hd 650 DE-V

EcoPak 03/03S

OPERATING INSTRUCTIONS

Valid for device versions of 09/2023

9.694.048

1 Introduction

1.1 Preface

First of all we would like to thank you for purchasing this sealing device.
In these instructions you will find information about using the device, servicing and care.

The sealing device is a microprocessor controlled rotary sealer with a printer for packaging sealable transparent pouches and reels (med. packaging).

Please read these operating instructions carefully before commissioning so that you are familiar with the capabilities of the device and you can make optimum use of its functions.

1.2 Legend

	The exclamation mark in the triangle draws your attention to important notes in the operating instructions, which must absolutely be observed.
	This warning sign refers to measures that could result in danger to human health if they are not observed. It is compulsory to observe it.
	Tips with a hand symbol next to them relate to daily practice.

1.3 Important notice

In accordance with the intended use, the CE marking is displayed based on the following EU directive.

The Medical Device Directive 93/42/EEC and Medical Device Regulation 2017/745 (MDR) is not applicable to sealing devices.

The limit values of IEC 60601-1 must not be applied in repeated electrical inspections.

The manufacturer accepts no liability whatsoever for damage caused by tests in accordance with standards not listed in the declaration of conformity.

In the event of conversion work or interventions to the device undertaken without the express written permission of the manufacturer, the warranty shall be deemed void and any liability for physical or material damage shall be transferred to the operator.

Note
We are constantly improving our products, therefore we reserve the right to modify these operating instructions and the functions described in them.
These operating instructions apply to products from the EcoPak 03/03S series.

1.4 Cleaning

Before cleaning, disconnect the mains plug from the socket and disconnect the device from the power supply with the plug.
Clean the device only with a dry or damp soft cloth and a mild cleaning agent. (E.g.: isopropanol, spirit, etc.)
Do not allow any water to find its way into the device.

Caution! Never wet clean the device!

1.5 Safety instructions

1. Our products are in a flawless condition in terms of safety technology when they leave the plant.

2. To maintain this condition, the contents of these safety instructions as well as type plates, labelling and safety instructions attached to the device must be observed while handling the device (transport, storage, installation, commissioning, operation and maintenance).

3. This device is suitable for processing laminated films in the heat-sealing process. See also chapter 2.1 "Intended use".

4. Please check the packaging, and lodge a complaint for any damage with the carrier or parcel service immediately, before installing the device.

5. Before commissioning, ensure that the device does not show any evidence of damage. In case of doubt, contact the manufacturer or a service partner authorised by the manufacturer.

6. Do not operate the device if the power cable or the power plug is damaged.
   Do not use the device if it does not operate correctly or it is damaged in any way.
   If the mains cable or the device have been damaged, the device must be repaired by the manufacturer or by one of the manufacturer's authorised service partners.

7. The device must be connected using the mains cable included in the scope of delivery to a protective contact socket with a stable voltage. Operation on IT networks is not permitted.

8. Place the device on a stable base.

9. The device must not be installed or operated in potentially explosive areas.

10. If the sealing device is brought directly from a cold environment into a warm environment, condensation may form. Wait until temperature equalisation has taken place.
    Starting up the device when it contains condensation causes danger to life!

11. Repairs and the replacement of wear parts / spare parts must be performed only by the manufacturer or by one of the manufacturer's authorised service partners.

12. Switch off the device when it is not in use, or remove the power plug from the socket.

13. Before cleaning: Disconnect from the mains! Clean the device only with a dry or damp soft cloth and a mild cleaning agent. Do not allow any water to find its way into the device. Caution! Never wet clean the device!

14. Do not insert pointed or flat items into the import slot of the device. This can result in damage to the device and instruments.

15. Do not insert items into the louvres of the device. You may receive an electric shock or the device could be damaged.

16. Do not use the device if you have any doubts about its safety.

17. The device must not be installed or operated by persons under 16 years of age.

18. The device must not be operated unsupervised.

19. It is forbidden to operate the device under the influence of drugs or alcohol.

20. Keep hair, clothing and gloves away from moving parts! Loose clothing, jewellery or long hair can be caught by moving parts.

21. The device contains valuable materials that can be recycled and reused.
The device should therefore be disposed of at a public disposal facility near you.
The device has been labelled in accordance with Directive 2012/19/EU (WEEE) on waste electrical and electronic equipment.
This directive governs the return and recycling of scrap equipment within the EU.

2 Before starting

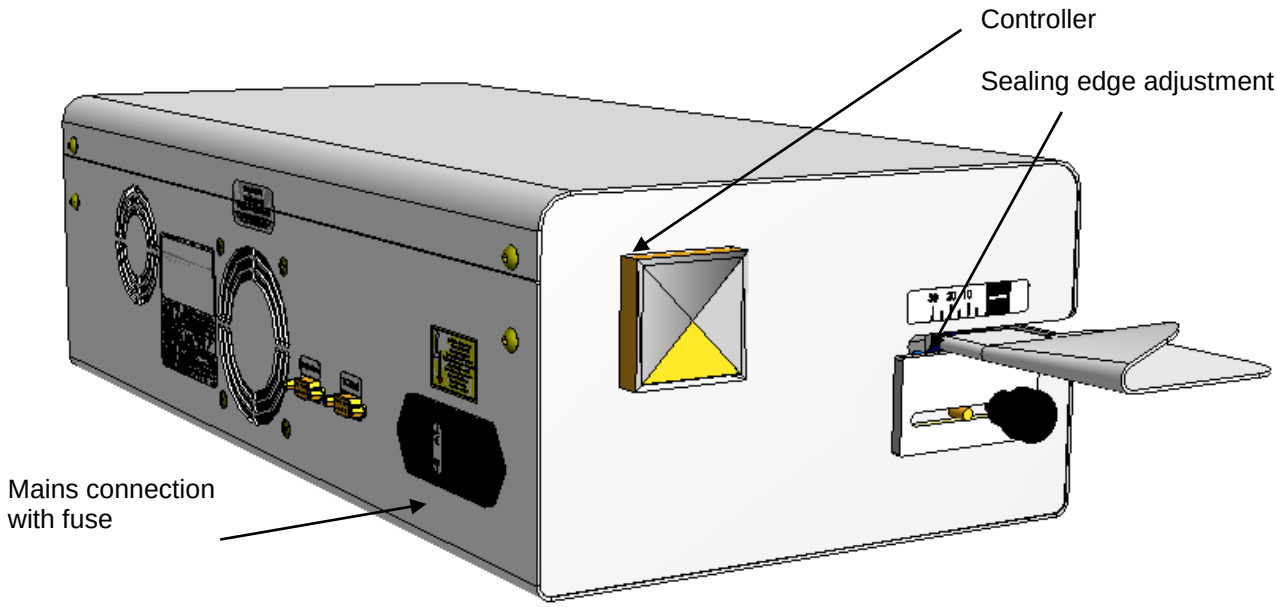
2.1 Intended use

SEALING MATERIALS	
Sealable paper pouches in accordance with EN ISO 11607-1/EN 868-4	x
Sealable pouches and tubes in accordance with EN ISO 11607-1/EN 868-5 made of film and paper as per EN 868-3	x
Sealable pouches and tubes in accordance with ISO EN 11607-1/EN 868-5 made of film and uncoated materials made of polyolefins as per EN 868-9 (e.g. Tyvek®[1])	x
Sealable pouches and tubes in accordance with ISO 11606-1/EN 868-5 made of PP fleece or PP non-woven	x[2]

NON-SEALABLE MATERIALS
Soft PVC films
Polyamide films
Coated HDPE
Aluminium-laminate film
Polyethylene films
Hard PVC films
Polypropylene films

[1] Tyvek® is a registered trademark of E.I. du Pont Nemours.
[2] Release and / or test required

2.2 Design and functions



Sealing process sequence

Step 1: After the med. packaging has been inserted, the feed is automatically switched on.

Step 2: The med. packaging is now fed and the sealing seam area is heated up to the set sealing temperature by the heating units located at the top and bottom.

Step 3: The sealing seam, which is now heated, is pressed together by the sealing rollers and sealed.

Step 4: The finished med. packaging is transported to the extraction side.

Step 5: If no item to be sealed is fed in, the feed switches off after approximately 30 seconds.

2.3 Installation

The device must not be installed or operated in potentially explosive areas.

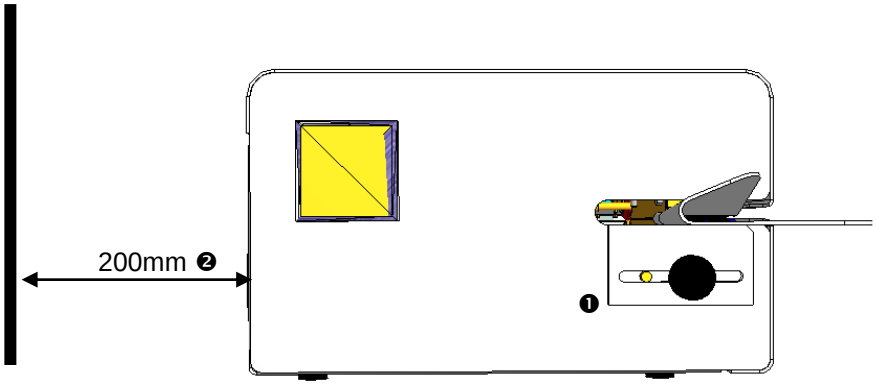
Only use sockets that are equipped with a protective conductor and where the mains voltage is stable.

The device may only be installed in a dry environment. Heavy dust, steam, dripping water or splashing water impair the function of the device.

Please make sure that the operating voltage corresponds to the specifications on the device's type plate.

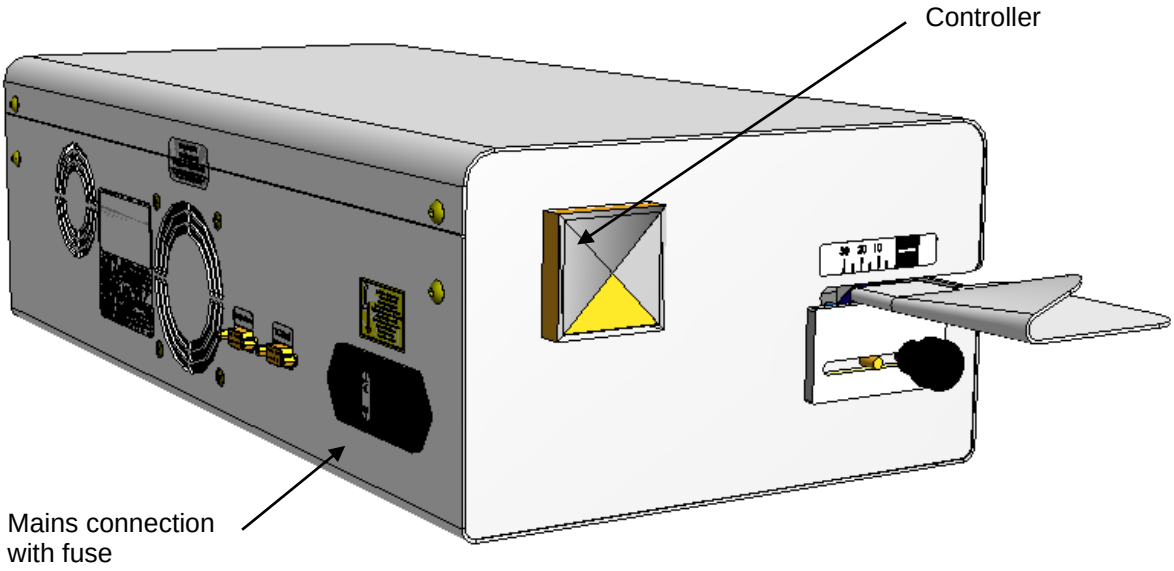
❶ Please do **not** transport the device on the peel edge setting.

