

## **Translation Original - Operating Instructions**

<b>Tecno Seal Print</b>	<b>Introduction</b>	<b>Section 1</b>
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## ENGLISH

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## Introduction

### 1.1 Preface

First of all we would like to thank you for purchasing the sealing machine. In these instructions you will find information about using the machine, servicing and care as well as process validation.

The sealing machine is a **microprocessor** controlled rotary sealer with printer for packaging sealable pouches and reels (SBS<sup>1</sup>).



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



Always keep these instructions close to the machine.

### 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, which relate to daily practice.

<sup>1</sup> Steril-Barriere-System

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### 1.3 Important notice



In accordance with the intended use, the CE marking is displayed based on the following EU directives:  
2006/42/CE, 2006/95CE and 2004/108/CE.

Medical machine directive 93/42/CE is not applicable to sealing machines.

The limit values of IEC 60601-1 may 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 Conformity Declaration.

**Note**

Because we are constantly improving our products, we reserve the right to modify these operating instructions and the functions described in them.

**These operating instructions apply to products from software version V1.38 onwards.**

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## 1.4 Safety instructions



1. Our products left the plant in perfect safety condition.
2. To maintain this condition, the content of these safety instructions as well as type plates, labeling and safety instructions attached to the machine must be observed while handling the machine (transport, storage, installation, commissioning, operation and maintenance).
3. This machine is suitable for processing laminated films in the heat-sealing process. See also chapter 2.1 "Designated use".
4. Please check the packaging and lodge a complaint for any damage with the carrier or parcel service immediately before installing the machine.
5. Before commissioning, ensure that the machine does not show any evidence of damage. In case of doubt, contact the manufacturer or a service partner authorized by the manufacturer.
6. Do not operate the machine if the power cable or the power plug is damaged. Do not use the machine if it does not operate correctly or it is damaged in any way. If the mains cable or the machine have been damaged, the machine must be repaired by the manufacturer or by one of the manufacturer's authorized service partners.
7. The machine must be connected using the mains cable included in shipment to a protective contact socket with a stable voltage. Operation on IT networks is not permitted.
8. Please place the machine on a stable base.
9. The machine must not be installed and operated in explosive areas.
10. If the sealing machine is brought directly from a cold environment into a hot environment, bedewing may occur. Wait until temperature equalization has taken place.  
**Starting up the machine when it is bedewed causes danger to life!**
11. Fuse changes and repairs must only be performed by the manufacturer or by one of the manufacturer's authorized service partners.
12. Switch off the machine when it is not in use or remove the power plug from the socket.

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13. **Before cleaning: Disconnect from the mains!** Clean the machine only with a dry or damp soft cloth and a mild cleaning agent. Do not allow any water to find its way into the machine. **Caution!** Never wet clean the machine!!
14. Do not insert pointed or flat items into the import slot of the machine. This can result in damage to the machine and instruments.
15. Do not insert items into the louvers of the machine. You may receive an electric shock or the machine could be damaged.
16. Do not use the machine if you have any doubts about machine safety.
17. The machine must not be installed or operated by persons under 16 years of age.
18. The machine must not be operated unsupervised.
19. It is forbidden to operate the machine under the influence of drugs or alcohol.
20. Your appliance contains valuable materials which can be recovered or recycled. Leave it at a local civic waste collection point. This appliance is labeled in accordance with European Directive 2002/96 EC concerning used electrical and electronic appliances equipment-WEEE).  
The directive determines the framework for the return and recycling of used appliances as applicable throughout the EU.



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## 1.5 Notes on the operation of the device



### Checking the sealing seam<sup>2</sup>

Each sealing seam must be subjected to a visual inspection after the sealing process and after sterilisation.

The sealing seam must be intact across the entire width and length and must be fully sealed.

There must be no channels, kinks, folds, air pockets or indents.

There must be no visible signs of scorching or melting.

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<sup>2</sup> The ASTM F1886 test method listed in EN 11607-1 Appendix B, "Standard test method for determining integrity of seals for medical packaging by visual inspection" can be used for routine visual inspections.

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## 2 Before starting Up

### 2.1 Intended use

The machine is intended only for commercial and industrial use and may only be used for the intended use and with following materials.

#### Sealable materials

Pouches and reels in accordance with EN 868-5 and EN ISO 11607-1\*

Paper pouches in accordance with EN 868-4\*

HDPE (e.g. Tyvek™, 1059B, 1073B and 2FS)\*

Aluminum laminate film

\* also with side gusset

The correct sealing temperature must be identified by means of test sealings (DIN 58953-7).

The machine output depends on the condition of the sealing material used.

#### Non-sealable materials

Polyethylene film

Soft PVC film

Hard PVC foils

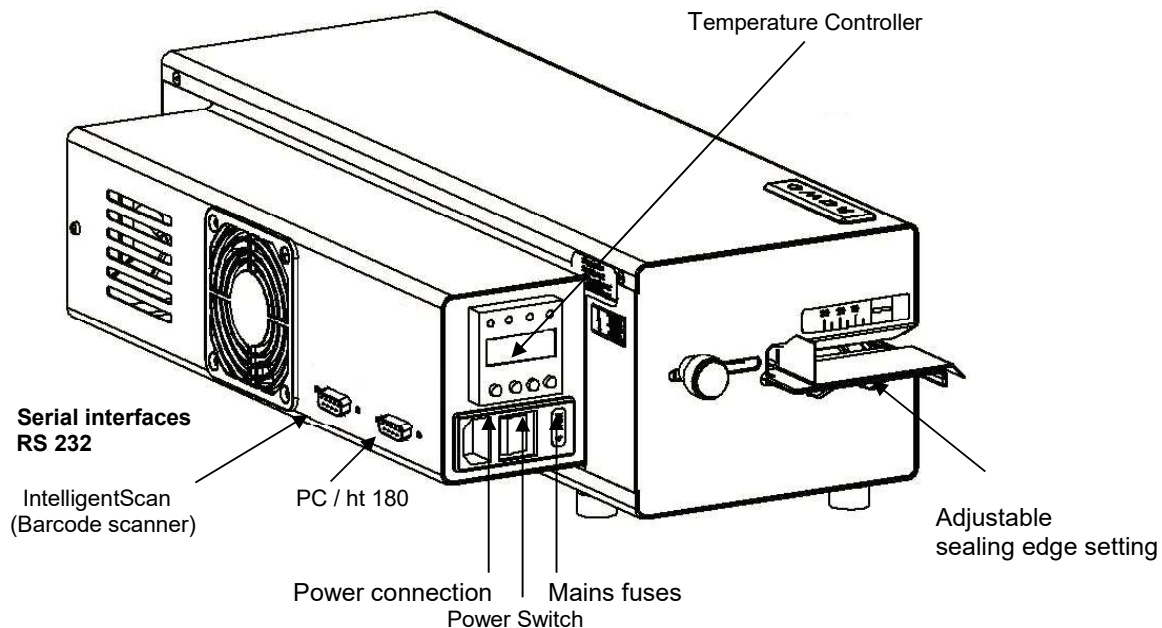
Polyamide film

Polypropylene film



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## 2.2 Composition and function



### Sealing and printing process sequence

1. After the sterilization packaging has been inserted, the feed process is started automatically by means of photoelectric cell.
2. The sterilization 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. The sealing temperature is monitored.
3. The sealing seam, which is now heated, is pressed together by the sealing roller and sealed.
4. The printing process is triggered by means of a photoelectric cell when the pressure is switched on and the activated print data is printed onto the sealed packaging.
5. The finished sterilization packaging is transported to the extraction side.
6. If no item to be sealed is fed in, the feed switches off after approximately 30 seconds.
7. The set parameters remain saved after the machine is switched on or off, or after a power failure. The date and time are updated automatically (auto safe).

