

"Build today, then strong and sure, With a firm and ample base; And ascending and secure. Shall tomorrow find its place." Longfellow, Henry W. (1807-1882)







Selecta Group Factory

Where there is a successful business, it is because someone has taken a courageous decision.

Peter Drucker

Located at Km. 585.1 of the A-2 highway, at the exit Abrera (Barcelona), covering an area of 21000 m², and factory build 14,800m². Situated 28 Km from the city of Barcelona, with excellent links by motorway AP-7, exit 25 (Martorell) or by the A-2 highway, Km 585.1 Barcelona-Madrid, industrial estate "Can Amat" next to the production centre of SEAT.







A-2 highway, Km. 585,1 - 08630 ABRERA (Barcelona-SPAIN) - P. +34 93 770 08 77* (6 lines) - F. +34 93 770 23 62 - www.jpselecta.es - selecta@jpselecta.es



J.P. SELECTA S.A.

Scientific Laboratory Equipment Manufacturer



COMECTA S.A.

Exclusive Representations



AQUISEL S.L.

manufacturer of Disposable Clinical Test Kits



I am pleased to launch this new catalogue 2020-2023 coinciding with the celebration of the 70th anniversary of the creation of our company.

In 1949, my father Joaquín Puig founded the company. Taking example of his entrepreneurial and innovative nature is what has inspired us to give continuity to his business development project.

Our organizational structure has always been focused on the design, development and manufacture of equipment for chemical, clinical, pharmaceutical and biotechnological laboratories.

We keep intact the objective of consolidating our presence in the Spanish market and reach the maximum penetration in the international arena. The Group's business strategy has focused on continuous updating of our website www.grupo-selecta.com and the catalogue's edition coming up next, with numerous improvements and important updates in some of our manufactured products and also presenting totally innovative new equipment in our sector. We are at your disposal to complete the interpretation of this General Catalogue 2020-2023 since it is our commitment to the strategic communication plan.

Your faithfully,



Jordi Puig Herrera Managing Director of Selecta Group



MANAGEMENT TEAM

From left to right: MIQUEL PLAYÀ, Technical director - RAIMON PERELLÓ, Aquisel, s.l director - TONY EJARQUE, Commercial director - JORDI PUIG, Managing director JOAQUÍN ARQUE, Finance director - ANTONIO ALARCÓN, Purchasing manager - ELOISA MIRAGALL Comecta, s.a. director

J.P. Selecta World wide





INFORMATION

- The apparatus presented in this catalogue is designed specifically for the application intended.
 Contact us for confirmation of suitable use in any other distinct application.
- 2. In accordance with existing standards. All tests on our equipment are completed at an ambient temperature of 20 °C.
- 3. For correct, installation, use and maintenance of our equipment read all the instructions before use.
- 4. J. P. Selecta SA reserves the right to modify some of the parameters or characteristics of the equipments described in this catalog, in order to improve their benefits or adapt them to changing current regulations at all times.

VOLTAGES AND FREQUENCY

- 5. Unless stated otherwise in the catalogue, our equipment is manufactured to be connected to the mains as:
 - Single phase 230-V ±10% 50 Hz.
 - Three phase 230/400V \pm 10% 50 Hz.
- 6. If required other voltages and frequencies can be supplied. In some application the power can be modified.
- Heating equipment without motors can operate on both 50 and 60 Hz.
- 8. In all cases where different voltages, frequencies and plugs type are requested. Written confirmation will be required before order acceptance, otherwise standard power and Schuko plug will be supplied.

CALIBRATION

9. If required certificates of calibration can be supplied that are traceable to known certified standards.

ACCESSORIES AND SPARES

To maintain the equipment to the original specification and design, it is important that genuine J.P. Selecta spares be used. In the case that original spares are not used, J.P. Selecta are not responsible for any damage or anomaly caused.

OUR WEBSITE

Discover all our new developments by connecting to our Web site:

http://www.grupo-selecta.com

You can see and match to your requirements all of our equipment and products.



OUR GUARANTEE

We guarantee the supply of spare parts for the life time of the production of the model manufactured.



Image showing our technical services department still repairing equipment manufactured in the 1970's



Quality Control Systems

J.P. Selecta complies with the obligatory controls and regulations related to the safety of electrical equipment, the measurement and control within the laboratory, and the completion of the standards and CE directives that affect the manufacturer of our equipment.

ELECTRICAL SAFETY 2014/35/EU.
ELECTROMAGNETIC COMPATIBILITY 2014/30/EU.
PRESSURE VESSEL 2014/68/EU.

Details of Standards and directives:

UNE-EN 61010-1 General requirements.

UNE-EN 61010-2-010 Required for the particular use of heated laboratory equipment and materials.

UNE-EN 61010-2-020 Particular requirement for laboratory centrifuges.

UNE-EN 61010-2-041 Requirement for Autoclaves that use steam vapour for the treatment of materials used

within medicine and laboratory processes.

UNE-EN 61010-2-051 Particular requirement for shaking and mixing equipment.

UNE-EN 61010-2-081 Particular requirement for automatic or semiautomatic laboratory equipment for analy

sis and other purposes.

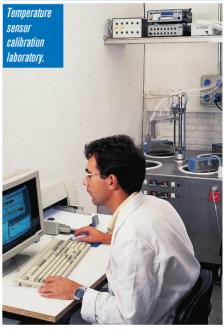
UNE-EN 61010-2-040 Particular requirements for used sterilizers and washing and disinfection equipment.

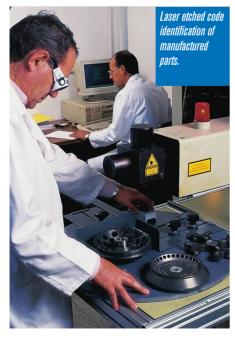
UNE-EN 61326 Requires electromagnetic compatibility.





Certificate of registration TÜV for the design, production, commercialisation and post sales service of :ovens, centrifuges, stirrers, thermostatic immersion baths, ultrasonic baths, hotplates and blocks, digesters, Kjeldahl steam distillations, fat, fibre and alcohol extractors, refrigerators, freezers and environmental cabinets.









CERTIFICATE

Management system as per

ISO 9001: 2015

In accordance with TÜV NORD CERTIFICACIÓN procedures, it is hereby certified that

J.P. Selecta, S.A. Ctra. N-II, km. 585,1 08630 Abrera (Barcelona) Spain



applies a management system in line with the above standard for the following scope

The design, production, marketing and after sales of stoves, centrifuges, autoclaves, agitators, immersion thermostats, thermostatic baths, distillers, ultrasonic baths, hotplates, heating blankets, blocks digesters, kjeldahl distillers, grease traps service fiber extractors, oenological distillers, refrigerated blood bags, chilled stoves, freezers fitted wardrobes. The marketing of medical devices for in vitro diagnosis.

Certificate Registration Nº: 4410015510069

Audit Report Nº: 180071

Valid from: 09.10.2018 Valid until: 08.10.2021

CertificationBody CUALICONTROL-ACI, SAU Madrid, 09.10.2018

This certification was conducted in accordance with the TÜV NORD CERTIFICACIÓN auditing and certification procedures and is subject to regular surveillance audits.

CUALICONTROL-ACI, SAU

C/ Caleruega, 67

28033 Madrid

www.tuv-nord.com





On request, we can supply calibration certificates of the working conditions of the instruments before they leave the factory. These certificates can be used for OQ, IQ validations and for equipment that needs to comply to a ISO9000 quality system.

These certificates can be produced for Ovens, Incubators, Refrigerated products, Autoclaves, Baths, Inmersion thermostats, furnaces, etc. instrument that require a temperature measurement by realising several temperature sensors and readings to obtain the probable temporal and spatial uncertainty.

Note: Consult for other types of equipment.

Part No. 1001738 Calibration certificate, 2 points.

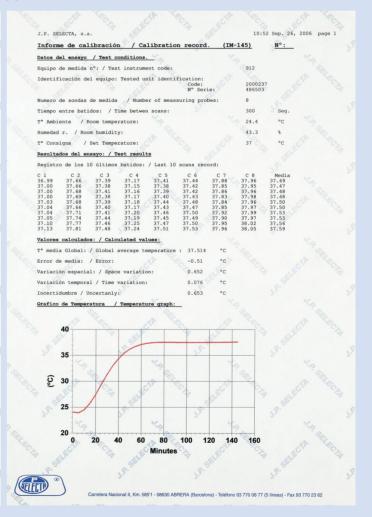
The calibration certificate has been completed based on two measuring points. This means to the user that the requested certificate should indicate two temperatures at which the effective calibration should be completed. For more than two measuring point please consult J.P. Selecta.

When requesting the certificate full details of the company and address can be included in the certificate information.

Note: When asking for a certificate, please indicate data (company name and address) for its validity.

EXAMPLE OF CALIBRATION CERTIFICATE OF BACTERIOLOGICAL AND CULTURES OVEN:











Process and quality control laboratories.









Selecta Group









Pressurized and acclimatized room with sophisticated serial production automatisms.





AUTOCLAVE PRESOCLAVE PLUS Page. 86



RECIRCULATION AND REFRIGERATED BATHS Page. 303



COMPLETE KIT STIRRER Page. 29



ELECTRONIC TEMPERATURE CONTROLLER Page. 294



REFRIGERATED OVENS WITH FIXED HUMIDITY Page. 160



IMMERSION THERMOSTATS Page. 100



CULTURE MEDIA AUTOCLAVE PREPARER Page. 62



ROLLER AND TILT MIXER Page. 34



MOLECULAR DISTILLATION Page. 302



SMALL REFRIGERATED CABINET Page. 72



BIG CAPACITY WATER BATHS Page. 88



TUBES FOR PEDIATRICS Page. 309



REFRIGERATED HIGH CAPACITY CENTRIFUGE Pages. 127 and 128



REACTORS FOR PILOT PLANT Page. 298 to 301



REFRIGERATED CABINET WITH DOUBLE COMPRESSOR Page. 74



AQUISFEK-2 Page. 314

GENERAL INDEX BY INSTRUMENT TYPE

COLOUR IDENTIFICATION











Pages 23 to 44











Pages 45 to 52











Pages 53 to 69











Pages 70 to 75











Pages 76 to 81











Pages 82 to 95





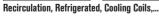








Pages 96 to 108















Pages 109 to 132

Digital Control, Brushless, Microprocessor Control, Refrigerated, Blood Bags,...













Pages 133 to 163

Drying, Bacteriological, Vacuum, CO2, Low Temperature,...











Pages 164 to 211

Clamps, Stands, Spatulas, Racks, Burners, Stirrer Bars, Porcelain,...











Pages 212 to 224

Biotechnology, Pipettes, Histology...











Pages 225 to 236











Pages 237 to 248

Thermocyclers, Spectrophotometers, Colorimeters, pHmeters, Coductivitymeters,...











Pages 249 to 265

Digestors, Distillators, Extractors, Alcohol Distillation Unit, Flocculators, Water Distillers,...













Pages 266 to 281

Microscopes, Refractometers, Melting Point, Polarimeter,...













Pages 282 to 305

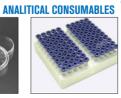
Safety Cabinets, Viscometers, Monitor and Control, Reactos, Filters,...













306 to 317

Medical devices, Petri plates

ALPHABETIC INDEX

A		G
Alcohol burner194	Colorimeters243 to 244	Glass drying oven137
Alcohol distillation259 to 260	Conductivity meter248	Glass slides215
ANALYTICAL CONSUMABLES306 to 317	Container cryo cooler189	Glass thermometers296-297
ANALYTICAL TECHNIQUE237 to 248	Containers sterilization194	Gloves199
AUTOCLAVES53 to 69	Control thermometers296 to 297	
Automatic Kjeldahl unit253 to 256	Controller electronic sensoterm293	Н
Automatic time switch295	Cooling bath218	HAEMATOLOGY76 to 81
Blood bags tubes automatic sealer81	Cooling cabinet plate217	Hand operated centrifuge112
0	Cooling immersion unit105 to 106	Hand microtome216
В	Crane for autoclaves61	Heating blocks106 to 108
BACTERIOLOGICAL INCUBATORS150 to 156	Crucible lids181	HEATING MANTLES225 to 231
Bag sealers68 to 69	Crucibles stainless steel, Ni & Zirco181	Heating tapes231
BALANCES267 to 269	Cryothermostats102	Hidraulic press190
Baskets stainless steel180 to 183	Cuvette quartz and glass241	High temperature oven146
Bath paraffin wax217	Chest freezer75	Histology Paraffin90
Bath reciprocating shaker91	Chromatography tank219	Homogeneizers43 to 44
Bath viscometer92	Chronometer digital295	HOTPLATES232-236
BATHS82 to 95		Hotplates, ceramic232
Baths for water and oil85 to 90	D	Humidity meter294
Baths ultrasonic cleaning93 to 95	Density measurement268	_
Beakers stainless steel183	Desiccator hidroscopic149	
Biological oxygen demand COD261	Desiccator vacuum149	Illuminator cold light278
Block digester Kjeldahl251 to 252	Detergent biosel63	Immersion cooler105
Blood banks instrumentation77 to 81	Diamond point pencil198	Immersion thermostats98 to 107
Blood banks cabinets79 to 80	Digestion & distilling tubes252	Incubation chamber156
Bossheads165	Digestion system251 to 252	Incubator COD261
Box cuvette storage188	Digital thermometer294	Incubator CO ₂ 157
Box for cryovials 15 / 2 ml188	Dispenser wax217	Incubator orbital shaker40 to 42
Box slide216	Dispensing pipettes220 to 222	Incubators150 to 156
Brushes201	Dissecting kit213 to 214	Incubator for Petri capsules153
Bucket with handle180 to 183	Distillation still263	Infra-red incinerator197
Burners194 to 197	Dry block heater106 to 108	INSTRUMENTAL164 to 211
	Drying rack192	INSTR. BIOLOGY AND HISTOLOGY212 to 224
C	Drying and sterilization ovens140 to 145	
CO ₂ Incubator157		K
Condenser261	E	Kidney dish182
Callipers200	Electrical contact thermometers293	KJELDAHL DISTILLING UNITS251 to 256
Caps, stoppers serology205 to 207	Extractor fat and oils257	Kolle handle loop214
Cell counter223	Extractor fiber unit258	-
Centrifugal pumps51		L
CENTRIFUGES109 to 132	E	LABORATORY ACCESSORIES198 to 211
Centrifuge blood bags127-132	Faecal parasites fixation/concentration314	LABORATORY-HOSPITAL182 to 184
Centrifuge, refrigerated119-122-124-127	Flake ice maker190	Laboratory jack176
Ceramic hotplates233	Floculators262	Laboratory lamp216
Circulation pump85	FILTRATION304 to 305	Laboratory fume cupboards288 to 284
Clamps and stands165 to 176	Forceps dissection213	Biological safety cabinets285
Cold plate histology217	FURNACE MUFFLE161 to 163	Liquid transfer52
Colony counter digital224	Fusion spoon flat bottom180	LOW TEMPERATURE70 to 75-154 to 155

M					
Magnifiers	200	Pumps circulation	48 to 52	Thermometers	296 to 297
Mantles bank for Kjeldahl	230	Pumps vacuum	48 to 51	Thermoreactor COD	
Melting point	281			THERMOSTATIC BATHS	96 to 108
Membrane vacuum	50 to 52	R		Thermostat dry blocks	106 to 108
Messuring range	201	n		Thermostat viscometer	290
Metal blocks	106 to 108	Racks	184 to 188	Tilting mixer shaker	34-107 to 108
Microcentrifugues	112	Refractometers	279 to 280	Timer alarm	295
Micrometer palmer	200	Reactors	298 to 301	Tong for flasks	169
Microplate reader	245	Refrigerated cabinets	158 to 160	Tripod base stand	174
Microplate washer	245	Refrigerators	73 - 75 - 78 - 79	Tubes with screw cap	316
Microtiter	244	Rocking mixer	34		
MICROSCOPES	270 to 279	Roller & tilt mixer	33 to 34	U	
MONITOR AND CONTROL	293 to 295	Rotator	33	Ultrasonic cleaning baths	93 to 95
MUFFLE FURNACES	161 to 163	Rotatory evaporator	46	Ultrasonic homogeneizers	43
Multi-parameter water quality m	neter244	S		Ultraviolet sterilizer	22
N		Sand bath	85	V	
Nutritional analysers and water.	2/9 to 265	Scalpel blades		Vacuum dry oven	1/17 to 1/19
mutificinal analysers and water.	243 to 200	Scissors universal		Vacuum pump	
0		Scoop with handle		Vacuum sealer	
Oenological distiller unit	250 to 260	Sealers68		Video microcamera	
Orbital shakers		Self-sealing parafilm		Viscometer bath	
OVENS		Shaker, orbital and horizontal		Viscometer flow cup	
Oven,vacuum		Slide boxes		Viscometer rotational	
Ovens, refrigerated		Slides		Viscometers glass	
Ovens, sterilization		Spatulas		Viscometers glass	
Ovens, universal		Spectacles		W	
Overhead stirrer		Spectrophotomers		Water circulating unit	10
Overnous surrer		Sponge scrubber		Water distillers	
P		Stabilising ring		Wax dispenser	
Palmer micrometer	200	Staining tank		Weights for balances	
Paraffin wax cabinet		Stands		Westergreen	
Paraffin wax dispenser		Steam distillation Kjeldahl		Wire baskets	
Parasites faecal fixation/concent		Stereomicroscopes		Wile business	
Peristaltic pumps		Sterile stoppers			
Petri dishes		Stirring shafts			
Petri capsules incubator		Stirrer magnetic			
Ph electrodes		Storage cabinets for anatomy			
pH meters		Strip reader			
Photometers		Suctioner for pipettes			
Pipettes		Support arm for electrodes			
Pipettes rack		Support westergreen			
Polarimeter		oupport wootergroom	£L¬		
Polycarbonate tubes		T			
Polypropylene tubes		Table drain rack	109		
Poupinel sterilizer		Tanks,immersion thermostats			
Porcelain		Test tube racks			
Pumps centrifugal		Thermocycler			
ı unipo oonunuyal	J I	1 1101 11100 yoldi	∠J0		

