

Laboratory Instruments



GENERAL CATALOGUE

“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 2014/35/EU of 26 February 2014 applicable since 2016 and according with LVD Directive.
- Essential requirements of Annex I of Directive for Machinery 2006/42/CEE, of May 17, 2006
- Electromagnetic compatibility (EC), relative to the Directive for electromagnetic compatibility 2014/30/EU, according with EMC Directive.
- 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

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

Name:	Joan A. Bravo	Josep X. Sensada
-------	---------------	------------------

Position :	Technic Manager	Quality Manager
------------	-----------------	-----------------

Signature :



Models: *DINKO* catalogue

TERMS OF SALE - PRICE LIST

Prices: In Euros. Including packing.

Delivery: Ex Warehouse, Barcelona

Payment Terms: - Net, 30 days
- Cash.
- Irrevocable letter of credit

Warranty: 1 year

Note: All the instruments are 230 V, 50/60 Hz. Other specifications on request

 / DINTER, S. A.

c/ Encarnació, 123-125. Phone : + 34 93 284 69 62 / Fax : + 34 93 210 43 07

e-mail: dinter@dinko.es
www.dinko.es

08024 - Barcelona

ÍNDEX	PAGE	ÍNDEX	PAGE
B		N	
Baths, sand	15	Nephelometers	55-57
Baths, circulator	6,7		
Blenders	5	O	
Buffers solutions	39	Oven, infrared	16
C		Orbital shakers	44
Chlorine	6,16-17	Orbital shaker, thermostated	44
Chlormeter	6	Oxymeters	22
COD incubator	13-14	P	
Colorimeters	40-42	Peristaltic Pumps	23-37
Conductimeters	7-8	pH-meters	38-39
Conductivity standards	8	Photometers	40-42
Controllers	9	Pneumatics Pumps	43
Cooler with recirculation	6,7	Pressure controller	9,58
Cuvettes	45,52	Probes, conductivity	8
D		R	
Digestion	10-12	Redox standards	39
Dose Pumps	13	Rotator	43
E		S	
Electrodes, conductivity	8	Sand baths	15
Electrodes, pH	39	Shakers	44
F		Spectrophotometers	45-52
Filters, photometry	41-42	Standards, conductivity	8
H		Standards NTU	56-57
Heater Block	13-14	Standards, photometry	17
Homogenisers	5	Stirrers	18,53
Hotplates	15	Strips, reactive	6,16
Hotplate Magnetic Stirrer	18	Suspended solids, analyzer	53
I		T	
Incubator	13-14	Temperature controllers	9
Incubator, orbital shaker	44	Temperature probes	18,55
Infrared Oven	16	Thermometers, portable	54-55
K		Timer Controller	9,58
Kits for water analysis	6,16-17	Tray Rotator	44
M		Trichinoscope - TriquiVisor	12
Magnetic Stirrers	18	Tube Rotator	43
Meal Digester	10-12	Turbidimeters	55-57
Microscopes	20-21	Turn Dishes, Petri dishes	57
Multiparameter	22-23	V	
		Vacuum controller	9,57
		Vacuum Pumps	58-59
		Vacuum Regulator	59
		Vacuum trap	59

BLENDERS - HOMOGENIZERS

BLENDER Model CB15, 4L

- ♦ High capacity, power and speed. Motor 3,75HP
 - ♦ It crushes, emulsifies, mixes, pulverizes, homogenizes, or disintegrates in seconds
 - ♦ Stainless steel container, independent of the base motor
 - ♦ Blades integrated in the container
 - ♦ Adapting AD1 to use containers of 1L, 1,25L and smaller on request
 - ♦ Three speeds or continuous speed control in model CB15VEX
 - ♦ Capacity 4 litres
 - ♦ Operation 230V 50/60 Hz. 2250W
- High speed, 20000rpm free, 15500rpm with 2L of water, 14000rpm with 4L
Medium speed 18300rpm free, 14400rpm with 2L of water, 13200rpm with 4L
Low speed 15500rpm free, 12500rpm with 2L of water, 11500rpm with 4L

Code ▼	Articles
10.9797.00	Blender CB15E, 4L, with lid, three speeds
10.9798.05	Blender CB15TE, 4L, with lid, three speeds and 3 minutes digital timer
10.9798.06	Blender CB15VEX, 4L, with lid, continuous speed digital control
10.9799.00	Adapter AD1 for use 1L, 1,25L container and mini MC containers



Blender Model 8010

- ♦ High power
- ♦ Two speeds, 22000 and 18500rpm
- ♦ One litre stainless steel or 1,25 litre glass containers with vinyl lid
- ♦ One litre and semi-micro containers with screw cover all stainless steel.
- ♦ Blades integrated in the containers
- ♦ Independent container of the base - motor
- ♦ Mini-containers stainless steel in option with silicone lid
- ♦ Timer
- ♦ Operation 240V 50/60Hz. 400W
- ♦ Capacity 1L and 1,25L-Timer 1 to180 seconds- Speeds 22000 and 18500rpm



Base Blender only



Containers: 1L st. steel Mini containers MC1, MC2, MC3 Semimicro One litre with screw lid Hermetic container Set Tools Blade assembly and 1,25L glass

Code ▼	Articles
10.9794.00	Blender 8010S. One litre stainless steel container. 2 piece vinyl lid
10.9795.00	Blender 8010G. 1,25L glass container. 2 piece vinyl lid
10.9794.17	Blender only base
10.9794.01	One litre stainless steel container 2-piece vinyl lid, spare
10.9795.01	1,25 L glass container 2-piece vinyl cover, spare
10.9807.00	One litre container with screw cover and gaskets, spare. Working from 75 to 500ml. All stainless steel
10.9794.16	One litre container, hermetic cover and sample valve. All stainless steel
10.9800.00	Mini-container MC1, stainless steel, 12-37ml. Silicone lid
10.9801.00	Mini-container MC2, stainless steel, 37-110ml. Silicone lid
10.9802.00	Mini-container MC3, stainless steel, 50-250ml. Silicone lid
10.9806.00	Semi-micro container 360ml. Working from 25 to 250ml. Screw cover and gaskets. All stainless steel
10.9794.10	Blades for 8010
10.9800.01	Blades for MC1
10.9801.01	Blades for MC2
10.9802.01	Blades for MC3
10.9794.02	Assembly, axis / blades / gaskets PTFE
10.9794.18	Set of tools to remove blades

CHLORINE

CHLORMETER – DPD Method

The DPD test is a method to measure the Free Chlorine, Combined or Total Chlorine in a range of 0 to 2.0mg / l Cl

The colour intensity is measured by means of a comparator with the scales 0.1 – 0.2 – 0.4 – 0.7 – 1.0 – 1.2 – 1.5 and 2.0ppm provided of the standard solutions in each position
It includes reagents for 110 tests.



Code ▼	Articles
8.0012.00	Comparator Chlorine DPD kit
8.0012.01	Reagent DPD 1, replacement for Free Chlorine
8.0012.02	Reagent DPD 2, replacement for Free Chlorine
8.0012.03	Reagent DPD 3, replacement for Total Chlorine

CHLORINE, strips for Chlorine test

Control of Chlorine high levels, for disinfection of utensils or foods like vegetables, salads or fruit, and others

Submerging a strip one second in the liquid and indicative colour of concentration of Chlorine is obtained in ppm.
Scales: 10,50,100 and 200ppm Cl

Code ▼	Articles
8.0012.09	Strips for Chlorine test, 200pcs



CIRCULATION BATHS

BATH, COOLING, WITH CIRCULATION

Model BRC10

- ♦ Thermostat of last technology, controlled entirely by microprocessor, without deviations, with uniform operation
- ♦ External is cold-rolled steel with anti-bacterial powder coating
- ♦ PID digital temperature control.
- ♦ LCD display of high contrast
- ♦ Range: -10°C to 100°C.
- ♦ Circulating pump for mixing and external temperature control of devices
- ♦ Automatic systems of security for control of liquid level, and overheating
- ♦ Compressor for cooling and heating units



Specifications

Basic Parameter ▼	Specification ▼
Temperature range	-10°C to +100°C
Temperature fluctuation range	± 0,005°C ~ ± 0,02°C
Display resolution	0.001°C
Refrigerant	R600a
Circulating fluid	Water, ethylene glycol, ethanol 99%
Circulating pump flow	6L/min
Cuvette size	250 x 200 x 150 mm
Opening size cuvette	180 x 140 mm
Overall size	515 x 450 x 600 mm
Operation	230V 50Hz
Total power / Weight	1.5kw / 35Kg
Code	12.0100.70

CIRCULATION BATHS

BATH, COOLING, WITH CIRCULATION. Model D-40

- ♦ Microprocessor control ♦ Stainless steel made ♦ Range of temperature control: -0 to +60°C
- ♦ Digital indicator
- ♦ Peristaltic pump for recirculation fluid: 4 to 20 l/hour to thermostat outside devices.
- ♦ Timer, total, cycles, and ramps. ♦ Peltier cooling system. ♦ Removable stainless-steel reservoir

Supplied with cover reservoir and tubes.



Parameters ▼	Features ▼	Parameters ▼	Features ▼
Temperature range	2.5°C to + 60°C	Power	300W (230V) – 600W (110V)
Fluctuation of temperature	± 0.1°C	Heating unit	Cartridge
Heating power	100W	Recirculation control	from 4 to 20L/hour
Cooling capacity	180W	Reservoir capacity	1L /10x15cm, Ø x height
Coolant	H ₂ O	Overall size	27x34x29cm width x deep x height
Heating time	<30 min from 20°C to 60°C	Operation/ Weight	110-230V 50-60Hz / 9.5Kg
Cooling time	<100 min from 20°C to 5°C	Code	1.8200.00

BATHS (Sand Baths) to see HOTPLATES / COLORIMETERS, to see PHOTOMETERS.

CONDUCTIMETERS

CONDUCTIMETER, PORTABLE. Model COND 7+ and COND 70+

Ergonomic model. Supplied in case with electrode and solutions. Equipped with rubber protective cover and a large LCD display showing all data simultaneously.

COND – TDS –Temperature for the model COND 7 and GLP - Data Logger -USB additional for the model COND 70. 5 years warranty

Specifications ▼	Model COND 7+	Model COND 70+
Range COND	0.00...20.0-200.0-2.000µS/cm/200...20.00-200mS/cm	
Resolution	0.01/0.1/1 µS-0.01/0.1mS	
Precision(according cell)	±2% full range	
Calibration points	1...4	
Recognized standards	84µS – 1413µS – 12.88mS – 111.9mS	
Selectable cell constant	1 user-defined value	
Reference temperature	0,1 – 1 – 10cm ⁻¹	
GLP function	NO	YES
Timer calibration	-	YES
Indication standard used	YES	
Cell constant	0.1 – 1 – 10cm ⁻¹	
TDS range	0.1mg/L to 100g/L (ppt)	
Factor TDS / Precision	0.4 to 1.0/± full range	
Temperature, range	0 to 100.°C±5°C	-10 to 110°C±0.5°C
Coefficient	0.00 to 10.00% /C°	
Compensation of temperature	Automatic / Manual 0 to 80°C	
Reference temperature	16...30°C	
Salinity	NO	0.01 to 50ppt / ±1%
GLP System	NO	YES, DATA LINK
Dataloger	NO	500 data with date and hour
Auto Shutdown	After 20 minutes	
Display	LCD	LCD back-light, 3 colors
Input	BNC, CINCH-RCA (CAT)	BNC, CINCH(CAT) and USB(PC)
Power	3 batteries 1.5V AAA	3 batteries 1.5V AA Power pack AC/DC with cable USB
Autonomy	>200 hours	
Protection IP	Anti moisture IP 57	
Size / weight of instrument	86 x196 x 33mm / 295g	86 x196 x 33mm / 300 g
Size / weight with suitcase	385 x 300 x 115mm / 1720g	385 x 300 x 115mm / 1725g



CONDUCTIMETERS...

Code ▼	Articles
4.0104.00*	Conductimeter, portable COND 07+, suitcase, cover rubber, solutions and cell / CAT
4.0104.01*	Conductimeter, portable COND 07+, suitcase, cover rubber, solutions without cell / CAT
4.0130.00*	Conductimeter, portable COND 70+, suitcase, cover rubber, solutions and cell / CAT
4.0130.04*	Conductimeter, portable COND 70+, suitcase, cover rubber, solutions without cell / CAT
4.0104.02*	Cell (5 μ S to 100mS) 0 to 80°C, CAT NTC30K, of plastic/Pt 1m cable
4.0104.03*	Cell (5 μ S to 150mS) 0 to 80°C, CAT NTC30K, of glass, 5 m cable
4.0104.04*	Cell (0,1 μ S to 500 μ S) CAT NTC30K, epoxy, st.st.1m cable
4.0101.04*	Power pack, main 230V

CONDUCTIMETER, bench top. Model COND 50+

- ♦ Laboratory instrument with microprocessor
- ♦ Custom configuration with selectable cell constant and coefficient of temperature.
- ♦ Automatic and manual calibration with automatic knowledge of 4 standards and 1 to choose by user.
- ♦ Automatic scaling in avoiding errors
- ♦ Adjustable parameters
- ♦ Function for medium stable readings and auto-diagnostic
- ♦ Large backlit LCD display shows readings, scale units' measurement and temperature.
- ♦ Cell with integrated temperature sensor designed to prevent the formation of bubble, built in materials of high resistance to chemicals.

ESPECIFICATIONS

- ♦ Range: 0...200.0 – 2000 μ S / 2.00...20.00 – 200.0mS.
- ♦ Resolution: 0.1-1 μ S / 0.01-0.1mS
- ♦ Precision: \pm 1% deep scale.
- ♦ Automatic calibration with automatic knowledge of 4 standards:
4 points and 1 to choose by user.
- ♦ Standards: 84, 1413 μ S and 12.88, 111mS to 25°C
- ♦ Cell constant: 0.1 – 1.0 – 10.0 selectable
- ♦ Temperature range: 0.0 to 50.0°C.
- ♦ Resolution: 0,1°C.
- ♦ Compensation of temperature: automatic and manual
- ♦ Reference temperature: 15...30°C
- ♦ Temperature Coefficient: 0.00 to 9.99% by °C adjustable
- ♦ Screen: LCD backlight
- ♦ Inputs: cell, BNC - CAT, jack
- ♦ Power: power pack 9V DC...230V AC
- ♦ Size / Weight: 160 x 185 x 70mm / 550gr



COND 51+

Code ▼	Articles
4.0106.00*	Conductimeter with articulate support, solutions and cell 2 poles with integrated temperature sensor
4.0106.02*	Conductimeter with articulate support, solutions without cell
4.0104.02*	Cell (5 μ S to 100mS), 0 to 80°C CAT NTC 30, plastic body 1m cable
4.0104.03*	Cell (10 μ S to 150mS), 0 to 80°C CAT NTC 30, st.st.,PP, Ultem 1m cable
4.0104.04*	Cell (0,1 μ S to 1mS), 0 to 80°C CAT NTC30, epoxy, st.st. body 1m cable
4.0104.08*	Cell 2 polos K=1 with CAT, 5m cable
4.0200.14*	Articulate support, spare, for 4 sensors and CAT

CONDUCTIVITY, standards solutions. NIST/ DKD Traceability

Code ▼	Articles
4.0100.13*	Standard solution 1.3 μ S / cm / 25°C, 1x280ml, ENAC
4.0100.14*	Standard solution 5 μ S / cm / 25°C, 1x280ml, ENAC
4.0100.16*	Standard solution 84 μ S / cm / 25°C, 1x500ml
4.0100.11*	Standard solution 147 μ S / cm / 25°C, 1x500ml
4.0100.04*	Standard solution 1413 μ S / cm / 25°C, 1x500ml
4.0100.07*	Standard solution 12880 μ S / cm / 25°C, 1x500ml

Standards of other values, conductivity, salinity and Certified ENAC solutions

CONDUCTIMETER, see, MULTIPARAMETRIC METER

CONTROLLERS

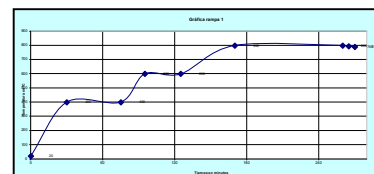
CONTROLLER, temperature. Model D-85

Controller type PID of great accuracy. Display for set and actual temperature.
Temperature probe (110mm. long x 5mm diameter 1 meter cord), provided.
Size: 185 x 245 x 120mm
Weight: 2Kg
Operate on 230V 50/60 Hz. 2x5Amp 2.000W



CONTROLLER, temperature / time. Model D-85R

Controller to program 4 ramps of 8 segments each, and permit to select start and end time operation
Port RS485, for PC command and analogical port (0-20 mA, 4-20mA, 0-10V, 0-20 V) for printer (optional)
Come with temperature probe.
Size: 185 x 245 x 120mm. Weight: 2Kg
Operate 230V 50/60 Hz. 2.000 W



Graphic of 6 ramps °C / time

Code ▼	Model	Temperature, maxim	Range time	Precision
1.8102.00	D-85	399,9°C	--	±0.1°C
1.8103.00	D-85R	400°C	99hours, 99min	±0.5 °C
1.8104.00	D-85R	1200°C	99hours, 99min	±0.5 °C
1.8300.01	Analogical card 0-20mA, 0-20V for printer			
1.8300.02	Card for RS485 port			

CONTROLLER, time. Digital cyclic time controller

The controller enables automatic switching of small appliances to on or off (up 2000watt)



- ♦ Two controls for recurrent operations that allow the programming operation and rest time
 - ♦ Memory EPROM, without battery and maintenance
 - ♦ Display LCD backlight
 - ♦ Range: 0,01 seconds to 99.9 hours or 999.9 hours according to mode
 - ♦ Safety IP65
- Come in housing with main switch, fuse, pilot lamps, main plug and auxiliary plug.
Size: W180 x D245 x H 12mm /Weight: 2Kg. Operation: 230V 50/60 Hz 10Amp 2000W

Code ▼	Articles
1.8119.00	Cyclic timer controller

CONTROLLER, VACUUM CONTROLLER, Digital. Model D-VCD

For precise control of vacuum pumps
The controller enables automatic switching of vacuum pumps to on or off.
Two set point controls and vacuum units to select.
Display of vacuum, LEDS of 11mm height, bicolour
Inlet of air. Auxiliary socket main
Operation: 230V 50/60 Hz. 2x2Amp
Weight: 2Kg
Size: 180 x 245 x 120mm



Scale measure: 0 to -101.3 kPa/ 0...-760mm Hg/0...1bar
Resolution: 0.1 kPa / 1 mmHg /0.001bar
Set point: 2, higher and lower limits

Repeatability: ± 0.2% end of scale
Operation temperature: 0 to 50°C
Relative humidity operation: 35 to 85%

Code ▼	Articles
1.9518.10	Controller of vacuum Mod. D-VCD

DIGESTION

EXTRACTOR FOR ANALYSIS OF MEATS. Model D-75 and D-75B



Device designed to reproduce the principle of the artificial digestion of meats using enzymes and controlled pH with the purpose to analysis the not digested residuals.

This device allows the realization of the official method for the extraction and identification of trichinas published in the Official Newspaper of European Union August 11, 2015, Implementing Regulations (UE) 2015/1375 of the Commission on August 10, 2015, for extraction of trichina in collective samples.

It is presented in piece of furniture-stand containing several devices to control the digestion process according to the selected method.

Included devices:

- Hot plate 140mm Ø with digital indication and control of temperature PID by means of probe Pt100 with protector to avoid corrosion, and precision of $\pm 0,5$ °C. Adjustable up to 99,9 °C.
- Adjustable magnetic stirrer, maxim 1800 rpm. and magnetic stirring bar of samarium of great power.
- Automatic dispenser pump of reagent with container, provided of conduits in Viton® (only D-75A) with selector / initiator for dosage, 50 or 100 samples.
- Device for the digestion collection, constituted by draw container with sieve, graduate container of previous collection sample and PTFE stopcocks.
- Glass container for the samples to digest.
- Cuvette, acrylic, 180 x 40mm of final sample collection, with the bottom divided in squares to facilitate the exam by means of Projectors.
- Support integrated for the collection containers with front opening to facilitate their extraction.
- A reagent flask of 1L is included for pH, 5 doses of 10 grams of enzyme and graduate cylinder.

Overall size: 400 x 300 x 600mm. (w x d x h)

Operation: 230V 50/60Hz. Amp. 2. Weight: 12Kg

EXTRACTOR, kit for analysis of meats. Model D-75C



This Extractor allows the realization of the official method for the extraction and identification of trichinas published in the Official Newspaper of European Union August 11, 2015, Implementing Regulations (UE) 2015/1375 of the Commission on August 10, 2015, for extraction of trichina in collective samples.