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## 2.3 Installation instructions and commissioning

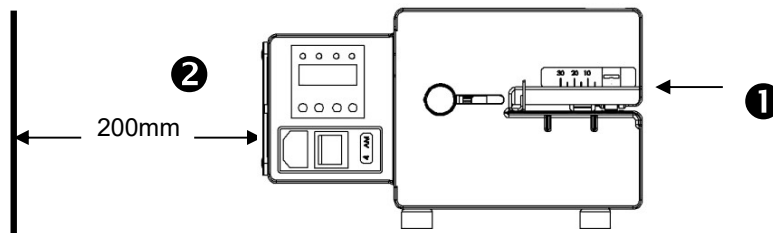


Prior to installation, read the safety notices in chapter 1.4

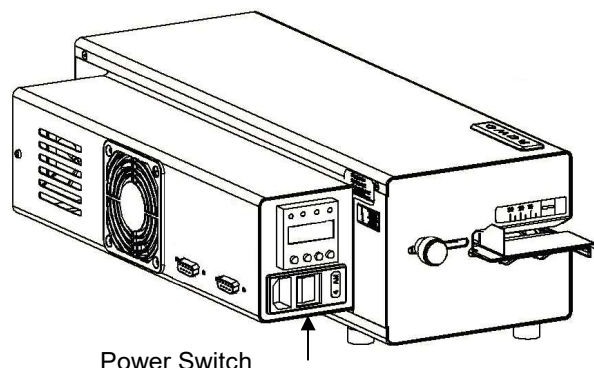
### 2.3.1 Installation

Place the machine on a horizontal surface.

- ❶ Please do not lift the machine by the in feed section.
- ❷ The distance from the machine to a wall must be at least 200 mm.



### 2.3.2 Commissioning





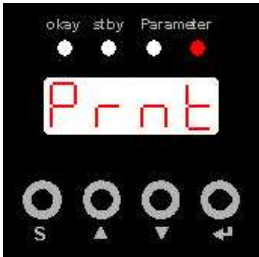
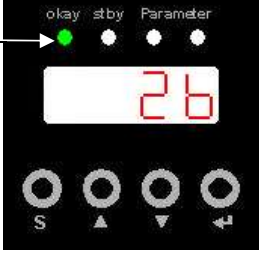
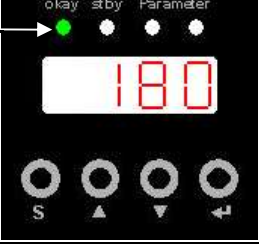
To switch on the machine, press the power switch on the left-hand side.

After a short self-test and after the selected sealing temperature has been reached, the machine is operational. You will see this when the "okay" indicator light has stopped flashing (see chapter 3.1).

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3 Configuration of machine

3.1 Basic functions

<p><b>Switch on the machine</b> The self test runs for approx. 5 seconds (see Chapter 2.3)</p>	<p><b>Indicator lights and display test</b></p>	
	<p><b>Software version indicator</b></p>	
	<p><b>Configuration test</b></p>	
<p>The "okay" indicator light flashes until the set temperature is reached, after about 3 - 4 minutes</p>	<p>"okay" inspection light flashes <b>Current actual temperature display</b></p>	
<p>After reaching the set temperature, the indicator light remains permanently on</p>	<p>"okay" inspection light on <b>Selected actual temperature is reached</b> <b>The machine is ready for use</b></p>	

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### 3.2 Inspection light functions







Function				
Machine switched on Warm-up phase	<b>flashes</b>	off	off	off
Sealing temperature = $\pm 5^{\circ}$	on	off	<b>on</b>	off
Sealing temperature <> $\pm 5^{\circ}$	off	on	off	<b>on</b>
Standby	off	<b>on</b>	off	on
warming up after standby or change in set temperature	<b>flashes</b>	off	off	<b>on</b>

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### 3.3 Button functions





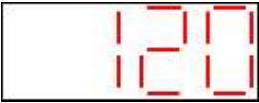




			
<b>Menu level 1</b> Menu level 2 activation <b>Press for 3 s</b>  Menu level 3 activation <b>Press for 7 s</b>	Switch printer off/on	Personal identification input	"Seal check" activation
<b>Menu level 2</b> Sealing temperature input	Temperature value + 1	Temperature value -1	Confirm input
<b>Menu level 3</b> <b>3.1</b> Sealing parameters view <b>3.2</b> Print data configuration <b>3.3</b> Data input	Switchover 3.1 - 3.2 - 3.3   on  Input value +1	Switchover 3.1 - 3.2 - 3.3  off  Input value -1	Confirm input






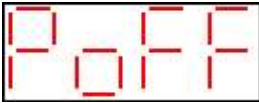

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3.4 Machine settings

3.4.1 Sealing temperature input


<div></div> <div>Press button for 3s</div> <div>Change set value</div> <div></div>	<div>Display for 1s</div> <div></div> <div>Current temperature set value display</div> <div></div> <div></div>	<div> Confirm input</div>
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3.4.2 Switch printer off and on

<div></div> <div>Press button</div> <div>Switch printer off or on</div> <div></div>	<div>Display for 1s</div> <div></div> <div>Current setting display</div> <div>Printer switched on</div> <div></div> <div>Printer switched off</div> <div></div>	<div> Confirm input</div>
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3.4.3 Personal code input




Press button



Select new code





Display for 1s




Current personal code display

 In this display  
an alphanumeric code has been  
input by barcode scanner



















Confirm input

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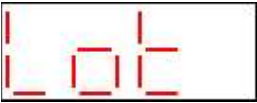
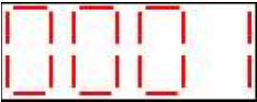






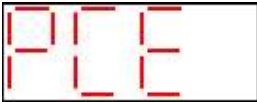
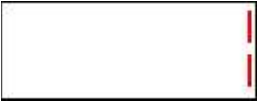


3.4.4 Data input

<p>Activate</p> <p></p> <p>Press button for 7s</p> <p>Switchover to data input</p> <p> </p> <p><b>Keylock</b></p> <p><b>active</b> Input 1 - 9999</p> <p><b>inactive</b> Input 0</p> <p> </p>	   	<p> Confirm selection</p> <p>Select data</p> <p> </p> <p> Confirm selection</p> <p> Confirm input</p>
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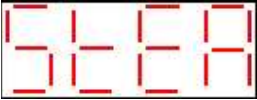
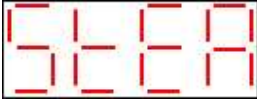












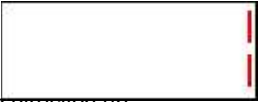
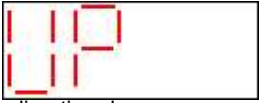















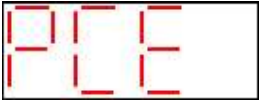


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<p>Date and time</p> <p>Day input</p> <p>Month input</p> <p>Year input</p> <p>Hour input</p> <p>Minute input</p>	     	<p> Confirm selection</p> <p> Confirm input</p> <p> Confirm input</p> <p> Confirm input</p> <p> Confirm input</p> <p> Confirm input</p>
<p>Expiry date</p> <p>Day input</p> <p>Month input</p> <p>Year input</p>	   	<p> Confirm selection</p> <p> Confirm input</p> <p> Confirm input</p> <p> Confirm input</p>