	Doub No	Deat No	Doub No.	Doub No.	Doub No.	Doub No	Don't No.	Don't No.
2009006 150 100048 1907 1000783 237 000088 250 100048 200 000088 250 100088 200 100078 237 000008 250 100048 200 100078 237 000008 200 100078 237 000008 200 100078 237 000008 200 100078 230	Part No Page	Part No Page	Part No Page	Part No Page	Part No Page	Part No Page	Part No Page	Part No Page
70225 155 000500 255 000500 170 001913 230 101914 230 101914 230 101914 230 101915 137 101915 137 101915 137 101915 130 101918 130 101918 130 101918 130 101918 130 101918 130 101918 130 101918 130 101918 130 101918 130 101919 130 101918 130 101919 130 101919 130 101918 130 101919 130 101918 130 101919 130 101918 130 101919 130 101918 130 101918 130 101919 130 101918 130 101918 130 101918 130 101918 130 101918 130 101918 130 101918 130 101918 130 101918 130 101918								
1968 1968								
705911155 00053531-203 0100802214 010011-0299 0011150201 0101337171 0105873930 0100802172 923272151 100030331-203 100806172-33 100110201 1011150201 101333173 101011173 101013								
9739152 255 1000557 3.1-210 1001068 739 100115 291 100115 201 100133 730 100158 80 1001771 300 1000001 1273 1000003 3.1-210 1000006 730 1001006 730								
902222 131 1000003 31-730 1000008 170-213 1001016 279 1001015 270 1001016 170 1000000 170-213 1001010 270 1001010 170 1000000 170-213 1001010 170 1000000 170-213 1001010 170 170								
1000002								
1000091 31-220								
1000011								
1000013								
1000013								
1000015 12-95 1000584 138 1000828								
100016 192-259 1000564 381 1000830 186 1000183 277 100177 177 178 1001559 273 1001579 188 1000718 32-20 1000719 33-203 1000566 381 1000832 186 1000832 37-203 100184 37-204 100183 273 1001541 1.195 201719 32-20 100072 37-203 1000570 181 1000852 186 1000858 37 100184 47 100183 273 1001541 1.195 100173 188 1000267 37-203 1000571 181 1000855 177 1000855 177 100184 47 100189 170-214 1001833 273 1001541 188 100173 178 1001067 179 100173 178 1001067 179 100173								
10000191 31-203 1000565 381 1000831 136 1000832 37 1001191 177-214 1001801 213 1001510 179 178 188 1000825 38 1000832 38 1001830 277 100180 170-214 1001812 213 1001542 188 1001732 178 1000825 38 1000825 38 1000832 38 1001830 277 100180 170-214 1001832 213 1001542 188 1001733 178 1000825 38 1000835 177 1001804 47 100181 170-214 1001832 213 1001544 188 1001733 178 1000825 178 1000835 177 100182 173 1001835 173 1001830								
1000026	1000016198	1000565181	1000831186			1001360213		
1000025		1000566181						1001720168
1000029	100002031-203	1000570181	100085263	1001039287	1001190170-214	1001362213	1001542188	1001726298
10000032	100002563	1000571181	100085363	100104447	1001191170-214	1001363213	1001543188	1001733198
1000033	100002663	1000572181	1000855177	100104547		1001364213	1001544188	1001734176
1000033	1000027104-293	1000573181	1000856178	100106131-203	100119989		1001545188	1001735176
1000037	100003231-203	1000574181	1000857178	100106231-203	100120089-89	1001366215-278		1001736176
1000089	1000033214	1000575181	1000858178	100106331-203	100120189-89	1001367215	1001556112	1001737176
	1000037166	1000576181-181	1000859179	100106431-203	100120289-103	1001368216	1001557115-116	10017389
1000069	100003931-203	1000577181-181	1000860179	1001070287	100120389-103		1001563184	
	100004531-203							
100063. 170								
1000064 170								
1000067 1.70 1000606								
1000093 90-165 1000607 185 1000607 214 1001091 176 1001221 188 1001397 315 1001588 178 1001762 298 1000096 224 1000609 185 10006072 89-296 1001095 168 1001223 319 1001422 259 1001588 178 1001767 298 10010101 185 1000611 185 1000675 195 1001095 168 1001224 287 1001423 188 1001590 169 1001770 298 10010101 185 1000671 195 1000675 195 1001097 168 1001225 287 1001433 180 1001599 169 1001770 298 10010101 230-266 1000612 186 1000677 196 1001098 168 1001230 32 1001435 202 1001599 179 1001781 200 1001010 200-236 1000672 181 1000687 196 1001098 168 1001231 32 1001435 202 1001593 179 1001787 298 10010100 200-236 1000672 181 1000689 3-293 1001101 168 1001234 92 1001435 202 1001593 179 1001787 298 1000120 200-236 1000672 181 1000689 3-293 1001101 168 1001234 92 1001438 202 1001598 180 1001788 298 1000208 175 1000662 181 1000689 3-293 1001102 171 1001235 92 1001439 202 1001596 180 1001799 298-299 1000208 175 1000662 181 1000693 31-203 1001104 176 1001252 186 1001440 202 1001598 180 1001799 298-299 1000208 175 1000664 259 1000603 31-203 1001105 187 1001252 186 1001440 202 1001599 180 1001799 298 1000238 175 1000644 251 1000690 31-203 1001151 187 1001252 186 1001453 292 1001599 180 1001799 298 1000238 175 1000644 251 1000690 31-203 1001151 187 1001252 186 1001453 292 1001599 180 1001799 298 1000238 175 1000644 251 1000690 31-203 1001151 187 1001252 186 1001453 292-200 1001599 180 1001799 298 1000255 138 1000665 170 1000690 180 1001118 187 1001255 299 1001455 292-200 1001599 180 1001799 298 1000255 138 1000665 170 1000665 180 1001118 187 1								
1000100								
1000100								
1000101								
1001014 230-236 1000612								
1000105 170-215 1000620 181 1000893 194 1001100 168 1001231 32 1001436 202 1001593 179 1001787 298 10010100 208-299 10010123 289 1000621 181 1000895 32-293 1001101 168 1001234 92 1001438 202 1001595 180 1001789 298-290 10010123 289 1000623 181 1000895 33-293 1001102 171 1001235 92 1001438 202 1001595 180 1001789 298-299 1000206 175 1000624 181 1000898 31-203 1001104 176 1001251 186 1001440 202 1001596 180 1001790 298-299 1000208 175 1000625 181 1000990 31-203 1001105 176 1001252 186 1001453 292 1001597 193 1001793 298 1000236 175 1000641 261 1000990 31-203 1001115 187 1001254 181 1001454 92-290 1001598 193 1001794 298 1000236 175 1000641 261 1000990 31-203 1001116 187 1001255 170-199 1001455 92-290 1001600 180 1001795 298 1000236 175 1000642 261 1000990 31-203 1001118 187 1001255 170-199 1001455 92-290 1001600 180 1001795 298 1000255 193 1000664 259 1000906 180 1001118 187 1001257 296 1001457 92-290 1001601 180 1001796 298 1000257 213 1000664 259 1000907 180 1001119 187 1001258 297 1001459 92-290 1001601 32 1001801 380 1000278 213 1000668 175 1000999 180 1001121 187 1001258 297 1001459 92-290 1001601 287 1001810 375 1000284 169 1000688 175 1000997 38-92 1001128 193 1001266 297 1001460 165 1001612 287 1001810 75 1000294 176 1000688 175 1000998 38-92 1001128 193 1001266 297 1001460 165 1001612 287 1001810 72 1000395 104 1000688 175 1000998 38-92 1001128 193 1001266 297 1001460 165 1001610 288 1001813 72 1000395 104 1000707 289 1000988 38-92 1001128 193 1001266 297 1001466 165 165 160 1001610 288 1001813 72 1000395 104 1000707								
1000106								
100120 89 1000622 181 1000895 32-293 1001101 168 1001234 92 1001438 202 1001595 180 1001789 298-290 100100235 181 1000897 31-203 1001102 171 1001235 92 1001438 202 1001596 180 1001790 298-299 1000206 175 1000624 181 1000990 31-203 1001104 176 1001251 186 1001440 202 1001598 193 1001592 298 1000217 179-179 100655 258 1000901 31-203 1001105 176 1001252 186 1001453 290 1001598 193 1001793 298 1000238 175 1000641 261 1000902 31-203 1001115 187 1001254 191 1001454 92-290 1001599 180 1001795 298 1000238 175 1000642 261 1000903 214 1001117 187 1001255 170-199 1001455 92-290 1001600 180 1001795 298 1000255 133 1000664 259 1000906 180 1001118 187 1001255 170 100456 92-290 1001602 180 1001801 80 1000255 133 1000665 170 1000907 180 1001119 187 1001255 297 1001457 92-290 1001602 180 1001806 80 1000275 213 1000668 175-196 1000998 180 1001120 187 1001256 297 1001459 92-92 1001611 287 1001806 80 1000284 169 1000688 175-196 1000917 389 1001120 187 1001262 297 1001460 165 1001612 287 1001811 75 1000284 169 1000688 175-196 1000917 38-92 1001126 193 1001262 297 1001465 165 1001612 287 1001811 75 1000294 176 1000689 175 1000997 38-92 1001126 193 1001262 297 1001466 168 1001617 286 1001813 72 1000347 298 1000688 175 1000997 38-92 1001126 193 1001268 297 1001466 168 1001617 286 1001813 72 1000341 104 1000689 175 1000998 287 1001130 198 1001268 297 1001466 168 1001617 288 1001815 298 1000395 104 1000705 289 1000985 287 1001132 201-222 1001268 297 1001469 170-213 1001627 288 1001852 298 1000431 179 1000716 168 1000985 287 1001133 201-222 1001286 29								
1000123 2.89 1000623 181 1000897 31-203 1001102 171 1001235 92 1001439 2.02 1001596 180 1001790 298-299 1000208 175 1000624 181 1000990 31-203 1001105 176 1001251 186 1001440 2.02 1001597 193 1001792 2.98 1000271 179-179 1000635 258 1000990 31-203 1001105 176 1001252 186 1001433 2.99 1001598 193 1001793 2.98 1000236 175 1000644 261 1000902 31-203 1001115 187 1001255 176-199 1001454 92-290 1001599 180 1001795 2.98 1000238 175 1000642 261 1000993 214 1001117 187 1001255 176-199 1001456 92-290 1001600 180 1001796 2.98 1000259 133 1000646 259 1000906 180 1001118 187 1001257 2.96 1001457 92-290 1001601 180 1001796 2.98 1000259 133 1000661 170 1000907 180 1001119 187 1001258 2.97 1001458 92-290 1001601 32 1001806 80 1000255 133 1000662 170 1000908 180 1001120 187 1001256 2.97 1001458 92-290 1001610 32 1001806 80 1000284 169 1000685 175-196 1000912 224 1001122 187 1001260 297 1001460 165 1001612 2.87 1001811 75 1000294 176 1000688 175 1000973 3.992 1001126 193 1001263 297 1001462 165-165 1001612 2.86 1001813 72 1000394 104 1000688 175 1000998 3.8-92 1001129 193 1001265 297 1001465 194 100161 2.86 1001813 72 1000395 104 1000688 175 1000998 3.8-92 1001129 193 1001265 297 1001465 194 1001620 158 1001813 72 1000395 104 1000707 289 1000985 287 1001130 198 1001266 297 1001465 194 1001620 288 1001840 301 1000413 179 1000718 232 1000985 287 1001131 201-222 1001268 297 1001468 170-213 1001624 288 1001840 301 1000413 179 1000718 232 1000985 287 1001130 201-22 1001266 297 1001467 170-213 1001626 288 1001840 301 1000433 186 1000786 231 1000985 286								
1000206								
1000208								
1000217 179-179 1000635 .258 1000901 .31-203 1001115 .187 1001254 .191 1001454 .92-290 1001599 .180 1001794 .298 1000236 .175 1000641 .261 1000902 .31-203 1001116 .187 1001255 .170-199 1001455 .92-290 1001600 .180 1001795 .298 1000251 .193 1000646 .259 1000906 .180 1001118 .187 1001255 .296 1001457 .92-290 1001601 .180 1001801 .80 1000255 .193 1000661 .170 1000907 .180 1001119 .187 1001258 .297 1001458 .92-290 1001611 .32 1001801 .80 1000283 .169 1000684 .175-196 1000909 .180 1001121 .187 1001260 .297 1001460 .165 1001611 .287 1001810 .75 1000284 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
1000236. 175 1000641 261 1000902 31-203 1001116. 187 1001255. 170-199 1001455 92-290 1001600 180 1001795. 298 1000251. 193 1000646. 259 1000906. 180 1001118. 187 1001257. 296 1001457. 92-290 1001602. 180 1001801. 80 1000259. 193 1000661. 170 1000907. 180 1001119. 187 1001258. 297 1001459. 92-290 1001610. 32 1001801. 80 1000275. 213 1000662. 170 1000988. 180 1001121. 187 1001259. 297 1001459. 92-290 1001610. 32 1001801. 80 1000283. 169 1000684. 175-196 1000999. 180 1001121. 187 1001260. 297 1001460. 165 1001611. 287 1001811. 75 1000284. 169								
1000238 .175 1000642 .261 1000903 .214 1001117 .187 1001256 .194 1001456 .92-90 1001601 .180 1001796 .298 1000251 .193 1000646 .259 1000907 .180 1001119 .187 1001257 .296 1001457 .92-290 1001602 .180 1001801 .80 1000275 .213 1000662 .170 1000908 .180 1001120 .187 1001259 .297 1001458 .92-290 1001611 .287 1001810 .75 1000283 .169 1000684 .175-196 1000909 .180 1001121 .187 1001260 .297 1001460 .165 1001612 .287 1001811 .75 1000284 .169 1000685 .175-196 1000917 .244 1001126 .193 1001261 .297 1001461 .165 1001613 .287 1001812 .27 1001462 .165-165 1001								
1000251 193 1000646 259 1000906 180 1001118 187 1001257 296 1001457 .92-290 1001602 .180 1001801 .80 1000259 .193 1000661 .170 1000907 .180 1001119 .187 1001258 .297 1001458 .92-290 1001610 .32 1001806 .80 1000275 .213 1000662 .170 1000998 .180 1001120 .187 1001259 .297 1001459 .92-92 1001611 .287 1001810 .75 1000284 .169 1000685 .175-196 1000912 .224 1001122 .187 1001261 .297 1001460 .165 1001613 .287 1001811 .75 1000285 .168 1000686 .175-196 1000973 .156 1001126 .193 1001262 .297 1001462 .165-165 1001616 .286 1001813 .72 1000347 .289								
1000259 193 1000661 170 1000907 180 1001119 187 1001258 297 1001458 92-290 1001610 32 1001806 80 1000275 213 1000662 170 1000908 180 1001120 187 1001259 297 1001459 92-92 1001611 287 1001810 .75 1000283 169 1000684 175-196 1000912 224 1001121 187 1001260 297 1001460 165 1001612 287 1001811 .75 1000284 169 1000685 175-196 1000973 .156 1001126 193 1001262 297 1001461 .165-165 1001616 286 1001813 .72 1000294 176 1000687 175 1000978 .38-92 1001127 193 1001263 297 1001464 .168 1001616 .286 1001814 .72-73 1000394 104 1000689								
1000275 213 1000662 170 1000908 180 1001120 187 1001259 297 1001459 92-92 1001611 287 1001810 .75 1000283 169 1000684 175-196 1000099 180 1001121 187 1001260 297 1001460 165 1001612 287 1001811 .75 1000284 169 1000685 175-196 1000912 224 1001126 193 1001261 297 1001461 165-165 1001613 287 1001812 .75 1000284 168 1000686 175-196 1000973 .156 1001126 193 1001262 297 1001462 .165 1001616 .286 1001813 .72 1000347 289 1000688 .175 1000979 .38-92 1001128 193 1001264 .297 1001465 .168 1001617 .286 1001815 .72 1000394 .104 1000689								
1000283 169 1000684 175-196 1000909 180 1001121 187 1001260 297 1001460 165 1001612 287 1001811 .75 1000284 169 1000685 175-196 1000912 224 1001126 187 1001261 297 1001461 165-165 1001612 287 1001812 .75 1000285 168 1000686 175-196 1000973 156 1001126 193 1001262 .297 1001462 165-165 1001616 286 1001813 .72 1000347 .289 1000688 .175 1000979 38-92 1001128 .193 1001264 .297 1001465 .168 1001617 .286 1001815 .72 1000394 .104 1000689 .175 1000980 .38-92 1001129 .198 1001265 .297 1001466 .191 1001620 .158 1001822 .298 1000395 .104 10								
1000284 169 1000685 175-196 1000912 224 1001122 187 1001261 297 1001461 165-165 1001613 287 1001812 .75 1000285 168 1000686 175-196 1000973 156 1001126 193 1001262 297 1001462 165-165 1001616 286 1001813 .72 1000294 176 1000687 175 1000978 38-92 1001127 193 1001263 297 1001464 168 1001617 286 1001814 .72-73 1000347 289 1000688 175 1000990 38-92 1001129 198 1001264 297 1001465 168 1001619 158 1001815 .72 1000394 104 1000705 289 1000981 38-92 1001130 198 1001265 297 1001466 191 1001620 158 1001822 298 1000396 104 1000707								
1000285 168 1000686 175-196 1000973 156 1001126 193 1001262 297 1001462 165-165 1001616 286 1001813 .72 1000294 176 1000687 175 1000978 38-92 1001127 193 1001263 297 1001464 168 1001617 286 1001814 .72-73 1000347 289 1000688 175 1000990 38-92 1001129 198 1001264 297 1001465 168 1001619 158 1001815 .72 1000394 104 1000689 175 1000980 38-92 1001129 198 1001265 297 1001466 191 101620 158 1001822 298 1000395 104 1000705 289 1000981 38-92 1001130 198 1001266 297 1001467 170 1001624 287 1001825 298 1000396 104 1000707 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>								
1000294 176 1000687 175 1000978 38-92 1001127 193 1001263 297 1001464 168 1001617 286 1001814 72-73 1000347 289 1000688 175 1000999 38-92 1001128 193 1001264 297 1001465 168 1001619 158 1001815 72 1000394 104 1000689 175 1000980 38-92 1001129 198 1001265 297 1001466 191 1001620 158 1001822 298 1000395 104 1000705 289 1000981 38-92 1001130 198 1001266 297 1001467 170 1001624 287 1001825 298 1000396 104 1000707 289 1000985 287 1001131 201-222 1001267 297 1001468 170-213 1001625 288 1001840 301 100412 179 1000716 1								
1000347 289 1000688 175 1000979 38-92 1001128 193 1001264 297 1001465 168 1001619 158 1001815 72 1000394 104 1000689 175 1000980 38-92 1001129 198 1001265 297 1001466 191 1001620 158 1001822 298 1000395 104 1000705 289 1000981 38-92 1001130 198 1001266 297 1001467 170 1001624 287 1001825 298 1000396 104 1000707 289 1000985 287 1001131 201-222 1001267 297 1001468 170-213 1001625 288 1001840 301 1000412 179 1000716 168 1000986 287 1001132 201-222 1001268 297 1001469 170-213 1001625 288 1001841 301 100413 179 1000718 <								
1000394 104 1000689 175 1000980 38-92 1001129 198 1001265 297 1001466 191 1001620 158 1001822 298 1000395 104 1000705 289 1000981 38-92 1001130 198 1001266 297 1001467 170 1001624 287 1001825 298 1000396 104 1000707 289 1000985 287 1001131 201-222 1001267 297 1001468 170-213 1001625 288 1001840 301 1000412 179 1000716 168 1000986 287 1001132 201-222 1001268 297 1001469 170-213 1001625 288 1001841 301 1000413 179 1000718 232 1000987 287 1001133 201-222 1001296 103 1001470 170-213 1001626 288 1001852 298 1000431 213 1000725 32-234 1000988 287 1001134 196-215 1001298 297								
1000395 104 1000705 289 1000981 38-92 1001130 198 1001266 297 1001467 170 1001624 287 1001825 298 1000396 104 1000707 289 1000985 287 1001131 201-222 1001267 297 1001468 170-213 1001625 288 1001840 301 1000412 179 1000716 168 1000986 287 1001132 201-222 1001268 297 1001469 170-213 1001626 288 1001841 301 1000413 179 1000718 232 1000987 287 1001133 201-222 1001296 103 1001470 170-213 1001627 288 1001852 298 1000431 213 1000725 32-234 1000988 287 1001134 196-215 1001298 297 1001471 170-213 1001627 288 1001852 298 1000434 186 1000780 193 1000990 287 1001138 218 1001298 296								
1000396								
1000412 179 1000716 168 1000986 287 1001132 201-222 1001268 297 1001469 170-213 1001626 288 1001841 301 1000413 179 1000718 232 1000987 287 1001133 201-222 1001296 103 1001470 170-213 1001627 288 1001852 298 1000431 213 1000725 32-234 1000988 287 1001134 196-215 1001298 297 1001471 170-213 1001628 288 1001858 75-159 1000433 186 1000780 193 1000990 287 1001138 218 1001299 296 1001472 170-213 1001629 259 1001859 298 1000434 186 1000781 231 1000995 286 1001139 218 1001306 73 1001478 205 1001630 259 1001860 73								
1000413								
1000431 213 1000725 32-234 1000988 287 1001134 196-215 1001298 297 1001471 170-213 1001628 288 1001858 75-159 1000433 186 1000780 193 1000990 287 1001138 218 1001299 296 1001472 170-213 1001629 259 1001859 298 1000434 186 1000781 231 1000995 286 1001139 218 1001306 73 1001478 205 1001630 259 1001860 73								
1000433186 1000780193 1000990287 1001138218 1001299296 1001472170-213 1001629259 1001859298 1000434186 1000781231 1000995286 1001139218 100130673 1001478205 1001630259 100186073			1000988287	1001134196-215		1001471170-213	1001628288	
1000434186 1000781231 1000995286 1001139218 100130673 1001478205 1001630259 100186073			1000990287	1001138218		1001472170-213		
1000442232 1000782231 1000996288 1001140218 100130773 1001479205 1001631259 100186172	1000434186					1001478205		
	1000442232	1000782231	1000996288	1001140218	100130773	1001479205	1001631259	100186172

Part No Page	Part No Page	Part No Page	Part No Page	Part No Page	Part No Page	Part No Page	Part No Page
100186278	1010280178	1026124184	1125124193	1581134310	2000025140-150	210118175	3000553298-303
100186378	1010313177	1026148184	1191100180	1581205310	2000030147	210118275	3000554298-303
1001879299	1010318177	1026412184	1196120177	1581209310-312	2000062145	210127072	300058785
1001880299	1010321177	1026424184	1196150177	1581304310	2000063145-153	210127172	300058885
1001892299	1010420169	1026448184	1198302181	1581305310	2000064145-153	210127272	300061794
1001915298	1010430169	1027680177	1198402181	1581404310	2000071146	210127372	300068394
1001926168	1010440169	1028130169	1198502181	1581405310	2000072143	210127473	3000718234
1001933298	1010450169	1028140169	1198602181	1581524310	2000073143	210127573	3000778105
1001943313 1001947298	1012126180 1012128180	1028230169 1028240169	1276120177 1276150177	1581525310 1581704310	2000074143 2000075143	210127874 210127974	3000788197-214 3000820262
1001960299	1012131205	1028301205	1276210177	1581705310	2000073143	210128074	3000821262
1001961299	1012132205	1028302205	1277100177	1581814310	2000091137	210128375	3000822262
1001962302	1012133205	1028303205	1277150177	1581942310	2000095143	210128475	3000823262
1001963302	1012134205	1028304205	1277210177	1581944310	2000238153	210128672	300083794
1001974298	1012135205	1028305205	1278140177	1581945310	2000239153	210128773	300083995
1002010175	1012200207	1028710174	1394855171	1581952310	2000240153	210128874	300085033
1002012175	1012201207	1040913168	1500100310	1581954310	2000250140	210128975	300086595
1002014175	1012202207	1040919168	1501028310	1581962310	2000251140	2101508160	300086695 300086795
1002126180 1002128180	1012203207 1015161205	1040929168 1040935168	1501103310 1501106310	1581964310 1581965310	2000252140 2000253140	210151178 210151279	300086895
1002280234-236	1015162205	1042044230	1501113310	1581974310	2000255140	210151378	300086995
1002290234-236	1015163205	1042066230	1501116310	1581975310	2000261150	210151479	3000896294
1002310175	1015164205	1051837218	1501118310	1581984310	2000262150	2101515159	300089732-293
1002312175	1015165205	1052010219	1501123310	1600230310-313	2000263150	2101517160	300091095
1002314175	1017181205	1052012186	1501126310	1630233313	2000264150	2101518160	3000914262
100241863-193	1017182205	1052014219	1501128310	1640234313	2000368162	210151979	3000915262
100241963-193	1017183205	1052016186	1501133310	1650000310	2000369162	210152078-160	300091684
100242063-193	1017184205	1052022186 1052026186	1501136310	1650050310	2000370162 2000376161	2101618158	300091732-84
100242661 1002429168	1017185205 1019160180	1052050216	1501206310 1501223310	1650100310 1650200310	2000377161	210162173 210162778	3000919233 3000920233
1002521183	1019170180	1052100216	1501226310-312	1650300310	2000381137	2200850163	3000921233
1002531185	1019180180	1087102175-196	1501306310	1660223313	2000787136	2200851163	300095738-156
1002532185	1019201205	1087122175-196	1501308310	1681154310	2000912136	2200852163	300095877-77
1002801169	1019202205	1087142175-196	1501326310	1740100312	2000963155	2200853163	300097437
1002802169	1019203205	1087162175-196	1501328310	1750224312	2000964155	2200854163	300097537
1002874174	1019204205	1087182175-196	1501406310	1760200312	2000965155	2200855163	300097637
1002875174	1019205205	1087202175-196	1501408310	1770001312	2001251141	2200856163	300097737
1002876174 1002877174	1019260180 1019270180	1090100296 1091100180	1501416310 1501418310	1770002312 1770003312	2001252141 2001253141	2200857163 3000156234	300098077 300098177
1002878174	1019830181	1092050296	1501706310	1770003312	2001254141	300035633	300100150
1002932168-300	1019840181	1092100180	1501708310	1780225312	2001255141	300040084	300100750
1004012185	1019850181	1095060296	1501806310	1800500314	2001261151	300040184	300100492
1004024185	1019860181	1095100296	1501808310	1800503314	2001262151	300040285	300101037
1004540168	1021210180	1095150296	1501816310	1800505314	2001263151	3000416224	300101138
1004713198-208	1021212180	1095210178	1501818310	1800508314	2001264151	300043536	3001172156
1004715198-208	1021215180	109525090-296	1501946310	1951201317	2001265151	3000438216	300120894
100477163-193 100477263-193	1024132192 1024148192	1095360296 1096050296	1501956310 1501963310	1951202317 1951205317	2001406146 2001477162	300044533 300044726-229	3001214105 300122134
100477363	1024188192	1096100296	1501966310	1951206317	2002371153	300044726-229	300125281
1005207219	1024261205	1096120177	1501967310	1951210317	2002372153	300044926-229	3001295103
1005208219	1024262205	1096150177	1501968310	1951211317	2002961145	300045026-229	300130147
1005209219	1024263205	1096190178	1501976310	1951225317	2002962145	300045990-217	3001373103
1008110174	1024264205	1097050296	1501978310	1951250317	2002971145	300051294	300142392-290
1008112174	1024265205	1097100297	1501986310	1951300313	2002972145	300051394	3001452290
1008114174	1025115193	109710169	1501988310	1951301313	2003721145	300051494	300148893
1008116174 1009100296	1025121193 1025124193	109710269 1098302181	1501998310 1561401310	1951302314 2000002137-146	2003741145 2003743145	300051594 300054099	300172333 3001752298
1009160180	1025412186	1098402181	1561521310	2000002137-146	2005163143	3000543100	300182033
1009170180	1025424186	1102100178	1561811310	2000003137-140	2005164143	3000544100	300221533
1009180180	1025500184	1102120178-178	1561941310	2000011140-150	2005165143	3000545101	3002301234
1009260180	1025512184	1102140178	1561951310	2000012140-150	2005166143	3000546101	3002302234
1009270180	1025524184-316	1102160178	1561961310	2000013140-150	2005167143	3000547101	300251233
1009280180	1025548184	1102200178	1561971310	2000015140-150	2005168143	3000548102	300301133
1009830181	1025812184-291	1102240178	1561981310	2000021140-150	2005169143	3000549102	3003141226-227
1009840181	1025824184	1102280178	1581104310	2000022140-150	2005170143 210104075	3000550103	3003142226-227
1009850181 1009860181	1025848184 1026112184	1125115193 1125121193	1581114310 1581124310	2000023140-150 2000024140-150	210104075	3000551103 3000552303	3003145226-227 3003178231
1000000101	1020112104	1120121133	1001124010			3000002000	2000110ZU1

Dort No	Dort No. Dogo	Dort No. Dogo	Dort No	Dort No. Dogo	Dort No	Dort No. Dogo	Dort No. Dogo
Part No Page	Part No Page	Part No Page	Part No Page	Part No Page	Part No Page	Part No Page	Part No Page
3004192226-229 3004195226-229	4001054252 4001055252	4120018241 4120019260	4312006239-240	5004016316 5004017316	5100018241 5100019241	5293070305 5293090305	5310004208 5310005208
300525033	4001056252	4120020240	4312015243	5004018316	5100019241	5293110305	5310005208
300610033	4001057252	4120021240	4313030244	5004019316	5100021241-260	5293125305	5310007208
3009200296	4001058252	4120025239	4313040260	5004020316	5100022241	5293150305	5310008208
3031410226-227	400122158-59	4120026239	4512009243-256	5004021316	5100023241-260	5297001305	5310009208
3031420226-227	4001425258	4120029256	4603010265	5004022316	5100024241	5297002305	5310010208
3031430226-227	4001473259	4120030241	4903000263	5004023316	5100025241	5297003305	5310011208
3031450226-227	4001489147	4120031241	4903001263	5004024316	5109000238	5297004305	5310012208
3031470226-228	4001490148	4120032241	4903002264	5004025316	5109001238	5297005305	5310013208
3031471226-228	4001528252	4120033260	4903004263	5004026316	5109002238	5297006305	5310014208
3031472226-228	4001538261	4120034260	4903005264	5004027316	5109003238	5297007305	5310015208
3031473226-228	400161051-230	4120101247	4903006263	5004028316	5109004238	5297008305	5310016208
3031474226-228	400161151-230	4120102247	4903007264	5004030317	5109100108	5297009305	5310017208
3031710231	400161251-230	4120103247	4903008264	5004031317	5109101108	5297010305	5310018208
3031715231	4001613259	4120104247	4903011265	5004032317	5109102108	5297011305	5310019208
3041910226-229	4001626259	4120107247	4903012265	5004033317	5109103108	5297012305	5310020208
3041920226-229	4001676157	4120108247	4903014265	5004034317	5109104108	5297013305	5310021208
3049110226-229	4001724253-254	4120109247	4903015263	5004035317	5109105108	5297014305	5310022208
3049120226-229	400172963-265	4120113256-295	4903016264	5004050132	5109106108	5297015305	5310023208
3049150226-229	4001730265	4120114247	4903017264	5004051132	5109107108 5109108108	5297016305	5310024208
3314100226-227 3314200226-227	400173467 400173567	4120117241 4120120247	4905002224 5000011196-196	5004052132 5004053132	5109200107	5297017305 5297018305	5310025208 5310026208
3352104220-227	400173766	4120121247-248	5000011190-190	5004054132	5109997245	5297019305	5310027208
3352204297	400174556	412012166	5000042199	5004055132	5109999245	5297020305	5310027208
3352604297	400175657	412012467	5000044199	5004056132	5110000245	5297021305	5310030208
3491100226-229	400175757	4120125247	5000045199	5004057132	5110020242	5297022305	5310031208
3491200226-229	400175858	4120126247	5000046199	501000080-267	5110021242	5297023305	5310032208
3521015297	400175958	4120127247	5000051285	501000180-267	5110022242	5301070304	5310033208
3522015297	400177059	4120129248	5000052285	501000280-267	5110023242	5301090304	5310034208
3523015297	400177159	4120160248	5000750197	501000380-267	5110024242	5301110304	5310035208
4000200231	400177259	4120161248	5001613283	501000480-267	5110025242	5301125304	5310036208
4000474149	400200062	4120162248	5001614283	5011148197	5110026242	5301150304	5310100201-253
4000475149	400241664	4120168247	5001615283	5014415197	5110027242	5301180304	5310101201-253
4000476149	400241759	4120174247	5001616283	5014449197	5110028242	5302070304	5310102201
4000490217	4002430255	4120177247	5001617283-284	5016041298	5110029242	5302090304	5310500200
4000501217	400251661	4120183244	5001619283-284	5020104190	5110033242	5302110304	5310501200
4000507252-261	400251861	4120184244	5001621283-284	5020105190	5113640207	5302125304	5310502200
4000508252-261	400251961	4120185244	5001623283-284	5020106190	5113641207	5302150304	5310503200
4000509252-261	4002627253	4120186244	5001625283	5022010112-260	5113644207	5302180304	5310504200
4000599258	4002628157	4120187244	5001626283	5028193199	5113646207	5303070304	5310505200
4000600258	4002629153	4120189244	5001627283	5028195199	5120220278	5303090304	5310506200
4000601258	4002841257	4120190244	5001628283	5028196199	5120221278	5303110304	531201035
4000623258 4000624258	4002842257 4002851254	4120191244 4120192244	5001629283-284	505092139-204	5120230288 5130501304	5303125304	531201135
4000629251	4005071252-261	4120193244	5001631283 5001632283	505093239-204 505093339-204	5130502304	5303150304 5303180304	531201235 531201335
4000630251	4005072252	4120194244	5001633283	505093439-204	5150502304	5304070304	531201435
4000631251	4005081252-261	4120220248	5001634283	505093539-204	5150502304	5304090304	531201535
4000632157	4005082252	4120222248	5001642284	505093639-204	5150503304	5304110304	531201635
4000633198-252	4005091252-261	4120223248	5001643284	505093739-204	5151001304	5304125304	531201735
4000634233-258	4005092252	4120300246	5001644284	505093839-204	5151002304	5304150304	531211341
4000635157	4042300252-253	4120400246	5004000316	505093939-204	525203752	5304180304	531213041
4000638261	410004468	4120401246	5004001316	5050950204	525203852	5305070304	531213141
4000639261	410004569	4120410248	5004002316	5050951204	525203952	5305090304	531213241
4000640261	410004669	4120411248	5004003316	5050952204	525204052	5305110304	531213341
4000643261	410004768-211	4120500246	5004004316	5050953204	525330050	5305125304	531213441
4000644261	410004969	4120510248	5004005316	5050954204	525340050	5305150304	531213541
4000645261	4100050211	4120600247	5004006316	5057011173	525350050	5305180304	531213641
4000648259	410005368	4120700244	5004007316	5057022165	525360050	5306070304	531213742
4001045252-253	410007569-211	4120801300-301	5004008316	505960043	525390050	5306090304	531213842
4001047251	410010069-211	4120802300-301	5004009316	505960143	5291047305	5306110304	5313000278
4001048251	410020069-211	4120803300-301	5004010316	505960243	5291070305	5306125304	5313003272 5313004 272-273
4001049251	4100519218	4120823300-301	5004011316 5004012316	505960343	5291090305 5291110305	5306150304 5306180304	5313004272-273
4001050252 4001051252	410171268 4120009243	4120824300-301 412905047-300	5004013316	5100014241 5100015241	5291125305	5310001208	5313007272-273 5313013270
4001052252	4120009243	4312001239	5004014316	5100015241	5291150305	5310001208	5313015270-271
4001053252	4120013243	4312004239	5004015316	5100017241	5293047305	5310002208	5313016270-271
TUU 1 UUU	1120010244	TU12004203	JUUTU1U	3100011241	3200041000	3010000200	3010010210

