



General material

GRUPO I&S





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Immersion thermostat

GENERAL FEATURES

- Resolution: 0.1 ° C.
- Accuracy: ± 0.5 fs (full scale)
- Temperature display: 4-digit display
- Probe type: up to 99.9 ° C PTC probe, up to 250 ° C PT-100 type.
- Resistance armored in stainless steel AISI 316
- Agitation pump, capable of homogenizing vessel temperature to 100 liter capacity (relative to water and the covered container).
- Temperature control with digital thermostat.
- All parts in contact with the liquid are made of stainless steel AISI 304.
- Manufactured according to EC guidelines.
- Dimensions: Depth 150 mm.

Tared basins Double body, stainless steel interior, 18/10 AISI 304 stainless steel outer

IMMERSION THERMOSTAT

Code	Type	Temp. max. (°C)	precision(end scale)	Resolution (°C)	Type of probe	Power (W)
V001	TFB	99,9	0,5%	0,1	PTC	1000
V002	TFB	99,9	0,5%	0,1	PTC	2000
V003	TFB	250	0,5%	0,1	Pt100	2000

ACCESSORIES

Code	Article	Capacity (l)	Internal dimensions W x H x D (mm)	Exterior dimensions W x H x D (mm)
V010	Tared cuvettes	9	290 x 150 x 220	380 x 180 x 290
V011	Tared cuvettes	12	320 x 150 x 290	380 x 180 x 350
V012	Tared cuvettes	20	480 x 150 x 290	550 x 180 x 350
V013	Tared cuvettes	27	480 x 200 x 290	550 x 230 x 350
V014	Tared cuvettes	50	600 x 200 x 480	670 x 230 x 550
V015	Methacrylate cuvettes	10	165 x 150 x 400	173 x 158 x 408
V016	Methacrylate cuvettes	13	230 x 150 x 400	238 x 158 x 408
V017	Methacrylate cuvettes	30	300 x 200 x 500	308 x 208 x 508
V020	Drain cock for attachment to metal cuvettes			
V021	Output valve tap for external circulation pump coupled to the stirrer to			
V022	Large cuvettes adapter to the thermostat			

*Request we can manufacture cuvettes of up to 100 liters



Thermostatic bath with digital display, adjustable for temperatures from ambient +5 ° C to 99.9 ° C and 200 ° C. Resolution 0.1 ° and 1 ° C.

GENERAL FEATURES

Regulación y lectura digital de la temperatura mediante microprocesador con acción P.I.D. y sonda de temperatura PT100. Tiempo de espera de puesta en marcha programable (0-99,5 h) Tiempo de mantenimiento de temperatura programable (0-99,5 h). Seguridad según norma: EN 61010-1 Termostato de seguridad con rearme manual que desconecta el equipo cuando se activa, conforme DIN 12877 Clase 2. Cubeta interior estampada y mueble exterior en acero inoxidable AISI 304 Resistencia eléctrica en acero inoxidable en el interior de la cubeta Grifo de desagüe incorporado Incluye la bandeja cubre resistencia perforada



Code	Capacity	Type	Temp.máx. °C	Internal dimensions W x H x D (mm)	Exterior dimensions W x H x D (mm)	Power	Precision(° C)
V025	5	Digital	99,9	295 x 150 x 140	340 x 210 x 280	600	0,1
V026	5	Digital	200	295 x 150 x 140	340 x 210 x 280	1.000	1
V027	12	Digital	99,9	320 x 150 x 295	340 x 210 x 450	1.200	0,1
V028	12	Digital	200	320 x 150 x 295	340 x 210 x 450	1.500	1
V029	20	Digital	99,9	490 x 150 x 290	630 x 210 x 340	1.600	0,1
V030	20	Digital	200	490 x 150 x 290	630 x 210 x 340	2.000	1
V031	40	Digital	99,9	620 x 150 x 500	660 x 210 x 630	2.400	0,1
V032	40	Digital	200	620 x 150 x 500	660 x 210 x 630	3.200	1



Code	Accessories
V035	Stainless steel lid with 2 holes and disc adapters for 5 liter bath.
V036	Stainless steel lid with 4 holes and disc adapters for 12 liter bath.
V037	Stainless steel lid with 6 holes and disc adapters for 20 liter bath.
V038	Sloping lid, for 5 L baths.
V039	Sloping lid, for 12 L baths.
V040	Sloping lid, for 20 L baths.
V041	Resistance-cover tray to 5 liters bath.
V042	Resistance-cover tray to 12 liters bath.
V043	Resistance-cover tray to 20 liters bath..
V044	Blanking lid for 5 liter bath .
V045	Blanking lid for 12 liter bath
V046	Blanking lid for 20 liter bath

Thermostatic baths with electronic adjustable temperatures, from ambient to up to 200 ° C

GENERAL FEATURES

- Double wall, metal construction: exterior painted in epoxy with anti-oxidant treatment and interior basin made of 18/10 stainless steel.
- Heating by shielded heating element made of AISI 316 stainless steel.
- Equipped with a safety thermostat that has a manual reset in the event of over-temperature according to DIN 12877, class 2.
- Control panel includes:
 - Illuminated ON switch
 - Indicator light showing heating element operation.
 - Safety thermostat indicator light.
 - Temperature control.
- Manufactured according to CE directives.
- Power supply: 230V/50Hz

Specific characteristics:

ANALOGUE BATHS:

- Temperature control bulb thermostat, from ambient temperature up to 120° C or 200° C, depending on different versions.



Code	Capacity (litros)	Type	Temperature maxim	Internal dimensions W x H x D (mm)	Weight (Kg.)	Exterior dimensions W x H x D (mm)	Power (w)	Precision
V052	5	Analog.	120	290x150x140	4	370x200x280	700	±1°
V053	5	Analog.	200	290x150x140	4	370x200x280	1000	±2°
V054	12	Analog.	120	320x150x290	6	390x200x440	1200	±1°
V055	12	Analog.	200	320x150x290	6	390x200x440	1500	±2°
V056	20	Analog.	120	490x150x290	8	560x200x440	1700	±1°
V057	20	Analog.	200	490x150x290	8	560x200x440	2000	±2°

Automatic water distiller

V060 Water distiller with borosilicate glass, for desktop or wall mounted. Mounted on metal cabinet, stove enamelled with epoxy resin. Electrical resistance screw top for easy rapid change. Automatic device which switches the resistor in case of failure in the cooling water supply, turning to automatically connect to the water supply is restored.

Capacity 3 l / hour consumption 3000 W, weight 5 kg





Thermostatic baths with digital temperature control, adjustable temperatures from ambient to up to 200 ° C

TECHNICAL FEATURES

- Double wall, metal construction: exterior painted in epoxy with anti-oxidant treatment and interior basin made of 18/10 stainless steel.
- Heating by shielded heating element made of AISI 316 stainless steel.
- Equipped with a safety thermostat that has a manual reset in the event of over-temperature according to DIN 12877, class 2.
- Control panel includes:
 - Illuminated ON switch
 - Indicator light showing heating element operation.
 - Safety thermostat indicator light.
 - Temperature control.
- Manufactured according to CE directives.
- Voltage: 230V/50Hz

Specific characteristics:

DIGITAL BATHS:

- Digital Temperature control or analogue models by digital thermostat
- Temperature precision: 0,1°

Code	Capacity (litros)	Type	Temperature maxim	Internal dimensions W x H x D (mm)	Weight (Kg.)	Exterior dimensions W x H x D (mm)	Powr (w)	Probe	Precision
V061	5	Digital	100	290x150x140	4	370x200x280	500	PTC	+/- 0,5% fs
V062	5	Digital	200	290x150x140	4	370x200x280	700	Pt100	+/- 0,5% fs
V063	12	Digital	100	320x150x290	6	390x200x440	1200	PTC	+/- 0,5% fs
V064	12	Digital	200	320x150x290	6	390x200x440	1500	Pt100	+/- 0,5% fs
V065	20	Digital	100	490x150x290	8	560x200x440	1700	PTC	+/- 0,5% fs
V066	20	Digital	200	490x150x290	8	560x200x440	2000	Pt100	+/- 0,5% fs

PLACAS CALEFACTORAS ANALOGICAS



FEATURES

Temperature on the surface up to 400° C. with heating power selector Enamel external case, temperature and corrosion resistant, with heating power selector. Sturdy steel hotplate with built in electric heater.

Code	Temperature control	Internal Dimensions (mm) D x W	Ext. Dimensions (mm) H x W x D	Temperature maxim(°C)	Power(W)
V070	Electronics	200 x 390	120 x 220 x 550	400	2500
V071	Electronics	300 x 300	130 x 330 x 460	400	3000

DIGITAL HOTPLATES

GENERAL FEATURES

- Electronic temperature control and digital display (3 digits). Subplate Adjustable temperature from ambient +5 to 200 ° C. stability ± 0.5 ° C.
- Resolution 1 ° C.
- Temperature sensor PT 100.
- Built the hotplate in hard aluminum teflon coated grinding and heating elements surrounding the entire surface.
- Excellent thermal insulation that prevents the transmission of heat to the cabinet where the control elements.
- Insulating spacer stainless steel heater. AISI 304.
- Stainless steel upper cabinet. AISI 304.
- Button to select and temperature reading.



Code	Temperature control	Internal Dimensions (mm) D x W	Ext. Dimensions (mm) H x W x D	Temperature maxim(°C)	Power(W)
V072	Digital	240 x 240	130 x 250 x 420	200	700
V073	Digital	200 x 400	130 x 220 x 570	200	800
V074	Digital	250 x 600	130 x 270 x 770	200	1000



SAND BATH



Features

Adjustable temperatures on plate surface up to 400°C. Temperature regulation by energy pulse regulator. Un-deformable steel hot plate with surrounding heating elements. Stainless steel uppercase AISI-304. Control panel with pilot-lights indicator of connection to the mains and heating functioning. Removable tray of stainless steel, allows using the apparatus as a hot plate.

SAND BATH

Code	Temperature control	Internal dimensions W x H x D (mm)	Ext. Dimensions (mm) H x W x D	Temperature maxim(°C)	Power(W)
V075	Electronics	50 x 180 x 380	180 x 220 x 410	400	2300
V076	Electronics	50 x 300 x 300	210 x 320 x 350	400	2800

Code	Accesorios
V078	Stainless steel bowl plate sand bath of 190 x 220 x 480 mm.
V079	Stainless steel bowl plate sand bath of 190 x 280 x 580 mm.

V083 Warm air drier, for general laboratory purposes, to dry soil and aggregate samples.
Power supply: 230V, 50 Hz. 1500 W.



ULTRASONIC CLEANING BATHS



FEATURES

Completely transistorized built in high frequency electric generator. Working frequency 35 Khz. Temperature regulation by microprocessor with digital read out (from ambient +5° C to 90° C). Timer 0 - 99 minutes. Cleaning tray made of stainless steel 18/10. External case made of stainless steel AISI-316. Heating by semi-detached elements at the tray. Complete-half wave selector. It allows less power consume in some applications. Draining tap incorporated.

Code	Capacity litres	Inner dimensions in mm (H x W x D)	External dimensions in mm (H x W x D)	Power W	Weight Kg
V085	5,7	150x300x151	320x330x180	325	10
V086	12	150x300x240	320x330x270	550	14
V087	18	200x327x300	320x360x330	700	20
V088	20	150x505x300	320x535x330	900	23
V089	28	200x500x300	320x535x330	1000	3

BATH WITH MOVEMENT

■ Equipment designed to bring liquids to room temperature, formed by a combination of immersion thermostats and a covered basin in order to provide better uniformity of the desired working temperature: It includes:

- 1) A double-walled metal basin of 20 or 27 litres. The interior is 18/10 stainless steel and the exterior is AISI 304 stainless steel.
- 2) TFB immersion thermostat positioned on the cover with an external cooling coil in order to work at a temperature close to the ambient temperature, and it includes a stirring pump with an outlet for external circulation, adjustable by an incorporated tap.
- 3) Drain tap included.
- 4) It incorporates a blind tap to completely shut off the basin.

■ Resolution: 0,1°C

■ Precision: +/- 0,5% fs (full scale)

■ 4 digits temperature display

■ Probe type according to maximum temperature:

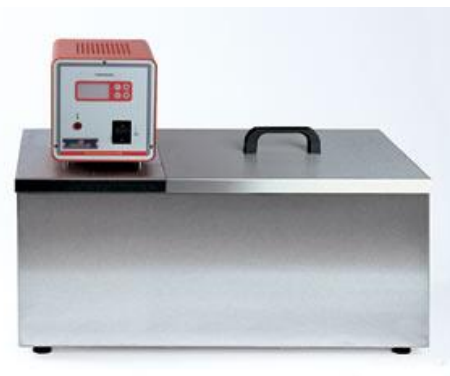
- Up to 99,9°C is PTC

- Up to 250°C Pt-100

■ The temperature regulation is by digital thermostat with PID self-adjustable control.

■ Manufactured according to CE directives

■ Voltage: 220V/50Hz



Code	Temp. máxim (°C)	Capacity (l)
V092	99,9	27
V093	250	27



Bank of circular hotplates 4 AND 6 POSTS

ADJUSTABLE TEMPERATURE HOTPLATE UP TO 400 °C.
SUITABLE FOR KJELDAHL DIGESTION ASSAYS AND
SOXHLET EXTRACTION.

FEATURES

Temperature control impulses independent power in each square.
Non-deformable steel hot plate with surrounding heating elements
over its entire surface.

rear bracket with adjustable height and tilt rod for easy attachment
flasks, coolants, etc.

stainless steel outdoor furniture. AISI 304.

CONTROL PANEL

Independently in each square.

- Temperature regulators impulse power.