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<p><b>Batch</b> Input 0000 - 9999</p> <div></div>	<div></div> <div></div>	<div><span>Confirm selection</span></div> <div><span>In this display an alphanumeric code has been input by barcode scanner</span></div> <div></div> <div><span>Confirm input</span></div>
<p><b>Pack content quantity</b> Input 0 - 99</p> <div></div>	<div></div> <div></div>	<div><span>Confirm selection</span></div> <div><span>Confirm input</span></div>

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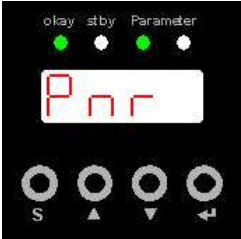



<p><b>Sterilization type</b></p> <p>Sterilization type selection</p> <div></div>	<div><div>Steam</div><div></div></div> <div><div>Ethylene oxide</div><div></div></div> <div><div>Ethylene oxide</div><div></div></div> <div><div>Formaldehyde</div><div></div></div> <div><div>Plasma</div><div></div></div> <div><div>Trockene Hitze</div><div></div></div> <div><div>Ionisierende Strahlung</div><div></div></div>	<div><div></div><div>Confirm selection</div></div> <div><div></div><div>Confirm selection</div></div>
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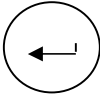
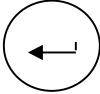





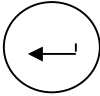
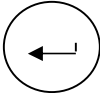
Tecno Seal Print	Configuration	Section 3
<p><b>Batch counter</b> Input 0 - 9999</p> <div data-bbox="240 348 446 443"></div> <p><b>Counting direction selection</b></p> <p>If counting direction down has been selected, an alarm sounds when the value 0 is reached</p> <p><b>Switch off batch counter</b></p>	<div data-bbox="662 216 919 317"></div> <div data-bbox="662 352 919 453"></div> <p>Counting direction up</p> <div data-bbox="662 474 919 575"></div> <p>Counting direction down</p> <div data-bbox="662 604 919 705"></div> <p>Switch off batch counter</p> <div data-bbox="662 751 919 852"></div>	<div data-bbox="1024 222 1117 317"></div> <p>Confirm selection</p> <div data-bbox="1024 348 1117 443"></div> <p>Confirm input</p> <div data-bbox="1024 674 1117 768"></div> <p>Confirm selection</p>
<p><b>Standby</b> Input 0 – 60min</p> <div data-bbox="233 1041 440 1136"></div> <p>If the motor was not started before reaching the set time, then the temperature is set automatically to 50°C / 122°F.</p>	<div data-bbox="662 911 919 1012"></div> <div data-bbox="662 1041 919 1142"></div> <p>The brief insertion of a package causes the temperature to reset to its previous set value. Once this has been reached, the machine is again ready for use</p>	<div data-bbox="1024 915 1117 1010"></div> <p>Confirm selection</p> <div data-bbox="1024 1041 1117 1136"></div> <p>Confirm input</p>
<p><b>Operating data</b> View of the operating hours and the absolute batch counter</p> <p>View selection</p> <div data-bbox="233 1520 440 1614"></div>	<div data-bbox="662 1367 919 1467"></div> <p>Operating hours</p> <div data-bbox="662 1514 919 1614"></div> <p>Absolute batch counter</p> <div data-bbox="662 1682 919 1782"></div>	<div data-bbox="1024 1367 1117 1461"></div> <p>Confirm selection</p> <div data-bbox="1024 1587 1117 1682"></div> <p>Confirm selection</p>

Tecno Seal Print	Configuration	Section 3
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<p><b>Units of measurement</b></p> <p>Units of measurement selection</p> <div><div></div><div></div></div> <p><b>Europe</b> Temperature in °C</p> <p><b>USA</b> Temperature in °F</p>	<div><div>Units of measurement Europe</div><div>Units of measurement USA</div></div>	<div><div>Confirm selection</div><div>Confirm selection</div></div>
<p><b>Character width</b></p> <div><div></div><div></div></div> <p><b>Input 0 - 2</b></p> <p>In accordance with the setting selected, the characters are printed in various widths</p> <p><b>Input A</b> Automatic setting of the character width, depending on the width of the packaging and the length of the print line.</p> <div><div>PNR</div><div>PNR</div><div>PNR</div></div>	<div><div></div><div></div></div>	<div><div>Confirm selection</div><div>Confirm input</div></div>






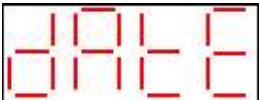

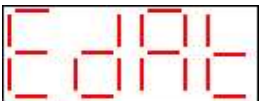







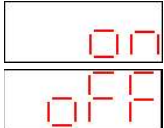







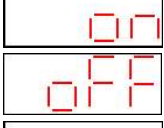



















Tecno Seal Print	Configuration	Section 3
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<p><b>Monitoring Personal number</b> Input 0 – 60min</p> <div></div> <p>When inputting a time &gt; 0 monitoring of the personal number is active and the motor can only be started if the value of the personal number is 1-9999</p> <p>Once the set time is reached, the personal number is automatically set to 0</p> <p>If the personal number is 0000 and a package is inserted, a command prompt appears</p> <p>By inputting a personal number of 1-9999, the lock of the drive motor is disabled and the command prompt disappears</p>	<div></div> <div></div> <div></div>	<div><div>Confirm selection</div></div> <div><div>Confirm input</div></div>
--	--	---

Tecno Seal Print	Configuration	Chapter 3
<p data-bbox="230 237 358 260"><b>Date format</b></p> <p data-bbox="230 342 443 365">Date format selection</p> <div data-bbox="230 390 443 485"></div> <div data-bbox="230 495 461 831"><div>1DD.MM.YYYY</div><div>2MM.DD.YYYY</div><div>3YYYY.MM.DD</div><div>4YYYY.MM</div><div>5DD.MM.YY</div><div>6MM.DD.YY</div><div>7YY.MM.DD</div></div>	<div data-bbox="659 222 917 323"></div> <div data-bbox="659 420 917 518"></div>	<div data-bbox="1019 216 1118 310"></div> <div data-bbox="1153 249 1326 273">Confirm selection</div> <div data-bbox="1019 438 1118 531"></div> <div data-bbox="1153 472 1326 495">Confirm selection</div>
<p data-bbox="230 980 358 1003"><b>Time format</b></p> <p data-bbox="230 1085 443 1108">Time format selection</p> <div data-bbox="230 1134 443 1228"></div> <div data-bbox="230 1239 415 1316"><div>2413:26</div><div>1201:26 PM</div></div>	<div data-bbox="659 959 917 1058"></div> <div data-bbox="576 1068 740 1092">Time format 24h</div> <div data-bbox="659 1100 917 1199"></div> <div data-bbox="576 1209 740 1232">Time format 12h</div> <div data-bbox="659 1243 917 1341"></div>	<div data-bbox="1019 959 1118 1054"></div> <div data-bbox="1153 993 1326 1016">Confirm selection</div> <div data-bbox="1019 1180 1118 1272"></div> <div data-bbox="1153 1213 1326 1236">Confirm selection</div>

Tecno Seal Print	Configuration	Section 3
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3.4.5 Print data selection

