mechanical settings are required on the synchronizer.

Attention!
After the following work **all positions** must be **reset**.

1. First operation of the sewing drive.
2. Replacement of the sewing drive, the drive controls or the control plate of the drive controls.
3. Replacement of the EPROMs in the drive controls.

After the following work only **the reference position** must be **reset.**

1. Removal and mounting or replacement of the synchronizer.

6.10.2.2 Setting Positions with the V810 Control Panel

Entry of the code number for the technician level

- Turn the main switch off.
- All plugs on the controls of the sewing drive must be plugged in.
- Press the "**P**" key and hold pressed.
- Turn the main switch on. The display shows "**C-0000**"
- Release the "**P**" key
- Enter code no. **1907**. With the "**+**" and "**-**" keys, the value of the blinking number is changed. The next number is called up with the ">>>>" key.
- Press the "**E**" key. The first parameter, **F-100**, at the technician level is shown.

Setting the reference position

- After entry of the code number press the "**E**" key.
  The first parameter, **F-100**, at the technician level is shown.
- With the "**+**", "**-**" and ">>>>" keys set the parameter **F-170**.
- Press the "**E**" key. Shown in the display = "**Sr1**"
- Press the "**>>**" key. Shown in the display = "**PoS0 ( )**"
- Turn the handwheel in the normal direction of turn until the character "**( )**" disappears from the display, then turn farther until the reference position (needle point, with lowered needle, at the level of the top of the needle plate) is reached.
- Press the "**E**" key. The reference position is saved. Shown in the display "**F- 171**"
- If the reference position was not saved, an error message appears in the display = "**inF E3**". Turn the handwheel farther, press the "**E**" key and repeat the procedure above.

GB

Setting positions 1 and 2

- The reference position is set. (see above)
- Enter parameter **F-171**.
- Press the "**E**" key. Shown in the display = "**Sr2**"
- Press the "**>>**" key. Shown in the display = "**1 xxx**" = parameter value of pos. 1.
- If necessary, correct parameter value *. Either with the "**+**" and "**-**" keys or by turning the handwheel.
- Press the "**E**" key. Shown in the display = "**2 xxx**" = parameter value of pos. 2
- If necessary, correct parameter value *. Either with the "**+**" and "**-**" keys or by turning the handwheel.
- Press the "**E**" key. Shown in the display = "**1A xxx**" = parameter value of pos. 1A
- If necessary, correct parameter value *. Either with the "**+**" and "**-**" keys or by turning the handwheel.
- Press the "**E**" key. Shown in the display = "**2A xxx**" = parameter value of pos. 2A
- If necessary, correct parameter value *. Either with the "**+**" and "**-**" keys or by turning the handwheel.
- Press the "**P**" key twice. The settings are completed, the programming level is exited
- Check the positions. See Chapter 6.10.2.4

*** Attention!** The parameter values for the positions 1, 2, 1A and 2A are to be found on the parameter sheet (accessories pack).

6.10.2.3 Setting Positions with the V820 Control Panel

Entry of the code number for the technician level

– Turn the main switch off.
– All plugs on the controls of the sewing drive must be plugged in.
– Press the "**P**" key and hold pressed.
– Turn the main switch on. The display shows "**C-0000**"
– Release the "**P**" key
– Enter code no. 1907 with the numeric keys 0 to 9.
– Press the "**E**" key. The first parameter, **F-100**, at the technician level is shown and the first number blinks.

Setting the reference position

– After entry of the code number press the "**E**" key.
The first parameter, **F-100**, at the technician level is shown.
– Set the parameter **F-170** with the keys 0 to 9.
– Press the "**E**" key. Shown in the display = "**F-170 Sr1**"
– Press the "**B**" key. Shown in the display = "**F-170 PoS 0 ( )**"
– Turn the handwheel in the normal direction of turn until the character "( )" disappears from the display, then turn farther until the reference position (needle point, with lowered needle, at the level of the top of the needle plate) is reached.
– Press the "**E**" key. The reference position is saved. Shown in the display "**F- 171**"
– If the reference position was not saved, an error message appears in the display = "**inF E3**". Turn the handwheel repeatedly until the desired reference position is reached.

Setting positions 1 and 2

– The reference position is set. (see above)
– Enter parameter "**F-171**".
– Press the "E" key. Shown in the display = "**Sr2**"
– Press the "**B**" key. Shown in the display = "**F 171 1 xxx**" = parameter value of pos. 1
– If necessary, correct parameter value *. Either with the "**+**" and "**-**" keys or by turning the handwheel.
– Press the "**E**" key. Shown in the display = "**F 171 2 xxx**" = parameter value of pos. 2
– If necessary, correct parameter value *. Either with the "+" and "-" keys or by turning the handwheel.
– Press the "E" key. Shown in the display = "F 171 1A xxx" = parameter value of pos. 1A
– If necessary, correct parameter value *. Either with the "+" and "-" keys or by turning the handwheel.
– Press the "E" key. Shown in the display = "F 171 2A xxx" = parameter value of pos. 2A
– If necessary, correct parameter value *. Either with the "+" and "-" keys or by turning the handwheel.
– Press the "P" key twice. The settings are completed, the programming level is exited
– Check the positions. See Chapter 6.10.2.4

*** Attention!** The parameter values for the positions 1, 2, 1A and 2A are to be found on the parameter sheet (accessories pack).

6.10.2.4 Checking Positioning

Position 1

- Turn the main switch on
- Press the pedal briefly forward and release again. The needle positions in position 1.
- Check the position of the needle.