David No	Don't No.	Deat No	Don't No.	Doub No.	Don't No.	Don't No.	Don't No.
Part No Page	Part No Page	Part No Page	Part No Page	Part No Page	Part No Page	Part No Page	Part No Page
5313017273	5490050221	5600066291	5726519206	5838110269	5838178269	5901986275	600014186
5313018273	5490053221	5600067291	5726525206	5838111269	5838179269	5901988276	600014286
5313019273	5490054221	5600068291	5752395132	5838112269 5838113269	5838180269	5901990277	6000170171
5313021275 5313022278	5490055221 5490056221	5600069291 5600070291	5752396132 5752397132	5838114269	5838181269 5838182269	5902008275 5902014277	6000190172 6000220171
5313026274	5490057221	5600071291	5752398132	5838115269	5838183269	5902074275	6000235171
5313027272	5490058221	5600072291	5752399132	5838116269	5838184269	5903023294	6000270171-227
5313028272	5490059221	5600073291	5752401132	5838117269	5838185269	5903025294	6000278171-227
5313029276	5490060221	5600074291	5752421132	5838118269	5838186269	5903029295	6000291181
5313034272-273	551503048	5600075291	5752561132	5838119269	5838187269	5903030294	600038586
5313035272-273	551503148	5600076291	5752571132	5838120269	5838188269	5903049265	600038686
5313044271	5600000268	5600396215-278	5752951132	5838121269	5838189269	5904009220	600038786
5313045271	5600001291	5600397215-278	5752988132	5838122269	5838190269	5904010220	600038886
5313046273	5600002291	5600398215-278	5753201132	5838123269	5862301269	5904011220	600038986
5313055275	5600003291	5600399215-278	5753205132	5838124269	5862302269	5904012220	600039099-104
5313060275	5600004291	5600400215-278	5753241132	5838125269	5862303269	5904013220	600039199-104
5313061275	5600005291	5601050189	5753243132	5838126269	5862350269	5904014220	600039299-104
5313062275	5600006291	5601051189	5753401132	5838127269	5862401269	5904015220	600039399-104
5313063275	5600007291	5601052189	5753411132	5838128269	5862402269	5904017220	600041039-173
5313064276-277	5600008291	5601053189	5753501132	5838129269	5862403269	5904018220	6000411173
5313065276	5600009291	5601054189	5753512132	5838130269	5862450269	5905006220	600041239
5313066276	5600010291	5601055189	5790044220	5838131269	5900010220	5905027221	6000482172
5313067276-277	5600011291	5601057209	5800038210	5838132269	5900019216	5905028221	6000534172
5313068276-277	5600012291	5609401281-281	5800042210	5838133269	5900020220	5905029221	6000535172
5313069277	5600013291	5609402281-281	5800044210	5838134269	5900100220	591000949	6000567181
5313070275	5600014291	5609404281	5800047210	5838135269	5900200220	5910049300-301	6000568181
5313071275	5600020292	5609405281	580006081	5838136269	5900499295	5910062300-301	6000569181
5313072275	5600021292	5609510285	580006181	5838137269	5900500295	591010048	6000570181
5313073275	5600022292	5609511285	581000044	5838138269	5900501295	591010148	600061938
5313075272	5600023292	5609512285	581000144	5838139269	5900600165	591010649	600070885
5313076272	5600024292	5609513285	581000244	5838140269	5900601200	591010749	600070985
5313077272	5600025292	5609601209	581000344	5838141269	5900602200	591010849	600071089
5313081271	5600026292	5609602209	581000444	5838142269	5900603200	591011049	600071189
5313082271	5600027292	5609603209	581000544	5838143269	590061051	591012049	600071289
5313083271	5600028292	5609604209	581000744	5838144269	590061151	591012149	600071489
5313084271	5600029292	5715202132	581010044	5838145269	590061251	591012249	600071588
5313089271	5600030292	5715203132	581010144	5838146269	590061351	591012349	600071688
5313090270-270	5600031292	5726000206-268	581010244	5838147269	590062048	591012449	6000719234
5313091270	5600032292	5726001206-268	5810200190	5838148269	590062148	591015546	6000720234
5313092270	5600033292	5726004206-268	5810201190	5838150269	590062248	591015646	6000778173
5313093270	5600034292	5726005206-268	5810202190	5838151269	590062448	592904152	6000779173
5313094270	5600035292	5726006206-268	5810203190	5838152269	590062548	599120350	6000798173
5313095270	5600036292	5726007206-268	5810204190	5838153269	590065094	599120450	6000879175
5313096271	5600037292	5726008206-268	5830024197	5838154269	5900700222	599120550	6000880175
5313097271	5600038292	5726009206-268	5830026267	5838155269	5900701222	599120650	600089689-166
5313098271	5600039292	5726010206-268	5830027267	5838156269	5900800222	599120750	6000901172
5313099271	5600040292	5726011206-268	5830031267	5838157269	5900801222	599120850	6000902172
5313111272	5600041292	5726012206-268	5830032267	5838158269	5901000220	6000008230-236	6000903172
5313113270-270	5600042292	5726013206	5830033267	5838159269	5901001280	6000009230	6000904215
5313115273	5600043292	5726016206	5830039267	5838160269	5901002280	600001190	600099884
5313119272	5600044292	5726019206	5831302269	5838161269	5901003280	6000016171	600109399-104
5313222277	5600045292	5726025206	5831303269	5838162269	5901006280	6000026171	6001094104
5313308271	5600046292	5726113206	5831304269	5838163269	5901007279	600003385	6001100171
5313309271	5600047292	5726116206	5831822269	5838164269	5901008279	6000036166	6001103172
5313311271	5600050291	5726119206	5832302269	5838165269	5901016278	6000046172	600112087
5435030278	5600051291	5726125206	5832303269	5838166269	5901017278	6000070198	600112187
5435034272	5600052291	5726213206	5832304269	5838167269	5901020280	6000090172	600112287
5490034220	5600053291	5726216206	5832822269	5838168269 5838169269	5901021280 5901022280	6000093179	600112387
5490035220 5490036220	5600054291 5600055 201	5726219206 5726225206	5838101268			6000094179	600113187
	5600055291 5600056291	5726238206	5838102269 5838103269	5838170269 5838171269	5901023280 5901024280	6000117166 6000120171	600113287 600113387
5490037220-221 5490038221	5600057291	5726413206	5838104269	5838172269	5901025280	600012389	6001150171
5490039220	5600058291	5726416206	5838105269	5838173269	5901981274-274	6000128170-214	6001160172
5490040220	5600059291	5726419206	5838106269	5838174269	5901982274-274	6000135170-214	600117391
5490041220	5600060291	5726425206	5838107269	5838175269	5901983274-274	600013786	6001200171
5490042220	5600061291	5726513206	5838108269	5838176269	5901984274-275	600013886	600120994
5490047220	5600065291	5726516206	5838109269	5838177269	5901985275	600014086	600122087
UTJUUTI22U	JUUUUUJ23 l	0120010200	JUJU 1 UJ2UJ	0000111200	JUU 1000	UUUU	000122001

Part No Page	Part No Page	Part No Page	Part No Page	Part No Page	Part No Page	Part No Page	Part No Page
600122187	6010252183	7000346106	7000764126	7001316118-120	7001651125-126	7001806126	8000252183
600122287	6014204226-230	700038434	7000768132	7001317118-120	7001652125-126	7001807126	8000500183
600122387 600124088	6014206226-230 6019730181	700038539 7000386301	7000769132 7000770132	7001318118-120	7001653125-126	7001808126	8001000183 8002000183
600124188	6019740181	7000387301	7000770132	7001319118-120 7001320118-120	7001654125 7001655126	7001809126 7001810126	8002902183
6001278179	6019750181	700030790-167	7000771132	7001320110-120	7001657123-125	7001811126	8002905183
6001300171	6019760181	7000404168	7000773132	7001322118-120	7001658123-125	7001812126	8003000183
600140089-104	6021312177	7000405168	7000774315	7001323119	7001659123-125	7001813116	8004000183
600146290	6021315177	7000406168	7000775315	7001324119-120	7001660123-125	7001814116	8005000183
600147290	6022610173	700040839-165	7000776315	7001325119-120	7001661123-125	7001815116	8012902183
600148290	6022612173	7000483216	7000777315	7001330131	7001662123	7001816116	8012905183
6001491105-300	6022613173	7000489195	7000793118-120	7001331131	7001668125	7002240112	8029010183
600160389-89	6023141236	7000497215-235	7000794118-120	7001332131	7001670119-120	7002357114	8029020183
6001800104	6023161236	7000498215-235	7000795118-120	7001333131	7001671119	7002358115	8029030183
6001901172	6028610174	7000506175	7000796118-120	7001340123	7001672119	7002510234-236	8029040183
6001902172	6028612174	7000508175	7000797118-120	7001342118	7001673119	7002556116	8029050183
6001903172 6002100171	6028614174	7000521166 7000531165	7000798118-120 7000808174-196	7001343129	7001700118-120 7001702114-119	7002560115 7002576117	8080207182-215 8080208182
6002150171	603201191 603201588	7000531169	700083728	7001344129 7001387123-125	7001702114-119	7003208117	8080801182
6002200171	603201688	7000532175	700083828	7001388112	7001704114	7003611196	8080802182
6002268173	6051622218	7000538175	7000846198	7001391131	7001705118	7003612195-196	8080803182
6002278173	6051635218	700054084	7000848198	7001392129-131	7001706119	7003613196	8080804182
6002300171	6077812173	700054184-191	7000856198	7001393129-131	7001707118-120	7003614196	8080904183
6002314236	6099120178	7000552126	7000858198	7001394131	7001708118-120	700400184	8081810182
6002316236	6099150178	7000555116	7000910132	7001395126-129	7001709118-120	700400284-191	8081812182
6002868174	6099180178	7000560126	700091333	7001396126-129	7001710118-120	7004031168	8081814182
600289139-204	6099210178	700057284	7000929114	7001397126-129	7001711118	7005000132	8081815182
600289239-204	6100120178	7000612117	7000930118-120	7001398126-129	700172333	7005010175	8081817182
600289339-204 600289439-204	6100150178 6100180178	7000613121 7000657195	7000931118-120 7000937194	7001399126-129 7001400126-129	700172533 700172634	7005012175 7005014175	8085301182 8085302182
600289539-204	6100210178	7000658195	7000938123-125	7001400126-129	7001731126	7005211175	8085303182
600289639-204	6121312177	7000660195	7000939123-125	7001403132	7001768119	7005310175	8085504182
600289739-204	6121315177	7000661195	700095130	7001407120	7001770123	7005312175	8085505182
600300146	6155100235	7000663195	700095230	7001408119	7001771123	7005314175	8085514182
600323189	6156100235	7000664195	700095330	7001445122-123	7001772123	7008010174-196	8085515182
600323289-94	6157100235	7000666195	700095430	7001446122-123	7001773123	7008012174-196	8085530183
600323489-89	6200255172	7000700115-116	7001000132	7001447122-123	7001774123	7008133165-171	8085531183
600323689-94	7000004198	7000706289	700100529	7001448122	7001775123	7008253165-171	8085532183
6003294226-230	7000014112	7000714106	700100629	7001449122	7001776123	7008412198 7008512198	8092902183
6003296226-230 6003901104	7000015112 7000016112	7000715106 7000716106	7001017289 7001018289	7001450126 7001451126	7001777123 7001778123	7008512117-121	8092905183 8129010183
6003921104	7000017112	7000717106	7001019289	7001474126	7001779118-120	7009133117-121	8129020183
6003931104	7000018112	7000731117-121	7001020289	7001475106	7001780118-120	7009223195	8129030183
600459190-217	7000025166-228	7000734117-121	7001021289	7001476122	7001781118-120	7022810174	8129040183
600512194	7000044194	7000735117-121	7001022289	7001477122	7001782118-120	7022812174	8129050183
600512294	7000130167	7000736117-121	7001065116	7001485124	7001783123-126	7022814174	8929010183
600512394	7000131167	7000737117-121	7001066116	7001486124	7001784123-126	7031220106	8929020183
600512494	7000134194	7000738117-121	7001067116	7001488128	7001785123-126	7031612106	8929030183
600513194	7000140167	7000739117-121	7001068116	7001490130	7001786123-126	7041921229	8929040183
600513394	7000141167	7000740117-121 7000741122-123	7001070116	7001496289	7001787123-126	7041922229	8929050183 899120050
600513494 600514194	7000144122 7000160167	7000741122-123	7001072116 7001073118-120	7001500112-132 700151229	7001788123-126 7001789123-126	7041951229 7041952229	899120150
600514294	7000161167-228	7000742122	7001074118-120	7001539195	7001790123-126	7094519194	899120250
600514394	7000181166	7000745125	7001075126	7001546195	7001791120-123	7121431223	8991208315
600514494	7000208106	7000746123-125	7001088132	7001547195	7001792120-123	7204055165	8991209315
600515194	700025132-166	7000747123-125	7001106194	7001551194	7001793120-123	7419101229	8991210315
600515394	7000256106	7000748123-125	7001107194	7001561243	7001794120-123	7419102229	8991211315
600683194	700027025	7000749123-125	7001108194	7001562107	7001795120-123	7419201229	8991212315
600683294	700027126	7000750123-125	7001109194	7001569107	7001796120-123	7419202229	8991213315
600683394	700027226-229	7000751123-125	7001110194	7001570107-260	7001797120-123	7462200106	8991214315
6007712173 600837394	700027326 700028027	7000752123-125 7000753123-125	7001111194 7001112194	7001573116 7001618106	7001798120-123 7001799120-123	7471200106 8000025207	8991215315 8991216315
6009730181	700028127	7000753123-125	7001112194	700163829-247	7001799120-123	8000025207	8991217315
6009740181	7000292198	7000755123-125	7001224106	7001639247	7001801120-123	8000027207	8991218315
6009750181	7000293198-252	7000756123-125	7001239289	7001647117-121	7001803126	8000028207	8991219315
6009760181	7000295176	7000757132	7001256106	7001648117-121	7001804126	8000140183	
6010140183	7000306106	7000763126	7001315118-120	7001650125-126	7001805126	8000250183	



Magnetic stirrers 25 to 32 pages Rotator, tilting and vortex mixer shakers 33 and 34 page **Rocking Mixer shakers** 34 page **Orbital** and **linear** motion shakers 35 to 38 pages **Overhead stirrer** 39 page **Orbital shaker incubators** 40 to 42 pages **Ultrasonic homogenizer** page 43 **Grinding and mixer homogeneizer** 44 page



STIRRERS Stirrer and shaker summary table

OUICK OVERVIEW

								<i>บุบเนห บ</i>	VEKVIE
				MA	GNETICS				
Single Direction	Part No.	Controller \	olume max.	Heater	Controller	Range	Range	Rapid	Plate Ø
Stirring			litres		Туре	temperature °C	r.p.m.	Overview	cm
AGIMICRO	7001638	Analogue	2	No	-	-	40 / 1700	ABS	12
AGIMATIC-S	7000270	Analogue	10	No	-	-	60 / 1600	INOX	14.5
AGIMATIC-N	7000271	Analogue	10	Yes	Electronic/Energy	350	60 / 1600	INOX	14.5
AGIMATIC-E	7000273	Analogue	10	Yes	Electronic/Temperature	350	60 / 1600	INOX	14.5
AGIMAN	7000272	Analogue	2	Yes	Electronic/Energy	350	60 / 1600	For Heating	Mantl
AGIMATIC-ED	7000280	Digital	10	Yes	Electronic/Temperature	350	60 / 1600	INOX	14.5
KIT AGIMATIC-ED	7001512	Digital	10	Yes	Electronic/Temperature	350	60 / 1600	INOX	14.5
AGIMATIC-ED-C	7000281	Digital	10	Yes	Electronic/Temperature	350	60 / 1600	CERAMIC	14,5
Large volume stirring									
AGIMATIC-HS	7001005	Digital	25	No	-	-	50 / 980	INOX	28 x 3
AGIMATIC-HL	7001006	Digital	60	No	-	-	50 / 980	INOX	44 x 3
Reversible stirring action									
AGIMATIC REV-TFT	7000837	TFT touch screen	10	Yes	Electronic/Temperature	350	100 / 1600	INOX	14.
AGIMATIC REV-TFT-C	7000838	TFT touch screen	10	Yes	Electronic/Temperature	350	100 / 1600	CERAMIC	14,
Multi- positions									
MULTIMATIC 5-S	7000951	Analogue	5 x 0.6	No	-	-	1600	INOX	28 x 3
MULTIMATIC 9-S	7000952	Analogue	9 x 0.3	No	-	-	1600	INOX	28 x 3
MULTIMATIC 5-N	7000953	Analogue	5 x 0.6	Yes	Electronic/Energy	300	1600	INOX	25 x 2
MULTIMATIC 9-N	7000954	Analogue	9 x 0.3	Yes	Electronic/Energy	300	1600	INOX	25 x 2
				ROTARY &	TILTING MIXERS				
Tube Mixers	Pa	rt No.	Vol.	max. litres	Heaters	Rar	nge r.p.m.	Capa	city
ORBIT	300	00445	5	x 0.25	No		12	See Tube S	election
MOVIL ROD	700	1723		-	No	10) / 80	35 mm Ø	max.
MOVIL TUB	700	00913		-	No		15	12 Tul	jes
VORTEX-VIB	700	01725		-	No	2	800	See Tube S	election
				VIBRAT	ING SHAKER				
Oscillating	Part N	o. Max.	Load	Heater		Capacity		Os	cil. min.
VIBROMATIC	70003	84 4 1	(g	No	8 flasks of 50 mm Ø ma	x. (optional + E	Erlenmeyer 250) ml) 100	0 / 950
					- FRO SHAKERS		•		
To & Fro	Part N	o. I	leater	Не	eater Ra	nge	Range	Pla	atforms
& orbital movement				T	ype temper	rature °C	r.p.m.		cm
ROTATERM	30004	135	Yes	Electron	nic/Digital	.250	20/230	4	1x31
ROTABIT	30009		No		-	-	20/230	According to a	





Shaker for Petri plates "AG-200", shaker for bottles "AG-200-A", and shaker for Erlenmeyer flasks "AG-200-B".

Thermo shaker "TRM-4" for Microtiter.

Incubated / refrigerated high volume orbital shakers "1102", "2102", "D-1102" and "D-2102".

Ultrasonic homogeneizers "CY-500".



MAGNETIC STIRRERS "AGIMATIC" AND "AGIMAN"



A new generation design of stirrers at the forefront of technology

COMMON FEATURES

Unique functional design, with epoxy covered alloy case. Choice of stainless steel or ceramic top plate (model dependent). An internal case acts as a spill guard and insulator, made from AlSl304 stainless steel. Tilted control panel for easy viewing with splash protection. Location hole at the back for a retort support rod, supplied as an accessory. Electronic speed control from 60 to 1600 r.p.m. and from 100 to 1600 r.p.m. for models "Agimatic Rev" with constant speed irrespective of liquid viscosity. Easy to service and to replace modular electronics. All heated models have a connection at the back to connect an electronic contact thermometer "Sensoterm II", electronic controller "Electemp-TFT" or Pt100 temperature probe, model dependent. Agimatic and Agiman exterior measures: Height 14.5, Width 19 and Depth 26 cm. Weight: 3,2 Kg. All hotplates have a safety over temperature cut out, set to the maximum working temperature.

TECHNICAL SCHEMATICS OF DIFFERENT COMPONENTS Upper plate covered by ceramic, or by AISI 304 Stainless steel Reinforced heater element Anti spillage protector **ICONS OF THE DIFFERENT TEMPERATURE REGULATION SYSTEMS AND OPTIMUM** Rectified Álnico magnet of STIR CONDITIONS. high thermal induction. Stirring Anti splashing part power up to 10 litres of low viscosity liquid **Electronic contact thermometer** 'Sensoterm II" Spring injected in epoxy coated dural alloy Air in/out device for motor drive protection Temperature sensor Pt100 Air inlet rack for refrigeration of the motor and the electronic components Flectronic circuit for speed and temperature control Air outlet Support base



Magnetic Stirrers "Agimatic" and "Agiman" analogue control



FOR SPEEDS FROM 60 TO 1600 rpm..
MAXIMUM STIR VOLUME: 10 LITRES.

PLATE MADE FROM AISI 304 STAINLESS STEEL WITH REMOVABLE SAFETY RING. PLATE Ø 14.5 cm.



"Agimatic-S" without heating

CONTROL PANEL

- 1. Mains switch illuminated.
- 2. Electronic stir speed control.



MODEL

	Part No.	Maximum stir volume litres	Height/width/Depth (exterior) cm	Power W	Weight Kg
AGIMATIC-S	7000270	up to 10	14,5 19 26	90	3,5

Supplied with a PTFE coated stir bar of Ø 8 x 40 mm long.





"Agimatic-N" with heating ELECTRONIC CONTROL OF SPEED AND POWER TO THE HEATER.

CONTROL PANEL

- 1. Switch on button with indicator lamp for heating and for stirring speed.
- 2. Electronic stir speed control.
- 3. Electronic heater energy control from 0-100%, synchronised with an indicator lamp that functions when the plate is hot.
- 4. Illuminated indicator when the heater is "on".



MODEL

	Part No.	Maximum stir volume litres	Height/width/Depth (exterior) cm	Power W	Weight Kg
AGIMATIC-N	7000271	up to 10	14,5 19 26	550	3,5

Supplied with a PTFE coated stir bar of Ø 8 x 40 mm long.





"Agimatic-E" with heating

ELECTRONIC TEMPERATURE CONTROL OF SPEED AND POWER TO THE HEATER. FROM 50 °C TO 350 °C PRECISION ±2 °C.

CONTROL PANEL

- 1. Switch on button with indicator lamp for heating and for stirring speed.
- 2. Electronic stir speed control.
- 3. Electronic temperature control of the heater plate from 50 °C to 350 °C synchronised with an indicator lamp that functions when the plate is hot.
- 4. Illuminated heater indicator when the heater is "on". Precision ±2 °C.





MODEL	Part No.	Maximum stir volume litres	Height/width/Depth (exterior) cm	Power W	Weight Kg
AGIMATIC-E	7000273	up to 10	14,5 19 26	550	3,5

Supplied with a PTFE coated stir bar of Ø 8 x 40 mm long.





Magnetic stirrer "Agiman"

ELECTRONIC CONTROL OF SPEED AND POWER TO THE HEATER. WITH A MECHANISM FOR ATTACHING HEATING MANTLES.

CONTROL PANEL

Switch on button with indicator lamp for heating and for stirring speed.

Electronic stir speed control.

Electronic heater energy control from 0-100%, synchronised with an indicator lamp that goes on when the mantle is hot.

Illuminated heater indicator when the mantle is "on".

ACCESSORIES

Attachable heating mantle for the "Agiman" magnetic stirrer.

Part No.	Capacity flask ml	Power W
3000447	250	130
3000448	500	270
3000449	1000	410
3000450	2000	530

Complements for Agimatic-S-N-E and Agiman. See accessories on page 31 and 32.

MODEL

	Part No.	Maximum stir volume litres	Height/width/Depth (exterior) cm	Weight Kg
AGIMAN	7000272	up to 2	14,5 19 26	3,5

Supplied with a PTFE coated stir bar of Ø 10 x 32 mm long.





Magnetic Stirrers "Agimatic-ED" and "Agimatic-ED-C" digital control



FOR SPEEDS FROM 60 TO 1600 RPM.

FOR ADJUSTABLE TEMPERATURES FROM 50 °C TO 350 °C (200 °C WITH EXTERNAL PROBE). PRECISION ± 2 °C. Maximum Stir Volume: 10 Litres.

PLATE Ø IS 14,5 cm.

WITH RENOVABLE SAFETY RING AGAINST SPILLAGE.



"Agimatic-ED" with heating

ELECTRONIC TEMPERATURE CONTROL OF SPEED AND POWER TO THE HEATER.

SILUMIN UPPER PLATE COVERED BY AISI 304 STAINLESS STEEL.

CONTROL PANEL

- 1. Digital display indicating stir speed or temperature.
- 2. Push button, parameter selector, Stir speed or Temperature.
- 3. Push button, increase parameter value.
- 4. Push button, decrease parameter value.
- 5. Indicator lamp, safety thermostat "on"
- 6. Push button Stop-Start

Precision ±2 °C.





Part No.	Maximum stir volume litres	Height/width/Depth (exterior) cm	Power W	Weight Kg
AGIMATIC-ED 7000280	up to 10	14.5 19 26	550	3.5

Supplied with a PTFE coated stir bar of Ø 8 x 40 mm long.





"Agimatic-ED-C" with heating

ELECTRONIC TEMPERATURE CONTROL OF SPEED AND POWER TO THE HEATER.

SILUMIN UPPER PLATE WITH CERAMIC SURFACE.

CONTROL PANEL

- 1. Digital display indicating stir speed or temperature.
- 2. Push button, parameter selector, Stir speed or Temperature.
- 3. Push button, increase parameter value.
- 4. Push button, decrease parameter value.
- 5. Indicator lamp, safety thermostat "on"
- 6. Push button Stop-Start

Precision ±2 °C.



MODEL

Part No.	Maximum stir volume litres	Height/width/Depth (exterior) cm	Power W	Weight Kg
AGIMATIC-ED-C 7000281	up to 10	14,5 19 26	550	3,5

Supplied with a PTFE coated stir bar of Ø 8 x 40 mm long.

Ceramic surface:

Excelent conducitity and heat distribution.

Unalterable surface.

Higher acceleration to reach temperature.

Extreme resistance against chemical agents and scratches.





Complements for Agimatic-ED and Agimatic ED-C. See accessories on pages 31 and 32.





Reversible magnetic Stirrers "Agimatic-Rev-TFT" and "Agimatic-Rev-TFT-C"



Forefront technology with TFT touch screen

FOR SPEEDS FROM 100 TO 1600 rpm.

FOR ADJUSTABLE TEMPERATURES FROM 30 °C TO 350 °C. PRECISION ± 2 °C.

MAXIMUM STIR VOLUME: 10 LITRES. PLATE Ø IS 14,5 cm.

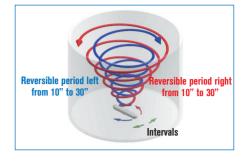
MAGNETIC REVERSIBLE ACTION STIRRERS, WITH ADJUSTABLE TIME STIRRING PERIODS AND PRECISE SPEED CONTROL, PROVIDES THE FOLLOWING ADVANTAGES FOR REPEAT PROCESSES:

A.- FASTER MIXING, REDUCED STIRRING TIME. B.- CONTROLLABLE VORTEX EFFECT. C.- QUICKLY ELI-MINATES AIR FROM WITHIN THE SAMPLE MIXTURE, DEGASSING. D.- MINIMUM SPLASHING, NO LOSS OF SAMPLE.

SELECT MOVEMENT FOR ONE DIRECTION OR REVERSE.

ELECTRONIC CONTROL OF THE FREQUENCY INVERTING PERIOD. FROM 10-30 SECONDS.

MEMORY UP TO 10 WORKING PROGRAMS. AUTOMATIC CYCLES UP TO 6 SEGMENSTS WITH TEMPERATURE PROGRAMMING, RPM AND TIME.