<p>Activate</p> <p></p> <p>Press button for 7s</p> <p>Switchover to print data</p> <p> </p> <p>The print sequence is predefined. Activated print data is always printed in this sequence</p> <p><b>Sterilization date</b> <b>Time</b> <b>Expiry date</b> <b>Batch counter</b> <b>Personal identification</b> <b>Batch counter</b> <b>Sterilization type</b> <b>Pack content quantity</b> <b>Text</b> (with barcode list and attached barcode scanner)</p>	<p></p> <p></p> <p><b>Sterilization date</b></p> <p></p> <p><b>Time</b></p> <p></p> <p><b>Expiry date</b></p> <p></p> <p><b>Batch number</b></p> <p></p> <p><b>Personal identification</b></p> <p></p> <p><b>Batch counter</b></p> <p></p> <p><b>Sterilization type</b></p> <p></p>	<p> Confirm selection</p> <p>Select data to be printed</p> <p> </p> <p>   </p> <p>   </p> <p>   </p> <p>   </p> <p>   </p> <p>   </p> <p>   </p>
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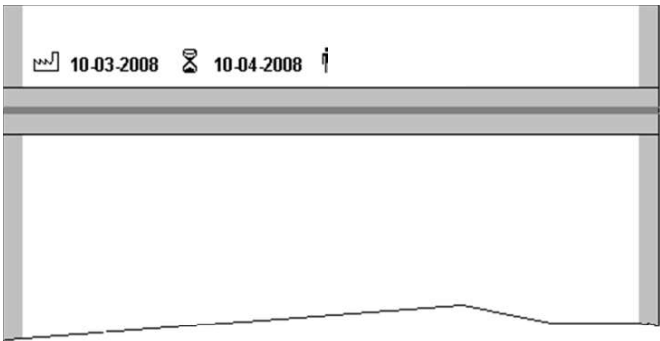


Tecno Seal Print	Configuration	Chapter 3
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	<div>Pack content quantity</div> <div>1234</div> <div>Text</div> <div>1234</div>	<div><div>on</div><div>off</div></div> <div><div>on</div><div>off</div></div> <div><div>△</div><div>▽</div><div>↶</div></div> <div><div>△</div><div>▽</div><div>↶</div></div>
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Example

Printing the sterilization date and the expiry date



<b>Tecno Seal Print</b>	<b>Configuration</b>	<b>Chapter 3</b>
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### 3.4.6 IntelligentScan, connection of a barcode scanner

The following inputs and functions can be implemented using a hm 780 BR barcode scanner (item number 1.421.006) connected to the "IntelligentScan" interface (see page 9), and relevant barcode lists:

#### Inputs and functions via the controller or using the barcode scanner

##### Inputs

Sealing temperature input	Page 14
Personal code input	Page 15
Batch number input	Page 18
Pack content quantity input	Page 18
Sterilization type selection	Page 18
Batch counter preset	Page 19
Character width selection	Page 20
Print data selection	Page 22

##### Functions

Switching the printer off or on	Page 14
Activating/deactivating standby function	Page 19
Switching personal number monitoring off or on	Page 21
Seal check activation	Page 26

#### Inputs and functions only with the barcode scanner

##### Inputs

Input of a 10-digit alphanumeric personal code  
 Input of a 10-digit alphanumeric batch designation  
 Input of an alphanumeric text  
 Expiry dates in 1, 3, 6, 9, 12, 24 and 60 months

##### Functions

Switching the batch counter off or on



The Tecno Scan barcode scanner (item number 1.421.017) is supplied with a CD (item number 1.490.016) enclosed, facilitating the generation and recording of the barcode lists on a PC.



Please only use barcode scanners approved by Tecno-Gaz  
 Tecno-Gaz accepts no liability for any damaged caused by the connection and use of other barcode scanners.

<b>Tecno Seal Print</b>	<b>Configuration</b>	<b>Chapter 3</b>
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### 3.5 Operation and sealing process

- The material to be sealed must be sealed according to the manufacturer's instructions.
- Set the peel edge width:  
After the locking machine has been loosened, the peel edge can be set by shifting the in feed section variably between 0 mm and 35 mm. A sufficient protrusion must be available between the sealing seam and the reel interface given on the extraction side
- Sterilization packaging must be inserted from the left-hand side, always with the side to be printed face down.  
The drive is switched on automatically.
- Remove the sealed sterilization packaging and leave briefly to cool.



The correct sealing temperature must be identified by means of sealing tests. Sealing must be performed in such a way that the sealing seam meets the quality characteristics requirements of EN ISO 11607-2, even with varying material thicknesses. The following quality characteristics must be met:

- Intact sealing across the entire sealing seam width
- No channels or open seals
- No punctures or tears
- No delamination or material separation

<b>Tecno Seal Print</b>	<b>Configuration</b>	<b>Chapter 3</b>
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

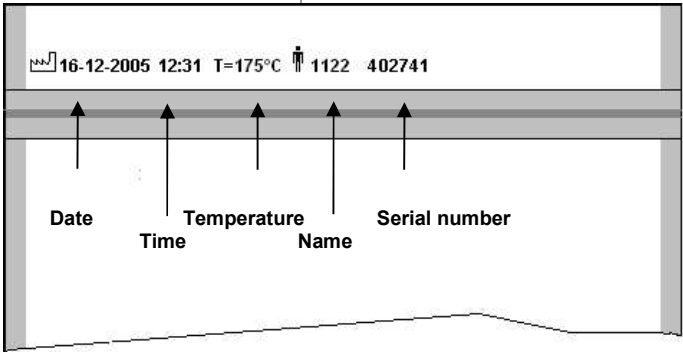
3.6 Sealing seam test – "Seal Check"

Testing of the critical process parameters temperature, contact pressure and sealing time with "SEAL CHECK".

This test should be performed before and after the daily working process and/or before/after each load and can be documented by routinely filing the printout (EN ISO 11607-2).

The additional use of the SEAL CHECK sealing indicator in combination with the SEAL CHECK function of the sealing machine is recommended.

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

<p><b>Machine ready for use</b> <b>Specified set temperature</b> <b>has been reached</b></p> <div></div> <p>Press button</p>	<div></div>	
<p>Sterilization packaging, minimum width 200 mm and insert SEAL CHECK indicator strips if necessary</p>	<div></div>	

<b>Tecno Seal Print</b>	<b>Troubleshooting and servicing</b>	<b>Section 4</b>
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## 4 Troubleshooting and servicing

### 4.1 Troubleshooting checklist



The trouble shooting suggestion marked with a \* may only be carried out by a service partner authorised by the manufacturer.

Malfunction	Possible cause	Troubleshooting
Machine does not switch on No data in the display	Mains connection - Mains cable not plugged in  - Mains cable defective  Mains fuse  Temperature controller defective	Check mains connection and connect to another socket if necessary  Replace mains cable  Replace mains fuse* ! In case of repeated failure you must have the machine fuse checked  Replace Temperature controller*
Machine not heating up	Set temperature too low  Temperature limitation active  Temperature sensor Heating element Temperature controller defective SST Module defective	Increase set temperature (see page 13)  Reset the temperature limiter by pushing down the pin ! In case of repeated activation you must have the machine checked  Replace temperature sensor*  Check heating element and replace if necessary*  Replace Temperature controller  Replace SST Module*
No feed	Conveyor belt - damaged - no feed  Front flap not closed  Motor - sensor  Front flaps - sensor  Motor  Temperature controller defect	Replace conveyor belt Check belt tension  Close front flap  Replace light barrier*  Replace front flap sensor*  Replace motor*  Replace Temperature controller*