❷ The distance from the device to a wall must be at least 200mm!



3 Basic functions

3.1 Switching on the device



Plug the mains cable into the mains connection.

Switch on the device with the mains switch in position "1".

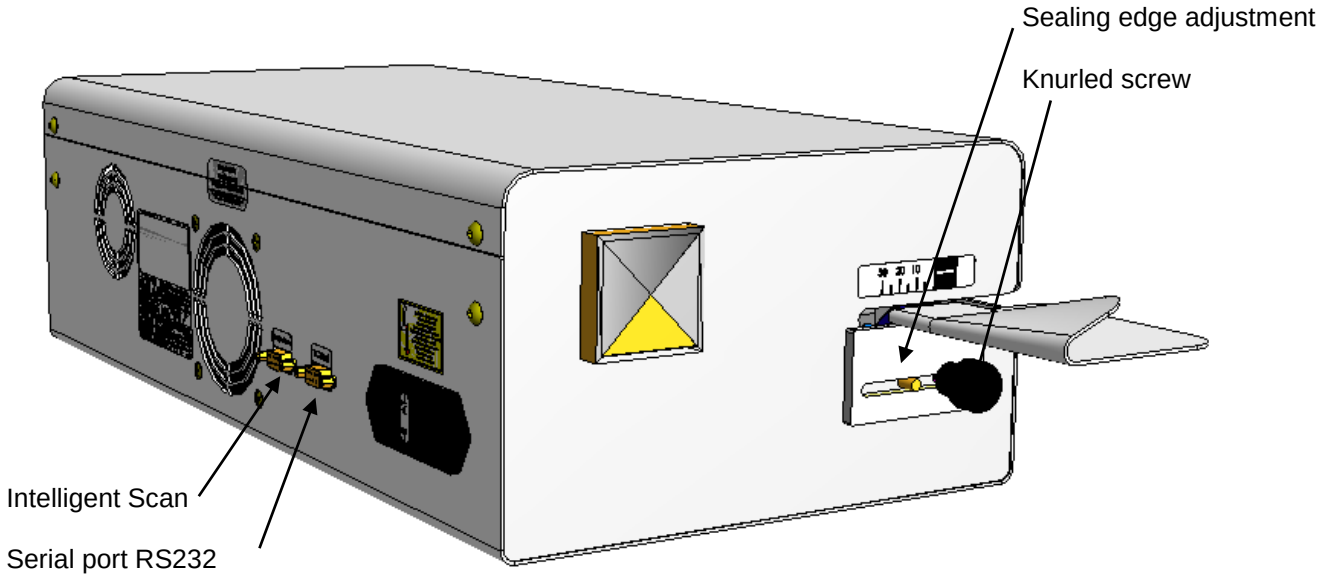
Set the required sealing temperature on the temperature controller as described in Chapter 3.3.

The device is heated up and ready for operation as soon as the set sealing temperature is displayed.

3.2 Printer Settings

All printer functions are only available in conjunction with a corresponding printer ValiPrint + print server possible.
Please feel free to contact us about this!

3.3 Operation



Schritt 1: Set the required sealing edge width. After loosening the knurled screw, the lower insertion plate can be continuously adjusted for sealing edge widths of 0 - 30mm.

Schritt 2: Insert packaging into the device from the left via the insertion plate.

Schritt 3: Remove the sealed package on the outlet side and allow to cool down briefly.

Check of the sealing seam
If leaks appear, the sealing temperature must be increased. If the film melts, the set temperature is too high.

As per DIN 58953 -7, the suitable sealing temperature is to be determined by test sealing.

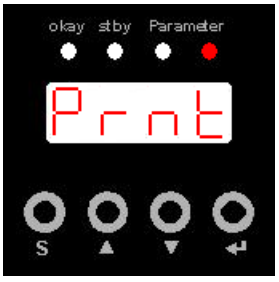
3.4 Process variables

Sealing temperature

The temperature is monitored electronically by means of a temperature sensor.
If this varies from the set value by 5°C (requirements set out in DIN 58953-7),
the drive is locked.

3.5 Setting the temperature controller

General settings

Switching on the sealing device Self-test runs for approx. 5 s (see Chapter 2.3)	**Test the control lights and the display**	
	Software version indicator	
	Configuration test	
Until the set temperature has been reached, after approx. 3-4 mins, the control light flashes "okay"	Control light "okay" flashes **Display current actual temperature**	
Once the set temperature has been reached, the control light remains permanently on	Control light "okay" on **Selected actual temperature is reached** **The sealing device is ready for operation**	

3.6 Control light functions

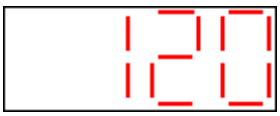
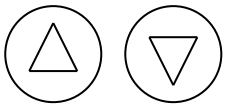
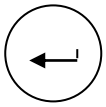
Function				
Sealing device switched on Heating-up phase	**flashes**	off	off	off
Sealing temperature = ± 5°	on	off	**on**	off
Sealing temperature <> ± 5°	off	on	off	**on**
Standby	off	**on**	off	on
Heating up after standby or changing the set temperature	**flashes**	off	off	**on**

3.7 Functions of the buttons

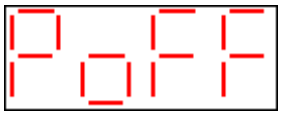
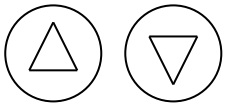
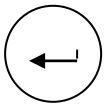
S	△	▽	↵
Menu level 1 Activation of menu level 2 **Press 3 s** Activation of menu level 3 **Press 7 s**	Switch printer off/on 	Enter personal identification	Activation of "seal check"
Menu level 2 Entering sealing temperature	Temperature value + 1	Temperature value + -1	Confirm entry
Menu level 3 **3.1** Sealing parameter view **3.2** Print data configuration **3.3** Data entry	Changeover 3.1 - 3.2 - 3.3 on Entry value +1	Changeover 3.1 - 3.2 - 3.3 off Entry value -1	Confirm entry

4 Device settings

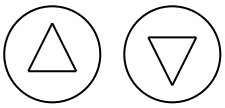
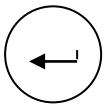
4.1 Sealing temperature entry

S Press button **3s**	Display for 1s  Display the current temperature setpoint 	
Change set temperature 		 Confirm entry

4.2 Switch printer off and on
(Just with external printer and printserver)

 Press the button	Display for 1s  Display the current setting Printer switched on  Printer switched off 	
Switch printer off and on 		 Confirm entry

4.3 Entry of a personnel code

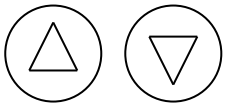
 Press the button Select new code 	Display for 1s  Displays the current personnel code  	☞ On this display, an alphanumeric code has been entered via the barcode scanner   Confirm entry

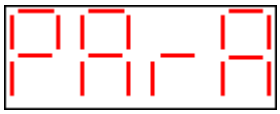
4.4 Data entry

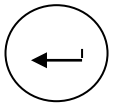
Activate

Press button **7s**

Toggle to data entry

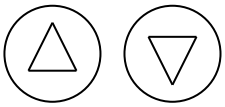






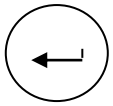
Confirm selection

Select data



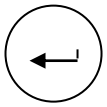
Key lock

Activated
Enter 1 - 9999

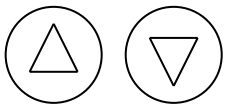


Confirm selection

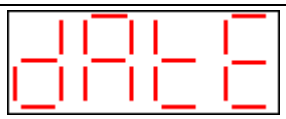
Deactivated
Enter 0

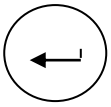


Confirm entry



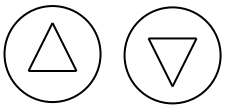
Date and time

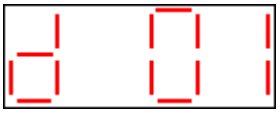


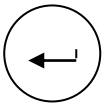


Confirm selection

Enter the day

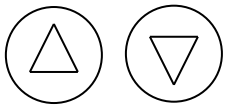


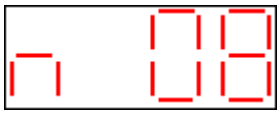


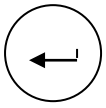


Confirm entry

Enter month

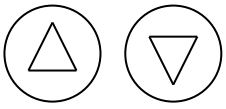


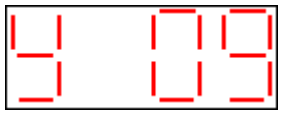


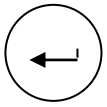


Confirm entry

Enter year

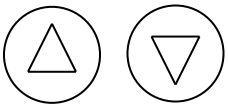


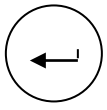




Confirm entry

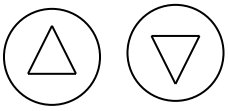
Enter hour

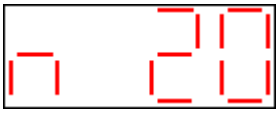


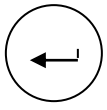


Confirm entry

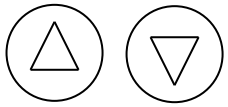
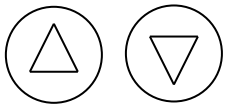
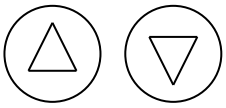
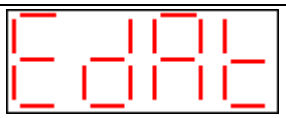
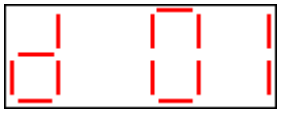
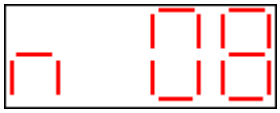
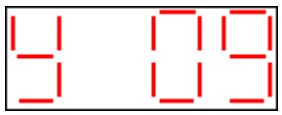
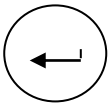
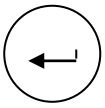
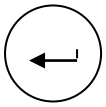
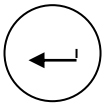
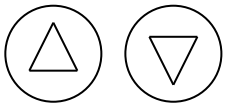
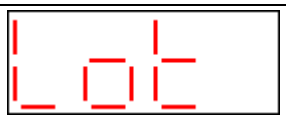
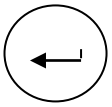
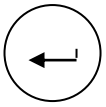
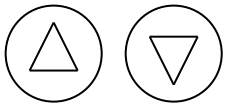
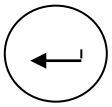
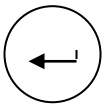
Enter minute