Position 2

- Press the pedal briefly forward and then step back on it and hold down until the machine stops. The needle positions in position 2.
- Check the position of the needle

If one or both needle positions do not agree with the definitions in Chapter 6.10.1, then a correction of the setting is to be conducted as per Chapter 6.10.2 or 6.10.3.

6.11 Setting Machine-specific Parameters

6.11.1 General

The functions of the controls of the sewing drive are determined by the program and the setting of the parameters.

At delivery of the sewing drives the parameter values have been preset by Efka (preset values). For each class and subclass some parameters at the "Technician" and the "Supplier Level" must be altered in order to optimally adapt the controls to the machine. The affected parameters are listed in the table below and in the parameter sheet (in the accessories pack).

GB

6.11.2 Autoselect

The controls "recognize" by measuring the autoselect resistor, which is found in the machine, which machine series they are connected to. Control functions and the preset values of the parameters are selected through autoselect. If the controls recognize no or an invalid autoselect resistor, then the drive only runs with the so-called emergency operation functions in order to protect the machine from damage.

See "EFKA DA82GA 3301" operating instructions

Autoselect resistor	Classes	Controls Sewing drive	Parameter sheet
1000R (1000 Ohm)	768	DA82GA	9800 130014 PB51

6.11.3 Table of the Machine-specific Parameters of the DA82GA Controls

The values of the parameters listed in the following must be changed from the preset value.
The values (x) to be set are to be found in the parameter sheet 9800 130014 PB51 (In the accessories pack of the machine).

Parameters	*	Designation	768
F-111	T	Upper limit of the maximum speed	x
F-117	T	High lift walking speed	x
F-147	T	Functions of the pushbutton on D.3	x
F-171	T	Position 2 Position 2A	x x
F-196	T	Function of both thread tension release with presser foot lifting	x
F-197	T	Function of 2.thread tension with HP and Speedomat	x
F-225	A	Speed regulation, 0 = machine normal, 1 = machine middle heavy	x

* T = Parameters at the technician level, A = Parameters at the supplier level

NOTE !

The altering of the parameter values must be conducted very carefully because the machine can be damaged through incorrectly set drive controls! All parameter values can be reset to the delivery status (preset values) by a master reset. See Chapter 6.12

6.11.4 Setting Parameter Values with the Control Panel V810

Changing parameter values at the "Technician Level"

Entry of the code number for the technician level

– Turn the main switch off.
– All plugs on the controls of the sewing drive must be plugged in.
– Press the "**P**" key and hold pressed.
– Turn the main switch on. The display shows "**C-0000**"
– Release the "**P**" key
– Enter code no. **1907**. With the "**+**" and "**-**" keys the value of the blinking number is changed. The next number is called up with the "**>>**" key.
– Press the "**E**" key. The first parameter, **F-100**, at the technician level is shown.

Selecting the parameters and changing the values

– The next or the previous parameter is selected with the "**+**"and "**-**" keys.
– The parameter can be entered directly with the "**>>**", "**+**",and "**-**" keys.
– Press the "**E**" key. The value of the selected parameter is shown.
– The parameter value can be altered with the "**+**" and "**-**" keys.
– Press the "**E**" key. The next parameter is shown.
or press the "**P**" key - the same parameter is shown.

Saving changed parameter values

– Press the "**P**" key, programming is ended.
– Sew a complete seam, that is, step the pedal forward and then completely back. The change is saved.
– If no seam is sewn, the change is lost.
– Through renewed pressing of the "**P**" key one returns to the programming level.

Changing parameter values at the "Supplier Level"

Entry of the code number for the supplier level

– Turn the main switch off.
– All plugs on the controls of the sewing drive must be plugged in.
– Press the "**P**" key and hold pressed.
– Turn the main switch on. The display shows "**C-0000**"
– Release the "**P**" key
– Enter code no. **3112**. With the "**+**" and "**-**" keys the value of the blinking number is changed. The next number is called up with the "**>>**" key.
– Press the "**E**" key. The first parameter, **F-200**, at the supplier level is shown.
– Proceed as in "**Selecting the Parameters and Changing the Values**"

NOTE !

The altered parameter values are only then saved, when, after exiting the programming level, a complete seam is sewn, that is, step the pedal forward and then completely back. If, after exiting the programming level, the drive is immediately turned off the changes are lost.

GB

6.11.5 Setting Parameter Values with the V820 Control Panel

Changing parameter values at the "Technician Level"

Entry of the code number for the technician level

– Turn the main switch off.
– All plugs on the controls of the sewing drive must be plugged in.
– Press the "**P**" key and hold pressed.
– Turn the main switch on. The display shows "**C-0000**"
– Release the "**P**" key
– Enter code no. **1907** with the numeric keys 0 to 9.
– Press the "**E**" key. The first parameter, **F-100**, at the technician level is shown and the first number blinks.

Selecting the parameters and changing the values

– After entry of the code number the first parameter, **F-100**, is shown.
The first number of the parameter number blinks.
– Enter the desired parameter number with the numeric keys 0 to 9.
– Press the "**E**" key. The value of the selected parameter is shown.
– The parameter value can be changed with the "**+**" and "**-**" keys.
– Press the "**E**" key. The next parameter is shown
or press the "**P**" key - the same parameter is shown.

Saving changed parameter values

– Press the "**P**" key, programming is ended.
– Sew a complete seam, that is, step the pedal forward and then completely back.
The change is saved.
– If no seam is sewn the change is lost.
– Through renewed pressing of the "**P**" key one returns to the programming level.

