



HOT PLATES
Models D-35 / D-39

and

Sand Baths

INSTRUCTION MANUAL

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Mark 

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GENERAL INTRODUCTION

The following considerations have as purpose to guarantee a correct reception and use the apparatus, as well as the security of the user. We recommend to read this manual detailed before proceeding to unpack the apparatus and later use.

- This manual should be conserved permanently within reach of the user.
- To unpack the apparatus carefully. Check that the content coincides with the packing list. Notify any eventuality immediately.
- For the correct conservation of the apparatus it is necessary to avoid their installation in areas with corrosive atmospheres or exposed liquid splashes.
- To avoid the use of the apparatus when the possibility exists to generate mixtures of explosive and inflammable gases.
- The European norm for use 89/655/CEE it exempts the maker all responsibility when it lacks an appropriate maintenance or there is alteration or change of some component.
- The apparatuses that are sent to the Technical *DINKO Instruments* Service they will be perfectly clean and disinfected.
Otherwise, they will be rejected and returned with freight in charge of the owner.

PACKING LIST

Description	Code	Quantity
*Hot Plate D-35	1.8425.00	1
*Hot Plate D-35D	1.8425.04	1
*Hot Plate D-39	1.8426.00	1
*Hot Plate D-39D	1.8426.01	1
*Hot Plate D-39D	1.8426.07	1
*Sand Bath, round 20cm Ø	1.8079.00	1
*Sand Bath, round 20cm Ø	1.8079.10	1
Cable plug		1
Instruction Manual		1
Warranty		1

*One of them.

DESCRIPTION

The hotplates have a steel top plate, heat reflectors, switch ON/ OF, pilot lights of operation, temperature control button and line cord.

REAR PANEL

Main cable with integrated portable fuse 1.2Amp.

SPECIFICATIONS

Round hot plates

Code	Model	Plate mm.	°C *	Accuracy	Display	Control	Weight	Watts	O. Size cm
1.8425.00	D-35	145 Ø	400	±2	-	Thermostat	4 Kg	800	16x22x9
1.8426.00	D-39	180 Ø	400	±2	-	Thermostat	5 Kg	1200	24x29x9
1.8426.01	D-39D	180 Ø	99,9	±0.1	YES	Digital Set	6 Kg	600	24x29x9
1.8087.00	Metallic block 20cm. Ø for tubes (to indicate size tube)								

* Temperature of the surface of the plate. Operation 230V 50/60Hz.

Round sand baths

Code	Chamber cm.	Temp.	Precision	Display	Control	Weight	Watts	O. Size cm
1.8079.00	20Ø x 6 high	350°C*	± 2	-	Thermostat	7 Kg	1600	24x29x19(1)
1.8079.10	20Ø x 6 high	300°C*	± 0.5	YES	PID Digital	7.5 Kg	1600	24x29x21(1)

* Temperature of the surface of the plate. Operation 230V 50/60Hz

(1) High without steel chamber

OPERATING INSTRUCTIONS- Thermostat models

- 1- Rotate the power control knob totally in contrary to the needles clock.
Place the switch to OFF position. Put line cord into a suitable powerline.

It is important follow these instructions before passing the point 2 in order to avoid damages in the main switch.

- 2- Push the ON switch. The pilot lamp will be illuminated. It is possible that some smoke coming from the heater film protector.
- 3- Rotate the power control knob in the sense of the needles- clock for increasing top plate temperature. Once reached the temperature to maintain the pilot lamp will go out and will light alternating indicating the regulation periods.

MODELS WHIT TEMPERATURE DIGITAL CONTROLLER PID

Instructions:

- P**: Process temperature (current) – Red digits
- S**: Temperature Set Point – Green digits

Pilot AT



Put the general switch to ON

- 1- Push << **AT** to configure the Set Point. The flashing of the digit to be modified corresponding to the Set Point starts.
- 2- Push ▲ or ▼ to select the first digit of Set Point.
- 3- Push <<**AT** to select the second digit Set Point. The flashing starts. Push ▲ or ▼ to select the second digit of Set Point.
- 4- Proceed in the same way, starting by pressing << **AT**, for the following digits until setting the Set Point temperature.
- 5- Push the blue key **SET** to confirm

Heating will start if the Set Point is higher than the current temperature.

AUTO -TUNING

If there is a deviation from the programmed Set Point, it may be necessary to carry out an Auto-tuning in which the regulator automatically selects the most suitable conditions to achieve adequate heating, obtaining the greatest accuracy of which it is capable.