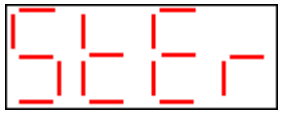
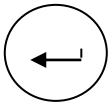
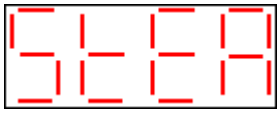
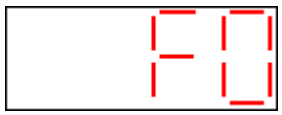
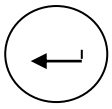


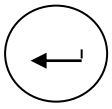
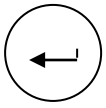




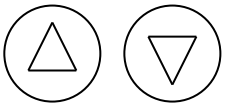
Confirm entry

Expiry date Enter the day  Enter month  Enter year 	   	 Confirm selection  Confirm entry  Confirm entry  Confirm entry
Batch Enter 0000 - 9999 	 	 Confirm selection ☞ On this display, an alphanumeric code has been entered via the barcode scanner   Confirm entry
Package content quantity Enter 0 - 99 	 	 Confirm selection  Confirm entry

Sterilisation type Select the sterilisation method		 Confirm selection
	Steam 	
	Ethylene oxide 	
	Formaldehyde 	 Confirm selection
	Plasma 	
	Dry heat 	
	Ionising radiation 	

Personnel code		 Confirm selection
	Displays the current personnel code 	
Select new code		 Confirm entry

Batch counter
Enter 0 - 9999

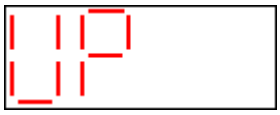


Select counting direction

If the counting direction is selected downwards, a signal sounds on reaching the value 0

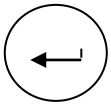
Switch off batch counter

Counting direction upwards

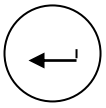


Counting direction downwards

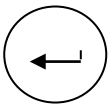
Switch off batch counter



Confirm selection

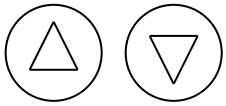


Confirm entry



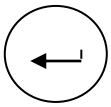
Confirm selection

Standby
Enter 0 – 60min

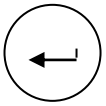


If the motor does not start until the set time is reached, the temperature is automatically set to 50°C / 122°F.

By briefly inserting a package, the temperature returns to it previously set value. Once this is reached, the sealing device is ready for use again



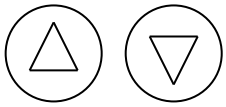
Confirm selection

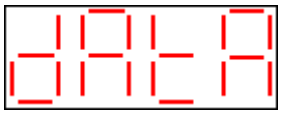


Confirm entry

Operating data
View operating hours and the absolute batch counter

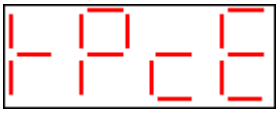
Select view

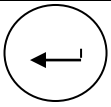




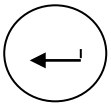
Operating hours

Absolute batch counter





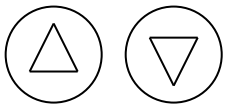
Confirm selection



Confirm selection

Measurement units

Select measurement units

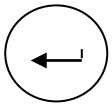


Europe
Temperature in **°C**

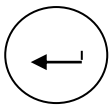
USA
Temperature in **°F**

Measurement units - Europe

Measurement units - USA

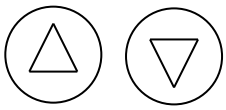


Confirm selection



Confirm selection

Character width



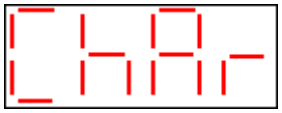
Enter 0 - 2

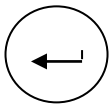
Depending on the selected setting, the characters are printed in different widths

Enter A
Automatic adjustment of the character size according to the width of the packaging and the length of the print line.

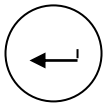
PNR

PNR



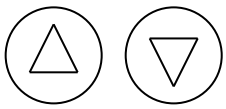


Confirm selection



Confirm entry

Monitoring
Personnel number
Enter 0 – 60min

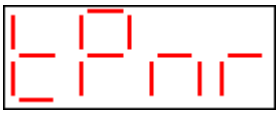


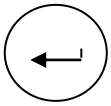
When entering a time >0, personal number monitoring is activated and the motor can only ever be started if the personal number value is 1-9999

If the set time is reached, the personal number is automatically set to 0

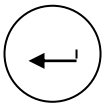
If the personal number is 0 and a package is inserted, a prompt appears

By entering a personal number 1-9999, the lock on the drive motor is released and the prompt disappears

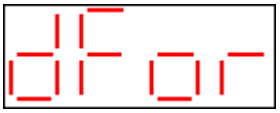


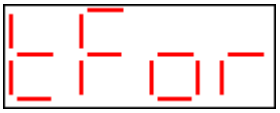
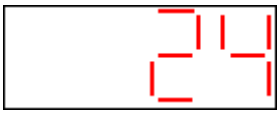


Confirm selection



Confirm entry

Date format Selection of the date format 1 DD.MM.YYYY 2 MM.DD.YYYY 3 YYYY.MM.DD 4 YYYY.MM 5 DD.MM.YY 6 MM.DD.YY 7 YY.MM.DD	 	Confirm selection Confirm selection

Time format Select time format 24 13:26 12 01:26 PM	 24-hour time format  12-hour time format 	Confirm selection Confirm selection

4.5 Select print data

Activate

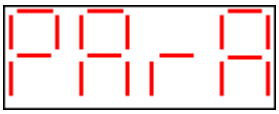
S

Press button **7s**

Switching of print data

The printing sequence is set and cannot be changed. Activated print data are always printed in this order

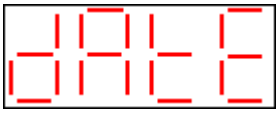
Sterilisation date
Time
Expiry date
Batch number
Personnel identification
Batch counter
Sterilisation type
Package content quantity
Text
(via barcode list with connected barcode scanner)



Confirm selection

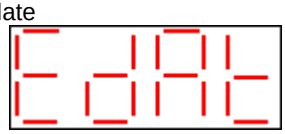
Select data to be printed

Sterilisation date

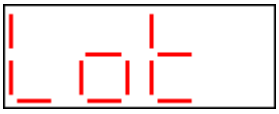


Time

Expiry date



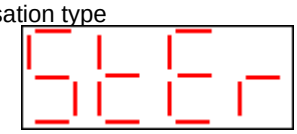
Batch number

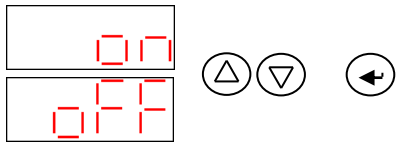


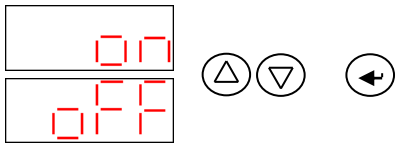
Personnel identification

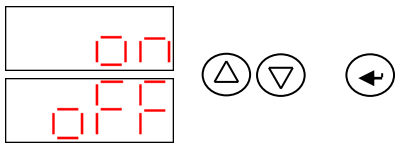
Batch counter

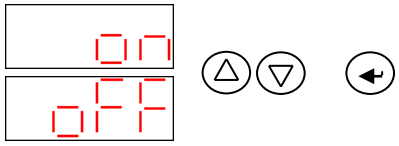
Sterilisation type

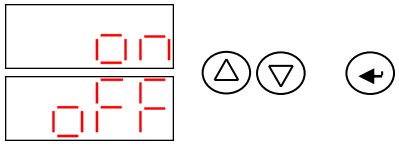


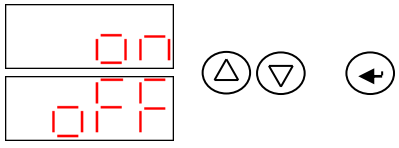


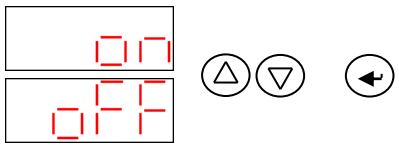




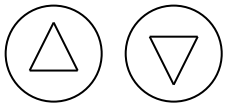
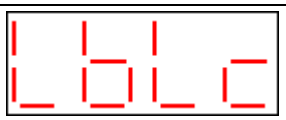
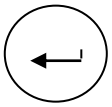
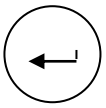




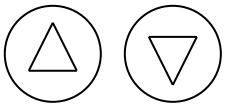
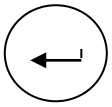
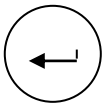


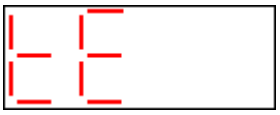
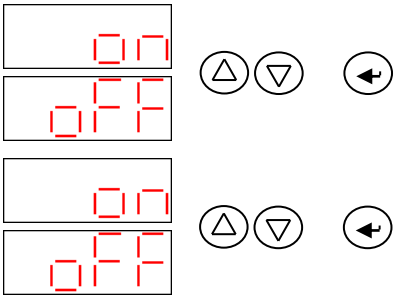


4.6 Number of printed labels

Enter 1-10 Factory setting 1 Select quantity 	 	 Confirm selection  Confirm entry

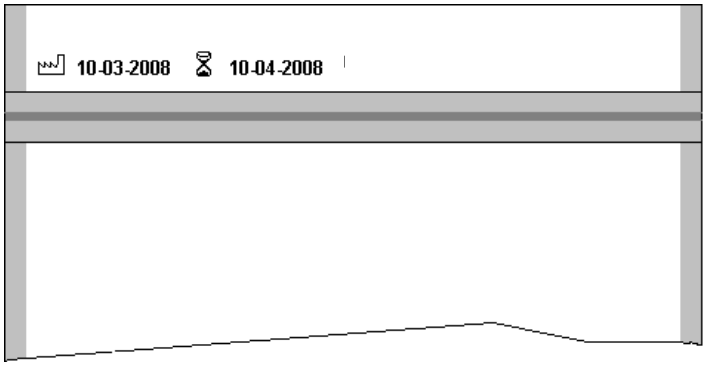
4.7 Select label sizes

Enter 1-5 Factory setting 1 Select sizes  Size 1 55x31 mm Size 2 60x44 mm Also see section 3.5.3	 	 Confirm selection  Confirm entry