- Lamps signaling functioning of heater. Power supply: 230V, 50H

Ref.	Number of pieces	Máxim T ^a	Power (w)	Dimensions (mm) height x width x depth	Weight (kg.)
V095	4	400°C	1600	650 x 80 x 360	8
V096	6	400°C	2400	950 x 80 x 360	12



ELECTRONIC HEATING PLATES PC SERIES

GENERAL CHARACTERISTICS

- Circular heating plate of solid steel.
- External injection cabinet painted in epoxy.
- Maximum working temperature on plate; 350°C.
- It incorporates a safety thermostat that disconnects the plate if the temperature exceeds 350°C.
- Electronic voltage regulation that allows variation of the power between 10% and 100% of this voltage.
- As an option, it can be fitted with a connection in the rear end for a contact thermometer or a digital programmer.
- It is equipped with a luminous start-up switch and a pilot light to indicate the operation of the resistance.
- Manufactured according to CE directives
- Power supply: 230v/50H

Code	Dimensions (mm) height x width x depth	Area (mm)	máx T ^a . (°C)	Power (w)	Weight (kg.)
V100	180 x 125 x 220	Ø150	350	500	2
V101	180 x 125 x 220	Ø150	350	1000	2

Accessories:

Code	Accessories
V102	Rear socket for contact thermometer
V103	Support rod 12 x 450 mm



DIGITAL MAGNETIC STIRRER

FEATURES

A set of digital temperature control magnetic stirrers. They come with a ceramic or an inox stirring surface. The common characteristics are the following:

- An injected housing that provides the equipment with great stability, painted in epoxy.

- Plate measures:

- Circular: 150-mm Ø stirring surface made of AISI 304 stainless steel or ceramic. (Version 104 and 105). Ceramic surface also available.

- Shielded heating element system with an indicator light to signal heating

- Temperature control is a digital thermostat with PID self-adjustable control

- “J” type probe

- Temperature control from ambient up to 350°

- The stirring capacity exceeds 10l (relative to water).

- Stirring speed variable between 30 and 2100 r.p.m.

- Includes Teflon-insulated magnet. (8x40mm)

- Manufactured according to CE standards External Temperature Control: **See accessories**

Code	Power (W)	Temperature máx (°C)	Heating surface	Dimensions (W x H x D, mm)	Precision (% F.S.)	Weight (kg.)
V104	500	350	Ceramic	180 x 125 x 220	± 0,5	3
V105	500	350	stainless steel AISI 304	180 x 125 x 220	± 0,5	3

ACCESSORIES:

Code.	Accessories
V106	Aero security
V107	Support rod 12 x 450 mm
V108	Set external probe

EN 933-9 / NF P94-068 / NF P18-592

A152 Electronic fins mixer, with digital display. Speed range between 200-2000 rpm. Supplied complete with double stir blade, support and locking nut.

A153 Electronic mixer with digital speed display, speed range 40-400 and 200-2000 rpm Accessories not included.

A153.01 Double support T, stainless steel rod. AISI 304 dia. 20 x 800 mm. high.

A153.02 Double shovel cross.

A152.02 Filter paper dia. 125 mm Pack of 100.

A152.03 Methylene Blue, Pack of 100 gr.

A152.04 Methylene Blue, Pack of 25 gr.

V7557 Burette 50 ml graduated with key.

V7558 Burette 100 ml graduated with key.

A152.05 Double fixing nut

A152.06 Solid glass rod 300 mm length

A152.07 Base plate Support



A152



A153

**ANALOG MAGNETIC STIRRER****FEATURES**

Set of magnetic stirrers with heating or without giving the user an interesting price / quality ratio, whose common features are:

- Furniture injection, which gives great stability to the team, painted in epoxy.
- Surface stirring circular stainless steel AISI 304 150mmØ. Also available in ceramic. Refs: 111C / 113C.
- Electronic control circuits for heating and / or stirring modularly designed for easy replacement .
- Light switches and independent regulatory controls for the heating and stirring functions located on the front panel.
- The stirring capacity is more than 10l. (relative to water).
- Stirring speed variable from 30-2100 rpm
- A magnet Teflon. of Ø8x40mm Includes.
- For stirrers with heating, the heating system is by armored resistance, signaling a pilot heating incorporates.
- Manufactured according to EC directives.
- Power supply: 230v/50H. Other on request .



Code	Power (W)	Temperature máx (°C)	Dimensions W x H x F	Heating system	Weight (kg.)
V111	500	400	180 x 125 x 220mm.	Electronic regulator 10-100% power. Making contact thermometer	3
V111-C	500	400	180 x 125 x 220mm.	Same as V111 with ceramic surface.	3
V113	500	300	180 x 125 x 220mm.	Temperature: bulb thermostat with an accuracy of $\pm 3^{\circ}\text{C}$	3
V113-C	500	300	180 x 125 x 220mm.	As V113 with ceramic surface.	3

BATH FOR OIL TESTING**FEATURES**

- Double walled metallic construction and an exterior metal body painted in epoxy treated with antioxidant. Stainless steel 18/10 interior tub.
- Heating by means of a resistance shielded in stainless steel AISI 316.
- Temperature control by means of a digital thermostat with the following characteristics:
 - Probe type is PTC with an accuracy of $\pm 2\%$
 - Security thermostat (according to DIN 12877 #2) if overheating occurs located in the back side of the equipment
- Aluminium block with nine cavities, specially designed for sampling edible oils according to EU N°. L.248/67standards.
- It is supplied with a stainless steel AISI 304 support for fastening the block in the bath.
- Manufactured according to CE directives.
- Power supply: 230V/50Hz



Code	Temp.. máx (°C)	Block Dimensions (mm) W x H x F	Dimensions (mm) ext. W x H x F	Power(W)
V115	100	45 x 240 x 240	390 x 150 x 440	1200

ELECTRONIC SCALES WITH DIGITAL DISPLAY HAVE A WIDE RANGE OF SCALES WITH DIFFERENT CAPACITIES AND RESOLUTIONS



PRECISION BALANCES WITH DIGITAL DISPLAY

GENERAL

- LCD display with internal lighting.
- Equipped with load sensing type RM1 art.
- You have a computer or printer connection RS 232-C.
- Doubletec design, two large adjustable feet for more stability in the workplace.
- counting function.
- Filters heavy.
- Selecting multiple units.
- Automatic calibration external
- Power supply 220V with external.
- External dimensions: 210 x 340 x 160 mm.

Code	Capacity(g)	Precision(g)	Plate dimension (mm)
V120	310	0,001	110
V121	420	0,001	110
V122	500	0,001	110
V123	1000	0,001	110
V124	3100	0,01	160
V125	4200	0,01	160

ELECTRONIC SCALES WITH DIGITAL DISPLAY

GENERAL FEATUREES

- LCD display with backlight.
- Verifiable OIML Class III.
- Auto paid.
- Tare function.
- Parts counting.
- Function limits (HI_OK_LO).
- Animal weighing function.
- Low battery indicator.
- Internal rechargeable battery.

Power: 220V

Battery: Internal rechargeable 6V/4Ah

Operating temperature: -10 ° C / +40 ° C



Code	Capacity(kG)	Precision(gr)	Plate dimension (mm)
V170	15	5	442 X 332
V171	30	10	442 X 332
V172	60	5	442 X 332
V173	100	10	442 X 332
V174	150	20	530 X 430
V175	300	50	530 X 430

Technical data and the format of the equipment subject to change without notice

**Different models analytical scales necessary in a laboratory**

- Laboratory analytical scale.
- LCD display with internal lighting.
- counting function.
- Selecting multiple weighing filters.
- Connecting a computer or printer.
- Option Kit density.
- Selecting multiple units of measure.

Power supply: 230 V/50 Hz 11 V AC

Battery: 30 hours operating time, charging time 10 hours.

Operating temperature: +5 ° C / +35 ° C

MODELS	V140	V141	V140i	V141i
Capacity (kg)	120	220	120	220
Resolution (kg)	0,1		0,1	
Calibración	External		automatic internal	
Weighing units	ct, dwt, g, gn, mg, mo, oz, ozt, t			
Cabinet Dimension (mm)	185 x 340 x 80			
Plate size (mm)	Dia. 80			
Balance Dimension (mm)	186 x 250 x 80			
Weight (kg)	9			

Moisture Analyzer scales of high performance

- Moisture Analyzer of high performance.
- LCD graphic display with backlight and contrast adjustment.
- Thermal response time of 50 ° C to 100 ° C in approx. 1 minute.
- Temperature range of 35 ° C to 160 ° C.
- External calibration.
- Adjustable timer from 1-99 minutes.
- Automatic programmable.
- Connect a PC keyboard to input RS 232-C standard.

- You can store up to 5 drying programs.
 - Drying process by halogen lamps.
- It has two microprocessors, one specifically designed to control all functions of weight, and one for the perfect control of all drying processes.
- Power supply: 220 V / 115V
Operating temperature: +5 ° C / +35 °



Models	Capacity(g)	Precision(g)	Resolution (%)	Plate size (mm)
V139	160	0,001	0,01	100



PRECISION SCALES WITH DIGITAL DISPLAY GENERAL FEATURES

- Protection system against overload.
- Cell highly impact resistant.
- Universal power supply available (110V/240) V-50/60Hz.
- RS-232.
- Various functions: Carat / Parts / Pounds / Ounces / Grams.
- Dimensions of scales: 215x330x95 mm - Weight 3 Kg
- Internal rechargeable battery 6V BP cc Type Ni / MH - Autonomy ± 12 h.
- Optional: Calibration Weights as models / Printer / Case Cover / USB output.

Models	Capacity(g)	Precision(g)	Plate size (mm)
V130	2000	0,01	150x150
V131	4200	0,01	150x150
V132	7500	0,1	190x190
V133PT	7500	0,1	190
V133BP	7500	0,1	190
V134R	950/7500	0,01/0,1	190
V135PT	10200	0,1	190

High Standard analytical scales

FEATURES:

- Calibration weight
- Autocalibration perfect "PSC". Built.
- Clock Calibration "Clock-CAL".
- Inbuilt clock.
- Calibration Report GLP / GMP / ISO.
- Window Direct. Connecting a PC without additional software.
- Output measurement intervals.
- RS-232-C serial bidirectional.
- Software for measuring specific gravity, piece count, percentage on the screen.
- Analog Display.
- Hydrostatic weighing below the balance.
- Metal housing. Verifiable.



Models	Capacity (Max)	Resolution	Internal calibration	Steel Plate
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V145	120 g.	0,1 mg.	SI	Ø 80
V146	220 g.	0,1 mg.	SI	Ø 80
V147	320 g.	0,1 mg.	SI	Ø 80
V148	120 g.	0,1 mg.	SI	Ø 80
V149	200 g.	0,1 mg.	SI	Ø 80
V150	320 g.	0,1 mg.	SI	Ø 80
V151	120 g.	0,1 mg.	NO	Ø 80
V151	220 g.	0,1 mg.	NO	Ø 80

INDUSTRIAL TYPE SCALES

Technical Features:

High resolution Balance

Internal 1/60.000

Calibration software.

Power supply: 110V, 220V $\pm$ 10%.

Tara all over the range.

Weighing in: grams, pounds and ounces.

Optional modules: Mini-Printer Interface, RS-232

Interface Relay.

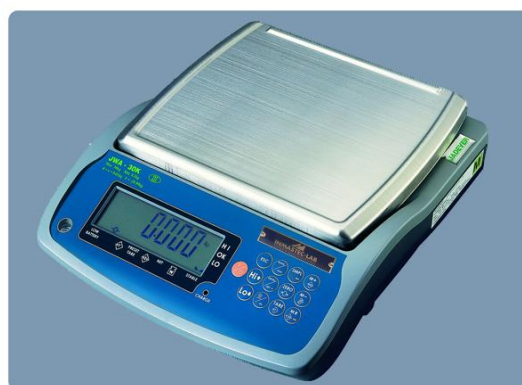
Balance robust.

Printer Internal Module: DP-343

Keyboard with keys.

Internal rechargeable battery.

Balance dimensions: 390x345x120 mm.



Models	Capacity	Precision	Plate size
V155	3 Kilos	0,1g	320x240 mm
V156	6 Kilos	0,2 g	320x240 mm
V157	15 Kilos	0,5 g	320x240 mm
V158	30 Kilos	1 g	320x240 mm
V159	60 Kilos	2 g	320x240 mm

Industrial type scales

Specifications:

Automatic Calibration Software, Calibration menu Zero / Span.

Counters 25,50,100 pieces per sample pieces.

Blister protection powder, liquid.

Stainless steel pan.

Power supply 220/110V.

Rechargeable battery with a battery life of about 120 hours.

Membrane tactile.

Optional RS-232.e printer.

Net Weight: 5.40 kilos.



Models	Capacity	Precision	Plate size
V160	3 Kilos	0,1g	334x245 mm
V161	6 Kilos	0,2 g	334x245 mm
V162	15 Kilos	0,5 g	334x245 mm
V163	30 Kilos	1 g	334x245 mm



V165 Precision scale

Capacity: 15 Kg

Accuracy: 0.1 g

Plate oversized stainless steel of 360x320 mm.