Changing parameter values at the "Supplier Level"

Entry of the code number for the supplier level

– Turn the main switch off.
– All plugs on the controls of the sewing drive must be plugged in.
– Press the "**P**" key and hold pressed.
– Turn the main switch on. The display shows "**C-0000**"
– Release the "**P**" key
– Enter code no. **3112** with the numeric keys 0 to 9.
– Press the "**E**" key. The first parameter, **F-200**, at the supplier level is shown.
– Proceed as in "**Selecting the Parameters and Changing the Values**"

NOTE !

The altered parameter values are only then saved, when, after exiting the programming level, a complete seam is sewn, that is, step the pedal forward and then completely back. If, after exiting the programming level, the drive is immediately turned off the changes are lost.

6.12 Master Reset

All parameter values are returned to their delivery status (preset values) through a master reset.

Note

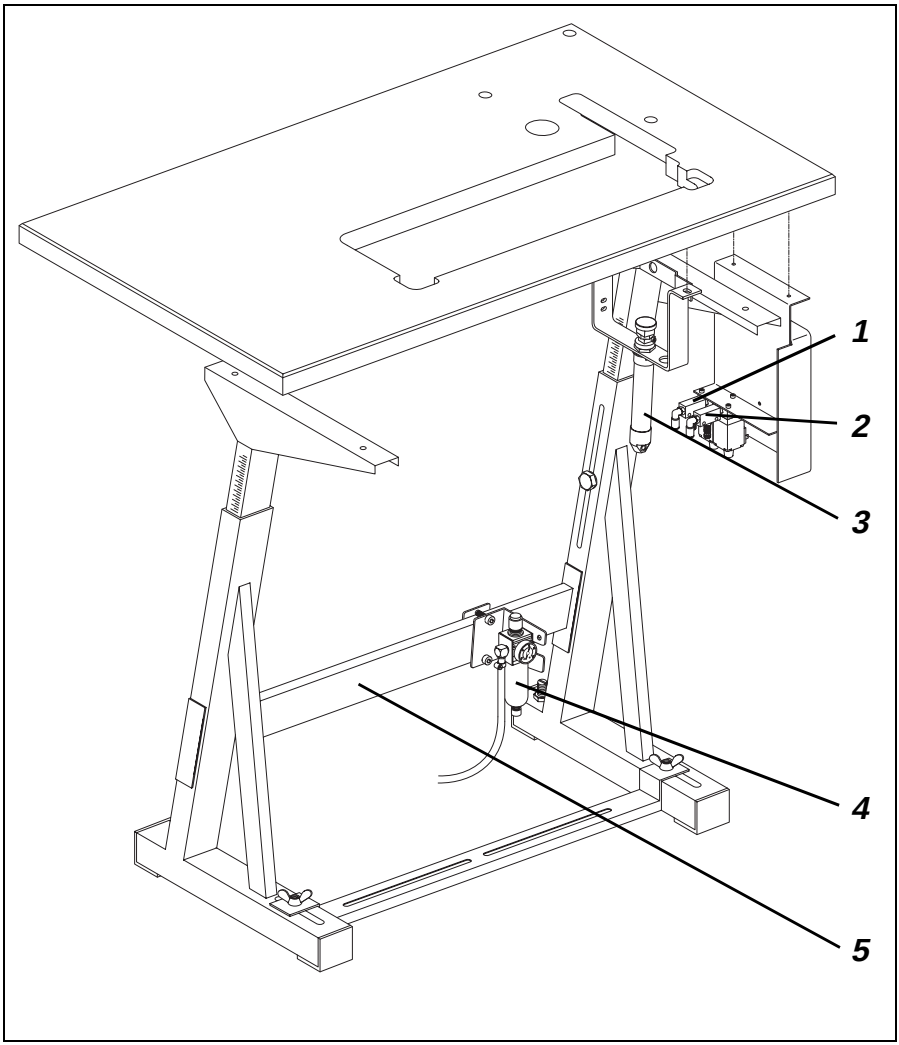
During a master reset all external consumers, e.g. sewing foot lift, must be turned off. For this reason the 37-pin plug "A" of the machine connection should be unplugged from the drive controls.

- Turn the main switch off.
- Unplug 37-pin plug "**A**" from the drive controls. (See section 6.6)
- Press the "**P**" key and turn the main switch on.
- Release the "**P**" key.
- Enter code number "**1907**". See Chapter 6.10.2.2 and/or 6.10.2.3
- Press the "**E**" key. The parameter **F-100** is shown.
- Press the "E" key. The value of the parameter **F-100** is shown.
- Set the value to **170**.
- Press the "P" key twice.
- Turn the main switch off.
- Insert 37-pin plug "**A**". (See section 6.6)
- Turn the main switch on after a brief wait. All parameters, except 111, 161, 170, 171 and 190 to 193, have the preset values that were set at the factory again.

GB

NOTE !

With a master reset certain parameters, such as e.g. **F-170** (reference position), **F-171** (needle position) and **F-161** (motor direction of turn) are not reset.All parameters which are set specifically for the machine must be set again as per the Parameter Sheet.See Chapter 6.11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7. Pneumatic connection

7.1 Completing the hose connections

The **class 768** pillar sewing machine is fitted as standard with the following pneumatic equipment:

- electro-pneumatic sewing-foot lift (FLP)
- electro-pneumatic rapid stroke-adjustment system (HP)

For the operation of this pneumatic equipment the special sewing machine must be supplied with absolutely dry compressed air.

CAUTION!