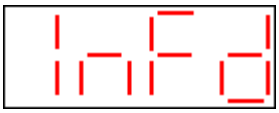
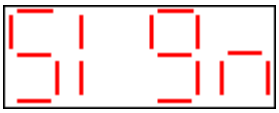
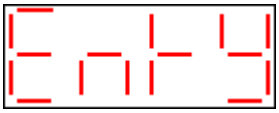
	Package content quantity  Text 	

Example

Printing the sterilisation date and the expiration date

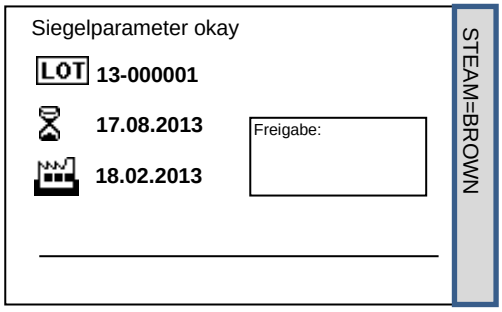


4.8 Contents label information field

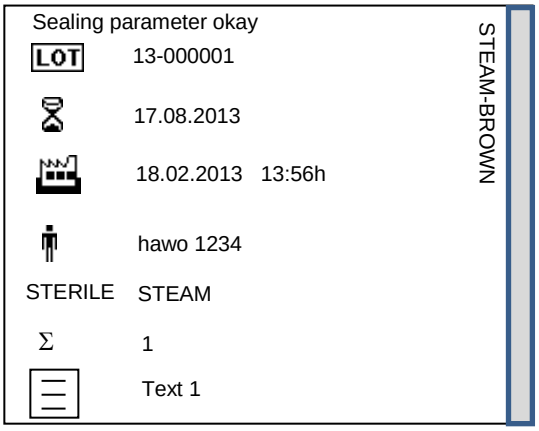
See chapter 3.5.1 Selection **Approved** Factory settings **empty** **HIBC**	   	Confirm selection Confirm selection

4.9 Label information – sealing and printing

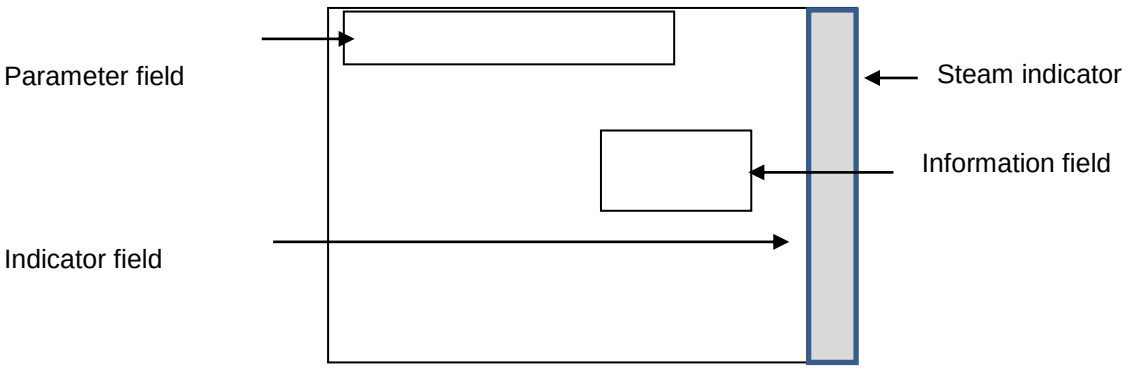
Label 1 size 55x33mm (factory setting)



Label 2 Size 60x44mm



Nomenclature of the label data



5 IntelligentScan, connection of a barcode scanner

The following entries and functions can be implemented using a hm 980 BR barcode scanner (item number 1.421.018) connected to the "Intelligent Scan" interface (see page 9), and relevant barcode lists:

Entries and functions using the controller or the barcode scanner

Entries
Sealing temperature entry
Personnel code entry
Batch number entry
Quantity entry of the packaging contents
Sterilisation type selection
Default setting of the batch counter
Character width selection
Print data selection

Functions
Switching the printer off or on
Activating/deactivating the standby function
Monitoring the personal number
Switching off or on
Seal check activation

Entries and functions only using the barcode scanner

Entries
Entry of a 10-digit alphanumeric personnel code
Entry of a 10-digit alphanumeric batch designation
Entry of an alphanumeric text
Expiry dates in 1,3,6,9,12,24 and 60 months
Functions
Switching the item counter off or on

The hm 980 BR barcode scanner (item number 1.421.018) is supplied with a CD (item number 1.490.028) enclosed, facilitating the generation and recording of the barcode lists on a PC.

Please only use barcode scanners approved by hawo.
hawo accepts no liability for damage caused by connecting and using other barcode scanners.

For further information, please contact your authorised service partner or the hawo Service Hotline: +49 (0) 6261 9770 0

5.1 Sealing seam test – “Seal Check”

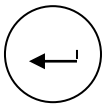
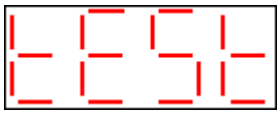
Test the critical process parameters (temperature, contact pressure and sealing time) with "SEAL CHECK".

Seal Check seal indicators are not suitable for packaging with side folds.

This test should be performed before and after the daily working process and/or before/after each batch and can be documented by routine filing of the print-out.

Additional use of the SEAL CHECK sealing indicator in combination with the SEAL CHECK function of the sealing device is recommended.

Before the test, the sealing device must be ready for use and the set temperature must have been reached.

Activate seal check **Place the seal indicator into the package** **Carry out seal procedure**	Press and hold the key for 2 s until the Seal Check function is activated.  Then release the key	

6 Troubleshooting and maintenance

6.1 Troubleshooting checklist

The troubleshooting suggestions marked with a * may be carried out only by the manufacturer or an authorised service partner appointed by the manufacturer.

Malfunction	Possible cause	Remedy
Machine fails to switch on No data on the display	Power supply -Power cable not plugged in	Check power supply If necessary, plug into a different power outlet
	-Power cable defective	Replace power cable
	Fuse	Replace the fuse* **!** If the fuse blows again, it is imperative to have the machine tested.
	Temperature controller faulty	Replace temperature controller*
Machine fails to heat up	Set temperature is too low	Increase set temperature (see 3.3.1)
	Temperature limitation activated	Switch off the machine and allow it to cool down ! If it still trips it is imperative to have the machine tested
	Temperature sensor	Replace temperature sensor*
	Heating cartridge	Check heating cartridges and replace if necessary*
	Temperature controller faulty	Replace temperature controller*
	SST module faulty	Replace SST module
No transport	Transport belt -damaged -no transport	Replace transport belt Check belt tension
	Motor sensor	Replace light barrier*
	Motor Temperature controller faulty	Replace motor* Replace temperature controller*

Malfunction	Possible cause	Remedy
Uneven material feed or loud running noise	Transport belt guide	Renew PTFE belt on guide rail (see pg. 36)
	Transport belt -damaged -no transport	Replace transport belt Check belt tension
	Motor	Replace motor*
Sealing seam will not hold	Temperature too low	Increase temperature
	Contact pressure too low	Readjust the contact pressure of the sealing roller or replace the sealing roller*
	Sealing die Distance between the sealing dies too great	Set the distance of the sealing dies to 0.5 mm*
Sealed seam distorted	Pressure applied to high	Readjust the contact pressure of the sealing roller or replace the sealing roller*
Paper side of the package is discoloured or side fold shrunk	Temperature too high	Reduce to temperature (see pg. 14 3.4.1)
No printing or printing incomplete	Ink ribbon	Ink ribbon not inserted properly Replace ink ribbon. (see pg. 35)
	Print head	Replace print head*
	Printer control faulty	Replace printer control*
	Switching power supply faulty	Replace switching power supply
Printing too faint	Ink ribbon	Replace ink ribbon.
	Print head	Readjust print head*
	Paper pressure roller	Adjust paper pressure roller*

6.2 Customer service

Your hawo customer service team is available from Mon - Fri 8 a.m. – 4:30 p.m. and on +49 (0)6261-9770-0.
You are also welcome to send questions to the following e-mail address: service@hawo.com

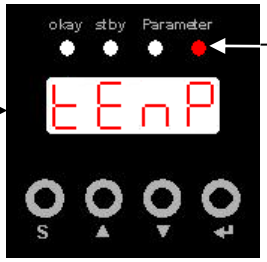
7 Alarm functions and error displays

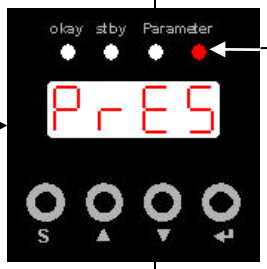
7.1 Alarm functions

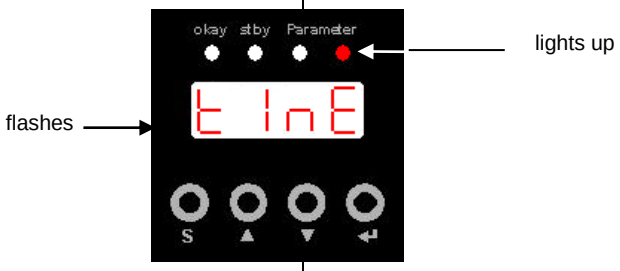
Batch counter, set with counting direction downwards, has reached the value 0	Flashes → 	
		Cancelling the alarm
		Set batch counter to a value > 0 or set the counting direction of the batch counter to up **See page 19**

7.2 Error displays

> ⚠ The troubleshooting suggestions marked with a * may be carried out only by the manufacturer or an authorised service partner appointed by the manufacturer.

Sealing temperature outside Tolerance	Flashes →  ← Lights up	
	Possible cause	**Remedy**
	Temperature sensor defective	Replace temperature sensor*
	Controller defective	Replace controller*
	SST module faulty	Replace SST module*

Contact pressure out of tolerance	flashes →  ← lights up	
	Possible cause	**Remedy**
	DMS module not calibrated	Recalibrate DMS module*
	DMS module faulty	Replace DMS module*

Sealing speed outside tolerance		
	Possible cause	**Remedy**
	Motor defective	Replace motor*

7.3 Maintenance/calibration

Like all technical devices, your device is also subject to technical wear.
In order to guarantee continuous operational readiness, your device should be inspected regularly by a competent person and serviced and calibrated at least once per year by the manufacturer or by one of the manufacturer's authorised service partners.

Maintenance cycle	Ink ribbon	PTFE tape Guiding die	Pressure roller	Toothed belt	Distance of Sealing die	Calibration of process variables
At least every 3 months						
Depending on usage, at least once a year						

Legend:

 **Check**

 **Replace**

 **Adjust**

 **Measure**

7.4 Spare parts service

☞ Simply order parts by fax:

- Please copy the following pages according to the part required
  Page 31: Maintenance and wear parts
  Page 32: Spare parts

- Enter the device number. →
- Enter the device type. →
- Enter address, fax number and order number.
- Mark items required.
- Enter quantity required.
- Sign order.
- Fax order.

