

8312

INSTRUCTION MANUAL

This instruction manual applies to machines
from serial number **10 030 037** and software
version **3.1** onwards →

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**PFAFF Industriesysteme
und Maschinen AG**

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1 Safety

1.01 Directives

This machine is constructed in accordance with the European regulations indicated in the conformity and manufacturer's declarations.

In addition to this instruction manual, please also observe all generally accepted, statutory and other legal requirements, including those of the user's country, and the applicable environmental protection regulations! The valid regulations of the regional social insurance society for occupational accidents or other supervisory authorities are to be strictly adhered to!

1.02 General notes on safety

- The machine may only be operated by adequately trained operators and only after these have read the appropriate instruction manual!
- The hazard and safety instructions attached to the machine must be followed!
- The machine may only be used for the purpose intended and may not be operated without its safety devices. All relevant safety regulations must be adhered to.
- When leaving unattended or during maintenance work, the machine must be disconnected from the power supply by operating the main switch or by pulling out the plug!
- Daily maintenance work may only be carried out by appropriately trained personnel!
- Repair work and special maintenance work may only be carried out by specialists or appropriately trained personnel.
- Work on electrical equipment may only be carried out by appropriately trained personnel!
- Work is not permitted on parts and equipment which are connected to the power supply! Exceptions to this rule are found in the regulation EN 50110.
- Modifications and alterations to the machine may only be carried out under observance of all relevant safety operations!
- Only spare parts which have been approved by us are to be used for repairs! We draw special attention to the fact that spare parts and accessories not supplied by us have not been subjected to testing nor approval by us. Fitting and/or use of any such parts may cause negative changes to the design characteristics of the machine. We shall not accept any liability for damage caused by the use of non-original parts.

1.03

Safety symbols



Danger!
Special points to observe.



Danger of hand injuries!



Danger of burns from hot surface!



Danger from electric voltage!

1.04

Important notes for the user

- This instruction manual is part of the equipment of the machine and must be available to the operating staff at all times.
- This instruction manual must be read before the machine is operated for the first time.
- Both operating and technical staff must be instructed on the safety devices of the machine and on safe working methods.
- It is the duty of the user to operate the machine only in perfect running order.
- The user must ensure that none of the safety devices are removed nor put out of working order.
- The user must ensure that only authorized persons operate and work on the machine.
- The user must make sure there is no high-frequency welding equipment being operated in direct proximity to the machine that exceeds the EMC limit values according to **EN 60204-31** for the machine.

For further information please refer to your PFAFF agency.

1.05 Operating and technical staff

1.05.01 Operating staff

Operating staff are the persons responsible for setting up, operating and cleaning the machine and for removing any disturbances in the sewing area.

The operating staff is obliged to observe the following points, and must:

- always observe the notes on safety in this instruction manual!
- avoid using any working methods which adversely affect the safety of the machine!
- avoid wearing loose-fitting clothing or jewelry such as necklaces or rings!
- also ensure that only authorized persons are allowed near the danger area of the machine!
- immediately report to the user any changes to the machine that may affect its safety!

1.05.02 Technical staff

Technical staff are persons who have been trained in electrical engineering, electronics and mechanical engineering. They are responsible for lubricating, servicing and repairing the machine.

The technical staff is obliged to observe the following points, and must:

- always observe the notes on safety in this instruction manual!
- switch off the on/off switch before carrying out any maintenance and repair work on the machine!
- never work on parts or equipment still connected to the power supply! Exceptions to this are only permissible according to regulations EN 50110.
- replace all safety covers after maintenance and repair work!

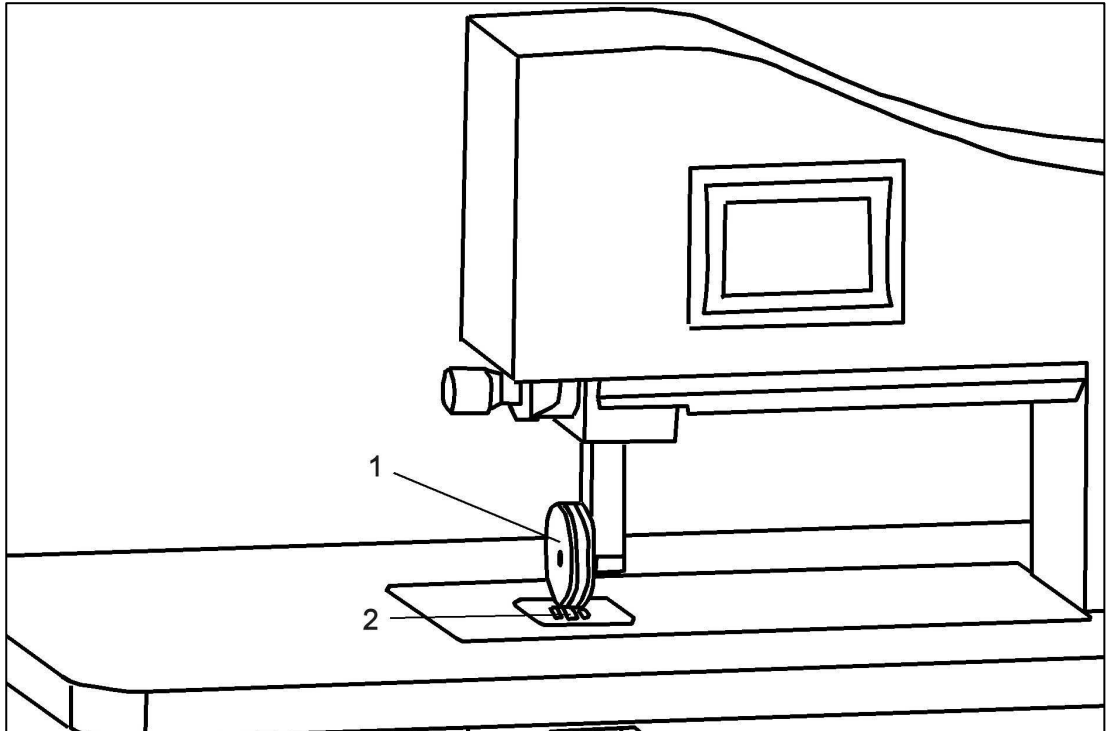
Safety

1.06

Danger



When the machine is in operation, a work area of 1 m must be kept free in front of and behind the machine, so that access to the machine is possible at all times without difficulty.



During operation do not place your hands in the area of feed roller 1 and sonotrode 2!
Danger of fingers being drawn in and crushed!



During operation do not touch sonotrode 2!
Danger of burns from the heat-generating surface!

2

Proper use

The PFAFF 8312 is used for continuous sealing of thin, thermoplastic materials, such as e.g. fleeces, felts, woven and knitted fabrics using ultrasonics.



Any use of the machine which is not approved by the manufacturer shall be considered improper use! The manufacturer shall not be liable for any damage arising out of improper use! Proper use shall also be considered to include compliance with the operation, adjustment, service and repair measures specified by the manufacturer!

Specifications

3

Specifications

Measures and weight

Depth:	800 mm
Width:	1200 mm
Height:	1310 mm
Weight:	127 kg
Clearance Width:	410 mm
Clearance under the rollers:	max. 30 mm

Connection data

Operating voltage:	230 V ± 10 %, 50/60 Hz, 1-phase
Max. capacity:	1000 VA
Fuse:	1 x 16 A, inert

Performance data

Sealing pressure:	64 – 500 N
Sealing power:	max. 400 W
Sealing speed:	0,1 – 11,8 m/min*
Seam width:	max. 10 mm

Noise data

Emission sound level at the workplace:	L _{pA} < 70 dB(A)■
----------------------------------------	-----------------------------

(Noise measurement in accordance with 45 635-48-A-1, ISO 11204, ISO 3744, ISO 4871)

▲ Subject to alterations

* depending on feed roller diameter, max. speed at roller diameter 80 mm

■ K_{pA} = 2,5 dB

4 Disposal of machine

- Proper disposal of the machine is the responsibility of the customer.
- The materials used for the machine are steel, aluminium, brass and various plastic materials. The electrical equipment comprises plastic materials and copper.
- The machine is to be disposed of according to the locally valid pollution control regulations; if necessary, a specialist is to be commissioned.



Care must be taken that parts soiled with lubricants are disposed of separately according to the locally valid pollution control regulations!

Transportation, packing and storage

5 Transportation, packing and storage

5.01 Transportation to customer's premises

The machines are delivered completely packed.

5.02 Transportation inside customer's premises

The manufacturer cannot be made liable for transportation inside the customer's premises nor to other operating locations. It must be ensured that the machines are only transported in an upright position.

5.03 Disposal of packing materials

The packing materials of this machine comprise paper, cardboard and VCE fibre. Proper disposal of the packing material is the responsibility of the customer.

5.04 Storage

If the machine is not in use, it can be stored as it is for a period of up to six months, but should be protected against dust and moisture.

If the machine is stored for longer periods, the individual parts, especially the surfaces of moving parts, must be protected against corrosion, e.g. by a film of oil.

6 Explanation of symbols

In this instruction manual, work to be carried out or important information is accentuated by symbols. These symbols have the following meanings:



Note, information



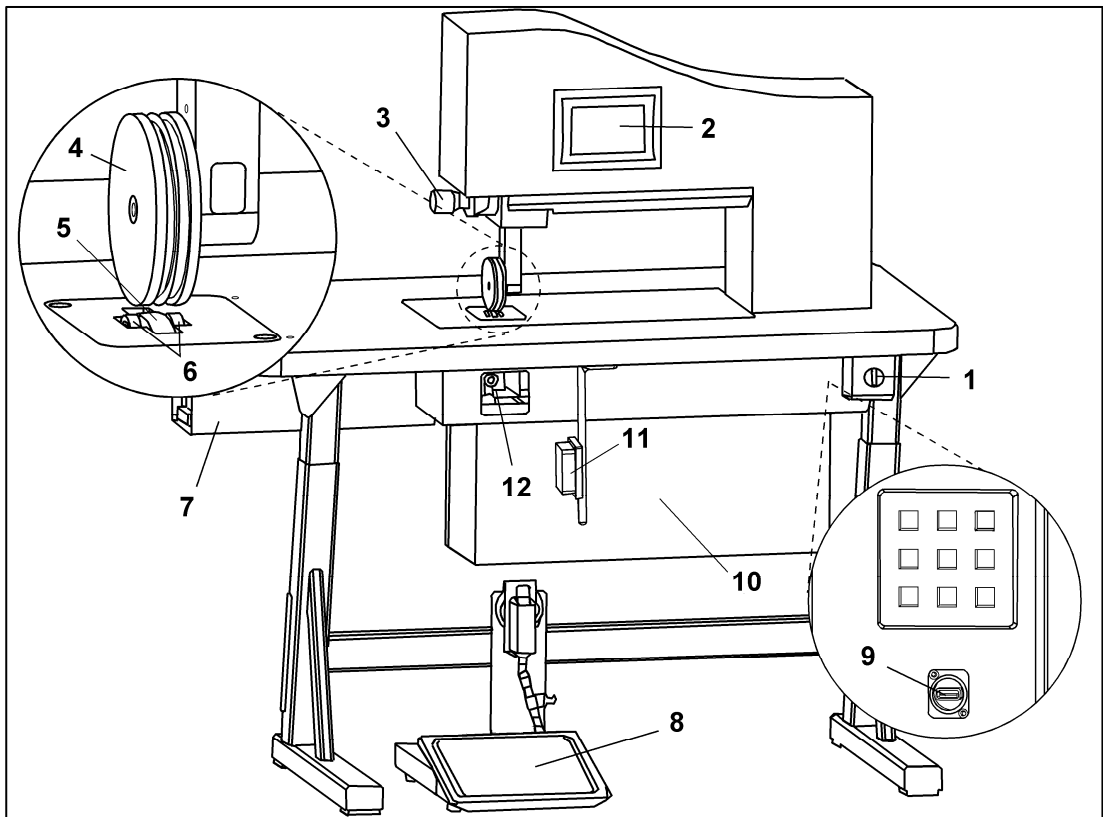
Cleaning, care



Maintenance, repairs, adjustment, service work (only to be carried out by technical staff)

