

Compactors DEG-1 and DEG-2



DEG-1



DEG-2



USER MANUAL


Dear customer,

Thank you for choosing a product from the Wassermann range. Wassermann Dental-Maschinen incorporates the highest standards of quality and the latest technology. In order to enjoy maximum performance and years of trouble-free operation, please read this user manual carefully before you connect this device and start work, and operate the device according to the recommended guidelines. The operation safety and the functionality of this device can only be guaranteed if you follow both the general safety guidelines and the applying laws to prevent accidents as well as the precautions given in this user manual. We are not liable for any damages which occur due to inappropriate usage or faulty operation of this device.



Make sure that anyone using this device has read and understood this user manual.

Keep this user manual in a safe place where it can be referred to as required at any time.

 The unit complies with the relevant EU guidelines.



The unit is subject to the EU guidelines 2012/19/EU (WEEE Directive).

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1 Features

The **DEG-1/DEG-2** ovens use pressures above atmospheric to compress materials. As these materials harden under compressed air, any residual air in the material mix is also condensed, resulting in a more homogeneous material structure, free of bubbles.

The technique is an excellent first step in the preparation of smooth unfinished castings, and is best suited to the hardening of embedding materials and silicone-rubber moulds.

Both units have a timer which can be set for up to 60 minutes, and which can be turned off at any time, either automatically or by using an ON/OFF switch. The ovens allow you to set pressures up to a maximum 7 bar, which are maintained by a non-return valve, even if the air supply is interrupted.

In addition to these features, the **DEG-2** also incorporates a heater to keep the temperature in the pressure chamber constant. You can select one of two temperatures: 37°C or 55°C. The polymerisation tray (see 10.6, page 12) allows you to compress material in a water-bath.

- maintenance-free, high-performance compactors for hardening plaster and silicone duplicating materials
- depending on the starting pressure, adjustable up to 6.0 bar then reducible to any pressure
- provide dense, homogeneous products
- automatic timer up to 60 minutes
- pressure chamber quick release, automatic venting
- over-pressure valve for maximum safety, non-return valve for steady operating pressure
- easy to use, meet high safety standards
- integrated stainless steel inserts, designed for multiple moulds
- DEG-2 also with integrated heater with two settings (37°C/ 55°C)
- 2 m compressed air hose supplied

2 Safety Symbols used in this Manual



Warning!

This is a warning of risk situations and dangers.

Failure to observe this warning could be life-threatening. These warnings has to be observed.



Information!

This symbol draws your attention to specific features that has to be observed.

3 Safety Guidelines

Configuring and operating this equipment requires ***precise knowledge*** and ***observance*** of the instructions in this ***user manual***. The equipment is designed only for its intended application.



WARNING:

Servicing and repairs should be carried out only by authorised specialists.
Disconnect the power plug before starting any maintenance work.



Make sure that the equipment is connected to the correct power source.



The safety valve on the pressure chamber open automatically if the pressure exceeds 7 bar.

4 Responsibility for Operation or Damage

The responsibility for operating the device lies exclusively with the owner or user if said device is incorrectly serviced, maintained or altered by persons not employed by an authorised dealer or if the device is used in a manner contrary to its specified purpose.

The unit has to be maintained and operated in accordance with this user manual.

Wassermann Dental-Maschinen GmbH is not responsible for damage arising from the **nonobservance** of these instructions.

Warranty and responsibility provisions contained in the sales and supply conditions of Wassermann Dental-Maschinen GmbH are not extended by these instructions.

5 Application

The **DEG-1/ DEG-2** ovens use pressures above atmospheric to compress materials. As these materials harden under compressed air, any residual air in the material mix is also condensed, resulting in a more homogeneous material structure, free of bubbles.

The technique is an excellent first step in the preparation of smooth unfinished castings, and is best suited to the hardening of embedding materials and silicone-rubber moulds.

With a view to improving the processing of certain materials and more accurately casting moulds, the **DEG-2** *also* incorporates a heater to maintain a constant temperature in the pressure chamber. Two temperatures are possible (37°C or 55°C), and you can also compress material in a water-bath.

Only use the device for this type of application.

6 Before Starting

6.1 Transport

Before transporting the unit, ensure that it has been unplugged from the power socket. Make sure that it is packed correctly in order to avoid accidental damage.



Be sure to check for any transport damage when unpacking the goods. Note down any damage if found.

6.2 Installation

Open the box, remove the packing materials, and carefully lift out the device and accessories. Check the included accessories.