The pneumatic units are only guaranteed to function properly if the supply pressure is between 8 and 10 bar.

The operating pressure of the special sewing machine is **6 bar**.

Connecting the electro-pneumatic sewing-foot lift (FLP)

- Complete the PU hose connection between throttle valve 1 and the cylinder 3.

Connecting the electro-pneumatic rapid stroke-adjustment system (HP)

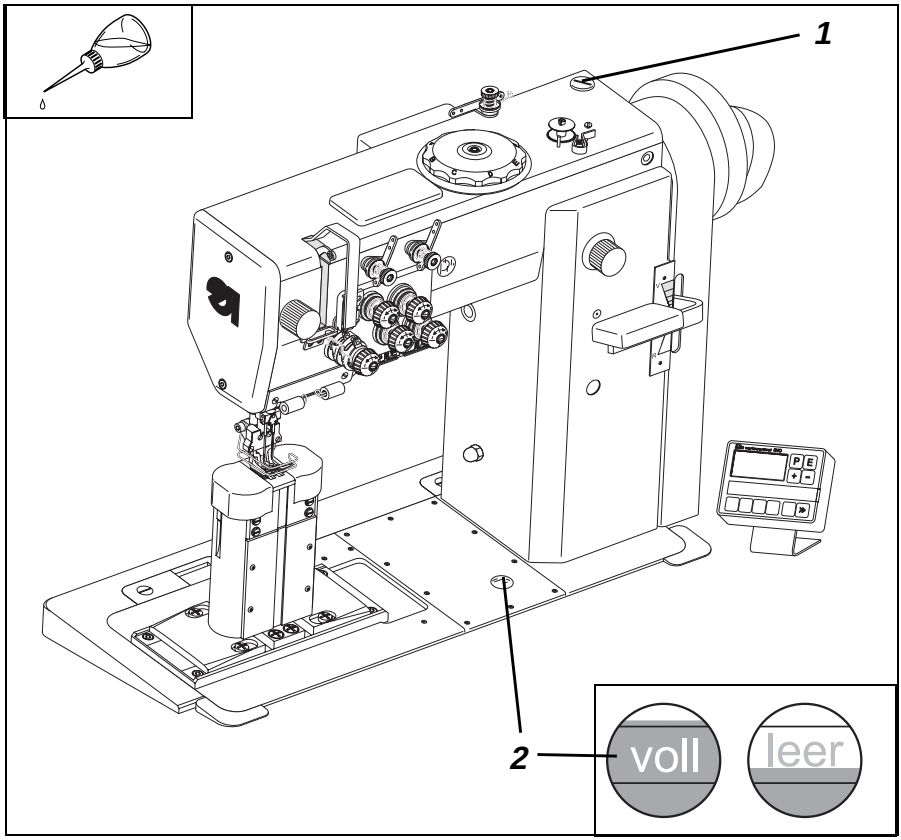
- Complete the PU hose connection from throttle valve 2 to the distributor cabinet at the rear of the sewing-machine arm.

GB

Compressed-air connection

- Complete the PU hose connection between compressed-air connector 4 on the frame 5 and the solenoid valve.
- Connect the pneumatic units to the factory compressed-air supply with the connection hose (Ø = 9 mm).

Pneumatic connection kit
A pneumatic connection kit for frames with compressed air-maintenance units and pneumatic ancillary equipment is available under order no. 797 3031.
It contains the following items:
- connection hose, 5m long, Ø = 9 mm
- hose nozzles and hose ties
- plug-and-socket connector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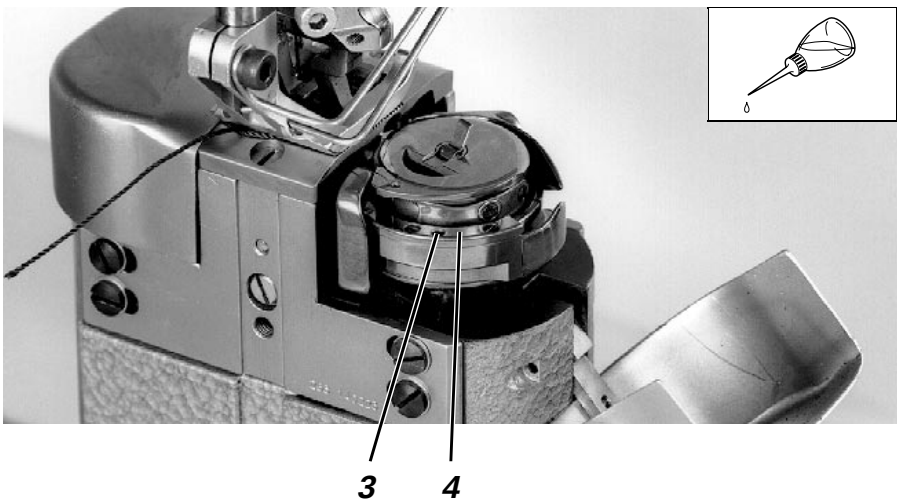
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8. Lubrication

Caution - danger of injury!

Oil can cause skin eruptions.
Avoid protracted contact with the skin.
In the event of contact, thoroughly wash the affected area.

CAUTION!

The handling and disposal of mineral oils is subject to legal regulation.
Deliver used oil to an authorised collection point.
Protect your environment.
Take care not to spill oil.