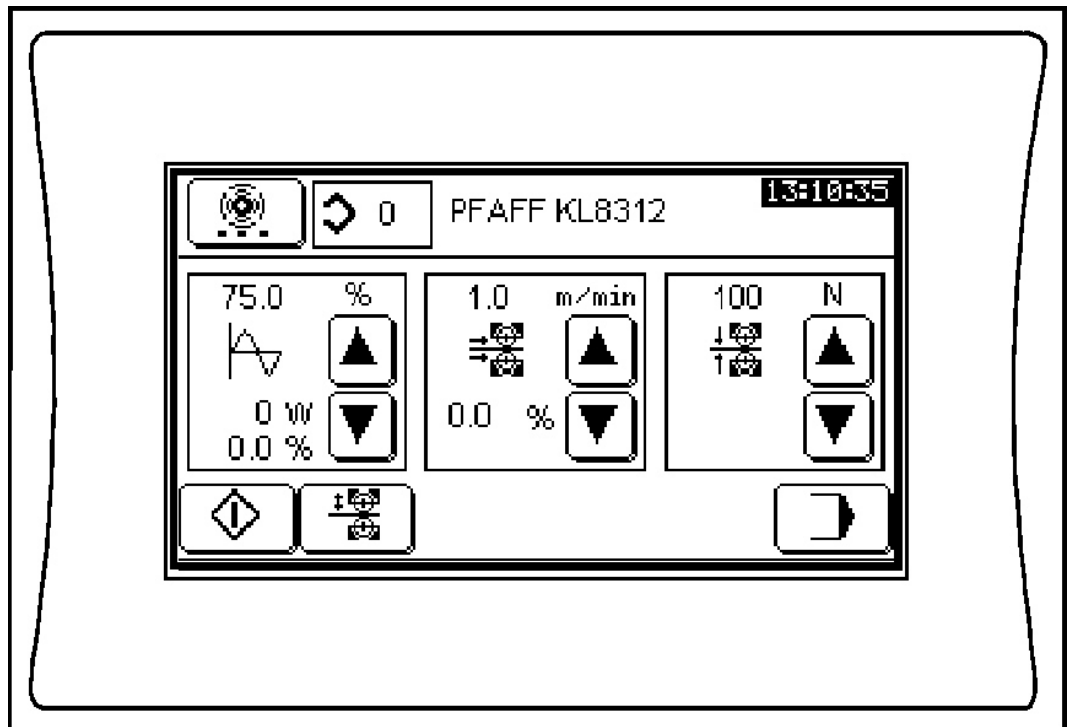
7 Controls

7.01 Summary of control elements



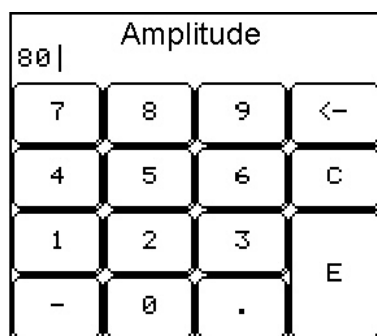
- Main switch **1**, see section 8.03, p. 19
- Control panel **2**, see section 7.02, p. 15
- Adjustment screw **3**, see section 9.01, p. 20
- Feed roller **4** (depicted comprising two feed wheels and a cutting wheel)
- Sonotrode **5**
- Secondary feed rollers **6**, see section 9.03, p. 22
- Generator **7**
- Pedal **8**, see section 7.03, p. 16
- USB port **9**, accessible from back
- Control box **10**, accessible from back
- Knee switch **11**, optional accessory, see section 7.04, p. 17
- Height adjustment of secondary feed rollers **12**, see section 9.03, p. 22

7.02 Control panel



The control panel serves as both a display and an input device. Depending on the operating condition of the machine different menus will be shown. Within the menus all symbols and texts in rounded frames can be used as keys to activate functions or different menus. Activated functions are shown with inverted symbols. Unframed symbols or texts as well as those in cornered frames are only used for display purposes.












Values that are computed and controlled by the machine are merely displayed. Values determined and changeable by the user can be entered numerically. By pressing a figure on the display a numeric keypad is activated as shown below.



- Erases the entered figures one by one, starting with the last.
- Cancels, entered value will not be taken over.
- Enters negative values. (Only where permissible)
- Concludes the input, value will be taken over. Input values that are not permissible will automatically be rounded up or down.

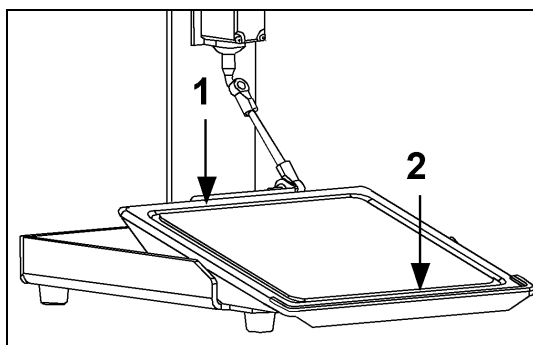
Numeric keypad, shown with the example of „altering the sealing amplitude“

Summary of the most frequently used symbols with related functions

-  Increases displayed value (alternative to numeric input as shown above)
-  Decreases displayed value (alternative to numeric input as shown above)
-  Changes to operating mode input (main menu), see Chapter 11, p. 31 ff.
-  Calls up service menu, see section 11.04, p. 34
-  Calls up settings menu, see section 11.03, p. 33
-  Changes to operating mode sealing, see Chapter 10, p. 23
-  Changes to basting mode, see section 10.02.05, p. 28
-  **13:10:35** Display of current time in hours, minutes and seconds. Clock time adjustment see section 11.09, p. 40
-  Starts sealing.
-  Stops sealing.
-  **0** Shows the formula number. Sealing parameters are stored under a formula number and can be recalled by it, see section 10.03, p. 30.

For further functions and their description see chapters Sealing and Input.

7.03 Pedal



The pedal can be operated forwards **1** as well as backwards **2**. The pedal function depends on the sealing mode and pedal mode currently in use, see section 9.02, p. 21.

Pedal function in level mode:

- Kick pedal partially forward: feed roller will be lowered to sealing position.

- Kick pedal fully forward and hold: sealing will start and continue as long as pedal is being held.
- Release pedal: sealing stops.
- Kick pedal partially backward: feed roller will be lifted, the applicable gauge can be set in the feed roller parameters menu, see section 11.06, p. 36.
- Kick pedal fully backward: feed roller will be elevated completely.

Pedal function in flip-flop mode:

- Kick pedal forward: feed roller will be lowered to sealing position. Sealing will start and continue even after pedal is released.
- Kick pedal forward again: sealing will stop.
- Kick pedal partially backward: sealing will stop, feed roller will be lifted, the applicable gauge can be set in the feed roller parameters menu, see section 11.06, p. 36.
- Kick pedal fully backward: sealing will stop, feed roller will be elevated completely.

Pedal function in dynamic sealing mode (pedal mode dynamic):

- Kick pedal forward: sealing parameters will be controlled within the values set by the operator in proportion to the pedal position. (Dynamic sealing with specified amplitude see section 10.02.03, p. 27, dynamic sealing with specified power see section 10.02.04, p. 28.)
- Other functions as in level mode, see above.

Pedal function in basting mode

- Kick pedal forward: a basting cycle (short, spotty sealing cycle) will be performed with the settings displayed in the control panel.

7.04 Knee switch (optional)

Pushing the knee switch (fig. 11, ill. p. 14) will immediately start a basting cycle (short, spotty sealing cycle) without previously activating the basting mode in the control panel (basting mode see section 10.02.05, p. 28). A basting cycle set off using the knee switch is performed with the parameters last set in the basting mode.

The knee switch can be obtained as an accessory.

Installation and commissioning

8 Installation and commissioning

After the machine has been unpacked, check it for any damages caused during transportation. If there is any damage, please notify the transport company and your local PFAFF agency.

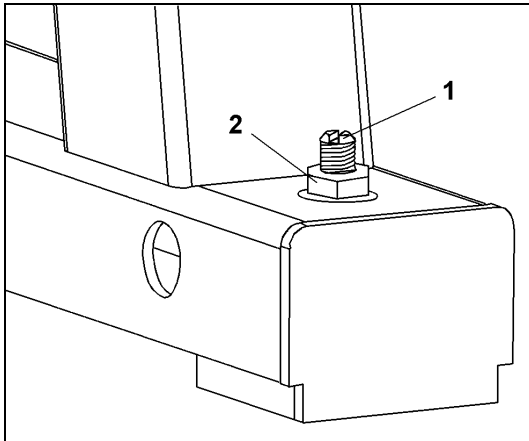


The machine must only be installed and commissioned by qualified personnel. All relevant safety regulations must be strictly adhered to!

8.01 Installation

A suitable connection for electricity must be available at the machine's location, see Chapter 3 Specifications, p. 10. An even and firm foundation as well as sufficient lighting must also be available at the machine's location.

- Slide the machine off the pallet.



- If the foundation is not completely even the machine must be stabilized using the adjustable foot at the right back end of the machine. Loosen the lock nut **2** with a suitable wrench and turn the adjusting screw **1** with a suitable screwdriver to the right or left until the machine stands steady. Hold the adjusting screw **1** with the screwdriver in position and tighten the lock nut **2**.

- Connect the plugs from the pedal and from any existing knee switch to the control box.

8.02 Commissioning

- Clean the machine thoroughly if necessary.
- Check the machine, particularly its electrical wiring, for any damage.
- Have a qualified person check whether the motor can be driven with the existing power voltage.

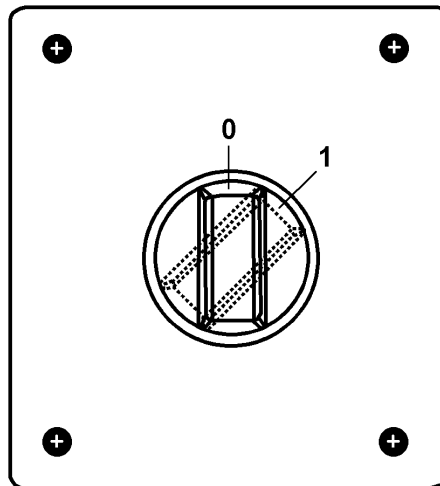


If there are any differences, the machine must definitely not be operated!



The machine must only be connected to a suitably grounded socket!

8.03 Switching the machine on/off



- To switch on the machine, turn the main switch (location of the switch see section 7.01, p. 14) to position **1**. After approximately 30 seconds the control panel will display the base menu last called up, before the machine was switched off, see Chapter 10 Sealing, p. 23 ff.

- To switch off the machine, turn the main switch to position **0**.

9

Preparation



All regulations and notes in this manual must be observed! Special attention must be paid to the safety regulations!



All setting-up work must only be carried out by personnel with the appropriate training!

9.01

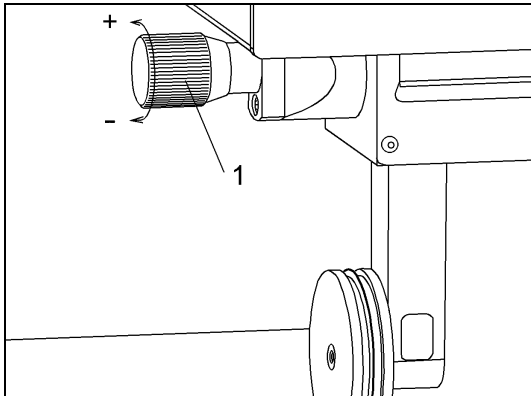
Adjusting the feed roller clearance (roller gap)

Before starting to seal, the gap between feed roller and sonotrode must be adjusted manually – depending on the material to be sealed and the sealing parameters set. The adjustment can be made from any of the sealing menus (see p. 23 ff.).