The device has to stand horizontally on a steady and even surface.



Install the device in a place where it will not block the working area and the functionality (take the dimensions into account).



Do not install the unit outdoors or in places without proper ventilation.

Before start-up, be sure the device reaches room temperature.

6.3 Storage

The unit location is very important when it comes to workplace safety, even if it is only to be set up there for a short period. The room should be dry, well ventilated and vibration-free. An even temperature and wooden supports also help. The unit should not be stored or set up outdoors. If the unit is to be stored for an extended period, protect it from moisture and dust.

7 Installation/ Start-up



Before starting the unit, connect up the following:

1. Connect up a compressed-air supply of **at least 3.5 bar**. If using a long hose, make sure its ID is at least 6 mm. Provide each compressed-air hose with a service unit (protection filter with water separator, pressure regulator, manometer) and use the regulator to set the pressure to a constant level.
2. Insert the mains plug in the power socket, making sure that the oven and the power supply are the same voltage.
3. Only DEG-2 (DEG-1 please see step 4): Turn on the main switch (green rocker switch).
4. Start the compressed air flow.
5. Turn on the pressure switch (green round button).
6. Use the regulator (black knob on the left, next to the vacuum flange) to set the embedding pressure (max. 7 bar – safety valve). To do so, release the knob by pulling it towards you, then turn it to set the desired pressure. Push the knob in again.

NOTE: To set a lower pressure, first turn the unit off (vent the chamber), because the chamber pressure is maintained at its current level by a non-return valve. You release the regulator and set the pressure, then, when the pressure gauge shows the desired pressure, you reset the regulator.

8 Operation

8.1 General Operating Instructions

All instructions for using the unit, whether in verbal or written form, are based on our own experience and experimentation and can only be regarded as guidelines.

1. Set the timer (max. 60 minutes).
2. Open the black door **by turning the knob in the opposite direction to the arrow** – do not pull it towards you.
3. Place the work in the chamber - max. 3 large collar rings or 1 polymerisation tray (for DEG-2, see 8.4).

4. DEG-2 only:

If a material requires a certain temperature in the pressure chamber, first set the temperature (black rocker switch, lower right), then switch on the heater (red rocker switch next to green main switch). **Allow for warm-up times** (see below).


5. Close the chamber and activate the green pressure switch.
6. The pressure will increase to the set level (pressure gauge).
7. After the set time has expired, the pressure chamber will vent automatically, and the work can be removed. You can turn off the pressure switch at any time to interrupt the **pressure-embedding process**, i.e. the chamber is vented.




If the unit is not to be used for an extended period, turn it off and shut off the compressed-air supply.




If the pressure in the hose drops at any time during the set period, the level previously reached will be maintained by a non-return valve.

 **Open the pressure chamber only when the pressure has dropped *completely* to zero. If you open the chamber prematurely, you could tear the rubber sealing ring from its groove and damage it.**


 **DEG-2: Warm-up times when heating**

- from 20 to 37°C, approx. 15 minutes
- from 20 to 55°C approx. 35 minutes

 **DEG-2:** The heater has a temperature cut-off which triggers at approx. 112 °C. It can be restarted once the unit has cooled down. To do so, press in the reddish-brown rubber knob on the left-hand side of the housing (above the model plate). You'll hear it click into place.

9 Troubleshooting

Fault	Cause	Solution
Pressure does not build in chamber	Faulty O-ring cover seal	Check O-ring and replace if necessary
	Pressure regulator set to "0" (pressure gauge)	Check and/or set pressure
	Timer set to "0"	Set timer
Chamber does not heat (DEG-2)	Heater not switched on	Switch on heater
	Temperature cut-off triggered and/or faulty	Push in safety knob (see 6) and/or replace knob (Service Workshop)
	Faulty heater	Repair (Service Workshop)

 If the above recommendations do not solve the problem, contact your dental depot or our service department.

10 Care and Maintenance

10.1 Cleaning



Disconnect the power plug before starting any maintenance work.

The identification plate has always to be kept in easily legible condition and has not to be removed.



Remove external dirt from time to time with some form of cold cleaner.

Use only cold cleaners to avoid damaging the paintwork or removing the lettering.

The equipment should be cleaned at regular intervals to ensure trouble-free operation.

It requires only normal cleaning (sponge, damp cloth, mild detergent) and no further chemical additives.

Do not use solvents to clean the mounting plate!