ABS indicator heavy

Indicator Measures: 175x84x40 mm

110/240V foreign power - Output 12V 500 mA

Operating Temperature 0o - 40o

Internal rechargeable battery - charging indicator

Display 6 digits 22 mm LCD

Tara all over the range

External calibration at one point and three-point linear

Aluminum load cell

CALIBRATION WEIGHTS



Maximum permissible error in mass fractions (mg)

	1 mg	2 mg	5 mg	10 mg	20 mg	50 mg	100 mg	200 mg	500 mg
F	0.02	0.02	0.02	0.025	0.03	0.04	0.05	0.06	0.08

Maximum permissible error in mass (mg)

	1 g	2 g	5 g	10 g	20 g	50 g	100 g	200 g	500 g	1000 g	2000 g	5000 g	10000 g
F	0.10	0.12	0.15	0.20	0.25	0.30	0.5	1.0	2.5	5	10	25	50

Class F		
Gram fraction	Code	
Complete set (1-500 mg) in 12 fractions	V210	

	Class F (nickel plated brass)	Class F (Stainless Steel)	
Mass	Code	Code	
1 g	V180	V195	
2 g	V181	V196	
5 g	V182	V197	
10 g	V183	V198	
20 g	V184	V199	
50 g	V185	V200	



100 g	V186	V201	
200 g	V187	V202	
500 g	V188	V203	
1.000 g	V189	V204	
2.000 g	V190	V205	
5.000 g	V191	V206	
10.000 g	V192	V207	



V215



V218



V217

V215 Digital thermometer, range -50 ° to 250 ° C. With 200 mm rod to puncture. Resolution 0.1 ° C to -19.9 ° C to 150 ° C., rest 1 ° C.

V216 Digital thermometer, range -40 to 200 ° C. With 180 mm rod to puncture. Movable head. Resolution 0.1 ° C to -19.9 ° C to 150 ° C., rest 1 ° C.

V217 Digital thermometer, range -50 ° to 150 ° C. With 110 mm probe to puncture.

V218 Digital thermometer, for temperatures from -50 ° to +1000 ° C. Possibility of connecting 2 sensors, resolution 0.1 ° C. up 199.9 ° C, remaining 1 ° C.

Accessories:

V219 Probe immersion / penetration

V220 Surface Probe

V218.01 Protective cover



ELECTRONIC DATA LOGGER THERMOHYGROGRAPHS

V225 This is a "data logger" with integrated sensor and memory capacity to store up to 20,000 measured values. Built in rugged anodized aluminum housing.

Windows Software. Comes complete with integrated probe humidity / temperature, battery, magnet, instruction manual and calibration.

Humidity range: 5-100% RH

Temperature range: -10 +50 ° C.

Accuracy: ± 3% RH / ± 0.6 ° C.

Resolution: 0.1 ° RH / 0.1 ° C.

Dimensions: 131 x 68 x 72 mm.

Lithium

Weight: 320 g.

Accessories:

V225.05 Comfort software interface.

V225.01 Carrying case

V436 Digital Timer on-table with five program channels



GLASS AND PORCELAIN

We have all kinds of glassware and porcelain laboratory

Transparent cylinders glass spouted, hexagonal base ISO 4788, DIN 12680-1

Code	Cap. ml
V6740	5
V6741	10
V6742	25
V6743	50
V6744	100
V6745	250
V6746	500
V6747	1000
V6748	2000



Beakers glass, graduated with peak high as ISO 3819, DIN 12 331

Code	Cap. ml
V6780	25
V6781	50
V6782	100
V6783	150
V6784	250
V6785	400
V6786	600
V6787	800
V6788	1000
V6789	2000
V6790	3000



Code	Cap. ml
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Beakers glass, graduated
with spout, squat shape ISO 3819,
DIN 12 331

V6799	10
V6800	25
V6801	50
V6802	100
V6803	150
V6804	250
V6805	400
V6806	600
V6807	800
V6808	1000
V6809	2000
V6810	3000
V6811	5000



Graduated impurities test bottles
ISO-GL-45 with stoppered for autoclave,
blue ring ISO 4796, DIN 168

Code	Cap. ml
V7100	100
V7101	250
V7102	500
V7103	1000
V7104	2000
V7105	5000
V7106	10000
V7107	20000



Volumetric flasks, with polyethylene
Stopper. Standard:ISO 1042,
DIN 12664

Code	Cap. ml
V6358	10
V6359	25
V6360	50
V6361	100
V6362	250
V6363	500
V6364	1000
V6365	2000



Conical flasks, Erlenmeyer, graduates
wide neck

Code	Cap. ml
V6400	25
V6401	50
V6402	100
V6403	250
V6404	500
V6405	1000



Conical flasks, Erlenmeyer, graduates
Neck ISO 1773 standard

Code	Cap. ml
V6420	25
V6421	50
V6422	100
V6423	250
V6424	500
V6425	1000
V6426	2000
V6427	3000
V6428	5000



Filter flasks, glass, vacuum filtering
ISO 6556

Code	Cap. ml
V6480	250
V6481	500
V6482	1000
V6483	2000
V6485	5000
V6486	10000



Filter flasks, glass vacuum filtering

Code	Cap. ml	thread
V6490	250	29/32
V6491	500	29/32
V6492	1000	29/32
V6493	1000	45/40
V6494	2000	29/32
V6495	2000	45/40



Desiccators, cap threaded button

Code	Dimensions mm Ø
V6160	100
V6161	150
V6162	200
V6163	250
V6164	300



V-6160

Vacuum type desiccators with key
on the lid

Code	Dimensions mm Ø
V6180	100
V6181	150
V6182	200
V6183	250
V6184	300



V-6180



Porcelain perforated plate

Code	Dimensions mm Ø	Used in desiccator
V6200	90	100
V6201	140	150
V6202	190	200
V6203	240	250
V6204	290	300



Glass funnels, short branch
60°, ISO DIN 4798

Code	Dimensions mm
V6220	45
V6222	55
V6223	75
V6224	85
V6225	100
V6226	125
V6227	150
V6228	200
V6229	250
V6230	300



Watch Glass (Beaker cover)

Code	Dimensions Ø mm.
7041	40
7042	50
7043	60
7044	70
7045	80
7046	90
7047	100
7048	120
7049	150
7050	200
7051	250



Graduated pipettes, 1 stroke, qualicolor
class B, ISO 648

Code	Cap. ml
V6560	1
V6461	2
V6562	5
V6563	10
V6564	20
V6565	25
V6566	50
V6567	100



Graduated pipettes, 1 stroke, qualicolor
class A, ISO 648

V6560/A	1
V6461/A	2
V6562/A	5
V6563/A	10
V6564/A	20
V6565/A	25
V6566/A	50
V6567/A	100

Graduted pipettes, 2 strok, qualicor class B, ISO 648

Code	Cap. ml
V6580	1
V6481	2
V6582	5
V6583	10
V6584	20
V6585	25
V6586	50
V6587	100

Graduted pipettes, 2 strok, qualicor class A, ISO 648

V6580/A	1
V6481/A	2
V6582/A	5
V6583/A	10
V6584/A	20
V6585/A	25
V6586/A	50
V6587/A	100



Rubber pears for pipetting

Code	V6559
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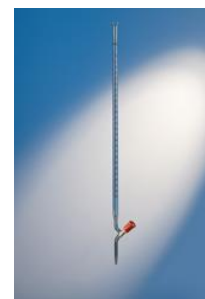


Burettes grad. Glass, with stopcock without fringe ISO 835

Code	Cap. ml
V7550	10
V7551	25
V7552	50
V7553	100

Burette grad. Glass, with stopcock With fringe

V7555	10
V7556	25
V7557	50
V7558	100



Code	Cap. ml
V5560	10
V5561	25
V5562	50
V5563	100

V5570	10
V5571	25
V5572	50
V5573	100

V5580	10
V5581	25
V5582	50
V5583	100





Gay-Lussac pycnometers
For liquid

Renault pycnometers
for solids

Pycnometers for solids and liquids
stoppered polythene



Weighing bottle, glass, with inner cover

Code	Dimensions mm.
V2320	32 x 40
V2325	40 x 25
V2330	44 x 40
V2340	50 x 40
V2350	60 x 40

Weighing bottle , glass, with external cover

V2360	22 x 35
V2370	28 x 35
V2380	44 x 40
V2390	54 x 40



Mortar and pestle, porcelain
Standard: BS 1377:2 / ASTM D421

Code	Dimensions Ø mm.	Cap. ml
V8212/00	60 x 32	25
V8212/10	70 x 37	30
V8212/15	80 x 42	50
V8212/18	90 x 46	75
V8212/20	100 x 50	110
V8212/25	110 x 56	150
V8212/30	125 x 64	220
V8212/35	140 x 71	325
V8212/40	160 x 82	500
V8212/50	180 x 90	730
V8212/60	210 x 104	1135
V8212/70	250 x 127	2250
V8212/80	300 x 150	4300



Ref.	Dimensiones mm.	Cap. ml
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Porcelain crucibles
squat form

V8001/30	30 x 19	5
V8001/35	35 x 22	10
V8001/40	40 x 25	17
V8001/45	45 x 28	21
V8001/50	50 x 32	34



Porcelain crucibles
half form

V8002/35	35 x 28	12
V8002/40	40 x 32	20
V8002/45	45 x 36	30
V8002/50	50 x 40	45
V8002/60	60 x 48	80
V8002/70	70 x 56	120



Porcelain crucibles
high form

V8003/05	30 x 38	15
V8003/35	35 x 44	26
V8003/40	40 x 50	35
V8003/45	45 x 56	50
V8003/50	50 x 62	72



Porcelain lids for Crucibles

V8000/30	30 x 34
V8000/35	35 x 39
V8000/40	40 x 44
V8000/45	45 x 49
V8000/50	50 x 54
V8000/60	60 x 64
V8000/70	70 x 74



Evaporating dishes, porcelain,
with sput

Ref.	Dimensiones mm.	Cap. ml
V274/10	55 x 22	18
V274/15	70 x 30	45
V274/20	85 x 32	75
V274/30	97 x 40	120
V274/40	110 x 50	200
V274/50	125 x 52	275
V274/60	140 x 55	375
V274/70	150 x 63	475
V274/80	167 x 68	660
V274/90	195 x 75	1000
V274/95	250 x 105	2500





ASTM ACCURACY THERMOMETERS

Code	ASTM	Range °C	Div.	Immer. mm	Code	ASTM	Range °C	Div.	Immer. mm
V9101	1C	-20 +150	1°	76	V9164	64C	+25 +55	0,1	Total
V9102	2C	-5 +300	1	76	V9165	65C	+50 +80	0,1	Total
V9103	3C	-5 +400	1	76	V9166	66C	+75 +105	0,1	Total
V9105	5C	-38 +50	1	108	V9167	67C	+95 +155	0,2	Total
V9106	6C	-80 +20	1	76	V9168	68C	+145 +205	0,2	Total
V9107	7C	-2 +300	1	Total	V9169	69C	+195 +305	0,5	Total
V9108	8C	-2 +400	1	Total	V9170	70C	+295 +405	0,5	Total
V9109	9C	-5 +110	0,5	57	V9171	71C	-37 +21	0,5	76
V9110	10C	+90 +370	2	57	V9172	72C	-19,4 -16,6	0,05	Total
V9111	11C	+6 +400	2	25	V9173	73C	-41,4 -38,6	0,05	Total
V9112	12C	-20 +102	0,2	Total	V9174	74C	-55,4 -52,6	0,05	Total
V9113	13C	+155 +170	0,5	Total	V9182	82C	-15 +105	1	30
V9114	14C	038 +82	0,1	79	V9183	83C	+15 +70	1	40
V9115	15C	-2 +80	0,2	Total	V9184	84C	+25 +80	1	249
V9116	16C	+30 +200	0,5	Total	V9185	85C	+40 +150	1	181
V9117	17C	+19 +27	0,1	Total	V9186	86C	+95 +175	1	35
V9118	18C	+34 +42	0,1	Total	V9187	87C	+150 +205	1	40
V9119	19C	+49 +57	0,1	Total	V9188	88C	+10 +200	1	57
V9120	20C	+57 +65	0,1	Total	V9189	89C	-20 +10	0,1	76
V9121	21C	+79 +87	0,1	Total	V9190	90C	0 +30	0,1	76
V9122	22C	+95 +103	0,1	Total	V9191	91C	+20 +50	0,1	76
V9123	23C	+18 +28	0,2	90	V9192	92C	+40 +70	0,1	76
V9124	24C	+39 +54	0,2	90	V9193	93C	+60 +90	0,1	76
V9125	25C	+95 +105	0,2	90	V9194	94C	+80 +110	0,1	76
V9126	26C	+130 +140	0,1	Total	V9195	95C	+100 +130	0,1	76
V9127	27C	+147 +182	0,5	76	V9196	96C	+120 +150	0,1	76
V9128	28C	+36,5 +39,4	0,05	Total	V9197	97C	-18 +49	0,5	Total
V9129	29C	+52,6 +55,4	0,05	Total	V9198	98C	+16 +82	0,5	Total
V9133	33C	-38 +42	0,2	50	V9199	99C	-48,4 +4,6	0,2	35
V9134	34C	+25 +105	0,2	50	V9200	100C	+145 +205	0,2	76
V9135	35C	+90 0170	0,2	50	V9201	101C	+195 +305	0,5	76
V9136	36C	-2 +68	0,2	45	V9202	102C	+123 +177	0,2	100
V9137	37C	-2 +52	0,2	100	V9203	103C	+148 +202	0,2	100
V9138	38C	+24 +78	0,2	100	V9204	104C	+173 +227	0,2	100
V9139	39C	+48 +102	0,2	100	V9205	105C	+198 +252	0,2	100
V9140	40C	+72 +126	0,2	100	V9206	106C	+223 +227	0,2	100
V9141	41c	+98 +152	0,2	100	V9207	107C	+248 +302	0,2	100
V9142	42C	+95 +255	0,5	100	V9210	110C	-133,5 +136,4	0,05	Total
V9143	43C	-51,6 -34	0,1	Total	V9211	111C	+170 +250	0,2	100
V9144	44C	+18,6 +21,4	0,05	Total	V9212	112C	+4 +6	0,02	Total
V9145	45C	+23,6 +26,4	0,05	Total	V9213	113C	-1 +175	0,5	Total
V9146	46C	+48,6 +51,4	0,05	Total	V9214	114C	-80 +20	0,5	Total
V9147	47C	+58,6 +61,4	0,05	Total	V9216	116C	+18,9 +25,1	0,01	Total
V9148	48C	+80,6 +83,4	0,05	Total	V9217	117C	+23,9 +30,1	0,01	Total
V9149	49C	+20 +70	0,2	65	V9218	118C	+28,6 +31,4	0,05	Total
V9150	50C	+12,2 -38,3	0,05	Total	V9219	119C	-38 -30	0,1	100
V9152	52C	-10 +5	0,1	Total	V9220	120C	+38,6 +41,4	0,05	Total
V9153	53C	+0,6 +10,4	0,1	Total	V9221	121C	+98,5 +101,4	0,05	Total
V9154	54C	+20 +100,6	0,2	Total	V9222	122C	-45 -35	0,1	Total
V9156	56C	+19 +35	0,02	Total	V9223	123C	-35 -25	0,1	Total
V9157	57C	-20 +50	0,5	57	V9224	124C	-25 -15	0,1	Total
V9158	58C	-34 +49	0,5	Total	V9225	125C	-15 +5	0,1	Total
V9159	59C	-18 +82	0,5	Total	V9226	126C	-27 +24,6	0,05	Total
V9160	60C	+77 +260	1	Total	V9227	127C	-21,4 -18,6	0,05	Total
V9161	61C	+32 +127	0,2	79	V9228	128C	-1,4 +94,4	0,05	Total
V9162	62C	-38 +2	0,1	Total	V9229	129C	+91,6 +94,4	0,05	Total
V9163	63C	-8 +32	0,1	Total	V9230	130C	-7 +105	0,5	Total
					V9232	132C	+148,6 +151,4	0,05	Total