To: **Sender:**

Fax no.

Your order no.	**Date**
Device type	**Serial number**

☑	Designation	Art. No.:	Qty.
☐	Ink ribbon, black	6.813.104	
☐			
☐	PTFE strip on upper guide rail	6.105.178	
☐	PTFE strip on lower guide rail	6.105.177	
☐	PTFE strip heating die	6.105.125	
☐	Plastic pressure roller	2.230.008	
☐	Toothed belt, drive	6.271.002	
☐	Toothed belt, transport sealing material	6.271.001	
☐	Heating cartridge	6.536.024	
☐	Upper sealing die assembly	1.616.049	
☐	Complete lower sealing die	1.616.050	
☐			
☐			

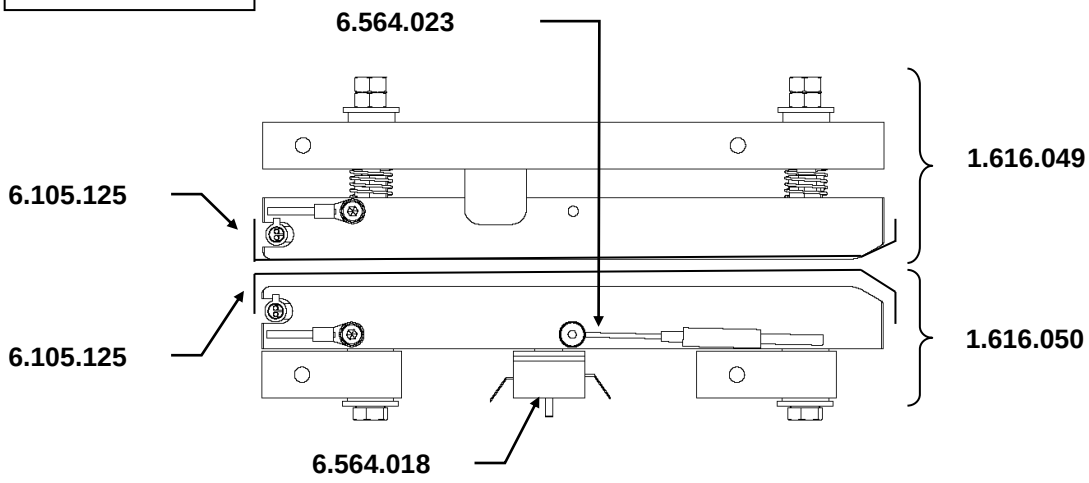
To: **Sender:**

Fax no.

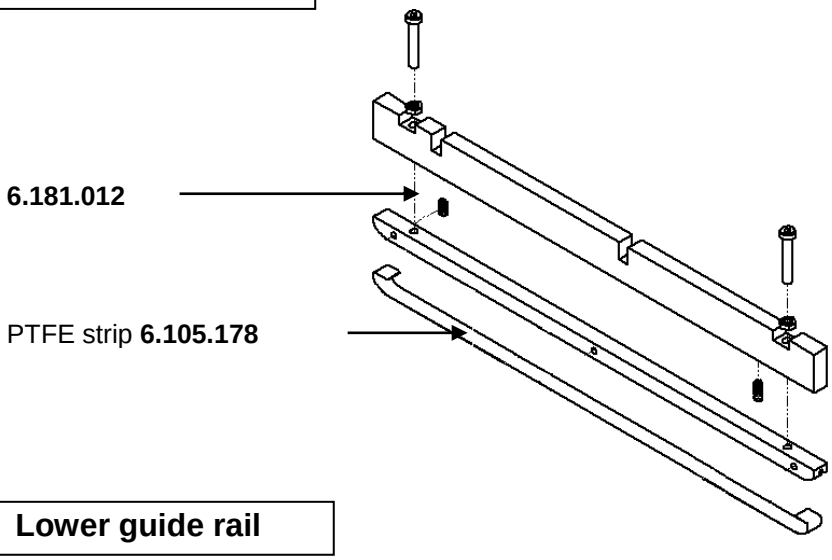
Your order no.		**Date**	
Device type		**Serial number**	
☑	**Designation**	**Art. No.:**	**Qty.**
☐	Temperature controller 100 - 240V	6.564.044	
☐	transformer	6.531.015	
☐	SST module	1.461.014	
☐			
☐			
☐	Motor optical sensor	1.561.010	
☐	Gear motor 230V	1.212.023	
☐	Lüfter 230V	6.212.029	
☐	Lüfter 115V	6.212.030	
☐			
☐	Reset the temperature limiter	6.564.018	
☐	Temperature sensor	6.564.023	
☐			