Included devices:

Magnetic stirrer with speed regulation, max 1800rpm, temperature control PID, max. 99,9°, precision of $\pm 0,5^\circ$ C. With Samarium stirring bar.

Display of temperature and Pt100 probe with support.

Support - foot with bar, hoops, and clamps

Draw container, glass, 2,7L with PTFE stopcock.

Sieve, stainless steel

Graduate container of collection 40ml, with PTFE stopcock

Glass container of samples. Acrylic cuvette 180 x 40mm for final collection,

1L Reagent flask. Five doses of 10 grams of pepsin. Graduate cylinder 25ml and dispenser syringe

Description of complements

Tray for the collection of samples with removable rack of 50 departments for facilitate the transfer and storage. Built in stainless steel according to the Gastro-Norm EN-631 standard. Recommended to ensure separation of samples. **Code 1.9808.50**

Cuvette, acrylic, 180x40mm of final sample collection, with the bottom divided in squares to facilitate the exam by means of projectors. **Code 1.9808.16**

Digital Precision Balance- High contrast LCD with blue backlighting. Capacity 600g. Precision 0.1g. Total continuous tare.

Automatic disconnection 2 minutes. Low battery warning. External auto-calibration. 55x155mm stainless steel platform. Weight 600g.

Power supply at 230V 50Hz or 4 R6 batteries. **Code 8.9812.02**

Meat mincer, great power. Removable container cup. Maximum speed: 18300 rpm. Regulation in increments of 650rpm. Power supply: 220... 240V 50/60Hz 750W. Joint weight: 750g. **Code 8.9816.00**

Decanter tank. Decanter funnel of 2 liters of borosilicate glass with Teflon ® key, top opening for 100mm Ø sieve, provided with slits to facilitate air evacuation. **Code 1.9808.14**

Graduated collection tube. Borosilicate glass, 40ml capacity, with Teflon ® key. **Code 1.9808.15**

Sieve, attachable to the 2liter decanter funnel. Built entirely in stainless steel. 100mm sieve Ø, 180 mesh. **Code 1.9808.13**



1.9808.50



1.9808.16



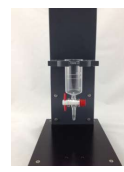
8.9812.02



8.9816.00



1.9808.14



1.9808.15



1.9808.13

DIGESTION...

TRICHINOSCOPE Model TriquiVisor Automat XY-HD

The *DINKO* TriquiVisor Automat XY-HD, it is a new instrument for a sequential, precise, and quick exam of tissue animals specially conceived for the detection of trichinas.

This instrument is according to the method for the identification of trichinas published in the Official Newspaper of the European Union August 11, 2015. Implementing Regulations (EU) 2015/1375 of the Commission on August 10, 2015

Features:

- Panoramic view finder of high resolution and contrast that allows to see a whole grid of the collection cuvette shown with 40X magnification.
- Precise and quick focusing system with helical ring.
- White LED lighting crown with evenly distributed power 100 watts
- Filter diffuser with adjustable light polarizer which prevents annoying reflections for viewing or loss of contrast.
- Scale continues selectable from 35X to 160X magnification.
- Moving motorized horizontal and vertical viewing independently with type switches push button start /stop
- Selectors for independent horizontal and vertical displacements with three positions: right -anchor - left for horizontal and up-anchor -down to the vertical that guarantee systematic and sequential observation grids of the sample cuvette
- Sample cuvette – holder board for stability, with grids
- Protocol for centering the test image using a 90X.
- It meets the essential safety requirements of the European Directive applicable (CE)



TriquiVisor Automat XY - HD : W46 x D40 x H28cm. **Code 1.9810.00**, screen LED 24" and cuvette included
TriquiVisor Automat XY - HD : W46 x D40 x H28cm. For PC. **Code 1.9810.30**, cuvette included, without PC.
 Weight: 18Kg. Operation: 230V 50/60 Hz.

Screen: LED high resolution 24". Code 1.9810.23. Cuvette, acrylate 180 x 40mm. Code 1.9810.22
 PC with 24" LED screen. **Code 8.9749.00**

DIGITAL MICROSCOPE FOR TRICHINA, see MICROSCOPES.
 DISPENSERS, see PERISTALTIC PUMPS

Articles and accessories for trichina extraction

Code ▼	Articles
1.9808.00	Extractor D-75A, complete with automatic dose
1.9807.00	Extractor D-75B, complete with dispenser syringe
1.9806.00	Extractor D-75C, complete with dispenser syringe
8.9812.02	Precision balance. Capacity 600g. Precision 0.1g
1.9808.16	Cuvette, acrylic 180x40mm
1.9808.14	Draw container 2L, PTFE stopcock
1.9808.15	Collection container, graduated tube 40ml, PTFE stopcock
8.0019.00	Stereomicroscope binocular head, magnification 40-80, with illumination control
2.7040.01	Formaldehyde, 1L
1.9808.19	Stirring bar, samarium, PTFE coated
1.9808.47	Pepsin NF 1:10000, 10 x 10g
1.9808.17	Pepsin NF 1:10000, 50 x 10g
1.9808.31	Pepsin NF 1:10000, 1Kg
8.9816.00	Mincer Meat
1.9808.40	Reagent 1L. (Hydrochloric acid 25%)
1.9808.13	Sieve, stainless steel, 100mm Ø 180mesh
1.9808.50	Tray, stainless steel, for 50 samples
1.9808.12	Sample container 3L, glass
1.9810.00	Trichinoscope Model TriquiVisor Automat X –Y HD with 24" LED screen and cuvette
1.9810.30	Trichinoscope Model TriquiVisor Automat X –Y HD for PC with cuvette, without PC or screen
1.9810.23	Screen, 24" LED for TriquiVisor
1.9810.22	Cuvette, acrylic 180x40mm for TriquiVisor
8.9749.00*	Computer PC with 24" LED screen for TriquiVisor

DOSE PUMPS

DOSE PUMPS. Model DECO

Low flow dose pump, very appropriate to dose many chemicals because the plastic materials involved

Characterized by the short stroke that assures a smaller wear. Don't need maintenance.

They are not damaged if work without liquid.

Variable flow

230V 50Hz



Main features

- ♦ ABS Box
- ♦ Stainless steel front cover.
- ♦ Polycarbonate cover for panel control
- ♦ Separation of electronic and hydraulics
- ♦ MOPLen+FV pump head
- ♦ MOPLen+FV valves
- ♦ Double sphere valve
- ♦ PTFE diaphragm of great thickness
- ♦ Brass piston
- ♦ Laterally adaptable

Versions with PVC, PVDF or ST.ST. pump heads and valves, or special valves for viscous fluids.

Code ▼	Flow max.	Pressure maxim Kg/cm ²	Stroke m/m	CCxstroke	Volts Watts	Kg
1.9509.01	2L / hour	8	0.6	0.3	220/30	4
1.9509.02	5L / hour	5	1	0.9	220/30	4
1.9509.03	8L / hour	2	1.7	1.32	220/30	4

HEATER BLOCKS

HEATER BLOCK. Model D-65 and D-65T

Heater unit of interchangeable heating metallic blocks with adjustable temperature. Designed for incubation and inactivation of cultures, enzyme reactions, melting and boiling points, Nitrogen or COD

The electronic controller assures temperature uniformity and rapid heat up.

Two digital readers, indicate the current temperature and the temperature set point. Housing of stainless steel

The model D-65 is given with warning digital chronometer while the model D-65T integrates an electronic digital timer for the automatic stop and acoustic warning.

Both models are manufactured for use up to 200°C or 99,9°C with $\pm 0,5^\circ\text{C}$ and $\pm 0,1^\circ\text{C}$ accuracy respectively

Includes threaded support rod enabling to remove blocks and safety-bell. Without blocks. Supplied with safety - bell.

The Heater D-65 ASTM include metallic block isolated for 6 Nessler tubes. Size holes of 20mm diameter and 230 mm deep each. Additional hole for temperature probe Pt100

Temperature control to 300°C. Precision $\pm 0,5^\circ\text{C}$

Conform ASTM 3366-95

The heater ASTM 2274 support four tubes of length 590 mm x 20 mm Ø to work up to 200 °C. Requires Controller temperature model D-85

Size: D-65 and D65T: 25 x 28 x 11cm.

D-65 ASTM: 26x28x40cm.

ASTM 2274: 35 x 35 x 80cm

Weight: D-65, 4Kg / D-65T, 4.5Kg. / D-65 ASTM, 20Kg. / ASTM 2274, 35Kg.

Operation: 230V 50/60Hz



D-65



D-65T

HEATER BLOCKS

Heaters

Code ▼	Articles	T maxim	Precision °C
1.8082.00	Heater D-65	200°C	±0.5
1.8082.10	Heater D-65	99,9°C	±0.1
1.8084.00	Heater D-65T	200°C	±0.5
1.8084.10	Heater D-65T	99,9°C	±0.1
1.8090.00	Heater D-65 ASTM	300°C	±0.5
1.8092.01	Heater ASTM 2274*	200°C	±0.1

*Requires a D-85 Temperature Controller

BLOCKS for D-65 and D-65T / Accessories

Code ▼	Articles
1.8083.00	Metallic block for 6 tubes each 13.16 and 20mm Ø
1.8085.00	Metallic block for 24 tubes of 16mm Ø
1.8085.01	Metallic block for 30 tubes of 13mm Ø
1.8085.08	Metallic block for 30 tubes of 12mm Ø
1.8085.04	Metallic block for 18 tubes of 20mm Ø
1.8085.02	Metallic block for 30 tubes Eppendorf
1.8087.00	Metallic block, virgin
1.8088.00	Threaded support rod enabling to remove blocks
1.8089.00	Safety-bell



D-65ASTM

HEATER BLOCK Model D-64D

Fixed metallic block of 12 tubes of 16mm diameter. Stainless steel housing
Digital control of temperature for current and programmed temperature
Supplied with safety-bell.

Code ▼	T° maxim	Precision °C	Size cm	Articles
1.8081.10	150° C	±0.5	21x17x15	Heater D64D
1.8081.01				Safety-bell



D-64D

HEATER BLOCK. Model D-66

Metallic block incubator for 4 places of flasks, tubes, etc. of 40mm diameter.
Deep holes, 60mm.
Stainless steel made.
PID temperature controller with digital reader.
Available aluminium adapters for smaller containers than 40mm diameter
Weight: 3.8Kg.
Operation: 230V 50/60 Hz 200W



D-66

Code ▼	Temperature	Precision °C	Size cm	Articles
1.8093.20	Room to 50° C	±0.1	21 x 17 x 15	Heater block D-66
1.8093.15			To indicate Ø	Aluminum adapter

HOTPLATS

HOTPLATES, CIRCULAR. Models D-35, D35D, D-39 and D-39D

- ◆ Stainless steel shield and ventilate housing of stainless steel assure safe internal electronic energy regulator and spills protection.
- ◆ Switch “on–off”, thermostat heat control knob and pilot lamp.
- ◆ Top plates are made steel with embedded heating elements of long-life and high power
- ◆ The plate D-35D and D-39D have a PID Temperature Control, with set point, display, external temperature Pt100 probe with 1 meter of cable, rod, and clamp to support the probe to permits to regulate in hot materials
- ◆ As accessory a metallic block of 20cm of diameter is given for tubes, adaptable to the plates D-39 and D-39D
- ◆ As accessory a metallic block of 20cm of diameter is given for tubes, adaptable to the plates D-35 and D-39



Cuvette 1.8079.01



D-39



DIGITAL PID



Pt100 Temperature probe

Code ▼	Model	Top plate mm	°C*	Accuracy	Probe	Display	Control	Weight	Watts	O. Size cm
1.8425.00	D35	145Ø	400	±2	Bulb	-	Thermostat	4 Kg	800	16x22x9
1.8425.04	D35D	145Ø	350	±0.5	Pt100 External	Yes	Digital PID	5 Kg	800	16x22x9
1.8426.00	D39	180Ø	400	±2	Bulb	-	Thermostat	5 Kg	1200	24x29x9
1.8426.01	D39D	180Ø	99,9	±0.5	Pt100 External	Yes	Digital PID	5 Kg	600	24x29x9
1.8426.07	D39D	180Ø	350	±0.5	Pt100 External	Yes	Digital PID	5Kg	600	24x29x9
1.8087.06	Metallic block 20cm. Ø for tubes (to indicate size tube)									
1.8079.01	Solid steel cuvette to enable hot plate like a sand bath									

* Surface temperature. Operate on 230V 50/60Hz.

SAND BATHS, TO SEE HOTPLATES

INFRARED OVEN

INFRARED OVEN. Model D-60

Inside walls mirror finished stainless steel reflecting and the high infrared penetrability assures a quick warm up to 200°C in 10 minutes.

An upward sliding, heat resistant, glass door, provides an observation window.

Digital Temperature Control: maxim 200°C / Accuracy: $\pm 0.5^{\circ}\text{C}$

Size: overall 25 x 26 x 40cm. Chamber: 180 x 180 x 110mm. Weight: 10Kg

Operate on: 230V, 50/60Hz. 2Amp / Power: 750W



Code ▼	Articles
1.9766.00	Infra-Red Oven D-60, digital temperatura controller

KITS

KITS, in view

Code ▼	Articles
8.0012.00	Chlorine DPD, free, combined and total, visual comparator (page 6)
8.0012.08	Calcium, Magnesium and Total Hardness, test of drop, 1440 drops. 1 drop=10ppm CaCO_3
8.0012.34	Iron. Scale 0-0.2-0.4-0.6-0.8-1.0-1.5-2.0ppm Fe, 44 tests



TEST STRIPS

Impregnated papers for semi –quantitative determination of ions

Code ▼	Articles
8.0012.09	Chlorine. Scale 10-50-100-200ppm, 200 strips (page 15)
8.0012.23	Hardness: 0-1000ppm/Alkalinity T:0-200ppm/pH:6.2-8.4/Bromine T: 0-20ppm, 50 strips
8.0012.21	Nitrate/Nitrite 0 to 50ppm NO_3 and 0 to 3ppm NO_2 , 25 strips
8.0012.15	Peroxides. Scale 0 to 90ppm, 25 strips
8.0012.22	Salinity 400,3000,4000,4500,5000,7000ppm NaCl, 10 strips



Hardness



Chlorine strips

See COMPARATORS AND DISCS SECTION

KITS, Photometrics, for water analysis

DINKO Photometers provides a quick and simple method of analysis. The reagents of the kits come with tablet form for maximum convenience, simplicity use and repetitive dose. The test is simply carried out by adding tablets to a sample of water

The kits included a calibration chart for the Photometer D-101 The Photometers D-100 and D-105 avoids the use of charts, because it has them memorised



The kits are manufactured in 50 or 250 test size. The kits of 25 test-tubes, it incorporates all the necessary reagents in each tube of 16 mm. diameter. Only is necessary to add the sample. It is the case of Ammonia Nessler, COD, Nitrate, Total Nitrogen and Total Phosphorus. The incubation of COD tubes is led to end up with the Heater *DINKO* D-65 or D-64D.

KITS, Photometrics

Name ▼	ppm	Nm	50 T	250 T	Name ▼	ppm	Nm	50 T	250 T
Alkalinity M	0-500	580	9404		Magnesium	0-100	520	9440	9487
Alkalinity P	0-500	520	9405		Manganese	0-0.03	630	9441	9488
Alkalinity T	0-500	580	9403	9466	Manganese	0-5	550	9447	
Aluminium	0-0.5	580	9401	9469	Molybdate	0-20	420	9442	
Ammonia (N)	0-1.0	620	9408	9470	Molybdate	0-100	420	9446	9480
Ammonia Nessler	0-15 (N)	420	9002+		Nickel	0-10	520	9448	
Boron	0-2.5	420	9407	9471#	Nitrate(N)	0-20	580	9450	9491*
Bromine	0-10.0	520	9409	9472	Nitrate (N)	0-30	420	9010+	
Calcium, Hardness	0-500	580	9406	9473	Nitrite(N)	0-0.5	520	9454	9492
Chlorine Dioxide	0-5.0	520	9415		Nitrite (Sodium Nitrite)	0-1500	490	9455	9501
Chlorine DPD F&C	0-5.0	520	9412	9474	Nitrogen Total (N)(2)	0-30	420	9012+	
Chlorine	0-250	490	9413	9483					
Chloride	0-50000	520	9419	9475	Ozone	0-2.0	520	9445	9449
Chromium (VI)	0-1.0	520	9428	9477	pH	6.8-8.4	520	9417	9504
COD (25 test)	10-150	440	9429+		Phenol	0-5.0	520	9418	
COD (25 test)	100-2000	580	9430+		PHMB	0-100	620	9420	
COD (25 test)	1000-20000	580	9431+		Phosphate	0-4.0	620	9432	9482*
Copper,F&Comb.	0-5.0	520	9422	9476	Phosphate	0-100	490	9426	9462
Colour	10-500Pt-Co	420	9423		Phosphorous T (P)	0-12	620	9007+	
Cyanuric Acid	0-200	520	9410	9465	Potassium	0-12	520	9456	9494
DEHA	0-500ppb	550	9439	9505	Silica	0-4.0	620	9457	9495*
Fluoride	0-1.5	580	9433	9481*	Silica	0-150	420	9421	9453*
Hardness Total	0-500	580	9434	9479	Sulphate	0-200	520	9458	9496*
Hydrazine	0-0.5	440	9435◇	9484♦♦	Sulphite	0-500	580	9459	9497
Hydrogen Peroxide	0-2.0	520	9436	9485	Sulphide	0-0.5	620	9460	9498*
Hydrogen Peroxide	0-100	490	9437	9452	Surfactants anionic	0.05-4.00	620	9371(3)	
Iron	0-5.0	520	9443	9500	Turbidity	5-400NTU	520	9444	
Iron	0-10	580	9438		Zinc	0-4.0	620	9411	9499

*200 Tests. + 25 test tube. (2) To be used with the Nitrate kit code 9010. (3) To be used with the Solvent Reagent code 1.9371.01 ◇ 30 tests ♦♦ 150 tests # 160 tests. The Photoanalyzer D-105 uses the filters 415, 450, 578 and 630 instead of 420,440, 580 and 620 respectively.