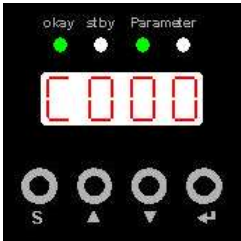
<b>Tecno Seal Print</b>	<b>Troubleshooting and servicing</b>	<b>Section 4</b>
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<b>Malfunction</b>	<b>Possible cause</b>	<b>Troubleshooting</b>
Uneven material feed or loud running noise	Conveyor belt guide  Conveyor belt - damaged - no feed  Motor	Replace PTFE belt on guide unit (see pages 25-26)  Replace conveyor belt Check belt tension  Replace motor*
Sealing seam does not hold	Temperature too low  Contact pressure too low  Sealing unit - Distance between sealing units too large	Increase temperature  Adjust the contact pressure of the sealing roller or replace the sealing roller*  Set sealing unit clearance to 0.5 mm*
Sealing seam distorted	Contact pressure too high	Adjust sealing seal roller contact pressure or replace sealing roller*
Paper side of the packaging discolored or side gusset shrunk	Temperature too high	Reduce temperature (see page 13)
No imprint or imprint incomplete	Programming - Printing start margin incorrectly set  Ribbon  Printer control  Switched – mode power supply defective	Program the printing start margin again (see page 12)  Ribbon not inserted correctly Replace ribbon. (see page 24)  Replace printer control*  Replace power supply*
Imprint too weak	Ribbon  Print head  Paper - pressure roller	Replace ribbon.  Adjust print head again  Paper - adjust pressure roller

Tecno Seal Print	Troubleshooting and servicing	Section 4
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4.2 Alarm functions and error displays

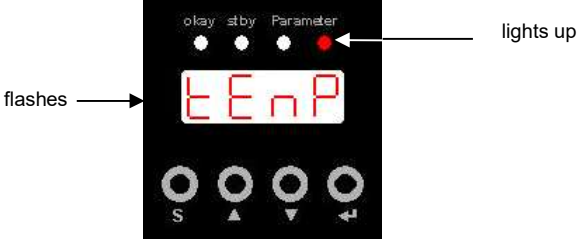
4.2.1 Alarm functions

Batch counter, set to count down, has reached the value 0	<div>flashes →</div> 
	<b>Canceling the Alarm</b>
	Set batch counter to a value > 0 or Set batch counter direction to up <b>see page 19</b>

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4.2.2 Error displays

	The trouble shooting suggestion marced with a * may only be carried of a service partner authorised by the manucaftuer.
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<b>Sealing temperature outside tolerance</b>		
	<b>Possible cause</b>	<b>Troubleshooting</b>
	Temperature sensor defective Temperature Controller defective SST module defective	Replace temperature sensor* Replace controller* Replace SST module*












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### 4.3 Servicing / calibration



Like all technical machines, your machine is also subject to technical wear. In order to guarantee continuous operational readiness, your machine 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 authorized service partners.

<b>Maintenance chart</b>	Ink ribbon	PTFE strip for guide die	Pressure roller	Toothed belt	Sealing die interval	Critical process parameters calibration
At least every 3 months						
Depending on use, at least once annually						

#### Legend:



Check



Replace



Adjust



Measure

### 4.4 Parts Service



#### Simply order parts by fax:

- Please copy the following pages according to the parts required.  
Page 31: Parts required for maintenance and wear  
Page 32: Replacement parts

- Enter machine number. \_\_\_\_\_
- Enter machine model \_\_\_\_\_
- Enter name, address, fax number and order number. \_\_\_\_\_
- Mark items required
- Enter quantity required.
- Sign order.
- Fax order.

**No.:** 123456  
**Type:** Tecno Seal Print

To:

Sender:

Fax No.

Your order no.: _____		Date _____	
Machine model _____		Seral number _____	
<input checked="checked" type="checkbox"/>	Designation	Part No	qty
<input type="checkbox"/>	Ink ribbon black	6.813.104	
<input type="checkbox"/>	Ink ribbon red	6.813.224	
<input type="checkbox"/>	PTFE strip for upper guide rail	6.105.178	
<input type="checkbox"/>	PTFE strip for lower guide rail	6.105.177	
<input type="checkbox"/>	PTFE strip for heating die	6.105.125	
<input type="checkbox"/>	Pressure roller plastic	2.230.008	
<input type="checkbox"/>	Toothed belt drive	6.271.018	
<input type="checkbox"/>	Toothed belt, material transport	6.271.019	
<input type="checkbox"/>	Heating cartridge	6.536.024	
<input type="checkbox"/>	Upper sealing die complete	1.616.049	
<input type="checkbox"/>	Lower sealing die complete	1.616.050	
<input type="checkbox"/>			
<input type="checkbox"/>	Print head	1.653.002	
<input type="checkbox"/>	Reed Contact	6.543.011	

Signature \_\_\_\_\_

To:

Sender:

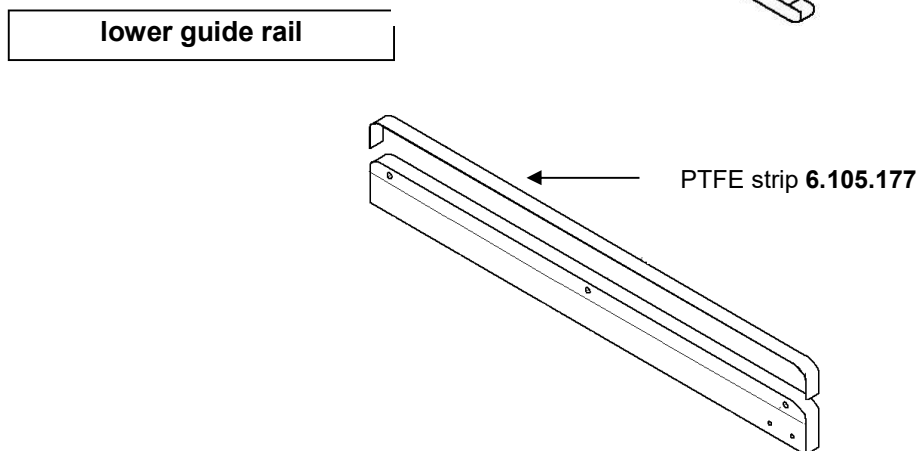
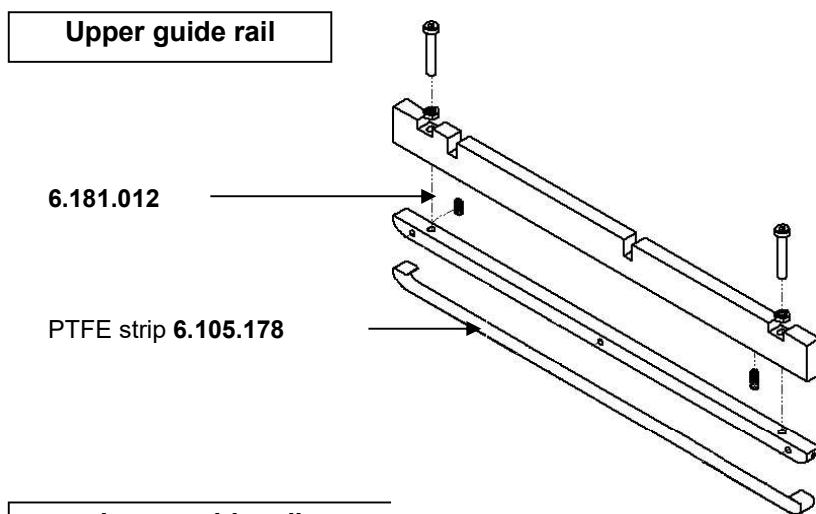
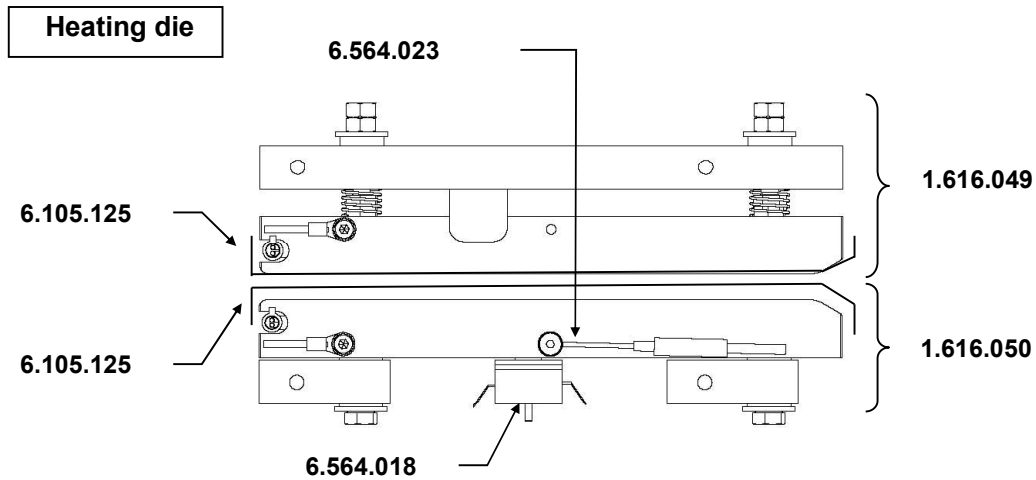
Fax No.

