



# DUNATRONIC

Vacuum Thermo-forming unit

Operating Instructions

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## **1. GENERAL**

### **1.1 This operation manual allows a safe and efficient handling of this unit**

The operation manual is part of the unit and has to be in close proximity of the unit and always accessible for the staff members. The staff members have to read and understand this manual before starting any work with this unit. The basis for safe working is the strict observance of all mentioned safety information and directions in this manual. Beyond that the local accident prevention regulations and general safety regulations for the application field of the unit are in force.

### **1.2 Limits of liability**

The manufacturer does not assume any liability for damages due to

- Disregard of the operation manual
- Inappropriate use
- Employment of unskilled staff members
- Unauthorized conversion of the unit
- Technical modifications
- Use of non-licensed spare parts

The contractual commitments based on the delivery contract, the general terms and conditions, the delivery conditions of the manufacturer as well as the legal requirements valid at the date of the contract's conclusion are valid. Technical alterations due to improvement and further development are subject to modifications.

### **1.3 Copyright protection**

This operation manual is copyright reserved and exclusively bound for internal purposes. Transferring this manual for use to third parties, duplication in any way and manner – even in extracts – as well as use and/or transfer of the content are prohibited without the manufacturer's permission in written except for internal use. Contraventions oblige for compensation. Further claims reserved.

### **1.4 Spare parts**

False or faulty spare parts can affect safety and lead to damages, hazardous malfunctions or complete failure.

- Only use original spare parts of the manufacturer. Loss of any warranty/guarantee when using external parts that are not provided by your dealer – that are not coming from the original manufacturer. Provide spare parts through your dealer.

### **1.5 Warranty regulations**

The relevant legal regulations are valid.

### **1.6 After-sales service**

If you need further technical details, please do not hesitate to contact your distributor.

Moreover our staff members are always interested in new information and experiences resulting from using this unit and which may be valuable for improving our products.

### **1.7 Disposal**

For a proper disposal the national regulations are valid. You may also contact your dealer.

## **2. SAFETY**

### **2.1 The operator's responsibility**

The unit is exclusively used in the commercial field. Due to this fact the operator of the unit is subject to the legal obligations for safety at work. The operator has to make sure that all staff members using this unit have read and understood the operation manual. The unit needs to be used by trained and qualified personnel only.

### **2.2 Appropriate use**

The unit is exclusively designed and constructed for the use herein described: Pressure thermo-forming unit for all applications in dental thermo-forming techniques used in dental technology.

## 2.3 Extraneous Hazards

The herein mentioned safety notes as well as the warning notes mentioned in further chapters of this manual have to be observed in order to reduce health hazards and to avoid dangerous situations.

### 2.31 Electrical Shock Hazard!



Risk of fatal injury from touching live parts! Damaging of the isolation or of single components can be dangerous to life!

For this reason:

- When isolation is damaged, deactivate the power supply immediately and arrange for repair.
- Do not bridge or deactivate fuses. When changing fuses observe the correct amperage!
- Keep live parts from moisture. Danger of short circuit!
- After finishing thermo-forming works switch off the unit.
- After finishing thermo-forming works pull the power plug out of the socket and thereby cut the unit completely from electricity.

### 2.32 Caution! Hot surfaces!



Contact with hot surfaces (heating cap (4)) can cause burns.

For this reason:

- After 5 successive thermo-forming works the unit has to be cooled down.

## 2.3 Indication for maintenance



Pull periodically the swivel head (5) all the way up and grease the swivel bolt (17) slightly.

## 3. DELIVERY CONTENTS

1 DUNATRONIC	Item no.	581-003-009
1 Plate reception	Item no.	331-000-507
1 Insert bowl	Item no.	581-004-005
1 Lead granules	Item no.	581-004-015
1 Mains supply cable	Item no.	214-120-007

## 4. INCOMING CONTROL

Please check the unit and accessories immediately after receipt for probable transport damages and defects. Warranty claims can only be enforced if the vendor or shipper is informed immediately. Then a document of damage has promptly to be made up.