GLASS STEM THERMOMETERS
GRADUATE, MERCURY SISTEMAGLASS STEM THERMOMETERS
GRADUATE, MERCURY SISTEMA

USE GENERAL, WHITE STRIPE

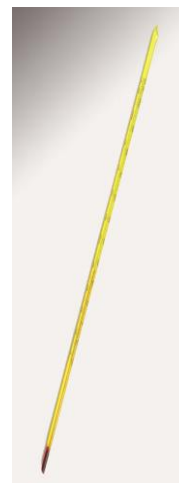
Code	Range °C	Div.	length
V9301	-10 +60	1°	200 mm
V9302	-10 +110	1°	300 mm
V9303	-10 +150	1°	300 mm
V9304	-10 +200	1°	300 mm
V9305	-10 +250	1°	300 mm
V9306	-10 +300	1°	300 mm
V9307	-10 +360	2°	300 mm

USE GENERAL, YELLOW STRIPE

Code	Range °C	Div.	Length
V9310	-10 +60	1°	200 mm
V9311	-10 +110	1°	300 mm
V9312	-10 +150	1°	300 mm
V9313	-10 +200	1°	300 mm
V9314	-10 +250	1°	300 mm
V9315	-10 +300	1°	300 mm
V9316	-10 +360	2°	300 mm

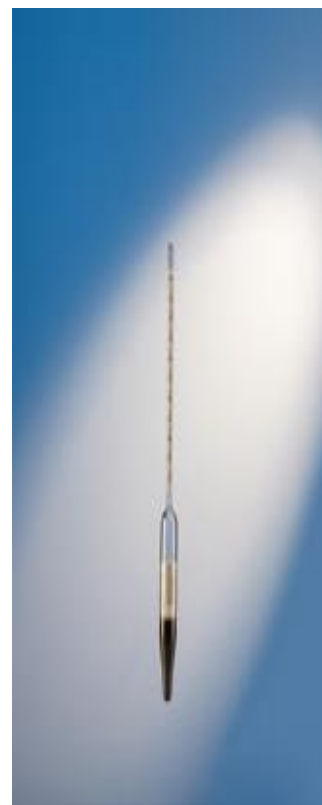
OPAL SCALE THERMOMETERS GRADUATE, GENERAL USE

Code	Range °C	Div.	Length
V9320	-10 +35	0,5°	260 mm
V9321	-10 + 60	1°	260 mm
V9322	-10 +110	1°	260 mm
V9323	-10 +150	1°	260 mm
V9324	-10 +200	1°	260 mm
V9325	-10 +250	1°	260 mm
V9326	-10 +300	1°	260 mm
V9327	-10 +360	1°	260 mm
V9328	-10 +420	1°	260 mm



HYDROMETER ACCURACY, STANDARD DIN 12791

Code	Range 0,050 gr/cm³	°C	Length mm
V9350	0,600 – 0,650 x 0,0005	20	335
V9351	0,650 – 0,700 x 0,0005	20	335
V9352	0,700 – 0,750 x 0,0005	20	335
V9353	0,750 – 0,800 x 0,0005	20	335
V9354	0,800 – 0,850 x 0,0005	20	335
V9355	0,850 – 0,900 x 0,0005	20	335
V9356	0,900 – 0,950 x 0,0005	20	335
V9357	0,950 – 1,000 x 0,0005	20	335
V9358	1,000 – 1,050 x 0,0005	20	335
V9359	1,050 – 1,100 x 0,0005	20	335
V9360	1,100 – 1,150 x 0,0005	20	335
V9361	1,150 – 1,200 x 0,0005	20	335
V9362	1,200 – 1,250 x 0,0005	20	335
V9363	1,250 – 1,300 x 0,0005	20	335
V9364	1,300 – 1,350 x 0,0005	20	335
V9365	1,350 – 1,400 x 0,0005	20	335
V9366	1,400 – 1,450 x 0,0005	20	335
V9367	1,450 – 1,500 x 0,0005	20	335
V9368	1,500 – 1,550 x 0,0005	20	335
V9369	1,550 – 1,600 x 0,0005	20	335
V9370	1,600 – 1,650 x 0,0005	20	335
V9371	1,650 – 1,700 x 0,0005	20	335
V9372	1,700 – 1,750 x 0,0005	20	335
V9373	1,750 – 1,800 x 0,0005	20	335
V9374	1,800 – 1,850 x 0,0005	20	335
V9375	1,850 – 1,900 x 0,0005	20	335
V9376	1,900 – 1,950 x 0,0005	20	335
V9377	1,950 – 2,000 x 0,0005	20	335





Meker burner with gas regulator and air, the tube outer diameter at its upper end 22 mm and 175 mm. total height

V236 For butane / propane.

V237 For natural gas.

V238 Lighter Meker external diameter 27 mm and 185 mm total height.

V239 For butane / propane.

V240 For natural gas.



Bunsen burner universal, with gas and air regulator. Outer diameter of tube 11 mm. Total height 140 mm.

V243 For butane / propane.

V244 For natural gas.

V245 Burner Butane Cartridge

V246 Butane cartridge



V245

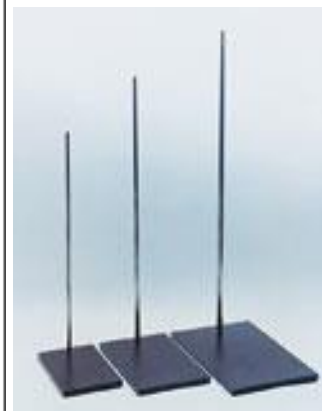


V242

V250 Support double T. Rod in stainless steel AISI 304 Ø20 x 800 mm high to support weights up to 20 kg to about 300 mm. base. Great stability. Useful for stirring support. Weight 7 kg.

Metal stand, base Standard DIN 12892, rod in stainless steel AISI 304.

Code	Rod dimensions Ø x H mm.	Plate size Length x Width
V252	8 x 500	200 x 125
V253	10 x 600	250 x 160
V254	12 x 700	315 x 200
V255	12 x 800	315 x 200



V260 Burette clamp for nut and pipe
Made in chromed metal and pronged PVC for diameters from 7-25 mm.



V264 Burette Clamp and refrigerants.
Made in chromed metal and pronged PVC for diameter from 12 to 45 mm.



V270 Mortar and pestle, stainless, dia. 130 x 65 mm.
V271 Mortar and pestle, stainless, dia. 150 x 75 mm..

Agate mortar with pestle, made with precious stones crystal (SiO₂). High resistance to chemical and physical agents (except hydrofluoric acid). Density: 2.6 g / cm³. **V274** Mortero de Ágata de 70 ml capacidad

V275 Agate mortar of 140 ml capacity



Tripod stand galvanized steel flat ring

Code	External ring Ø	Total height mm
V280	80	210
V281	100	210
V282	120	210



Spatula flexible, stainless steel

Code	Long blademm.	Blade width mm.
V285	100	22
V286	150	22
V287	200	25
V288	240	25



V290 Hoffman screw clamp, max opening 15 mm

V291 Mohr clamp.



MIXING BOWLS, STAINLESS STEEL

V292 Dia. 85 x45 mmh. 200 ml. Capacity

V293 Dia. 105 x50 mmh. 300 ml. Capacity

V294 Dia. 125 x55 mmh. 400 ml. Capacity

V270 Mortar and pestle, stainless, dia. 130 x 65 mm.

V295 Digital cernier caliper 0-150 mm capacity and 0,01 mm. resolution. Mouth 40 mm. with digital readout. Constructed according DIN 862, readings in mm and inches. Battery supply. Supplied in case.

V296 Digital vernier caliper 0-200 mm capacity and 0,01 mm. resolution. Mouth 40 mm. with digital readout. Constructed according DIN 862, read in mm and inches. Battery supply. Supplied in case.





BALL MILL

V320 Apparatus for moist grinding and dry preparation for tapping of the balls against the sample to describe a semi-circular orbit by entrainment in the cylinder engine jug. Used in laboratories of public works, paint factories, mining, ceramics, grinding of raw materials for the manufacture of pharmaceutical products and foodstuffs. Jugs isolated prevent sample contamination.

Cylinders Heavy-duty solid steel interior and exterior coated strong and flexible to permit rotation the jars without damaging them. Metal external heavy duty treatment. Illuminated pushbutton on / off. Backstop. The running time is also adjustable to 99 hours, or hold position.

Dimensions: 1250 x 490 x 340 mm.

Power supply: 220 V, 50 Hz



V321 1 liter Jug stainless steel.

V322 3 liter Jug stainless steel.

V323 5 liter Jug stainless steel.

V324 11 liter Jug stainless steel..

V325 15 liter Jug stainless steel.

Vacuum pump with vacuum and regulation

Magnetics ventilated motor, provides an extremely silent operation without vibration or oil contamination to run dry with EPDM membrane, and head PPS / fiberglass PRIMEF, resistant to acids and solvents. It has stainless steel nozzle. Vacuum and pressure, and are therefore usable as a compressor.

Accessories:

V334 Time controller (timer) digital

V335 Digital vacuum controller



V337 Temperature controller. Range ambient from 99.9 ° C

VACUUM PUMP

Code	Vacuum mm. Hg	Presion Bar	Volume L/min	Vacuum gauge	Regulator	Dimensions cm.	Weight Kg.
V326	620	2	6	Yes	Yes	24 x 27 x 10	2,8
V327	630	2	15			24 x 27 x 10	3,8
V328	750	2	12			24 x 27 x 10	3,8
V329	750	2	30			26 x 31 x 13	5,7
V330	750	2	50		26 x 31 x 13	7,1	
V331	730	2	30		NO	26 x 31 x 13	6,1

MUFFLE FURNACE HIGH TEMPERATURE

Muffle furnace up to 1800 ° C. PAD execution allows for the control and automatic regulation of the temperature by means of a pyrometer connected to the digital-type automatic regulator.

This model is designed with the most advanced technical fiber types and elements calorification insulating current market, allowing you to get a very high temperature scale in remarkably short time. Fiber plates which form the sides and roof of the chamber are supported and are anchored on a dual chamber ceramic refractory plates of the same type as the sill plate.

Uniformity $\pm 5\%$. Stability $\pm 2^\circ \text{C}$.

External insulation for double chamber with forced air circulation.

Scheduler ramps 4 programs 15 segments.

Automatic digital pyrometer. microprocessor, ↗



Alarm, PID parameters. Nonvolatile memory.

Manufactured under EEC standards.

Security alarm on temperature.

CODE	Interior Dimensions mm H x W x D	External dimensions mm H x W x D	Maximum temperature ° C	Power Kw	Power supply
V340	100 x 140 x 154	600 x 550 x 600	1350	4	220
V341	140 x 170 x 300	700 x 700 x 800	1375	6	220
V342	140 x 170 x 300	700 x 700 x 800	1450	7	220
V343	120 x 175 x 250	650 x 950 x 700	1450	6	220
V344	100 x 130 x 250	650 x 950 x 700	1525	7	220
V345	100 x 130 x 250	650 x 950 x 700	1650	6	220
V346	250 x 250 x 260	650 x 1000 x 800	1650	10	220
V347	150 x 150 x 150	800 x 550 x 600	1650	5	220
V348	150 x 150 x 150	800 x 550 x 600	1700	6	220
V349	250 x 250 x 260	1000 x 600 x 700	1700	10	220
V350	150 x 150 x 150	800 x 550 x 600	1800	6	220
V351	250 x 250 x 260	1000 x 600 x 700	1800	10	220
V352	400 x 400 x 400	2100 x 850 x 1000	1600-1700-1800	30	380III
V353	450 x 450 x 450	2150 x 1000 x 1200	1600-1700-1800	40	380III
V354	600 x 600 x 600	2100 x 900 x 1400	1600-1700-1800	50	380 III

MUFFLE FURNACE AT 1200 ° C.