To top up the oil reservoir use only **ESSO SP-NK 10** lubricating oil or an equivalent oil of the following specification:

- viscosity at 40° C : 10 mm2/s
- flashpoint: 150 °C

ESSO SP-NK 10 is available from **DÜRKOPP ADLER AG** retail outlets under the following part numbers:

2-litre container: 9047 000013

5-litre container: 9047 000014

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8.1 Topping up with oil

Lubricating the head and lower part of the sewing-machine

- Top up with oil through the hole beneath stopper 1.
- Check oil level at the sight glass 2.
  The oil level must be above the red **"full"** line.
- Screw stopper 1 (in the accessory pack) into the hole in the arm cover.
- Remove any oil spillage from the oil collector.

Shuttle lubrication

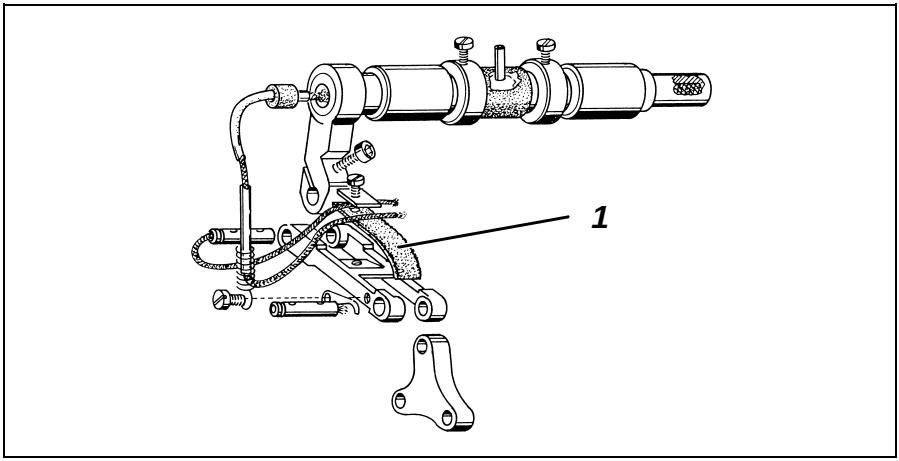
- Use the oil can (in the accessory pack) to drip a few drops of oil into hole 3 in the shuttle plunger ring 4.

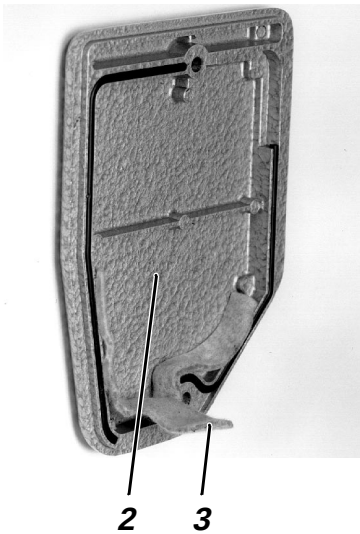
CAUTION!

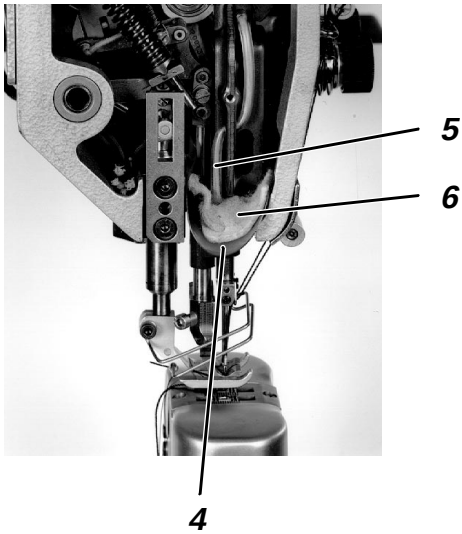
In order to ensure that the shuttle is properly lubricated during the running-in period, a relatively large quantity of oil is set prior to despatch.

This setting should be checked, and after the running-in period reduced to the required quantity (see servicing instructions).

8.2 Oiling wicks and felts



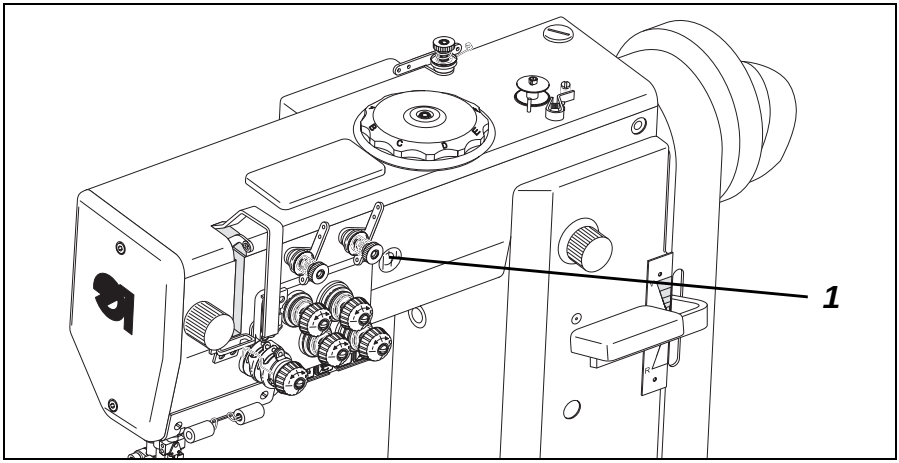




When the machine is set up and after long periods of disuse the wicks and felt 1 in the head must be soaked with a little oil.

- Unscrew head cover 2.
- Soak wicks and felt 1 with a little oil.
- Replace and screw down the head cover 2.
  The felt tab 3 of the head cover must be clamped between the absorption felt 6 and the nipple of the wick 5.
  The foil 4 must be in contact with the inside of the head cover 2.