## 5. TECHNICAL DATA

Mains supply	230 V AC 50/60 HZ $\pm$ 10 %
Max. power consumption	850 W
Fuse of unit	T 4 A
Operating vacuum	<b>-0,8 bar</b>
Width / Depth / Height	270 x 320 x 270 mm
Weight	9 kg

## 6. INSTALLATION

### 6.1 Initiation of the DUNATRONIC

- The unit has to be put onto a stable horizontal basis in **dry surrounding (not in high-humidity rooms due to jet steamers, e.g.)**
- When mounting the device keep at least a distance of 30 cm to easily inflammable materials like paper, etc.
- The packaging can be disposed of with domestic waste.

### 6.2 Mains supply

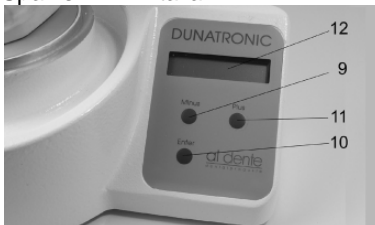
The electrical connection of the unit is only allowed in rooms which are equipped according to the directions of VDE 0107 or IEC 364-710.

Put the power cable included in the delivery into the female connector installed (6) and into an earthed wall socket. Due to safety reasons do not use flexible distributing sockets or extender cables. The power socket has to be fused with at least 10 A.

### 6.3 Selection of language

You can select one of the following languages:

German      English  
Spanish     Italian



By pressing the button (10) „Enter“ (for approx. 5 sec.), the menu for Adjusting the language is selected. The display (12) shows the language selected.

By pushing the button (11) „Plus“ the language desired can be chosen. Confirm using button (10) „Enter“.

Factory setting: English

## 7. OPERATING THE DUNATRONIC

### 7.1 Operating elements

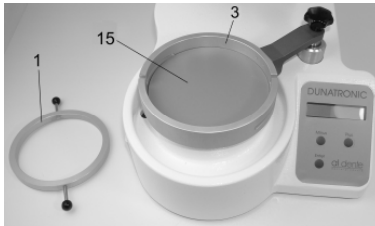


- 1 Foil tension ring
- 2 Plate reception
- 3 Foil reception
- 4 Heating cap (infrared lamp)
- 5 Swivel head for foil reception
- 6 Female connector installed together with fuse carrier (back side)
- 7 Power switch ON/OFF
- 8 Reception for granules and plate reception
- 9 Button „Minus“
- 10 Button „Plus“
- 11 Button „Enter“
- 12 Display

## 7.2 Relevant information for operating the unit



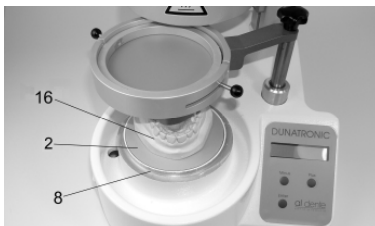
Turn foil tension ring (1) counter-clockwise and take it out.



Insert foil (15) centrally in foil reception (3).



Insert foil tension ring (1) and turn it all the way clockwise.



Working with the plate reception:

Put the dust-free and dry model (16) onto the plate reception (2).

Working with granules:

Remove the plate reception (2) as well as the insert bowl from the granular reception.

Fill the granules into the granular reception (8) or into the insert bowl

Only the use of al dente granules is recommended – using different filling material will lead to **loss of any guarantee** and may cause the **destruction of the vacuum pump**.

Embed the dust-free and dry model (8) into the granules.



Turn on the unit on the power switch (7) (shines green).



Program heating time by pushing the buttons (9), (10) and (11).

Button (9) „Minus“

Button (11) „Plus“

Button (10) „Enter“ confirm.

The necessary heating time depends on the thickness of the foil and is mentioned on the wrapping of the foil.

The cooling down period is automatically determined. By applying the Buttons (9), (10) and (11), it can be manually programmed.