Your order no.: _____		Date _____	
Machine Model _____		Serial number _____	
<input checked="" type="checkbox"/>	Designation	Part No	qty
<input type="checkbox"/>	Temperature control 100 - 245V	6.564.042	
<input type="checkbox"/>	Printer control	1.461.013	
<input type="checkbox"/>			
<input type="checkbox"/>	SST Module	1.461.014	
<input type="checkbox"/>	Switched –mode power supply	6.533.001	
<input type="checkbox"/>	Light barrier printer	1.561.003	
<input type="checkbox"/>	Light barrier motor	1.561.010	
<input type="checkbox"/>	Gear motor 230V	1.212.026	
<input type="checkbox"/>	115V	1.212.027	
<input type="checkbox"/>	100V	1.212.028	
<input type="checkbox"/>			
<input type="checkbox"/>	Motor ink ribbon	1.212.012	
<input type="checkbox"/>	Temperature limit switch	6.564.018	
<input type="checkbox"/>	Thermocouple	6.564.023	
<input type="checkbox"/>	Fan 24V	6.212.028	

Signature \_\_\_\_\_

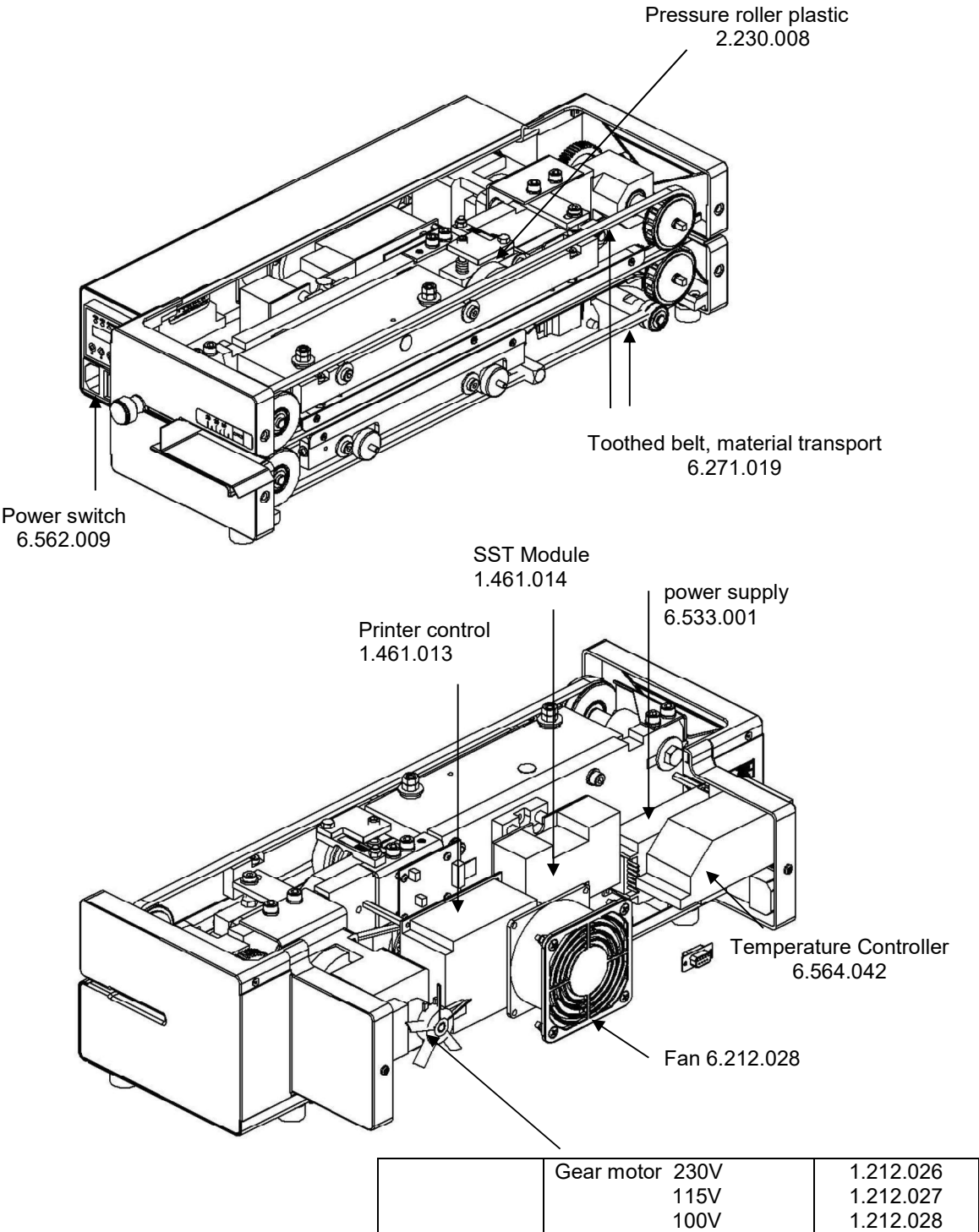
Tecno Seal Print	Troubleshooting and servicing	Section 4
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#### 4.5 Replacement part orders- allocation of article numbers



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4.6 Spare part ordering – Complete overview



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#### 4.7 Information about replacing wearing and spare parts