ACTIVATION – AUTO-TUNING

Put the container to be heated in the hot plate and adjust the Set Point to zero degrees. Check that the temperature probe is properly installed and activate the device at medium power.

- 1- Enter the Set Point temperature. (**S**). See previous instructions.
- 2- Keep the <<**AT** key pressed for 5 seconds, and the **AT** light (green) will come on.
- 3- The process starts automatically. The working conditions must not be modified while it lasts.
The setting ends when the green **AT** light turns off.

START UP. Models with Digital Controller

- 1- Put the main switch of the plate in the OFF position. Connect the rear power outlet to the network, 230V-50/60Hz, with the supplied cable. Install the Pt100 probe in the models with an external probe using the bar and bracket included.
2. - Check the operation of the temperature controller



ORDERING INFORMATION / MAINTENANCE SPARES

Before proceeding to any exam or repair it is necessary to disconnect of the mains. All initiative should be made by qualified personnel to avoid bigger wrongs. Trust their apparatus to a technical service authorized by *DINKO Instruments*.

<u>Code</u>	<u>Description</u>
<u>Spares</u>	
1.8040.00	Support rod
1.0050.16	Digital temperature controller PID
1.0090.01	Heating unit for D-35.
1.0090.02	Heating unit for D-39.
1.0061.02	Relay
1.8110.00	Temperature probe, external, 1 m cable Pt100.
1.8110.01	Temperature probe, external, 1 m cable Pt100 gel/glass anti-acid.
1.8041.00	Support for external temperature probe.
1.0053.01	Thermostat.
1.0042.04	Fan for D-35.
1.0042.02	Fan for D-39.

Ordering

1.8425.00	Hotplate 145mm Ø. D-35
1.8425.04	Hotplate 145mm Ø. D-35D
1.8426.00	Hotplate 180mm diam. D-39
1.8426.01	Hotplate 180mm diam. D-39D
1.8079.00	Sand Bath, round 20cm Ø
1.8079.10	Sand Bath, round 20cm diam. PID controller
1.8079.01	Steel chamber 20cm dia. Code 1.8079.01

Note



Disposal of Waste Electrical and Electronic Equipment by users in private households in the European Union

This symbol on the product or on the packing indicates that this cannot be disposed of as household waste. You must dispose of your waste equipment by handling it over to the applicable take-back scheme for the recycling of electrical and electronic equipment. For more information about recycling of this equipment please contact your city office, the shop where you purchased the equipment or your household waste disposal service. The recycling of materials will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and environment.

WARRANTY

WHAT IS COVERED:

This product is guaranteed to be free of defect in workmanship and materials under normal use for a period of one year from the date of purchase by the consumer. During the warranty period, the manufacturer will repair or, at their option, replace at no charge a product that proves to be defective, provided you return the product, shipping prepaid, to an authorized service center.

WHAT IS NOT COVERED:

Instruments subjected to misuse, buse, neglect or unauthorized repair or modifications will be excluded from this warranty. Also excludes expendables, consumables. The liability of Dinko is limited to repair or replacement and in no event shall Dinko be liable for any collateral or consequential damages or loss.

“CE” DECLARATION OF CONFORMITY

DINTER S. A. *DINKO Instruments* c/ Encarnació, 123-125 / 08024 – Barcelona

Declare that the products mentioned in attached list, to which this declaration relates, comply with the essential safety requirements of the relevant European Directive.

- Low Voltage Directive D2006/95/CEE, of December 12, 2006

- Electromagnetic compatibility (EC), relative to the Directive for electromagnetic compatibility 2004/108/CEE, of December 15, 2004

-Safety for electrical devices of measurement, control, and laboratory use. Requirements concerning to CEM. EN 61326

-Safety rules for the electric devices of measurement, control, and laboratory use. Part I. General requirements EN 61010-1

-Requirements for laboratory equipment for heating materials EN 61010-2-010

Mounting and connecting instructions defined in catalogues and technical data sheets must be respected by the user

Name: Joan A. Bravo
Position: Technical Manager

Name: Josep X. Sensada
Position: Quality Manager

Signature:



Model: Hot Plates D-35 / D-39

OTHER DINKO APPARATUS

- Colorimeters
- Extractor for mince analysis
- Heater Metallic Blocks
- Heater Plates
- Infrared Ovens
- Kits for Water Analysis
- Magnetic Stirrers.
- Nephelometers
- Orbital Shakers
- Peristaltic Pumps
- Photometers
- Respirometers
- Rod Stirrers
- Rotary Stirrers
- Sand Baths
- Temperature Controllers
- Timers
- Turbidimeters
- Turn Dishes
- Vacuum Pumps



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