7.5 Replacement parts ordering – allocation of article numbers

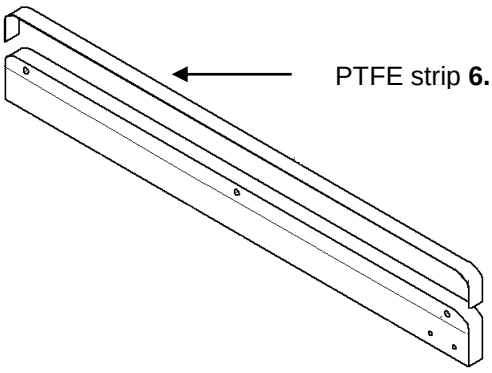
Heating die



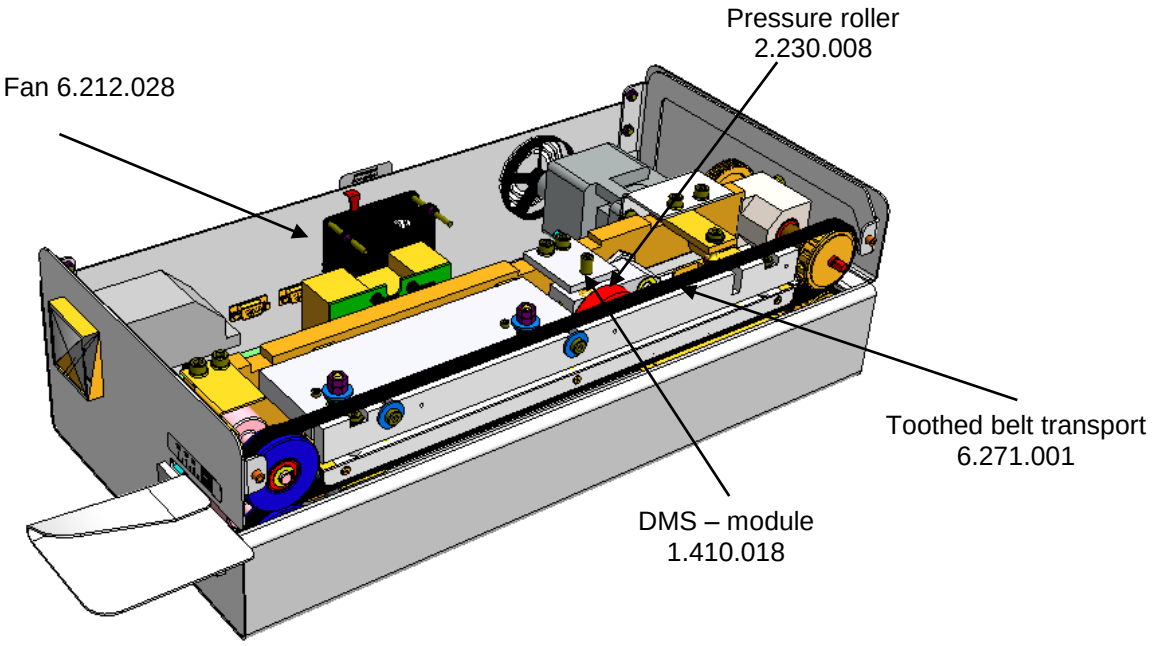
Upper guide rail

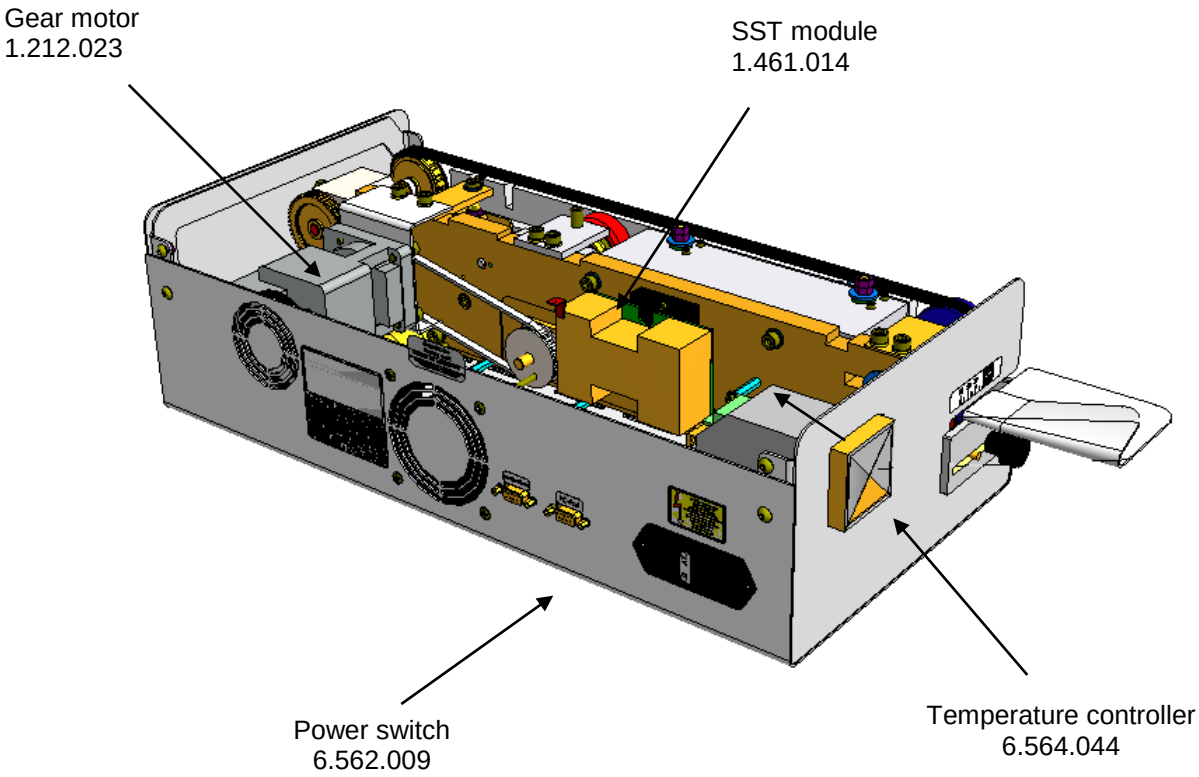


Lower guide rail



7.6 Replacement parts ordering - comprehensive overview





7.7 Replacing of wearing parts

Maintenance information

! Please use **only genuine replacement parts**

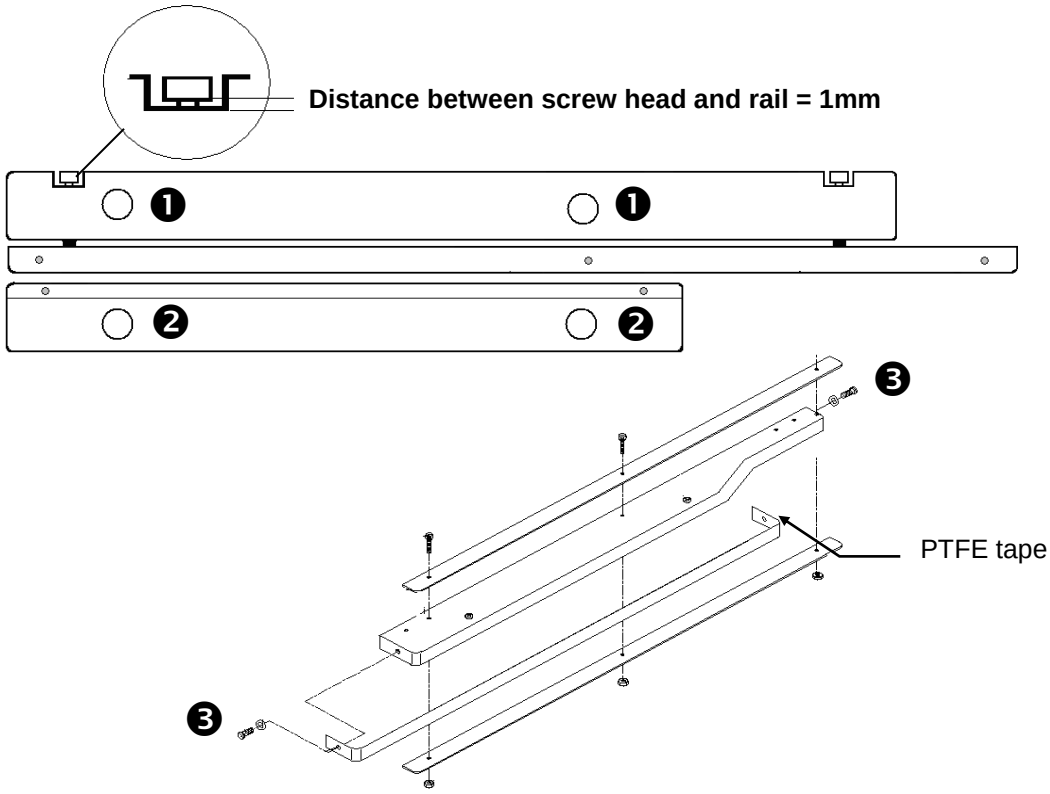
Replacement of PTFE tape on guide rail

➔Switch off the sealing device and DISCONNECT THE POWER PLUG!

- Opening the housing
- Remove mounting screws ❶ for the upper guide rail and remove the guide rail **or**
- Remove mounting screws ❷ for the lower guide rail and remove guide rail
- Remove mounting screws ❸ and detach the PTFE strip
- Pull backing foil off of new PTFE strip and glue new PTFE strip on straight and without wrinkles
- Fasten PTFE strip with screw❸
- Install the guide rails.

☞ When installing the upper guide rail, push the die down before fastening so that the gap between the screw head and the rail is 1mm on both sides. This ensures the correct contact pressure for the guide rail.

- Close housing

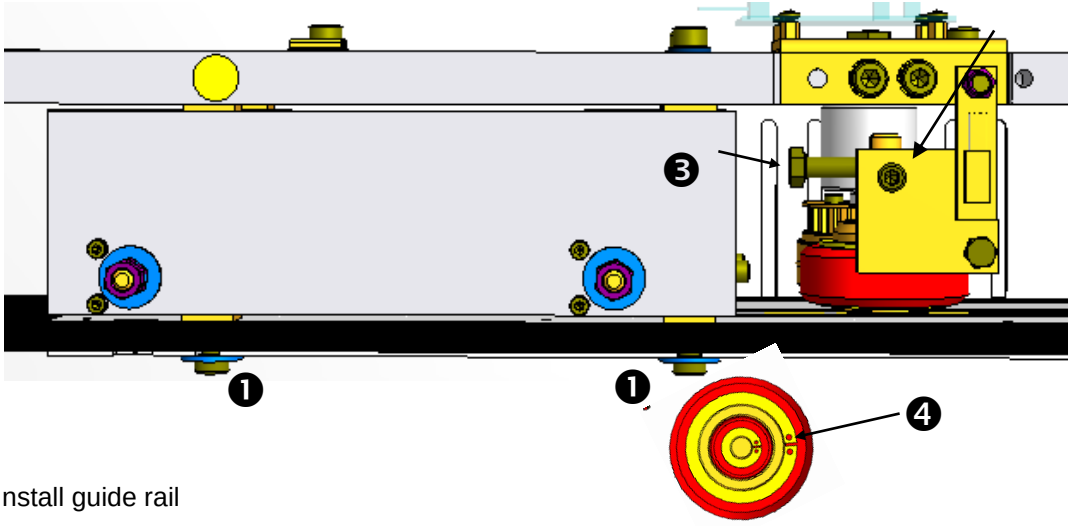


Maintenance information

Replacing the pressure roller

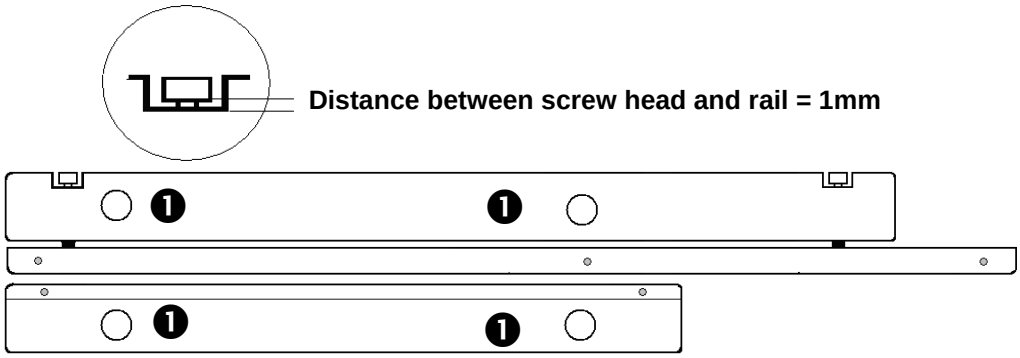
➔ Switch off the sealing device and DISCONNECT THE POWER PLUG!

- Opening the housing
- Remove mounting screws ❶ for the upper guide rail and remove the guide rail.
- Unscrew pressure adjustment screw ❷ approx. 5 mm
- Loosen mounting screw ❸ and pull the pressure roller completely out of the holder
- Detach snap ring ❹ and remove the pressure roller
- Install the new pressure roller and fasten with snap ring ❹
- Place the pressure roller fully in the holder, aligning it centrally with the lower roller
- Tighten the mounting screw ❸
- Adjust contact pressure by screwing in adjustment screw ❷ according to calibration instructions on page 41



- Install guide rail

☞ When installing the upper guide rail before fastening, push the rail as far down as possible, before final fixing with the mounting screw, ❶ so that the gap between the screw head and the rail is 1mm on both sides. This ensures the correct contact pressure for the guide rail.



- Close housing

7.8 Adjusting the process parameters

☞ After adjusting, the sealing device must remain switched on for another 10 seconds!

Temperature control

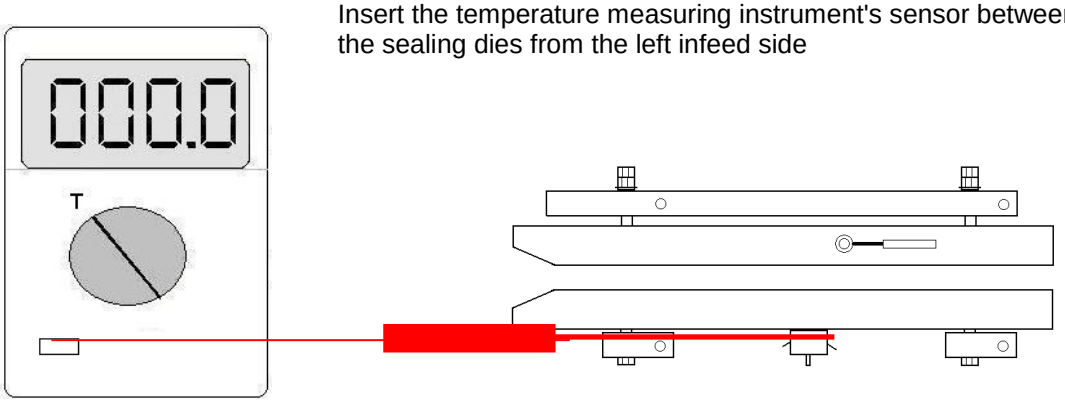
Adjustment of temperature control must always be performed after replacing a heating cartridge, after replacing the temperature sensor and after replacing the temperature controller.

The temperatures **120°C and 200°C** are measured one after another and the difference between the set value and the actual value is corrected.