Manual of DINKO kits. Code 1.9400.00

Photometric Standards, with certificate of analysis. Complements

Code ▼	Articles
1.9982.02	Ammonia, 1ppm, 50ml
1.9982.01	Ammonia, 15ppm, 50ml
2.4684.00	Chloride, concentrated solution 3.545g Cl ⁻
1.9983.00	Colour 500 units. Hazen-APHA, Pt / Co, 50ml
1.9424.00	Conditioner reagent for ammonia test in brackish water (kit 9408)
1.9971.00	COD 50ppm, 50ml.
1.9972.00	COD, 100ppm, 50ml.
1.9974.00	COD, 500ppm, 50ml.
1.9977.00	COD, 1500ppm, 50ml.
1.9978.00	COD, 5000ppm, 50ml.
1.9980.00	COD, 15000ppm, 50ml.
1.9982.09	Nitrate, 2ppm N, 50ml
1.9982.07	Nitrate, 30ppm N, 50ml
1.9982.08	Nitrate, 75ppm N, 50ml
1.9982.10	Nitrite, 0.5ppm N, 50ml.
8.0011.13	Phosphate, 200ppm, 100ml
2.6939.01	Silicium, 1000ppm, 100ml
1.9371.01	Solvent reagent for surfactants kit, 50 tests.
1.9982.15	Sulphate, solution 200ppm SO ₄
1.9371.03	Surfactants, anionic, 4ppm, 60ml
1.9779.00	Turbidity, Formazine, 4000 NTU, 125ml

MAGNETIC STIRRERS

MAGNETIC STIRRER and HOT PLATE MAGNETIC STIRRER



D-71



D-11



D-12D



D-72



D-72D

- ♦ Magnetic stirrers of robust conception with electronic regulation of speed from slow up to 1.800rpm
- ♦ Axis with double magnet of Neodymium or samarium with great force
- ♦ Stainless steel top plates for stirrers and aluminium alloy top plate with cast-in heating element for hotplates.
- ♦ Thermostat controlled top plate temperature, maxim 325°C.
- ♦ Stainless steel housings
- ♦ Illuminate "on-off" switch and pilot lamps
- ♦ Integral lattice rod support
- ♦ Model D-72D and D-12D provided with Pt100 external temperature probe and PID temperature controller
- ♦ Available Pt100 external temperature probe gel/glass acid resisting for D-12D and D-72D.
- ♦ Temperature control by electronic modulation of power for the model D-72 and D-12

MAGNETIC STIRRER 4 PLACES. Model D-66AM

- ♦ Magnetic stirrer with metallic block incubator for 4 places of flasks, tubes, etc. of 40mm. diameter.
- ♦ Deep holes, 60mm
- ♦ Available adapters for containers smaller than 40mm diameter
- ♦ PID temperature control from room to 50°C with digital reader.
- ♦ Stirring switches for each position of the metal block.
- ♦ Suitable for incubation tasks that require agitation and temperature.
- ♦ Supplied with PTFE magnetic stirrer bar of 2x7mm or 5x12mm



Model ▼	Heating	Surface mm	Size mm	Temperature Control	Precision °C	Temperature maxim	Speed maxim	Weight Kg	Power W
D-71	NO	180x185	90 high	---	---	--	↑ 1800 rpm ↓	3	20
D-11	NO	200x210	100 high	---	---	--		3.5	20
D-72	YES	140Ø	180x240x130	Electronic	±2	325°C		3.4	450
D-72D	YES	140Ø	180x240x130	Digital	±0.1	325°C		3.6	450
D-72D	YES	140Ø	180x240x130	Digital	±0.1	99.9°C		3.6	450
D-12	YES	199Ø	215x270x150	Electronic	±2	325°C		4	625
D12D	YES	199Ø	210x270x150	Digital	±0.1	325°C		4.5	625
D66AM	YES		204x285x130	Digital	±0.1	50°C	3300 rpm	4.8	200

Ordering information

Code ▼	Model	Article	Temp.max.
1.8093.00	D-66AM	Magnetic stirrer incubator 4 places	50°C
1.8025.00	D-71	Magnetic stirrer	---
1.8031.00	D-11	Magnetic stirrer	---
1.8026.00	D-72	Hot plate magnetic stirrer	325°C
1.8029.00	D-72D	Hot plate magnetic stirrer with Pt100 temperature probe and support	325°C
1.8030.00	D-72D	Hot plate magnetic stirrer with Pt100 temperature probe gel /glass acid resistant and support	99.9°C
1.8032.00	D-12	Hot plate magnetic stirrer	325°C
1.8034.00	D-12D	Hot plate magnetic stirrer, with Pt100 temperature probe and support	325°C
1.8039.20		Aluminum adapter for D-66AM (diameter to be indicate)	
1.8049.00		Magnetic bar PTFE coated 2x7mm	
1.8050.00		Magnetic bar PTFE coated 5x12mm	
1.8053.00		Magnetic bar PTFE coated 8x20mm	
1.8055.00		Magnetic bar PTFE coated 8x30mm	
1.8057.00		Magnetic bar PTFE coated 8x40mm	
1.8058.00		Magnetic bar PTFE coated 8x50mm	
1.9808.00		Magnetic bar Samarium PTFE coated 12x28mm	
1.8040.00		Support rod	
1.8041.00		Double clamp for temperature probe and thermometer	
1.8110.00		Temperature Probe Pt 100, stainless steel	
1.8110.01		Temperature Probe Pt 100, stainless steel, gel/glass coated-acid resistant	
1.9631.01		Beaker 5L, stainless steel 20cm. Ø, 17cm. high	

MICROSCOPES



Microscope with D1 support

MICROSCOPE, digital, portable

Portable digital microscope to connect directly to a monitor via a VGA connector.

It offers a high frame rate of up to 60 images per second with a resolution of 800x600 and great visibility in low light. You can see clearly with any resolution.

Built-in adjustable polarizer reduces glare and reflection in bright objects. Along with the long working distance of up to 15 centimetres, the *DINKO* microscope is the ideal choice in situations where real-time images are vital, such as working on PCB's or other miniature objects.

The lighting by LEDS can be turned on and off.

Its portability means the possibility of examining large objects.

The high speed of image capture makes it useful in viewing moving images.

The option of USB connection for PC allows computer processing of captured images that involves saving and changing the contrast, brightness, and colour of these images.

Specifications

- ◆ Resolution: 800x600 pixels ◆ Magnification: 10x to 90x, continuous
- ◆ Interface VGA for direct connection to LED HD screen. Model with USB connector for PC.
- ◆ White light LED lighting crown ◆ Switchable ON / OFF the LED lighting crown (8 LEDS)
- ◆ Video frame rate up to 60fps ◆ Filter / Diffuser, through built-in polarizer

Different supports available depending on the use.

D1 support:

Metal base 100x75mm with aluminium bar for 20cm of vertical working distance, ball joint mechanism mounted on a dovetail sliding guide for additional focus and clamp.

D2 support:

Round base flexo with clamp

D3 support

Slide for flat surfaces with 2 adapters.



Portability



D3 Support

Code ▼	Articles
1.0019.00	Microscope, digital portable VGA
1.0019.01	Microscope, digital portable USB
1.9810.03	Support, D1
1.0019.03	Support, D2
1.0019.04	Support, D3



D2 Support

MICROSCOPES...

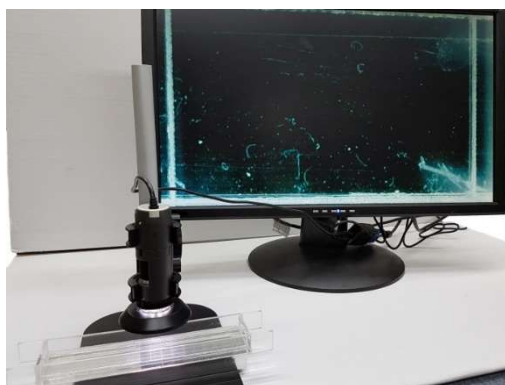
DIGITAL MICROSCOPE FOR TRICHINA

The *DINKO* Digital Microscope, is a device for a precise exam of tissue animals specially conceived for the detection of trichinas.

This instrument is according of the essential official method for the identification of trichinas published in the Official Newspaper of European Union August 11, 2015, implementing Regulations (EU) 2015/1375 of the Commission on August,10, 2015.

Features:

- Panoramic view screen of high-resolution HD and contrast that allows to see a whole grid of the collection cuvette shown with 40X magnification
- Precise and quick focusing system with helical ring.
- White LED lighting crown with evenly distributed power equivalent to 100 watts
- Filter diffuser with adjustable light polarizer which prevents annoying reflections for viewing or loss of contrast



- Scale continues selectable from 35 X to 160 magnifications.
- Reflection cuvette-holder, reticulated.
- Base support, rod and clamps
- Acrylic sample cuvette 180x40mm
- It meets the essential safety requirements of the European Directive applicable (CE)

Código ▼	Artículos
1.9809.00	Digital Microscope for trichina, screen, support, cuvette-holder and acrylic cuvette
1.9809.01	Digital Microscope for trichina, support, cuvette-holder and acrylic cuvette
1.9810.23	Screen, monitor 24" LED HD
1.9810.22	Acrylic cuvette 180x40mm

Operation: 100... 230V 50/60Hz.

MULTIPARAMETRICS

pH-METER, CONDUCTIMETER, TDS, °C - MULTIPARAMETRIC PORTABLE. Models PC 7+ DHS and PC 70+DHS

Ergonomic model. Supplied in case with electrode and solutions. Equipped with rubber protective cover and a large LCD display showing all data simultaneously.

pH - mV/ORP - COND - TDS -Temperature for the model PC 7+.

GLP - Data Logger -USB additional for the model PC 70+.

5 years warrant



Specifications ▼	Model PC 7	Model PC 70
Range pH	0.00 to 14.00pH	-2 to 16.00pH
Resolution	0.1 / 0.01pH	0.1 / 0.01pH
Calibration points	1, 2 or 3 USA: 1.68-4.01-7.00-10.01 NIST: 1.68-4.01-6.86-9.18pH 1 user-defined value	
Reconigzed bufferes		
Indication of slope and asymmetry potential	YES	YES with date and hour
GLP Function	-	YES
Indication as stable measure	YES	
Timer calibration	-	YES
Indication of buffer calibration	YES	YES
Range of mV	± 1.000mv	± 1.999mv
Resolution	1 mV	0.1mV (±200mV) / 1m V
Range COND	0.0 to 199.9mS	
Resolution	0.01/0.1/1µS 0.01/0.1mS	
Calibration points	1...4	
Recognized standards	84µ S – 1413µS – 12.88mS – 111.9mS 1 user-defined value	
Cell constant selecable	0.1 - 1 – 10cm ⁻¹	
Reference temperature	15 to 30°C	
GLP function	-	YES
Calibration timer	NO	YES
Indication of standard used	YES	
TDS range	0 to 100 g/l	
Resolution	-	1% f. e.
TDS factor	0.4 to 1.0	
Salinity	NO	0 to 50ppt
Temperature	0 to 100.0°C	-10 to 110°C
Resolution / Accuracy	0.1°C / ± 0.5°C	
Compensation of temperature pH	Automatic / manual 0 to 100°C	
Compensation of temperature conductivity	Automatic / manual 0 to 80°C	Automatic / manual 0 to 100°C
GLP system	NO	YES, Data Link
Data Logger	NO	Man / Auto 500 dates with date and hour
Auto-shutdown	After 20 minutes	
Display	LCD	LCD back-light, 3 colors
Input	2xBNC and Tem Cinch	2xBNC, Temp Cinch and USB(PC)
Power	3 batteries 1.5V AA	3 batteries 1.5V AA Power pack AC/DC with cable USB
Autonomy	>300 hour	
Protection IP	Anti moisture IP 57	
Size / weight of instrument	86 x 196 x 33mm / 295g	86 x 196 x 33mm / 300g
Size / weight with suitcase	385 x 300 x 115mm / 1720g	385 x 300 x 115mm / 1725g

Code ▼	Article
4.0111.00*	Multiparametric portable PC 7+, suitcase, dissolutions, pH electrode and conductivity cell with CAT in both, cable 1m BNC
4.0111.01*	Multiparametric portable PC 7+, with suitcase, dissolutions, cell /CAT, without pH electrode
4.0105.00*	Multiparametric portable PC 70+, with suitcase, dissolutions, pH electrode and conductivity cell with CAT in both, cable 1m BNC
4.0105.01*	Multiparametric portable PC 70+, with suitcase, dissolutions, cell/CAT, without pH electrode
4.0100.30*	Electrode, pH, epoxi with temperature sensor CAT NTC30, 0 to 60°C cable 1m BNC
4.0104.02*	Cell K=1 (10µS to 200mS) plastic with temperature sensor 0 to 80°C, 1m cable
4.0104.07*	Cell K=0.1 (0.1µS to 1mS) epoxy/st.st. , temperature sensor CATNTC30K, 0 to 80°C, 1m cable BNC

MULTIPARAMETRICS

BENCH-TOP MULTIPARAMETRIC MODEL 50 pH / mV / Conductivity / °C

- ◆Microprocessor ◆Automatic and manual calibration ◆Custom configuration ◆ Automatic and manual calibration with automatic knowledge of 4 standards and 1 to defined by user.
- ◆Automatic compensation of temperature ◆Cell constant: 0.1 – 1.0 – 10.0 selectable ◆ Automatic scaling in avoiding errors
- ◆Temperature coefficient: 0.00 to 9.99% by °C adjustable ◆ Reference temperature: 15...30°C ◆ Indication of Slope and Offset
- ◆Screen: LCD back-light ◆ Display information about reading stability and auto-diagnostic

ESPECIFICATIONS

- ◆Scales: 0.00 -14.00pH / $\pm 1000\text{mV}$ / 0.0...200-2000 μS /20.00-200.0mS ($\pm 1\%$ deep scale) / 0...100°(0.1°C/ $\pm 0.5^\circ\text{C}$)
- ◆Resolution: 0.1/0.01pH / 1mV / 0.1/1 μS , 0.01/0.1mS / 0.1°C
- ◆Recognize standards: 84, 1413 μS and 12.88, 111mS and 1 point defined by user, 25°C
- ◆Calibration points: 3 points recognized on screen, standards USA 1.68 / 4.01 / 7.00 / 10.01pH and NIST, 1.68 / 4.01 / 6.86 / 9.18pH and 2 points defined by user.
- ◆Inputs: 2 BNC and 2 RCA / Jack (CAT) and REF
- ◆Power: 5 V DC / 220V AC, power pack
- ◆Size / Weight: 160 x 185 x 70mm / 550g



Código ▼	Article
4.0113.00*	Bench-top multiparametric 50 with support, standards, pH electrode and cell with integrated temperature sensor
4.0113.01*	Bench-top multiparametric 50 with articulate support, standards, pH electrode without cell
4.0104.02*	Cell (5 μS to 100mS), 0...80°C CAT NTC 30, plastic, 1m cable
4.0104.03*	Cell (5 μS to 150mS), 0...80°C CAT NTC 30, glass, 1m cable
4.0104.04*	Cell(0,1 μS to 500 μS), 0...80°C CAT NTC 30, epoxi and st.st. 1m cable
4.0200.14*	Articulate support for 4 sensors and CAT

SEE pH-METER and CONDUCTIMETER SECTION for buffers and solutions.

OXYMETERS

OXYMETER, DO portable Analyzer. Model 3100

- ◆ Optical Sensor ◆ No membrane ◆ No Constant Calibration ◆ Data Logging ◆ Download Date
- ◆ Instrument designed for the measurement of dissolved Oxygen in aqueous solutions by an optical sensor
- ◆ Fluorescence sensor technology
- ◆ Sensor does not have to remain moist
- ◆ No membranes, fill solutions, or cartridges
- ◆ Data logging and the ability to download the data directly to a computer are standards feature.
- ◆ RS232 serial port
- ◆ Memory of safety
- ◆ Calibration is factory programmed
- ◆ Large, backlit graphical display
- ◆ Waterproof
- ◆ Rechargeable batteries and charger, 12 hours of autonomy.
- ◆ Automatic turn out
- ◆ Real time clock User friendly



Range: 0 to 25mg/L O₂.

Accuracy: 1% of reading or $\pm 0.02\text{mg/L}$ O₂, whichever is greater

Sensitivity/Resolution: 0.01mg/L below of 4.00mg/L; 0.1mg/L above of 4.0mg/L O₂.

Stability: 0.01mg/L O₂.

Repeatability: 0.01% O₂.

Response time: 95% in less than 60 seconds

Sensor cable length: 6,6m / Sensor drift: less than 0.01mg/L O₂ per year

Sensor checks automatic self-diagnostic.

Output: RS-232 serial. Memory backup: yes

Temperature range: 0 to 60°C. Room temperature: minus 20°C to 70°C

Ambient humidity: 0 to 100%

Enclosure rating: NEMA 4X

Wetted materials: epoxy, polyurethane, and PVC

Display: LCD graphic display with UV protection, contrast adjustment by keypad

Maximum pressure: 100psi (7 bar)

Size: 110x260x67mm / Weight: 1.8Kg.

Code ▼	Articles
12.0202.00*	Dissolved Oxygen Analyzer DO, portable, with sensor

PERISTALTIC PUMPS

The *DINKO* peristaltic pumps provide flows from 0.01 to 13L/minute according to the pump head, the revolutions of the associate motor and the inside diameter of the flexible tube installed in the head.

The tables of flows indicate the intervals of regulation by each tube for the variable speed pumps and the fixed flow for the pumps without regulation.

The rotors of pump head can have of polycarbonate with 2 rollers, or from 3 to 10 rollers, but this doesn't affect to the flow of the pumps, only to the cadence of the flow.

Each code of pump includes a head pump, a motor, and a selection of flexible tubes of different composition and diameter.

It is advisable to choose the inside diameter tube that allows to obtain the flow wanted with the smallest revolutions of the motor. It will be possible this way to lengthen the flexible tubes life.

FLOW TABLE PERISTALTIC PUMPS D-21V / D-25Vplus and D-25VT

Indicative adjustment intervals by tube diameter, head, and engine revolutions.

Pump head ▼	rpm	0.5	0.8	1.6	3.2	4.0	4.8	6.4	8.0	9.6	◀ Tubo Ø mm	
CFV-4r	15	0.02 0.30	0.05 0.80	0.2 3	0.8 12	1.25 18	1.5 25	No			Flow ml/min min, max.	
CFV-4r	30	0.03 0.5	0.07 1.20	0.3 4.6	1.2 18	1.8 29	2.2 30					
CFV-4r	80	0.08 1.2	0.20 3.0	0.8 12	3.0 48	4.5 78	5.0 85					
CFV-4r	240	0.25 3.0	0.80 8.0	3.0 30	11 122	18 192	25 250					
CFV-4r	330	0.5 5.0	0.8 12	3.3 50	13 205	20 320	25 330					
CFV-4r	110	0.17 1.7	0.27 4	1.1 17	4.3 68	6.7 100	8.4 110					
50	240	0.6 5.2	1.5 16	5.6 65	25 225	35 283	70 400	130 700	No			
50	80	0.15 2.2	0.4 5.6	1.3 24	3.8 73	5.9 114	8.9 145	16 258				
50	30	0.05 0.8	0.13 2.0	0.6 7.5	1.5 23	2.1 35	3.2 45	5.7 81				
153-3r	500	0.7 12	2 29	12 120	29 470	*	80 1000	115- 1500	250 2000	No		
153-3r	330	0.5 8.5	1.5 20	8.0 85	20 330	*	56 700	80 1050	175 1300			
153-3r	110	0.17 2.8	0.5 6.7	2.7 28	6.7 100	*	19 230	27 367	58 500			
CF-4r	330	0.5- 8.5	1.5-20	8.0-85	20-330	*	56-700	80- 1050	No			
253-3r	500	No						220 2700	320 4700	450 6000		
253-3r	330	No						150 1850	200 2970	250 3300		
253-3r	110	No						50 600	65 990	80 1120		
1500-2r	330	No						190 1700	400 2000	No		
MC2-10r	110	To see table flows of “Pump heads MC”										
MC4-10r	110											
353Y-3r	600	Max. variable Flow 12L/min.										

* To determine. The regulation intervals have been calculated with water under normal conditions, with silicone tubes, without outlet back pressure and with a minimum path from supply to discharge.

PERISTALTIC PUMPS

FLOW TABLE PERISTALTIC PUMPS D-300 and D-28

Indicative adjustment intervals by tube diameter, head, and engine revolutions

Code Pump ▼	Model	Pump head	Rpm Min.	Rpm Max.	Flow Min. ml/min	Flow Max. ml/min
1.9746.10	D-300	153YX-3r	0,1	300	0.07	1240
1.9746.12	D-300	2x153YX-3r		300	0.07	1240
1.9746.50	D-300	314D-4r		300	0.07	1240
1.9746.60	D-300	253D-3r		300	8	3000
1.9746.20	D-300	MC2/DT/DG		300*	0.006	180
1.9746.40	D-300	MC4/DT/DG		300*	0.006	180
1.9762.00	D-28	153-3r		400	0.003	1750
1.9760.00	D-28	CF-4r		400	0.003	1200
1.9761.00	D-28	CFV-4r		400	0.002	400
1.9764.00	D-28	MC2		150	0.002	90
1.9765.00	D-28	MC4		150	0.002	90

*Speed for intermittent use only. Maximum speed for continuous use 150rpm..

The regulation intervals have been calculated with water under normal conditions, with silicone tubes, without outlet back pressure and with a minimum path from supply to discharge.



PERISTALTIC PUMP FIXED FLOW

Model D-20FM

Heavy-duty fixed flow peristaltic pump with PP polypropylene body and semi-transparent polycarbonate front panel for user protection that allows viewing the operation of the head equipped with 2 long-lasting Delrin plastic rollers.

Supplied with head tube. Spare kit in option with 0.5m peristaltic tube and 2 connectors. According to EEC regulations

Description

Flow	4 L /h	66,7ml/min	
Pressure	1 Bar	14.7Psi	
Tube	Santoprene	Silicone*	Tygon*
Wat	35		
Operation	230V 50/60Hz	24V DC*	
Size	ancho x alto x fondo: 80 x 85 x 100mm		
Weight	0.5Kg		

*Option

Articles and accessories

Code ▼	Description
1.9701.00	Peristaltic Pump 4 l/h 1 bar, 230V 50/60 Hz, model D-20FM
1.9701.05	Kit spares: 0,5m peristaltic tube and 2 connectors

Model 253M and 153M



Robust and powerful pumps with an efficient and simple design with a 3-roller stainless steel rotor for intense continuous or intermittent work.

Excellent behaviour when pumping viscous liquids with a flow rate of up to 6 litres/min.

SPECIFICATIONS

Peristaltic head: easy tube loading with 3 stainless steel roller rotor.

Speed: 330 or 500rpm. Outlet pressure: 2 bar. Power supply: 24V DC. Power: 100W

Environmental conditions: Temperature, 0 → 60°C; Humidity, < 85%RH. Motor: DC geared



Tubes for 253M, inner Ø: 9.6mm (36); 8mm (35); 6.4mm (24). Wall thickness 2.4mm.