"Agimatic-Rev-TFT" with heating

ELECTRONIC DIGITAL CONTROL OF STIR SPEED AND HEATER TEMPERATURE. WITH REMOVABLE SAFETY RING AGAINST SPILLAGE.

SILUMIN UPPER PLATE COVERED BY AISI 304 STAINLESS STEEL.

CONTROL PANEL

- 1. Probe position indicator.
- 2. rpm, temperature and time reading.
- 3. Start up.
- **4.** Stop.
- 5. Settings.
- 6. Backward.
- 7. Increase/decrease parameters value.
- 8. Cursor.





Part No	o. Maximum stir	Height/width/Depth	Power	Weight
	volume litres	(exterior) cm	W	Kg
Agimatic-Rev-TFT 70008	337 up to 10	14,5 19 26	550	3,5

Supplied with a PTFE coated stir bar of Ø 8 x 40 mm long.



"Agimatic-Rev-TFT-C" with heating

ELECTRONIC DIGITAL CONTROL OF STIR SPEED AND HEATER TEMPERATURE. WITH REMOVABLE SAFETY RING AGAINST SPILLAGE.

SILUMIN UPPER PLATE WITH CERAMIC SURFACE.

CONTROL PANEL

- 1. Probe position indicator.
- 2. rpm, temperature and time reading.
- 3. Start up.
- **4.** Stop.
- 5. Settings.
- 6. Backward.7. Increase/decrease parameters value.
- 8. Cursor



MODEL

MODEL	Part No.	Maximum stir volume litres	Height/width/Depth (exterior) cm	Power W	Weight Kg
Animatic-Rev-TFT-C	7000838	un to 10	14.5 19 26	550	3.5

Supplied with a PTFE coated stir bar of Ø 8 x 40 mm long.

Ceramic surface:

Excelent conducitity and heat distribution.

Unalterable surface.

Higher acceleration to reach temperature.

Extreme resistance against chemical agents and scratches.







Complements for Agimatic-Rev-TFT and Rev-ED-C see accesories on pages 31 and 32.



Complete KIT stirrer Agimatic-ED with support rod and temperature

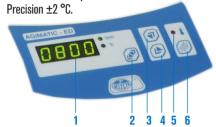
sensor PT100. With heating

SUPPLIED COMPLETE WITH SUPPORT ROD, TEMPERATURE SENSOR PT100, CLAMP AND STIR BAR. ELECTRONIC TEMPERATURE CONTROL OF SPEED AND POWER TO THE HEATER.

SILUMIN UPPER PLATE COVERED BY AISI 304 STAINLESS STEEL.

CONTROL PANEL

- 1. Digital display indicating stir speed or temperature.
- 2. Push button, parameter selector, Stir speed or Temperature.
- 3. Push button, increase parameter value.
- 4. Push button, decrease parameter value.
- 5. Indicator lamp, safety thermostat "on"
- 6. Push button Stop-Start



INCLUDED

Support rod with thread of 12 mm \emptyset x 500 mm high, stirrer dependent, attaches to the main body of the stirrer.

Temperature sensor Pt100. Controls the sample temperature in the digital hotplate stirrers. Immersion Probe: 4mm Ø x 130 mm long. Cable connector 150 cm long.

Clamp with bosshead , "AUTOMATIC" Chrome coated alloy with screw closure. For Ø from 0 to 25mm.



NEW

MODEL

	Part No.	Maximum stir volume litres	Height/width/Depth (exterior) cm	Power W	Weight Kg
KIT	7001512	up to 10	14,5 19 26	550	3,5

Supplied with a PTFE coated stir bar of Ø 8 x 40 mm long.



Magnetic stirrer "Agimicro" without heating

FEATURES

Maximum stir volume: 2 Litres.
Adjustable stir speed from 40 to 1400 r.p.m.
Durable moulded ABS plastic body.
Excellent chemical resistance.

MODEL

Part No.	Height	Ø Plate	Power	Weight
	cm	cm	W	Ka
7001638	5	12	3	0.5

Comes complete with a 8 \emptyset x 32 mm P.T.F.E. coated stir bar.

CONTROL PANEL

Mains switch with luminous "on" indicator.

Analogue control of speed in r.p.m.



Support bar and electrode clamp (1 of 13 and 2 of 16 mm Ø). Used with pH and conductivity meters. Part No. 7001639







Powerful magnetic stirrer "Agimatic-H" without heating

FOR LOW VISCOSITY VOLUMES FROM 1 TO 60 LITRES.
USING REDUCED VOLUMES THE UNIT CAN STIR MEDIUM TO HIGH VISCOSITY LIQUIDS.

Maximum stirring power

FEATURES

Electronic speed control from 50 to 980 r.p.m, will maintain a constant stir speed irrespective of the liquid viscosity.

Digital speed display.

AISI 304 stainless steel top plate with an epoxy coated metal case.

CONTROL PANEL

Main switch with a luminous "on" indicator. Electronic speed control. Digital speed display in r.p.m.

MODEL

	Part No.	Speed control r.p.m.	Maximum stir volume in litres	Height/Widt (exterior)	•	Power W	Weight Kg	
AGIMATIC-HS	7001005	50 to 980	up to 25	12 28	34	35	8	
AGIMATIC-HL	7001006	50 to 980	un to 60	14 44	38	40	12	

Model HS comes complete with a 16 Ø x 127 mm stir bar and model HL with a 19 Ø x 150 mm stir bar.





Multiple position magnetic stirrers "Multimatic"



COMMON FEATURES

External plate made from AISI 304 stainless steel with engraved stirrer positions.

Independent stirring speed control for each position.

Front panel protected against splashes.

Models 5-S and 5-N: Suitable for 5 flasks, 600 ml max. (max. Ø 90 mm).

9-S and 9-N: Suitable for 9 flasks, 300 ml max. (max. Ø 75 mm).

Epoxy coated external case.

APPLICATIONS

Specially recommended for bio-pharmaceutical diagnostic assays.

Stirrers "Multimatic" 5-S and 9-S without heating

FOR 5 AND 9 POSITIONS.



CONTROL PANEL

Illuminated mains switch.
Individual position stir speed control.

MODELS

	Part No.	Height / Width / Depth (exterior) cm	Width / Depth (plate) cm	Speed control r.p.m.	Maximum stir volume ml	Power W	Weight Kg
MULTIMATIC 5-S	7000951	11 28 35	28 33	Up to 1600	5 x 600	16	7
MULTIMATIC 9-S	7000952	11 28 35	28 33	Up to 1600	9 x 300	27	9

Comes complete with a 5 or 9 mm stir bar, model dependent covered in PTFE of 8 Ø x 32 mm long.

ACCESSORIES

Transparent methacrylate bath.

Fits onto the non heating stir plate of the "Multimatic" 5-S y 9-S

The bath can withstand temperatures up to 60 °C. See section immersion Thermostats (page 94).

Part No.	Capacity	Height / Width / Dep	th Weight
	litres	(exterior) cm	Kg
1001007	14	16 30 55	4





Hotplate stirrers "Multimatic" 5-N y 9-N with heating

FOR 5 AND 9 POSITIONS, OVER TEMPERATURE SAFETY THERMOSTAT FITTED.



CONTROL PANEL

Mains illuminated power switch.

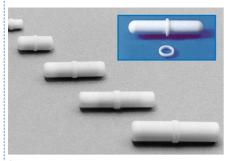
Individual speed control for each position.

Electronic heater energy control from 0-100% synchronised with an indicator lamp when the heater is on.

	Part No.	Height / Width/ Depth (exterior) cm	Width / Depth (plate) cm	Maximum temperature °C	Speed control r.p.m.	Maximum stir volume ml	Heater Power W	Total Power W	Weight Kg
MULTIMATIC 5-N	7000953	16 28 35	25 25	200	Up to 1600	5 x 600	680	700	12
MULTIMATIC 9-N	7000954	16 28 35	25 25	200	Up to 1600	9 x 300	680	700	14

Comes complete with a 5 or 9 mm stir bar, model dependent covered in PTFE of 8 Ø x 32 mm long.

ACCESSORIES FOR MAGNETIC STIRRERS



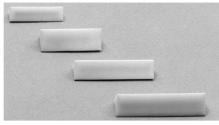
Stir-bars followers for magnetic stirrers.

Encased in PTFE with pivot ring, temperature resistant to +275 °C.

Part No.

i aiciioi		
1000009	6 Ø x 10 mm long.	without pivot ring.
1000012	4 Ø x 12 mm long.	without pivot ring.
1000019	7 Ø x 20 mm long.	with pivot ring.
1000032	8 Ø x 32 mm long.	with pivot ring.
1000039	8 Ø x 40 mm long.	with pivot ring.
1000045	10 Ø x 45 mm long.	with pivot ring.
1001061*	12 Ø x 75 mm long.	with pivot ring.
1001062*	16 Ø x 102 mm long.	with pivot ring.
1001063*	16 Ø x 127 mm long.	with pivot ring.
1001064*	19 Ø x 150 mm long.	with pivot ring.





Triangular stir-bar "TRIMAG".

Encased in heat resistant PTFE of temperatures up to 275 °C. useful for "dissolving solids" and stirring silts. Liquids flow upwards as well as sideways. Quiet with excellent stability. Suitable for flat bottomed vessels. Part No.

art wo.	
1000536	9 side x 35 mm long.
1000537	14 side x 40 mm long.
1000538	12 side x 50 mm long.
1000539	14 side x 55 mm long



Stir Bar "ROTOR-PAT".

Encased in PTFE useable up to temperatures of

275 °C.

Excellent stability with strong vortexing turbulence, useful for round bottom or convex bottom flasks. Part No.



1000001 10 Ø max. x 32 mm long.

Oval stir bar, coated with PTFE, resistant to high temperatures of up to +275 °C. Can be used for all types, including

round bottom vessels.

Part No.



Starhead stir bar.

Circular, encased in heat resistant PTFE for temperatures up to 275 °C. Useful for tubes, flasks and round bottom vessels.

Part No.

1000790 25 Ø x 15 mm height. 1000791 40 Ø x 17 mm height.



1000788 16 Ø x 30 mm long. 1000789 20 Ø x 40 mm long.

Floating magnetic stir-bar "IMANFLOTER".

Encased completely in PTFE Dismountable structure. autoclavable. Designed specifically for low constant speed stirring. Recommended for tissue culture applications. The floating conception of the Imamfloter minimises the grinding effect of cell damage as there is no friction on the bottom of the flask.

Medium speed levels prevent the IMANFLOTER from jumping within the vessel.

Part No. Total length Stir bar length



Concentric stir-bar with beaker cover "CENTRIMAN".

Encased in P.T.F.E. with an adjustable axis bar made of AISI 304 stainless steel. Suitable for applications with volumes of 100 to 2000 ml.

Soft start stirring and adjustable height prevents the stir-bar jumping inside the vessel.

Conical fitting lid of polypropylene with excellent chemical and thermal properties that resists temperatures up to 160 °C. The lid has an auto-lubricating central axis hole with two lateral air displacement holes.

Part No. 1000900

Concentric stir-bar with conical fitting lid for beakers volumes of 100 ml.

to 500 ml. Length 32 mm.

1000901 Concentric stir-bar with conical fitting lid for beakers volumes of 500 ml.

to 1000 ml. Length 50 mm.

1000902

Concentric stir-bar with conical fitting lid for beakers volumes of 1000 ml. to 2000 ml. Length 55 mm.



Box of 17 assorted stir bars.

Encased in temperature resistant PTFE for temperatures up to 275 °C.

Contents:

1 stir-bar with pivot ring 6x10 mm. 1 stir-bar with pivot ring 4 x12 mm. 1 stir-bar with pivot ring 7x20 mm. 2 stir-bars with pivot ring 8x32 mm. 2 stir-bars with pivot ring 8x40 mm. 2 stir-bars with pivot ring 10x45 mm. 1 triangular stir-bar of 9x35 mm. 1 triangular stir-bar of 14x40 mm. 1 triangular stir-bar of 12x50 mm.

1 triangular stir-bar of 14x55 mm. 1 stir-bar Rotor-Pat of 11x35 mm. 1 oval stir-bar of 16x30 mm. 1 oval stir-bar of 20x40 mm.

1 star head stir-bar of 20x15 mm. 1 star head stir-bar of 40x17 mm.

Part No. 1000487



1000897 1000898 50 mm 60 mm 39 mm 45 mm

Stir-bar retriever.

Flexible, encased in PTFE.

Part No.

1000020 Length: 280 mm.

ACCESSORIES FOR MAGNETIC STIRRERS AND HOTPLATE STIRRERS



Support rod with thread of 12 mm Ø x 500 mm high. stirrer dependent, attaches to the main body of the stirrer.

Part No. 1000725



Clamp with bosshead, "AUTOMATIC" Chrome coated alloy with screw closure. For Ø from 0 to 25mm.

Part No. 7000251



Electronic contact thermometer with digital readout "Sensoterm II".

Complete with AISI 304 stainless steel sheathed Pt1000 temperature sensor.

FEATURES:

Conceived and designed as external sensor probe, where the controller is away from the measuring temperature zone of heat and vapour. The advantages over a contact thermometer means additional safety, no broken glassware or mercury spills.

SPECIFICATION

Temperature range from: -50 °C to +300 °C. Temperature sensor : 3.5 Ø x 250 mm immersion.

Stability: 1 °C ±1 digit Resolution: 1 °C.

Temperature display: LCD 8 mm.

Working environment: 0 to 60 °C and relative humidity

Dimensions: 130 high x 71 wide x 24 mm deep (without probe)

Identification ICON Part No. 1001009



Adapters for round flasks of 250, 500 and 1000 ml. Made of Aluminium alloy. Suitable for the stirrers with a Ø greater than 14.5 cm.

Maximum adapter temperature 250 °C.

Part No.

1001712 250 ml flasks. 1001718 500 ml flasks. 1001719 1000 ml flasks.



Temperature controller Electemp-TFT.

FEATURES:

P.I.D. digital temperature controller. User configurable microprocessor of function parameters.

Temperature measurement range: -150 °C to 1300 °C. Temperature regulation: from ambient +5 °C to 1300 °C. Sensor options: Pt100 or Thermo resistor K type probe. See page 293.

SPECIFICATION:

Stability: ±0.1 °C.

Resolution: ±0.1 °C Pt 100 /±1 °C K Type probe.

Operation: P.I.D.

AUTOTUNING. Adapts automatically to the working me-

dium (Solid, liquid or gas.)

Dimensions: 10.5 high x 13.5 wide x 21cm deep. Maximum power (at 230 V): 3100 W.

Weight: 1.250 Kg

Part No. 3000897

ACCESSORIES:

Probe Pt100 Part No. 1000893 Probe K Type. Part No. 1000895



Aluminium PTFE coated bath.

Suitable for stirrers and hotplate stirrers, "Agimatic N. E, ND, ED and Rev-E".

Suitable as water or oil baths for temperatures up to 200 °C with magnetic stirring from 150 to 1500 r.p.m. For rotary evaporators etc.

Part No.

1001230 capacity 2 litres, 11 cm high x 18 cm Ø. 1001231 capacity 4 litres.13 cm high x 24 cm Ø.

ACCESSORIES:

Suitable only for tank Part No. 1001230. Set of 4 reduction ring lid, stainless steel AISI304, with location hole for a thermometer.

Part No. 3000917



Temperature sensor Pt100. Controls the sample temperature in the digital hotplate stirrers. Immersion Probe: 4mm Ø x 130 mm long. Cable connector 150 cm long.



Identification ICON

Part No. 1001610 for 7000280 and 7000281. Part No. 1000893 for 7000837 and 7000838.



Rotator "Orbit"

FEATURES

Rotation Speed: 12 r.p.m.

Adjustable rotation angle axis from vertical to horizontal. An elastic shaft drive and clip supports permit the flasks and tubes to be loaded and unloaded while the motor is running. Epoxy coated outer casing.

Recommended for extractions of cell cultures, blood tubes and other haematological applications.

MODEL

Part No.	Speed r.p.m.		Width terior)	/ Depth cm	Power W	Weight Kg
3000445	Fixed 12	19	23	20	15	6



ACCESSORIES

Erlenmeyer flask adapters, clips made from stainless steel.

Part No. Capacity

3000850 8 x 50 ml Erlenmeyer flasks. 3006100 6 x 100ml Erlenmeyer flasks. 3005250 5 x 250ml Erlenmeyer flasks. Tube adapters, made from Aluminium, with nickel/chrome clips for different tube \emptyset .

Part No. Capacity

3000356 35 tubes from 6 to 9 mm \emptyset . **3003011** 30 tubes from 10 to 13 mm Ø. **3002512** 25 tubes from 14 to 16 mm Ø. Part No. Capacity

3002215 22 tubes from 17 to 20 mm Ø. **3001820** 18 tubes from 21 to 24 mm Ø. **3001723** 17 tubes from 23 to 28 mm Ø.



Tilting Mixer Shaker "Movil-Tub"

FEATURES

Fixed speed tilting shaker mixer with removable silicon, anti slide tray. Recommended especially for haematology, chemistry and microbiology applications.

MODEL

Part No.	Tube capacity	Tube Ø / length mm		Height / Width / Depth (exterior) cm	Tilt angle	Power Weight W Kg
7000913	12	20 160	15	12 34 20	25°	6 25



Mixer shaker for tubes "Vortex-Vib"

SHAKE BY MIXER HEAD.

Strong and economic.

With stirring selector by pressure, or fixed in continuous. Starting switch, 4 interchangeable platforms for multiple tubes and 50 ml flasks. Base with 4 suction cups for full adherence.

MODEL

Part No.	Frequency	Height /Width /Depth	Power	Weight
	r.p.m.	(exterior) cm	W	Kg
7001725	2800	18 12.5 18	50	4











Roller and tilt mixer "Movil-Rod"

WITH VARIABLE SPEED CONTROL FROM 10 TO 80 r.p.m.

FEATURES

Roll and tilt mixer with 7 rollers, double action, gently rolls the tubes while rocking, produces a sinusoidal movement, providing excellent sample homogenisation. Recommended for suspensions of biological and haematological fluids.

MODEL

Part No.	For tube	Speed	Length	Height / Width / Depth	Power	Weight
	Ø up to mm	r.p.m.	(rollers) cm	(exterior) cm	W	Kg
7001723	35	10 - 80	24	9.8 34.9 26.5	12	3.6





Roller and tilt mixer "Movil-Rod II"

FIXED SPEED 36 RPM.

FEATURES

Roll and tilt mixer with 5 rollers, double action,gently rolls the tubes while rocking, produces a sinusoidal movement, providing excellent sample homogenisation. Recommended for suspensions of biological and haematological fluids.

MODEL

Part No.	For tube	Speed	Length	Height / Width / Depth	Power	Weight
	Ø up to mm	r.p.m.	(rollers) cm	(exterior) cm	W	Kg
7001726	35	36	23	14 26 15,5	6	3







Optimum shaking frequency: 950 oscillations per minute

APPLICATIONS

Dissolution, extractions and homogenisation.

FEATURES

Electronic control from 100 to 950 oscillations per minute. (1900 vibrations) and timer from 1 to 999 minutes or continuous operation.

Oscillation amplitude: 8 mm.

Easily detachable arms equipped with 8 clamps that allow all types of tubes and flask with diameters of between 5 to 50 mm can be held in position.

Maximum load: 4 kg.

CONTROL PANEL

- 1. Digital display indicator of osc./min. and time.
- 2. Parameter display selector.
- 3. Parameter selector, speed or time.
- 4. Push button increase value.
- 5. Push button decrease value.
- 6. Push button start-stop.



MODEL

Part No.	Oscillations p.m.	Maximum capacity Kg	Height / Width /Depth (exterior) cm	Power W	Weight Kg
7000384	100 - 950	4	23 77 27	34	11



ACCESSORIES

2 in 1. Platform support for Erlenmeyer flasks.

Platform support for Erlenmeyer flasks, made from AISI 304 stainless steel with clip adapter position holes for 50 ml to 1000 ml flasks. Platform dimensions: 38 cm long x 19 cm wide.

Weight: 2 Kg.

Platform capacity:

- 18 Erlenmeyer flasks of 50 ml. - 12 Erlenmeyer flasks of 100 ml.
- 8 Erlenmeyer flasks of 250 ml.
- 6 Erlenmeyer flasks of 500 ml.
- 3 Erlenmeyer flasks of 1000 ml.

Part No. 3001221



Model Vibromatic with adapter platform.

Adapters for Erlenmeyer flasks.

Made from tempered stainless steel.

1001003	Adapter for	50 ml
1000978	Adapter for	100 ml
1000979	Adapter for	250 ml
1000980	Adapter for	500 ml
1000981	Adapter for	1000 ml





COMECTA Orbital shaker "AG-200", "AG-200-A", "AG-200-B"



ELECTRONIC DIGITAL CONTROL OF SPEED AND RUN-TIME

COMMON FEATURES

External ABS case with adapter platform for the different models. Innovative single button to select start, shaking speed, time and stop. Digital display of time and shaking speed.

Maintenance free induction drive motor which produces a uniform movement according to the rotation speed program.

Acoustic notification at the end of the cycle.



Main switch.

Single button selector for shaking speed and time. Display indicating the shaking speed. Display indicating the programmed time.

Measures: Alto 10 x Ancho 28 x fondo 26

TECHNICAL INFORMATION

Rotation frequency: 50-250 r.p.m. Timer from 1 min to 99h 59 min Rotation amplitude: 20mm

Power: 50 W.

Power supply: 220V/50Hz Load capacity: till 2,5Kg

Measures cm: Height 10 x Width 28 x Depth 26



Shaker for Petri plates "AG-200"

With non-slip rubber platform of 24cm width and 20cm depth. Capacity for 4 Petri plates. Useful for slides and little flasks shaking.

Weight (Kg): 7. Part no: 5312010



Shaker for bottles "AG-200-A"

With non-slip rubber platform of 26cm width and 22cm depth, with 3 adjustable rubber retaining bars suitable for any kind of glasses: Erlenmeyer, flasks, bottles, etc.

Weight (Kg): 8 Part no: 5312011



Incubator for Petri capsules. See page: 153

Tempered aluminium base of 27cm width and 22cm depth, with multi-adapter location holes to support different capacities flasks from 50ml to 2000ml.

Shaker for Erlenmeyer flasks "AG-200-B"

Weight (Kg): 8. Part no: 5312012

Erlenmeyer flasks adapters

Made of stainless steel with upper spring. Part no. 5312013 Adapter for 50 ml.

Platform capacity: 12 units

Part no. 5312014 Adapter for 100 ml.

Platform capacity: 8 units

Part no. 5312015 Adapter for 250 ml. Platform capacity: 6 units

Part no. 5312016 Adapter for 500 ml.

Platform capacity: 4 units Part no. 5312017 Adapter for 1000 ml.

Platform capacity: 2 units







Orbital and linear motion shaker "Rotaterm"



WITH HEATED PLATFORM TOP PLATE. ELECTRONIC DIGITAL SPEED AND TEMPERATURE DISPLAY. INCLUDES A SAFETY OVER TEMPERATURE DEVICE. TEMPERATURE STABILITY ±1 °C.

2 in 1 System suitable for orbital or linear motion

FEATURES

Adjustable temperature range from ambient +5 °C. to

Electronic 3 digit temperature display, monitored by a Pt 100 temperature probe.

Resolution: 1 digit.

Electronic digital speed control from 20 to 230 oscillations per minute and timer from 1 to 999 minutes or continuous operation.

Adjustable oscillation amplitude: 15 or 20 mm.

Choice of: orbital or linear motion.

Epoxy covered external casing.

Aluminium top plate platform with evenly distributed heater elements.

The upper platform is made of AISI 304 stainless steel with adjustable tensile spring clips that allow all kinds of glassware, flasks, Erlenmeyer flasks, racks, etc. to be held in position.

Digital calibration temperature circuit.



Part No 3000435 with platform and tensile spring clips.

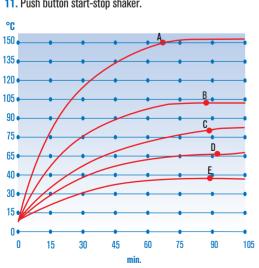
CONTROL PANEL

Temperature control.

- 1. Digital temperature display.
- 2. Push button increase temperature.
- 3. Push button reduce temperature.
- 4. Push button start-stop heater.
- 5. Over temperature alarm.

Temperature and speed control.

- 6. Digital display of oscillation per minute and time (in minutes).
- 7. Displayed parameter.
- 8. Push button select displayed parameter, speed or time function.
- 9. Push button increase parameter value.
- 10. Push button decrease parameter value.
- 11. Push button start-stop shaker.



3 10 11

MODEL

Part No.	Platform	Width /Depth (platform) cm	Height / Width /Depth (exterior) cm	Power W	Weight Kg
3000435	Spring clip	41 31	30 46 38	2300	32

Diagram of Temperature Vs Time. For 500ml Erlenmeyer flasks.

A. Plate to 250 °C: Silicon 150 °C.

B. Plate to 200 °C: H₂O 97 °C.

C. Plate to 150 °C: H₂O 82 °C.

D. Plate to 100 °C: H₂0 61 °C.

E. Plate to 50 °C: H₂O 37 °C.



Orbital and horizontal shaker "Rotabit"

ELECTRONIC DIGITAL CONTROL OF SPEED AND RUN TIME.





2 in 1 system, versatile orbital and horizontal shaker

FEATURES

Speed control from 20 to 230 oscillations per minute with timer from 1 to 999 minutes or continuous operation. Shaking amplitude of: 15 and 20 mm.

Choice of orbital movement or a horizontal "To and Fro" motion.

Load capacity: till 30 Kg

Easy to interchange platforms, see accessories for platform selection.

Epoxy covered outer casing.

CONTROL PANEL

- 1. Digital display showing oscillations and time.
- 2. Displayed parameter.
- 3. Push button, select parameter function, speed or time.
- 4. Push button increase parameter value.
- 5. Push button reduce parameter value.
- 6. Push button Start- Stop.



MODEL

Part No.	Control oscillations p.m.	•	t / Width / Depth exterior) cm	Power W	Load capacity Kg	Weight Kg
3000974	20 - 230	20	42 43	80	30	13.5

This shaker can be coupled to the "Boxcult" incubation chamber with platform Part No. 3000975 (see page 38).

ACCESSORIES

Universal platforms with non-slip surface with four adjustable silicon covered retaining bars suitable for all types of glassware, Erlenmeyer flasks, etc. to be held in position.

Part No.	Height (e	Weight Kg		
3000975	9	42	35	5
3000976	9	70	35	7

NOTE: This shaker has multiple options and accessories, a flow chart for easy selection of the accessories can be found at the end of this section.



Platform Part No. 3000975



Platform Part No. 3000976

Base for Erlenmeyer flask clips.

Made from AISI 304 stainless steel with multi-adapter location holes to support Erlenmeyer flask clips. Capacities 50, 100, 250, 500 and 1000 ml.

Part No.	For platform number Part No.	Width /Depth (platform) cm		Capacity, No. of positions 50 ml 100 ml 250 ml 500 ml 1000 ml			1000 ml	Weight Kg	
3000977	3000975	40	34	36	25	16	9	5	1.5
3001010	3000976	69	34	66	45	21	18	10	2,2

Erlenmeyer flasks spring clips.