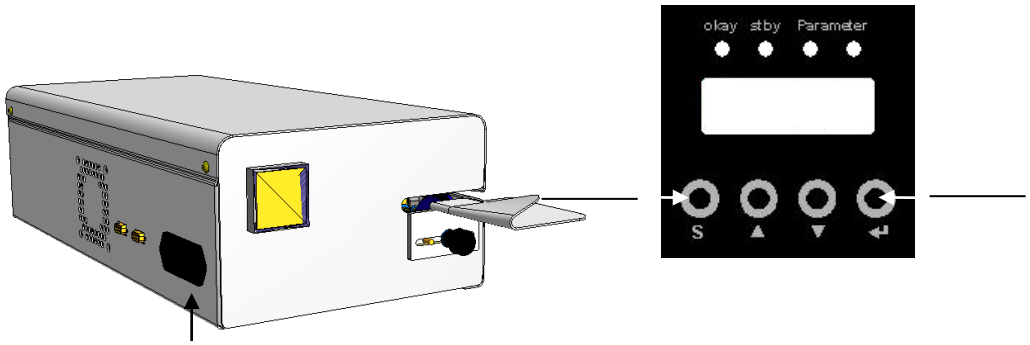
After a set temperature has been reached it is stabilised for 120s. After the 120 seconds have elapsed, the measured temperature value is entered using the temperature measuring instrument

Procedure

Insert the temperature measuring instrument's sensor between the sealing dies from the left infeed side

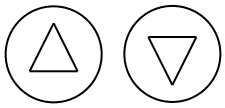


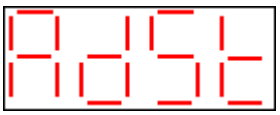
Press both buttons at the same time and switch on the sealing device

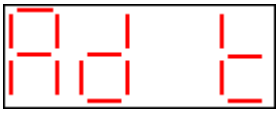


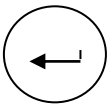
Power switch

Select temperature adjustment



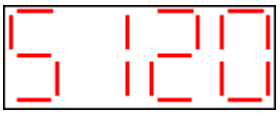






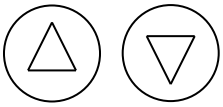
Confirm selection

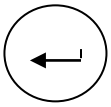
The set temperature of the device is automatically set to 120°C



After reaching the temperature, the stabilisation period starts

After this time has elapsed, enter the temperature which has been measured with the measuring device



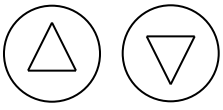


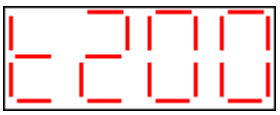
Confirm entry

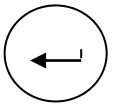
The set temperature of the device is automatically set to 200°C

After reaching the temperature, the stabilisation period starts

After this time has elapsed, enter the temperature which has been measured with the measuring device





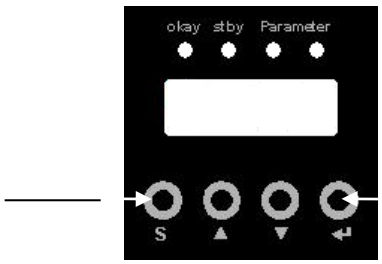


Confirm entry

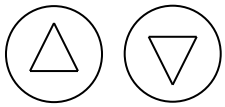
7.9 Contact pressure

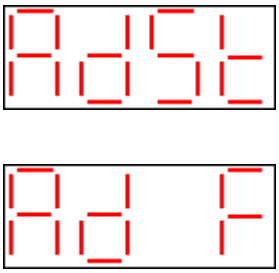
Press both buttons at the same time and switch on the machine

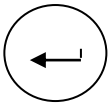
Adjustment of contact pressure must always be performed after replacing the temperature controller, after replacing the DMA module and after replacing the pressure roller.



Select contact pressure setting



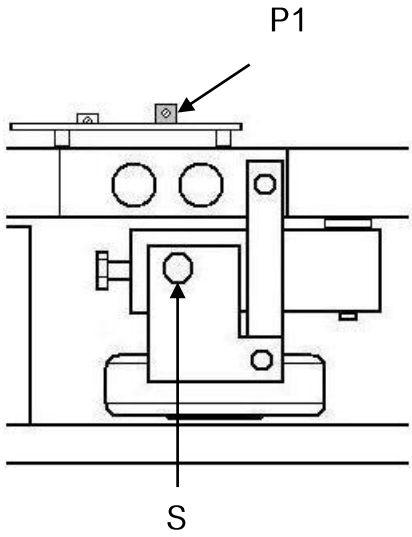


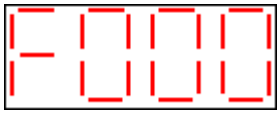


Confirm selection

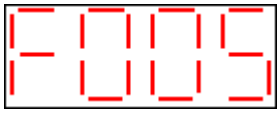
Procedure

Turn screw **S** to the left until the displayed value no longer changes

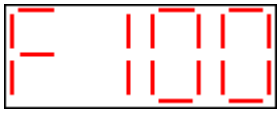


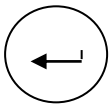


Using the potentiometer **P1**, set the 0-point of the DMS module to the value 005



By turning the screw **S** to the right, set the contact pressure to 100N

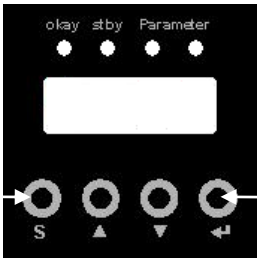




Accept setting

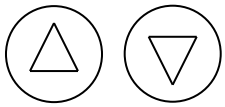
7.10 Configuration of motor monitoring

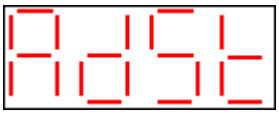
Press both buttons at the same time and switch on the machine

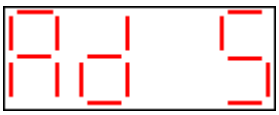


Configuration of the motor monitoring must always be performed after replacing the temperature controller, after replacing the motor and after replacing the tacho generator

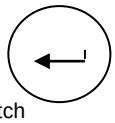
Select configuration of motor monitoring





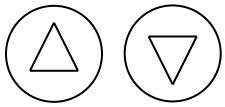


Power switch

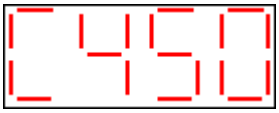


Confirm selection

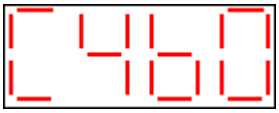
Select frequency of motor voltage

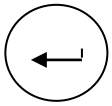


50Hz



60Hz



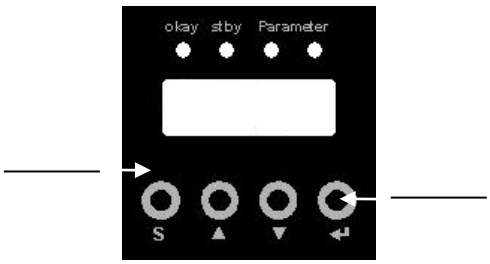


Confirm selection

The motor starts up and the measured sealing speed is displayed for 5 seconds

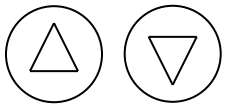
7.11 Activate default settings

Press both buttons at the same time and switch on the machine

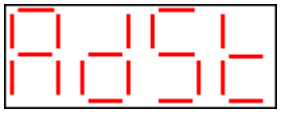


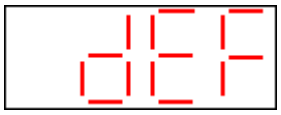
	Expiry date	6 months	
	Personal identification	Empty	is not printed
STERILE	Sterilisation type	STEAM	
Σ	Package content quantity	1	
LOT	Batch identification	Year and batch counter	
	Text	is not printed	

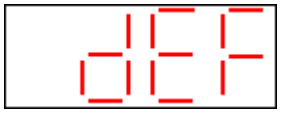
Select default setting activation

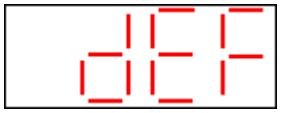


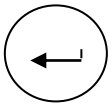
Display flashes



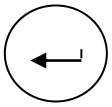








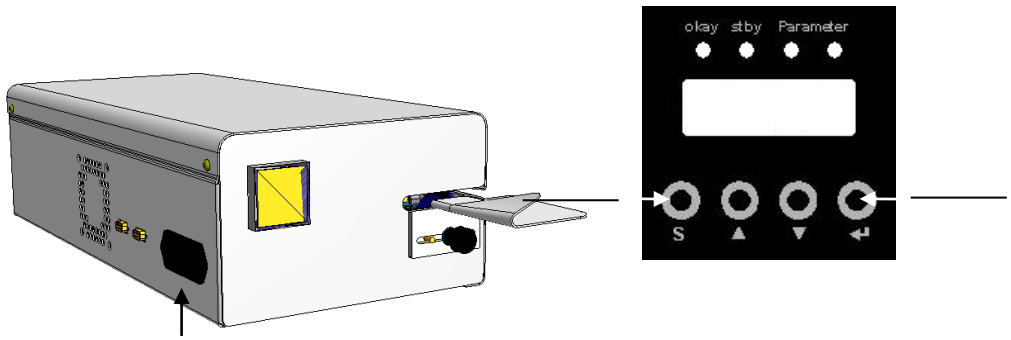
Confirm selection



Confirm activation

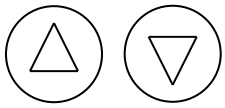
7.12 Setting the serial interface transmission rate (baud rate)

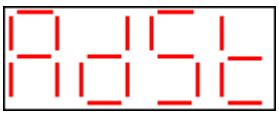
Press both buttons at the same time and switch on the sealing device