Tubes for 153M, inner Ø: 0.8mm (13); 1.6mm (14); 3.2 mm (16); 4.8mm (25); 6.4mm (17); 8.0mm (18). Wall thickness 1,6mm.

Size / Weight, 253M: 120mm x 255mm x 110mm / 2.7Kg. Size / Weight, 153M: 190mm x 160mm x 135mm / 1.9Kg

Reference Flow Chart for each tube

Pump Code ▼	Head	rpm	0.8	1.6	3.2	4.8	6.4	8.0	9.6	ID tube mm
1.8798.00	253-3r	500	No					2700	4700	6000
1.8798.50	153-3r	500	29	120	470	1000	1500	2000	No	ml/min
1.8798.33	153-3r	330	20	85	330	700	1050	1300		

Flow rates obtained with water under normal conditions and without outlet back pressure.

PERISTALTIC PUMPS...

PERISTALTIC PUMP VARIABLE FLOW. Model D - 21V

- ◆ Speed control, that can be set 0 to 99% in 1% increments with 100% repeat accuracy
- ◆ Pump head 50-2r of 2 rollers fitted with polycarbonate rotor, 1500-2r pump head with 2 rollers or 153N-3r and 253-3r pump head with 3 stainless steel rollers and easy remove system tubes.
- ◆ Reverse and stop flow switch ◆ Main switch ON/OFF ◆ Remote control
- ◆ Supplied with choice of tubing and connectors ◆ Size 50-2r: W 195 x D 245 x H 120mm. Weight: 3Kg.
- ◆ Size: 1500-2r, 153N-3r and 253-3r: W 163 x D 306 x H 233mm. Weight: 5Kg.
- ◆ Operate on 100...240V 50/60Hz. Portable models 12V DC



Pump head 253-3r



Pump head 153N-3r



Pump head 1500-2r



D-21V, Pump head 50-2r

Reference Flow Table and Code Products Pumps D-21V

Code ▼	Pump head	Motor rpm	0.5mm	0.8mm	1.6mm	3.2mm	4.0mm	4.8mm	6.4mm	8.00mm	9.6mm	Tube ID	
1.9730.30	↑ 50-2r ↓	30	0.1-0.8	0.3-2.0	1.5-9	4.3-30	6.8-48	10-67	15-100		No	Flow ml/min	
1.9730.03		80	0.4-2.5	1.1-6.3	4.2-30	13-94	20-147	25-210	36-300				
1.9730.00		240	1.0-5.5	2.6-14	8-70	26-240	41-337	70-556	88-700				
1.9730.12+		240	1.0-5.5	2.6-14	8-70	26-240	41-337	70-556	88-700				
1.9730.31	1500-2r	110	No						60-560	130-680			
1.9730.29		330	No						190-1700	400-2000			
1.9730.14	153N-3r	110	0.2-2.8	0.5-6.6	2.7-28	6-110	*	18-233	26-350	58-430			
1.9730.32	153N.3r	330	0.5-8.5	1.5-20	8.0-85	20-330	*	56-700	80-1050	175-1300			
1.9730.08+	153N-3r	330	0.5-8.5	1.5-20	8.0-85	20-330	*	56-700	80-1050	175-1300			
1.9730.54	153N-3r	500●	0.7-12	2-29	12-120	29-470	*	8-1000	115-1500	250-2000			
1.9730.34	253-3r	110	No						40-616	67-990			83-1100
1.9730.33	253-3r	330	No						150-1850	220-2970			250-3300
1.9730.55	253-3r	500●	No						220-2000	320-4700			450-6000
1.9730.06+	253-3r	330	No						150-1850	200-2970			250-3300

Table dates with water fluid and silicone tube at normal conditions. +12V DC with rechargeable battery and charger. Portable model with pump head 153N-3r and 253-3r for 12V DC /100...240V 50/60Hz include battery, charger, carrying handle and connector for car battery 12V. Elevation capacity 8m, upgradeable with minimum diameter tubes. *Undetermined flow.

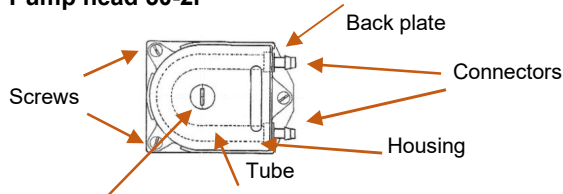
● Brushless motor.

Accessories:

Code ▼	Article
1.0078.63	Pump head 153N-3r. 3 rollers
1.0078.60	Pump head 153N-3r, 3 rollers, middle
1.0078.40	Pump head 253-3r, 3 rollers
1.0078.61	Pump head 253-3r, 3 rollers, middle
1.0078.11	Pump head 1500-2r, 2 rollers
1.9740.01	Foot switch
1.8119.00	Cyclic timer, times ON / OFF, from 0.01 seconds to 99.99 hours

Cyclic timer: See Controllers

Pump head 50-2r



Pump head 1500-2r



PERISTALTIC PUMPS...

PERISTALTIC PUMPS VARIABLE FLOW. Model D-25Vplus

- ◆ Speed control 0 to 99% in 1% increments
- ◆ Speed repeat accuracy 100%
- ◆ Auxiliary remote control by signal 0-10V /4-20mA
- ◆ Connector for foot switch ON/OFF and remote control
- ◆ Waterproof keyboard
- ◆ Ramp function, flow / time 0...99% / 1...99 minutes
- ◆ Automatic cyclic dose with programming time of dosing and rest between 1 and 99 seconds.
- ◆ Display indicator
- ◆ T version with cyclic timer, seconds, minutes, hours, and days for stop and operation times, independently.
- ◆ Anti drip system, adjustable
- ◆ Reverse flow
- ◆ Full flow switch for charge o remove fluid
- ◆ Rotors from 3 to 10 rollers
- ◆ Warning pilot lamps
- ◆ Tube is easily removed by user
- ◆ General switch ON/OFF
- ◆ Many lots of pump heads and motors for flows from 0,02 to 6000 ml/minute
- ◆ Non-volatile memory



1.9747.50 (153-3r), 500 rpm, brushless motor
1.9747.00 (Pump head 153-3r), 330 rpm
1.9747.11 (Pump head 153-3r), 110 rpm



1.9749.50 (Pump head 253-3r), 500 rpm, brushless motor
1.9749.00 (Pump head 253-3r), 330 rpm



1.9747.08 (Pump head MC4)
1.9747.09 (Pump head MC2)



1.9735.12 (50-3r, metallic rotor), 30 rpm
1.9735.15 (50-3r, metallic rotor), 80 rpm
1.9735.00 (50-3r, metallic rotor), 240 rpm



1.9731.33 (Pump head CFV-4r), 330 rpm (1 Pump head)
1.9731.11 (Pump head CFV-4r), 110 rpm (1 Pump head)



1.9731.15 (Pump head CFV-4r), 15 rpm
1.9731.30 (Pump head CFV-4r), 30 rpm
1.9731.80 (Pump head CFV-4r), 80 rpm
1.9731.24 (Pump head CFV-4r), 240 rpm



1.9747.40 (CF-4r 330 rpm)

PERISTALTIC PUMPS...

PUMP HEADS D-25V plus – Description

50-3r head, metal rotor with three rollers, for medium flow rates and low.

153-3r head, rotor with 3 metal rollers. Extremely comfortable tube removal. It admits another complementary head.

CF-4r head, rotor with 4 rollers. Extremely comfortable tube removal. It admits another complementary head.

CFV-4r head, comfortable tube removal. Rotor with 4 rollers. With a 330rpm motor, it supports up to 4 heads.

253-3r head, rotor with 3 metal rollers, long-lasting continuous use. Easy extraction tube by release lever. It admits another complementary head.

MC2 - 10r head, 2 channels with 10 drive rollers. Maximum channels, 12

MC4 - 10r head, 4 channels with 10 drive rollers. Maximum channels, 12

All pumps are supplied with a set of tubes suitable for your head.

Dimensions: width x depth x height:

Pump with head 50-3r and CFV-4r (up to 240rpm): 250 x 260 x 120mm. Weight: 4.2Kg

Pump with head 153-3r, 253-3r, MC, CF-4r and CFV-4r, 330rpm: 340 x 280 x 180mm. Weight: 7Kg. Stainless steel cabinet.

Operation: 100...240V 50/60Hz.



Table – Regulation intervals for each tube diameter

Table – Regulation intervals for each tube diameter																
Code ▼	rpm	head.	0.5mm	0.8mm	1.6mm	3.2mm	4.0mm	4.8mm	6.4mm	8.0mm	9.6mm	tube Ø				
1.9731.15	15	CFV-4r	0.02-0.30	0.05-0.80	0.2-3.0	0.8-12	1.25-18	1.5-25	No			Flow ml/min				
1.9731.30	30	CFV-4r	0.03-0.5	0.07-1.20	0.3-4.6	1.2-18	1.8-29	2.2-30								
1.9731.80	80	CFV-4r	0.08-1.2	0.20-3.00	0.8-12	3.0-48	4.5-78	5.0-85								
1.9731.24	240	CFV-4r	0.25-3.0	0.80-8.0	3.0-30	11-122	18-192	25-250								
1.9731.33	330	CFV-4r	0.5-5.0	0.8-12	3.3-50	13-205	20-320	25-330								
1.9731.11	110	CFV-4r	0.17-1.7	0.27-4	1.1-17	4.3-68	6.7-100	8.4-110								
1.9735.00	240	50-3r	0.60-5.2	1.5-16	5.6-65	25-225	35-283	70-400	130-700	No			Flow ml/min			
1.9735.15	80	50-3r	0.15-2.2	0.40-5.6	1.3-24	3.8-73	5.9-114	8.9-145	16-258							
1.9735.12	30	50-3r	0.05-0.8	0.13-2.0	0.6-7.5	1.5-23	2.1-35	3.2-45	5.7-81							
1.9747.50●	500	153-3r	0.7-12	2-29	12-120	29-470	*	80-1000	115-1500	250-2000	No			Flow ml/min		
1.9747.00	330	153-3r	0.5-8.5	1.5-20	8.0-85	20-330	*	56-700	80-1100	175-1300						
1.9747.11	110	153-3r	0.17-2.8	0.5-6.7	2.7-28	6.7-100	*	19-230	27-367	58-500						
1.9747.40	330	CF-4r	0.5-8.5	1.5-20	8.0-85	20-330	*	56-700	80-1050	No					Flow ml/min	
1.9749.50●	500	253-3r	No						220-2700	320-4700	450-6000					
1.9749.00	330	253-3r	No						150-1850	200-2970	250-3300					
1.9747.09	110	MC2	1													
1.9747.08	110	MC4														

● Brushless motor; * Flows not determined (1) Flows for MC type heads, see the following table.

PERISTALTIC PUMPS...

D-25Vplus

Indicative flow rates per channel-MC Pump head. Minimum and maximum

Tube ID mm	1.0	2.0	3.0	4.0
Minimum flow: ml/ min	0.5			
Maximum flow ml/min				100

Flows calculated with water under normal conditions without outlet back pressure.

D25Vplus Pump Codes

Code	Motor rpm	Head	Article
1.9731.15	15	CFV-4r	Peristaltic pump, complete
1.9731.30	30		Peristaltic pump, complete
1.9731.80	80		Peristaltic pump, complete
1.9731.24	240		Peristaltic pump, complete
1.9731.33	330		Peristaltic pump, complete
1.9731.11	110		Peristaltic pump, complete
1.9735.12	30	50-3r	Peristaltic pump, complete
1.9735.15	80		Peristaltic pump, complete
1.9735.00	240		Peristaltic pump, complete
1.9747.50	500 ●	153-3r	Peristaltic pump, complete, brushless motor
1.9747.00	330		Peristaltic pump, complete
1.9747.11	110		Peristaltic pump, complete
1.9749.50	500 ●	253-3r (2)	Peristaltic pump, complete, brushless motor
1.9749.00	330		Peristaltic pump, complete
1.9747.40	330	CF-4r	Peristaltic pump, complete
1.9747.09	110	MC2-10r	Peristaltic pump, complete, 2 channel with 10 rollers
1.9747.08	110	MC4-10r	Peristaltic pump, complete, 4 channel with 10 rollers
1.0078.41		MC2-10r	Pump head 2 channels of 10 rollers*
1.0078.42		MC4-10r	Pump head 4 channels of 10 rollers*
1.0078.34		CFV-4r	Pump head, 4 rollers
1.0078.47		CFV-4r (1)	Pump head, middle
1.0078.43		153-3r	Pump head for 1.1.9747.00 / 11 / 50
1.0078.60		153-3r	Pump head middle, for 1.9747.00 /11/ 50
1.0078.01		CF-4r	Pump head, 4 rollers for 1.9747.40
1.0078.65		CF-4r	Pump head middle, 4 rollers for 1.9747.40
1.0078.40		253-3r (2)	Pump head for pumps 1.9749.00 and 1.9749.50
1.0078.61		253-3r (2)	Pump head middle for pumps 1.9749.00 and 1.9749.50

*For Pumps 1.9747.09 and 1.9747.08, maximum 12 channels. ● Brushless motor. (1) maximum 4 heads. (2) Thickness wall tube 2,4mm

PERISTALTIC PUMPS...

D-25Vplus

Complements for MC pump heads.

Code ▼	Article
1.8760.101	Silicone tube 1.0mm ID with 2 end connectors for MC, 10 units
1.8760.201	Silicone tube 2.0mm ID with 2 end connectors for MC, 10 units
1.8760.301	Silicone tube 3.0mm ID with 2 end connectors for MC, 10 units
1.8760.401	Silicone tube 4.0mm ID with 2 end connectors for MC, 10 units
1.8760.100	Silicone tube 1.0mm ID, for MC, 1 meter
1.8760.200	Silicone tube 2.0mm ID, for MC, 1 meter
1.8760.300	Silicone tube 3.0mm ID, for MC, 1 meter
1.8760.400	Silicone tube 4.0mm ID, for MC, 1 meter
1.8710.101	Farmed tube 1.0mm ID with 2 end connectors for MC, 10 units
1.8710.201	Farmed tube 2.0mm ID with 2 end connectors for MC, 10 units
1.8710.301	Farmed tube 3.0mm ID with 2 end connectors for MC, 10 units
1.8710.100	Farmed tube 1.0mm ID, for MC, 1 meter
1.8710.200	Farmed tube 2.0mm ID, for MC, 1 meter
1.8710.300	Farmed tube 3.0mm ID, for MC, 1 meter
1.8789.008	Viton ® tube 0.8mm ID, with 2 end connectors for MC, 10 units
1.8789.016	Viton ® tube 1.6mm ID, with 2 end connectors for MC, 10 units
1.8789.08	Viton ® tube 0.8mm ID, for MC, 1 meter
1.8789.16	Viton ® tube 1.6mm ID, for MC, 1 meter
1.0078.58	Cartridge for MC pump heads, without tubes
1.9740.02	Foot switch (pedal) to indicate serial number pump.

PERISTALTIC PUMPS...

PERISTALTIC DISPENSING PUMPS - VARIABLE FLOW Model D-25VT



With pump head 153-3r.
Code 1.9745.00, 330 rpm
Code 1.9745.11, 110 rpm
Code 1.9745.50, 500 rpm, brushless motor



With pump head 253-3r
Code 1.9745.51, 330 rpm
Code 1.9770.00, 500 rpm, brushless motor

- ◆ Pumps integrated by a peristaltic pump, cyclic timer, speed control, maximum flow button for purge, flow inverter, remote control output and main switch.
- ◆ Speed control from 0 to 99% with 100% repeatability
- ◆ They accept several tube sizes giving different regulation intervals.
- ◆ It is possible to obtain any volume in each cycle of the timer.
- ◆ The cyclic timer allows separate programming of pumping and stopping times from 0.02 seconds to 99.90 hours.
- ◆ In repetitive dosing, the dosing time is programmed, and it is possible to choose that the timer restart the following dosages or use the foot switch to start each dosage.
- ◆ There are several models with different motors and pump heads

Peristaltic pumps D-25VT codes and accessories

Code ▼	Pump head	Articles
1.9732.25	CFV-4r	Peristaltic pump, with pump head
1.9732.26	CFV-4r	Peristaltic pump, with pump head
1.9732.05	CFV-4r	Peristaltic pump, with pump head
1.9736.80	CFV-4r	Peristaltic pump, with pump head
1.9736.00	CFV-4r	Peristaltic pump, with pump head
1.9745.11	153-3r	Peristaltic pump, with pump head
1.9745.00	153-3r	Peristaltic pump, with pump head
1.9745.50●	153-3r	Peristaltic pump, with pump head
1.9745.51	253-3r*	Peristaltic pump, with pump head
1.9770.00●	253-3r*	Peristaltic pump, with pump head
1.9745.08	MC4-10r	Peristaltic pump Multichannel, 4 channels
1.9745.10	MC2-10r	Peristaltic pump Multichannel, 2 channels
1.0078.41	MC2-10r	Pump head MC2-10r, 2 channels (1)
1.0078.42	MC4-10r	Pump head MC4-10r, 4 channels (1)
1.0078.43	153-3r	Pump head 153-3r
1.0078.40	253-3r*	Pump head 253-3r
1.0078.34	CFV-4r	Pump head
1.0078.47	CFV-4r	Pump head, middle
1.9740.02		Foot switch (to indicate serial number pump)

● Brushless motor. (1) For MC2 and MC4 Pumps, maximum 12 channels.

* For thickness wall tube 2.4 mm

PERISTALTIC PUMPS...

PERISTALTIC DISPENSING PUMPS - VARIABLE FLOW Model D-25VT PUMP HEADS DESCRIPTION

Pumps 1.9745.00, 1.9745.11 and 1.9745.50 mount the "Easy Load" 153-3r three-roller head and pumps 1.9745.51 and 1.9770.00 the 253-3r three-roller head. Both are very suitable when the tube must be changed frequently and admit another supplementary head on the same motor axis.

The CFV-4r head of pumps 1.9732.25, 1.9732.26, 1.9732.05, 1.9736.80 and 1.9736.00, as well as the 153-3r and 253-3r head, facilitate quick and easy tube change, with 4 rollers, the pulse of the flow decreases, providing greater repeatability in the dosage of small volumes.

153-3r head for medium flow rates. Quick tube loading and retention system. Three stainless steel rollers. Loads tubes from 0,5 to 8,00 mm inner diameter. The Pump code 1.9745.50 is fitted with a brushless motor.

253-3r head for high flow rates. Quick tube loading and retention system. Three stainless steel rollers. Loads 2,4mm thickness wall tubes. The Pump code 1.9770.00 is fitted with a brushless motor.

The pump head MC with 10 drive rolls eliminates pumping pulse.

Tubes can be changed while still running without affecting the other channels.

MC head pumps can mount up to 12 channels of 10 rollers.

Pump sizes:

With 50-3r, CFV-4r heads: 320 x 260 x 140mm (width x depth x height). Weight: 6Kg.

With head 153-3r, 253-3r, CFV- 4r of 330rpm and MC: 340 x 280 x180mm. Weight: 7kg

All work between 100 and 240V 50/60 Hz. Amp. 0.5 /1 (115V on request)



Pump head 153-3r



Pump head 253-3r



Pump head CFV-4r



Pump head MC

Reference Flow Table Pumps D-25VT

Reference Flow Table Pumps B-25V1													
Code ▼	Pump head	rpm	0.5 mm	0.8 mm	1.6 mm	3.2 mm	4.0 mm	4.8 mm	6.4 mm	8.0 mm	9.6 mm	Tube ID ◀	
1.9732.25	CFV-4r	15	0.02-0,30	0.05-0,80	0.2-3	0.8-12	1.25-18	1.5-25	No			Flow ml/min	
1.9732.26	CFV-4r	80	0.08-1,2	0.2-3.0	0.8-12	3.0-48	4.5-78	5.0-85					
1.9732.05	CFV-4r	30	0.03-0,5	0.07-1.20	0.3-4.6	1.2-18	1.8-29	2.2-30					
1.9736.80	CFV-4r	330	0.5-5.0	0.8-12.0	3.3-50	13-205	20-320	25-330					
1.9736.00	CFV-4r	240	0.25-3.0	0.80-8.0	3.0-30	11-122	18-192	25-250					
1.9745.11	153-3r	110	0.17-2,8	0.5-6,7	2.7-28	6.7-100	*	19-230	27-367	58-500	No		
1.9745.00	153-3r	330	0.5-8.5	1.5-20	8.0-85	20-330	*	56-700	80-1050	175-1300			
1.9745.50●	153-3r	500	0.7-12	2-29	12-120	29-470	*	80-1000	115-1500	250-2000			
1.9745.51(1)	253-3r	330	No						150-1850	200-2970	250-3300		
1.9770.00(1)●	253-3r	500							220-2800	320-4700	450-6000		
1.9745.08	MC4	110	See flow, rpm and tube diameter on MC table										
1.9745.10	MC2	110	See flow, rpm and tube diameter on MC table										

The flows shown are indicative and refer to water under normal conditions. (1) For 2.4mm thickness wall tube. * Undetermined flow

● Brushless motor

Reference Flow Table by channel for pump head MC

ID tube mm ▶	1.0	2.0	3.0	4.0
Minimum flow: ml / mln.	0.5			
Maximum continuous flow, ml/min				100

Flows calculated with water under normal conditions without outlet back pressure.