**!** Please use only **genuine replacement parts**

##### Replacing ink ribbon

###### → Switch off machine

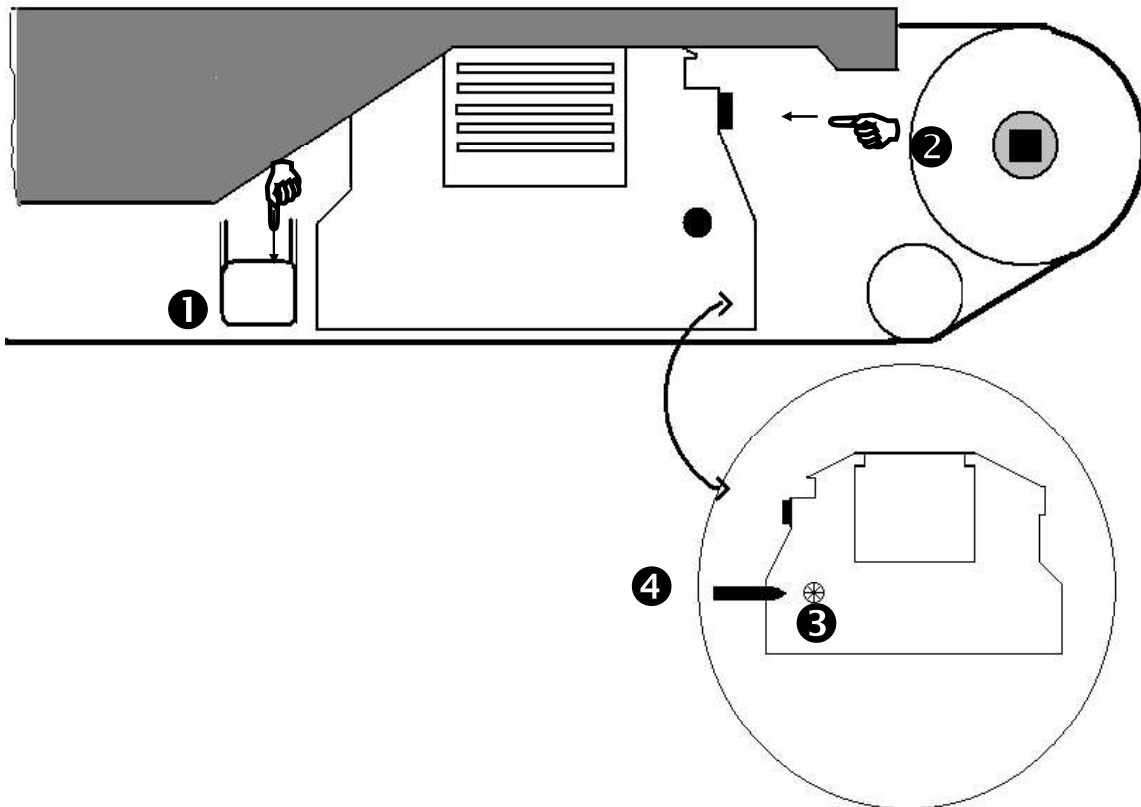
- Open front flap, set in feed section to 0 if appropriate
- Press lever for ink ribbon holder **1** down with left hand.
- Press holder for ink ribbon cassette **2** to side and remove cassette.
- Insert new ink ribbon cassette



Always ensure that the transport opening **3** in the cassette is attached to the transport shaft **4**.

- Press ink ribbon cassette toward rear until holder **2** catches
- Close front flap

###### → Switch on machine and check printing function after reaching nominal temperature



## Maintenance Information

**!** Please use only **genuine replacement parts**

## Replacing PTFE strip on guide rail

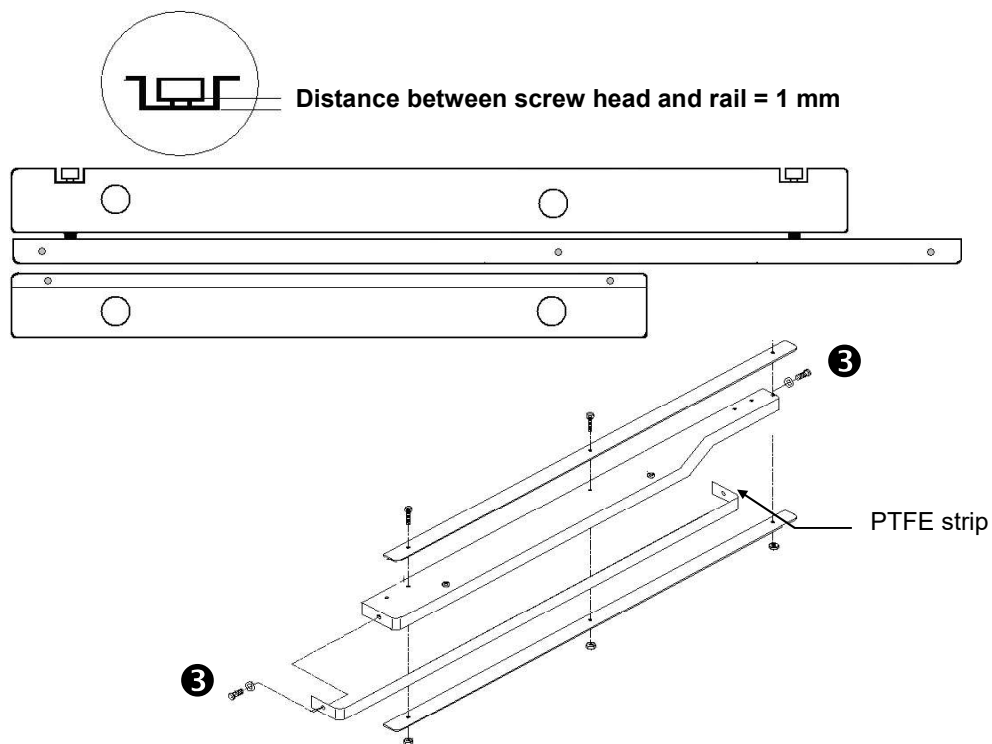
## → Switch off machine and DISCONNECT POWER PLUG !

- Open housing
- Remove mounting screws **1** for upper guide rail and remove guide rail **or**
- Remove mounting screws **2** for lower guide rail and remove guide rail
- Remove mounting screws **3** and detach PTFE strip
- Pull backing foil off of new PTFE strip and glue new PTFE strip on straight and without wrinkles
- Fasten PTFE strip with screws **3**
- Install guide rail



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

- Close housing

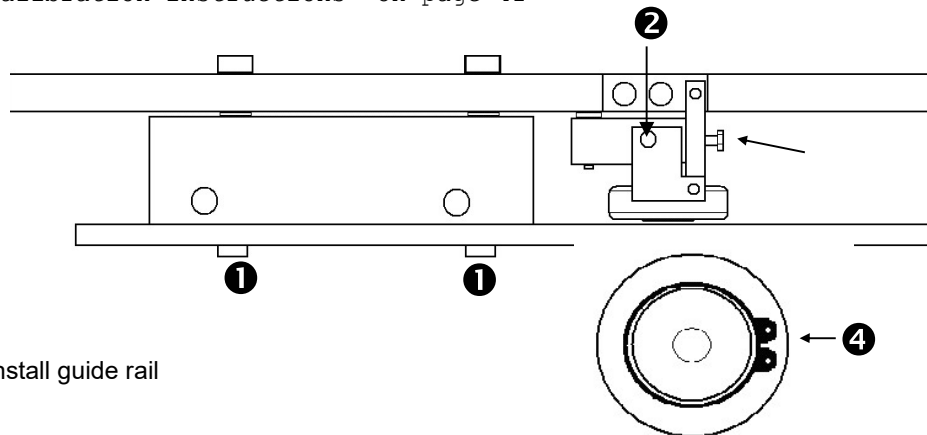


**Maintenance  
Information**

**!** Please use only **genuine replacement parts**

**Replacing pressure roller****→ Switch off machine and DISCONNECT POWER PLUG !**

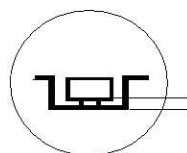
- Open housing
- Remove mounting screws **1** for upper guide rail and remove guide rail.
- Unscrew pressure adjustment screw **2** approx. 5 mm
- Loosen mounting screw **3** and pull pressure roller completely out of holder
- Detach snap ring **4** and remove pressure roller
- Install new pressure roller and fasten with snap ring **4**
- Position complete pressure roller in holder, center in relation to bottom roller and tighten mounting screw **3**
- Adjust contact pressure by screwing in adjustment screw **2** according to calibration instructions on page 41



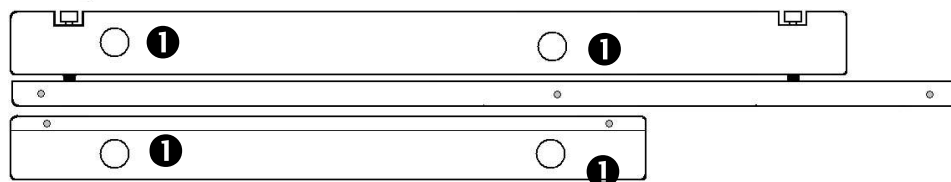
- Install guide rail



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



Distance between screw head and rail = 1mm



- Close housing



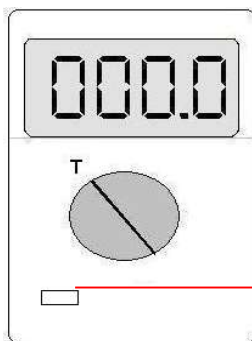
## 4.8 Process parameters adjustment



After adjustment, the machine should remain switched on for a further 10 seconds!