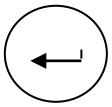


Power switch

Select baud rate setting



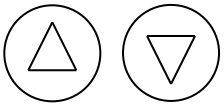




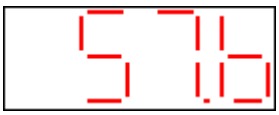
Confirm selection

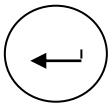
Select baud rate

1200Bd – 57600Bd



Example: Baud rate 57600Bd

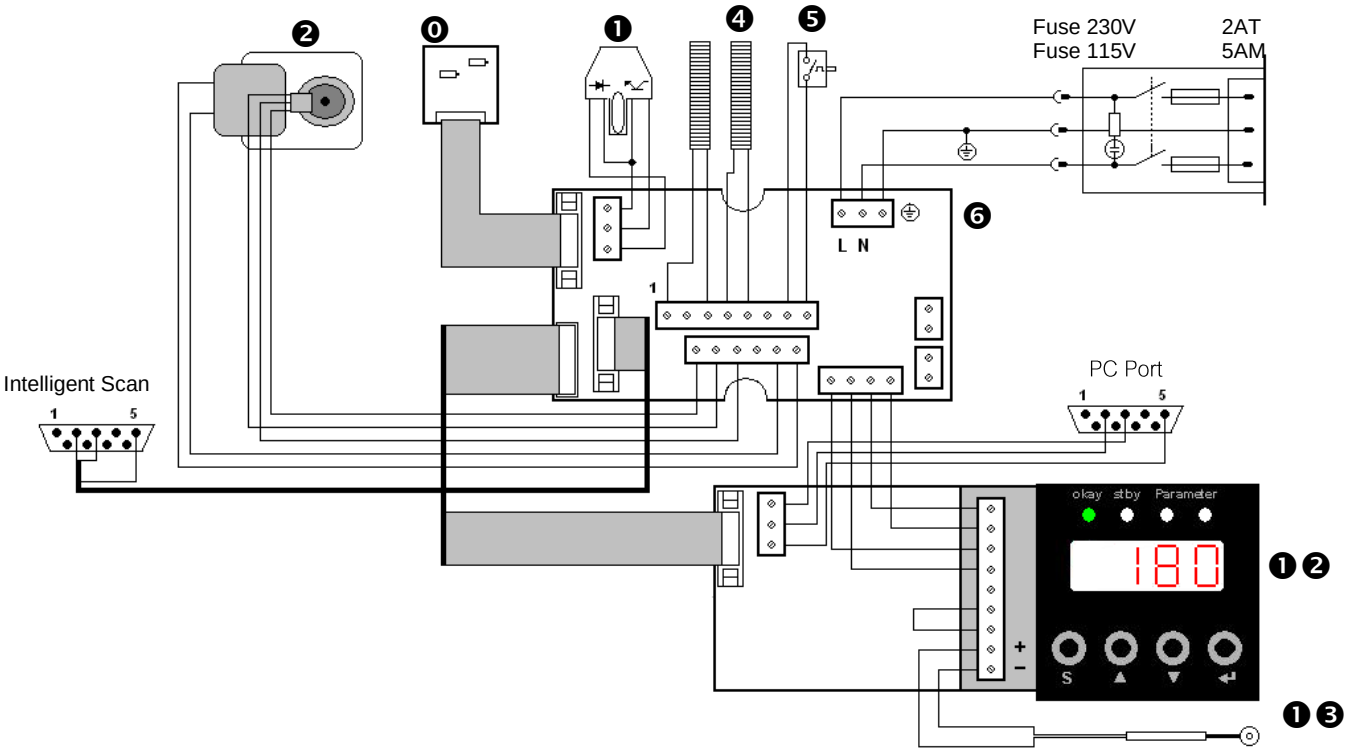




Confirm selection

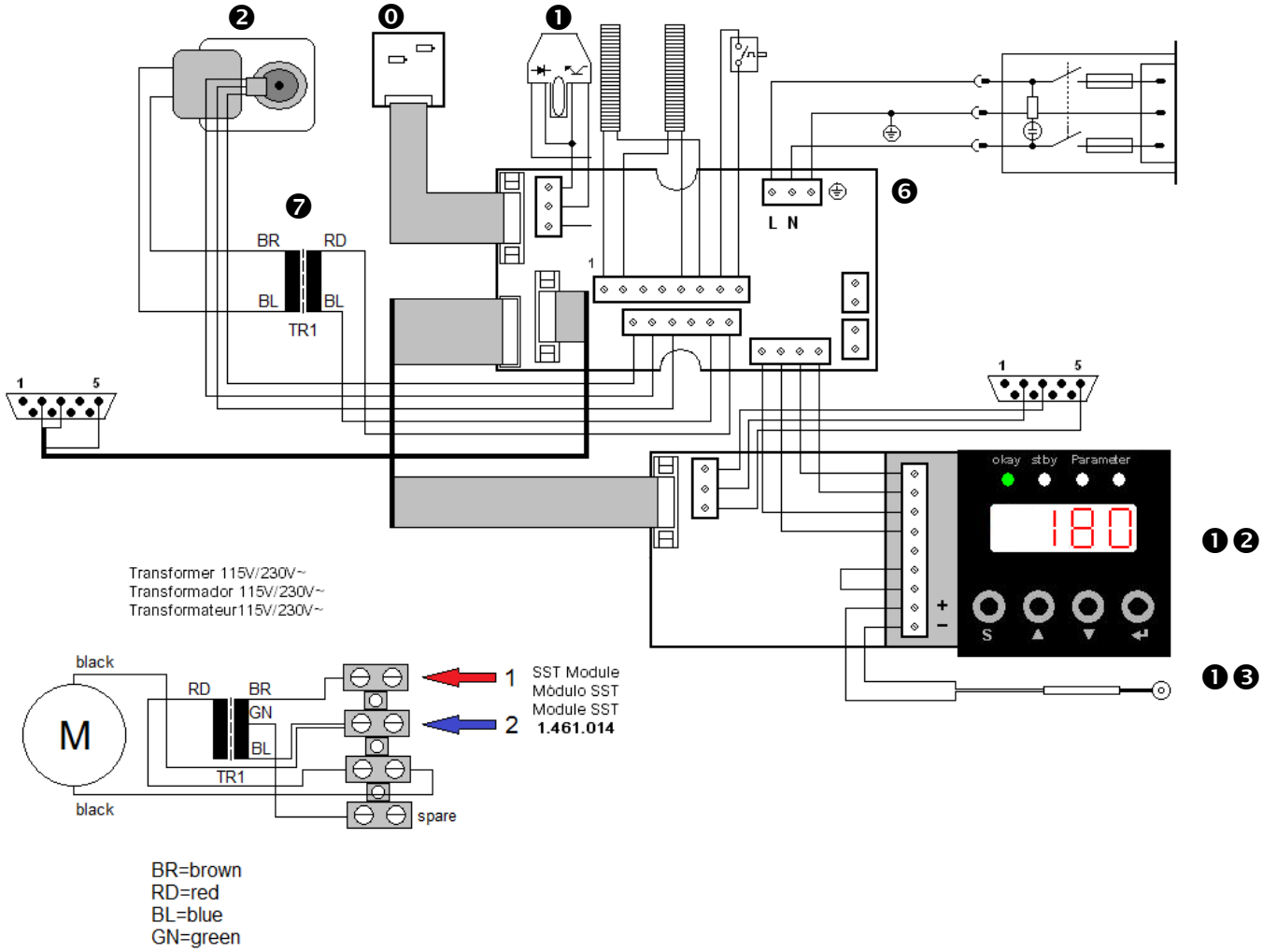
8 Technical data

8.1 Circuit diagram and wiring diagram 230V~



⓿	DMS – module	1.410.018
❶	opto-sensor	1.561.010
❷	gear motor 230V	1.212.023
❸		
❹	heating cartridge	6.564.024
❺	over temperature limit switch	6.564.018
❻	SST module	1.461.014
❼	transformer 115V/230	6.531.015
❽		
❾		
❿		
❶❶		
❶❷	temperature controller	6.564.044
❶❸	temperature sensor	6.564.023
❶❹		

8.2 Circuit diagram and wiring diagram 115V~



❼	transformer 115V/230	6.531.015
❽		
❾		
❿		
❶❶		
❶❷	temperature controller	6.564.044
❶❸	temperature sensor	6.564.023
❶❹		

8.3 Specifications

Connection data

Mains connection		[V]	115 / 230
Mains frequency		[Hz]	50 / 60
power consumption	max. heating up average	[W]	500 390 ~ 160
Mains fuse 115V / 230V		[A]	5A / 2A

Mechanical system

Dimensions Including Infeed section	Length Width Height	[mm]	465 255 155
Housing			Metal, powder-coated
Weight	230V~ 115V~	[kg]	14,7 15,7
Seal distance from edge		[mm]	0 – 35
Sealing seam width		[mm]	12 +/- 1
Sealing system			Seal Peak
Sealing seam length		[mm]	Unlimited
Distance from medical product		[mm]	>30 (as per DIN 58953-7)

Process variables/sealing parameters

Sealing temperature	max.	[°C]	220
Tolerance for sealing temperature		[°C]	±5
Throughput speed [fixed]		[m / min]	10
Temperature standard tolerance		[%]	±2
contact pressure		[N]	100 (factory setting)
Contact pressure switch-off tolerance		[%]	±20

Electronics and communication systems

System		electronic
interface	RS232	yes
Electrical protection class		1

Environmental parameters

Ambient temperature	[°C]	5-25
Heat output	[kJ/s]	0.1
Noise intensity acc. to Machinery Directive 2006/42/EC Appendix I 1.7.4.2 u.)	[dB/ A]	<70
Relative humidity	[%]	30-80 non-condensing

9 Declaration of conformity

hawo 74847 Obrigheim / Germany	Konformitätserklärung – Declaration of Conformity Déclaration "CE" de Conformité Declaracción de conformidad de la C.E. Dichiarazione di conformità - Declaração de conformidade	9.694.048C
Gültig ab: 24.07.2023 Valid from: 24.07.2023		Seite 1/1 Version 1.01

Hiermit erklären wir, daß die Folienschweissmaschinen:
Herewith we declare that the Foil sealing unit:
Par la présente, nous déclarons que la gamme de Soudeuse de films plastique:
Por la presente certificamos que las máquinas embolsadoras modelos:
Dichiariamo con la presente che le macchine per saldatura di fogli:
Por este meio se declara que as máquinas de selagem de folhas de plástico:

hd 650 DE-V ECOPAK 03/03S

folgenden einschlägigen Bestimmungen und harmonisierten Normen entsprechen:
complies with the requirements of the following regulations and harmonised standards:
corresponde aux dispositions suivantes et standards harmonise:
objeto de esta Declaración cumpie con las siguientes disposiciones:
Sono conformi alle seguenti dieposizioni in materia nonché alle seguentie norme armonizzate:
corespondem às sequintes determinações e normas harmonizadas:

EG - Maschinenrichtlinie Machinery directive Directive "CE" rel. aux machines Directiva de Maquinaria de la CE Direttiva CE sulle maccine nella versione Directiva da UE relativa a maquinaria		2006/42/EG
EMV-Richtlinie Directive CEM Direttiva CEM	EMC-directive Directiva de CEM Directiva CEM	2014/30/EU
WEEE-Richtlinie Directive WEEE Direttiva WEEE	WEEE-directive Directiva de WEEE Directiva WEEE	2012/19/EU
RoHS-Richtlinie Directive RoHS Direttiva RoHS	RoHS-directive Directiva de RoHS Directiva RoHS	2015/863/EU
Harmonisierte Normen Standard harmonise Norme armonizzate	Harmonized standards Las normas armonizadas Normas harmonizidadas	EN ISO 12100:2010 EN ISO 13857:2019 EN IEC 63000:2018 EN 60204-1:2018 EN IEC 61000-6-1:2019 EN IEC 61000-6-3:2021

Verantwortliche Person für die Technischen Unterlagen siehe unten
Responsible person for technical documentation see below
La personne responsable pour la documentation technique est mentionnée au-dessous

hawo GmbH
74847 Obrigheim/Germany
T +49(0) 6261/9770-0
info@hawo.com

Torsten Ehrhardt
Prokurist / authorized officer

hawo GmbH, Obere Au 2, D-74847 Obrigheim, Germany

hawo GmbH Obere Au 2-4 74847 Obrigheim / Germany	T + 49 (0) 6261 / 9770-0 F + 49 (0) 6261 / 9770-69 info@hawo.com www.hawo.com	Amtsgericht Mannheim: HRB 441011 Geschäftsführer: Christian Wolf Firmensitz: Obrigheim	This document and the contents hereof are considered proprietary and confidential information of hawo and disclosure to unauthorized individuals or dissemination, publication, or copying is prohibited without prior written consent by hawo GmbH, 74847 Obrigheim, Germany.

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hawo GmbH
Obere Au 2 – 4
74847 Obrigheim
Germany
T +49 (0) 6261 / 9770 - 0
F +49 (0) 6261 / 9770 - 69
info@hawo.com
www.hawo.com

hawo USA
321 North Clark Street
Suite 1425
Chicago IL 60654
T +1 312 585 8329
F +1 312 644 0738
info@hawo-usa.com
www.hawo-usa.com

hawo ASIA
25 International Business Park
#03-105 German Centre
Singapore 609916
T +65 6433 5339
F +65 6433 5359
info@hawo-asia.com
www.hawo-asia.com