To see Complements D25Vplus for MC tubes

PERISTALTIC PUMPS...

PERISTALTIC PUMPS, MULTIHEADS. Models D25V2i. D25V4i and D25VT2i

- ◆ Numeric speed control that can be set 0 - 99% in 1% increments with 100% repeat accuracy by pump head.
- ◆ Remote control by foot switch or external relay
- ◆ Pump heads 50-2r of 2 rollers or 4 rollers for CFV-4r
- ◆ Switch ON/OFF/Reverse flow by pump head
- ◆ Digital cyclic timer allows pumping schedule and shutdown times of 0,01 seconds at 99,90 hours which makes it possible to obtain any volume in each cycle of the timer
- ◆ Speed control by optional signal 0-10 volts. Consult this option.
- ◆ Pumps accept several tube sizes. Tubing is easily removed for changeover, or autoclaving.
- ◆ Pumps with multiple heads adapted to the needs of the user are manufactured.



D-25V2i

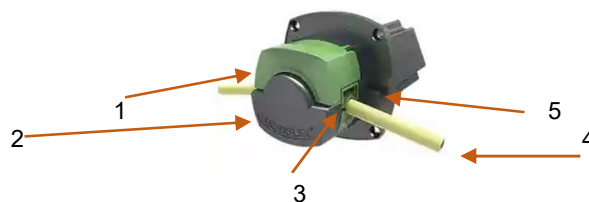


D-25V4i

Ordering information

Code ▼	Model	Pump heads	Cyclic timer	Flow ml/min	Motor rpm
1.9733.05	D25V2i	2x50-2r	No	0.1-100	30
1.9738.00				0.4-300	80
1.9738.01				1-700	240
1.9734.05	D25V4i	4x50-2r	No	0.1-100	30
1.9739.00				0.4-300	80
1.9739.01				1-700	240
1.9733.11	D25VT2i	2xCFV-4r	Yes	0.02-25	15
1.9733.12				0.03-30	30
1.9733.04				0.08-85	80
1.9738.17				0.25-250	240

PUMP HEAD CFV-4r.



- 1- Mobile head cover for tube change
- 2- Fixed lower cover
- 3- Tube retainer
- 4- Peristaltic tube
- 5- Release lever for head change

Size: with 2 pump heads, 32 x 26 x 14cm. Weight: 5 / With 4 pump heads, 26 x 34 x 27cm. Weight: 6Kg
Operation: 100... 240V 50/60Hz

PERISTALTIC PUMPS...

HIGH FLOW PERISTALTIC PUMP

Model 353Y – Variable flow.

- ♦ Maximum flow 12L/min
- ♦ Robust and powerful pump with an efficient and simple 3-roller design for continuous or intermittent intense work.
- ♦ Excellent behaviour when pumping viscous liquids with flow rates of up to 12 litres/minute.
- ♦ With 3 stainless steel rollers.
- ♦ Easy loading tube head
- ♦ Membrane keyboard
- ♦ Brushless DC motor, life from 6000 to 20000 hours.
- ♦ IP31 protection.
- ♦ Power supply AC 100...240V 50/60 Hz.
- ♦ Speed: 30 to 600 rpm.
- ♦ Power: 200W
- ♦ Thermoplastic tube with a wall thickness of 3.2mm.
- ♦ Flow regulation with LCD indicator. Measurements made with water at 25°C without discharge or suction pressure.
- ♦ Resolution 1rpm.
- ♦ Key for reverse flow and stop - Key for maximum flow.
- ♦ Outlet pressure: 2 bar
- ♦ Size / Weight: 240 x 160 x 323 mm (width x depth x height). 8Kg.
- ♦ Functions: Manual control - Automatic control-Time control - Fill control- Remote control 0-5V/0-10V/4-20mA/ ModBUS communication protocol



Ordering information

Code ▼	Description
1.9754.00	Peristaltic pump 353Y-3r, 12 L/min

PERISTALTIC PUMPS...

DIGITAL DISPENSING PERISTALTIC PUMPS MODEL D-300



153YX-3r



2x153YX-3



314D-4r



253D-3r



MC/DT/DG

Models D-300-153YX and D-300-2x153YX, 3 rollers models. Flow rate 0,002 to 1240ml/min, per head.
Model D-300-314D- 4r, 4 rollers models. Flow rate 0.002 to 1240ml/min.
Model D-300-253-3r, 3 rollers model. Flow rate 8 to 3000ml/min.
Models D-300/MC2 with 2-channel head and D-300MC4 with 4-channel head. Flow rate 0.006 to 180 ml/min per channel. Individually unlockable channels.

The 300 series peristaltic pumps are intelligent pumps that combine flow, timing, and filling dosing functions. They can be operated by buttons or controlled by an external signal or foot switch. Have a full speed emptying function and the suction angle can be adjusted. The high-definition LCD display shows pump speed, flow rate, operating parameters, and other information on the same screen. It is a multifunctional intelligent product with the advantages of simple operation, stable and reliable performance, long-term continuous operation, and the ability to save input working parameters. Is suitable for bioengineering, chemistry, pharmaceutical, hospital, food, production, and research unit laboratories. It is an essential product for fluid testing and scientific research.

SPECIFICATIONS

Speed range: 0.1 - 300rpm. Resolution: 0.1rpm.
 Outlet pressure: 2 bar
 Control panel: membrane (ON-Pause), Reverse flow, Maximum flow + Coded switch + RPM control.
 Functions: Manual, automatic control, timing, dosing, remote control, purge, suction and calibration.
 Remote control modes: 0 →5V, 0 →10V, 4 →20mA, ModBus communication protocol.
 Display: Full colour LCD.
 Power: AC100...220V, 50/60 Hz, 3.0A/ Power: <200W.
 Environmental conditions: Temperature, 0→60°C; Humidity, < 85%RH
 Motor: DC brushless gear motor with "driver" for rpm.
 Pump head 153YX and 314D: tubes: 0.5mm ID to 8.0mm ID (18#), all 1.6mm.TW
 Pump head 253: tubes: 8.0mm ID (35#); 9.6mm ID (36#). All 2.4mm TW
 Size: 240mm L x 160mm W x 323mm H. Weight: 3.6kg. Protection: IP31.

PERISTALTIC PUMPS...

Ordering information

Code ▼	Articles
1.9746.10	Digital Dispensing Peristaltic Pump, Mod. D-300/153N
1.9746.12	Digital Dispensing Peristaltic Pump, Mod. D-300/2x153N
1.9746.50	Digital Dispensing Peristaltic Pump, Mod D-300-314D-4r
1.9746.60	Digital Dispensing Peristaltic Pump, Model D-300-253D-3r
1.9746.20	Digital Dispensing Peristaltic Pump Mod D-300-MC2/DT/DG
1.9746.40	Digital Dispensing Peristaltic Pump Mod. D-300-MC4/DT/DG
Silicone tube codes for pump heads 153YX and 314D-4r	
1.8760.16	Silicone tube 1.6mm ID 1.6mm TW - (14#), 1 meter
1.8760.24	Silicone tube 2.4mm ID 1.6mm TW - (19#), 1 meter
1.8760.32	Silicone tube 3.2mm ID 1.6mm TW - (16#), 1 meter
1.8760.48	Silicone tube 4.8mm ID 1.6mm TW - (25#), 1 meter
1.8760.64	Silicone tube 6.4mm ID 1.6mm TW - (17#), 1 meter
1.8760.80	Silicone tube 8.0mm ID 1.6mm TW - (18#), 1 meter
Silicone tube codes for pump head 253-3r	
1.8762.80	Silicone tube 8.0mm ID 2.4mm TW - (35#), 1 meter
1.8762.96	Silicone tube 9.6mm ID 2.4mm TW - (36#), 1 meter

Indicative flow table per head – Regulation intervals. Pumps D-300. Pump heads 153N-3r and 314D-4r

Tubo Ø mm. ►	1.6	2.4	3.2	4.0	4.8	6.4	8.0
ml / 0.1rpm.	0.027	0.05	0.09	0.14	0.19	0.30	0.40
ml / 300rpm	80.0	140.0	270.0	500	600	900	1240

Data obtained with water at normal temperature and without back pressure.

Indicative flow table Pump 300-253D

Tube mm ID ►	8.0	9.6
Flow ▼		
ml / 1 rpm	8.71	10.00
ml / 300rpm	2400	3000

Data obtained with water at normal temperature, without back pressures

Ordering information- Tubes for MC pumps and accessories

Code ▼	Head	Articles
1.8760.101		Silicone tube 1.0mm ID with 2 end connectors for MC, 10 pcs.
1.8760.201		Silicone tube 2.0mm ID with 2 end connectors for MC, 10 pcs.
1.8760.301		Silicone tube 3.0mm ID with 2 end connectors for MC, 10 pcs.
1.8760.401		Silicone tube 4.0mm ID with 2 end connectors for MC, 10 pcs.
1.8760.100		Silicone tube 1.0mm ID, for MC, 1 meter
1.8760.200		Silicone tube 2.0mm ID, for MC, 1 meter
1.8760.300		Silicone tube 3.0mm ID, for MC, 1 meter
1.8760.400		Silicone tube 4.0mm ID, for MC, 1 meter
1.8710.101		Farmed tube 1.0mm ID with 2 end connectors for MC, 10 pcs.
1.8710.201		Farmed tube 2.0mm ID with 2 end connectors for MC, 10 pcs.
1.8710.301		Farmed tube 3.0mm ID with 2 end connectors for MC, 10 pcs.
1.8710.100		Farmed tube 1.0mm ID, for MC, 1 meter
1.8710.200		Farmed tube 2.0mm ID, for MC, 1 meter
1.8710.300		Farmed tube 3.0mm ID, for MC, 1 meter
1.8789.008		Viton ® tube 0.8mm ID with 2 end connectors for MC, 10 pcs.
1.8789.016		Viton ® tube 1.6mm ID with 2 end connectors for MC, 10 pcs.
1.8789.08		Viton ® tube 0.8mm ID, for MC, 1 meter (minimum 15 meters)
1.8789.16		Viton ® tube 1.6mm ID, for MC, 1 meter (minimum 15 meters)
1.0078.50		MC cartridge, tubeless
1.9740.02		Foot switch (pedal).

Indicative flow per channel. Pump head MC/DT/DG

▼ rpm / Tube ID ►	1mm	2mm	3mm	4mm	Flow ml/min
A 0.1 rpm	0.006	0.02	0.03	0.06	
A 300 rpm*	18	60	100	180	

* Speed only for intermittent use. Maximum continuous use speed, 150rpm.

HIGH PRECISION DOSSER PERISTALTIC PUMPS SMART TOUCH SCREEN MODEL D-28



DOSSER D-28 RANGE

The DOSSER D-28 peristaltic pump series is designed for the transfer of exact quantities and repetitive dispensing with a great accuracy in aseptic conditions.

Equipped with an internal computer host, they provide an intuitive menu assisted by a full color touch screen that allows the calculation of parameters, speed of selection, execution of the options offered automatically by the pump when choosing the desired flow rate in ml/min, calibrations and memory for the programming carried out.



Up to 100 programs can be memorized for later use in which establish parameters such as flow rate, type of rubber and its diameter, duration of pumping, volume in automatic dosages and number of them.

Flow rates are obtained from 0.002 ml/minute up to 1750 ml/minute with single-channel or multichannel heads and versions with negligible pumping pulse.

You can select the working language.

Many tubes are available.
Different sizes made with materials resistant to various conflicting substances.



Other specifications

- ♦ Flow control by external signal. Switch/pedal. Ports 0-10mV, 4-20mA, Ethernet
- ♦ Adjustable anti-drip system
- ♦ Variety of heads

Five pumps available with different heads that provide the characteristics of the head and the revolutions of the installed stepper motor.

PERISTALTIC PUMPS...

HIGH PRECISION DOSSER PERISTALTIC PUMPS SMART TOUCH SCREEN D-28

PUM HEADS

CF-4r head with 4 rollers, extremely comfortable tube extraction.
For 1.6mm wall tubes, from 0.5 to 6.4mm inner diameter.

CFV-4r head with 4 rollers, extremely comfortable tube extraction.
Supports 3 additional overlapping heads.
For 1.6mm wall tubes, from 0.5 to 4.8mm inner diameter.

153-3r head, with 3 rollers, long-lasting continuous use.
Easy tube loading. 1.6mm wall tubes and 0.5 to 8.0mm inner Ø.
Accepts 1 additional head.

MC2 head with 2 channels and 10 drive rollers.
MC4 head with 4 channels and 10 drive rollers.
Supports up to a total of 12 overlapping channels.

The pumps include a set of tubes suitable for their head.



Dimensions: width x depth x height

260 x 340 x 270mm. Weight: 8Kg. Operation: 100... 240V 50/60Hz.

Indicative table of flow rates

Code ▼	rpm ▼	Head ▼	0.5	0.8	1.6	3.2	4.0	4.8	6.4	8.0	◀ Tube Ø mm	
1.9760.00	400	CF-4r	0.003	*	*	*	*	*	1200	No	Flow ml/min.	
1.9761.00		CFV-4r	0.002	*	*	*	*	400	No			
1.9762.00		153-3r	0.003	*	*	*	*	*	*			
1.9764.00	150	MC2										
1.9765.00		MC4										

Minimum speed: 0.1rpm. Flow rates obtained with water under normal conditions. *Values to be indicated by the pump.

Table of indicative flow rates per channel-MC type head. Maximum speed 150rpm

Inner tube diameter mm ▶	1.0	2.0	3.0	4.0
Minimum flow ml/min ▶	0.002	0.020	0.030	0.066
Maximum continuous flow rate ml/min ▶	9	30	50	90

From 0.1 to 150rpm (with 1.0 to 4.0mm inner Ø tube)

Flow rates calculated with water under normal conditions without outlet backpressure.

Dosser D-28 Pump Codes and Accessories

Code ▼	Engine rpm ▼	Head ▼	Article ▼
1.9760.00	400	CF-4r	Peristaltic pump with head
1.9761.00	400	CFV-4r	Peristaltic pump with head
1.9762.00	400	153-3r	Peristaltic pump with head
1.9764.00	150	MC2-10r	Peristaltic pump with 2-channel head
1.9765.00	150	MC4-10r	Peristaltic pump with 4-channel head
1.0078.34		CFV-4r	main head
1.0078.47		CFV-4r	Auxiliary intermediate head
1.0078.41		MC2-10r	MC2-10r main-intermediate head
1.0078.42		MC4-10r	MC4-10r main-intermediate head
1.9740.02			Foot switch (pedal).

* Up to a total of 12 overlapping channels type MC pump

pH-METERS

pH-METER, portable. Model pH 7+DHS and pH 70+DHS

Ergonomic model supplied in suitcase with pH electrode and solutions. Provided with shockproof rubber and a large LCD display indicating all data simultaneously.

pH – mV / Redox / Temperature for pH 7+ and additional GLP – Data Logger USB for pH 70+.

5 years of warranty



Specifications ▼	Model pH 7+DHS	Model pH70+DHS
Range pH	0.00 to 14.00pH	-2 to 16.00pH
Resolution/Precision	0.1 / 0.01Ph / ±0.01pH	
Calibration points	Low-Medium-High	
Recognition of buffers	USA, NIST and 2 user	
Calibration timer	NO	YES with date and hour
Stable measurement indication	YES	YES
Calibration timer	-	YES
Calibration buffer indication	YES	
Range mV	±1000mv	±1999mv
Resolution	1mV	0.1mV (±200mV) / 1mV
Temperature	0 to 100.0 °C	-10 to 110°C
Resolution / Accuracy	0.1°C / ± 0.5°C	
Temperature compensation	Automatic / manual 0 to 100°C	
Digital probes	DHS	
GLP	NO	YES
Data Logger	NO	500 date with day and hour
Auto-turn out	After 20 minutes	
Display	LCD	LCD back light, 3 colours
Input	pH BNC and (CAT)(Cinch)	pH BNC, CAT/Cinch and USB
Power	3 batteries 1.5V AA	3 batteries 1.5V AA Adapter AC/DC with USB cable
Autonomy	>500 hours	
IP protection	IP 57	
Size / Instrument weight	86 x196 x 33mm / 295g	86 x196 x 33mm / 300g
Size / Instrument and suitcase weight	385 x 300 x 115mm / 1720g	385 x 300 x 115mm / 1725g

Code ▼	Article
4.0100.00*	pH-meter pH 7+DHS, portable, with suitcase, cover, dissolutions, electrode with CAT cable BNC
4.0100.01*	pH-meter pH 7+DHS, portable, with suitcase, cover, dissolutions, without electrode
4.0131.00*	pH-meter pH 70+DHS, portable, with suitcase, cover, dissolutions, electrode with CAT cable BNC
4.0200.00*	pH-meter pH 70+DHS, portable, with suitcase, cover, dissolutions, without electrode
4.0100.30*	Combination pH electrode with temperature sensor NTC30, 0 to 60°C, cable BNC

pH-METER bench-top model 50+

- ♦ Microprocessor control ♦ On-screen status icon ♦ Screen LCD backlight with indication of pH or redox and °C
- ♦ Articulate support ♦ Size: 160 x 185 x 70mm ♦ Weight: 550g

SPECIFICATIONS

- ♦Range 0.00 to14.00pH, ± 1000mV, 0.0 to 100.0°C NTC30♦ Accuracy: ± 0.02pH
- ♦Resolution: 0.1/0.01pH/1 mV/0.1°C/±0.5°C♦ Calibration points: 3 with automatic recognition on screen standards USA, 4.01 / 7.00 /10.01 and NIST, 4.01 / 6.86 / 9.18
- ♦Two points of calibration to be defined by user♦ Function for medium stable readings and auto-diagnostic
- ♦Indication of the Slope and Offset ♦ Automatic temperature compensation or manual
- ♦Inputs: BNC and RCA /CINCH(CAT) and REF♦ IP protection: IP 54
- ♦Power: 5V DC / 220V AC power supply



Code ▼	Articles
4.0102.00*	pH-meter 50+, articulate support, temperature compensation, electrode pH with integrated temperature sensor, plastic body, cable, solutions pH 4.1 and 7.0
4.0102.01*	pH-meter 50+ like above with temperature sensor and cable without electrode to select
4.0100.30*	Electrode of pH epoxy body with temperature sensor CAT NTC30, 0 to 60°C cable BNC

pH-METERS...