- Switch on the machine.



- Lower feed roller.



Adjust the roller gap with the adjustment screw 1:

- Turn towards + : gap will be extended.
- Turn towards - : gap will be minimized.

After replacing the feed roller, the diameter (see section 11.06, p. 36) and the neutral point (see section 11.07, p 37) of the feed roller must be set before adjusting the roller gap.

9.02 Selecting the sealing mode and the pedal mode

Before starting to seal, the operator chooses the sealing mode he is going to work in. Within any of the standard sealing modes he will also have to choose a pedal mode, either level mode or flip-flop mode. The pedal functions are described in section 7.03, p. 16. For further information about the sealing modes see Chapter 10 Sealing, p. 23 ff.

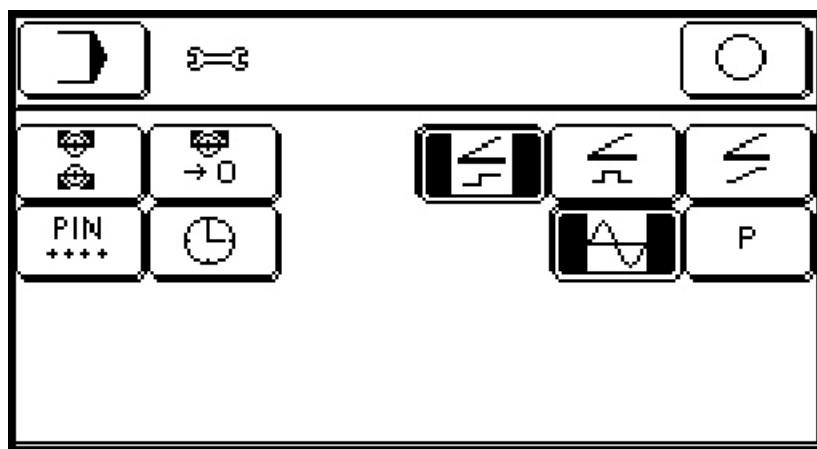
- Switch on the machine.



- Call up operating mode input.



- Call up settings menu. The following menu will appear:



In the right upper part of the screen, the symbols of the sealing and pedal modes are displayed. In the example shown above, the level mode and sealing mode amplitude are activated.















- Change to the main menu of the selected sealing mode.



The selections will be valid – even after the machine has been switched off and on again – until different modes have been selected. After switching on again, the machine will start in the base menu of the sealing mode last selected.

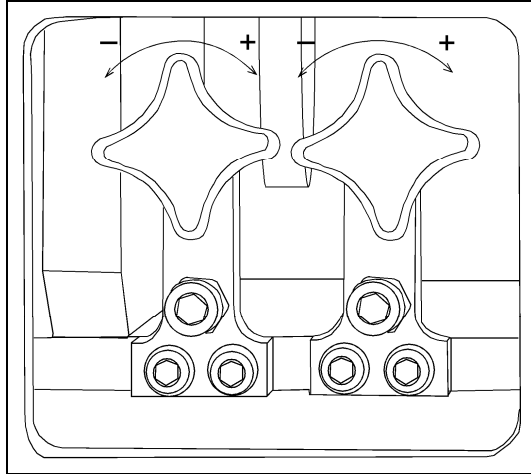
Summary of the possible combinations:

 + 	Amplitude sealing in the level mode
 + 	Power sealing in the level mode
 + 	Amplitude sealing in the flip flop mode
 + 	Power sealing in the flip flop mode
 + 	Dynamic sealing with specified amplitude
 + 	Dynamic sealing with specified power

The further functions of the setting menu are described in the Chapter Input, see p. 31 ff.

9.03 Secondary feed rollers

Secondary feed rollers can be mounted on both sides of the sonotrode. If needed they can be manually lifted, and will then assist in feeding the sealing material.



By turning the handles – accessible from the front, below the sealing table – the secondary feed rollers can be lifted or lowered individually.

Turn towards **+** : roller will be lifted.

Turn towards **-** : roller will be lowered.

10 Sealing



The machine may only be operated by properly instructed personnel. The operating personnel must make sure that only authorised persons are in the danger zone of the machine.

10.01 Sealing principle

Due to the vibrations of the sonotrode, the plies of the workpiece are mechanically "hammered" in the seam area. Through the hammering motions of the sonotrode the workpiece is heated until it becomes viscous and at the same time it is pressed and fed to form the seam.

In order to achieve optimum sealing results, certain conditions concerning the workpiece and the machine settings have to be fulfilled.

The workpiece must be:

- sealable (thermoplastic),
- suitable for processing with the PFAFF 8312 with regard to thickness and properties and
- clean in the seam area.

The basic requirements on the machine are

- selection of the correct feed roller and correct setting of
- roller pressure
- sealing power
- sealing speed and
- roller gap (distance of the feed roller to the sonotrode during sealing).



All settings of the sealing machine are always dependent on the type of material being sealed and the ambient temperature. As a result of the influence of the individual parameters on each other, optimum settings can only be determined by means of test sealing operations. All settings necessary for sealing will be entered and displayed in the control panel.

10.02 Sealing modes

The following sealing modes can be chosen :

- Standard sealing with specified amplitude, see section 10.02.01, p. 24.
- Standard sealing with specified power, see section 10.02.02, p. 25.
- Dynamic sealing with specified amplitude. see section 10.02.03, p. 27
- Dynamic sealing with specified power, see section 10.02.04, p. 28
- Basting, see section 10.02.05, p. 28

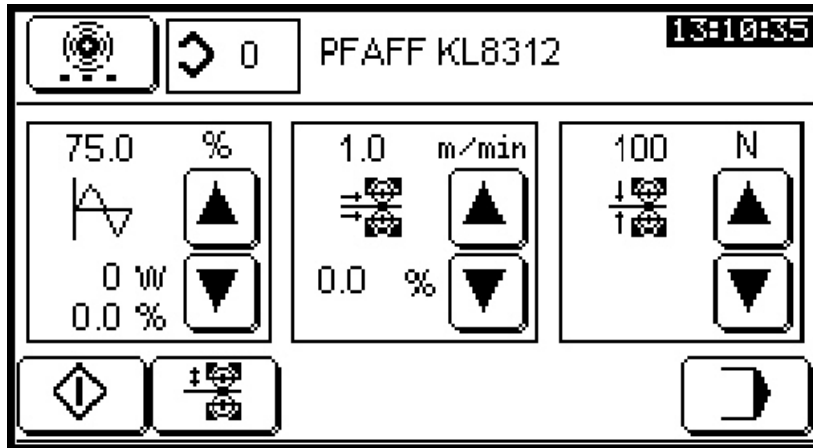
After calling up any of the sealing modes, their corresponding base menu will appear in the control panel.

10.02.01 Standard sealing with specified amplitude (amplitude sealing)



While sealing in the amplitude sealing mode the operator may specify the sealing amplitude as well as the sealing speed and the sealing pressure.

Base menu of the amplitude sealing mode (selecting the base menus see section 9.02, p. 21):



The three frames in the middle of the control panel display the following sealing parameters:



Sealing amplitude. The required value is shown at the top as a percentage of the maximum amplitude (at least 50%), the actual sealing power is shown below in watts and as percentage of amplitude.



Sealing speed in meters per minute, adjustable in steps of 0.1 m/min (maximum value depending on machine equipment).



The differential, shown below the sealing speed, controls the feed roller speed in proportion to the sonotrode speed, adjustable from -10 % to 10 % in steps of 0.1 %.



Sealing pressure in Newton, adjustable from 64 N to 500 N. (A sealing pressure of 10 N is the equivalent of the weight of one kilogram.)

The required values displayed can be changed using the arrow keys or by calling up the numeric keypad (see also section 7.02 Control panel, p. 15).

After setting the sealing parameters the sealing can be controlled by using the pedal (pedal functions see section 7.03, p. 16) or by using the control panel:



Feed roller will be lifted/lowered.



Starts sealing



Stops sealing (Symbol will be displayed as soon as the sealing has been started.)

Further functions available in the amplitude sealing mode:



Changes to basting mode, see section 10.02.05, p. 28



Formula number of the current sealing formula. For storing and recalling sealing formulas see section 10.03, p. 30.



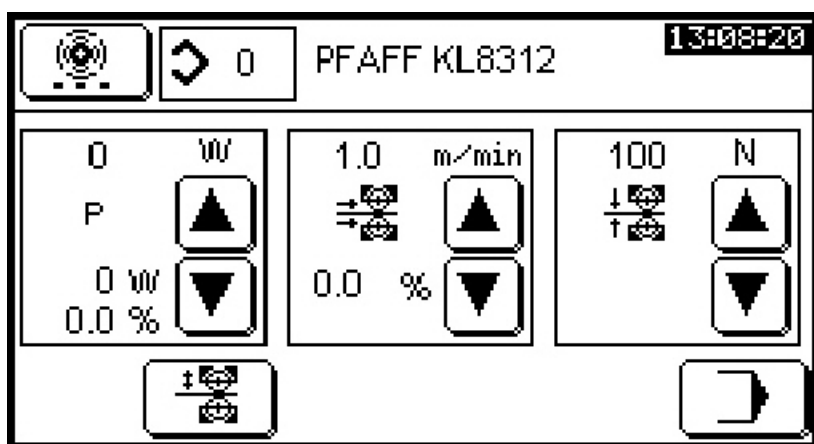
Changes to the main menu input, see Chapter 11, p. 31.

10.02.02 Standard sealing with specified power (power sealing)





While sealing in the power sealing mode the operator may specify the sealing power as well as the sealing speed and the sealing pressure.

Base menu of the power sealing mode (selecting the base menus see section 9.02, p. 21):



The three frames in the middle of the control panel display the following sealing parameters:

- P** Sealing power, adjustable up to a maximum of 400 W. The required value is shown at the top in watts, the actual sealing power is shown below in watts and as percentage of amplitude.
-  Sealing speed in meters per minute, adjustable in steps of 0.1 m/min (maximum value depending on machine equipment).
- %** The differential, shown below the sealing speed, controls the feed roller speed in proportion to the sonotrode speed, adjustable from -10 % to 10 % in steps of 0.1 %.
-  Sealing pressure in Newton, adjustable from 64 N to 500 N. (A sealing pressure of 10 N is the equivalent of the weight of one kilogram.)

The required values displayed can be changed using the arrow keys or by calling up the numeric keypad (see also section 7.02 Control panel, p. 15).

Sealing

After setting the sealing parameters the sealing can be controlled by using the pedal (pedal functions see section 7.03, p. 16) or by using the control panel:



Feed roller will be lifted/lowered.



Starts sealing



Stops sealing (Symbol will be displayed as soon as the sealing has been started.)

Further functions available in the power sealing mode:



Changes to basting mode, see section 10.02.05, p. 28.



Formula number of the current sealing formula. Storing and recalling sealing formulas see section 10.03, p. 30



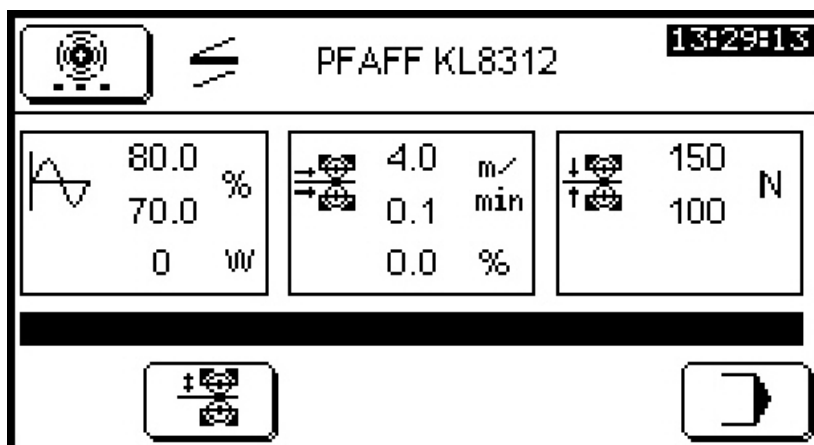
Changes to the main menu input, see Chapter 11, p. 31.

