

INSTRUCTIONS FOR USE

FIRING OVEN

DEGETHERM EASY



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Laboratory preheating ovens type DEGETHERM EASY are using up to 1150°C. they are used in dental laboratories for ring preheating before casting and in gold, metal, chemistry, food, ceramic and others industries, as well as education centres. The ovens are produced in compliance with the European standards . Their advantages are low energy consumption, fast heating, simple and reliable work with digital temperature regulator.

1 TECHNICAL DATA

Type	EASY 4	EASY6	EASY9
Max temperature	1150°C	1150°C	1150°C
Working area (WxHxL)	150x110x150mm	200x130x200mm	250x150x230mm
Power	2,0kW	2,5kW	3,0kW
U	230V/50Hz	230V/50Hz	230V/50Hz
Dimension(WxHxL)	280x500x230mm	420x520x380mm	450x540x430mm
Weight	28kg	32kg	35kg
Termoelement: Alumel – Chromel (NI – NiCr) tip K			

2 SAFETY PRECAUTIONS



WARNING



PROHIBITION



HIGH TEMPERATURE



WARNING!



Before connecting the appliance to the power mains or before the first use, carefully read the instructions for operation, programming, and connection.

For correct and safe operation of the appliance, please also comply with all instructions and precautions. If the oven and the regulator are used in a way that is not described in these instructions, protection of the user and the measuring circuit must be provided.

Before connecting the appliance, make sure the power mains voltage complies with the specifications of 230 V +/- 5% / 50 Hz. The appliance may be connected to the power mains via a single-phase outlet with a protection ground contact. The supply cable for such outlet shall be laid directly from the distribution board on which it shall be protected with a 16 A fuse. We also recommend an additional safety precaution with a 30 mA current differential switch. Cable cross section is 3 x 2.5 mm².



PROHIBITION!



Do not connect the appliance via extension cables or power strips (extension blocks)! Before any maintenance or repair work, remove the plug from the power outlet. Any task that involves opening of the appliance casing may only be carried out by an authorized service technician. If this provision is breached, the warranty shall be void.

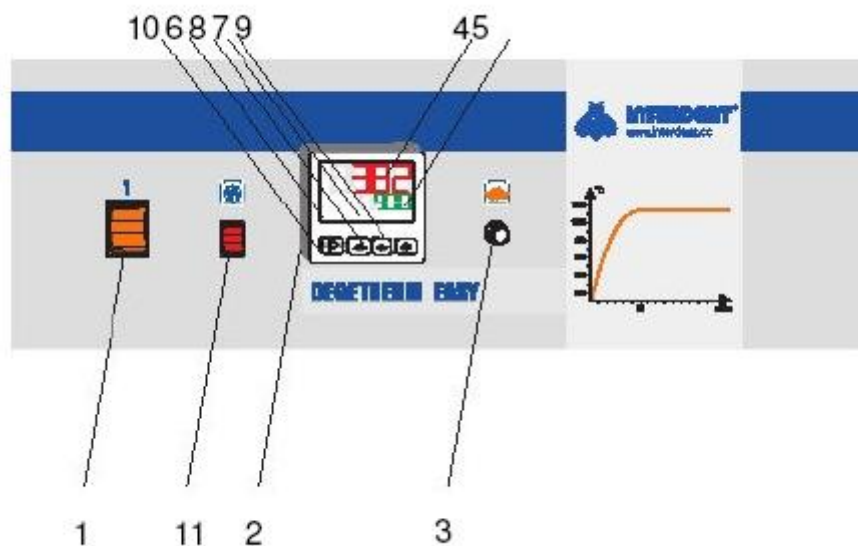
After a repair, the appliance shall be tested for dielectric strength and the protection conduit shall be inspected. In case of a malfunction after which safe operation of the appliance can no longer be guaranteed, any inadvertent further use of the appliance should be prevented.

3 OVEN CHARACTERISTIC

The housing is made of mutually sheet metal. The door, front panel and all flexible mechanisms of the door are made by stainless steel. Working area is made by fire resistance ceramics. It is resistant to cracking, peeling and crushing at high temperature and heated from the 4 side to assure the same T inside. All insulating are without asbestos.

4 THERMOREGULATOR

N480D is a microprocessor PID temperature controller with relay control output. Regulator has the potential to achieve the set T in time (time) and to maintain the set T for defined time. Working conditions 0-50°C, relative humidity 20-85%.

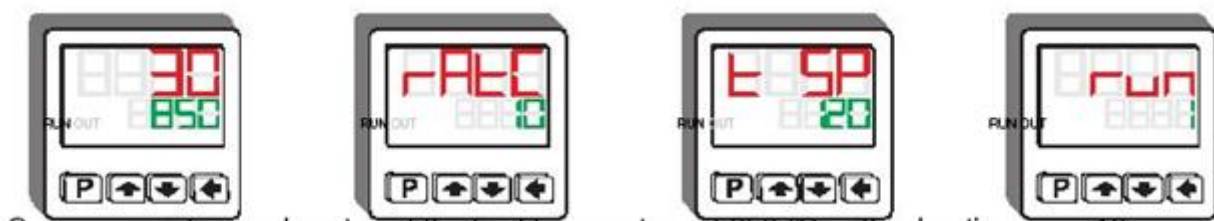


1. Main switch
2. Temperature regulator
3. Control light
4. Current temperature
5. Set temperature
6. Signal programmer light
7. Signal heater light
8. Key up
9. Key down
10. Programme key P
11. Power switch ventilator

If problems with oven ventilator operation occur you should check a cable and power. If you can not solve the problem after these checking than you have contact us by phone +386-3-425-62-06 or by e-mail: servis@interdent.cc