Made with tempered stainless steel.

Part No.

1001003 Adapter for 50 ml. 1000978 Adapter for 100 ml. 1000979 Adapter for 250 ml. 1000980 Adapter for 500 ml. 1000981 Adapter for 1000 ml.



ACCESSORIES



Orbital To & Fro shaker "Rotabit" complete with accessory. "Boxcult" incubation chamber.

Incubation chamber "Boxcult"

The "Boxcult" can be fitted onto the "Rotabit", Part No. 3000974, with the universal platform, (SMALL) Part No. 3000975.

Forced air fan circulation.

Adjustable temperature, ambient +5 °C to 57 °C.

Homogeneity ±2.5%

Stability ±0.5%

Built of transparent Perspex, access is throught a wide hinged front door which provides easy access for loading and unloading. Samples can be viewed without opening the incubator maintaining a constant homogeneous temperature.

Part No.	•	/ Width nterior)	/ Depth cm	•	/ Width xterior)	n / Depth cm	Power W	Weight Kg
3000957	50	47	47	61	51	51	220	11

See incubator section for more details (page 129).

Set of 5 reduction rings adapters for separating flasks of 50 to 100 ml. Part No. 6000620

Separating funnel device.

Two positions, for mixing Horizontal to Vertical for easy decanting. Capacity: 5 separating funnels of 250 to 500 ml or 2 funnels of 1000 ml. Part No. 6000619

This accessory can only be fitted to the platform Part No. 3000976. The "Rotabit" Part No. 3000974 and platform need to be ordered separately.



Double platform part no 3001011, with shaker Part No. 3000974

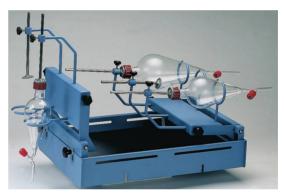
Double platform.

Two levels.

Fits onto the "Rotabit" Part No. 3000974.

Complete with anti slide mats and four support bars that support the upper level. Each platform has four silicon clamping bars.

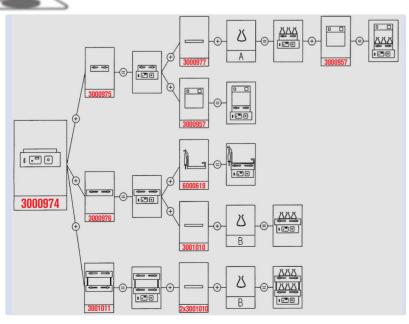
Part No.	Width / Depth (platform) cm	Total combined height cm
3001011	55 35	40



Separating funnel decanting accessory Part No. 6000619 Fits onto platform Part No. 3000976.



Flow diagram of the selection of accessories for the "Rotabit" To & Fro Orbital Shaker



SUITABLE FOR ERLENMEYER						
Capacity	Part No.	A	В			
50 ml	1001003	36	48			
100 ml	1000978	25	30			
250 ml	1000979	16	20			
500 ml	1000980	9	12			
1000 ml	1000981	5	8			



Overhead stirrer "SE-100"

FOR BLENDS, HOMOGENIZATIONS, SUSPENSIONS, SOLUTIONS GASIFICATION AND SUBSTANCES RECIRCULATION. DESIGNED FOR CONTINUOUS WORK.

BRUSHLESS MOTORS FREE OF MAINTENANCE AND SPARKS.

PARTIALLY SEALED ENCAPSULATED CASES AGAINST SUBSTANCES AND AGRESSIVE VAPOURS.

THERMAL PROTECTION FOR OVERHEATING WITH AUTO POWER OFF AND LED INDICATOR.

FEATURES

Excellent blending results in an accurate and repeatable control.

Stirring by electronic control of speed, from 60 to 2000 rpm.

Specially designed for those samples in which its viscosity changes during the process.

Max stirring volume: Up to 40 L (in H20)

Max stirring viscosity: Up to 1.000.000 mPas.

Speed digital reading and pre-selection (rpm).

Adaptable spindle to stirring rods up to 9.5 mmØ.

MODEL

Part No.	Height/Width/Depth	Power	Weight
	(external) cm	W	Kg
7000385	17,5 7,5 13,5	100	2,8

Base and shaft not included.

COMPLEMENT

Automatic elevator for rod stirrers.

Specially designed to ease the use of the overhead stirrer, rising and descending to the height required by the user.

Part No.	Height / Width / Depth	Lift	Weight
	(exterior) cm	max. cm	Kg
6000412	74 41 42	25,5	8





OVERHEAD STIRRER ACCESSORIES





Shaft with AISI 304 stainless steel rotor. Shaft: 7mm Ø.

Part No.	Rotor type	Ø shaft mm	Total length mm	Features
6002891	1	90	400	Double fly vane
6002892	2	60	400	Fly vane
6002893	3	50	400	Fixed blade
6002894	4	50	400	Double cross vane
6002895	5	58	400	Helix
6002896	6	70	450	Six hole paddle
6002897	7	70	450	Three hole paddle
5050921	8	46	400	Radial turbine
5050932	9	45	400	Turbo helix 45 mm Ø
5050933	10	66	400	Turbo helix 66 mm Ø



Bosshead "MAXIM"

For large diameters.

Chrome plated with one opening to hold rods up to 30 mm \emptyset . Second opening up to 20 mm \emptyset .

Part No. **7000408**



SHAFTS WITH PTFE PADDLES

Shaft of 8 mm Ø.

410 mm

Part No.	Rotor type	Ø shaft mm	Total Length mm	Features	Speed range r.p.m.
5050934	11	50	500	Helix PTFE	500
5050935	12	80	500	Anchor PTFE	500



ADJUSTABLE HEIGHT SHAFT STIRRERS

Shafts made of AISI 304 stainless steel coated in PTFE and PTFE stirrer paddles. Shaft: $7 \text{ mm } \emptyset$. Adjustable height paddles using a locking thread. Can be used with differing paddles on the same shaft to create a

Can be used with differing paddles on the same shaft to create a multiple mixing action.

Part No.	Rotor type	Ø shaft mm	Total Length mm	Features	
5050936	13	70	400	Shaft PTFE	
5050937	14	40	400	Helix PTFE	
5050938 Shaft PTFE Spare or additional paddle for multiple stir effect					
5050939	Helix PT	FE Spare or a	additional naddle	for multiple stir effect	



Rod of AISI 304 stainless steel of 20 Ø x 800 mm high. Designed to support weights up to 20 Kg at 300 mm height from the base. Useful for stirrers.

Weight: 7 Kg. Part No. **6000410**





COMECTA High volume orbital shaker incubators



FAN AIR CIRCULATED. WITH OR WITHOUT REFRIGERATION DIGITAL ELECTRONIC CONTROL OF SPEED, TEMPERATURE AND TIME, FOR LONG OPERATING PERIODS.

SAFETY:

TRIPLE PROTECTION MOTOR DRIVE:

OVER TEMPERATURE, IRREGULAR MOVEMENTS, AUTOMATIC STOP WHEN THE DOOR IS OPENED, TEMPERATURE ALARM, THERMAL CUTOUT,



Hinged door model with refrigeration

GENERAL FEATURES

Metallic external case epoxy-coated.

Current and set digital reading of temperature, time and speed parameters. Acoustic alarm and illuminated indicator at the end of the cycle and also to indicate temperature and / or time programs errors.

Automatic switch off mechanism when the shaker door is opened.

Motor over load protection, with automatic switch off activation.

Induction drive motor, where the drive mechanism has an anti vibration system. Refrigerated models have a hermetically sealed compressor unit with a ventilated condenser.

Internal case made of stainless steel AISI 316 with polished finish and glazed door for a handy visibility of the samples process.

Internal platform with multi-adapter positions for differing accessories, such as: conical flask adapters, microtitre plate holders and universal tray with adjustable tension springs for other non standard sized vessels.

HINGED DOOR MODELS "S100D" AND "S200D'

Temperated glass hinged door. The orbital rotation can be adjusted without disassembly from 50mm.



Orhital rotation adjustmen

MODELS FRAMEWORK TYPE "S1102" AND "S2102"

Made with two doors framework type and double glass windows which allow visibility of the material exposed in the inside

Two removable upper trays for high volume Erlenmeyer flasks accommodation in the lower tray.

Adjustable outlet hole for the air in the inside of the chamber.

Amplitude of oscilation: 25mm.

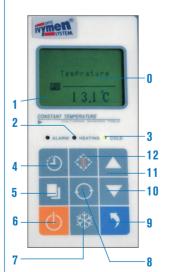
With wheels for movements and adjustable support for a stabled fixing.

Accesories: See pag. 41



Framework type models with or without refrigeration

CONTROL PANEL



- O. LCD Display.
- 1. Heater "ON" indicator.
- 2. Alarm indicator.
- 3. Refrigeration compressor "ON" indicator.(only refrigerated models)
- 4. Time function push button.
- 5. Modify and confirm push button.
- 6. Start / Stop Push button.
- 7. Adjust temperature push button. (only refrigerated models)
- 8. Speed push button.
- 9. Rotation push button.
- 10. Reduce value push button.
- 11. Increase value push button.
- 12. Temperature push button.

Note: In models framework type, the control panel position is horizontal.











S100D serie.

S200D serie.

S1102 and S2102 series.

MODELS	\$100D	\$200D	S1102	\$2102	
Part No.	5312130	5312131	5312132	5312133	
Rotation amplitude	Continuous adjustment fro	om 0 to 50 mm orbital	25 mm		
Controllable speed range	from 30 to 400 r.p.m.	from 30 to 400 r.p.m.	from 40 to 300 r.p.m.	from 40 to 300 r.p.m.	
Controllable speed in steps of	1 r.p.m.	1 r.p.m.	1 r.p.m.	1 r.p.m.	
Refrigeration	No	Yes	No	Yes	
Heating	Yes	Yes	Yes	Yes	
	from ambient +5 °C	from 5 °C	from ambient +5 °C	from 6 °C	
Controllable temperature range	to 60 °C	up to 60 °C	to 60 °C	up to 60 °C	
Controllable temperature in steps of	0.1 °C	0.1 °C	0.1 °C	0.1 °C	
Chamber temperature uniformity	±1 °C	±1 °C	±1 °C	±1 °C	
Timer	from 0 to 500 hours	from 0 to 500 hours	from 0 to 500 hours	from 0 to 500 hours	
Usable platform dimensions	370 x 400 mm	420 x 380 mm	734 x 458 mm	734 x 458 mm	
Platform number	1	1	2	2	
Maximum conical flask capacity	6 x 1000 ml, or 9 x 500 ml	9 x 1000 ml, or 9 x 500 ml, or	*4 x 5000 ml, or *8 x 3	000 ml, or *8 x 2000ml,	
(see accessories)	12 x 250 ml, or 16 x 100 ml,	16 x 250 ml, or 20 x 100 ml, or	or 24 x 1000 ml, or 44 x	x 500 ml, or 56 x 250 ml,	
	20 x 50ml	25 x 50 ml	or 104 x 100 ml, or 104 x 50 ml		
Dimensions Height x Width x Depth	610 x 610 x 510 mm	700 x 740 x 560 mm	1440 x 950 x 700 mm	1440 x 950 x 700 mm	
Weight	72 Kg	100 Kg	200 Kg	235 Kg	
Power	490 W	580 W	930 W	1200 W	

*Note: An upper tray divided into two removable pieces which allow high volume Erlenmeyer flasks accommodation, from 2000 to 5000 ml. in the lower tray or the Universal platform which is supplied as an accessory.

ACCESSORIES

Erlenmeyer and flask adapters.

Made from hardened sprung stainless steel.



Part No. 5312105 Adapter for 50 ml 100 ml Part No. 5312106 Adapter for 250 ml Part No. 5312107 Adapter for Part No. 5312108 Adapter for 500 ml Part No. 5312109 Adapter for 1000 ml Part No. 5312110 Adapter for 2000 ml Part No. 5312111 Adapter for 3000 ml Part No. 5312112 Adapter for 5000 ml Adapter for microtiter holder

From 85 x 130 mm., allows up to 3 plates in models \$100D and \$200D, and up to 6 plates in models 1102 and 2102.

Part No. **5312113**

Universal platform tray with elastic tension clips that hold in position any type of vessel, flasks, beakers, racks, etc.



For model **\$100D** Dimensions 400 x 370 x 80 mm Part No. **5312134**

For model **\$200D** Dimensions 420 x 400 x 80 mm Part No. **5312135**

For models S1102 and S2102 Dimensions 780 x 480 x 80 mm Part No. 5312136





COMECTA Stackable high volume orbital shaker incubators



FAN AIR CIRCULATED. WITH OR WITHOUT REFRIGERATIONF PROGRAMABLE TFT TOUCH SCREEN CONTROL OF SPEED, TEMPERATURE AND TIME. FOR LONG OPERATING PERIODS.

SAFETY:

TRIPLE PROTECTION MOTOR DRIVE:

OVER TEMPERATURE, IRREGULAR MOVEMENTS, AUTOMATIC STOP WHEN THE DOOR IS OPENED, TEMPERATURE ALARM, THERMAL CUTOUT.

GENERAL FEATURES

Metallic external case epoxy-coated and ABS frontal, specially designed to be able to stack up to 3 incubators.

TFT Touch screen.

8 programable segments, current and set reading of temperature, time and speed parameters.

Acoustic alarm and illuminated indicator at the end of the cycle and also to indicate temperature and / or time programs errors.

Automatic switch off mechanism when the shaker door is opened.

Motor over load protection, with automatic switch off activation.

Induction drive motor, where the drive mechanism has an anti vibration system. Refrigerated models have a hermetically sealed compressor unit with a ventilated condenser.

Internal case made of stainless steel AISI 316 with polished finish and glazed door for a handy visibility of the samples process.

Interior platform with front extraction guides with multi-adapter positions for differing accessories, such as: conical flask adapters, microtitre plate holders and universal tray with adjustable tension springs for other non standard sized vessels.

The orbital rotation can be adjusted without disassembly from 50mm.

Amplitude of oscilation: 25 -50 mm.

Comes complete with print and USB output for the process registration.



MODELS	ZHP-2012	ZGP-2012 Refrigerated
Part No.	5312137	5312138
Controllable speed range	from 30 to 300 r.p.m.	from 30 to 300 r.p.m.
Controllable speed in steps of	1 r.p.m.	1 r.p.m.
Cantrallable temperature range	from ambient +5 °C	from 4 °C
Controllable temperature range	to 60 °C	to 60 °C
Controllable temperature in steps of	0.1 °C	0.1 °C
Chamber temperature uniformity	±1 °C	±1 °C
Timer	999 hours	999 hours
Usable platform dimensions	780 x 480 mm	780 x 480 mm
Platform number	1	1
Maximum conical flask capacity	12 X 2000 ml or 15 x 1000 ml,	12 X 2000 ml or 15 x 1000 ml,
(see accessories)	ó 28 x 500 ml, or 40 x 250 ml,	ó 28 x 500 ml, or 40 x 250 ml,
Dimensions Height x Width x Depth	640 x 1150 x 780 mm	640 x 1150 x 780 mm
Weight	150 Kg	180 K g
Power	760 W	1120 W

ACCESSORIES

Erlenmeyer and flask adapters. Made from hardened sprung stainless steel.

Part No. 5312105		50 ml
Part No. 5312106	Adapter for	100 ml
Part No. 5312107	Adapter for	250 ml
Part No. 5312108	Adapter for	500 ml
Part No. 5312109	Adapter for	1000 ml
Part No. 5312110	Adapter for	2000 ml





Ultrasonic homogenizers "CY-500"

IVYMEN SYSTEM

INTENSE CAVITY SHAKING. FOR 10 TO 500ML VOLUMES.

OPERATION

The ultrasonic generator transforms the electric current from 220V 50Hz into ultrasonic energy of 20Hz, to feed the ultrasonic transducers. The transducer produces an elastic distortion by following the alternate voltage, which traduces in a longitudinal mechanical vibration that produces a cavitation effect in the titanium alloy probe submerged in the solution. This generates a multitude of micro bubbles which releases a considerable energy in the probe end that allow a sample intense shaking and vibration

APPLICATIONS

Biology, chemistry, environment, general analysis laboratory.

It allows disintegration of cells and biological tissue, DNA protein extraction, ether hydrolysis RNA, reactions output acceleration and increase, earth and sediments treatment according to EPA SW methods which simplifies the Soxhet method in time, quality control, R&D, sample gas remove, dissolution and homogenization, emulsion, dispersion, liposomes formation, proteins microencapsulation, etc.



FEATURES

The equipment consists of a control and power unit and an ultrasonic transducer (homogenizer).

Control unit: Epoxy coated external metallic case and ABS front panel. It consists of a LCD display, cycle time programming push buttons, impulse intervals, maximum power and temperature with 10 programs configurable by the user. Probe and connector for the sample temperature control.

Ultrasonic transducer consists of a piezoelectric converter with a $\frac{1}{4}$ inches titanium alloy probe (5,6mmØ and 60mm height).

It is hold by means of a retort stand and an adjustable clamp, max. 44 cm height.

ACCESSORY

Anti-noise cabin

Made in double isolated layer that protects from high noises emited by the ultrasound effects. It comes with a transparent door.

Part No. 5059601

Probe 1/8" for volumes of 0.5-400 ml.

Part No. 5059602

Probe 3/8" for volumes of 20-600 ml.

Part No. **5059603**



CONTROL PANEL

On/off switch.

Parameters indicator LCD display.

Ultrasonic power adjustable control (1-99%).

Push button from 0 to 9 for parameters selection: Time (1" - 2hours).

Maximum impulses and temperature. SET push button: select parameters. CLEAR push button: cancel parameters.

ENTER push button: validate parameters.

START/STOP push button: cycle beginning and end.

PAUSE push button: pause function.

RECALL-SAVE push button: memory to save 10 programs.

MODEL

Part	KHz	Height/Width/Depth		Power	Weight	
No.	Frequency	(exterior) cm		W	Kg	
5059600	20	22	19	33	500	6,7

It is supplied with a support-rod adjustable in height.



V solid mixer homogeneizer "VS-5", "VS-8" and "VS-50"



CAPACITY: FROM 5 TO 50 KG. (INDUSTRIAL DESIGN)

APPLICATIONS

For the use in pharmaceutical, chemistry and alimentary industry.

For powder, granulated and small concentrated batches that are sent to the production plant after being investigated in laboratory.

FEATURES

Made of stainless steel AISI 304.

It have two loading entrances in V and an unloading hole which is protected with isolated covers with silicon gaskets.

Engine group with shaking device at a constant speed of 18 rpm.

CONTROL PANEL

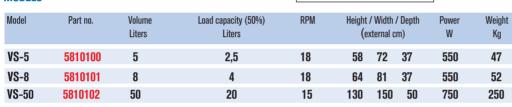
Start button.

Stop button.

Container positioner button.

Timer from 1 to 99,9h.

MODELS





SPARE PART

Silicone gasket for VS-5, VS-8 and VS-50 Part No. **5810110** (Unit).



Multifunctional grinding mill "TR-20"

FOR CRASHING AND SHEARING (INDUSTRIAL DESIGN)

APLICATIONS

For a wide range of products grinding, solid, fragile, soft and semi-hard ones. For the use in pharmaceutical, chemistry and alimentary industry in general.

FEATURES

Made of stainless steel AISI 304.

Device for different kind of easily changeable sieves. From 0,12 mm \emptyset to 0,80 mm \emptyset .

It is supplied with a sieve of 0,18 mm \emptyset .

Only suitable for grinding samples with relative humidity below 20%.

Model	Part No.	Capacity Kg / h	Db	RPM	Voltage V		easures ' Width.	(cm) / Depth.	Power Kw	Weight Kg
TR-20	5810000	10 a 30	85	4200 38	0-50 Hz phase	70	40	80	2,2	85
ACCES	SORIES									









Device for an easy sieve insertion.



EVAPORATORS



PERISTALTIC DOSING PUMP



MEMBRANE VACUUM AND PRESSURE PUMP "VACUM-PRES"



MEMBRANE VACUUM PUMPS



ROTARY VEIN VACUUM PUMPS



WATER RECIRCULATION VACUUM PUMP



LIQUID TRANSFER PUMP, ELECTRIC



LIQUID TRANSFER PUMP, MANUAL



CENTRIFUGAL PUMPS

Evaporator and peristaltic pump
Peristaltic dosing pumps
Rotary vein pump
Membrane vacuum pumps
Vaccum pumps
Water recirculation pumps
Centrifugal pumps
Liquid transfer pumps

46 page 47 page 48 page 49 to 50 pages 51 and 52 page 51 page 51 page **52** page



Rotatory evaporator "RS 3001-V Food" FOR 1000 AND 2000 ML. FLASKS.

Electronic elevation. Quality and safety. Rotary speed and bath temperature regulation

FEATURES

Compact rotatory evaporator composed of stainless steel AISI 304 case. Electronic elevator system and bath made of dur-al alloy chemically treated.

Rotatory speed: from 20 to 120 rpm.

Bath temperature: up to 100 °C.

External probe temperature type K: up to 100 °C.

maximum volume of the receiving flask and evaporator flask: 2000 ml. Vacuum breaker with air inlet filter.

CONTROL PANEL

- 1. Digital reading indicator of external probe temperature.
- 2. Digital reading indicator of bath temperature.
- 3. Digital reading indicator of programmed temperature.
- 4 & 5. Bath temperature regulator.
- 6. Vacuum pump switch.
- 7. Heater bath switch.
- 8. ON/OFF switch.
- 9 & 10. Elevator.
- 11. Digital indicator and regulator of velocity RPM.





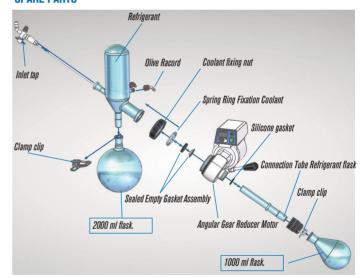
MODEL							
	Part no	Speed	Height /	Width	/ Depth	Power	Weight
		Regulation t.p.m.	(ext	terior) (cm	W	Kg
RS 3001-V	6003001	0 to 120	26	46	45	1010	28
It is completely	cunnlied	with a tan for	enluti	inn a	Tyne	K nrohe	a coo-

It is completely supplied with a tap for solution, a Type K probe, lant, one 2000 ml flask, one 1000 ml. flask and its accessories.

ACCESSORY Silicone oil 4 liters. Temperature up to 300°C. Viscosity 50 mm₂/s at 25 °C. Melting point 318 °C. Part No. 1000027



GLASS AND ITS ACCESSORIES DIAGRAM SPARE PARTS





COMECTA Peristaltic Pump "Percom S-Z BIG"

SPEED VARIABLE.

WITH MULTI-ADAPTER HEAD FOR 16 TO 20 MM Ø (EXT.) TUBES. **MAXIMUM WALL THICKNESS: 3,3 MM.** ADJUSTABLE FLOW FROM 220 TO 10000 ML/H.

FEATURES

High flow desktop model. Easy-handling aluminum head. Conveyor handle Silent and vibration-free.

Selectable speed between 20 and 460 r.p.m.

CONTROL PANEL

Start-stop button. Speed variator.

MODEL

Part No.	High/ Width /Depth	Flow in H20	Power	Weight
	(exterior) cm	ml/hour	W	Kg
5910155	23 21 40	220 to 10000	60	15,5

ACCESSORY Standard silicone tube. Ø Inside: 13.1 mm. Ø outside: 19.5 mm. Part No. 5910156





Peristaltic pump "Percom N-M II"

ELECTRONIC SPEED CONTROL WITH DIGITAL DISPLAY,
WITH MULTI HEAD ADAPTER FOR TUBES FROM 4 TO 12 mm Ø (ext.). MAXIMUM WALL THICKNESS 1,6 mm.
ADJUSTABLE FLOW RATES FROM 0 TO 1100 ml/min.

FEATURES

Small footprint bench top model Quiet with minimal vibrations. Speed control 0.5 to 350 r.p.m (reversible).

CONTROL PANEL

Push button Stop/Start/switch.
Digital speed display.
Push button increase speed control.
Push button decrease speed control.

BACK

External control connection using a foot switch for Start / Stop, supplied as an accessory.

MODEL

Part No.	Height / Width / Depth	Pump rate of H₂O	Power	Weight
	(exterior) cm	ml/min	W	Kg
3001301	19 13 23	0 to 1100	48	4.4

Graph of pump rate/r.p.m. dependent on the internal tube Ø.

ml./min.				
2500 •	•	• •	•	ø 7,9 mm.
2000 •	•	• •	• •	ø 6,4 mm.
1500	•	• •		ø 4,8 mm.
1000 •	• •			ø 3,1 mm.
500			•	ø 1,6 mm.
0	+	•	• •	■ Ø 0,8 mm.
0	100	200 r.p.m	300	400

Graph showing with liquids: Distilled water. These characteristics vary according to the density of the liquid.





Peristaltic dosing pump "Peristaltic PR-2003"

ELECTRONIC SPEED CONTROL AND DIGITAL DISPLAY.

MULTI TUBE ADAPTER FROM 4 TO 12 mm Ø (ext.). MAXIMUM WALL THICKNESS 1,6mm. ADJUSTABLE DOSING RATE PROGRAMMABLE FROM 10 ML TO 10 LITRES.

MAXIMUM PUMP RATE 1500 ml / minute.

FEATURES

Small foot print, bench top.

Silent and free from vibrations

Pump tube held by a simple clamp

Glass dosing tip "PECIPUMP" provides precise dispensing.

Dispense rate: The pump can dispense set volumes over a set time period.

Flow rate: The pump dispenses at a constant rate over a set time or continuous operation.

CONTROL PANEL

Numeric keypad to enter values.

LCD display of 16 x 2 characters.

Calibration memory.

Change pump direction, control from the panel.

Rotation direction indicator

Foot switch connection for Start/Stop.

TECHNICAL SPECIFICATIONS

I EditionE di Editioni
Speed (r.p.m.):
Resolution (ml): 1 or 0.1
Dispensing range (ml):
Pump rate See table
Nº of programs:
Nº of repeat doses:9999
Repetition interval:1 - 9
Maximum tube wall (mm):
Maximum external tube diameter (mm):12
Note: The precision depends on the tube \emptyset and the speed.

BACK

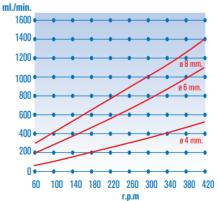
Main On/Off switch.

Foot switch connection Start - Stop, for operation from a distance, supplied as an accessory.

MODEL

Part No.	Height/W (exte			Pump rate of H₂O ml/hour	Power W	Weight Kg
412905	0 25	19	23	90,000	65	4

Graph of pump rate/r.p.m. dependent on the internal tube Ø.





Dose	rate (ml/mir	nute)	
Interior Ø mm	60 r.p.m.	420 r.p.m.	
4	80	480	
6	140	1100	
8	180	1400	

Graph showing with liquids: Distilled water. These characteristics vary according to the density of the liquid.