10.02.03 Dynamic sealing with specified amplitude



In the dynamic sealing mode the operator may set a range for each of the sealing parameters. While operating, the machine will control the parameters within the given range in proportion to the pedal position.

Base menu of the dynamic sealing mode with specified amplitude (selecting the base menus see section 9.02, p. 21):



The three frames in the middle of the control panel display the following sealing parameters:



Sealing amplitude as a percentage of the maximum amplitude, at least 50 %



Sealing speed in meters per minute, adjustable in steps of 0.1 m/min (maximum value depending on machine equipment).



The differential, shown below the sealing speed, controls the feed roller speed in proportion to the sonotrode speed, adjustable from -10 % to 10 % in steps of 0.1 %.



Sealing pressure in Newton, adjustable from 64 N to 500 N. (A sealing pressure of 10 N is the equivalent of the weight of one kilogram.)

For each parameter a lowest and a highest value can be set, using the numeric keypad (see also section 7.02 control panel, p. 15).

The operator will then control the sealing intensity by use of the pedal (pedal functions see section 7.03, p. 16). The progress bar in the lower part of the control panel will illustrate the sealing intensity proportionally.

Further functions available in the dynamic sealing mode:



Feed roller will be lifted/lowered.



Changes to the basting mode, see section 10.02.05, p. 28.



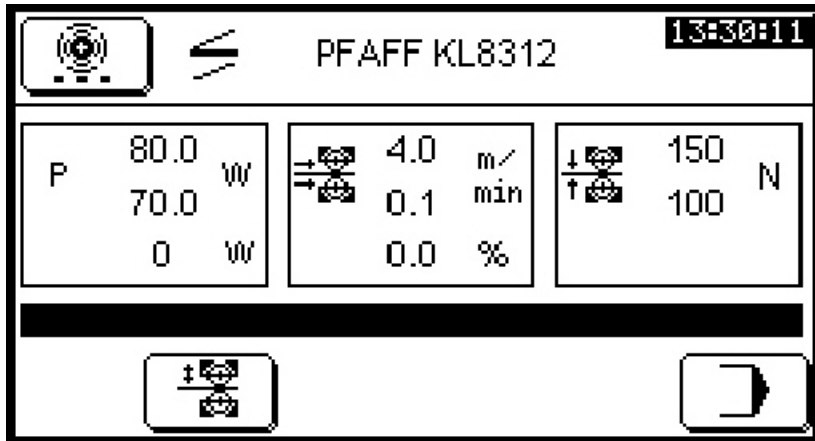
Changes to the main menu input, see Chapter 11, p. 31.

10.02.04 Dynamic sealing with specified power



In the dynamic sealing mode the operator may set a range for each of the sealing parameters. While operating, the machine will control the parameters within the given range in proportion to the pedal position.

Base menu of the dynamic sealing mode with specified power (selecting the base menus see section 9.02, p. 21):



The three frames in the middle of the control panel display the following sealing parameters:

P Sealing power in watts adjustable up to a maximum of 400 W



Sealing speed in meters per minute, adjustable in steps of 0.1 m/min (maximum value depending on equipment of the machine).

%

The differential, shown below the sealing speed, controls the feed roller speed in proportion to the sonotrode speed, adjustable from -10 % to 10 % in steps of 0.1 %.



Sealing pressure in Newton, adjustable from 64 N to 500 N. (A sealing pressure of 10 N is the equivalent of the weight of one kilogram.)

For each parameter a lowest and a highest value can be set, using the numeric keypad (see also section 7.02 Control panel, p. 15).

The operator will then control the sealing intensity by use of the pedal (pedal functions see section 7.03, p. 16). The progress bar in the lower part of the control panel will illustrate the sealing intensity proportionally.

Further functions available in the dynamic sealing mode:



Feed roller will be lifted/lowered.



Changes to the basting mode, see section 10.02.05, p. 28.



Changes to the main menu input, see Chapter 11, p. 31.

10.02.05 Basting



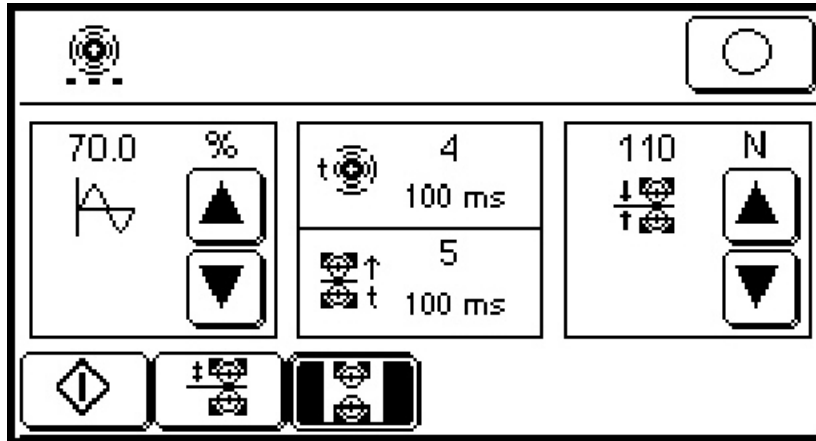
In the basting mode sealing is performed point by point (without feed stroke) in accordance with specified parameters.

The workpiece is fed manually by the operator between basting cycles.

- Switch on the machine. The machine will start in the base menu of the sealing mode last selected.



- Call up the basting mode.



The three frames in the middle of the control panel display the following basting parameters:



Amplitude as a percentage of the maximum amplitude, at least 50 %



Sealing time in tenths of a second, adjustable from 0.1 to 1 s



Holding time (in tenths of a second) after sealing, adjustable from 0.1 to 1 s



Sealing pressure in Newton, adjustable from 64 N to 500 N. (A sealing pressure of 10 N is the equivalent of the weight of one kilogram.)

All parameters may be changed using the numeric keypad. Amplitude und sealing pressure may also be altered using the arrow keys (see also section 7.02 Control panel, p. 15).

After setting the basting parameters, the basting can be controlled using the pedal (pedal functions see section 7.03, p. 16), the knee switch (optional accessory, see section 7.04, p. 17), or the control panel:



Starts basting cycle.



Lifting. With this function activated, the feed roller will not be fully elevated between basting cycles, but rather only be lifted by a few millimeters, in order to allow a faster workflow. The applicable gauge can be adjusted between 3 and 10 mm, see section 11.06, p. 36.

Further functions available in the basting mode:



Feed roller will be lifted/lowered.



Changes to that sealing mode from which the basting mode was called up before.



With the knee switch (available as an accessory) a basting cycle can be set off at any time, without previously activating the basting mode in the control panel.

10.03 Sealing formulas

In both of the standard sealing modes (power sealing and amplitude sealing) the sealing parameters set by the operator will be stored as sealing formulas. Up to twenty of those formulas can be stored and recalled. They may also be saved on a USB flash drive, see section 11.02, p. 32.



- Touch the figure next to the symbol. The numeric keypad will appear and the formula number may be entered (see also section 7.02 Control panel, p. 15).
- Enter the desired formula number. Numbers from 0 to 19 are permissible.

If parameter values have previously been stored under the chosen number, they will now be displayed.



Any parameter values entered will overwrite the displayed values of a previously stored formula immediately. If the called up formula is still required, choose a different formula number before changing the parameter values.

11 Input

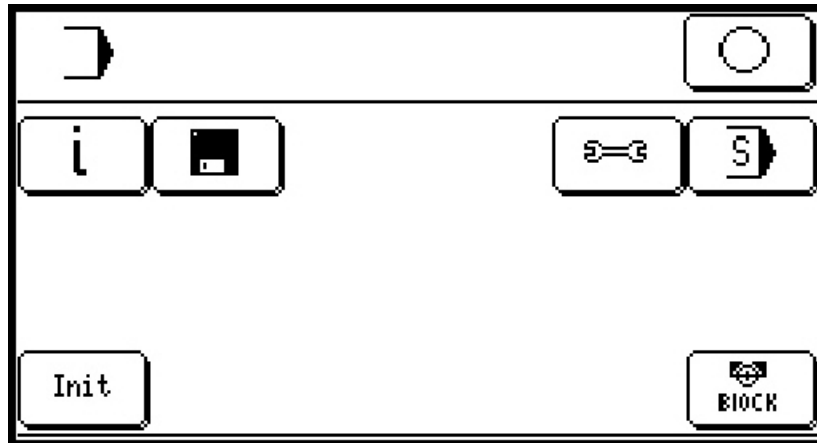
The input mode contains the functions for displaying information, for machine adjustment and configuration, as well as for supporting service and adjustment work.

11.01 Main menu input

- Switch on the machine.



- Call up the main menu input.



The following functions are available in the main menu input:



Changes to the operating mode sealing. The prevailing sealing mode can be selected in the settings menu, see section 9.02, p. 21.



Calls up an information about the current software variant and version. From there you can change to the operating mode sealing or back to the main menu input.



Changes to the data management menu, see section 11.02, p. 32



Changes to the settings menu, see section 11.03, p. 33 and section 9.02 Selecting the sealing mode and the pedal mode, p 21.



Changes to the service menu, see section 11.04, p. 34 and section 11.12 Changing the contrast of the control panel display, p. 43.



Initializes the actuators without switching off the machine.



Calls up a menu from which the feed roller can be blocked temporarily, e. g. in order to facilitate a roller change, see section 11.05, p. 35.

11.02 Data management

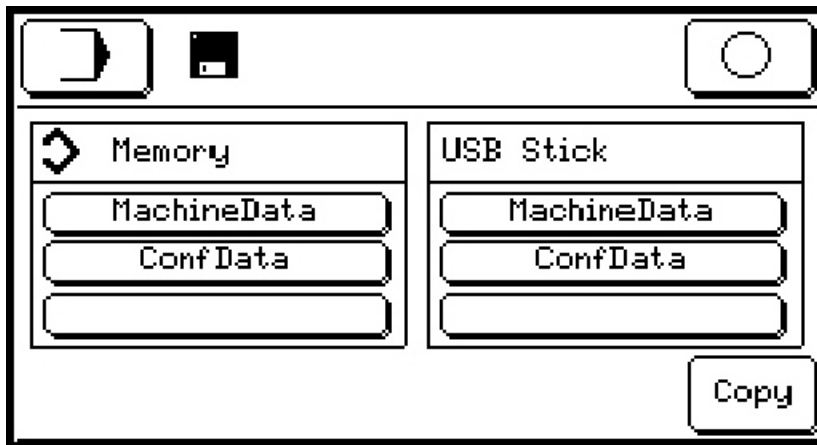
Using the data management menu, configuration data for the machine and sealing formulas can be transferred from the machine memory to a USB flash drive or vice versa. The USB port is located outside of the control box below the fan outlet. Any USB flash drive used must be formatted with FAT32.



- Call up the main menu input.



- Call up the data management menu.



MachineData labels the sealing formulas, **ConfData** the configuration data of the machine, see section 11.11, p. 42.

Copy data from the machine memory to the USB flash drive

Select the desired data category in the left column (Memory).



- Copy data of the previously selected category from the machine memory to the USB flash drive.



Data will be copied without prior query. Data on the USB flash drive should therefore be saved before copying a different set of data.

Copy data from a USB flash drive to the machine memory

Select the desired data category in the right column (USB Stick).





- Copy data of the previously selected category from the USB flash drive to the machine memory.





The copying will overwrite the data in the machine memory. In case these are still required, they should previously be saved to a different medium.