9. Sewing test



When setting-up is complete a sewing test must be carried out.

– Insert the mains plug.

Caution - danger of injury!

Turn off the main switch.
The looper thread for spooling may only be threaded with the sewing machine switched off.

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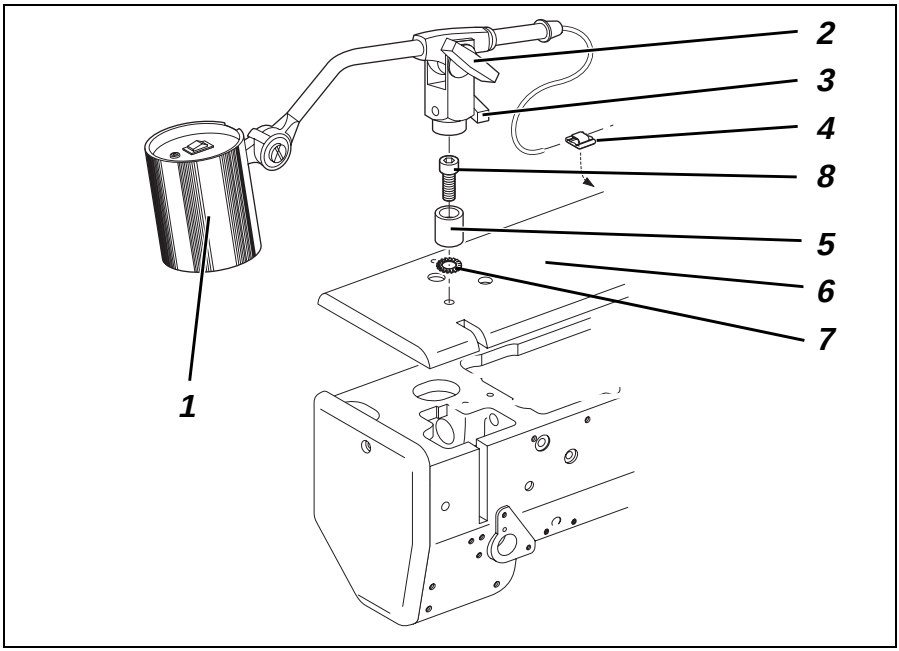
– Thread the looper thread ready for spooling (see operating manual).
– Lock the sewing feet in the up position (see operating manual).
– Turn on the main switch and fill the bobbin at low speed.

Caution - danger of injury!

Turn off the main switch.
The needle thread and looper thread may only be threaded with the sewing machine switched off.

– Thread the needle thread and looper thread (see operating manual).
– Select the material to be processed.
– Start the sewing test at low speed, then gradually increase it.
– Check whether the seams are satisfactory.
If not, alter the thread tension (see operating manual). If necessary also check the settings given in the servicing instructions and correct them if appropriate.
– **While the sewing machine** is running check the oil supply to the sewing head at the viewing window 1. If no oil flow is visible at the viewing window during operation, check the recirculation lubrication (see servicing instructions).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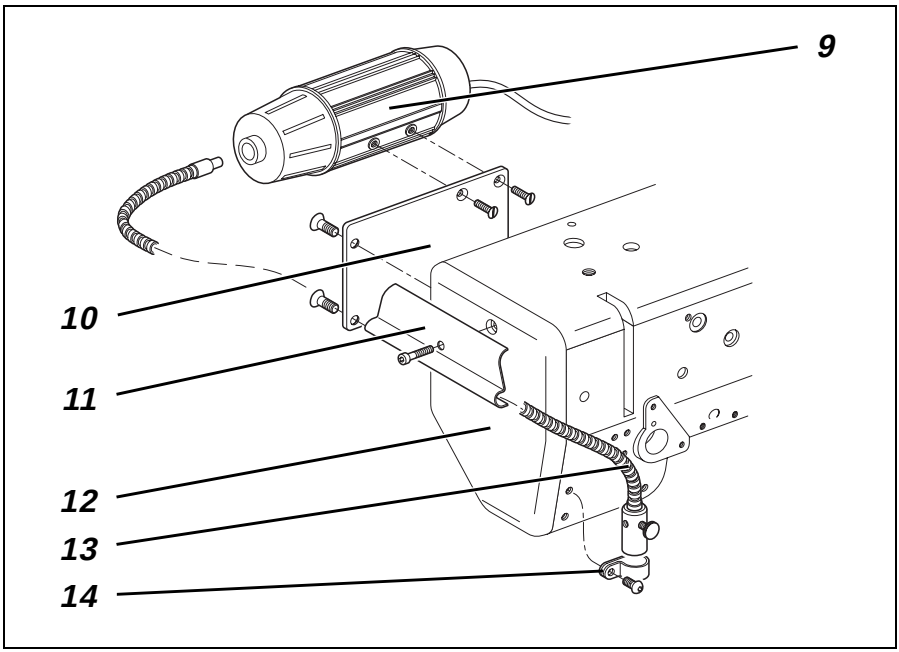
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10. Ancillary equipment