ACCESSORIES FOR PERISTALTIC PUMPS "PERCOM N-M II" AND "PR-2003"

Standard silicon tubing. (see page: 50)

START STOP foot pedal controller. (PERCOM N-M II) Part No. 1001045 START STOP foot pedal controller. (PR-2003) Part No. 1001044



COMECTA Membrane vacuum pumps "MV 50 and MV 100"

FOR AIR. GASES AND STEAM.

Free of lubrication • Free of maintenance • Quiet

APPLICATIONS

Vacuum filtration.

Vacuum distillation.

Rotating evaporators.

Gas extraction and transport.

Vacuum drying.



COMUN FEATURES

Constructed in aluminium.

Membrane of polifluoropreno, resistant to the corrosion and long-life. Refrigeration system that allows a continuous operation of 24 hours.



CONTROL PANEL

Vacuum and pressure gauges. Adjustable pressure and vacuum. Tensile handle for easy transport. Button On-Off.

CONTROL PANEL

Vacuum indicator. Vacuum regulator. Button On-Off.

MODELS	Part No.	Vaccum Rate m³/h	Vaccum Limit mbar	Pressure bar	Heigh / Width / Depth (exterior) cm	Power W	Power supply	Weight Kg
MV 50	5910100	1,8	200	2	23,5 16 21	160	220V/50Hz	8
MV 100	5910101	3,6	200	2,75	23,5 16 30	160	220V/50Hz	9

They are supplied with a 1 meter of silicone tube \emptyset 8 x 12mm.





COMECTA Vacuum pump

ROTARY VANE PUMP WITH ANTI RETURN VALVE PREVENTS OIL FLOW BACK. SUITABLE FOR GENERAL LABORATORY APPLICATIONS. OVER TEMPERATURE MOTOR PROTECTION CUT-OUT AND MAIN ON/OFF SWITCH.

FEATURES

Asbestos veins and internal joints.

Aspiration connection 16 mm Ø in model 5900620 and 5900621,

25 mm in model 5900622.

Analogue vacuum gauge.

High oil volume and forced lubrication.

Oil reservoir charge capacity:

250 ml in model 5900620, 550 ml in model 5900621 and 1150 ml in model 5900622.

Exhaust filter and ballast.

Shock absorber mounted.

Low noise level (62db)

Maximum working temperature 60 °C.

Portable with lifting handle.









Part No. 5900622

MODELS

INIODELO								
Part No.	Pump rate m³/hr	Vacuum limit mbar	•	Width (terior)	/ Depth cm	r.p.m.	Power W	Weight Kg
5900620	3,6	0,1	23	27	12	1400	120	7,6
5900621	3,6	0,00	27	35	14	1400	180	11
5900622	72	9000	34	49	15	1400	370	21

ACCESSORY

High pressure rubber tubes of 18 x 26 mm Ø. Part No 5900624

High pressure **rubber tubes** of 8 x 15 mm Ø. For Vacuum oven connection "VACIOTEM". Part No 5900625

Pump oil for vacuum pumps, 1 litre bottle. Part No. 5515030

SPARE Vacuum gauge (Fits both models). Part No. 5515031



COMECTA Membrane vacuum pump

SUITABLE FOR AIR, GAS AND VAPOURS.



FEATURES

Transfer, evacuation and compression, free from contamination. The models N-86 and N-022 of 2.5 and 4 bar of relative pressure, can be used also as a compressor.

Can be operated dry.

No lubrication required.

Maintenance free.

Silent.

The double head models are made with linear two phase membranes.

All Models (except model N-022), are made with a patented system of diaphragms manufactured with optimum tension, that results in a smaller more durable pump.

Approximate loss 6 x 10-3 mbar x L/s

Complete with thermal breaker and fuse.

Medium to high resistance to chemicals, (model dependant). We advise that you check the compatibility of the pump performance with the materials that will be in contact with the pump parts (see table).









MODELS / SPECIFICATIONS	N-86	N-022	N-816	N-820	N-840
Part No.	5910106	5910107	5910108	5910009	5910110
Vacuum pump rate (to 1 Atm, of pressure)	5.5 l/min	13 l/min	16 l/min	20 l/min	34 l/min
vacuum pump rate (to 1 Aun, or pressure)	0.33 m³/h	0.78 m³/h	0.96 m³/h	1.2 m³/h	2.04 m³/h
Vacuum limit (mbar) absolute	160 mbar	100 mbar	20 mbar	8 mbar	8 mbar
Pressure (bar) relative	2.5 bar	4 bar	0.5 bar	1 bar	1 bar
Tube connection, Ø interior	4 mm	6 mm	6 mm	10 mm	10 mm
Number of heads and phases	1	1	2	2	2
Head material	PPS	Aluminium	PPS	PTFE	PTFE
Membrane material (diaphragms)	PTFE	PTFE	PTFE	PTFE	PTFE
Valve material	FFPM	Stainless steel	FFPM	FFPM	FFPM
Motor protection level	IP-20	IP-20	IP-20	IP-44	IP-44
Gas operating temperature and permissible ambient			5 to 40 °C		
Current (A) / Power (W)	0.63 / 65	0.7 / 100	0.6 / 100	0.7 / 120	1.5 / 245
Dimensions height x width x depth (cm)	14 x 9 x 17	19 x 15 x 20	14 x 9 x 36	21 x 15 x 31	23 x 17 x 34
Weight (Kg)	1.9	4	3.95	9.3	12.6

APPLICATIONS AND CHEMICAL RESISTANCE	N-86	N-022	N-816	N-820	N-840
Chemical resistance (depends on medium being pumped.)	medium-high	medium-high	medium-high	medium-high	medium-high
For gasses and vapours very aggressive or corrosive	-	-	-	Yes	Yes
For gasses and vapours slightly aggressive or corrosive	Yes	Yes	Yes	Yes	Yes
For liquid transfer and evacuation	Yes	Yes	Yes	Yes	
For liquid transfer, evacuation and as a compressor	Yes	Yes	-	-	-
Ideal for vacuum filtration	Yes	Yes	Yes	Yes	Yes
Ideal for vacuum filtration, evaporation, drying and gel drying	-	-	-	Yes	Yes

SPARE PARTS	N-86	N-022	N-816	N-820	N-840
Spares Kit: 1 membrane +2 valves + 2 gaskets	5910120	-	-	-	-
Spares Kit: 1 membrane +2 valves + 1 gasket	-	5910121	-	-	-
Spares Kit: 2 membrane +4 valves + 4 gaskets	-	-	5910122	5910123	5910124

COMECTA Silicon tube for peristaltic and membrane pumps

MODELS

INIONERS			
	Part No.	interior Ø mm	exterior Ø mm
	8991202*	4	7
Standard tube*	8991201*	6	9
	8991200*	8	11



	Part No.	interior Ø mm	exterior Ø mm
	5253300*	0.8	4
	5253400*	1.7	4.9
	0686203	3	7
Calibrated	5253600*	3.1	6.3
tubing*	5253500	4.8	9.8
	0686210	5	9
	5253900	6.3	11.3
	0686216	8	12

- (*) Tubing supplied in 1 meter lengths.
- (*) Part Numbers with asterisk* are adaptables to peristaltic pumps "Percom N-M II" and "PR-2003". See page 47

COMECTA Sink weights and glass connections

FOR CENTRIFUGAL AND PERISTALTIC PUMPS.

FEATURES

Made of glass.

Adapters for centrifugal and peristaltic pumps. For better aspiration and dispensing.



A. Sink weight "ASPIPUMP"
Surface olive that fixes to the tube. The sink weight maintains the tube at the bottom of the vessel being used for the aspirant liquid.
Part No. Tube size

5991204 4 mm Ø interior. 5991206 6 mm Ø interior. 5991208 8 mm Ø interior.

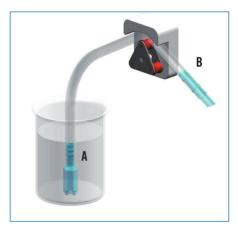


B. Spout "PECIPUMP"

Surface olive is pushed onto the inside of the dispensing end of the tube, liquids can then be dispensed easily and accurately.

Part No. Tube size

5991203 4 mm Ø interior. 5991205 6 mm Ø interior. 5991207 8 mm Ø interior.



A. Sink weight "ASPIPUMP" an efficient way to aspirate to the last dron

B. Spout "PECIPUMP" an exact way to dispense.



Membrane vacuum pump "Vacum-Sel"

FEATURES

Small footprint, bench top. Quiet and vibration free. Maximum working temperature: 40 °C.

CONTROL PANEL

Mains power switch.
Vacuum gauge, scale 0 to -1 bar.
Vacuum in.
Air out.

MODEL

Part No.	Pump Rate litres/min.	Vacuum limit	Height / Width / Depth (exterior) cm	Power W	Weight Kg
3001001	1.08	-0.6 bar ≈ 440 mm Hg	19 14 19	35	3





Membrane vacuum and pressure pump "Vacum-Pres"

FEATURES

Small footprint, bench top. Quiet and vibration free.

Maximum working temperature: 40 °C.

CONTROL PANEL

Mains power switch.

Vacuum gauge, scale 0 to -1 bar.

Pressure gauge, scale 0 to 2.5 bar.

Control for pressure/vacuum.

Vacuum in.

Pressure out.

MODEL

Part No.			Pressure H		Height / Width / Depth		Power	Weight	
	Pump Rate /mir	n. Vacuum limit	Pressure Rate /min.	Max. Pressure	(ex	terior)	cm	W	Kg
3001002	1.08	-0.6 bar=440 mm Hg	1.3	1.2 bar	19	14	19	35	3.2





Water recirculation vacuum pump

DESCRIPTION

Made from a centrifugal pump that pulses water at a high velocity through suction aspirators, creating a pump rate of 10 litres/min from each pump connection. The vacuum achieved, 5 to 40mbar is dependent on the water temperature in the reservoir. Aspirated gasses from both inputs mix in the 10 litre reservoir. Although the interior of the pump is made from stainless steel and polypropylene it is a requirement to change the water in the pump to limit any attack of any chemicals or vapours absorbed in the water. For better protection of equipment it is recommended to connect a "Scrubber" to wash and neutralise any corrosive gasses. The pump includes an exit valve that allows the water to be circulated externally. This can be used to empty and change the water in the reservoir to form an external re-circulation of water.

FEATURES

Reduced water consumption.

2 independent connections, aspiration pump vacuum rate 10 litres/min.

Vacuum limit: 5 and 40 mbar (dependent on water temperature).

Capacity: 10 litres.

Low noise level (<65dBA).

Valve connections for entrance and exit of vacuum and external water recirculation.

CONTROL PANEL

2 vacuum connections.

2 analogue vacuum gauges.

Illuminated mains switch.

ACCESSORY

Extraction system and neutralisation of vapours.

Made up of a "Scrubber" unit that blocks the passage of condensed acid vapours and neutralises the gas vapour in NaOH, and a recirculating water pump that provides an adequate pump rate to aspirate vapours.

It is supplied with 3 Kg. acid vapours neutralizer solution.

"Scrubber" unit

Part No.	•	Height / Width / Depth (exterior) cm			
4001611	32 3	l 16	2		

Spare part:

3 Kg. acid vapours neutralizer solution. Part No. 4001610



MODEL

Part No.	Height / (ex	Width terior)		th Vacuum limit mbar	Pump rate litre/minute	Power W	Weight Kg
4001612	44	39	28	betwen 5 and 40	10	280	10



Complete unit image for a Kjeldahl distillation block.

COMECTA Centrifugal pumps "MP"



FEATURES

Centrifugal pump for re-circulating and transferring of liquids.

A selection of models with pump rates of 8 to 60 litres/min.

The motor power to the turbine is transmitted via a magnetic coupling.

All parts in contact with liquids are chemically resistant materials.

Manual priming.

SERIES MP

Dimensions per model in mm.

MODEL	Depth	Height	Width	Ø
MP-15R	180	108	95	68
MP-20R	210	108	116	92
MP-40RX	277	130	122	102
MP-100R	322	175	150	110

Motor Magnetic drive Isolation case Impassive magnet Propeller Turbine head MP Series

TECHNICAL DATA	MP-15R	MP-20R	MP-40Rx	MP-100R			
Part No.	5900610	5900611	5900612	5900613			
Pump rate (max) P (pressure) =0 (litres/min)	8	17	47	60			
Precision (min) Q (pump rate)=0 (bar)	0.21	0.37	0.40	0.50			
Tube connection (aspiration)	14 mm Ø	18 mm Ø	26 mm Ø	26 mm Ø			
Tube connection (output)	14 mm Ø	18 mm Ø	26 mm Ø	26 mm Ø			
Normal working temperature (°C)	0 - 80	0 - 80	0 - 80	0 - 80			
Function cycle	continuous	continuous	continuous	continuous			
Power consumption (W)	10	20	65	250			
Pump material: Body	Po	lypropylene with	a mixture of fibre	glass			
Turbine material:	Po	lypropylene with	a mixture of fibre	glass			
Pump spindle/axle material:		ceramic alı	ıminium oxide				
Seals and junctions material:	EPDM	EPDM	EPDM	EPDM			
Voltage:	220-240 V 50-60Hz						



Liquid transfer pump, manual "RP-90P" MADE FROM CHEMICALLY AND CORROSION RESISTANT POLYPROPYLENE. ROTARY MOVEMENT.

FEATURES

Manual rotary suction movement that extracts liquid or sucks up liquid from a drum, composes of a pump handle, dip tube 1.2 M long by 1 inch Ø, with adjustable clamp that fastens to the barrel and an outlet tube of 3/4". Easy to use, light weight and very robust.

MODEL

Part No.	Pump rate litres/min.	Weight Kg
5252040	20	1.6



Liquid transfer pump, electric "FA-100" SUITABLE FOR NON CORROSIVE AND NON FLAMMABLE LIQUIDS.



All metal with electric air displacement motor drive, with steel suction tube 1 m long and 38 mm Ø. Maximum height 13 m.

MODEL

Part No.	Pump rate litres/min.	R.p.m.	Power W	Weight Kg
5929041	86	10000	120	6.6





SPARES

1. Drum faucet: 2" in diameter.

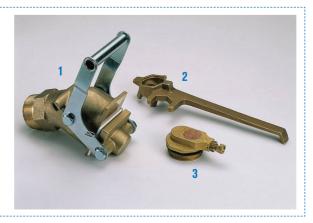
Made of brass. Part No. 5252038

2. Drum Plug key for opening drum, standard model. Made of brass.

Part No. 5252039

3. Air bleed drum cap 2" in diameter.

Made of brass. Part No. 5252037







Vertical desktop autoclaves	Pages	56 to 57
Pressure regulator		
Vertical stand autoclaves.	Pages	58 to 61
Microprocessor control and atmospheric purge		
Autoclave preparation of culture media	Page	62
Water distiller for autoclaves	Page	63
Horizontal stand autoclave	Page	64
Microprocessor control		
Horizontal stand autoclaves	Pages	65 to 67
Microprocessor control and fractional vacuum purge		
Polypropylene and polyester bag sealers	Pages	68 an 69



ELECTRICAL AUTOCLAVES FOR STERILIZATION

Wide range of electrically heated bench top and top loading autoclaves. Pressure range from 0.62 to 2 bar, Capacity: 1.5, 8, 12, 18, 20, 23, 25, 50, 80 and 150 litres.

Complies with the pressure and autoclave directives



- 50 Years of sterilization experience.
 - Quality and innovation.
 - A new dimension in design and technology

PRINCIPAL OF STEAM STERILIZATION:

STERILIZATION IS THE PROCESS OF THE DESTRUCTION AND ELIMINATION OF ALL FORMS OF MICROBIAL LIFE, INCLUDING BACTERIA AND ITS SUBFORMS

THE LABORATORY AUTOCLAVE CONSISTS OF A VESSEL IN WHICH STEAM FLOWS AT A HIGH PRESSURE WITH A STERILIZATION PURPOSE. SATURATED STEAM WILL IMMEDIATELY CONDENSE AND THUS RELEASING ITS HIGH EVAPORATION HEAT, WHICH IS IN FACT THE DESTRUCTIVE AGENT. IN ORDER THAT STERILIZATION WOULD BE EFFECTIVE, STEAM MUST BE SATURATED AND, CONSEQUENTLY, ALL THE AIR INSIDE THE VESSEL MUST BE PURGED BEFORE INITIALIZING THE PROCESS.

IN THE FOLLOWING PAGES J.P. SELECTA OFFERS AN EXTENSIVE RANGE OF AUTOCLAVES WITH A CHOICE OF ATMOSPHERIC PURGING OR VACUUM PURGING SYSTEMS. A CHOICE OF MICROPROCESSOR CONTROLLED SYSTEMS ARE OFFERED INCLUDING DRYING CYCLES AT THE END OF THE STERILIZATION CYCLE.



Electrical Autoclaves for sterilization





THREE DIFFERENT CONTROL SYSTEMS:



CONTROL BY PRESSURE WITH ATMOSPHERIC PURGE: MI-CRO 8 MED 12 MED 20





MICROPROCESSOR CONTROL OF TEMPERATURE AND STERILIZATION CYCLE,
PULSED VACUUM AIR PURGE:

AUTESTER ST DRY PV-III 25 (mod. horizontal)



RS-232 and USB interface output of parameters to a computer, printer or USB adapter.

PRESOCLAVE PLUS III 50 (mod. vertical)
PRESOCLAVE PLUS III 80 (mod. vertical)
PRESOCLAVE PLUS II 150 (mod. vertical)
AUTESTER ST DRY PV-III 50 (mod. vertical)
AUTESTER ST DRY PV-III 80 (mod. vertical)
AUTESTER ST DRY PV-III 150 (mod. vertical)
The printer can be built-in the autoclaves together with the control panel





QUICK OVERVIEW

MODELS	Part No.	System DRY	Capacity litres	Temperature °C	Pressure bar	Power W	Control	Purge control	Туре
MICRO 8	4001745	NO	8	121 and 134	1 and 2	1000 P	ressure thermostat	Manual	Vertical bench top
MED 12	4001756	NO	12	121 and 134	1 and 2	1800 P	ressure thermostat	Atmospheric	Vertical bench top
MED 20	4001757	NO	20	121 and 134	1 to 2	2500 P	ressure thermostat	Atmospheric	Vertical
PRESOCLAVE III 50	4001758	NO	50	115 to 134	0.62 to 2	3600 E	electronic controller	Atmospheric	Vertical
PRESOCLAVE III 80	4001759	NO	80	115 to 134	0.62 to 2	3600 E	electronic controller	Atmospheric	Vertical
PRESOCLAVE PLUS III 50	4001770	NO	50	115 to 134	0.62 to 2	3600 E	electronic controller	Atmospheric	Vertical
PRESOCLAVE PLUS III 80	4001771	NO	80	115 to 134	0.62 to 2	3600 E	electronic controller	Atmospheric	Vertical
PRESOCLAVE PLUS II 150	4002172	NO	150	115 to 134	0.62 to 2	7500 E	electronic controller	Atmospheric	Vertical
AUTESTER ST DRY PV-B 12	4001737	YES	12	121 and 134	1 and 2	1800	Microprocessor	Purged vacuum	Horizontal bench top
AUTESTER ST DRY PV-B 18	4001734	YES	18	121 and 134	1 and 2	1500	Microprocessor	Purged vacuum	Horizontal bench top
AUTESTER ST DRY PV-B 23	4001735	YES	23	121 y 134	1 and 2	1700	Microprocessor	Purged vacuum	Horizontal bench top
MED 40 CLT	4002000	NO	40	105 to 125	0 to 1	6000 E	electronic controller	Atmospheric	Vertical
AUTESTER ST DRY PV-III 25	4002420	YES	25	105 to 134	0.21 to 2	2510	Microprocessor	Purged vacuum	Horizontal bench top
AUTESTER ST DRY PV-III 50	4002516	YES	50	105 to 134	0.21 to 2	3600	Microprocessor	Purged vacuum	Vertical
AUTESTER ST DRY PV-III 80	4002519	YES	80	105 to 134	0.21 to 2	3600	Microprocessor	Purged vacuum	Vertical
AUTESTER ST DRY PV-III 150	4002518	YES	150	105 to 134	0.21 to 2	7500	Microprocessor	Purged vacuum	Vertical



AUTESTER ST DRY PV-B 12 (mod. horizontal) AUTESTER ST DRY PV-B 18 (mod. horizontal) AUTESTER ST DRY PV-B 23 (mod. horizontal)





SUMMARY TABLE OF MODEL RANGE



MICROPROCESSOR CONTROL OF
TEMPERATURE AND STERILIZATION CYCLE, ATMOSPHERIC AIR PURGE:
AUTESTED B 1.5 (mod. vortice))

AUTESTER P 1,5 (mod. vertical)
PRESOCLAVE III 50 (mod. vertical)
PRESOCLAVE III 80 (mod. vertical)
PRESOCLAVE II 150 (mod. vertical)





Autoclaves for sterilization "MICRO 8", "MED 12" and "MED 20"

PRESSURE REGULATOR THERMOSTAT OF 1 AND 2 bar. TEMPERATURES 121 °C AND 134 °C. VERTICAL DESKTOP MODELS. "MICRO 8" CAPACITY: 8 LITRES. "MED 12" CAPACITY: 12 LITRES. VERTICAL STAND MODEL "MED 20" CAPACITY: 20 LITRES.

An economic alternative. Semiautomatics.

SAFETY:

SAFETY VALVE: PREVENTS THE PRESSURE WITHIN THE AUTOCLAVE OVERPASSING THE MAXIMUM SET LIMIT.

SAFETY PRESSURE: DISCONNECTS POWER TO THE HEATER IN CASE OF OVERPASSING THE PRESSURE SET LIMIT.

SAFETY THERMOSTAT: DISCONNECTS THE HEATING IN CASE OF OVERTEMPERATURE OR LACK OF WATER IN THE TANK.

THERMALLY INSULATED LID MADE OF MOLDED THERMOPLASTIC.

COMMON FEATURES

AISI 304 stainless steel external case and top.

Stainless steel chamber and lid, with easy opening.

INCOLOY special stainless steel heater element, which provides long life, low corrosion and high temperatures resistance.

Manual air purge when starting ("MICRO 8" model).

Automatic atmospheric purge ("MED 12" and "MED 20" models).

Safety device to prevent lid opening.

Starting main switch.



REAR PART

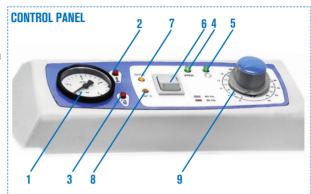
Mains source. Two fuse carriers. Safety thermostat.



SIDE PART

Drain outlet.

Steam and drainage selective valve.



- 1. Pressure gauge.
- 2. Over temperature alarm light indicator.
- 3. Door open light indicator.
- 4. Sterilization phase light indicator.
- 5. Sterilization end of cycle light indicator.
- **6.** Temperature selector 121°C or 134°C.
- 7. Light indicator at 121°C.
- 8. Light indicator at 134°C.
- 9. Timing from 0 to 60'.



Autoclave for sterilization "MICRO 8"

DESKTOP MODEL



MODEL

Part	Capacity	Ø Height	Height/Width/Depth	Power	Weight
No.	litres	(usable) cm	(exterior) cm	W	Kg
4001745	8	24 15	40 38 38	1000	13

It comes complete with a stainless steel wire basket of Ø 22x14cm high. Part no. 1004771.



Autoclave for sterilization "MED 12"

DESKTOP MODEL

Features: see page 56







MODEL

Part	Capacity	Ø Height	Height/Width/Depth	Power	Weight
No.	litres	(usable) cm	(exterior) cm	W	Kg
4001756	12	24 26	46 38 38	1800	18

It comes complete with a stainless steel wire basket of Ø 22x24cm high. Part no. 1004772.



Autoclave for sterilization "MED 20"

VERTICAL STAND MODEL. CONFORMS TO APPARATUS PRESSURE REGULATION DIRECTIVES.





Part	Capacity	Ø Height	Height/Width/Depth	Power	Weight
No.	litres	(usable) cm	(exterior) cm	W	Kg
4001757	20	24 41	70 38 38	2500	41

It comes complete with two stainless steel wire baskets of Ø 23x17 cm Part No. 1004773



Autoclaves for sterilization "Presoclave" 50 and 80 litres



MICROPROCESSOR TEMPERATURE AND CYCLE CONTROL AND ATMOSPHERIC PURGE.
ELECTRONIC CONTROL OF TIME AND TEMPERATURE RANGE FROM 115 °C TO 134 °C. (0.62 TO 2 bar).
CONFORMS TO APPARATUS PRESSURE REGULATION DIRECTIVES.

VERTICAL MODEL: 50 AND 80 AND 150.

SAFETY:

SAFETY OVER PRESSURE VALVE: PREVENTS OVER PRESSURE ABOVE THE MAXIMUM SET LIMIT.

SAFETY PRESSURE SWITCH: DISCONNECTS POWER TO THE HEATER IF THE UNIT EXCEEDS THE MAXIMUM PRESSURE LIMIT.

SAFETY THERMOSTAT AND WATER LEVEL: DISCONNECT POWER TO THE HEATER IF INSUFFICIENT WATER OR OVER TEMPERATURE.

SAFETY LID: PREVENTS THE LID BEING OPENED IF THE CHAMBER IS UNDER PRESSURE.

SAFETY INSULATION: THERMALLY INSULATED LID.

An economic alternative, semi-automatic

FEATURES

External case made from stainless steel.

INCOLOY stainless steel heater elements, hard waring, resistant to corrosion and high temperatures.

RS-232 connection.

External lateral probe port.

Sterilization chamber and door made from stainless steel.

Automatic purge to atmosphere

CONTROL PANEL



- 1. Pressure gauge.
- 2. Illuminated alarm indicator.
- 3. Illuminated indicator door open
- 4. Temperature display.
- 5. Time display
- **6.** Temperature set pushbutton (range from 115 °C to 134 °C).
- 7. Pushbutton increase value.
- 8. Push button START
- 9. Push Button STOP
- 10. Push button Reduce value.
- 11. Push button select time, (range from 3' to 99').
- 12. Push button open lid.
- 13. Devaporization pushbutton.

MODELS	Part No.	Capacity litres	Ø Height (usables cm)	Height / Width / Depth (exterior cm)	Power W	Weight Kg
PRESOCLAVE III 50	4001758	50	30 70	117 48 62	3600	75
PRESOCLAVE III 80	4001759	80	40 62	119 58 72	3600	100

Does not include baskets and drums, order separately.

ACCESSORIES: AISI 304 Stainless steel wire baskets and drums.

For Presoclave III 50, Part. no: 4001758.

Capacity, 3 baskets Ø 25 and 20 cm. height. Part No. 1000495

For Presoclave III 80, Part. no: 4001759.

Capacity, 2 baskets Ø 44 and 22 cm height. Part No. 1000780

Sterilization **drum** made from AISI 304 stainless steel.

For Presoclave III 50, Part. no: 4001758.

Capacity, 3 drum 0 25 and 18 cm. height. Part No. 1002418

For Presoclave III 80, Part, no: 4001759.

Capacity, 2 drum Ø 35 and 27 cm. height. Part No. 1002419

Detergent Bio-Sel.

Water distillation unit especially for autoclaves.