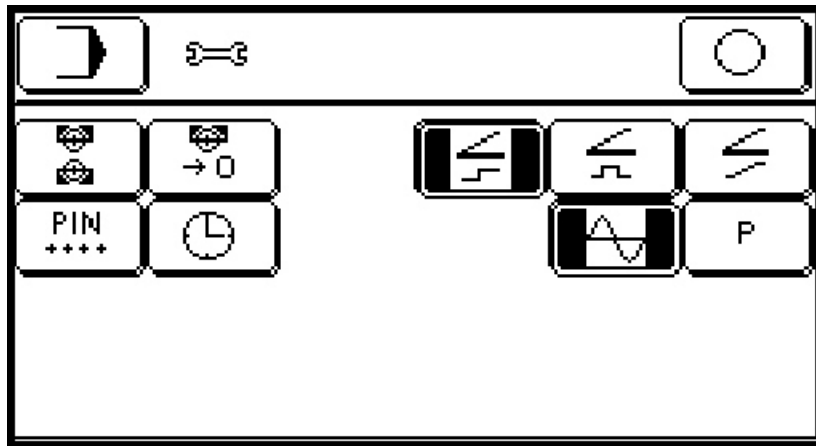
Further functions:





-  Changes to the operating mode sealing.
-  Changes to the main menu input.

11.03 Settings menu



Besides selecting the sealing and pedal modes, described in section 9.02, p. 21, further machine settings can be carried out from this menu.

-  • Call up the main menu input.
-  • Call up the settings menu.



-  Calls up a menu to set parameters for the feed roller, see section 11.06, p. 36.
-  Calls up a menu to set the neutral point of the feed roller, see section 11.07, p. 37.
-  Changes to the PIN code menu, see section 11.08, p. 38.
-  Calls up a menu to set the clock time, see section 11.09, p. 40.

Further functions:

-  Changes to the operating mode sealing.
-  Changes to the main menu input.

11.04 Service menu



To prevent any damage to the machine caused by inappropriate settings in the service menu, access to the service menu is secured by a service PIN that will be disclosed to the proprietor by the PFAFF agency.

The service PIN will be requested when first calling up the service menu. Thereafter the service menu and all functions secured by the PIN code (s. p. 38) will be freely accessible until the machine is switched off.

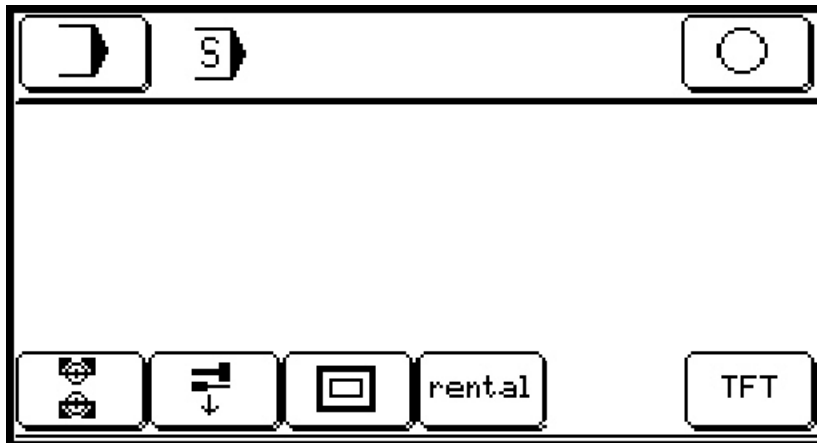
From the service menu, further menus may be called up, in which additional machine settings can be made.



- Call up the main menu input.



- Call up the service menu, enter service PIN if requested.



Calls up a menu to adjust the current of the drive motors, see section 11.10, p. 41



Calls up a menu, in which extended machine configurations may be set, see section 11.11, p. 42



Calls up a menu to change the contrast of the control panel display, see section 11.12, p. 43.



Calls up a menu to administrate the rental data of rented machines, see section 11.13, p. 44



This function is reserved for manufacturer's service staff.

Further functions:



Changes to the operating mode sealing.



Changes to the main menu input.

11.05 Blocking the feed roller

This function is used to block the feed roller temporarily, e. g. to facilitate a roller change.



If the blocking of the feed roller is released before the service work is completed, there is a danger of injury. Therefore pay attention to the display (see below) and start the repeat blocking if necessary.



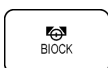
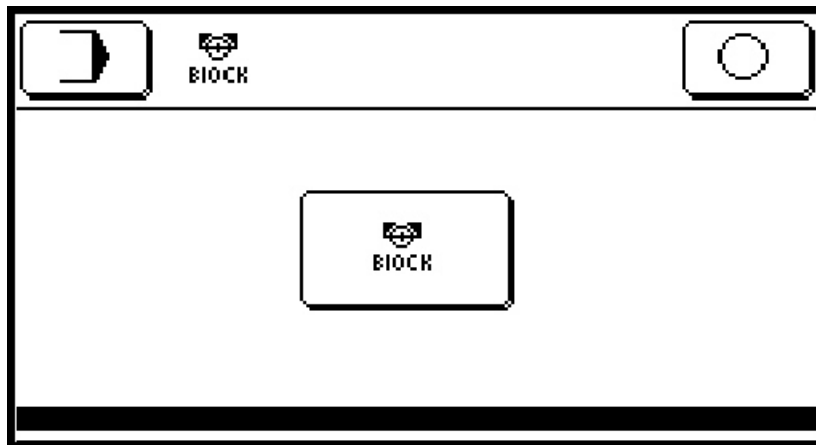
To prevent any damage to the machine, the installation instructions in section 12.03, p. 46 must be followed.



- Call up the main menu input.



- Call up the feed roller blocking menu.






- Block the feed roller.

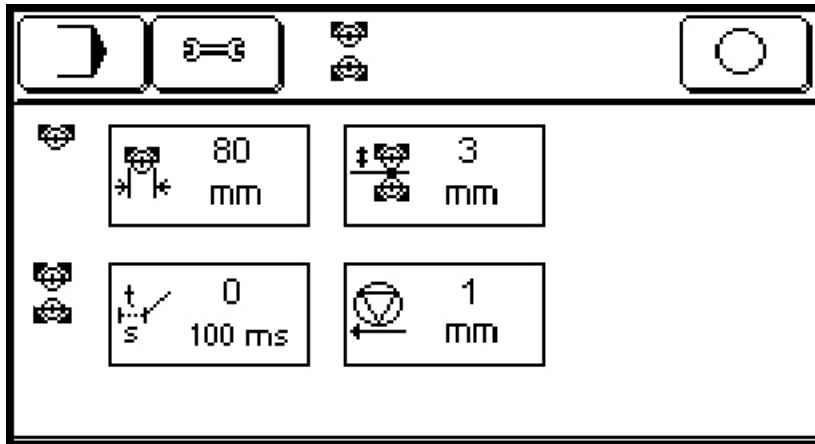
The feed roller will be blocked for several minutes, while a progress bar is displayed in the lower part of the control panel. The blocking will be released automatically, as soon as the bar has reached the right end of the display.

The blocking can be released at any time by touching the block key again.





11.06 Setting feed roller parameters

In this menu the following parameters may be set: the feed roller diameter, the lifting gauge, the sealing delay and the back feed after sealing.



-  • Call up the main menu input.
-  • Call up the settings menu.
-  • Call up the feed roller parameters menu.



Touching the figure next to the parameter symbol will call up the numeric keypad to enter the desired value.




-  Entering the diameter of the feed roller currently installed (e. g. after changing the feed roller).
-  Entering the gauge by which the feed roller will be lifted when using the lifting function, adjustable from 3 to 10 cm in steps of 1 mm.
-  Setting the time (in tenths of a second) by which the start of sealing will be delayed, after the feed roller has been fully lowered.
-  Setting the distance in millimeters, by which the workpiece will be fed backwards after the sealing has stopped.

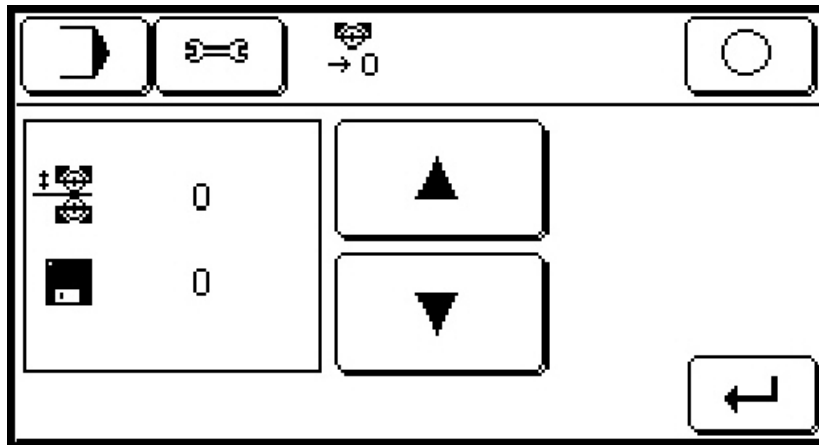
Further functions:

-  Changes to the operating mode sealing.
-  Changes to the main menu input.


11.07 Setting the neutral point of the feed roller

In this menu the neutral point of the feed roller can be set, e. g. after changing the feed roller.




-  • Call up the main menu input.
-  • Call up the settings menu.
-  • Call up feed roller neutral point menu.



- Loosen the adjustment screw (see p. 20) until the roller gap is fully opened (no more spring resistance perceptible).
- Using the arrow keys, lower the feed roller carefully stepwise until the feed roller slightly touches the sonotrode (check visually).

-  • Store the neutral point setting.

Further functions:

-  Changes to the operating mode sealing.
-  Changes to the main menu input.
-  Changes back to the settings menu.

11.08 PIN code menu

The PIN code protects some of the machine's functions against unauthorized access. After switching on the machine, the PIN code will be requested as soon as any of the following protected functions is called up:

- Data management
- Sealing parameter input
- Formula numbers
- PIN code menu

Once the PIN code is entered correctly, all protected functions are freely accessible until the machine is switched off again. The PIN code may be stipulated by the operator.

Stipulating the PIN code



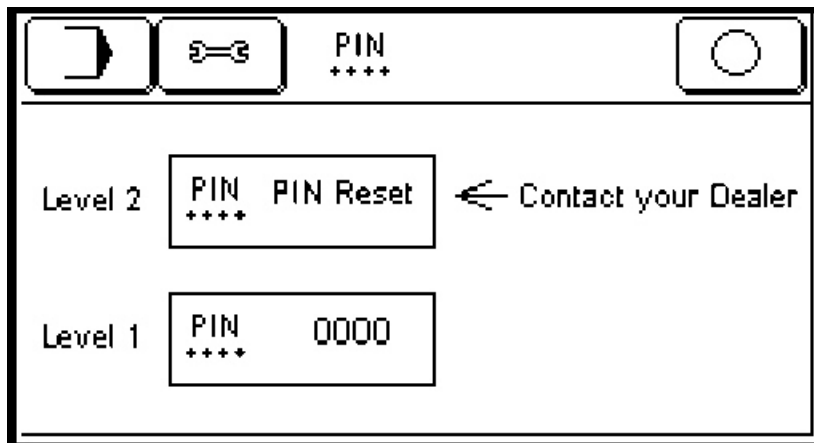
- Call up the main menu input.



- Call up the settings menu.

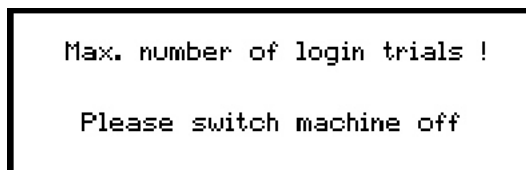


- Call up the PIN code menu.



- Touch the PIN code shown in the „Level 1“ frame. The numeric keypad for entering the PIN code will appear.
- Enter any four digit numeric code and confirm by touching **E**. The newly stipulated PIN code will be shown in the „Level 1“ frame.

After a PIN code has been stipulated it will be requested once any of the protected functions (see above) will be called up. After having entered a wrong PIN code four times in a row, the following message will be shown:



- Switch off the machine. After switching the machine on again, another four trials are permitted.