10.2 Maintenance

Check the door seal (item no. 380032) for damage at regular intervals. To do so, use a round-ended pair of tweezers to remove the red silicone ring from its groove in the pressure chamber. The groove for the seal has to be kept clean.

Use a lubricant such as Vaseline or oil to reseal the ring in its groove.

Wassermann pressure hardening ovens do not require any maintenance. The units only need to be kept clean.

10.3 Warranty



The warranty period for our equipment is 12 months. If faults occur within the warranty period, contact your dental depot or get in touch directly with our service department.

Your equipment should only be operated in perfect condition. If faults occur which could harm operators or third parties, the unit should not be used until it has been fixed.

This warranty does not cover damage caused by improper use, external mechanical causes, transport damage or interference with the unit by unauthorized persons.

10.4 Spare Parts

If necessary please contact our service hotline phone.

10.5 Service Hotline 0049 (0)40 730 926 -20/ -24

10.6 Scope of Delivery/ Accessories

DEG-1 Item no.: 180999

DEG-2* Item no.: 180996*

Included parts	Item no.
Compressed air hose, PVC hose Ø 8 x 6 textile (blue) 2 m	320026
Supply line	592012

Accessories	Item no.
Compressed air hose, PVC hose Ø 8 x 6 textile (blue) per meter	320026
Polymerisation trough only DEG-2	180053*

10.7 Repairs



Servicing or repairs to the unit has only to be carried out by qualified technicians. Only original spare parts are to be used. Responsibility for the product is voided if unauthorised persons alter it or if inappropriate components are installed.

11 Technical Data

DEG-1	Item no.: 180999
DEG-2*	Item no.: 180996*
Voltage	220–240 V / 50/60 Hz
Power consumption	0.1 A, 4.2 A*
Output	20 W, 1000 W*
W x H x D	300 x 230 x 380 mm 345 x 285 x 450 mm*
Weight	13.2 kg, 19.7 kg*
Sound level	≤ 70 dB (A)
Compressed air connection	min. 3.5 bar
Operating pressure	max. 6 bar
Pressure chamber H x D	130 x 250 mm, 130 x 285 mm*

Other voltages on request.



Technical changes reserved.

12 Disposing of the Unit

The unit has to be disposed by an authorized recycling operation. The selected company has to be informed of all possibly health-hazardous residues in the unit.

12.1 Information on Disposal for Countries within the EU



To conserve and protect the environment, prevent environmental pollution and improve the recycling of raw materials, the European Commission adopted a directive that requires the manufacturer to accept the return of electrical and electronic units for proper disposal or recycling.

Within the European Union units with this symbol should not therefore be disposed of in unsorted domestic waste.

For more information regarding proper disposal please apply at your local authority.

13 EU Declaration of Conformity

in accordance with 2014/35/EU (Low Voltage Directive) and 2014/30/EU (Electromagnetic Compatibility Directive) and 2006/42/EC (Machinery Directive) and 2011/65/EU (RoHS Directive) and 2014/68/EU (Pressure Units Directive)

Manufacturer:	W A S S E R M A N N Dental-Maschinen GmbH Rudorffweg 15-17 21031 Hamburg Germany	Product description:	Compactor for dental applications
Model:	DEG-1 DEG-2 with heater and two temperature settings	Item no. 180999 Item no. 180996	
Applicable standards:	DIN EN 61010-1 DIN EN 61000-6-3 DIN EN 61000-6-1 DIN 45635-1 DIN EN 60335-1		

Hiermit wird bestätigt, dass die oben bezeichnete Maschine den genannten EU-Richtlinien entspricht. Diese Erklärung wird ungültig, falls die Maschine ohne unsere Zustimmung verändert wird.

This is to confirm that the above mentioned machine complies with the described EU guidelines. This declaration becomes invalid if the machine is modified without our approval.

Cette machine est conforme aux normes en vigueur d'Union européenne. Cet avis est nul et non avenant si cette machine est modifiée sans notre accord.

Esta máquina, anteriormente mencionada, cumple con los límites requeridos por el reglamento UE. Ahora bien, esta declaración quedará invalidada en caso de realizar modificaciones al aparato sin nuestra aprobación.

Hiermee wordt bevestigd dat bovengenoemde machine voldoet aan de voorgeschreven EU normen. Deze verklaring verliest geldigheid als er zonder onze uitdrukkelijke toestemming wijzigen aan de machine worden aangebracht.

Place, date: Hamburg, 2020-02-28

Company stamp :



Signature: _____
Sven Wassermann
(Managing Director)



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