Muffle furnace up to 1200 ° C. allows for the control and automatic regulation of the temperature by a pyrometer connected to the digital-type automatic regulator.

Microprocessor control system for programming functions and temperature ramps at different times,

Manufactured under EEC standards.

Safety switch

Security alarm.

Type K Thermocouple



1.200° C

Code	V355	V356	V357
Chamber Interior:	100 mm	150 mm	200 mm
H x W x D	150 mm	200 mm	280 mm
	200 mm.	300 mm	400 mm
External Dimensions:	505 mm	700 mm	750 mm
H x W x D	460 mm	550 mm	600 mm
	560 mm	800 mm	900 mm



Power supply

220 V

220 V

220 V

V360 Dial gauge stroke 12,5 mm, div. 0,01 mm
V361 Digital Comparator 0 to 30 mm capacity and resolution 0.01 mm. with data output
V362 Digital Comparator 0 to 50 mm capacity and resolution 0.01 mm. with data output



V363 Dial gauge stroke 5 mm, div. 0,01 mm
V364 Dial gauge stroke 10 mm, div. 0,01 mm.
V365 Dial gauge stroke 25 mm, div. 0,01 mm
V366 Dial gauge stroke 30 mm, div. 0,01 mm
V367 Dial gauge stroke 50 mm, div. 0,01 mm

V370 Magnetic support articulated
Magnetic Base prismatic vertical tower Ø 12 x 170 mm. cross tower Ø 10 x 135 mm. and approximating device. Supplied without dial.
V371 Magnetic support articulated
Magnetic Base prismatic vertical turret Ø 11 x 195 mm. turret traversal of Ø 7 x 200 mm. and approximating device. Supplied without dial.



V380 Antivibration table for scales
Designed fundamentally to counteract vibrations caused by different systems, as well the mechanical or sound.
Postforming laminate worktop constructed by its front and sides, PVC edges 3 mm. support base for balance in polishing granite plate 450x500 mm.
Antivibration system for outer cabinet protected to prevent involuntary movements within the weighing area.
These tables weighing ensure the possibility to oscillate without the dial even occasionally adverse excessively.
Dimensions: 950 x 800 x 900 mm (W x D x H)



V392 Vacuum drying oven for 50 l. Capacity

FEATURES

Adjustable temperatures: from 35° C to 200° C.
Temperature homogeneity: $\pm 4^{\circ}$ C
Temperature stability: $\pm 1^{\circ}$ C
Temperature display accuracy: $\pm 2^{\circ}$ C
Maximum admissible vacuum: 0,01 mbar.
Safety according to: EN-61010-1, EN-61010-2-010.
Double safety glass against implosions according to regulations
Safety thermostat: class 2 incorporated from factory.
Time and temperature controller: digital by microprocessor.
Temperature probe: Pt 100 Class A
Epoxy resin oven painted external case. Interior made in polished stainless steel AISI 304.
Supplied with: Two perforated shelves made in aluminium with galvanic treatment.

Accessories:

V393 Vacuum pump for Vacuterm
V394 Connection Kit PC via RS232



Safety cabinet for acids and bases

COMMON FEATURES

Constructed with double wall steel 18 mm with chamber of 3.81 cm in both the top, bottom, sides and doors.

Equipped with lateral double ventilation system of 5.08 cm diameter, which incorporates a deflector hole in each fire (flame arrester).

By means of a temperature sensor, in case of fire, at 73 ° C and are closed automatically and thus the leveling feet as double aeration openings are adapted for stopping the flames.

Closing doors with mechanism three anchor points provided and a small device to keep the door open and lock.

Shelves with anchor variable and adjustable feet for proper leveling.

Surface final finish of the inner and outer chemically resistant.



Code	Capacity liters	Type doors	Shelf Number	Al / W / F (Ext.) cm	Al / W / F (Int.) cm	Weight Kg
V385	200	1 auto-closing	1	112 x 59 x 46	104 x 51 x 38	68
V386	403	2 auto-closing	1	112 x 110 x 46	104 x 102 x 38	116
V387	403	1 sliding self-closing	1	112 x 110 x 46	104 x 102 x 38	114
V388	608	1 auto-closing	2	165 x 110 x 46	157 x 102 x 38	159
V389	608	1 sliding self-closing	2	165 x 110 x 46	157 x 102 x 38	153
V390	813	2 self-closing	2	165 x 80 x 0	157 x 72 x 72	164
V391	813	1 sliding self-closing	2	165 x 80 x 0	157 x 72 x 72	161

Drying oven with natural convection, Adjustable temperature from 40 ° C to 250 ° C. Temperature homogeneity: ± 2%

Safety according to EN 61010-1, EN-61010-2-010

Outdoor furniture built in oven painted with epoxy. Inside tray, double body and counter stainless steel AISI 304. silicone gasket. Adjustable aerator

Regulating Hydraulic thermostat temperature. Analog thermometer, the internal temperature reader, electric resistance heating chamber mounted independently, which allows optimum temperature stability.

Supplied complete with two stainless steel perforated trays.



Code	Capacity	Inner dimensions in mm. H x W x D	Exterior dimensions in mm. H x W x D	Power W	Weight Kg
V395	40	400 x 350 x 300	710 x 540 x 450	900	40
V396	50	330 x 470 x 330	520 x 790 x 470	900	45
V397	90	500 x 450 x 400	810 x 640 x 550	1.200	54
V398	150	500 x 600 x 500	690 x 920 x 640	1.500	70



Drying oven, forced air circulation. Adjustable temperature from ambient +5 ° C to 250 ° C.

Temperature homogeneity: $\pm 1.5\%$

Temperature stability: $\pm 0.1\%$

Safety according to EN 61010-1, EN-61010-2-010

Outdoor furniture built in oven painted with epoxy. Inside tray, double body and counter stainless steel. AISI 304.

Silicone gasket. Adjustable aeration device.

Temperature control by electronic digital microprocessor controller with PID action. Keyboard and screen microprocessor with IP-54 protection

Supplied complete with two stainless steel perforated trays.



Code	Capacity	Inner dimensions in mm. H x W x D	Exterior dimensions in mm. H x W x D	Power W
V400	43	330 x 470 x 280	520 x 790 x 470	1.000
V401	78	500 x 450 x 350	810 x 640 x 550	1.000
V402	135	500 x 600 x 450	690 x 920 x 640	1.000
V403	250	800 x 600 x 520	1100 x 750 x 760	3.000

Universal oven, with forced air circulation, 250 l capacity. Adjustable temperature from ambient +5 ° C. Up to 250 ° C.

Painted external baked epoxy. Inside tray, double chamber and contra-door stainless steel. AISI 304. Silicone gasket. Adjustable aeration device.

Temperature control by electronic microprocessor controller with digital readout selection and temperature.

Time programmable temperature maintenance from OFF to 99.50 hours.

Temperature sensor PT-100

Temperature stability $\pm 0.1\%$.

Electrical resistance heating, armored stainless steel.

Comes complete with two stainless steel perforated trays with anti-rollover system.



Code	Capacity	Inner dimensions in mm. H x W x D	Exterior dimensions in mm. H x W x D	Power W	Weight Kg
V405	425	1.000 x 800 x 530	1.370 x 950 x 770	3.000	120
V406	635	1.200 x 1.000 x 530	1.570 x 1.150 x 770	3.000	140



SCANNING SPECTROPHOTOMETER UV / VIS MODEL 8001PC

V410 Fully automatic spectrophotometer to measure absorbance, transmittance and concentration of samples. Scannings performed wavelength, kinetics and function of concentration calculations. The analysis data, processes and spectra can be stored with the software of the spectrophotometer. Includes software that allows the use of the instrument via computer.

A large LCD display with adjustable lighting and membrane keyboard ensures comfortable use and as obtaining spectra displayed.

Can be performed scannings, regressions, kinetic spectra manipulation such as additions, subtractions, zoom, identify maximum and rounding and minimum peaks on its LCD.

Permanent memory for 60 data sets.

The additional program includes allows command via a PC, data download

introducing a number of standard curves

unlimited calculations DNA - RNA, Protein and Acid

Nucleic A lower bandwidth of 2 nm. and the diffractor of beam high resolution provide a structure

above. Scanning speed selectable between 100 and 5000 nm / min are achieved rapid and accurate analysis.

It is supplied with the instrument cell holder of 10 mm light path, cuvette game paired 10 mm quartz Windows program and software for the implementation of water analysis kits. Printer port and RS 232.

SPECIFICATIONS

FEATURES PARAMETERS

Wave Length range 190 - 1100 nm Base line ± 0.002 A

L increase. Diffused light wave 0.1 nm $<0.05\%$ at 340 nm/220 nm (ASTM)

Accuracy ± 1 nm wave length sample cuvette Chamber 10-100 mm step light

Reproducibility ± 0.2 nm wavelength

Photometric Accuracy ± 0.005 A a1, ASTM 000A lower bandwidth of 2 nm.

Diffraction beam monochromator high resolution

Photometric range -0.300 to 3, 000A, 0-150% T Silicon Photodiode Detectors 2

A kinetic wavelength deuterium light source UV lamp

Stability 0.0003 to light (500nm in 1h) Lamp. halogen Vis

Interface RS232, printer (serial, par) (auto switch selectable)

Scanning speed of 100-5000 nm / min Screen / Keyboard lit LCD, 320x240 mm

Scanning range 190 -1100 nm

Dimensions: 50x43x22 cm (W x L x H)

Power supply: 110 to 230V, 50 / 60Hz.

Weight: 18 kg

*** We have other models Spectrophotometers, colorimeter, photometers, etc.. consult information**



LABORATORY FURNITURE

Laboratory Furniture research and development.

Made of steel frame and covered by different types of countertops and stainless steel, polypropylene, Gres in tile, hardwood, etc. ..

Countertops are always one of the most important components in the project design and furniture a laboratory.

The wisdom in their choice provided depending on the use to which they will devote gives durability and economy because of its resistance worktop. Request quotes.



Tables support structure in steel tube 30x30 mm protected section where they will under the same coupling different models of furniture, may be these with sockets or wheels. The easy removal of the modules under tables allows great cleaning zones. Request quotes.

V418 Emergency eyewash shower offering a practical decontamination chemical aggressions, water spray.



V419 Eyewash, made corrosion resistant plastic





GRUPO I&S

Index products	Page	Index products	Page
A			
Abrams cone	* 64	Basket metal Ø120x160 mm, 3.35 mm mesh	* 20
Abrasion disc Ø200 x 10 mm	* 23	Basket metal Ø200 x 200 mm with handle	* 20
Abrasive charge of 9, 21, 259 stainless steel balls.	* 24	Basket metal Ø250 x 250 mm with handle	* 20
Abrasive material, pack of 25 kg	* 74	Basket metal Ø65x80 mm, 0.15 mm mesh	* 20
Abrasive, pack of 25 kg To Böhme	* 24	Basket metal Ø95x120 mm, 1.18 mm mesh	* 20
Accelerated polishing of aggregates	* 24	Basket Stainless steel with 3 mm mesh	* 50
Accumulator	* 30	Basket with handle of Ø200x200 Mmh	* 15
Adapter Kit for sampling	* 128	Basket with stainless steel mesh	* 35
Adapters base	* 130	Baskets Ø95x120 mm metal, mesh 0.50 and 0.60 mm	* 20
Adapters for Hydraulic extractor	* 116	Bath Circulators	* 146
Additional weight of 700 g	* 90	Bath for oil tasting	* 154
Adhesion tester calibration	* 94	Bath Le Chatelier	* 92
Adjustable stirrer	* 95	BBR-Bending Beam Rheometer	* 60
Aerosols	* 107	Beaker 250 ml	* 118
Agate mortar with hand	* 170	Beakers, graduated	* 161
Agitator electronic 40-200 and 400-2000 rpm	* 21	Beckman thermometer centesimal	* 94
Air compressor	* 44	Benkelman Beam	* 58
Air entrainment meter 1 l. in mortars	* 94	Benkelman beam calibration device	* 58
Air entrainment meter 5 l.	* 68	Bernard calcimeter	* 21
Air entrainment meter 8 l.	* 68	Blade cross double	* 153
Alkali reactivity container	* 20	Blade cross double	* 21
Aluminum Hopper	* 64	Blade Impact	* 108
Aluminum rotary table for two	* 48	Blaine Permeability	* 87
Analytical scales digital	* 156	Blaine air permeability apparatus automatic	* 105
Analytical scales high Standard	* 157	Böhme abrasion	* 24
Annular surcharges	* 131	Böhme abrasion machine	* 74
Antivibration table for scales	* 173	Bottle 5 l plastic	* 139
Anvil taring	* 27	Bottle 5 l. With siphon cover	* 27
Anvil taring	* 83	Bottles thread ISO-GL-45 with lid and blue ring	* 161
Apparatus "LAMBE"	* 124	Bowl 4.9 l. capacity stainless steel.	* 35
Apparatus for determining the particle charge	* 56	Bowl Stainless steel, 5 l capacity	* 96
Apparatus for grinding	* 171	Box of 100 filter paper Marshall	* 40
Apparatus for impact resistance tile	* 67	Brass bristle brush	* 12
Apparatus for testing the impact strength BD 812	* 23	Brass cup	* 141
Apparatus for testing the impact strength of 18-574 NF	* 23	Brass Cups Ø 55 x 35 mm.	* 48
Apparatus for wet abrasive slurries	* 50	Brass ring	* 51
Apparent density of the aggregates	* 18	Brazilian test device in rocks Ø70 mm	* 20
Arena calibrated	* 139	Brazilian test device in rocks Ø90 mm	* 20
Aro security	* 153	Brick cappers	* 81
Aro with nuts	* 49	Brinell carbide ball penetrator	* 109
Asphalt Samples vacuum Drying	* 60	Brinell hardness Patterns	* 109
ASTM Thermometers	* 167	Bristle Round Brush Ø30 mm	* 12
Automatic Asphalt large mixer	* 41	Brookfield digital viscometer	* 55
Automatic consolidation apparatus (Oedometer)	* 147	BRTA Viscometer Standard	* 54
Automatic digital penetrometer	* 53	Bunsen burner	* 49
Automatic digital Ring Ball Apparatus	* 54	Bunsen burner	* 51
Automatic extraction of bitumen	* 38	Bunsen burner with regulator	* 169
Automatic grinding machine	* 75	Burette 50 ml graduated with key	* 153
Automatic programmable Proctor/CBR compactor	* 158	Burette 50 ml graduated with key	* 21
Automatic Ring and Ball Apparatus	* 51	Burette Clamp and coolants	* 169
Automatic shaker sand equivalent	* 121	Burette Clamp and tubes	* 169
Automatic shaker sand equivalent	* 27	Burette graduated 100 ml with a key	* 153
Autotec	* 86-87	Burette graduated 100 ml with a key	* 21
B			
Bag residue	* 39	Burettes graduated key glass	* 164
Ball mill	* 171	Burner Butane Cartridge	* 169
Ball valve 10 mm.	* 54	Butane cartridge	* 169
Ball valve 4 mm.	* 54	C	
Ball Valve to 2 mm	* 54	Cabinet for curing wet specimens	* 98
Bar holder Marshall compaction hammer	* 132	Cage for incinerating the sample	* 37
Barium standard solution	* 88	Calcium carbide	* 115
Baroid scale	* 89	Calcium solution standard	* 88
Baroid scale	* 141	Calibrated weights for durometer	* 110
Base control support	* 108	Calibration measurer cylinder	* 68
Base glass (EN, ASTM)	* 90	Calibration weights	* 159
Base perforated mould C.B.R.	* 131	Calibre flakiness index measuring	* 19
Base plate for mold	* 56	Caliper Huffman	* 170
Base without hole for mould proctor modified	* 130	Caliper King	* 91
		Calorimeter	* 91