If the PIN code should be forgotten, the PIN code menu can be accessed by entering the service PIN instead. The service PIN is disclosed to the proprietor by the PFAFF agency. After the service PIN is entered, the service menu and all functions secured by the PIN code will be freely accessible until the machine is switched off.

Withdrawing the PIN code protection



- Call up the main menu input.



- Call up the settings menu.






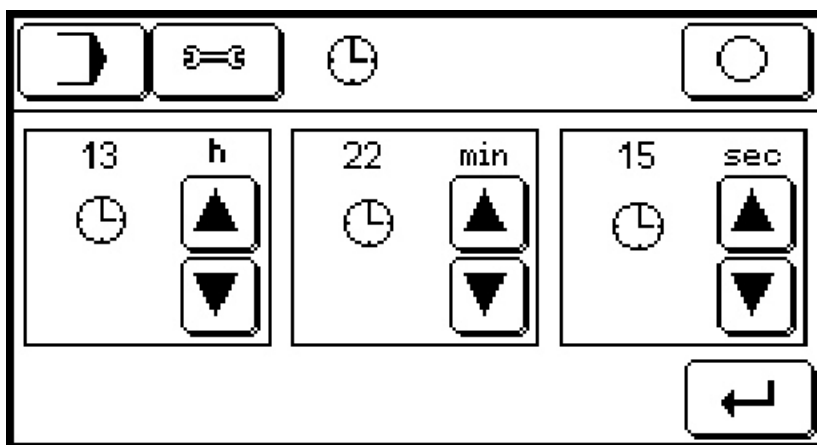
- Call up the PIN code menu.
- Touch the PIN code shown in the „Level 1“ frame.
- Enter „0“ into the numeric keypad and confirm with **E**.
- Switch off the machine.

After switching the machine on again, all functions protectable by the PIN code will be freely accessible.


11.09 Adjusting the clock time

In this menu the clock time of the machine may be set, which will be shown in some of the menus in the right upper corner of the control panel.

-  • Call up the main menu input.
-  • Call up the settings menu.
-  • Call up the clock time adjustment menu.



Hours, minutes and seconds may be separately adjusted by using the arrow keys or the numeric keypad (see also section 7.02 Control panel, p. 15).

-  • Adjusted clock time will be applied to the machine.

The time will be displayed in some of the menus in the right upper corner of the control panel as hh:mm:ss.

11.10 Adjusting the current of the drive motors



To prevent damage to the machine, never operate the drive motors with more than 70 % current for an extended period of time.

If the maximum torque of the drive motors is not required, sound emission, power consumption and waste heat can be reduced by lowering the current of the drive motors.



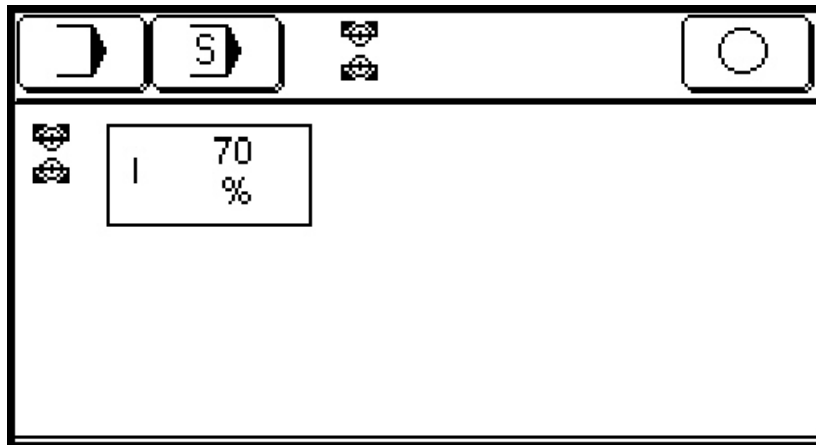
- Call up the main menu input.



- Call up the service menu.



- Call up the drive motor current menu.



The current of the drive motors can be adjusted from 10 % to 110 % by use of the numeric keypad (see also section 7.02 Control panel, p. 15). The adjustment takes effect on both of the drive motors.

11.11 Setting the machine configuration



Configuration settings that do not comply with the actual equipment of the machine may cause damage to the machine!



Changes in the configuration will only be necessary after components of the machine have been replaced by parts of different specification. Therefore settings in this menu may only be carried out by expert staff trained for this purpose.



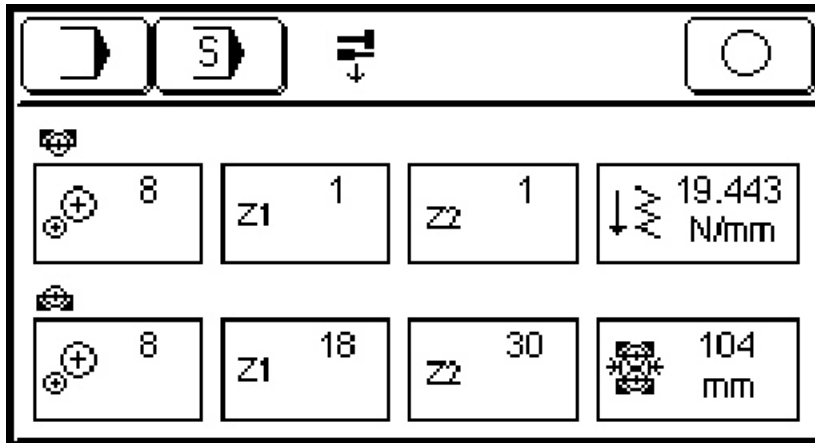
- Call up the main menu input.



- Call up the service menu.



- Call up the configuration menu.






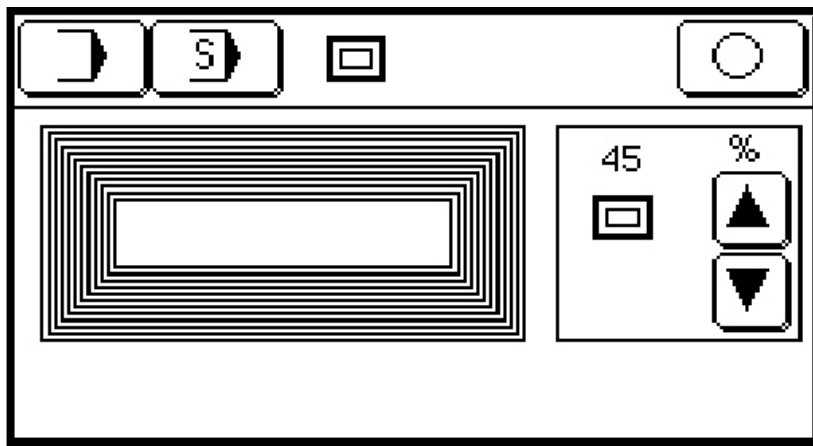
Transmission ratio and gear train of the feed roller and the sonotrode may be adjusted as well as the spring rate and the sonotrode diameter.

11.12 Changing the contrast of the control panel display



General information about the functionality of the control panel is given in section 7.02, p. 15.

- Switch on the machine.
-  • Call up the main menu input.
-  • Call up the service menu.
-  • Call up the contrast setting menu.






The display contrast is shown as percentage. It can be changed by use of the arrow keys or by use of the numeric keypad (see also section 7.02 Control panel, p. 15).

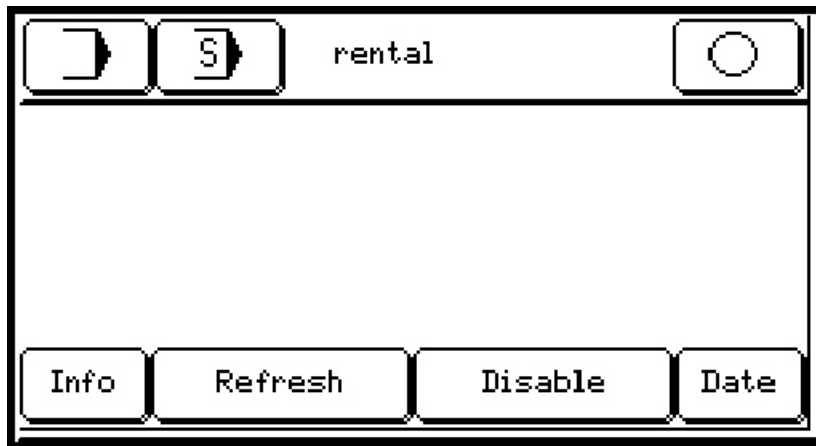






The contrast can be set between 30 % and 70 %. Incorrect entries will not be taken over.

11.13 Rental menu

On rented machines the rental period is displayed in this menu. The menu is also used for activating a renewal of the rental period.

-  • Call up the main menu input.
-  • Call up the service menu.
-  • Call up the rental menu.



-  **Info** Calls up a display showing the CPU identification, the current date, the serial number and the end of the rental period. On permanently activated machines „Rental end: ---.---.----“ will be displayed.
-  **Refresh** Calls up the numeric keypad to enter a code for renewing the rental period.
-  **Disable** Calls up the numeric keypad to enter a code for permanently activating the machine.
-  **Date** With this function the system date can be changed. The function is code protected. When in need of this function please contact your PFAFF agency.

12 Maintenance and self help

12.01 Cleaning and care



To always ensure best working results please observe the following instructions for cleaning and care.

- Always remove material residues sticking to the feed rollers and the sonotrode. Also remove particles of dust and fuzz that may accumulate in the proximity of the sonotrode.
- The edge of the cutting roller must be checked regularly, blunt rollers must be replaced.

12.02 Protective switch



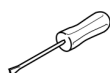
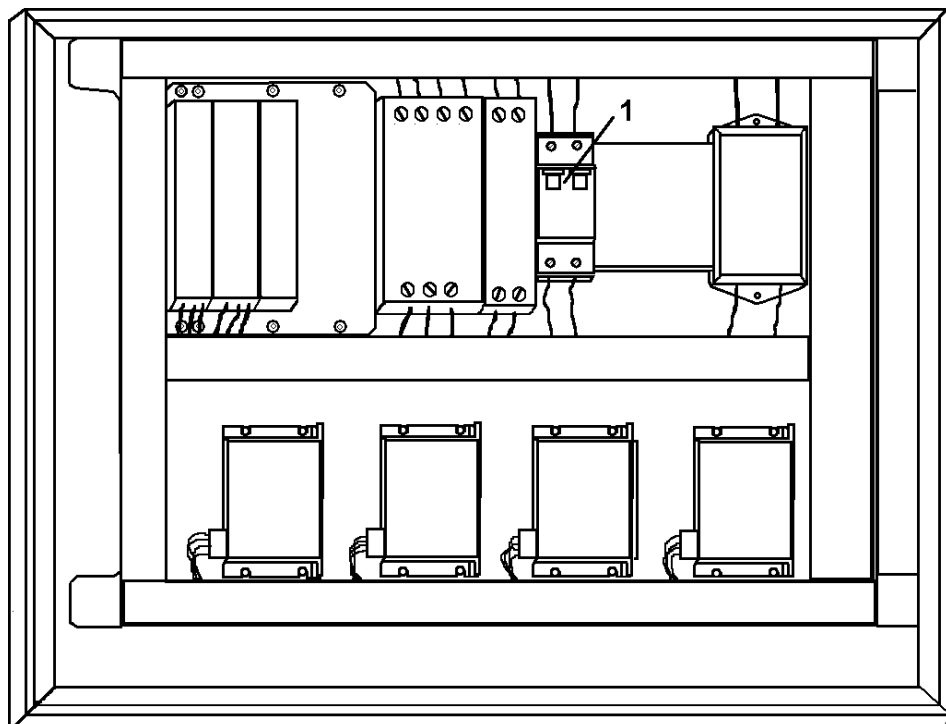
The protective switch serves as protection against major damage in case of a short circuit or overload.



Disconnect the mains plug!
Danger from electric voltage!



First eliminate the cause of the fault before, switching the machine on again!



- Eliminate the cause of the fault.
- Open the control box with the special key supplied and reset the protective switch **1**.
- Close the control box again.