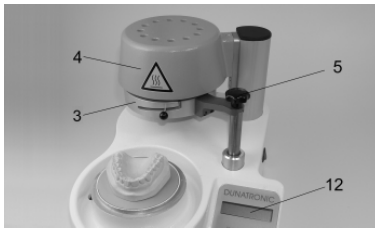
Button (9) „Minus“

Button (11) „Plus“

Button (10) „Enter“ confirm.



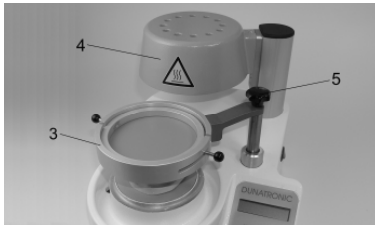
When too hot, the unit is deactivated by a thermo-switch. Please switch off the unit by means of the power switch (7) for 30 minutes.



Swivel foil receipt (3) by means of the swivel head (5) below the heating cap (4).

The process conducted by the user is shown on the display (12).

If the foil gets severely heated (visible by an immense flexion of the foil), the heating time can be cancelled by pressing the button (10) "Enter" and the operation can be proceeded as described further below.



After termination of the heating time, swivel the foil receipt (3) at the swivel head (5) all the way away from the heating cap (4).



Put the foil receipt (3) over the model (16).

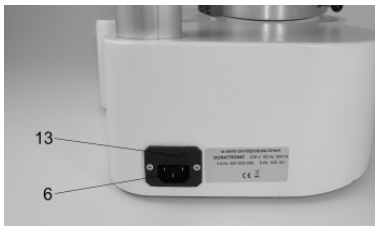
By means of the vacuum, the foil is slipped over the model.



After termination of the cooling down period turn the foil tension ring (1) counter-clockwise all the way and take it out.

Then take out the thermo-formed result.

## 8. EXCHANGE OF FUSES





The fuses are situated in the female connector installed (14) at the back of the unit.

The fuse is to be exchanged as follows:

- Unplug mains supply cable from the female connector installed (6).
- Open at the indentation the cover of the fuse carrier (13) by means of a screwdriver (size 1) and pull it out.
- Exchange the defect fuse. Attention: Only use fuses as indicated besides the fuse carrier: T 4 A.
- Put the fuse carrier (13) back into the female connector installed (6).
- Connect mains supply cable to the female connector installed (6).

## 9. HEATING TIME AND COOLING PERIOD (RECOMMENDATION)

Foil **	Thickness [mm]	 s	 s
FOLIFLEX, transparent	1,0	35	50
	1,5	35	50
	2,0	40	60
	3,0	60	90
	4,0	80	120
FOLIFLEX bleach, transparent	1,0	35	50
FOLIDUR-N, transparent	0,5	35	50
	0,6	35	50
	0,8	45	70
	1,0	45	70
	1,5	55	80
	2,0	85	130
	3,0	100	150
FOLIDUR-S, transparent	1,0	45	70
	1,5	55	80
	2,0	85	130
FOLILEN, opaque	0,5	30	45
	0,6	30	45
	0,7	35	50
	1,0	35	50
	1,5	40	60
COMBILOC, transparent soft-hard	2,0	70	100
	3,0	80	120

\*\* when using other brands the heating/cooling times may vary.

## 10. TROUBLESHOOTING

Error description	Remedy
<b>Power switch 7 does not light</b>	Check your power socket. If there is a defect in your power socket, use another socket. Check your power cord. If it is defective, the power cord should be exchanged. Check the fuse. If there is a defect, exchange the fuse – see page 10.
<b>No indication on display (12)</b>	There seems to be a defect on the control board: it needs to be exchanged (by a service engineer), see page 9.
<b>Heating element (infrared lamp) (4) within the heating chamber does not light up</b>	Defect of the heating element, it needs to be exchanged (service engineer), see page 8-9. Defect of the control board: it needs to be exchanged (service engineer), see page 9.
<b>Thermoforming foil/sheet is not correctly pressed over the model</b>	Heating time was too short. Chose the correct heating time for the corresponding foil. Vacuum pump is defect – it needs to be exchanged (service engineer), see page 9. Microfilter soiled, it needs to be exchanged (service engineer), see page 9.



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