Electrodes

Code	Articles
For portables	
4.0101.05*	Electrode, plastic body Polyplast HAMILTON, 0 to 14pH, 0 to 60°C, electrolyte gel, head threads S7
4.0101.06*	Electrode, plastic body Polyplast HAMILTON, 0 to 14pH, 0 to 60°C, electrolyte gel, 1m fixed cable with BNC connector
For portables with temperature sensor	
4.0100.30*	Electrode, plastic body, for portables 1m fixed cable with BNC connector
Of general use, with head threads S7, without cable	
4.0101.10*	Electrode, pH LIQ-GLASS, 0 to 14pH, -10 to 100°C, glass body, electrolyte liquid
4.0101.11*	Electrode, pH POLYLITE LAB, 0 to 14pH, 0 to 80°C, glass body, electrolyte polymer. Without filler of electrolyte. "Single pore" system
For foods, with thread head S7, without cable	
4.0101.12*	Electrode, pH DOUBLE PORE, penetration Ø 6mm, L= 25mm, 0 to 14pH, 0 to 60°C, glass body and electrolyte polymer
4.0101.13*	Electrode, pH FOODTRODE, 2 to 14pH, -10 to 80°C, glass body, electrolyte liquid Protelyte
Electrodes for critical measures, with thread head S7, without cable	
4.0101.16*	Electrode, pH FLUSHTRODE, difficult measures, pH 0 to 14pH, 10 to 50°C, glass body with electrolyte liquid
Special electrodes with thread head S7, without cable	
4.0101.21*	Electrode, pH SINGLE PORE FLAT, for surfaces, 0 to 14pH, 0 to 60°C, epoxy body with electrolyte liquid
4.0101.22*	Electrode, pH SLIMTRODE, micro Ø 6mm and 100mm, 0 to 14pH, 0 to 80°C, glass body with electrolyte liquid
4.0101.23*	Electrode, pH MINITRODE, micro Ø 3mm and 60mm, 0 to 14pH, 0 to 80°C, glass body with electrolyte liquid
Metallic electrodes with thread head S7, without cable	
4.0101.26*	Electrode, double redox Pt, LIQ-GLASS ORP, -5 to 100°C
4.0101.27*	Electrode, double redox Pt, for portables, POLYPLAST RX, epoxy body, 0 to 60°C, 6bar
4.0101.28*	Electrode, double of Silver, LIQ-GLASS AG, -5 to 100 °C, KCL 3M electrolyte
Reference electrode	
4.0101.29*	Electrode Ag/AgCl, double bridge, with fixed cable and connector with 2 sticks Ø 2.5mm

Cable for electrodes	
Code ▼	Articles
4.0101.30*	Cable AS7/1M/BCN, for pH meter with BNC connector
4.0101.31*	Cable AS7 / 1 M stick Ø 4mm for reference electrode

Redox standard dissolutions	
Code ▼	Articles
4.0101.48*	Standard redox 475 mV, 500ml
4.0101.49*	Standard redox 271 mV, 500ml
On demand : 124, 200,300, 400, 465, 600 and 650mV	

Electrolyte, to fill electrode	
Code ▼	Articles
4.0101.53*	KCl 3M, 55ml
4.0101.54*	KCl 3M, 500ml
4.0101.58*	KNO ₃ 1 M, for Silver electrodes 55ml
4.0101.59*	Lithium Acetate 3M, 100ml

Buffers pH, with Certificate and NIST traceability	
Code ▼	Articles
4.0101.32*	Buffer 4.01 ± 0.01pH / 25°C, 500ml
4.0101.36*	Buffer 7.00 ± 0.01pH / 25°C, 500ml
4.0101.40*	Buffer 10.00 ± 0.01pH / 25°C, 500ml
Colored pH buffer dissolutions to avoid confusion	
4.0101.43*	Buffer 4.01 ± 0.01pH / 25°C, 55ml
4.0101.45*	Buffer 7.00 ± 0.01pH / 25°C, 55ml
4.0101.46*	Buffer 10.00 ± 0.01pH / 25°C, 55ml

Dissolutions for maintenance	
Code ▼	Articles
4.0101.60*	Maintenance of electrodes, 500ml
4.0101.61*	Clean - proteins (Pepsin-HCl), 250 ml
4.0101.62*	Clean - diaphragms (Thiourea+HCl) 250ml
4.0101.63*	Regeneration of membranes, 250ml

PHOTOMETERS (Colorimeters)



PHOTOMETER. Model D-100

Precision and accuracy when compared with other expensive apparatus. Wavelength range 415 to 670nm. by filters of high resolution. It has wide application teaching, environmental, and industrial laboratory.

Based on the photometer methods incorporated to their microprocessor, it makes possible the realisation of up 57 analytical tests. Direct readings in ppm are obtained using the *DINKO* kits for water test. The keyboard provides a good spill protection and functions control. The function Factor allows the introduction of independent corrective factors for the recalibration of each one parameter

Automatic zero adjustment. Cuvette holder for 16mm. Ø round cuvettes and 10mm. path light square cuvettes.

Photometric accuracy: 1 % to 1A	Linearity..... 3 %
Display..... Digital LCD extreme contrast	ABS range..... 0.000-2000Abs
Wavelength range..... 415 nm-670nm	Concentration... 0-1999ppm
Size..... 220 x 150 x 70mm	Response..... 2 seconds
Weight..... 0.5Kg.	Operation..... 230V 50/60Hz.
Factor..... 0.1 – 1.99	

Code ▼	Articles
1.9301.00	Colorimeter D-100, Absorbances-ppm, with 1 filter to choose and 4 cuvettes
1.9302.00	Colorimeter D-100P, portable, with rechargeable battery and suitcase

FILTERS AND CUVETTES FOR D-100 TO SEE PHOTOANALYZER D-105



PHOTOMETER. Model D-101

A digital photometer reading in transmittance, absorbance, and concentration. This instrument exhibit extreme precision and accuracy when compared with other expensive devices.

The instrument has wide application teaching, environmental, clinical and laboratory operations

Wavelength selection is by 8 filters 420, 440, 490, 550, 520, 580, 620 and 680nm., with spectral slit width of 25nm., wavelength peak of ± 5 nm.

Test can be made with round cuvettes to 16mm Ø and 10mm path length square cuvettes. A sample compartment lid assures minimum outside contamination for optics and electronics. With 4 filters and cuvettes.

DINKO kits for water test come with calibration tables for D-101

SPECIFICATIONS D-101

Auto-zero	Automatic
Photometric accuracy	better of 3 % at 1A
Linearity	3 %
Repeatability	$\pm 0.5\%$ T.
Stability	Drifting 0.003 A/h after 1/2h. of warm up at 0 A
Response	3 seconds
Display	Digital LCD, high c.
Ranges.....	0 – 100.0% Transmittance and 0.000 – 2000 Absorbance.
	0 - 1999ppm. Concentration. Three scales C, 10 x C and 100 x C
Size / Weight	250 x 260 x 95mm. / 2.5Kg. Operation: 230V 50/60Hz

Code ▼	Articles
1.9333.00	Colorimeter D-101, with four filters to choose and 4 cuvettes

PHOTOMETERS (Colorimeters)...

FILTERS AND CUVETTES for PHOTOMETERS D-101

Code ▼	Articles
1.9310.00	Filter, 420nm
1.9311.00	Filter, 440nm
1.9312.00	Filter, 490nm
1.9313.00	Filter, 520nm
1.9314.00	Filter, 550nm
1.9315.00	Filter, 580nm
1.9316.00	Filter, 620nm
1.9317.00	Filter, 660nm
1.9365.00	Round cuvettes, 16mm Ø, with cap, 4pcs
1.9363.00	Square cuvettes, path light 10mm, with cap, 100pcs

PHOTOMETER, PHOTOMETER. Model D-105

- ◆ Quick determination of most of the tests required in the analysis of waters, foods, and industry
- ◆ Memory of up to 200 analytic methods including 60 *DINKO* methods
- ◆ Direct readings in ppm, DQO or pH using the *DINKO* kits
- ◆ User can accede to the memory to enter their own methods or to kits of another origin
- ◆ Readings in absorbance, transmittance, and concentration
- ◆ It accepts square cuvettes of 10mm. and round of 16mm. of diameter and it admits interchangeable filters of high resolution with spectral slit width of 10nm. and peak accuracy of $\pm 1\text{nm}$.
- ◆ In the sample compartment are located the cuvette holder and the lodging for the filters, protected of the external contamination for a sliding cover
- ◆ Function Kinetics with maxim readings of 100 and interval times from 5 to 3600 seconds.



SPECIFICATIONS D-105

Parameters ▼	Performances	Parameters ▼	Performances
Range WL	415 – 700nm	Detector	Si Photodiode
Measuring modes	ABS / T% / CONC	Display	LCD high contrast backlight
Bandwidth pass	10nm	Light source	Tungsten W
Optical system	Single beam	Data input	Membrane keyboard
Stability, drifting	± 0.003 ABS/1/2 h to 0 A	Sample compartment	Round cuvettes 16mm Ø Square cuvettes 10mm
Adjustment WL	Interferential filters	Kinetic	Total readings and interval times
Zero	Automatic	Outputs	RS232 (printer) RS485(PC)
Photometric linearity	1%	Operating	100...230V 50/60Hz 18W
Photometric range	-0.30 a 3.5 A; 0 to 200.0%T 0-9.999C	Size	225 x 230 x 90mm
Repeatability	$\pm 0.5\%$ T	Weight	1.8kg

PHOTOMETERS (Colorimeters)...

ORDERING INFORMATION

Code ▼	Articles
1.9336.00	Photoanalyzer D-105, with 1 filter and 4 cuvettes. 230V 50/60Hz
8.9747.01	Printer
Cuvettes and Filters for D-100 and D-105	
1.9363.00	Square cuvettes, plastic.10mm. path light, with cap, 100pcs
1.9365.00	Round cuvette, 16mm. Ø with screw cap, 4pcs
1.9341.00	High resolution filter 415nm
1.9343.00	High resolution filter 450nm
1.9345.00	High resolution filter 490nm
1.9349.00	High resolution filter 520nm
1.9352.00	High resolution filter 550nm
1.9355.00	High resolution filter 577nm
1.9356.00	High resolution filter 630nm
1.9357.00	High resolution filter 670nm
	Available other filters.

PHOTOMETER (Colorimeter) Mc Farland

The Colorimeter McFarland is a user-friendly instrument. Controlled by microprocessor, it contributes great precision, speed, and comfort in the determination of the turbidity or density that they go acquiring solutions with growth of bacterial colonies

The Colorimeter has a range of 0 to 4 McFarland units. They are obtained readouts with a resolution of 0.01 McFarland in only 1second, and extrapolated readouts up to 10 McFarland Turbidity Units



The Colorimeter is calibrated to correspond with the turbidity of the Barium Sulphate precipitate produced when adding Barium Chloride to the Sulphuric Acid, under described conditions of McFarland (Journal of American Medical Association) and CLSI (Clinical & Laboratory Standards Institute).

The front panel includes a keyboard membrane that contributes an excellent watertight and it facilitates the control functions with only four keys.

The Function Calibration provides a method for a user calibration.

The cell holder admits round tubes to 18 mm. Ø and provides adapter rings for 16 and 13mm Ø.

SPECIFICATIONS

Range.....: 0-4 McFarland Units
Extrapolated range.....: 4-10 McFarland Units
Resolution.....: 0,01 McFarland Units
Accuracy: ± 0.02 McFarland Units
Timer warming
Calibration function

Memory: 10 last readouts
Display.....: Digital LCD high contrast backlight.
Size: 220 x 150 x 70mm
Weight: 0.5 Kg
Power pack: 100...240V 50/60Hz .AC/5 V15W DC

Code ▼	Article
1.9305.00	Colorimeter McFarland with rings adapter for 16 and 13mm Ø tubes
1.9305.11	Set of standards McF (0.5-1.0-2.0-3.0-4.0 Mc FTU) in 16mm Ø tubes
1.9305.12	Standard 0.5 Mc FTU, tube of 16mm Ø
1.9305.13	Standard 1.0 Mc FTU, tube of 16mm Ø
1.9305.14	Standard 2.0 Mc FTU, tube of 16mm Ø
1.9305.15	Standard 3.0 Mc FTU, tube of 16mm Ø
1.9305.16	Standard 4.0 Mc FTU, tube of 16mm Ø
1.9365.00	Tube 16mm Ø optically selected with screw cap and PTFE gasket. Pk. (4)
1.0105.26	Ring adapter for 16mm Ø tube
1.0105.25	Ring adapter for 15mm Ø tube
1.0105.24	Ring adapter for 14mm Ø tube
1.0105.23	Ring adapter for 13mm Ø tube
1.0105.22	Ring adapter for 12mm Ø tube
	Standards and tubes of 13mm Ø available

PNEUMATICS PUMPS

PNEUMATIC PUMPS. Model Boxer

Pneumatic pumps of double diaphragm impelled by means of compressed air.
Especially appropriate for to rack of aggressive substances.
Manufactured of resistant materials as PP, PVDF, Aluminium and stainless steel AISI 316
Three standards pumps are manufactured with different flows.
The standard versions indicated in the ordering information are manufactured in PP (Polypropylene)
To consult prices for other materials or bigger flows



Code	Type	Mouths asp/imp	Air enter mouth	Aspiration capacity	Max. flow	Max. pressure	Max. diam Solid path	Weigh Kg
8.0049.00	Micro	1/2"	1/4"	2m	30L / min	6.5 bars	2mm	1.6
8.0049.01	Mini	1/2"	1/2"	2m	50L / min	7 bars	3mm	3.6
8.0049.02	80	1	1/2"	2m	90L / min	7 bars	7mm	5.5

The compressor is not included.
Compressor 2CV for Micro pump. Compressor 3 CV for Mini and 80 pumps

ROTATORS

ROTATOR FOR TUBES OR CAPSULES. Model D- 01

- ♦ Rotator provided of disc with clamps for tubes or tray for capsules.
- ♦ Angle of rotation can be continuously set between 0 and 90°
- ♦ Comes with line cord but without disc or tray.
- ♦ Speed control: 0-15 rpm. 230V 50/60Hz.

Code ▼	Articles
1.8007.00	Rotator stirrer D-01
1.8016.00	Tray for 18 capsules of 28mm Ø
1.8017.00	Tray for 8 capsules of 40mm Ø
1.8016.01	Tray mix (to indicate)
1.8008.01	Disc for 16 Eppendorf tubes
1.8008.00	Disc for 16 tubes of 12/14mm Ø
1.8009.00	Disc for 16 tubes of 15/18mm Ø
1.8010.00	Disc for 16 tubes of 20/24mm Ø
1.8010.01	Disc for 8 tubes of 29/35mm Ø



SHAKERS, ORBITAL

ORBITAL SHAKER

The *DINKO* orbital shakers consists in a rectangular platform that orbit in their own plane with orbital shaking amplitude depending on model.

Model ES-23

Orbital shaker capable for different trays. Charge capacity: 10kg.
Provided with digital speed control, digital cyclic timer, and reverse shaker selector.

Speed control: 0 a 300rpm. Orbital shaker: 4.8, 12 or 16mm.
Maxim load: 10Kg. Support platform: 320 x 260 x 120mm.
Base size: 340 x 330 x 120mm (w x d x h). 60Hz. Without trays.
Weight: 6Kg. Operation: 230V 50/60Hz



ES-23 with Universal Attachment

Model ES-23T

Orbital shaker with thermostated cabin with transparent door and inside shaker platform. Speed and temperature control. Admits the accessories of model ES-23

Speed control 0-300rpm. in increments of 3rpm.
Orbital shaker: 12mm.
Platform, inside: 320 x 260 x 120mm.
Base size: 340 x 330 x 120mm., W x D x H.
Cabin size: inside 540 x 345 x 450mm.
Maxim load: 10K
Maxim temperature: 60°C ± 0.1°C.
Weight: 12Kg.
Operation: 230V 50/ 60Hz.



◀ Inside detail with the universal tray in U and two support rollers of horizontal displacement in two different heights that allow to accommodate diverse utensils like flasks, beakers, etc.

Code 1.8022.00

Model ES-20

It is a shaker that find great application in the biochemistry sector like the latex test. Capable for one microtiter plate

Speed: 100rpm. Orbital amplitude :18mm. Ø. Platform: 130 x 100mm.
Base: 150 x 125 x 75mm (w x d x h). Weight: 0.8Kg.
Operation: 230V 50Hz. **Code 1.8019.00**



Model ES-21

With adjustable speed control. Capable for two microtiter plates

Speed: 0 to 800rpm. Orbital amplitude: 12mm Ø. Platform: 170 x 130mm.
Base size: 150 x 125 x 75mm (w x d x h). Weight: 1.5Kg. Operation: 230V 50/60Hz.
Code 1.8020.00

Code ▼	Articles
1.8019.00	Orbital Shaker ES-20
1.8020.00	Orbital Shaker ES-21
1.8004.04	Orbital Shaker ES-23, orbital amplitude 4mm
1.8004.08	Orbital Shaker ES-23, orbital amplitude 8mm
1.8004.12	Orbital Shaker ES-23, orbital amplitude 12mm
1.8004.16	Orbital Shaker ES-23, orbital amplitude 16mm
1.8004.01	Tray, stainless steel, non-skid surface. Size: 320 x 260 x 10mm. Capable for 8 microtiter plate.
1.8004.14	Universal Attachment Tray, stainless steel, in form U with 2 rollers for height and deep adjust. Size 320 x 260 x 120mm
1.8004.15	Additional roller for Universal Attachment
1.8004.17	Holding clamp rod for Universal Attachment, 16 pos. of 5...8mm Ø
1.8004.18	Holding clamp rod for Universal Attachment, 16 pos. of 8...11mm Ø
1.8004.19	Holding clamp rod for Universal Attachment, 16 pos. of 12...14mm Ø
1.8004.20	Holding clamp rod for Universal Attachment, 16 pos. of 15...18mm Ø
1.8004.21	Holding clamp rod for Universal Attachment, 16 pos. of 20...24mm Ø
1.8022.00	Orbital shaker thermostated ES-23T

SPECTROPHOTOMETERS

SPECTROPHOTOMETER Thermo-Cement VIS3500CEM

Formed by the 3500 Spectrophotometer with thermostatic cell holder for cuvette of 200ml, stirrer of adjustable speed and a temperature controller up to 99.9°C with accuracy of $\pm 0.1^\circ\text{C}$.

Conform to U.N.E. - EN196 -2:1996 for the analysis of cements by photometry.

Supplied with hole in the cover of the sample chamber for the adaptation of titration burette and adjustable speed stirrer.



Cuvette-holder 200 ml



Burette and Stirrer

Spectrophotometer specifications VIS3500CEM

Parameters ▼	Features	Parameters ▼	Features
Wavelength range	320 - 1100nm	Photometric range	-0.300 to 3A; 0 to 200% T
Measuring modes	ABS / T% / CONC	Detector	Silicon Photodiode
Bandwidth pass	2nm	Display	LCD HD 128*64
Optical system	Single beam. Grating 1200 lines/mm	Light source	Halogen lamp
Stability	± 0.002 Abs/h(500nm)	Standard cell holder	4-position 10mm cell changer
Wavelength accuracy	± 0.3 nm	Keyboard	Membrane
Wavelength repeatability	≤ 0.2 nm	Interface	USB and RS232
Wavelength setting	Automatic	Power	AC110/250V 50/60Hz
Photometric accuracy	$\pm 0.3\%$ T	Size	460 x 360 x225mm
Photometric repeatability	0.2% T	Weight	16kg
Stray light	$\leq 0.05\%T@220\text{nm}, 360\text{nm}$	Cement cell holder	200ml

Ordering information

Code ▼	Articles
3.9753.10	Spectrophotometer Thermo-Cement, complete, without D-85
1.8000.00	Stirrer D-13
1.8102.00	Temperature controller D-85
1.9366.00	Glass cuvette 200 ml

SEE ACCESSORIES, CUVETTES AND SPARE PARTS AT END OF SPECTROPOTOMETERS CHAPTER

SPECTROPHOTOMETERS...

SPECTROPHOTOMETER MODEL VIS 3500

A compact instrument designed for measurements in the range 320 - 1100nm quickly, easily, and precise.

The VIS 3500 model is an instrument of high performances at an affordable cost.

The membrane keyboard of full control, the LCD high-definition screen 128*64 for data and curves, and the USB and Parallel ports provide the input / output data, reading measurements and processing functions.



Control Panel

PERFORMANCES

- ◆ Automatic to measure Absorbance, Transmittance and Concentrations simultaneously
- ◆ Memory store of up to 200 results
- ◆ Calculation curves to determine concentrations of samples. ◆ Grating 1200 lines/mm
- ◆ Automatically WL. calibration and dark current getting ◆ Coefficient Method to find concentrations.
- ◆ Admits the complete range of manual and motorized multiple cuvette holders or the "Peltier" thermosetting systems and "Sipper".
- ◆ Automatic sample dosing. ◆ Optional PC software providing the following functions:

1. Kinetics
2. Quantitative calculations
3. Scanning's
4. Automatic measurements at several wavelengths
5. Calculations DNA / Protein
6. Significant increase in data storage capacity

It includes Manual positioner for 4 cuvettes of 10mm light path operable externally 4 glass cuvettes 10mm path light with lid

Specifications

Parameters ▼	Features	Parameters ▼	Features
Wavelength range	320 – 1100nm	Photometric range	-0.300 to 3.000A; 0 to 200%T 0-9999C
Measuring modes	ABS / T% / CONC	Detector	Silicon Photodiode
Bandwidth pass	2nm	Display	LCD HD 128*64
Optical system	Single beam. Grating 1200 lines/mm	Light source	Halogen lamp W
Stability	±0.002 Abs/h at 500nm	Standard cell holder	4-position 10mm cell changer
Wavelength accuracy	± 0.8nm	Keyboard	Membrane
Wavelength repeatability	0.3nm	Interface	USB and Parallel(printer)
Wavelength setting	Automatically by keys	Power	AC110... 220V 50/60Hz
Photometric accuracy	± 0.3%T	Size	460 x 360 x 225mm
Photometric repeatability	0.2%T	Weight	18kg
Stray light	≤0.05%T		

Ordering information

Code ▼	Description
6.3500.00	Spectrophotometer with cuvettes. Model VIS 3500
6.3000.01	Software to PC – Quantitative / Kinetic / Scanning / Multi-WL / Proteins / DNA
8.9749.00*	PC with monitor TFT 19"
6.6900.03	Halogen lamp W

SPECTROPHOTOMETERS...