Purge microfilter. Part No. 4001221

Printer of continuous paper roll with print out of temperature, time and mode. Part No. **4120113** (see page 64).





BACK VIEW:

- 1. Safety valve.
- 2. Mains power.
- 3. Safety thermostat
- 4. Steam discharge and drainage outlet



Pt100 second sensor only temperature reader. Part No. 4001219 (see page 63). Loading and unloading crane. Part No. 1002426 (see page 61).



Autoclaves for sterilization "Presoclave PLUS" 50, 80 and 150 litres.



CONFORMS TO APPARATUS PRESSURE REGULATION DIRECTIVES.

PROCESS REGISTRATION AND DOWNLOAD VIA USB. VERTICAL MODEL: 50, 80 AND 150 LITRES.



SAFETY OVER PRESSURE VALVE: PREVENTS OVER PRESSURE ABOVE THE MAXIMUM SET LIMIT.

SAFETY PRESSURE SWITCH: DISCONNECTS POWER TO THE HEATER IF THE UNIT EXCEEDS THE MAXIMUM PRESSURE LIMIT.

SAFETY THERMOSTAT AND WATER LEVEL: DISCONNECT POWER TO THE HEATER IF INSUFFICIENT WATER OR OVER TEMPERATURE.

SAFETY LID: PREVENTS THE LID BEING OPENED IF THE CHAMBER IS UNDER PRESSURE.

SAFETY INSULATION: THERMALLY INSULATED LID.

An economic semi-automatic alternative

FEATURES

External case made from stainless steel.

INCOLOY stainless steel heater elements, hard waring, resistant to corrosion and high temperatures.

Process registration and download via usb.

External lateral probe port (only models 50 and 80 litres).

Sterilization chamber and door made from stainless steel.

Automatic purge to atmosphere.

10 programs configurable by the user.

CONTROL PANEL

- **1.** TFT touch screen with virtual push buttons.
- 2. Pressure gauge.
- 3. Push button open lid.



MODELS	Part No.	Capacity litres	Ø Height (usables cm)	Height / Width (exterior o		Power W	Weight Kg
PRESOCLAVE III 50	4001770	50	30 70	117 48	62	3600	75
PRESOCLAVE III 80	4001771	80	40 62	119 58	72	3600	100
PRESOCLAVE II 150	*4001772	150	50 70	118 80	95	7500	225

Does not include baskets and drums, order separately. Part No. 4001772 due to its consumption is manufactured for three-phase current at 230 V or 400 V to be specified.



For Presoclave III 50 Plus, Part. no: 4001770.

Capacity, 3 baskets Ø 25 and 20 cm. height. Part No. 1000495

For Presoclave III 80 Plus, Part. no: 4001771.

Capacity, 2 baskets Ø 36 and 28 cm, height, Part No. 1000496

For Presoclave II 150 Plus, Part. no: 4001772.

Capacity, 2 baskets Ø 44 and 22 cm height. Part No. 1000780

Sterilization drum made from AISI 304 stainless steel.

For Presoclave III 50 Plus, Part. no: 4001770.

Capacity, 3 drum Ø 25 and 18 cm. height. Part No. 1002418

For Presoclave III 80 Plus, Part. no: 4001771.

Capacity, 2 drum Ø 35 and 27 cm. height. Part No. 1002419

Detergent Bio-Sel.

Water distillation unit especially for autoclaves.

Purge microfilter. Part No. 4001221

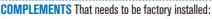
Loading and unloading crane. Part No. 1002426 (see page 61).





BACK VIEW:

- 1. Safety valve.
- 2. Mains power.
- 3. Safety thermostat
- 4. Steam empty valve and Drain selector valve.
- 5. USB connector.



Pt100 second sensor only temperature reader. Part No. 4001219 (see page 63). **Printer** of continuous paper roll with print out of program, temperature, pressure, time and phase. Part No. 4002417







Autoclaves for sterilization "Autester ST DRY PV III"

MICROPROCESSOR PROCESS CONTROL.

AUTOMATIC VACUUM DRY AND PURGE "PREVACUUM"

PROGRAMMABLE TEMPERATURE FROM 105 °C TO 134 °C (0.21 TO 2 bar).

CONFORMS TO APPARATUS PRESSURE REGULATION DIRECTIVES.

VERTICAL FLOOR STANDING MODEL: 50, 80 AND 150 LITRES.



CONFORMITY

SAFETY FOR EQUIPMENT FOR LABORATORY USE EN 61010-1

SAFETY FOR STERILIZER EQUIPMENT FOR LABORATORY USE EN 61010-2-040

ELECTROMAGNETIC COMPATIBILITY FOR EQUIPMENT FOR LABORATORY USE. EN 61326

FEATURES

Stainless steel exterior and top.

Stainless steel lid.

Lid, six closure point system.

Pulsed vacuum system and atmosphere purge.

External steam generator (except 150 litres autoclave).

Water reservoir for clean water for the steam generator boiler.

External water connection if required.

6 function modes.

RS 232 for PC parameters printing (back side).

Printer output.

USB output for PEN-DRIVE data logging.

Connection for a second temperature sensor.

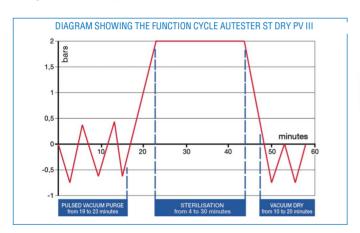
10 customer set programs.

Lateral external probe port (except 150 litres autoclave).

Safety: The lid cannot be opened if the chamber is under pressure. Safety valve: Prevents over pressure over the maximum limit.

Safety pressure switch: switches the heater power off to if over pressure.

Safety Lid: insulated lid protection.



CONTROL PANEL

TFT touch screen with virtual pushbuttons.



- 1. Graphical representation of real time process
- 2. Start/Stop virtual pushbutton.
- 3. Running program.
- 4. Press indicator.
- 5. Temperature indicator.
- 6. Running program parameters.





BACK VIEW

- 1. Mains input.
- 2. External water supply.
- 3. Safety valve.
- 4. Vacuum vapour valve.
- 5. Air in filter valve.
- 6. Safety thermostat.
- 7. Safety thermostat.
- 8. Empty tank valve.
- 9. Drain tank valve.
- 10. RS232 connector.

MICROPROCESSOR FEATURES

The microprocessor controls the performing of the air extraction process, sterilizing and drying, executing the selected procedures and commands by the user, adjusting the following parameters:

- Sterilization temperature from 105°C up to 134°C.
- Sterilization time from 3' to 59'.
- Drying time from 20' to 60'.
- Up to 10 user-configurable programs.
- Six operating modes:
- Solid 1 Solid 2 fractions. Solid 3 fractions -Drying - Liquids - Liquids 2 probes
- Verification test
- Vacuum Bowie Dick.
- Settings:
- Units languages (Spanish, English, French).
- Printer module On/Off. Clock: date/time.

- External water: on/off.
- Password for configuration.
- Calibration (adjustment offset)
- Temperature probe 1 Temperature probe 2
- Water dosing. Pressure
- · Audible and visual alarm for overtemperature and insufficient temperature.
- Network failures detection and memorization
- · Safety therrmostat by software
- · Sterilization cycles data logging with capacity for over 500 cycles.
- · Internal cleaning program
- Graphical representation of real time process



Error messages of functions and program execution are displayed and an acoustic alarm sounds. The vapour generator automatically cuts out.

MESSAGES:

1. E 2PROM	7. VACUUM	13. LEVEL 1
2. RTC FAULT	8. PRESSURE	14. LEVEL 2
3. SENSOR PRECISION	9. BOILER TEMPERATURE	15. DOOR
4. HEATER PROBE	10. TEMPERATURE LOW FAULT	16. PRINTER NO PAPER
5. CHAMBER PROBE	11. INPUT ERROR	17 PAPER JAM
6. OVER PRESSURE	12. STERILIZATION	18. ELECTRICAL FAULT

MODELS	Part No.	Dry	Capacity litres	Ø / Height (usables) cm	Height / Width / Depth (exterior) cm	Temp. ° C	Water Reservoir H ₂ O capacity.	Basket size	Power W	Weight Kg
AUTESTER ST DRY PV III 50	4002516	Yes	50	30 63	117 48 62	105 to 134	10	3	3000	108
AUTESTER ST DRY PV III 80	4002519	Yes	80	40 60	119 58 72	105 to 134	10	2	4850	136
AUTESTER ST DRY PV III 150*	4002518	Yes	150	50 70	118 80 95	105 to 134	20	3	7500*	250

Comes without baskets and drums.* The part number 4002518 due to its power rating is only manufactured for three phase 230V or 400V. Specify preference when ordering.

COMPLEMENTS: Factory fitted options.



Printer of continuous paper roll with print out of program, temperature, pressure, time and phase. Part No. 4002417

Pt100 Sensor (See page 63).

COMPLEMENTS FOR "PRESOCLAVE III", "PRESOCLAVE PLUS" AND "AUTESTER ST DRY PV III"

Loading and unloading crane

Baskets elevator for loading and unloading of autoclaves of 50, 80 and 150L With adapter for handling baskets without deforming.

Axial rotation for placing baskets to a trolley.

Total lift height: 2.35 m (autoclave assembled)

Bottom part made of epoxi coated steel and upper part made of stainless steel.

Maximum crane load: 40 Kg. Power: 230V 300W UP/DOWN pushbutton. Part No: 1002426



PARAMETERS AND PROGRAMS PRE INSTALLED IN THE AUTOCLAVE MICROPROCESSOR (Note: All these parameters are adjustable by the user)										
Nº Programm	Description e	Temperature Sterilization	Time Sterilization	Time Dry	Purge					
0	Free	-	-	-	-					
1	Unwrapped instruments	134 °C	4 min	15 min	2 (1)					
2	Wrapped instruments	134 °C	12 min	30 min	3 (2)					
3	CJD	134 °C	20 min	20 min	3 (2)					
4	Delicate unwrapped	121 °C	15 min	15 min	2 (1)					
5	Delicate wrapped	121 °C	30 min	30 min	3 (2)					
6	Disinfecting	105 °C	25 min	15 min	1 (3)					
7	Liquids	121 °C	30 min	-	1 (3)					
8	Solids	121 °C	15 min	30 min	1 (3)					
9	Solids	134 °C	4 min	30 min	1 (3)					
(1) Doul	ble Vacuum purge. (2) Tripl	le Vacuum pu	rge.							

(3) Atmospheric purge (No vacuum).

ACCESSORIES: AISI 304 Stainless steel wire baskets and drums.

For Autester ST DRY PV-II 50, Part No: 4002516.

Capacity, 3 baskets Ø 25,5 and 20 cm. height. Part No: 1000495

For Autester ST DRY PV-II 80. Part No: 4002519.

Capacity, 2 baskets Ø 36 and 28 cm. height. Part No: 1000496

For Autester ST DRY PV-II 150, Part No: 4002518.

Capacity, 3 baskets Ø 44,5 and 22 cm. height. Part No: 1000780

Sterilization drum made from AISI 304 stainless steel.

For Autester ST DRY PV-II 50, Part No: 4002516.

Capacity, 3 drum Ø 25 and 18 cm. height. Part No. 1002418

For Autester ST DRY PV-II 80, Part No: 4002519.

Capacity, 2 drum Ø 35 and 27 cm. height. Part No. 1002419

Detergent Bio-Sel. (see page 63)

Water distillation unit especially for autoclayes, (see page 63).

Purge microfilter. Part No. 4001221



Culture media autoclave preparer "Med 40 CLT"







STANDARD

EN 61010-1 SAFETY REQUIREMENTS FOR LABORATORY USE EQUIPMENTS.

EN 61010-2-040 SAFETY REQUIREMENTS FOR LABORATORY USE EQUIPMENTS. STERILIZERS.

EN 61326 REQUIREMENTS FOR ELECTROMAGNETIC COMPATIBILITY OF LABORATORY EQUIPMENTS.

APPLICATIONS

Ideal for the operative workflow in microbiology and in tissue culture laboratories. Preparation, sterilization and dispensing culture media is integrated in a single autoclave

High efficiency system in heating, cooling and chamber agitation.

FEATURES

Stainless steel outer casing.

Tank and cover in stainless steel.

USB output for data recording in PEN-DRIVE.

50 programs totally configurable by the user.

Dosage per peristaltic pump.

Dosage control by a pedal.

Magnetic stirrer for internal stirring with PTFE rod.

Agitation speed adjustment (50-200 rpm).

Filler for dosage additive.

Temperature control by water probe and by product probe.

SAFETY

Safety: The lid cannot be opened if the chamber is under pressure. Safety valve: Prevents over pressure over the maximum limit.

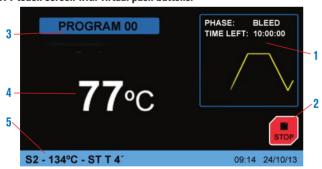
Safety pressure switch: switches the heater power off to if over pressure.

Safety Lid: insulated lid protection.

Available from July 2020

CONTROL PANEL

TFT touch screen with virtual push buttons.



- 1. Graphical representation of processes in real time
- 2. Start/Stop button.
- 3. Program in execution.
- 4. Temperature indicator.
- 5. Parameters of the program in execution

MODEL

Part No.	Capacity	Ø Height	Height /Width / Depth	Power	Weight
	litres	(useful) cm	(exterior) cm	W	Kg
4002000	40	20 45	117 50 65	6000 III phase	95

COMPLEMENTS that must be installed at the factory:

Printer on continuous paper with indication of temperature, time and mode. Part number 4002417 (See page 61)

OPTIONS: for vertical autoclaves, need to be factory fitted.



Pt 100 Sensor. 2nd Probe for reading sample temperature.

To guarantee in all circumstances that the system has completed the cycle to the set time and temperature parameters, the Autester ST DRY PV III autoclave can be installed with a temperature probe that can be placed within the culture flask, residual packets etc.

When the probe is connected to the controller of the autoclave, it must be selected in settings, whereby the real time temperature values detected by the probe, are displayed and printed.

For autoclaves PRESOCLAVE III and PRESOCLAVE PLUS this Pt100 sensor only reads the temperature with an external thermometer, Part No. 4001219

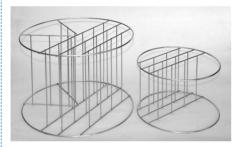
ACCESSORIES FOR VERTICAL AUTOCLAVES



AISI 304 stainless steel wire baskets.

Part No.	Ø	Height m	Suitable for autoclaves Part No.	Number of baskets
1004771	22	14	4001745	1
1004772	22	24	4001756	1
1004773	23	17	4001757	2
1000495	27	20	4001758 - 4001770 - 4002516	3
1000496	36	28	4001759 - 4001771 - 4002519	2
1000780	44	22	4001772 - 4002518	3
1000490*	26	19	4001758 - 4001770 - 4002516	3
1000491*	36	26	4001759 - 4001771 - 4002519	2
1000492*	47	20	4001772 - 4002518	3

^{*}AISI 304 stainless steel blind baskets.



AISI 316 stainless steel wire dividers for autoclave baskets. Part No.

1001217 4 divider compartments for basket part no. 1000495.

1001218 6 divider compartments for basket part no. 1000496.

1001222 7 divider compartments for basket part no. 1000780.



Sterilization Drums.

Código		Height m	Suitable for autoclaves Part No.	Capacity Drums	
1002418	25	18	4001758 - 4001770 - 4002516	3	
1002419	35	27	4001759 - 4001771 - 4002519	2	
1002420	28	18	Not suitable for our autoclaves.		

Water distiller, specially for autoclaves "DEST-4".

Distillation capacity: 1.2 litres/hour. Internal capacity 4 litres. Case made from thermo resistant plastic.

Internal stainless steel.

Cooling by forced air though a condenser. Without glass heater elements.

Easy to use. Safety cut out system if over temperature due to insufficient water.

Comes complete with a 4 litre three way dispenser plastic bottle with filter.

Note: for daily use it is recommended to change the filter every 3 months.



Part No.	Capacity	Conductivity	Ø Height	Power	Weight
	Distillation litre/Hour	µs/cm	cm	W	Kg
4001729	1.2	5	29 39	750	3.5

Spare: Dispenser spout with filter. Part No. 4001730



Detergent "BIO-SEL"

Part No.

1000025 Capacity 1 litre.

1000026 Capacity 4 litres.

1000852 Box of 12 x 1 litre flasks.

1000853 Box of 4 x 4 litre flasks.

additiona



Autoclave for liquids and solids sterilization "Autester ST DRY PV III"



CAPACITY: 25 LITRES. SPACE FOR 12 BOTTLES OF 250 ML, 9 OF 500 ML, 3 OF 1000 ML AND 2 OF 2000 ML. CONFORMS TO THE REGULATION - 2014/68/UE EQUIPMENT UNDER PRESSURE.

Complete selection of programs. Displays in English - Spanish - French.

FEATURES

Sterilization chamber and lid made from AISI 304 stainless steel.

External case epoxy coated.

Digital control of all autoclave operations.

TFT 3,5" touch screen .

Air filter, purifies air before entering in the sterilization chamber.

Separate clean water reservoir and waste water.

RS-232 Interface output of parameters to a computer or for printer.

USB output for PEN-DRIVE data logging.

SAFETY

Safety valve.

Prevents the door being opened if under pressure or high temperature is produced. Temperature safety thermostat.

Door closed correctly detector

Thermally protected lid.

MICROPROCESSOR FUNCTIONS

Controlled parameters are:

- Sterilization temperature from 105°C up to 134°C.
- Sterilization time from 3' to 59'.
- Drying time from 20' to 60'.
- Up to 10 user-configurable programs.
- · Six operating modes:
- Solid 1 Solid 2 fractions. Solid 3 fractions Drying Liquids Liquids 2 probes
- Verification test
- Vacuum Bowie Dick.
- Settings:
- Units languages (Spanish, English, French). Printer module On/Off. Clock: date/time.
- · Password for adjustment.
- Calibration.
- Temperature probe 1 Temperature probe 2 Water dosing Presion.
- · Audible and visual alarm for overtemperature and insufficient temperature.
- Network failures detection and memorization.
- Safety therrmostat by software.
- Sterilization cycles data logging with capacity for over 500 cycles.
- · Internal cleaning program.
- Graphical representation of real time process.

CONTROL PANEL

TFT touch screen with virtual pushbuttons.



- 1. Graphical representation of real time process
- 2. Start/Stop pushbutton.
- 3. Running program.
- 4. Press indicator.
- 5. Temperature indicator.
- 6. Running program parameters.





MODEL	Part No.	Capacity litres	Ø/Depth (usables) cm	Height/Width/Depth (exterior) cm	Power W	Weight Kg
AUTESTER ST DRY PV III 25	4002420	25	30 35	58 46 59	2510	52



Comes complete with three trays, extractor forceps, and additional support for instruments and sterile wrapping

Nº Programme	Description	Temperature Sterilization	Time Sterilization	Time Drv	Purge				
0	Free	-	-	-	-				
1	Unwrapped instruments	134 °C	4 min	15 min	2 (1)				
2	Wrapped instruments	134 °C	12 min	30 min	3 (2)				
3	CJD	134 °C	20 min	20 min	3 (2)				
4	Delicate unwrapped	121 °C	15 min	15 min	2 (1)				
5	Delicate wrapped	121 °C	30 min	30 min	3 (2)				
6	Disinfecting	105 °C	25 min	15 min	1 (3)				
7	Liquids	121 °C	30 min	-	1 (3)				
8	Solids	121 °C	15 min	30 min	1 (3)				
9	Solids	134 °C	4 min	30 min	1 (3)				
(1) Double Vacuum purge. (2) Triple Vacuum purge. (3) Atmospheric purge (No vacuum).									

MESSAGES:

1. E 2PROM 2. RTC FAULT 3. SENSOR PRECISION	10. TEMPERATURE LOW FAULT 11. INPUT ERROR 12. STERILIZATION
4. HEATER PROBE	13. LEVEL 1
5. CHAMBER PROBE	14. LEVEL 1
6. OVER PRESSURE	15. DOOR
7. VACUUM	16. PRINTER NO PAPER
8. PRESSURE	17 PAPER JAM
9. BOILER TEMPERATURE	18. ELECTRICAL FAULT

ACCESSORIES

Ink Printer (no thermal).

Paper size 2 1/4" (56 mm) wide.

Includes communications and power cable.

Model





Water distiller especially for Autoclaves. (See page 63).

Bag sealers (See page 68 and 69).

Special tray for bottles of 0.25, 0.5, 1 or 2 litres. Part No. 4002416



Autoclave for sterilization "Autester ST DRY PV" Class B

CHASE



AUTOMATIC VACUUM DRY AND PURGE. Programs to 121 °C and 134 °C (1 and 2 bar). Model Horizontal. Capacity: 12, 18, and 23 litres.

APPLICATIONS

"Class B" autoclaves are used within the field of general medicine, dentistry, veterinary, tattoo parlours and sterilization applications in general, to sterilize any material that could have been in contact with body fluids including blood.

The general capabilities of the instrument are regulated by EN 13060 that guarantees the differing sterilization applications.

The normal processes include: Solids with and without wrapping, porous material with and without wrapping and utensils that have cavities and holes (e.g. dentistry materials.)

To guarantee sterilization of these materials the "AUTESTER ST DRY PV" Class B, autoclaves, have an efficient staged vacuum, that performs a complete extraction of air that allows penetration of the steam vapour.

The same vacuum system is used to obtain the dry phase, which is required for perfect storage of sterilized materials.

The "AUTOCLAVES ST DRY PV" Class B includes verification and validation programs.

CONFORMITY:

EN 13060 SMALL GENERAL PURPOSE STEAM STERILIZERS. EN 61010-1 EQUIPMENT SAFE FOR LABORATORY USE.

EN 61010-2-040 SAFETY FOR STERILIZER EQUIPMENT FOR LABORATORY USE

EN 61326 ELECTROMAGNETIC COMPATIBILITY FOR EQUIPMENT USED IN THE LABORATORY.

SAFETY:

SAFETY VALVE: PREVENTS THE PRESSURE EXCEEDING THE MAXIMUM SET LIMIT.

SAFETY THERMOSTAT: DISCONNECTS THE HEATER AGAINST OVER TEMPERATURE OR LOW WATER IN THE RESERVOIR.

THERMALLY INSULATED LID.



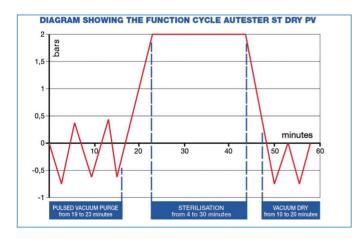








18 and 23 litres



Staged fractional vacuum: Extracts air from the load that permits absolute steam vapour penetration.

Sterilization stage: Sterilization within the time and temperature selected.

Dry cycle: Extracts the humidity from the load leaving it suitable for storage.



Autoclave for sterilization Autester "ST DRY PV" 12 Class B

CAPACITY: "ST DRY PV": 12 LITRES.





According to directive: 2014/68/UE equipment under presure, 3.3.

FEATURES

Stainless steel internal chamber. Staged vacuum purge.

Dry by vacuum

Incorporated steam generator.

Water reservoir to supply the chamber

High vapour penetration of porous material

Used in digestive studies, ophthalmology, operating

theatres etc.

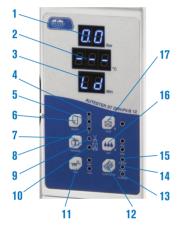
SAFETY

Safety valve. Prevents over pressure over the maximum working limit.

Safety thermostat. Disconnects power to the heater if over temperature or low water in the reservoir.

Thermally protected lid.

CONTROL PANEL





TEMPERATURE CONTROL AND AUTOMATIC MICROPROCESSOR CYCLE.

- 1. Pressure indicator (bar).
- 2. Temperature indicator (°C).
- 3. Time Indicator (min.).
- **4.** 121 °C.
- **5.** 134 °C.
- 6. Program selection.
- 7. Select wrapped or non wrapped.
- 8. Textile materials.
- 9. Solids (Not wrapped).

- 10. Solids (Wrapped).
- **11.** Test.
- 12. Preheating.
- 13. Sterilization cycle in process.
- **14.** Autoclave ready for operation.
- **15.** Low level water indicator.
- 16. Fast dry (1 or 5 minutes).
- 17. "Maintain hot" the chamber.

CYCLES	134 °C Wrapped	134 °C Not Wrapped	121 °C Wrapped	121 °C Not Wrapped	Textiles	Test Bowie Dick	Test Vacuum
Sterilization Temperature	134 °C	134 °C	121 °C	121 °C	134 °C	134 °C	-
Sterilization pressure	2.1 bar	2.1 bar	1.1 bar	1.1 bar	2.1 bar	-	2.1 bar
Vacuum purge time	8 min.	4 min.	8 min.	4 min.	8 min.	-	-
Sterilization time	12 min.	4 min.	30 min.	20 min.	12 min.	3.5 min.	10 min.
Dry time	10 min.	10 min.	10 min.	10 min.	15 min.	1 min.	-

MODEL	Part No.	Capacity litres	Ø / Depth cm	External dimensions cm Height Width Depth	Trays dimensions cm Height Width Depth	Power W	Weight kg
AUTESTER ST DRY PV B 12	4001737	12	20 35	39,2 48,7 60	1,8 14 29,5	1800	42,2



Comes complete with: spare joint, door adjustment key, support with three trays, extractor forceps, empty water filter and waste water out.

ACCESSORIES

Thermal Printer.

Paper size 2 1/4" (56 mm) wide.

Includes communications and power cable.

Power: DC 5V 3A Part No: **4120123**

Water distiller especially for Autoclaves. (See page 63). **Bag sealers** (See page 68 and 69).





Autoclave for sterilization "Autester ST DRY PV" 18 Class B "ST DRY PV" 23 Class B





CAPACITY: "ST DRY PV" 18: 18 LITRES. "ST DRY PV" 23: 23 LITRES..

According to directive: 2014/68/UE equipment under presure, 3.3.

FEATURES

Digital electronic control.

Stainless steel internal chamber.

Staged vacuum purge.

Dry by vacuum

Incorporated steam generator.

Water reservoir to supply the chamber

High vapour penetration of porous material

Used in digestive studies, ophthalmology, operating theatres etc.

Automatic or manual filling of the water tank. Printer interface.

USB connection for parameters memorization (software included).

SAFETY

Mechanism door lock, prevents the door being opened accidentally.

Safety valve. Prevents over pressure over the maximum working limit.

Safety thermostat. Disconnect power to the heaters if over temperature or low water in the reservoir are produced.

Thermally insulated lid.

Dirty water tank full alarm.

CONTROL PANEL

- 1. LCD screen.
- 2. Push button increase parameters.
- 3. Push button decrease parameters.
- 4. Push button menu.
- 5. Push button Start-Stop.