10.1 Sewing lamp

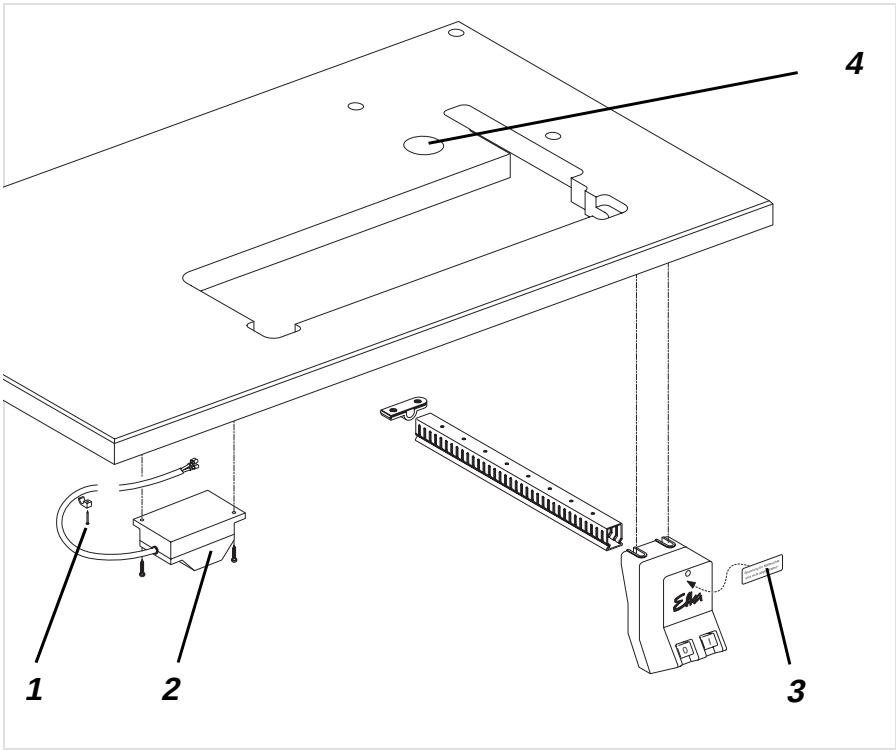
Fitting the sewing lamp
Two sewing lamps are available as ancillary equipment for the **class 768**.

Fitting the halogen sewing lamp
A special fitment (order no. 0907 487519) is required for the halogen sewing lamp 1.

- Unscrew arm cover 6.
- Attach holder 5 with serrated lock washer 7 and screw 8 to the arm cover 6. There is a tapped hole in the arm cover for this purpose.
- Replace the arm cover 6.
- Place the halogen sewing lamp 1 on the holder 5 and align.
- Tighten locking screws 2 and 3.
- Stick the cable-holder 4 to the rear of the sewing-machine arm.

Fitting the light-guide sewing lamp
A special fitment (order no. 9880 767001) is required for the light-guide sewing lamp 9.

- Screw the light-guide sewing lamp 9 onto mounting plate 10 with countersunk screws.
- Attach the mounting plate 10 with countersunk screws to the rear of the sewing-machine arm. There are tapped holes in the sewing-machine arm for this purpose.
- Screw the holder 11 for the light-guide 13 onto the head cover 12.
- Screw the light-guide 13 with clamp 14 to the sewing-machine head.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Fitting the sewing-light transformer

Power for the sewing lamps is supplied by the sewing-light transformer which is available as ancillary equipment (order no. 0798 500088).

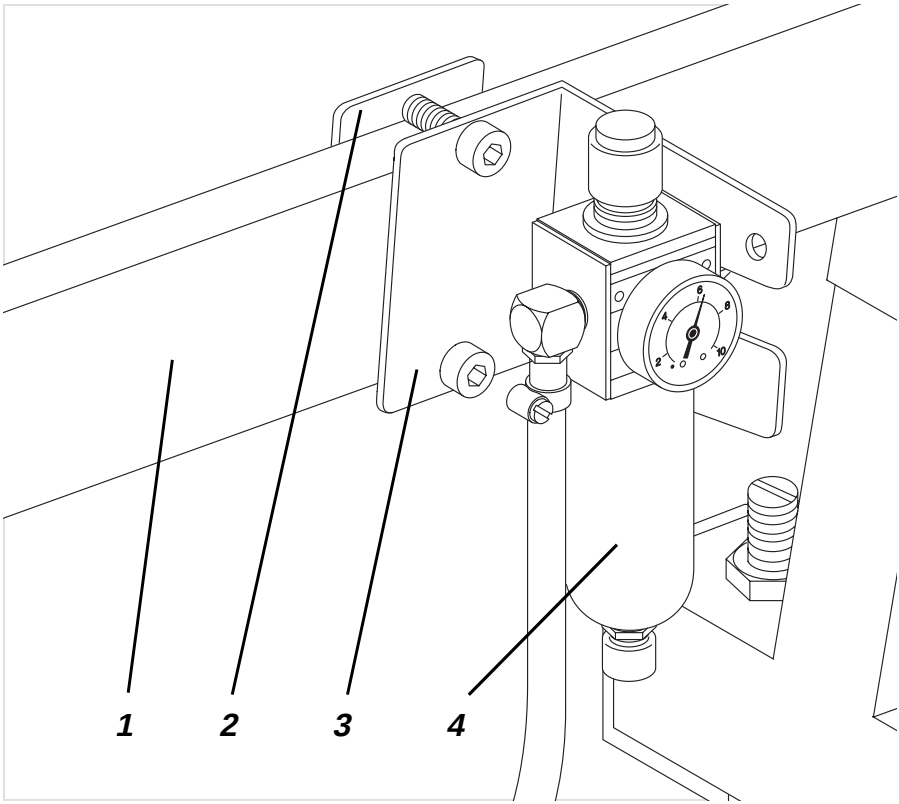
- Attach the sewing-light transformer 2 beneath the table plate with chipboard screws 1.
- Attach the connection cable beneath the table plate with cable ties.