Index products	Page	Index products	Page
Capsule stainless steel	* 170	Contraction Tester	* 19
Capsules Ø64x140 mm glass	* 48	Contraction tester	* 92
Carbon Black	* 75	Control Module 4 channel	* 59
Carrying case	* 72	Control Module 4 channel	* 138
Cartridge filter Ø58x170 mm (25 pcs.)	* 45	Control stone (25 Kg)	* 24
Cartridge filter Ø80x200 mm (25 pcs.)	* 45	Coring machine with petrol engine	* 57
Casagrande manual mechanical counter	* 117	Corundum grain 3 pack of 25 kg	* 23
Casagrande method manually operated	* 117	Covemeter	* 101
Casagrande motorized drive	* 117	Crack width gauge for walls	* 83
C.B.R. mould	* 131	Crack width gauges	* 83
C.B.R. mould Collar	* 131	Crystal 200x200 mm	* 97
CBR testing machine	* 160	Crystal 300 x 300 x 5 mm	* 117
CBR penetration piston	* 131	Crystallizer Ø60x35 mm glass	* 120
CBR penetration piston	* 133	Cubic moulds 100, 150 and 200 mm	* 70
Cell 20 cm ²	* 122	Cubic plastic moulds	* 70
Cell Membrane for air / water	* 127	Cup with orifice dia. 10 mm	* 54
Cell Ø4 “; Ø6”	* 139	Cup with orifice dia. 2 y 4 mm	* 54
Cell Stainless steel. With perforated disk	* 87	Cutting Attachment	* 124
Cement pattern (10 g)	* 87	Cutting Attachment 100x100 mm	* 124
Cement compression machine 500 KN	* 120	Cutting Box cubic specimens	* 124
Centering drill 50 mm	* 94	Cutting Box cubic specimens	* 124
Centering Guides	* 51	Cutting Box cylindrical specimens	* 124
Chapman bottle Enclosure	* 18	Cutting concrete specimens	* 74
Chapman Flask	* 18	Cutting concrete specimens up to 350 mm	* 26
Chapman Flask	* 114	Cutting concrete specimens up to 600 mm	* 26
Charpy pendulum	* 108	Cutting Disc Ø300 mm	* 26
Chisel	* 139	Cutting Disc Ø350 mm	* 26
Chromed cup	* 141	Cutting discs	* 74
Clamp Le Chatelier	* 92	Cutting hand winch (Vane test)	* 141
Clamps in V	* 106	Cutting ring	* 124
Cleaning device needle	* 90	Cuvettes adapter	* 145
Cleveland Electric	* 52	Cuzin Needle Ø 1.6 mm	* 22
Cohesion Tester	* 61	Cylinder graduated 100 ml	* 49
Cold / heat and humidity teams	* 71	Cylinder graduated 1000 ml	* 118
Color charts Soil kit	* 116	Cylindrical cappers specimens Counterboring	* 76
Combined PT100 Probe	* 72	Cylindrical measure Ø102x52 NF 18-574 mm	* 23
Comfort software interface	* 162	Cylindrical measure Ø6x52 812 mm BD	* 23
Comfort software interface	* 72	Cylindrical moulds, Ø50 70, 100, 15, 160 mm	* 70
Compacting rod Ø 16 x 600 mmh	* 64	Cyber-Plus	* 88-91
Compacting rod Ø 16 x 600 mmh.	* 70		
Compacting rod Ø95x300 mm	* 23	D	
Compaction rod Ø16x600 mm	* 18	Data Acquisition Module	* 122
Compactor automatic mortar	* 98	Data acquisition module 16 channel	* 126
Complete cooling system	* 51	Data acquisition module 16 channel	* 124
Compression Device 4x4x16 cm	* 100	Data acquisition module 16-conditioners	* 31
Compression machine 2000 KN motorized	* 92-93	Data acquisition module 8 channel	* 126
Compression machine 3000 KN motorized	* 95-96	Data Logger	* 72
Computer latest generation	* 31	Decision-manual sample team	* 114
Concrete penetrometer	* 67	Dehumidifier	* 98
Concrete test machines	* 77	Density "in situ" method of sand	* 139
Concrete test machines	* 78	Depth of penetration of water under pressure	* 76
Concrete test machines	* 79	Desiccators porcelain discs	* 163
Concrete test machines	* 80	Desiccators, cap screw button	* 163
Conical mold, funnel and tamper, set	* 20	Desktop refrigeration equipment	* 45
Conical Mould	* 90	Desviometer 500 mm	* 93
Conical Mould	* 91	Determination linear shrinkage	* 119
Connecting pipe	* 36	Determination of drying shrinkage	* 19
Consistency test probe	* 90	Determination of Moisture Content	* 115
Consistometer Vebe	* 65	Determination of plastic limit	* 120
Consolidated Undrained Test CU	* 125	Determination of sand equivalent	* 27
Constant pressure system oil / water	* 30	Determine C.B.R. index	* 131
Contact tip	* 93	Device cylindrical specimens fixing bracket	* 28
Concrete flwxural machine 150 KN	* 98	Device for blocks of different sizes	* 28
Container as "L"	* 65	Device for blocks of different sizes	* 75
Continuous flow filterless centrifuge	* 35	Device for Electrowelded Mesh	* 105
		Device for flexural prisms	* 81

Index products	Page	Index products	Page
Device for flexural test curbs	* 81	E	
Deive for flexural tests	* 97	Edometros support	* 122
Device specimens cylindrical fixing bracket	* 75	Electric aspirator	* 15
Dewar	* 94	Electric corer probe	* 57
Dial gauge analog	* 173	Electric corer probe	* 74
Dial gauge analog 10 x 0.01 mm	* 108	Electric heater of Paraffin	* 94
Dial gauge analog 10 x 0.01 mm	* 131	Electric heater Sulfur	* 75
Dial gauge analog 10 x 0.01 mm.	* 42	Electric heating mantle	* 38
Dial gauge analog 10 x 0.01 mm.	* 122	Electronic extensometer for tensile	* 131
Dial gauge analog 10x0, 01 mm.	* 133	Electrical Safety System	* 108
Dial gauge digital 0 to 12.5 mm	* 59	Electro glass body	* 116
Diamond Crowns	* 57	Electro stainless steel	* 116
Diamond Crowns	* 74	Electromagnetic Sieve hasta315 Ø200 mm	* 14
Diamond disc. Ø 600 mm	* 26	Electromagnetic Sieve Ø200 to 400 mm	* 14
Diamond polishing industry (8 pieces)	* 28	Electromechanical machine twin screw	* 136
Diamond polishing Sector	* 75	Electromagnetic Sieve for Ø200 and 203 mm	* 13
Digital Beckman Thermometer	* 94	Electronic Data Logger Thermohygrographs	* 159
Digital Caliper	* 170	Electronic Data Logger Thermohygrographs	* 72
Digital Caliper King	* 91	Electronic magnetic stirrers	* 154
Digital comparator 0-13 mm	* 137	Electronic microprocessor thermostatic bath	* 46
Digital Comparator 0-30 mm	* 59	Electronic Tester adhesion	* 94
Digital Comparator 0-30 mm	* 137	Electronic Thermostatic Bath	* 91
Digital comparator 12.5 mm x 0.001 mm	* 19	Eley Voluminometro	* 140
Digital comparator 12.5 mm x 0.001 mm	* 92	Emergency eyewash shower	* 177
Digital Comparator 12.5 x 0.01 mm	* 42	Emery grains (25 Kg)	* 24
Digital comparator 5 mm x 0.001 mm	* 19	Emery powder (25 kg)	* 24
Digital comparator 5 mm x 0.001 mm	* 92	Engler flask test	* 55
Digital Comparators	* 173	Engler viscometer	* 55
Digital electronic mixer 200-2000 rpm	* 118	Equipment pressure Hoek cells	* 30
Digital electronic scales	* 155	Equipment calibration load	* 44
Digital electronic scales	* 157	Equipment for determining the bulk density of cement	* 88
Digital gasuge of 10 x 0.01 mm	* 122	Equipment for determining the cationic emulsions	* 47
Digital magnetic stirrers	* 153	Equipment for determining the consistency of mortar	* 92
Digital precision scales	* 157	Equipment for determining the fineness of cement	* 87
Digital stirrer, range 40-400 and 200-2000 rpm	* 153	Equipment for distillation of bitumens	* 49
Digital Thermostatic Baths	* 148	Equipment to compact the filler	* 19
Digital Timer	* 171	Equipment to determine fly ash	* 87
Digitec	* 86-87	Equipment to determine the crush resistance of less than 9.5 mm	* 23
Direct Shear Machine	* 124	Equipment to determine the crush strength greater than 9.5 mm	* 23
Disc of aluminum	* 94	equipment to determine the equivalent sand	* 27
Disc spacer	* 131	Equipment to determine the equivalent sand	* 121
Disco extractor with plunger	* 42	Equipment to locate metal bars	* 84
Double brushing with brass bristles and nylon	* 12	Equipment to simulate aging "in situ"	* 52
Double locking nut	* 153	Equipment workability period	* 89
Double locking nut	* 21	Equipmament for determining residue	* 105
Drain cock	* 145	Erlenmeyer flasks graduates, wide neck	* 152
Dropping ball apparatus	* 106	Erlenmeyer flasks, graduates normal neck	* 152
Drying oven with forced air circulation	* 28	Extension to 1000 mm sampler	* 114
Drying ovens with natural circulation	* 173	Extensometer clamped	* 106
Drying ovens, forced air circulation	* 174	Estensometer	* 132
Ductility and Breakpoint	* 59	Extensometer plasters	* 92
Duriez cylinder Mould release	* 47	Extractor automatic pneumatic sampler	* 44
Duriez cylindrical mould	* 47	Extractor hot reflux	* 35
Duriez mould Base	* 47	Extractor manual for soil samples	* 113
Duriez piston	* 47	Extractor manual pneumatic sampler	* 44
Durometer universal optical	* 110	Extractor manually operated hydraulic	* 41
		Extractor manually operated hydraulic	* 119
		Extractor sampler hydraulic	* 119
		Eyewash	* 177
		Hoek Triaxial Cells for trial on rocks	* 29
F		Holder jaws, set manuals	* 106
Filler reference box 25 kg	* 47	Holder jaws, set manuals	* 134
Filling hopper 4x4x16 cm	* 98	Hole for Ø100 and 150 mm. emulsions	* 97
Filter paper box of 1000 pcs.	* 87		