5 INSTRUCTION

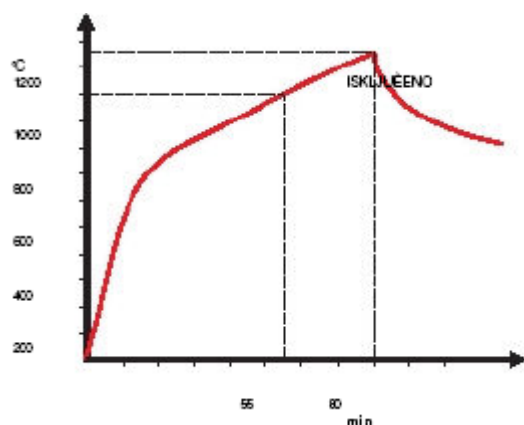
- Put the plug into the socket.
- Using of extension cable is not recommended. If it is necessary be aware of thickness of the cable (intersection $3 \times 2,5\text{mm}$).
- Put the main switch on (1) - control light will appear and display will lit. This is a sign that oven is energized.
- Setting desired temperature (further T) is implemented by key up (8) and key down (9).
- When the oven T reaches the set T it is constant until the oven is turned on. Heater operation is shown by control light (3).
- Current temperature is shown by upper LED display (4) and set temperature is shown by lower LED display (5).
- At lower T it is possible to achieve higher T than set T due to inertia heater.
- In case of loss of voltage set T will be the same as before after re-integrated voltage. Heating process will automatically continue.
- A gradual heating from start to finish T in fix time interval could be reached by ramp function. It is set by heating rate ($^{\circ}\text{C}/\text{min}$)) at parameter »rAtE«. When SP appears (set T is reached) you have to set the time for this constant set T (1 - 9999 minutes). It is set at »t SP« parameter. If we choose 0 (zero) the T will be at set value for infinite time (until the oven will be turn off). Gradually heating function is turn off by setting »rAtE« parameter on 0.0.
- The slope ($^{\circ}\text{C}/\text{min}$) and the ramp time (min) are set by programme key "P" and by key up and key down to set the values.
- Regulator operation is switch on by parameter »RUN« at 1 and switch off at 0.



Set upper pictures- how to set final temperature at 850°C with ramp 10°C/min and time interval at final temperature 120 minutes.

Key **P** is using for function changing. Desire value is set by **↑** and **↓** key. A programme is started by setting function »RUN2 at 1

The curve of oven heating



Regulator in the event of failure

Contact the servis



WARNING! Do not touch the door and the front panel between operating. It is necessary to dry the oven at 250°C at least 3 hours before first using. Every 13 months changing of thermocouple is recommended. For proper functioning of the oven it is necessary to follow the instruction.

6 DECLARATION OF CONFORMITY

According to article no. 7. in Annex 2 and point A: Regulation on Machinery Safety (UL RS 75/08)

Producer:

INTERDENT d.o.o.

Dol 1, 3342 Gornji Grad

Person who compiles the technical file:

Igor Grudnik

Dol 1, 3342 Gornji Grad

Product description:

Firing furnace Degetherm Easy4, Easy6 in Easy9

Documentation number: 186

Year of production: 2012

We declare that the products below are in accordance with the following directives:

Directive for electromagnetic compatibility (UL RS 84/01, 32/02, 132/06)

Directive for machinery safety (UL RS 25/06, 75/08)

Directive for electrical equipment (UL RS 27/04)

EMC 2004/108/ES

LVD 2006/95/ES

MD 98/37/ES

and harmonized standards SIST:

Machinery safety – Basic concepts, general planning principles – 1. part: Basic terminology, methodology	EN ISO 12100-1
Machinery safety – Basic concepts, general planning principles – 2. part: Technical principles	EN ISO 12100-2
Machinery safety – Evaluation and reduction of the radiation risk, emitted by the machines – 1. part: General principles	EN 12198-1
Machinery safety – Ergonomic requirements for the display design and control switches – 1. part: General principles about interaction between human and displays and control switches	EN 894-1
Machinery safety – Ergonomic requirements for the display design and control switches – 2. part: Displays	EN 894-2
Machinery safety – Ergonomic requirements for the display design and control switches – 3. part: Control switches	EN 894-3
Machinery safety – Fuse – General requirements for design and construction of fixed and movable guards	EN 953
Machinery safety – Prevention of unexpected start-up	EN 1037
Machinery safety – Electrical equipment of the machines – 1. part: General requirements	EN 60204-1
Electromagnetic compatibility – General emission standard – 2. part: Industrial environment	EN 50081-2
Electromagnetic compatibility – General emission standard – 2. part: Industrial environment	EN 50082-2

Place and date of issue of the declaration Gornji Grad, 01.12.2012	Stamp of the manufacturer 	Signature of responsible person: 
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7 WARRANTY FOR PRODUCT 0670, 0671, 0672

Product:.....

Serial number.

Date of sale:

Signature of the seller:

Warranty declaration:

- The product will work flawless during the warranty period if being administered in accordance with its purpose and the instructions provided;
- Warranty period expires after 12 months from purchase day. At your request we will repair failure or defects on the product, if you will report it within the warranty period. Failure will be resolved free of charge within 45 days from the date of failure report. The product, which will not be repaired within this deadline, will be, at your request, replaced with a new one. We will extend the warranty period for the time the product was being repaired..
- Validity of the warranty should be proofed by certified warranty card and original invoice.

The warranty is voided:

- If an unauthorized person interferes into the device
- If provided instructions for use are not being considered
- If the device is being mechanically injured
- If the unoriginal spare parts are being build in