SPECTROPHOTOMETER MODEL UV/VIS 4000



A compact instrument designed for measurements in the range 190 - 1000nm quickly and easily.

The UV / VIS 4000 model is very versatile with similar performances to that offered by other instruments of high cost.

The membrane keyboard, LCD screen high-definition 128 * 64, the USB and Parallel ports provide the input / output data and meter reading also curves



Control Panel

PERFORMANCES

- ♦ Automatic to measure Absorbance, Transmittance and Concentrations
- ♦ Can display wavelength, absorbance, and transmittance with 5 results per screen
- ♦ Can set up various standard curves according to customer solutions and find the concentration of unknown solutions
- ♦ Memory store of up to two hundred results
- ♦ Grating 1200 lines/mm
- ♦ Automatically WL. calibration and dark current getting
- ♦ Coefficient Method to find concentrations
- ♦ PC software providing the following functions:

- | | |
|-------------------------------|--|
| 1. Kinetics | 2. Quantitative calculations |
| 3. Scanning's | 4. Automatic measurements at several wavelengths |
| 5. Calculations DNA / Protein | 6. Significant increase in data storage capacity |

It includes:

Manual positioner for 4 cuvettes of 10mm light path operable externally

4 glass cuvettes 10mm path light with lid and 2 quartz cuvettes of 10mm path light with lid.

SPECIFICATIONS

Parameters ▼	Features	Parameters ▼	Features
Wavelength range	190 - 1000nm	Photometric range	-0.300 to 3A; 0 to 200%T
Measuring modes	ABS / T% / CONC	Detector	Silicon Photodiode
Bandwidth pass	2nm	Display	LCD HD 128*64
Optical system	Single beam. Grating 1200 lines/mm	Light source	Deuterium lamp D2 Halogen lamp W
Stability	±0.002 Abs/h at 500nm	Standard cell holder	4-position 10mm cell changer
Wavelength accuracy	± 1nm	Key board	Membrane
Wavelength repeatability	0.5nm	Interface	USB and Parallel(printer)
Wavelength setting	Automatically by keys	Power	AC 85-260V 50/60Hz 3A
Photometric accuracy	± 0.5%T	Size	455 x 380 x 180mm
Photometric repeatability	0.3%T	Weight	12kg
Stray light	≤0.02%T		

ORDERING INFORMATION

Code ▼	Description
6.4000.00	Spectrophotometer UV / VIS. Model UV/VIS 4000
6.3000.01	Software to PC-Quantitative /Kinetic / Scanning / Multi-WL/ Proteins / DNA
8.9749.00*	PC, monitor TFT 19 "for UV/ VIS 4000
6.6900.03	Halogen lamp W
6.6900.04	Deuterium lamp D2

SEE ACCESSORIES, CUVETTES AND SPARE PARTS AT FINAL OF SPECTROPHOTOMETERS CHAPTER

SPECTROPHOTOMETERS...

SPECTROPHOTOMETER UV / VIS 4600



A compact instrument designed for measurements in the range 190 - 1100nm quickly, easily and precise.

The UV / VIS 4600 model is an instrument of high performances at an affordable cost.

The membrane keyboard of full control, the LCD high-definition screen 128 * 64 for data and curves, and the USB and Parallel ports provide the input / output data, reading measurements and processing functions.



Control Panel

PERFORMANCES

- ♦ Automatic to measure Absorbance, Transmittance and Concentrations simultaneously
- ♦ Memory store of up to 200 results ♦ Calculation curves to determine concentrations of samples. ♦ Grating 1200 lines/mm
- ♦ Automatically WL. calibration and dark current getting ♦ Coefficient Method to find concentrations.
- ♦ ON / OFF selectable lamp Deuterium
- ♦ The V-4600 admits the whole range of manual and motorized multiple cuvette holders or the "Peltier" thermostating systems and "Sipper" automatic sample dosing. Include PC software providing the following functions:

1. Kinetics
2. Quantitative calculations
3. Scanning's
4. Automatic measurements at several wavelengths
5. Calculations DNA / Protein
6. Significant increase in data storage capacity

It includes:

Manual positioner for 4 cuvettes of 10mm light path operable externally

4 glass cuvettes 10mm path light with lid

2 quartz cuvettes of 10mm path light with lid

Specifications

Parameters ▼	Features	Parameters	Features
Wavelength range	190 - 1100nm	Photometric range	-0.300 to 3.000A; 0 to 200%T 0-9999C
Measuring modes	ABS / T% / CONC	Detector	Silicon Photodiode
Bandwidth pass	2nm	Display	LCD HD 128*64
Optical system	Single beam. Grating 1200 lines/mm	Light source	Deuterium lamp D2 Halogen lamp W
Stability	±0.002 Abs/h at 500nm	Standard cell holder	4-position 10mm cell changer
Wavelength accuracy	± 0.8nm	Keyboard	Membrane
Wavelength repeatability	0.3nm	Interface	USB and Parallel(printer)
Wavelength setting	Automatically by keys	Power	AC110... 220V 50/60Hz
Photometric accuracy	± 0.3%T	Size	460 x 360 x 225mm
Photometric repeatability	0.2%T	Weight	18kg
Stray light	≤0.05%T		

Ordering information

Code ▼	Description
6.4600.00	Spectrophotometer UV / VIS with cuvettes. Model UV/VIS 4600
8.9749.00*	PC, monitor TFT 19" for UV/ VIS 4600
6.6900.03	Halogen lamp W
6.6900.08	Deuterium lamp D2

SPECTROPHOTOMETERS...

SPECTROPHOTOMETER UV/VIS MODEL UV-VIS 6000 SMART TOUCH SCREEN

Intelligent Alarm function
System Encryption
Display several groups of data at the same time for direct reading.
Module design for easy operation
New panel with touch screen

Feature and Functions

- ◆ 800*480* high-definition touch screen clearly shows test results and graphs.
- ◆ Powerful data analysis system with internal computer host could realize multi functions independently. Like establishing calibration curve, photometric measurement, quantitative measurement, spectral scanning. Kinetics, DNA/Protein test, multi-wavelength analysis and data printing.
- ◆ Optical system adopts suspension design. All optical parts are independently fixed on the 8 mm thick aluminium. deformation-free base to avoid the impact of bottom deformation and outside deformation and outside vibration on optical system.
This premium design greatly improved the stability and reliability of the instrument.
- ◆ Convenient data storage and printing function. The UV-6000 can be directly connected to the printer A4 format data and graph printing
- ◆ Automatic power on self-test and system positioning function could inspect and calibrate the deviation before every use.
- ◆ All test data and analysis report can be exported to USB disk directly
- ◆ Supplied with cell holder for 4 x 10 mm path light with change by external control

Technical Specification

Parameters ▼	Features	Parameters ▼	Features
Wavelength Range	190 -1100nm	Baseline flatness	±0.001A
Spectral Bandwidth	1.8nm	Noise	±0.0005A
Wavelength Accuracy	±0.5nm	Display	7 Inches Smart touch screen
Wavelength Repeatability	≤0.2nm	Data Out pout Ports	USB Port
Stray Light	≤0.05% T@220 nm,360nm	Printer port	USB Port
Photometric Accuracy	±0.2 %T (0-100 % T), ±0.002A (0-0.5 A)	Light source	Halogen W & Deuterium D2
Photometric Repeatability	≤0.1 % T (0-100% T),0.001 A (0-0.5 A), ± 0.002A (0.5-1.0 A)	Powers Requirements	AC 220V/50Hz or AC 110V/60Hz
Stability	±0.001 A/h @ 500nm	Detectors	Silicon Photodiode
Photometric Range	0-200° T, - 0.3-3.0A, 0-9999C	Size	460*380*180mm
		Weight	20kg

Standard Accessories:

- ◆ PC Software ◆ 4 Glass cuvettes 10mm path light ◆ 2 Quarts cuvettes 10mm path light ◆ User's Manual ◆ Dust Cover

Ordering information

Code ▼	Description
6.6000.00	Spectrophotometer UV/VIS 6000. Smart Touch Screen. Band width 1.8nm
6.3000.02	Optional PC software to comply with 21 CFR PART 11
6.6900.03	Halogen lamp
6.6900.08	Deuterium lamp



SPECTROPHOTOMETERS...

SPECTROPHOTOMETER UV-VIS DOUBLE BEAM. Model UV-6900

Spectrophotometer belonging to a new generation of dual-beam instruments with 2 detectors that simultaneously measure the reference and the sample to optimize accuracy, sensitivity, low stray light and a bandwidth of up to 0.5nm.

A suitable instrument for clinical, pharmaceutical and biochemical laboratories as well as current applications and quantitative analysis, kinetics, scanning's at various wavelengths and analysis of DNA / Protein

All operable directly on the instrument and displayed on the LCD display or transferred to PC, data, and curve.



- ♦ Auto - calibration baseline, wavelength and dark current.
- ♦ Equipped with parallel printer port and one USB for PC. ♦ Included software
- ♦ Available a variety of accessories to complete the versatility of the spectrophotometer
- ♦ New layout monochromator diffraction grating with 1200 lines which ensures high durability and stability of the system
- ♦ Software Update by internet ♦ Real-time results, date and time ♦ 320x240 DOTS, LCD big screen

SPECIFICATIONS

Parameters ▼	Features	Parameters ▼	Features
Optical principle	Double beam	Baseline flatness	± 0.001Abs
Wavelength range	190-1100nm	Noise	± 0.001Abs
Wavelength accuracy	±0.3nm	Band width	0.5 / 1.0 / 2.0 / 4, to select
Wavelength repeatability	±0.2nm	Stray light	<0.05% T (220 nm, 360nm)
Photometric accuracy	±0.3%T	Out	USB
Measuring ranges	Abs: -0.3 to 3.0 %T: 0 to 200% T Conc: 0 to 9999C	Baseline stability	0.002 Abs/h (at 500nm, after 2h warm up
Photometric repeatability	±0.2%T	Light source	WI, D2
Instrument control	Autonomous and PC	Detectors	Silicon photodiodes
Weight	30Kg	Printer port	Parallel
Power	220VAC 50/60Hz	Size	625w x 430d x 206h mm

SOFTWARE UV/VIS ANALYST (included). Features

Multi - Wavelength

Up 32 wavelengths can be selected, and multiple samples can be measured.

Quantitative

- 1- Coefficient method
- 2- Standard curve

Up to 10 standards samples may be used to establish a curve. Four methods for fitting a curve through the calibration points: Linear fit, Linear fit through zero, Square fit and Cubic fit

Wavelength Scan

- 1- The wavelength scan intervals are 0.1 – 0.2 – 0.5 - 1 – 2.5
- 2- Scan speed: High - Medium and Low, from 100 to 3000nm/min.

DNA /Protein Test

Concentration and DNA purity are quickly and easily calculated:

Absorbance ratios 260nm / 280nm with optional subtracted absorbance at 320nm

DNA concentration = 62.9 x A 260 – 36.0 x A 280

Protein concentration= 1552 x A 260 – 757.3 x A 280

Kinetics

Calculate reaction rates. Graphical time / real time absorbance

Total time up to 12 hours with reading selectable interval 0,5 - 1 - 2 - 5 - 10 - 30 seconds and 1 minute

Further manipulation with re-scaling, curve tracking and selection of the part of the curve required for the rate calculation
The speed is calculated using a linear regression algorithm before multiplying by the factor entered.

SPECTROPHOTOMETER DOUBLE BEAM MODEL UV 6900

Code ▼	Description
6.6900.00	Spectrophotometer Double Beam. Model UV 6900 with software, cable USB, 2-cell cuvette 10mm holder, 4 glass cuvettes 10mm, 2 quartz cuvettes 10mm. Band width 0.5 /1.0 / 2.0 / 4.0 to select
6.6900.18	Spectrophotometer Double Beam. Model UV 6900 with software, cable USB, 2-cell cuvette 10-50mm holder, 4 glass cuvettes 10mm, 2 quartz cuvettes 10mm. Band width 1.8nm
6.6900.20	Spectrophotometer Double Beam. Model UV 6900 with software, cable USB, 2-cell cuvette 10-50mm holder, 4 glass cuvettes 10mm, 2 quartz cuvettes 10mm. Band width 1nm

SPECTROPHOTOMETERS...

SPECTROPHOTOMETER VIS-UV- DOUBLE BEAM. Model UV-8000. Smart Touch Screen

Feature and Functions

- ◆ Adopt dual beam system with precision vertical-type dual optical path and dual detector
- ◆ Imported grating of high performance greatly reduced the stray light and improved the stability and reliability of device.
- ◆ 10 inches large touch screen, built-in 32G memory, support Bluetooth connection network
- ◆ Three operation modes are available Host, Computer and App of mobile phone (Android)
- ◆ Powerful data analysis system with internal computer host could realize multi functions independently.
Like establishing calibration curve, photometric measurement, quantitative measurement, spectral scanning, Kinetics, DNA/Protein test, multi-wavelength analysis and data printing.
- ◆ Optical system adopts suspension design. All optical parts are independently fixed on the 8mm thick aluminium. deformation-free base to avoid the impact of bottom deformation and outside deformation and outside vibration on optical system.
This premium design greatly improved the stability and reliability of the instrument.
- ◆ Convenient data storage and printing function. The UV-8000 can be directly connected to the printer A4 format data and graph printing
- ◆ Automatic power on self-test and system positioning function could inspect and calibrate the deviation before every use.
- ◆ All test data and analysis report can be exported to USB disk directly
- ◆ PC software follows 21 CFR PART 11 requirements ◆ Graphs support 3D display on PC software



THECNICAL SPECIFICATIONS

Parameters ▼	Features		Parameters ▼	Features
UV/VIS 8000	Code 6.8000.00	Code 6.8000.18		
Wavelength Range	190 -1100nm		Baseline flatness	±0.001A
Spectral Bandwidth	0.5/1.0/2/4.0nm	1.8nm	Noise	±0.0004A
Wavelength Accuracy	±0.1nm (D ₂ 656.1nm), ±0.3nm@full range		Display	10 inches Smart touch screen
Wavelength Repeatability	≤ 0.1nm		Data Out pout Ports	USB Port
Stray Light	≤0.03% T@220nm,360nm		Printer port	USB Port
Photometric Accuracy	±0.2% T (0-100% T), ±0.002 A (0-0.5 A)		Light source	Halogen W & Deuterium D2
Photometric Repeatability	≤0.1% T (0-100%T), 0.001A (0-0.5A), ±0.002A (0.5-1.0A)		Powers Requirements	AC 220V/50Hz or AC 110V/60Hz
Stability	± 0.001A/h @ 500nm		Detectors	Silicon Photodiode
Photometric Range	0-200° T, - 0.3-3.0A, 0-9999C		Size	630*430*210mm
			Weight	28kg

Standard Accessories

- ◆ PC Software ◆ 4 Glass cuvettes 10mm path light ◆ 2 Quartz cuvettes 10mm path light ◆ User's Manual ◆ Dust Cover

ORDERING INFORMATION MODEL UV / VIS 8000

Code ▼	Description
6.8000.00	Double Beam Spectrophotometer Smart Touch Screen. Band width 0.5/1.0/2.0/4.0nm
6.8000.18	Double Beam Spectrophotometer Smart Touch Screen. Band width 1.8nm
6.3000.02	Optional PC Software to comply with 21 CFR part 11, for all models
6.6900.03	Halogen lamp
6.6900.08	Deuterium lamp

SPECTROPHOTOMETERS...

Accessories for Spectrophotometers of the serial 3500, 4000 and 6000

Code ▼	Articles
6.3200.01	Cuvette Holder 1x10mm path light
6.3200.02	Cuvette Holder 4x10mm path light
6.3200.03	Cuvette Holder 4x50mm path light
6.3200.04	Cuvette Holder 4x100mm path light
6.6900.01	Cuvette Holder 8x10mm path light, automatic, only for 3500,4600, 6000, 6900 and 8000 model
6.3200.17	Cuvette Holder 1x10mm path light for water circulation
6.3200.18	Spacer, Aluminium, for Cuvette 1mm, 2 pcs
6.3200.19	Spacer, Aluminium, for Cuvette 2mm, 2pcs
6.3200.20	Spacer, Aluminum, for Cuvette 5mm, 2pcs
6.3200.05	Micro Cuvette Holder adjustable
6.3200.06	Films transparent Holder
6.3200.07	Tube Holder, max. 25mm Ø
6.3200.08	Peltier System 15°C to 65°C
6.3200.09	Sipper System, continuous, time from 1 to 255s
6.3200.10	Peltier / Sipper System, combined
6.3200.14	Reflectance system, not for 4000 model
6.6900.07*	Micro-printer for dates
8.9749.00*	Computer PC with screen TFT 19"



Cuvettes and spare parts for Spectrophotometers of the serial 3000, 4000 and 6000

Code ▼	Articles
6.3200.11	Cuvette with lid, glass, 1.7ml, 5mm path light, 4 pcs
6.6900.05	Cuvette with lid, glass, 3.5ml, 10mm path light, 4 pcs
6.3200.12	Cuvette with lid, glass, 7ml, 20mm path light, 4 pcs
6.3200.13	Cuvette with lid, glass, 10.5ml, 30mm path light, 4 pcs
6.3200.15	Cuvette with lid, glass, 17.5ml, 50mm path light, 4 pcs
6.3200.16	Cuvette with lid, glass, 35ml, 100mm path light, 4 pcs
6.4000.01	Cuvette with lid, quartz, 1.7ml, 5mm path light, 2 pcs
6.6900.06	Cuvette with lid, quartz, 3.5ml, 10mm path light, 2 pcs
6.4000.02	Cuvette with lid, quartz, 7ml, 20mm path light, 2 pcs
6.4000.03	Cuvette with lid, quartz, 10.5ml, 30mm path light, 2 pcs
6.4000.05	Cuvette with lid, quartz, 17.5ml, 50mm path light, 2pcs
6.4000.06	Cuvette with lid, quartz, 35ml, 100mm path light, 2 pcs
6.3200.18	Spacer for 1 mm cuvettes, 2 pcs
6.3200.19	Spacer for 2 mm cuvettes, 2 pcs
6.3200.20	Spacer for 5 mm cuvettes, 2pcs
6.4000.07	Micro Cuvette, quartz 12.5*12.5*45*, 100µl, 2 pcs
6.4000.08	Micro Cuvette, quartz 12.5*12.5*45*, 200µl, 2 pcs
6.4000.10	Micro Cuvette, quartz 12.5*12.5*45*, 700µl, 2 pcs
6.6900.03	Lamp, halogen for visible
6.6900.04	Lamp, Deuterium, ultraviolet, for VIS/UV4000 model
6.6900.08	Lamp, Deuterium, ultraviolet, all models, except 4000 model



STIRRERS

The *DINKO* stirrer is provided of very silent sealed motors requiring minimal maintenance, permanently lubricated, with protection to overloads.

The electronic speed control is progressive and precise with high torque even at a low speed.

Unit is encased in all plastic housing of reduced size and closed for the protection against gases and liquids. An integral 225 x 12mm diameter rod is fitted so that stirrer can be easily mounted to a support stand. The stirrer shaft is interchangeable.

The speed control is by 7 speed selectors with reverse speed in the model D-13 and D-14, while in the D-15 and D-15BR model is by an external continuous regulation module with retractile cable.

STIRRER Model D-15 and D-15BR

For liquids of medium viscosity / Maximum volume of mixing: 15 litres. Without stirring bar. Adjustable speed: 100 to 3400rpm

Stirrer weight: 1Kg. Control module weight: 300g /Stirrer size, without rod: 175mm high x 60mm Ø

Rod size: 225mm long x 12mm Ø. Control module size: 150 x 150 x 70mm

Operation: 230V 50/60 Hz. 100W. **Code 1.8002.00**

STIRRERS Model D-15BR, low speed of continuous control like D-15

For liquids of medium viscosity / Maximum volume of mixing: 15 litres. Without stirring bar

0-5rpm. **Code 1.8002.15**

0-10rpm. **Code 1.8002.14**

0-80rpm. **Code 1.8002.13**

0-150rpm. **Code 1.8002.12**

0-300rpm. **Code 1.8002.10**



D-14 and D-13

STIRRER Model D-14

For liquids of medium viscosity

Maximum volume of mixing: 15 litres. Without stirring bar

Selector of 7 speeds maximum 3400rpm.

Stirrer weight: 1Kg / Stirrer size without rod 175mm high x 60mm Ø.

Rod size: 225 long x 12mm Ø

Operation: 240V 50/60Hz. 100 W. **Code 1.8001.00**

STIRRER Model D-13

Selector of 7 speeds, maximum 4400rpm / Maximum volume of mixing: 2 litres. Without stirring bar.