Index products	Page	Index products	Page
Filter paper Ø 125 mm package of 100	* 153	Hopper	* 97
Filter paper Ø 125 mm.package of 100	* 21	Horizontal Extractor specimens Hoek	* 29
Filter paper Ø150 mm	* 131	Hotplate Ø 150 mm	* 35
Filter Paper Ø150 mm (pack 100 units)	* 44	Hotplates 4 and 6 positions	* 152
Filters Pack 100 of 25 mm.	* 37	Hotplates circular	* 152
Filter press for muds API	* 106	Hovanyi grooving tool	* 117
Fineness of fly ash by wet sieving	* 106	Humid chamber team	* 71
Flame Photometer	* 88	Humidifier centrifugal	* 72
Flask of 200 ml capacity	* 55	Hydrometers	* 118
Flask of 500 ml capacity.	* 49	Hydrometers precision	* 169
Flask Protection Device	* 49		
Flat jaw for round specimens, sets	* 105	I	
Flat plate 850 x 850 mm	* 65	Immersion tank	* 91
Flexible aluminum tube 100x1, 5 m.	* 37	Immersion thermostats	* 145
Flexural device 4x4x16 cm	* 100	Indirect Traction Device	* 45
Flexural testing device	* 137	Indirect traction device, Brazilian	* 81
Flow tables manual	* 91	Irrigator tube with conical tip	* 27
Flow tables motorized	* 91	J	
Frosting Test Chamber (freeze / thaw)	* 73	Japanese Ring	* 65
Fund sieves	* 11	Jaw crusher, 100x60 mm mouth	* 25
Funnel	* 27	Jaw Crusher, 80x50 mm mouth	* 25
Funnel	* 49	Jaw Marshall	* 42
Funnel for measuring fluency Grouts	* 89	Jaw Marshall	* 133
Funnel German, short branch	* 163	K	
Funnel Ø 150 mm double cone	* 139	Kango hammer	* 42
Fuses Ø5x20 mm	* 110	Kango hammer	* 132
G		Kango hammer holder	* 42
Gable cover	* 146	Kango hammer Support	* 132
Galvanized steel base plate 500x500 mm	* 64	Kelly ball penetrometer	* 66
Galvanized trays	* 12	Kerosene Centrifuge	* 39
Gauge 20 Kg / cm ²	* 26	Kit Baroid	* 89
Gauge for determining the percentage of needles	* 19	Kit Baroid	* 142
Gauge for determining the shape coefficient	* 19	K-Slump Test	* 66
Gauge for measuring the length and thickness	* 19	Kumagawa Extractor (Soxhelet)	* 45
Gauge of 100 Kg / cm ²	* 26	L	
Gauge of 400 Kg / cm ²	* 26	Laboratory air compressor	* 128
Gay-Lussac pycnometer of 50 ml	* 18	Ladle	* 139
Gay-Lussac pycnometers	* 165	Ladle stainless steel	* 75
Geopocket dial penetrometer	* 141	Lamp lighting6V	* 109
Glass Base	* 90	Large rubber (6 Pcs.)	* 25
Glass bottle of 500 ml capacity	* 36	Latex membrane	* 129
Glass bottle, 1 liter capacity	* 120	Layered Extension 105	* 49
Glass funnel	* 94	Le Chatelier Flask	* 87
Glass plate of 50x50 mm	* 92	Le Chatelier Mould	* 92
Glass Thermometer -10 ° to +50 ° C	* 87	Length basis Adapters of 100 mm.	* 105
Gloves High temperature	* 37	Lid sieves	* 11
Go/not go gauge for dia. 10 mm orifice	* 54	Lid wet Ø200 mm	* 12
Go/not go gauge for dia. 2 mm orifice	* 54	Lid wet Ø300 mm	* 12
Go/not go gauge for dia. 4 mm orifice	* 54	Lids for Crucibles	* 166
Grinder (machine) automatic	* 28	Liebig West condenser	* 49
Grooving plane	* 141	Lithium standard solution	* 88
Grooving tool	* 141	Load abrasive Ø 10 mm (5 Kg)	* 24
Gyratory Compactor	* 44	Load cell 200 KN	* 59
H		Load cell 200 KN	* 138
Hammer peak	* 139	Load cell 50 KN	* 134
Hammers concrete compressive strength	* 83	Load Cell of 5000 N	* 124
Hammer grinding mill	* 18	Load distribution plate for Hoek cells	* 29
Hand Mortar with rubber head	* 17	Load plate 200 KN	* 59
Hardened cylindrical mould and plate	* 44	Locking stirrups device cubic specimens	* 28
Hardened cylindrical mould and plate	* 47	Locking stirrups device cubic specimens	* 75
Harvard Mould bipartite	* 131	Lomi mixer	* 118
Harvard rammer	* 131	Lona to expand samples. Size 2x2 m.	* 17
Heating plates	* 151	Los Angeles abrasión machine	* 22
Hoek heads cell samples	* 30	Lower piston	* 47
		LVDT displacement transducer 100 mm	* 82

Index products	Page	Index products	Page
M			
Machine Marshall of 50 KN capacity	* 41	Methylene Blue Test	* 21
Machine CBR-Marshall 50 KN	* 133	Micro Deval Standard stainless steel cylinder	* 24
Machine concrete 2000 KN	* 31	Micro-Deval Machine	* 24
Machine concrete 3000 KN	* 31	Micronized sulfur powder	* 75
Machine Direct shear tests	* 123	Mill Angels soundproof cabin	* 22
Machine Dual-zone automatic servo control test 300 KN and 25 KN	* 99	Mineral Mohs hardness scale, set	* 27
Machine electromechanical Double screw automatic	* 137	Miniature splitter	* 121
Machine electromechanical multipurpose 200 KN (	* 31	Mirror for easy adjustment of the cone	* 46
Machine electromechanical universal double screw	* 106	Mirror for easy adjustment of the cone	* 119
Machine electromechanical universal double screw	* 106	Mixer 14 liter	* 118
Machine folded and unfolded	* 107	Mixer 20 liter	* 38
Machine for ceramic tile abrasion	* 23	Mixer 400-700 rpm fins electronic	* 153
Machine for determining the wear resistance	* 24	Mixer 400-700 rpm fins electronic	* 21
Machine for flexion- compression tests 50 KN	* 100	Mixers	* 69
Machine multipurpose 300 kN electromechanical	* 31	Modified hammer	* 158
Machine multipurpose electromechanical automatic	* 134	Modified proctor mould Collar	* 130
Magnetic base with articulated arm	* 42	Mohr clamp	* 27
Magnetic base with articulated arm	* 133	Mohr clamp	* 170
Magnetic holder articulated	* 173	Mortars iron hand	* 170
Magnetic stirrer with heating	* 51	Mortars Porcelain with hand	* 167
Magnetic stirrer with heating	* 116	Mot rule	* 58
Markioff machine	* 133	Mould form of a truncated cone	* 64
Manometer fluid	* 87	Mould form of a truncated cone	* 65
Manuals Drills	114	Mould prismatic three posts, 1 "x1" x11 ¼ "	* 93
Marble test piece of 150 x 150 x 50 mm	* 23	Mould triple 40x40x160 mm	* 97
Marking-off machine	* 107	Mould triple 4x4x16 cm	* 93
Marsh Cone	* 95	Mould triple prism 75x75x275 mm	* 93
Marsh Cone	* 141	Muffle Furnaces	* 60
Marshall compaction Base Manual	* 40	Muffle Furnaces	* 172
Marshall compaction rammer	* 40	Multipurpose electromechanical, aut. machine	* 134
Marshall compaction test software	* 40	Multipurpose electromechanical, aut. machine	* 135
Marshall Compactor Automatic	* 40	N	
Marshall Mold Base	* 40	Needle Final setting	* 90
Marshall mould	* 40	Needle for final setting Ø1, 13 mm	* 90
Marshall mould Collar	* 40	Needle for initial setting Ø1 mm	* 90
Marshall pushing piston	* 42	Needle initial setting	* 90
Marshall pushing piston	* 133	Needle penetration Ø1,00 mm	* 46
Marshall rectangular thermostatic bath	* 45	Needle penetration Ø1,00 mm	* 119
Maximum air compressor 10 bar	* 76	Needle to top Ø1,13 mm	* 90
Maximum and minimum thermometer	* 114	Nonabsorbent rammer	* 91
Measure of 125 cm ³	* 27	Non Nuclear electromagnetic density gauge	* 37
Measuring cylinders with spout	* 151	Nozzle Furoil	* 53
Mechanical strain gauges	* 99	Nozzle interchangeable	* 89
Meker burner with regulator	* 169	Nylon tube dia. 6x4 mm	* 127
Membrane Voluminómetros	* 140	O	
Mesh opening 0.09 mm	* 87	Oedometer central loading	* 122
Mesh opening 0.18 mm.	* 87	Optical glass cell	* 95
Metal bar of 300 mm	* 65	Orbital and swinging	* 21
Metal mesh basket 100 x 100 x 100 mm	* 47	Outboard immersion thermostat	* 118
Metal plate test	* 50	Oven RTFOT EN 12607-1	* 48
Metal stand base	* 25	Oven to determine weight loss	* 48
Metal stand base	* 153	Oven-analyzer (ignition) Automatic	* 37
Metal stand base	* 21	Oven-ASTM RTFOT	* 48
Metal stand base	* 49	P	
Metal stand base	* 169	Paper roll record	* 58
Metal structure	* 133	PC Reading Program	* 108
Metal structure	* 100	P.D.R. Mould	* 42
Metal structure for the placement of the machine	* 41	Pears rubber for pipetting	* 164
Metal trays	* 144	Pendulum impact Charpy	* 133
Methylene blue pack of 100 gr.	* 153	Pen	* 58
Methylene blue pack of 100 gr.	* 21	Penetrometer Analog standard	* 46
Methylene blue pack of 25 gr.	* 153	Perforated disk	* 87
Methylene blue pack of 25 gr.	* 21	Perforated plate with stem extensible	* 131
Methylene Blue Test	* 21	Permeability of rocks Hoek cell	* 30
Micro Deval Standard stainless steel cylinder	* 24	Permeameter combined for constant and variable loads	* 139
Micro-Deval Machine	* 24	PH meter on-board	* 116

Index products	Page	Index products	Page
PH Meter Portable	* 116	R	
Pinhole test equipment	* 167	Rammer Ø146 mm standard	* 132
Piston for Hoek cells, set	* 29	Rammer standardized CBR test	* 42
Piston Ø 100 and 150 mm	* 44	Rammer type "Army" of 4.5 Kg	* 131
Planetary Mixer Automatic	* 96	Rammer type Army of 2.5 kg	* 124
Planetary Mixer for mortar	* 96	Rammer type Army of 2.5 kg	* 131
Plastic Test Tube with 2 strips	* 27	Reference bar for calibration invar	* 19
Plasticímetro LCL	* 66	Reference bar invar	* 92
Plate bearing test	* 138	Registrar for coupling to the rule	* 58
Plate Ø 762 mm	* 59	Regulator propane, butane or natural gas	* 88
Plate Ø 762 mm	* 138	Relative density and apparent	* 20
Plato reducer	* 81	Renault pycnometer glass of 100 ml peak	* 18
P.M. Mould	* 130	Renault pycnometer of 50 ml cup pico	* 18
P.N. closed Mould	* 130	Renault pycnometers	* 165
P.N. open Mould	* 130	Research Laboratory Furniture	* 177
Pocket Penetrometer	* 67	Resistance cover	* 45
Pocket Penetrometer	* 117	Resistance to plastic deformation	* 43
Pocket penetrometers	* 141	Resistance to traction	* 104
Point charge safety Cabinet team	* 26	Resistance-cover tray	* 146
Point load with analog gauge	* 26	Resistance covers	* 146
Point load with digital	* 26	Ring and Ball Team	* 51
Point load with digital gauge	* 26	Rock strength index	* 26
Polyethylene bottle 15 l	* 64	Rockwell diamond penetrator	* 109
Porcelain Capsules	* 166	Rod holder for proctor maces	* 132
Porcelain crucibles	* 166	Rod support ø12x450mm	* 153
Porcelain mortar Ø125 mm	* 17	Rod with ballast	* 27
Porous stones	* 129	Roller compactor Pneumatic	* 43
Porous stones	* 124	Roller universal electromagnetic	* 132
Porous stones	* 139	Rolling Rule 3 m	* 58
Porta Helpful	* 42	Rotary evaporator	* 35
Porta Helpful	* 132	Rotary Plate Aluminum	* 48
Portable Needle Vibrator	* 71	Rotor for testing Kerosene	* 39
Potassium standard solution	* 88	Rough brass cup	* 141
Potentiometric displacement transducers	* 126	Rubber baskets	* 139
Potentiometric sensor 25 mm	* 59	Rubber Mallet	* 166
Potentiometric sensor 25 mm	* 138	Rubber membranes	* 140
Potentiometric transducer	* 124	Rubber sleeve for Hoek cells	* 29
Pressure Ageing Vessel (PAV3)	* 55	Rubber stopper	* 27
Pressure regulator high precision	* 127	Rubber tube (1.5 m).	* 27
Pressured oil / water	* 127	Rule rigid 1000 mm	* 64
Printer paper	* 90	Ruler 500 mm	* 64
Prismatic mould two posts 25x25x250mm	* 93	Ruler 500 mm stainless steel	* 27
Prismatic mould two posts 75x75x254mm	* 93	Runoff cement paste	* 95
Probe 300 g	* 90	S	
Probe immersion / penetration	* 57	Safety cabinet for acids and bases	* 174
Probe immersion / penetration	* 160	Safety protection test area	* 132
Probe Ø10 mm for testing consistency	* 90	Sample splitters	* 17
Proctor normal and modified compaction	* 130	Sample splitters	* 113
Protection Case for bottle chapman	* 114	Sampling	* 113
Protection recommended	* 108	Sand bags standard in 1350 g	* 96
Protective cover	* 57	Sand baths	* 150
Pull-Off strength tester digital	* 113	Sand Patch Equipment	* 61
Pycnometer 1000 ml with capillary	* 15	Saybolt flask 60 ml	* 53
Pycnometer 1000 ml with capillary	* 20	Saybolt viscometer	* 53
Pycnometer 24 ml capacity Hubbard- Carmick type	* 49	Scale Moisture Analyzer	* 156
Pycnometer 25 ml capacity	* 49	Scales industrial type	* 158
Pycnometer 500 ml with capillary	* 15	Sclerometer for rock classification	* 27
Pycnometer 500 ml with capillary	* 20	Sclerometer soft Particle	* 22
Pycnometer in 250 ml glass	* 49	Scoops curved	* 139
Pycnometer of 25 ml capacity, Hubbard- Carmick	* 49	Scoops curved stainless steel	* 64
Pycnometers for solids and liquids	* 165	Screed 300 mm	* 97
Q		Screed with handle	* 130
Quadrant pocket penetrometer	* 117	Screed with handle	* 130
Quadrant pocket penetrometer	* 141	Screen protection for test area	* 106