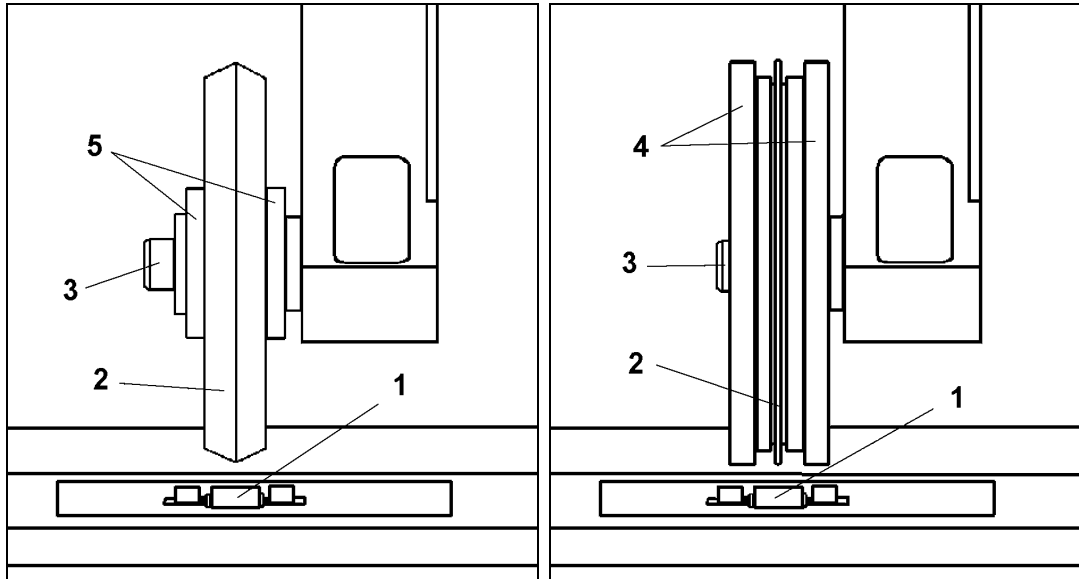
12.03 Changing feed roller



To prevent injury while changing the feed roller, observe the directions in section 11.05 Blocking the feed roller, p. 35!



To prevent damage to the machine the cutting wheel must be adjusted above the centerline of the sonotrode (see illustrations below).



Feed roller with cutting wheel 2

Feed roller with cutting wheel 2 and two feed wheels 4.



For loosening and tightening the fixing screw 3 in the feed roller shaft, the feed roller can be blocked, see section 11.05, p. 35.

- Loosen the fixing screw 3 and remove it together with the wheelset.
- When attaching the new wheelset (cutting wheel 2, spacer wheels 5 and/or feed wheels 4) ensure that the cutting edge of the cutting wheel is adjusted above the centerline of the sonotrode.
- Tighten the fixing screw 3.
- Set the feed roller diameter, see section 11.06, p. 36.
- Set the neutral point of the feed roller, see section 11.07, p. 37.

12.04 Error messages



In case of a malfunction, an error message will be displayed in the control panel, consisting of an error number and an error parameter number. Please write down the displayed numbers in any case and keep them at hand while contacting your PFAFF agency. This will considerably facilitate troubleshooting.



Troubleshooting may only be carried out by appropriately trained personnel!



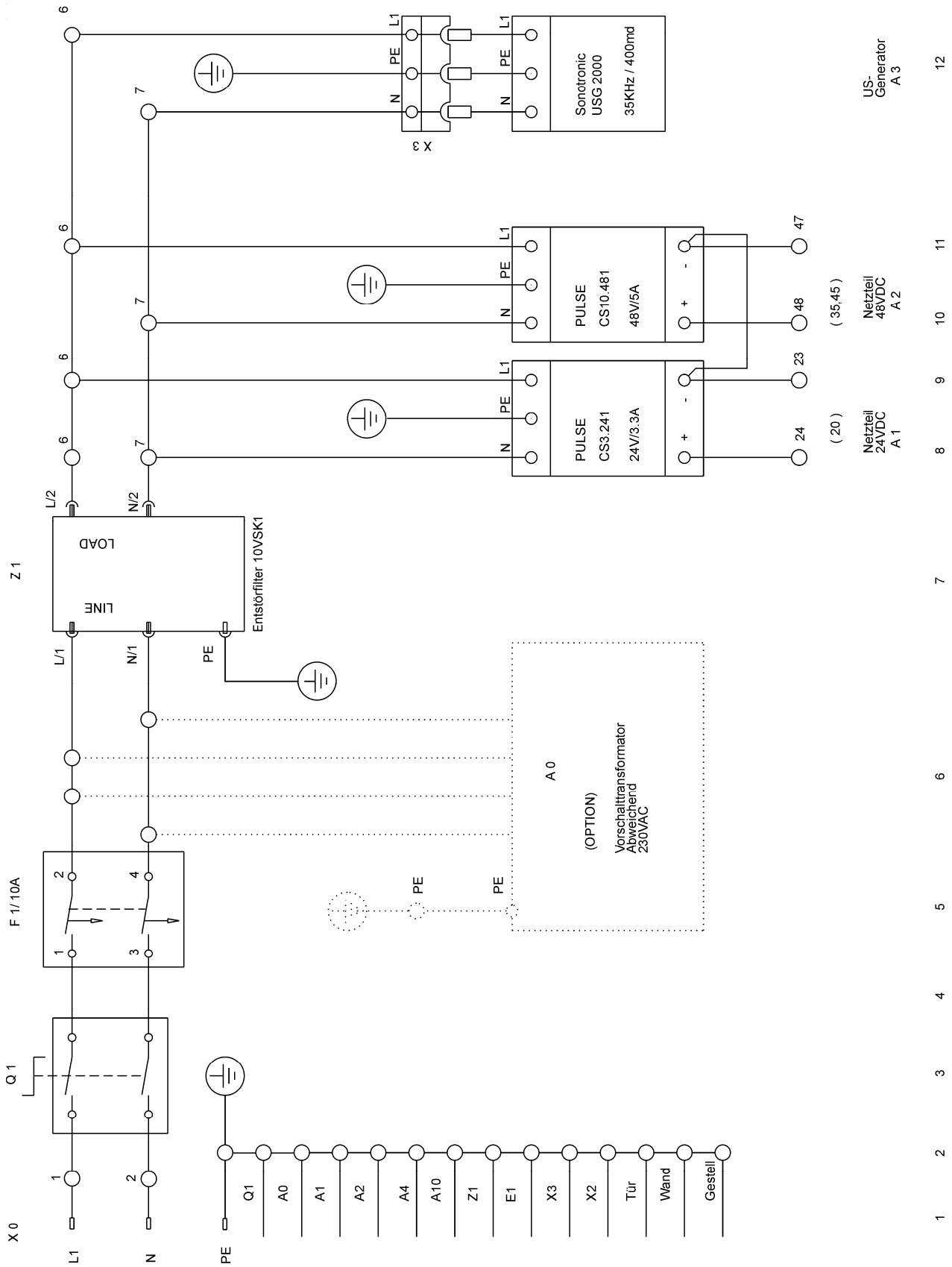
Disconnect the mains plug before undoing any case parts!
Danger from electric voltage!

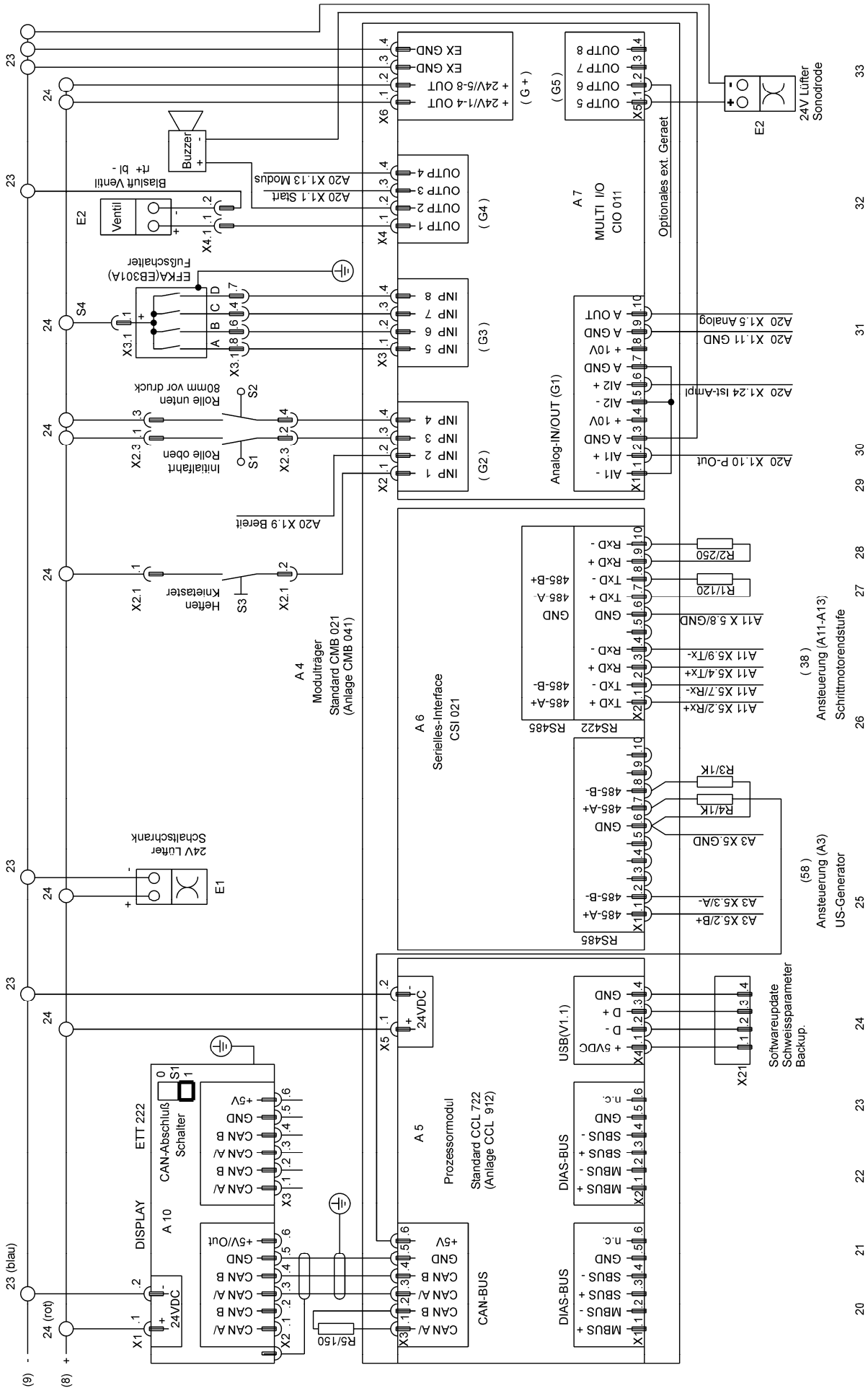
After the cause of the fault has been eliminated:

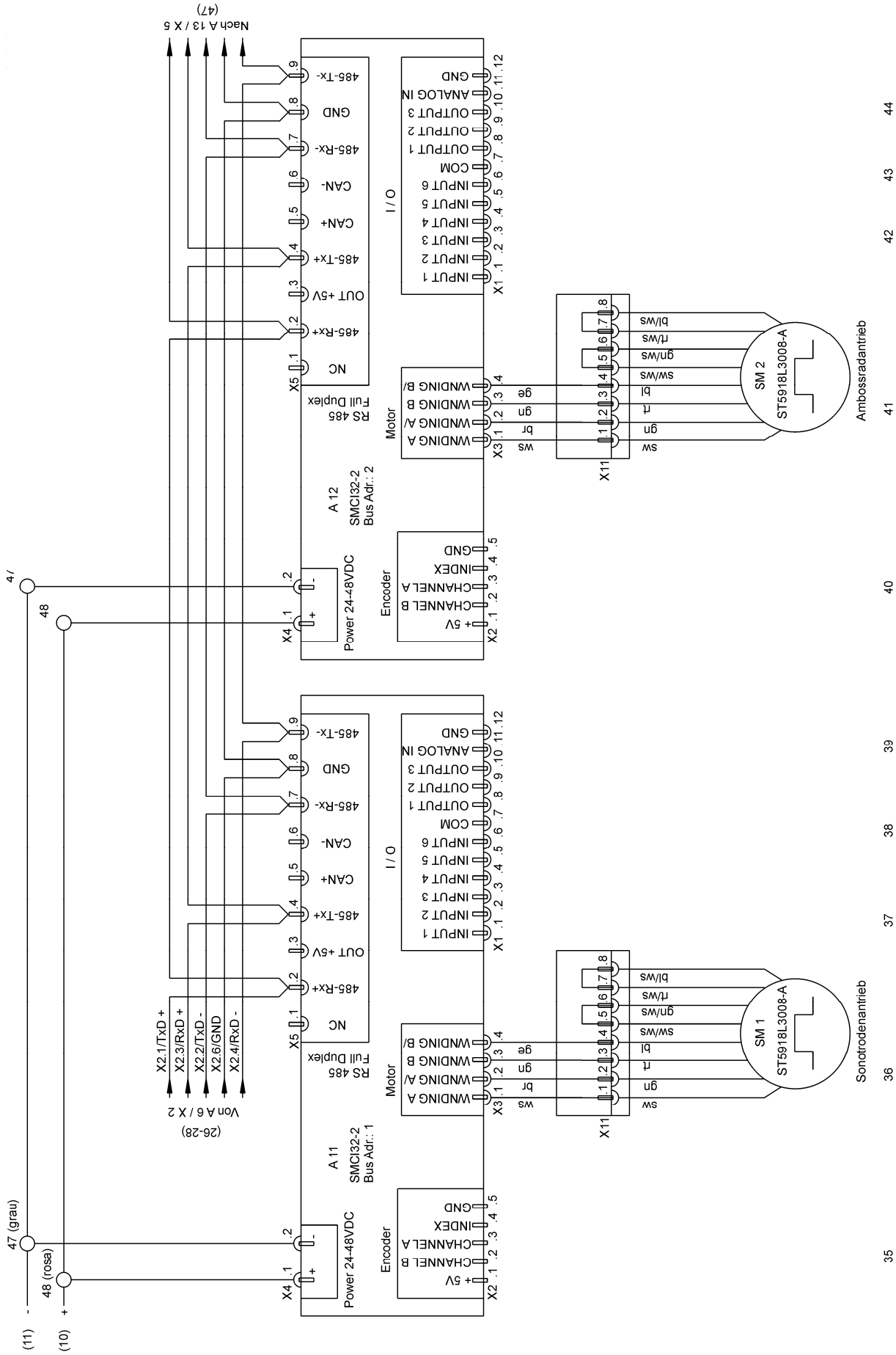


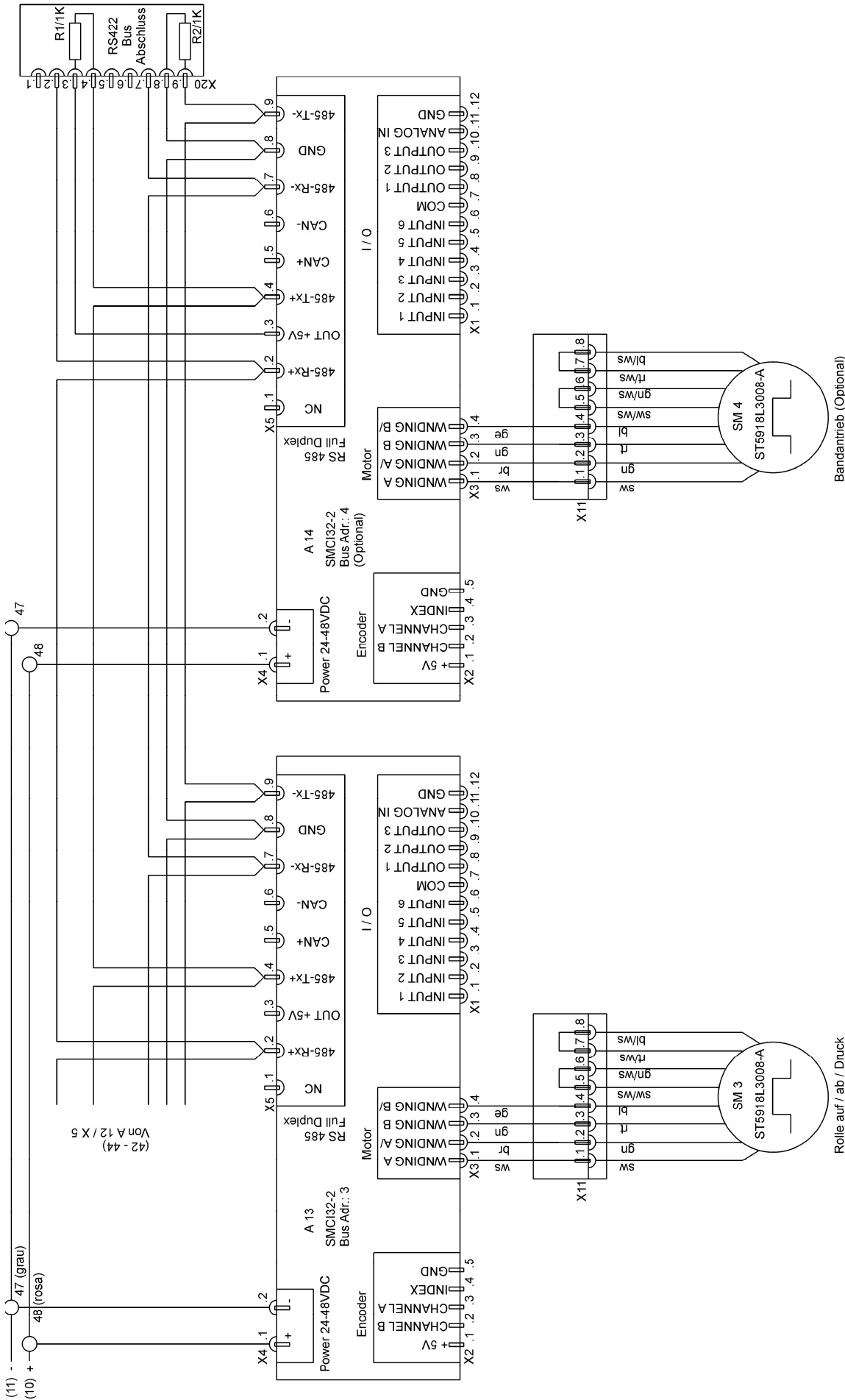
- Terminate error message.

Display	Description	Cause/remedy
Error 4 Param. 0 Param. 40 Param. 80	After switching on the machine a fault occurred in one of the stepping motor end phases. End phase 1 (sonotrode) End phase 2 (feed roller) End phase 3 (lift/lower)	Contact your PFAFF agency.
Error 10	After switching on the machine the lift/lower/pressure drive did not reach the upper limit switch within the given time.	Check whether motor and/or mechanic is blocked (tight) or limit switch is not in the right position.
Error 11	During operation the slide did not reach the upper limit switch after roller lift.	See Error 10 or limit switch is attached too high by a few millimeters.
Error 13	While lowering the roller the lower safety limit switch was not reached.	See Error 10 or inappropriate object jammed or lower limit switch incorrectly attached.
Error 20 Param. 1 Param. 2	Problem in power failure protected memory or with the memory backup battery. Battery is almost empty Battery is empty, or memory fault	Contact your PFAFF agency. Attention: Change memory backup battery only while machine is switched on. Otherwise all machine data will be lost!
Error 30 to Error 34	Generator fault	Contact your PFAFF agency.
Error 35	Generator not ready	Generator is not switched on or check the wire.
Error 40	Error while reading/writing data on/from USB flash drive	Make sure an intact, FAT32 formatted USB flash drive is plugged in, containing machine compatible data.

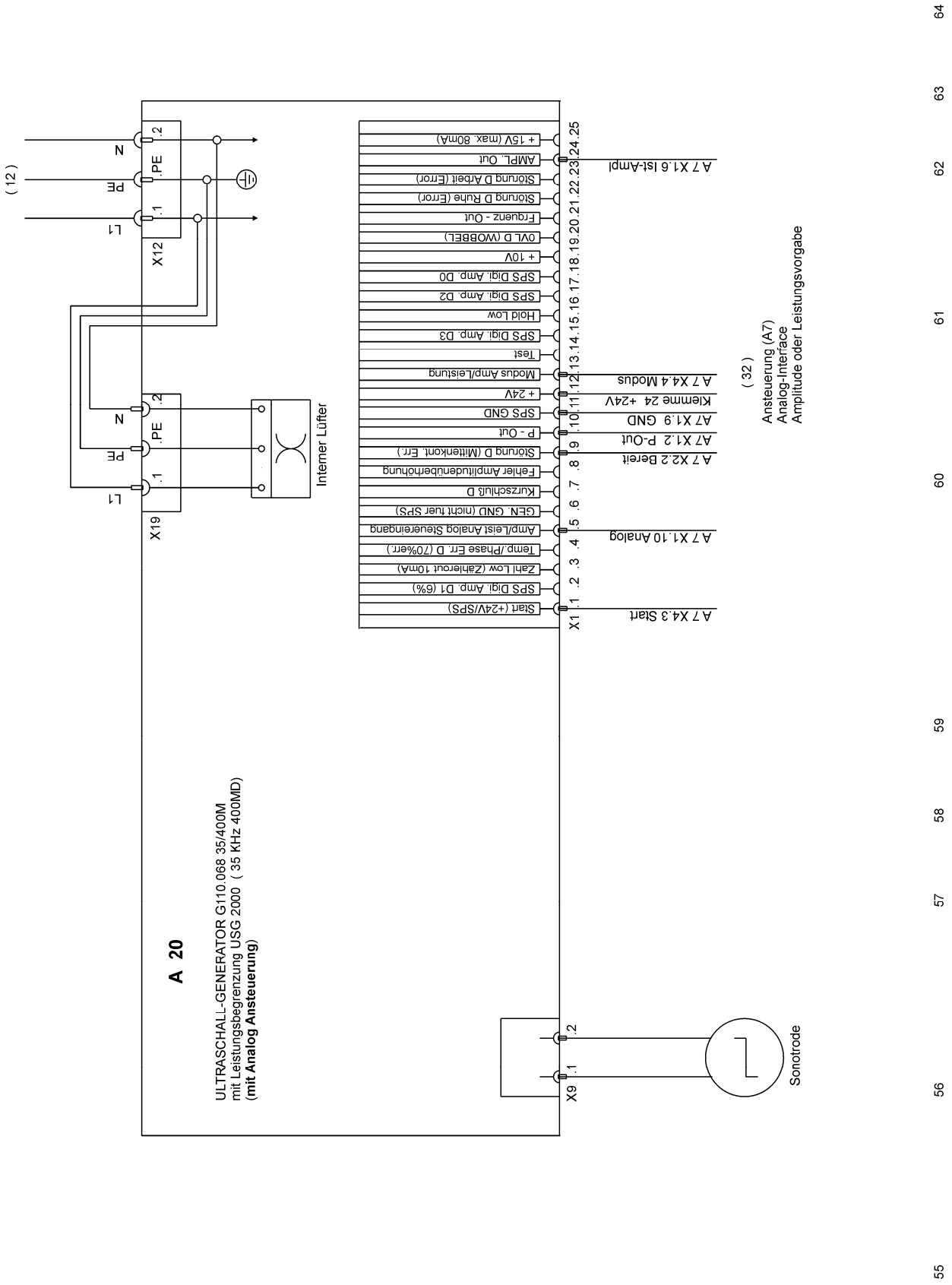








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