Connecting the sewing lamp

CAUTION!

Turning off the main switch does not turn off the power supply to the sewing lamp.

- Stick the adhesive label 3 with safety warning to the front of the main switch.
- Pass the sewing-lamp connection cable behind the guard on the sewing-machine arm.
- Pass the connection cable down through the cable-holders on the pillar.
- Pass the connection cable down through hole 4 in the table plate.
- Plug the cable into the sewing-light transformer.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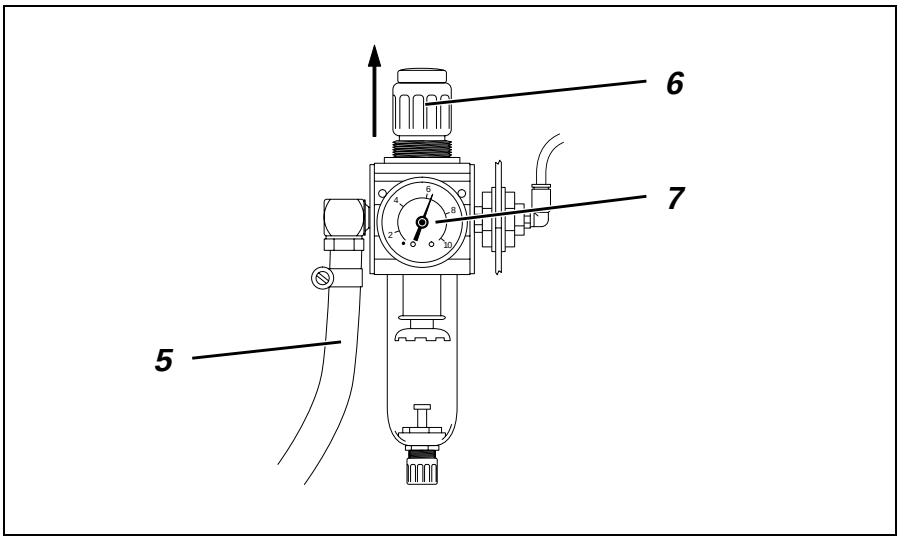
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10.2 Compressed-air maintenance unit

The WE-6 filter controller for pneumatic ancillary equipment is available under order no. 9781 000002.

Connecting the compressed-air maintenance unit

- Attach the compressed-air maintenance unit 4 with bracket 3 and link plate 2 to the frame brace 1.
- Connect the compressed-air maintenance unit to the works compressed-air supply with connection hose 5 (Ø = 9 mm) and R1/4" hose connector.

Adjusting the operating pressure

The operating pressure is **6 bar**.
It can be read off at the manometer 7.

- To adjust the operating pressure pull out and rotate the handle 6:

  clockwise = to increase pressure
  anti- clockwise = to decrease pressure.

10.3 Tape guide

Fitting the tape-roll holders

- Attach the holder 1 with 4 screws beneath the table plate. Care must be taken that the centre of the tape on the tape-roll holder coincides with the centre of the seam.

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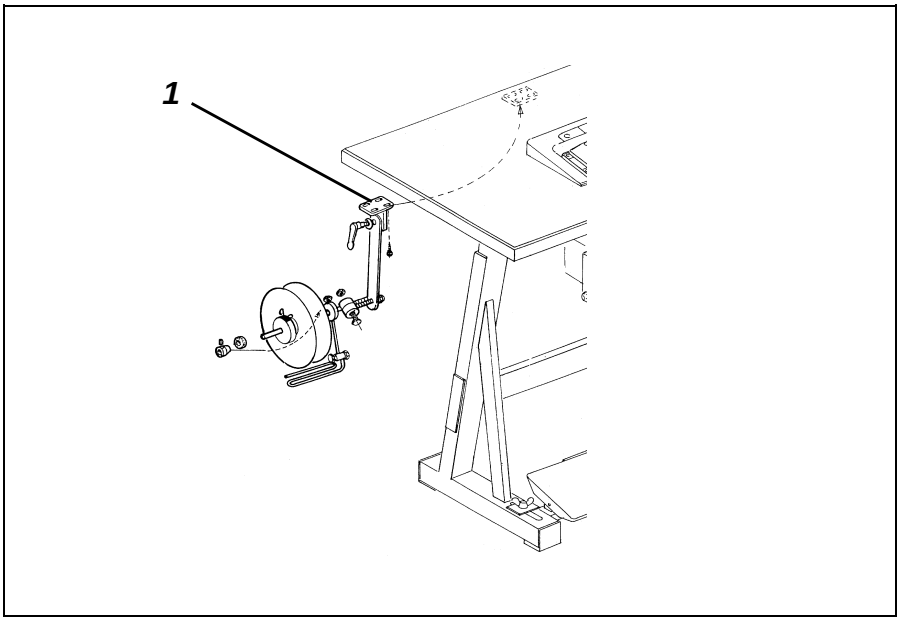

Fitting the tape guide

- Fit the synthetic guide 1 and guide 2.
- Fit the screw 3, guide 2 and washer 4. Do not fully tighten screw 3.
- Attach the synthetic guide 1, guide 2, screw 3 and washer 4 to the sewing-machine pillar with the screw 5.
- Attach the lower tape guide 6 to the sewing-machine pillar with washers 7 and screws 8.
- Align the catch of the guide 2 to the centre of the seam and secure with screw 3 and washer 4. Then tighten screw 5.