Stirrer weight: 0.8Kg / Stirrer size without rod: 175mm high x 60mm Ø

Rod size 225mm long x 12mm Ø / Operation: 240V 50/60Hz. 75W. **Code 1.8000.00**

STIRRER Model D-13C. Code 1.8000.15 whit continuous speed control like D-15



D-15 and D-15BR

Ordering information

Code ▼	Articles
1.8002.00	Stirrer D-15, 100 to 3400rpm, without stirring bar
1.8002.15	Stirrer D-15BR, 5 to 5rpm, without stirring bar
1.8002.14	Stirrer D-15BR, 0 to 10rpm, without stirring bar
1.8002.13	Stirrer D-15BR, 0 to 80rpm, without stirring bar
1.8002.12	Stirrer D-15BR, 0 to 150rpm, without stirring bar
1.8002.10	Stirrer D-15BR, 0-300 rpm, without stirring bar
1.8001.00	Stirrer D-14, 7 speeds, max. 3400rpm, without stirring bar
1.8002.05	Stirring shaft stainless steel fixed paddle 300mm long x 8mm Ø, 60mm Ø tour, for D-14, D-15 and D-15BR
1.8002.04	Stirring blade stainless steel 300mm. long x 8mm Ø, 70mm Ø tour for D-14, D-15 and D-15BR
1.8000.00	Stirrer D-13, 7 speeds, max. 4400rpm, without stirring bar
1.8000.15	Stirrer D-13C, continuous speed control, max. 4400rpm, without stirring bar
1.8000.01	Stirring blade stainless steel 200mm x 6mm Ø, 50mm Ø tour for D-13
1.8000.07	Stirring shaft stainless steel fixed paddle 200mm long x 6mm Ø, 40mm Ø tour for D-13
SUPPORT STANDS	
1.8003.00	Stand type A, 260 x 260mm, without rod or double clamp
1.8003.01	Support rod stainless steel 600mm long x 12mm Ø
1.8003.02	Clamp, double for D-13, D-14 and D-15
1.8003.06	Stand complete, base 300x150mm, support rod 700mm long and double clamp (1.8000.09)



Stand complete 1.8003.06



Double clamp 1.8003.02



Stirring bars

SUSPENDED SOLIDS, PORTABLE ANALYZER

Suspended Solids, Portable Analyzer, "SS". Model 3150

- ♦ Optimised for MLSS & RAS ♦ Data Logging ♦ Download Data to Spreadsheet
- ♦ Instrument designed for the measurement of suspended solids in aqueous solutions by an optical sensor
- ♦ Data logging and the ability to download the data directly to a computer are standard features
- ♦ RS232 serial port ♦ Independent calibration for MLSS & RAS ♦ Large, backlit graphical display. Waterproof
- ♦ Rechargeable batteries and charger, 12 hours of autonomy. Automatic turn out
- ♦ Real time clock. Real time SS concentrations for process control ♦ Eliminates need for daily lab analysis.
- ♦ User friendly ♦ Analyzer can also be used to measure sludge blankets in clarifiers ♦ Memory of safety



Features - Analyzer "SS" Model 3150

Range: 0 to 150 / 0 to 1500mg/L or 0 to 3000 / 0 to 30000mg/L suspended solids
 Temperature range: 0 to 65°C
 Accuracy: 3% of reading or $\pm 20\text{mg/L}$, whichever is greater
 Sensitivity/Resolution: 1mg/L below 1000mg/L; 10 mg/L between 1000 and 9999mg/L; 100 mg/L above 10000mg/L
 Repeatability: $\pm 0.5\%$ Sensor check: automatic self-diagnostics. Sensor drift: less than 1% per year. Memory backup: yes
 Display: LCD graphic display with UV protection, contrast adjustment via keypad. Sensor cable length: 6.6 m
 Ambient temperature: -40...+55°C. Ambient humidity: 0...100%. Enclosure rating: NEMA 4. Wetted materials: epoxy and polyurethane. Maximum pressure: 100 psi (7 bar about). Size: 110 x 260 x 67mm. Shipping weight: about 1.8Kg.

Code ▼	Articles
12.0213.00*	Suspended Solids SS, Portable Analyzer, with sensor, 0-30000mg/L
12.0213.01*	Suspended Solids SS, Portable Analyzer, with sensor, 0-1500mg/L

THERMOMETERS, PORTABLE

PORTABLE THERMOMETER Models 7 Pt100, 7 NTC and / K/T

- ♦ Maximum and minimum temperature mode, HOLD and self-turn-off ♦ Screen LCD
- ♦ Standard connector mini ♦ Stability indicator ♦ Permanent memory ♦ Calibration: 1 point
- ♦ Diagnostic messages ♦ IP56 ♦ Battery indicator ♦ Operation 3x1.5V type AAA, > 750hours
- ♦ With rubber cover to protect of humidity and blows
- ♦ Size/Weight: 86x196x33mm / 295g. With suitcase: 260x135x75cm / 580g



FEATURES TABLE BY MODEL

Model ▶	7 Pt 100	7 NTC	7 K / T
Probe	Pt 100	NTC 30 K	K-T
Scales	-200 to 999°C	-50 to 150°C	K: -200 to 1350°C T: -250 to 400°C
Precision	0.1 °C (-99.9 to 199.9°C) 1 °C (-200 to 999°C)	0.01°C (-99.99 to +99.99°C) 0.1°C (-200 to 999.9°C)	K y T: 0.1°C (-99.9 to 199.9°C) K= 1°C (-200 to 1350°C) T= 1°C (-250 to 400°C)
Reading stability	Yes, fixed	Yes, fixed	Yes, regulable
Environmental conditions	-20 to 65°C, 10 to 90% humidity		

THERMOMETERS

Code ▼	Model	Articles
4.0101.65*	7 Pt100	Thermometer, suitcase, rubber cover, without probe
4.0101.66*	7 NTC	Thermometer, suitcase, rubber cover and immersion probe NTC code 4.0121.85
4.0101.67*	7 NTC	Thermometer, suitcase, rubber cover and penetration probe NTC code 4.0121.86
4.0121.70*	7 K/T	Thermometer, suitcase, rubber cover, without probe

TEMPERATURE PROBES FOR THERMOMETER 7 Pt100

Code ▼	Articles
4.0101.69*	Pt100, immersion, sheath st.st., 3x200mm, -5 to 300°C and 1.5m cable
4.0101.70*	Pt100, contact, sheath st.st., 3x200mm, -50 to 300°C and 1.5m cable
4.0101.71*	Pt100, penetration, sheath st.st., 4x150mm, -50 to 400°C and 1.5m cable
4.0101.72*	Pt100, room, sheath st.st., 4x200mm, -50 to 250°C and 1.5m cable
4.0101.74*	Pt100, immersion, sheath st.st., 6x500mm, -50 to 400°C and 1.5m cable
4.0101.75*	Pt100, immersion, sheath st.st., 6x1000mm, -50 to 400°C and 1.5m cable

Special probes under demand

THERMOMETERS, PORTABLE...

TEMPERATURE PROBES FOR THERMOMETER 7 NTC

Code ▼	Articles
4.0121.85*	Temperature probe NTC, immersion st. st. 3x200mm, -50 to 150°C, 1.5m cable
4.0121.86*	Temperatura probe NTC, penetration st. st. 4x150mm, -50 to 150°C, 1.5m cable

TEMPERATURE PROBES FOR THERMOMETER 7 K AND T

Code ▼	Articles
Temperature probes of thermocouple K, high temperatures	
4.0121.72*	Immersion and room, st.st. 2x200mm, -60 to 600°C and 1.5 m cable
4.0121.73*	Immersion, sheath st.st. 3x200mm, -60 to 800°C and 1.5 m cable
4.0121.74*	Immersion, sheath mineral oxide 6x500mm, -60 to 1100°C and 1.5m cable
4.0121.75*	Immersion, sheath mineral oxide 6x1000mm, -60 to 1100°C and 1.5m cable
4.0121.76*	Contact, sheath st.st. 5x200mm, -60 to 600°C and 1.5m cable
4.0121.77*	With flexible thread, 2x2000mm, 60...400°C

Special probes under demand

TURBIDIMETERS, NEPHELOMETRICS

Model D-110

The *DINKO* Turbidimeters are nephelometric instruments that sense the quantity of light-reflecting particles in water. A beam of light is focused and passed through the sample. Light scattered by particles in water is detected by photocells located at 90° angle to the incident beam of light and displays the results in NTU (Nephelometric Turbidity Units)

The model D-110 is designed according to the EPA method 180.1 related in "EPA Manual of Methods for Chemical Analyses of Water and Wastes" U.S.A. with tungsten wide-band light source.

The model D-110IR is designed according to ISO 7027(DIN 27027) requirements with an infrared led 860nm peak wavelength source



To alleviate the influence of diffuse light, the color sample and the difference between the angles of scattering light according to the size of the particles, a group of sensors covering 360° around the sample tube is used. The signals obtained are averaged automatically and turbidity readings **RATIO** are offered in NTU units.

The Turbidimeter is supplied calibrated. The membrane keyboard prevents accidental change of the set values and user re-calibrations can be spaced. The user re-calibration includes zero.

Turbidimeter 110 has resistance housing in coloured metallic grey, black keyboard, back-light LCD display, general rear switch, and fuse of protection.

The portable version P includes inside rechargeable battery up to 1000 test and aluminium carrying case. It can also operate at 230 V 50/60 Hz.

The apparatus is given with 8 sample cuvettes and instruction manual.

TURBIDIMETERS, NEPHELOMETRICS...

Model D-110

Specifications	
Parameters ▼	Performances
Range	0 - 9.99 /10 - 99.9 and 100 -999NTU
Accuracy	± 2% scale 1 and 2 / ± 3% scale 3
Resolution	0.01NTU
Repeatability	± 1 % of reading
Light source	Tungsten W / LED infrared
Input	Membrane Keyboard

Parameters ▼	Performances
Display	LCD high contrast backlight
Sample required	Minimal 5ml
Memory	The last 10 readings
Size	190 x 210 x 70mm
Weight	1.5Kg
Power	230V 50/60Hz/Battery (model P)

Description		
Code ▼	Model	Articles
1.9771.00	D-110	Turbidimeter, bench-top, white light, 8 cuvettes
1.9772.00	D-110P	Turbidimeter, portable, white light, 8 cuvettes, battery and aluminium case
1.9791.00	D-110IR	Turbidimeter, bench-top, infrared light, 8 cuvettes
1.9792.00	D-110IR-P	Turbidimeter, portable, infrared light, 8 cuvettes, battery and aluminium case

SDVB Turbidity Standard, conform EPA/ ISO, with certificate. Cuvettes

Code ▼	Articles
1.9775.00	Sample cuvettes, optically selected, 4pcs
1.9776.00	5NTU Primary Standard, SDVB, 60ml
1.9777.00	40NTU Primary Standard, SDVB, 60ml
1.9778.00	400NTU Primary Standard, SDVB, 60ml
1.9796.00	5NTU Primary Standard IR, SDVB, 60ml
1.9797.00	40NTU Primary Standard IR, SDVB, 60ml
1.9798.00	400NTU Primary Standard IR, SDVB, 60ml
1.9779.00	4000NTU Formazine Primary Standard, 125ml
1.9790.00	Antistatic-cleaning solution, 250ml.

Model D-112

The *DINKO* Turbidimeters are a nephelometric instruments that senses the quantity of light-reflecting particles in water.

A beam of light is focused and passed through the sample.
Light scattered by particles in water is detected by photocells located at 90° angle to the incident beam of light and displays the results in NTU (Nephelometric Turbidity Units)

The D-112 is designed according to 180.1 EPA method related in "EPA Manual of Methods for Chemical Analyses of Water and Wastes" U.S.A. with tungsten wide-band light source.



The D-112IR is according to ISO 7027(DIN 27027) requirements with an infrared led 860nm peak wavelength source.

PECULIARITIES- To alleviate the influence of diffuse light, the colour of the sample and the difference between the angles of scattering light according to the size of the particles, a group of sensors covering 360° around the sample tube is used.

The signals obtained are averaged automatically and turbidity readings **RATIO** are offered in NTU units on the right scale without user intervention.

SIGNAL AVERAGING- By means of the AVERAGE key on the front panel the ratio readings made in each time are automatically averaged.

CALIBRATION-The instrument is supplied calibrated, but it has the function of user recalibration in 4 points. An excessive deviation in subsequent calibrations generates an "error" message in the reader. The membrane keyboard prevents accidental change of the set values and calibrations can be spaced.

The parameters involved in the calibration process, readings, time and date are accessible for adjustment and maintenance work.

TURBIDIMETERS, NEPHELOMETRICS...

Model D-112

PRESENTATION- Turbidimeter D-112 has resistance housing in coloured metallic grey and black keyboard, back-light LCD display, general rear switch, and fuse of protection. The apparatus is given with 8 sample cuvettes and instruction manual.

Specifications

Parameters ▼	Performances	Parameters ▼	Performances
Auto-Range	0-9.999 / 10.00-99.99 / 100.0 – 999.9 / 1000-2000NTU	Display	LCD high contrast backlight
Accuracy	± 2%	Average readings	Control Time
Resolution	0.001NTU	Sample required	Minimal 5ml
Repeatability	±1% of reading	Warm up	Automatic
Light source	Tungsten W / LED, infrared	Memory	10 last readings
Input	Membrane Keyboard	Size	250 x 260 x 95mm
Output	RS232(printer) / RS485(PC)	Weight	2Kg
Readings	Ratio, instant or average, in NTU	Power	230V 50/60Hz

Description

Code ▼	Model	Articles
1.9773.00	D-112	Turbidimeter, bench-top, white light, 8 cuvettes
1.9793.00	D-112IR	Turbidimeter, bench-top, infrared light, 8 cuvettes

SDVB Turbidity Standards, conform EPA/ ISO, with certificate. Cuvettes

Code ▼	Articles
1.9775.00	Sample cuvettes, optically selected, 4pcs
1.9776.00	5NTU Primary Standard, SDVB, 60ml
1.9777.00	40NTU Primary Standard, SDVB, 60ml
1.9778.00	400NTU Primary Standard, SDVB, 60ml
1.9784.00	1500NTU Formazine Primary Standard, 60ml
1.9796.00	5NTU Primary Standard IR, SDVB, 60ml
1.9797.00	40NTU Primary Standard IR, SDVB, 60ml
1.9798.00	400NTU Primary Standard IR, SDVB, 60ml
1.9779.00	4000NTU Formazine Primary Standard, 125ml
1.9790.00	Antistatic-cleaning solution, 250ml.

McFarland Turbidity Meter, to see Photometer (Colorimeter).

TURN DISHES

TURN DISHES Model D-10

Provided of round platform that can be turn slowly up 6rpm, with round marks for to place Petri dishes of 55, 90, 100 and 140 millimetres of diameter. The rotation to make easy a uniform micro-organism scatter on Petri dishes. Foot switch connector. The foot switch is supplied as accessory and to make possible the start / stop function for hand free.

Speed: 0- 360rpm
Overall size: 160 x 200 x 120mm
Platform size: 150mm diameter.
Weight: 1.5kg.
Operate: 230V 50/60Hz. 0.3Amps.



Code ▼	Articles
1.8018.00	Turn Dishes
1.9740.00	Foot switch

VACUUM PUMPS

Model D-95

Diaphragm vacuum pumps, designed for laboratory use and to serve as operating component for pneumatic devices and instruments. High speed smooth out pulsation actuated by an FPM ® diaphragm and there is no lubricant to contaminate gases being pumped.



1.9513.00/1.9515.00/1.9515.15/1.9515.12
and 1.9517.00



1.9511.00

Don't need maintenance because they mount motors of induction magnetic auto-ventilate that works in dry.
They are not affected for re-absorptions of liquids.

The pumps are equipped with digital vacuum and pressure gauges, valves for vacuum adjustment, except code 1.9511.00.

Also switch ON/OFF and hose connections for vacuum and pressure
Operates on 230V, 50 Hz. Codes 9514, and 9521 for 50/60Hz.

Codes 9511.12 and 1.9515.12 are supply to 12VDC with Ion-Lithium battery and charger. See table.

All pumps come with output for remote control, PLC or foot switch.

The 1.9515.15, 1.9514.10, 1.9521.10, 1.9516.12. Pumps are provided with a Digital Controller to regulate the vacuum generated by the pump with great precision and maintain it between two selectable vacuum limits.
The choice of two control points to maintain the vacuum between the desired margins avoids continuous operation of the pump with the consequent energy savings, benefiting the environment and the duration of the pump.

With digital pressure indicator manometer code 1.9514.10
1.9521.10, while the 1.9516.12 instead of a pressure gauges
provide a cyclical digital timer.

SPECIFICATIONS OF VACUUM DIGITAL CONTROLLER

Vacuum pumps:

D-95CD. Codes 1.9514.10, 1.9515.15 and 1.9521.10

D-95T. Codes 1.9516.12.

Measure ranges: vacuum 0 to -1.00 bar. Pressure: 0 to 2.5 bar

Resolution: 0.01 bar

Repeatability: $\pm 0.2\%$

Additional units available

Operation temperature: 0 to 80°C

Set points: 2, higher and lower limits.

Relative humidity operation: 35 to 85%

SPECIFICATIONS OF CYCLIC TIMER

Vacuum pump D-95T. Code 1.9516.12.

Digital cyclic time controller that allows the programming
operation and rest times.

Memory EPROM, without battery and maintenance



1.9514.10, 1.9521.10



Vacuum pumps D-95T
Codes 1.9516.12

VACUUM PUMPS...

ACCESSORIES

Device for vacuum adjustment

With vacuum gauge 0 - 760mm.Hg, increments 20mm.Hg. Precision $\pm 2\%$
Code 1.9518.00



Code 1.9518.00 and 1.9518.01

Device for pressure adjustment

With pressure gauge 0-2 bar. Resolution: 0.1bar
Code 1.9518.01

Trap for vacuum.

Indispensable in those cases when there is production of annoying vapours and harmful for people or harmful for the integrity and duration of the membranes and valves of the pump like sticky substances or solid particles

Code 1.9520.00



Vacuum Digital Controller. Model D-95CD

Connected to a pump it allows to regulate the vacuum with precision.

Measure ranges: 0...-101.3kPa/ 0... -760mm Hg / 0...-1.000 bar. Resolution: 0.1kPa / 1mm Hg/ -0.001bar

Repeatability: $\pm 0.2\%$. Operation temperature: 0 to 80°C. Set points: 2, higher and lower limits.

Relative humidity operation: 35 to 85%

Code 1.9518.10



Digital Timer Controller

Connected to a vacuum pump allows you to choose the operating and stop time.

Power supply: 230V 50/60Hz. 2000W.

Weight: 2Kg. Size: 180 x 240 x 120mm

See specifications in the description of the D-95T pump with digital timer.

Code 1.8119.00



Vacuum Pumps Model D-95, D-95CD, and D-95T

Code ▼	Vacuum Bar	l/min	Press Bar	V	Vacuum gauge	Controller	Pressure gauge	Timer	Regulator	Size cm	Kg
1.9511.00	-0.84 $\pm 2\%$	6	2	230 AC	No	No	No	No	No	16x22x9	2
1.9517.00	-0.84 $\pm 2\%$	6	2	230 AC	Yes	No	No	No	Yes	24x27x10	2.8
1.9513.00	-0.86 $\pm 2\%$	15	2	230 AC	Yes	No	No	No	Yes	24x27x10	3.8
1.9515.00	-0.98 $\pm 2\%$	12	2	230 AC	Yes	No	No	No	Yes	24x27x10	3.8
1.9515.15	-0.98 $\pm 2\%$	12	2	+	Yes	Yes	No	No	Yes	24x27x10	3.8
1.9515.12	-0.98 $\pm 2\%$	12	2	12V DC*	Yes	Yes	No	No	Yes	24x27x10	4
1.9514.10	-0.98 $\pm 2\%$	30	2.5	230 AC	Yes	Yes	Yes	No	Yes	26x31x13	6.1
1.9521.10	-0.98 $\pm 2\%$	50	2.5	230 AC	Yes	Yes	Yes	No	Yes	26x31x13	6.5
1.9516.12	-0.98 $\pm 2\%$	12	2	230 AC	Yes	Yes	No	Yes	Yes	26x31x13	5
1.9518.00					Analogic		No		Yes	15x15x7	0.5
1.9518.01					No		Analogica		Yes	15x15x7	0.5
1.9518.10					Yes		Yes		Yes	19x25x12	2
1.9520.00										1 L	0.3

* With 12V DC Lithium-Ion battery and charger. + 100...240V AC 50/60Hz 100W.