Index products	Page	Index products	Page
Sedimentation of bituminous emulsions	* 54	Standard penetrometer with digital indicator	* 119
Seive shaker motor operated	* 13	Standard sodium solution	* 88
Semi-automatic digital penetrometer	* 143	Steel ball	* 51
Servo-Plus	* 88-89-90-91	Steel ball 1Kg.	* 67
Self Compacting Concrete	* 65	Steel ball 250. g	* 67
Set hotplate external sensor	* 153	Steel ball 500 gr.	* 50
Set moulds 6,3 - 10 - 13 19 mm	* 50	Steel ball penetrator Rockwell	* 109
Set of 11 abrasive balls	* 22	Steel mallet with wooden handle	* 139
Set of 12 abrasive balls	* 22	Steel prismatic moulds	* 70
Set of 50 Kg weight	* 124	Stirring rod according to EN 196-8	* 94
Set of 50 Kg weight	* 123	Stirring rod ASTM C186	* 94
Set of moulds from 10.5 6.3 to 8.2 mm height.	* 50	Strain gage Kit	* 105
Shaker bottle	* 36	Strain gauge	* 31
Shaped mould "8"	* 56	Strain gauge	* 80
Shrinkage limit	* 144	Sulfates stirrer	* 120
Sieve Ø150 mm	* 89	Support dual T	* 153
Sieve shaker for large capacity	* 14	Support dual T	* 21
Sieve shaker large capacity	* 14	Support dual T	* 169
Sieves ballast	* 14	Support for attaching transducer	* 126
Sieves for Air jet sieving	* 15	Support Harvard	* 131
Sieves for Air jet sieving	* 15	Support ring flat steel tripod	* 170
Sieves for automatic extractor. bitumen	* 38	Support universal guide	* 27
Sieves for wet	* 12	Support with square	* 47
Sieves index Laja	* 14	Surface Probe	* 57
Sieves Ø200, 300, 400 mm braided mesh	* 9	Surface Probe	* 160
Sieves Ø200, 300, 400 mm perforated plate	* 11	Surface sampler team	* 114
Sieves shape index	* 14	System air / water	* 127
Slider rubber for use in laboratory	* 25		
Slider rubber for use on terrain	* 25		
Slotted surcharges	* 131	Table for circular workpiece	* 109
Small rubber (6 Pcs.)	* 25	Table for hydrostatic weighing	* 15
Software elastic modulus	* 31	Tables in tube support structure	* 177
Software elastic modulus	* 103	Tag viscometer	* 52
Software for bench oedometer test.	* 122	Take samples cutting	* 129
Software for direct shear test	* 124	Tapered tips for team point charge, set	* 27
Software to control humidity chamber	* 71	TAR, BRTA Viscometer digital standard	* 54
Soil bathe	* 144	Temperature Controller	* 95
Soil sampler	* 137	Test funnel in "V"	* 64
Solid glass rod 300 mm	* 153	Thermal paper printer	* 90
Solid glass rod 300 mm	* 21	Thermometer ASTM 13C	* 48
Solid glass rod dia. 6 mm	* 36	Thermometer ASTM 15 C	* 51
Solution type	* 121	Thermometer ASTM 16 C	* 51
Solution type, pack of 5 l.	* 27	Thermometer ASTM 17C	* 119
Solvent recovery still 10 l.	* 36	Thermometer ASTM 8C	* 49
Solvent recovery unit 25 l	* 39	Thermometer with digital display -40 ° to 200 °	* 57
Solvents recuperator 15 l	* 39	Thermometer with digital display -40 ° to 200 °	* 160
Soundproof booth for sieving	* 14	Thermometer with digital display -50 ° +1000 °	* 57
Spatula with wooden handle and stainless steel blade.	* 173	Thermometer with digital display -50 ° +1000 °	* 160
Spatula Wood Handle	* 117	Thermometer with digital display -50 ° to 150 °	* 160
Spatulas for flush, set	* 97	Thermometer with digital display -50 ° to 150 °	* 57
Spectrophotometer thermo-cement system	* 95	Thermometer with digital display -50 ° to 250 °	* 160
Spectrophotometers	* 176	Thermometer with digital display -50 ° to 250 °	* 57
Speedy moisture teters	* 30-115	Thermometers graduated rod	* 168
Spiral Palette	* 38	Thermometers graduated scale opal	* 168
Spray apparatus constant load	* 50	Thermometers graduated scale opal	* 147
Square plate 300 mm	* 59	Thermostatic Bath	* 41
Square plate 300 mm	* 138	Thermostatic Bath Marshall	* 151
Stainless Steel beater with bayonet fittings	* 38	Thermostatic Baths circulation	* 49
Stainless Steel beater with bayonet fittings	* 96	Thermostatically Controlled Water bath	* 171
Stainless steel conical sieve	* 35	Time controllers	* 27
Stainless Steel Glass Ø120 mm.	* 38	Timing deivce	* 64
Stainless steel jars ball mill	* 171	Timing device	* 118
Stainless steel lids with holes	* 146	Tining device	* 19
Stainless steel tray	* 12	Tip of contact for mould	* 56
Standard digital penetrometer	* 143	torsiometer	* 126
Standard hammer	* 158	Transducer connection cable	* 118
Standard penetrometer	* 119	Transparent acrylic tray	* 47
Standard Penetrometer indicator	* 46	Tray 160x160x10 mm	* 41
		Tray covers-resistance	* 64
		Tray flow flat test	

Index products	Page	Index products	Page
Tray with hole Ø 150 mm	* 139	W	
Triaxial Cell Accessories	* 129	Walz Consistometer	* 66
Triaxial Cells	* 129	Warm air drier	* 150
Triaxial test machine	* 151	Watch Glasses	* 163
Triaxial Test Equipment	* 125	Water bath with coil	* 46
Triaxial test mould tripartite	* 129	Water distiller	* 146
Triaxial testing software	* 126	Watertight container with handles	* 67
Triple Mould 50x50x200 mm	* 19	Wedge graduate	* 58
Triple Mould 70.7 x70, 7x282, 8 mm	* 97	Weighing bottle inner cap	* 165
Tripod for measuring the swelling	* 131	Weighing bottle outer cover	* 165
Tripod ring round Ø 100 mm	* 51	Weight: 100 g	* 92
Trowel	* 139	Weights up to 50 kg, set	* 123
TRRL pendulum	* 25	Wet fund Ø200 mm	* 12
Tube manometer "U"	* 87	Wet fund Ø300 mm	* 11
Tube or hammer for the Marshall test	* 132	Wheel Tracking	* 43
Tubes cement sampler	* 88	Wire mesh with ceramic fiber	* 51
U		Y	
Ultrasonic cleaning bath sieves	* 12	Yale pycnometer	* 36
Ultrasonic cleaning baths	* 151		
Ultrasonic Equipment	* 84		
Unconsolidated undrained test UU	* 125		
Undisturbed sampling equipment	* 113		
Unconfined compression tester	* 142		
Universal CBR-Mashall 2 speeds	* 159		
Universal machine multiensayo	* 135		
Universal machine twin screw	* 137		
Universal machine electromecanicaal 200 KN	* 121-161		
Universal Nozzle	* 53		
Universal oven forced air circulation	* 174		
Universal testing machine for bending prisms	* 82		
Universal testing machine tensile	* 103		
Universal testing machine electromecaniccal	* 130-131		
Upper head drainage	* 129		
Upper head undrained	* 129		
Upper piston	* 47		
V			
Vacuum Desiccators locked at the top	* 163		
Vacuum drying oven for	* 173		
Vacuum pump	* 87		
Vacuum pump for Vacuterm	* 173		
Vacuum pump portable	* 36		
Vacuum pumps with vacuum	* 171		
Vacuum, Filtering flasks	* 152		
Vane Test analog	* 117		
Vialit plate team	* 50		
Vibrated concrete base	* 40		
Vibrating machine specimens 70.7 mm	* 97		
Vibrating table for compaction of specimens	* 71		
Vibro-deaerator electromagnetic	* 36		
Vicat Mould Ø60/70x40 mm	* 90		
Vicat Mould Ø70/80x40 mm	* 90		
Vicat Needle Automatic	* 90		
Vicat Needle Manual	* 90		
Vickers diamond penetrator	* 109		
Vickers hardness Pattern	* 19		
Viscometer Pennsky-Martens	* 53		
Viscosity of Slurries	* 89		
Volumetric flask of 500 ml capacity	* 20		
Volumetric flask Stoppered 100 ml.	* 18		
Volumetric flasks stoppered	* 152		
Volumetric pipettes, 1 stroke	* 164		
Volumetric pipettes, 2 strokes	* 164		

CONVERSION TABLE

AREA	AREA
1 Km ² (100ka)	247.105 acres
1 hectare (ha)	2.47105 acres
	10.000 m ²
1 m ²	1.19599 yd ²
1 cm ²	0,155 pulg ² /in ²
1 mm ²	0,00155 pulg ² /in ²
1 milla ² /mile ²	2.58999 km ²
1 acre	4.046,86 m ²
	0,404686 ha
1 yd ²	0,836127 m ²
1 pie ² /ft ²	0,092903 m ²
1 pulg ² /in ²	645,16 mm ²

DENSIDAD	DENSITY
1 Kg. m ²	1,686 lb/yd ²
	0,06243 lb/pie ² /ft ²
1 gr. Cm ²	62,4280 lb/pie ² /ft ²
1 ton/yd ²	1328,94 Kg/ cm ²
1	0,593 Kg/ cm ²
1 lb/pie ² /ft ²	16,0185 Kg/ cm ²
1 lb/pulg ² /in ²	27,6799 gr/ cm ²

FUERZA	FORCE
1 N	0,10197 kgf
	0,22481 lbf
1 KN	101.971 Kg
	224,809 lbf
1 Kg	9,80665 N
	2,20462 lbf
1 Dina	10 ⁻⁵ N
	0,224809 x 10 ⁻⁵ lbf
1 lbf	4,44822 N
	0,45359 Kg
1 tonf	9,96402 KN
	1016,05 kgf

ENERGÍA	ENERGY
1 mj	0,277778 KWh
1 J	0,737562 pie/ft
	lbf
1 Kg m	9,80665 J
	7,23301 pie/ft/lbf
1 term/therm	105,506 MJ
1 Kwh	3,6 MJ
1 Btu	1,05506 KJ

PRESIÓN	PRESSURE
1 Pa (N/m ²)	1 Pa /N/m ²)
	0,01 Kg/cm ²
	10 mbar
1 Kpa	20,885 lbf/pie ² /ft ²
(KN/mm ²)	0,2953 pulg/in
	merc. (Hg)
1 Kg/cm ²	98,0665 Kpa
	14,223 lbf/pulg ² /ft ²
1 bar	100 Kpa
	14,5038 lbf/pul ² /ft ²
1 mbar	100 Pa
	2,0885 lbf/pul ² /ft ²
1 atm	133.322 Pa
	0,01934 lbf/pul ² /ft ²
1 mm Hg	133.322 Pa
(torr)	0,01934 lbf/pul ² /ft ²
1 mm H ₂ O	9.80665 Pa
	0,001422 lbf/pul ² /ft ²
	6,89476 Kpa
1 lb/pulg ² /in ²	0,07031 Kg/cm ²
	68,9476 mbar
1 lb/pie ² /ft ²	47,8803 Pa
	0,4788 mbar
1 ton/pie ² /ft ²	107,252 Kpa
	1,094 Kg/cm ²
1 pulg/in. Hg	3,38639 Kpa
	0,491 lbf/pulg ² /in ²
	2,98907 Kpa
1 pie/ft H ₂ O	0,030 Kg/cm ²
	22,3997 mm Hg.

LONGITUD	LENGTH
1 Km	0,621371 milla
1 m	1,09361 yd.
	3,2808 pie/ft
1 cm	0,393701 μ/inch
1 mm	0,03937 μ/inch
1 m	39,3701 μ/inch
1 milla/mile	1,60934 Km.
1 yd.	0,9144 m.
1 pie/ft	0,3048 m
1 pulg/in	25,4 mm
1 milipulg/mili-in	25,4 μm
1 plg/ in	0,0254 μm

MASA	MASS
1 tm	1000 Kg
(metric)	2204,62 lb
	0,98420 ton
1 Kg	0,0968 cwt
	2,20462 lb
1 gr.	0,03527 oz
1 ton (long)	1016,05 Kg
	1,01605 tm
1 cwt (50 kg)	50,8023 Kg.
1 lb	0,45359 Kg.
1 oz	28,349 gr.

POTENCIA	POWER
1 hp (imp)	745,700 W
	(J/s)
1 hp (metric)	735,499 W
	(J/s)
1 hp (electric)	746.000 W
	(J/s)
1 pie.lbf/s	1,35582 W

VOLUMEN	VOLUME
1 m ³	1,30795 yd ³
	0,03531 pie ³ /ft ³
1 dm ³	0,21997 gal imp.
(litro/litre)	1,7605 pintas
	0,2642 gal. U.S.
1 cm ³ (ml)	0,06102 pulg ³ /in ³
1 yd ³	0,76455 m ³
1 pie ³ /ft ³	28,3168 dm ³
1 pulg ³ /in ³	16,3871 dm ³
1 gal imp.	4,50609 dm ³
1 gal U.S.	3,78541 dm ³
1 pinta	0,56826 dm ³
1 oz. Fl.	28,4134 cm ³



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