### 4.8.1 Temperature control

The temperature control adjustment should always be carried out after replacing a heating element, after replacing the temperature sensor and after replacing the temperature control

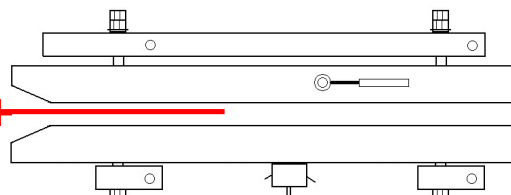


The temperatures **120 °C and 200 °C** are measured consecutively and the difference between set and actual value corrected.

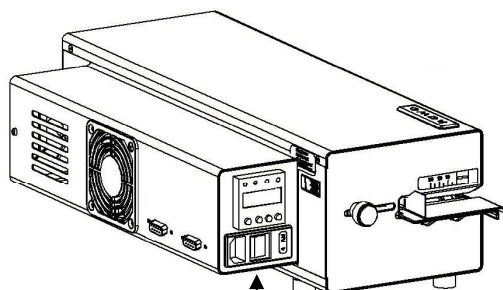
After reaching the set temperature, this is stabilized for 120 s. At the end of 120 s, the temperature value measured with the temperature gauge is input

#### Process

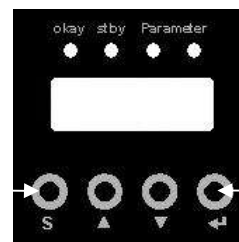
Insert the temperature sensor of a temperature measuring machine from the inflow side on the left, between the sealing units









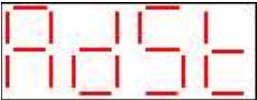










Press both buttons simultaneously and switch on the machine.



Power Switch



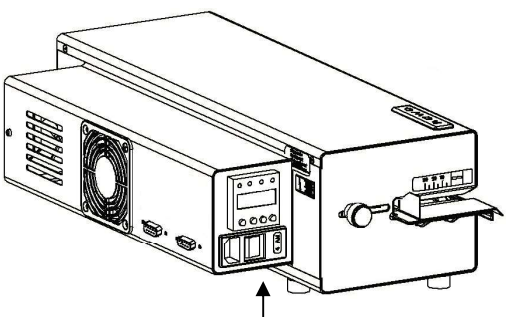
Tecno Seal Print	Troubleshooting and servicing	Section 4
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<p><b>Select temperature adjustment</b></p> <p> </p> <p>The set temperature of the machine is set automatically to 120 °C</p> <p>After reaching that temperature the stabilizing time starts</p> <p>After expiry of that time input the temperature measured with the measuring device</p> <p> </p> <p>The set temperature of the machine is set automatically to 200°C</p> <p>After reaching that temperature the stabilizing time starts</p> <p>After expiry of that time input the temperature measured with the measuring device</p> <p> </p>	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	<div> Confirm selection</div> <div> Confirm input</div> <div> Confirm input</div>
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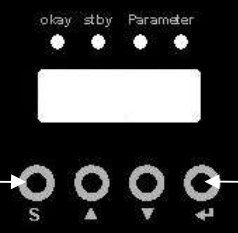
Tecno Seal Print	Troubleshooting and servicing	Section 4
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4.8.2 Setting the transmission rate (baud rate) of the serial interface

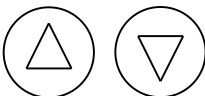
Press both buttons simultaneously and switch on the machine



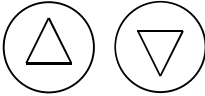
Power Switch


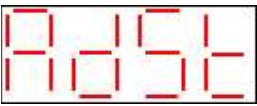


**Select baud rate setting**

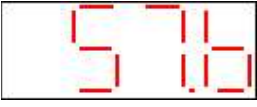



**Select baud rate**  
1200Bd – 57600Bd






Example: Baud rate 57600Bd





Confirm selection

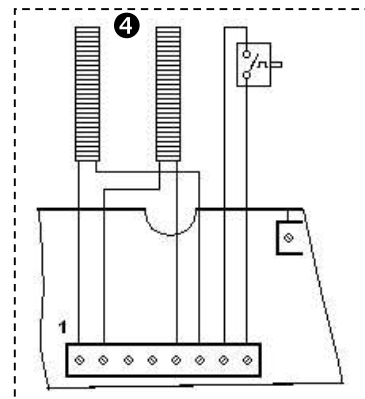
  


Confirm selection

## 5.1 Circuit and Wiring Diagram



①	Print head	1.653.002
①	Light barrier motor	1.561.010
②	Gear motor 230V	1.212.026
	Gear motor 115V	1.212.027
	Gear motor 100V	1.212.028
④	Heating cartridge	6.536.024
⑤	Temperature limit swswitch	6.564.018
⑥	SST Module	1.461.014
⑦	Printer control	1.461.013
⑧	Motor ink ribbon	1.212.012
⑨	Fan	6.212.028
⑩	Switched-mode power supply	6.533.001
① ①	Reed contact	6.543.011
① ②	Temperature control	6.564.042
① ③	Thermocouple	6.564.023
① ④	Light barrier printer	1.561.003



<b>Tecno Seal Print</b>	<b>Troubleshooting and servicing</b>	<b>Section 4</b>
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## 5.2 Specifications

### Connection data

Power connection	[ V ]	230 / 115 / 100
Power frequency	[ Hz ]	50 / 60
Power consumption standard	[ W ]	390
Power consumption max.	[ W ]	500
Main fuse 230V (110V / 115V)	[ A ]	2 T ( 5 M )

### Mechanic

Dimension	Length Width Height	[ mm ]	560 250 145
Housing cover			Steel AISI 304
Housing bottom			Steel AISI 304
Weight		[ kg ]	14
Sealed edge infinitely adjustable		[ mm ]	0 – 35
Sealing seam width		[ mm ]	12
Length of sealing seam		[ mm ]	unlimited
Sealing seam distance from pack content		[ mm ]	>30 ( DIN 58953-7:2003)

### Process parameter / Sealing parameter

Sealing temperature max.	[ °C ]	220
Tolerance limit motor stop temperature	[ °C ]	± 5
Temperature ranges		1
Temperature-tolerance	[ % ]	±2

### Electronic und Communication

System	Microprozessor
Serial Interfaces:	yes
RS-232 connector for PC	yes
RS-232 connector for bar code scanner	
USB with adapter	optional available (Art.-Nr.: 1.596.024)
Ethernet (LAN) with adapter	optional available
Datea rate (Baudrate) [ Bd ]	RS 232 PC 1200 – 57600 RS 232 Bar Code Scanner 9600
Protection class	1

### Environmental parameter

Heat dissipation	[ kJ/s ]	0,1
Noise intensity	[ dB/ A ]	<70