CYCLES	134 °C Emergency	134 °C Solid	134 °C Hollow	134 °C Sanguinary	121 °C Solid	121 °C Hollow	134 °C Glass	121 °C Tampon	134 °C Bowie Dick	134 °C Helix	134 °C User-defined	Test Vacuum
Sterilization Temperature	134 °C	134 °C	134 °C	134 °C	121 °C	121 °C	134 °C	121 °C	134 °C	134 °C	134 °C	-
Sterilization pressure	2,1 bar	2,1 bar	2,1 bar	2,1 bar	1,1 bar	1,1 bar	1,1 bar	1,1 bar	2,1 bar	2,1 bar	-	-
Vacuum purge number	1	1	4	3	1	3	1	3	3	3	3	-
Sterilization time	4 min.	4 min.	4 min.	18 min.	20 min.	20 min.	4 min.	30 min.	3,5 min.	3,5 min.	4 min.	-
Dry time	8 min.	4 min.	10 min.	10 min.	8 min.	10 min.	4 min.	18 min.	3min.	3 min.	3 min.	_

MODEL	Part No.	Capacity litres	Ø / depth cm	External dimensions cm Height Width Depth	Trays dimensions cm Height Width Depth	Power W	Weight kg
AUTESTER ST DRY PV 18	4001734	18	24,5 38	40 47 56	2 20,5 28	1500	46,6
AUTESTER ST DRY PV 23	4001735	23	24,5 48	40 47 67	2 20,5 38	1700	48



Comes complete with: spare joint, door adjustment key, support with three trays, extractor forceps, empty water filter and waste water out.

ACCESSORIES

Ink Printer (no thermal).

Paper size 2 1/4" (56 mm) wide.

Includes communications and power cable.

Power: DC 5V 3A Part No: **4120124**

Water distiller especially for Autoclaves. (See page 63). Bag sealers (See page 68 and 69).





Bag sealer "S-400-B"

SUITABLE FOR POLYPROPYLENE-POLYESTER STERILISING BAGS WITH A PAPER BASE.

FEATURES

Front part made of metal epoxy cove-

red case.

Pressure sealer. Manual cut.

CONTROL PANEL

Illuminated mains switch.



Part No.	o. Seal Width Maximum seal		Height / Width / Depth	Power	Weight
	mm length mm		(exterior) cm	W	Kg
4100047	12	300	17,5 47 35	100	4.8





Bag sealer "Seal-1000"

FOR POLYPROPYLENE AND POLYESTER BAGS WITH A STERILE PAPER BASE.

FEATURES

Metal construction with stainless steel

Pressure sealer unit with lateral leaver with two bilateral cutting edges. Constant sealing temperature (from 180 °C and 200 °C).

External support for rolls of up to 240mm wide, with adjustable separator sides to accommodate different roll sizes.

CONTROL PANEL

Illuminated start switch.

Indicator, optimum seal temperature.

Part No.	Seal width	Maximum seal	Height / Width / Depth	Power	Weight
	mm	length mm	(exterior) cm	W	Kg
4101712	10	260	30 36 43	400	6.5





Automatic bag sealer "Seal-Com 2" ACCORDING TO DIN 58953 SECTION 7 STANDARD. FOR POLYPROPYLENE-POLYESTER BAGS WITH PAPER BASE TO STERILIZE. CONTI-NUOUS SEALING. MANUAL OR AUTOMATIC ADVANCE.

Continuous Thermosealer

FEATURES

Exterior in enamel protected steel. Heating time: 4'. Sealing width: 10 mm. Sealing speed: 6 m / min. Acoustic signal of cycle starting. Electronic regulation and digital reading of temperature.

CONTROL PANEL

Start-up light switch. Manual or automatic start switch.



MODEL

Part No.	Height / Width / Depth	Power	Weight
	(sealer) cm	W	Kg
4100044	16 48 26	720	13











Automatic bag sealer with printer "Seal-Com 3"

ACCORDING DIN 58953 SECTION 7 STANDARD. FOR SEALING STERILE PAPER, POLYPROPYLENE-POLYESTER BAGS. SPECIAL FOR A LARGE AMOUNT OF BAGS SEALING.

FEATURES

Exterior made from AISI 304 stainless steel, ideal for sealing plastic paper bags, solid

plastic paper and only paper bags.

Heating time: 4 minutes. Seal width: 12 mm. Sealing speed: 10 m/min. Acoustic sign of cycle starting.

Temperature touch control from 60 to 220°C.

CONTROL PANEL

LCD touch screen 7" indicating:

- Setpoint temperature and actual temperature.
- Date and time (automatic date change).
- Print size.

PRINTING

Print sterilization date, expiration date, sterilization lot, name of the operator, name of the item and department.

MFG: 20190516LOT: 000000230PERATOR: 00000000 EXP: 20220208NO. /SECOND: /PACKAGED GOODS: DEPARTMENT: (€

MODEL

Part No.	Height / Width / Depth (sealer) cm	Power W	Weight Kg	
4100049	22 56 26	500	20	



NEW

ACCESSORIES

Roller table

Measures cm: 74.5 width x 28.6 depth x 5.2 height.

Part No. 4100053



SEALING MACHINE ACCESSORIES

Rolls of paper for sterilization "Polisteril"

Paper base polypropylene and polyester bags showing differing ink prints of sterilized items.

Part No.	Bag width cm	Bag length n
4100075	7,5	100
4100100	10	100
4100200	20	100



Sterile paper "Policort" trimmer

Completely made of metal with back and reel support, for a capacity of 2 x 200mm or 4 x 100 mm wide reels.

Circular cutting knife edge.

Measurements: 13 high x 51 wide x 32 cm deep.

Weight: 2.8 Kg. Part No. 4100045

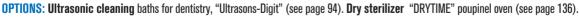


Date stamping machine for sterile bags.

Part No. 4100046

STERILIZED
30 OCTOBER 2022
Valid for 3 months.

VALID FUR 3 MUNIHS.



ACCESSORIES FOR AUTOCAVES

Mercury-free thermometer for recording autoclave's temperature.

It indicates the highest temperature reached by the autoclave to verify its correct operation.

AISI 304 stainless steel made body and glass lens resistant to humidity, pressure and high temperatures.

Range: -20/150°C. Accuracy: ± 2°C.
Part number 1097101 Without calibration.

Part number 1097102 With individual calibration report at 121°C.





Flake ice makers	page 71
Refrigerated cabinets "Medilow" XS, S, M, L & LG	page 72
Refrigerated medical cabinets, S, L & M	page 73
Upright freezers "Templow" S, M, L, P and Z	page 74
Storage refrigerators "Stocklow" LS & GS	page 75
Chest freezers "Combatemp"	page 75



LOW TEMPERATURE

Model selection table

QUICK OVERVIEW

Equipment type	Model	Forced Air	Regulation		CAPACITY		
Refrigerated Cabinets				105 litres			
+2 +8 °C	Medilow XS	Yes	Analogical	2101286			
Cabinets				180 litres	236 litres	544 litres	544 litres glass
+1 +40 °C	Medilow-S-M-L-LG	Yes	Digital	2101270	2101271	2101272	2101273
Storage refrigerators				236 litres	352 litres	330 litres	
+0 +15 °C	Pharmalow-S-L	Yes	Analogical	2101274	2101275	_	
+2 +8°C	Pharmalow-M	Yes	_	-	-	2101287	
+2 +8 G	Pilarillaluw-ivi	Yes	Digital	-	-	2101207	
Storage freezers				513 litres			
-1425 °C	Templow-M	No	Digital	2101279			
				257 litres			
-1532 °C	Templow-S	No	Digital	2101278			
	·		-	600 litres			
-1035 °C	Templow-L	Yes	Digital	2101280			
			J	289 litres (Two compartments)			
+240 °C	Templow-YC	Yes	Digital	2101288			
Storage refrigerators				670 litres	670 litres Glass		
+1 +8 °C	Stocklow LS	Yes	Digital	2101283	-		
+1 +8 °C	Stocklow GS	Yes	Digital	-	2101284		
-1722 °C	Stocklow LSC	Yes	Digital	2101289			
Chest Freezers				206 litres	215 litres	343 litres	352 litres
-1428 °C	Combatemp	No	Digital	2101040	-	2101041	-
-1040 °C	Combatemp	No	Digital	- 2101181 -		2101182	
10 70 0	Compatemp	110	Digital	_	2101101		2101102
Flake ice maker				Production 58 Kg	Production 89 Kg	Producti	on 142 Kg
	"COM"	Compressor	-	5020104	5020105	5020)106
		•					



Flake ice maker "COM-50", "COM-85" and "COM-150" "COM-50" MODEL: PRODUCTION 45 kg-24 HOURS.



"COM-85" MODEL: PRODUCTION 85 kg-24 HOURS. "COM-150" MODEL: PRODUCTION 150 kg-24 HOURS.

MODELS	Part No.	24h.(kg) Production	Tank Capacity (Kg)	Height / Width /Depth cm	Power W	Weight Kg
EF-50	5020104	58	20	79 47 60	470	58
EF-85	5020105	89	20	79 47 60	550	58
EF-150	5020106	142	60	136 51 55	900	75

Features: See page. 190.

		DESIGN
64€ ₪	46C m	
		V



Refrigerated cabinet "Medilow-XS"

FOR TEMPERATURES FROM 2°C TO 8°C. **IDEAL FOR SMALL SPACES.**

FEATURES

Epoxy covered external case. Interior ABS molded, resistant to chemicals with LED light built-in. Internal fan for temperature homogenization. Supports for adjustable in height shelves.

CONTROL PANEL

Analog temperature controller. On/Off switch internal light. On/Off switch external light.

MODELO

Código	Capacity	Height / Width / Depth	Height / Width / Depth	Power	Power	Nº	Weight
	litres	(interior) cm	(exterior)cm	W	HP	Shelves	Kg
2101286	105	146,5 28 27	182,5 36 38,5	110	1/8	8	65

Supplied with 8 steel trays, PVC laminated. For additional tray. Part No. 1001861





Refrigerated cabinets "Medilow" S, M, L & LG

WITH FORCED AIR FAN CIRCULATION. WITH DIGITAL ELECTRONIC TEMPERATURE CONTROL. TEMPERATURE RANGE CONTROLLABLE FROM +2 °C TO +40 °C. WITH A STABILITY OF ± 1.5 °C. Resolution 1 °C. CAPACITY: 180, 236 AND 544 LITRES.



SAFETY: CONFORMS TO EN61010.1. OVER TEMPERATURE SAFETY THERMOSTAT INSTALLED.



Models Medilow M and L. Medilow M. Capacity: DBO 3 blocks

Model Medilow LG, double glass door.



Model Medilow S. Capacity: DBO 2 blocks

APPLICATIONS

Determination of BOD at 20°C, Measurement of enzyme activity at 25°C. Storage and Preservation of samples, Incubation, Cosmetics, Botany, Food Products, etc.

TEMPERATURE CONTROL

Electronic temperature control with digital display. Pt 100 temperature probe. Probe failure alarm.

FEATURES

Epoxy covered external case. Easy to clean, strong, molded ABS Interior. Vibration and CFC free hermetically sealed compressor.

Turbine fan air circulation, enclosed within the unit. External hole for connecting inside probes, etc. Internal power connection to a maximum of 500 W. Adjustable level front supports.

Door can be hung to open left or right. Door lock.

CONTROL PANEL

Temperature control. Live-time temperature display. Pre-selected temperature display. Increase value, push button. Decrease value, push button. Program parameter selection, push button. Configure push button.

MODELS	Part No.	Capacity litres	Door glass	Height / (int	Width / terior) c			/ Width tterior)	/ Depht cm	Number of shelves	Internal power points	Power W	Weight Kg
MEDILOW-S	2101270	180	-	70	51	44	85	60	85	3	2	250	36
MEDILOW-M	2101271	236	-	106	47	44	125	60	85	3	2	330	47
MEDILOW-L	2101272	544	-	145	60	56	164	75	95	4	2	330	73
MEDILOW-LG*	2101273*	544	YES	145	60	56	164	75	95	4	2	330	82

Comes complete with steel shelves, PVC laminated.

	104	10	ฮฮ	4	2	JJU	02
ľ	SPARE PARTS	Shel	ves				
	For Medilow S/M/L/LG Part No.		2101270	2101271	2101272/21012		
	Shelves			1001813	1001814	10018	15

^{*}Anti mist double glazed insulated door, with LED interior light.



Refrigerated medical cabinet "Pharmalow" S and L

WITH FAN ASSISTED CIRCULATION. TEMPERATURES RANGE FROM +0 °C UP TO +15 °C.

APPLICATIONS

Products that require a constant below atmosphere temperature, preservation of pharmaceutical products, medications, micro-tubes, etc.

COMMON FEATURES

External case and metallic door.

White coated and interior made of anti-toxic white sheet.

Double glazed door and interior light for model M. Hermetically sealed compressor.

Homogeneous, turbine fan assisted air circulation.

Automatic de-frost with water evaporation system. Adjustable level, front base supports. Door can be mounted to open left or right. Door lock.

CONTROL PANEL

Temperature thermostat regulator. Digital thermometer display for models S and L Electronic digital temperature control model M.

Refrigerator "Pharmalow" S and L

MODELS	Part No.	Capacity litres		Height / Width / Depht H (interior) cm			Width terior)	/ Depht cm	Number of shelves	Power W	Weight Kg
Pharmalow S	2101274	236	106	47	44	125	60	61	4	170	47
Pharmalow L	2101275	352	145	47	44	164	60	61	4	180	56
Comes complete v	with steel she	lves. PVC I	aminate	d.							

ACCESSORIES Need to be factory fitted.



Frame support, partitioned metallic drawers.

Modular system with perforated base, sliding drawers, each drawer is divided into three fixed compartments, each compartment with four removable methacrylate partitions.

Frame support for Pharmalow S (Part No. 2101274), with 4 drawers and 48 partitions in total, (maximum capacity: 6 drawers).

Part No. 1001306

Frame support for Pharmalow L (Part No. 2101275), with 5 drawers and 60 partitions in total, (maximum capacity: 10 drawers).

Part No. 1001307

OPTIONAL

Drawer with 3 compartments and 12 partitions. Part No.1001308



Details of frame support, drawers, dividers and partitions.

Storage refrigerator with double glazed anti mist door "Pharmalow" M DIGITAL ELECTRONIC TEMPERATURE CONTROL FROM +2 TO +8

MODEL

Model Pharmalow S and I

with frame support and drawers.

Part No.	Capacity litres		/ Width nterior)	n / Depht cm		Alto / Ancho / Fondo (exterior)cm			Power HP	Number of shelves	Weight Kg
2101287	330	145	54	47	184,5	62	60	575	1/4	6	113
Comes com	plete with ste	el shelve	s, PV0	C laminat	ted.						

ACCESSORY "Pharmalow" S - L and M. Must be factory fitted.

Circular graphic register independently powered.

Temperature range: -10 °C up to 40 °C. Precision ±2% at 12 °C. Chart speed selection of 24 hours or 7 days. Disc Ø 125mm Graphic register dimensions:

18 cm high x 22 cm wide x 35 cm deep.

Powered by an LR-6 1.5V battery. Battery life 1 year.

Part No. 2101621





SPARE PARTS Shelves	
For Pharmalow S/L. Part No.	2101274/2101275
Shelves	1001814



Model Pharmalow M with 6 shelves.

SPARE PARTS Part No.

1001860 Set 2 additional guides + shelf



Upright freezers "Templow" S, M,L and YC

APPLICATIONS

Preservation and storage of products that require to be preserved at low temperatures.

Upright freezer "Templow" S

DIGITAL TEMPERATURE CONTROL.

FIXED TEMPERATURE: -15 °C. -18 °C. -21 °C. -25 °C AND -32 °C. 8 DRAWERS WITH INDIVIDUAL FREEZER COMPARTMENTS.

FEATURES

Epoxy covered metallic external case. Strong, molded, chemically resistant ABS interior. Manual defrost with water evaporation system. Door can be hung to open left or right.

CONTROL PANEL

Mains power ON/ OFF switch. Temperature thermostat regulator. Temperature indicator lamp. Audible and visual alarms. Push button alarm reset/stop. Push button with quick freeze indicator.











Upright freezer "Templow" M

TEMPERATURE RANGE FROM -14 °C TO -25 °C. 7 INDIVIDUAL FREEZER COMPARTMENTS WITH 14 BASKETS.

FEATURES

Epoxy covered external case. Strong, chemically resistant, ABS molded case. Specially coated "Rilsan", wire mesh baskets. Manual defrost, with water evaporation system. The door can be hung to open left or right. Lockable door.

CONTROL PANEL

Temperature thermostat regulator. Digital temperature display.

Upright freezer "Templow" L

WITH FAN ASSISTED AIR CIRCULATION. TEMPERATURE RANGE FROM -10 °C UP TO -35 °C. **COMES WITH 4 SHELVES.**

FEATURES

External and internal case made completely of AISI 304 stainless steel, with water sump and drain. Chemically resistant.

Acclimatized hermetically sealed CFC free compressor. Automatic defrost with electrical water evaporation system.

Regulable shelves.

Adjustable front level supports.

The door can be hung to open, left or right. Door lock.

CONTROL PANEL

Mains power ON/ OFF switch. Electronic temperature regulator. Digital temperature display.

Refrigerated cabinet with double compressor "Templow" YC

UPPER CASE: TEMPERATURES FROM 2°C UP TO 8°C, CAPACITY: 189 LITRES. LOWER CASE: TEMPERATURES FROM -10°C UP TO -40°C. CAPACITY: 100 LITRES. 3 SHELVES AND 1 DRAWER IN UPPER CASE AND 3 DRAWERS IN LOWER CASE.

CARACTERÍSTICAS

External case covered in epoxy.

Stainless steel internal easy for cleaning, with also stainless steel wire basket.

Double compressor that offers maximum stability and constancy of temperature.

Gradual adjustment of the trays for a versatile use of the interior.

Door with lock and key.

USB output for data recording.

TEMPLOW L 2101280

CONTROL PANEL.

Digital electronic control.

Alarms of low and high temperature, door open and power failure.

Backup battery for alarms.

Upper case temperature indicator display. Lower case temperature indicator display. Parameters value increase/decrease.

215 70

83

64

600

360

130

136

•										
MODELS	Part No.	Capacity litres	Range °C		Width / Depht erior) cm		/ Widtlexterior)	n / Depht cm	Power W	Weight Kg
TEMPLOW S	2101278	257	-15 to -32	151	44 42	184	60	63	110	81
TEMPLOW M	2101279	513	-14 to -25	151	61 56	186	75	75	345	109

155 51

65

TEMPLOW YC 2101288 289 **2 to -40 183 70 *Comes with steel PVC laminated shelves and baskets. **in different compartments

600 -10 to -35

Comes with 8 drawers	
*Comes with 14 baskets	
*Comes with 4 shelve	
Comes with 3 shelves and 4 drawers	



Storage refrigerators "Stocklow" LS, GS and LSC

WITH FAN ASSISTED CIRCULATION.

MODEL LS, WITH METAL DOOR. TEMPERATURE CONTROLLABLE FROM +1 °C TO +8 °C.
MODEL GS, WITH DOUBLE GLAZED ANTI MIST DOOR. TEMPERATURE CONTROLLABLE FROM +1 °C TO +8 °C.
MODEL LSC. WITH METAL DOOR. TEMPERATURE CONTROLLABLE FROM -17 °C TO -22 °C.



Preservation and storage of products that require below ambient temperatures.

FEATURES

Chemically resistant.

Tropical hermetic compressor.

Automatic defrost with electrical water evaporation system.

Support rack and shelves.

Adjustable front level supports (Models LS and GS).

Supplied with wheels (Model LSC).

The door can be hung to open left or right.

Door lock.

There are two versions:

Stocklow LS and LSC which is completely made of metal, both interior and exterior. AISI 304 stainless steel door.

Stocklow GS inside made of AISI 304 stainless steel and epoxy white external case with glazed door that enables internal view.

CONTROL PANEL

Mains power, ON/OFF switch.

Electronic temperature regulator.

Digital temperature display.

Interior light only(Double glazed door model).

SPARE PARTS

Código 1001858 Set 2 guides + additional tray



Model Stocklow LS and LSC, with metallic door.



Model Stocklow GS, with metallic door.

MODELS	Part No.	Capacity litres	Door	Height / Width / Depht (interior) cm	Height / Width / Depht (exterior) cm	Number of shelves	Power W	Weight Kg
STOCKLOW LS	2101283	600	Metallic	154 61 63	213 73 84	3	250	120
STOCKLOW GS	2101284	600	Glass	154 61 63	213 73 84	3	250	125
STOCKLOW LSC	2101289	600	Metallic	154 61 63	213 73 84	3	500	125

Comes complete with steel shelves, PVC laminated.



Chest Freezers "Combatemp"

CONTROLLABLE TEMPERATURE RANGE FROM -14 °C TO -28 °C. CONTROLLABLE TEMPERATURE RANGE FROM -10 °C TO -40 °C.

APPLICATIONS

Suitable for preservation and freezing of sample.

FEATURES

Epoxy covered external case. Interior of aluminium, with guide supports for baskets or trays.

The interior of the door is made of easy to clean, strong, chemically resistant, moulded ABS.

Drop down lockable door with compensating support hinges. Hermetically sealed compressor, silent and vibration free.

Automatic interior light when the door is opened. (all models except Combatemp S-30.)

Digital electronic temperature control. N.T.C. Sensor.

CONTROL PANEL

Temperature control.

Digital live and preset temperature display.

Push-button temperature selector.



MODELS	Part No.	Capacity litres	Freezing capacity in 24hrs Kg	Temperature up to °C	•	nt / Width (interior)		•	/ Width xterior)	/ Depht cm	Power W	Weight Kg
COMBATEMP S-30	2101040	206	28	-28	74	63	53	92	75	71	160	38
COMBATEMP L-30	2101041	343	38	-28	74	100	53	92	113	71	200	56
COMBATEMP S-40	2101181	215	30	-40	63	89	41	92	113	76	230	57
COMBATEMP L-40	2101182	352	40	-40	65	117	50	92	137	81	400	72

Note: Part No. 2101040 is supplied with 1 basket. Part No. 2101041 is supplied with 2 baskets. Part No. 2101181 is supplied with 3 baskets and Part No. 2101182 is supplied with 2 baskets.

SPARE PARTS Baskets			
For Combatemp. Part No.	2101040 / 2101041	2101181	2101182
Baskets	1001810	1001811	1001812



Shakers for platelet bags	page	77
Incubation chamber	page	77
Platelet bags incubator cabinets	page	78
Blood bank refrigerated cabinets	pages	79 to 80
Shaking monitor	page	80
Dry air defroster	page	81
Automatic sealer and plasma extractor	page	81



Horizontal shakers for platelet bags "APL-54" and "APL-108"

HORIZONTAL MOVEMENT AT A FIXED SPEED OF 66 R.P.M., LATERAL SHUFFLE OF 40 MM.

MODEL "APL-54": CAPACITY FOR 54 PLATELET BAGS.
MODEL "APL-108": CAPACITY FOR 108 PLATELET BAGS.



Platelet bags constant shaking for long periods of time.





FEATURES

Epoxy covered case with treated aluminium platform with AISI 304 stainless steel racks for bags. Programable stirring automatic restart and pause device for bags handling (30 \pm 90 seconds). Acoustic alarm in case of power failure.

LCD display informing of the events log: it counts the number of power failures and their duration. When power is restored, the device automatically restarts the stirring.

CONTROL PANEL

Single button to adjust: -Date and time programmation.

- -Shaking stop button for 30 seconds.
- -Alarms reset.

- -Moving to review the number of incidences.
- -Shaker stop time programmation.

MODELS	Part No.	N° of	Capacity	Height / Width / Depth	Power	Voltage	Weight
		Shelves	bags	Cm.	W	V	Kg
APL-54	3000980	9	54	40 44 39	50	110 / 230 50/60 Hz	22
APL-108	3000981	18	108	40 84 38	50	110 / 230 50/60 Hz	35



Incubation chamber "PLX-IN"

FOR PLATELET BAGS "APL-54" SHAKING, CAPACITY 54 PLATELET BAGS. FOR REGULABLE TEMPERATURES FROM 18 °C UP TO 60 °C. RESOLUTION 0.1 °C. STABILITY \pm 0,1 °C. HOMOGENEITY \pm 0,5 °C. SET ERROR \pm 0,3 °C.

Peltier effect. No compressor group. Quiet, vibrations free, high accuracy and low consumption.

FEATURES

Made of transparent methacrylate with swinging door that allows an easy access to the working area and an inside chamber view during bags shaking.

AISI 304 stainless steel lower base.

Auto shut-off protective device in case of door opening and automatic restart in 30 seconds.

CONTROL PANEL

Start-up main switch with digital temperature regulation.

MODEL

Part No.	Height / (ex	Width a			/ Width. nterior) (- 1	Power w	Weight Kg
3000958	44	63	65	33	60	50	360	38

It can be supplied for 110 V- 60 Hz on demand.



Incubation chamber "PLX-IN" Part No. 3000958 with "APL-54" shaker Part No. 3000980

Note: For a correct bag preservation, it is recommended to keep a temperature between 20 and 24 °C.



Platelet bags incubated cabinets "Blood Bank" E and F

EXCLUSIVE DESIGN ADAPTED TO ACCOMODATE PLATELET BAGS STIRRERS "APL". FORCED AIR CIRCULATION.







SAFETY:

LOW TEMPERATURE THERMOSTAT LIMITER.

VISUAL AND ACOUSTIC INDICATORS: EXCESSIVE LOW TEMPERATURE (+18 °C), EXCESSIVE HIGH TEMPERATURE (+24 °C), OPEN DOOR, MAINS FAILURE TEMPERATURE GRAPHIC REGISTER. 7 DAYS RECORDER. AUTONOMY 6 MONTHS. ACOUSTIC ALARM ON ALL FAIL CONDITIONS. ACOUSTIC INDICATOR.











Graphic recorder

APPLICATIONS

Storage cabinet specially designed for platelet bags preservation.

COMMON FEATURES

AISI 304 stainless steel external cabinet and internal lining.

Double glazed door, reversible lockable door, easy to change, with automatic feedback mechanism and manual locking.

Hermetically sealed compressor mounted on antivibration settlement with forced type evaporator and ventilated type condenser.

Shelves and supports in steel PVC laminated.

2 power outlet base for model "Blood-Bank E" max. power 500 W

6 power outlet base for model "Blood-Bank F" max. power 500 W

Inner air circulation for a more temperature homogeneity.

Temperature sensors located in similar conditions to platelet bags. Circular graphic register built-in.

Microprocessor temperature control that allows configuration and visualization of the following parameters by means of the display:

- SET adjustment.
- Alarm adjustment.
- Calibration.

OPTIONAL COMPLEMENTS

ETHERNET thermometer module

Temperature Record, with control of programmable warnings and graphic representation. It must be installed at the factory.

ETHERNET connection is needed at the place of use.

Part No: 2101627

Data logger with digital display

PT100 type probe with two meters of cable. Measuring range of -100 °C. at +200 ° C. With GSM module for data transmission.

Part No. 2101520

SPARE PARTS

For 2101511. Part No. 1001862 Additional tray.

For 2101513. Part No. 1001863 Set 2 trays + additional central guide

MODELS	Part No.	Capacity litres	Capacity stirrers	Height / Width / Depth (interior) cm		Height / Width / Depth (exterior) cm			Power W	Power HP	Number of shelves	Weight Kg	
Blood Bank E	2101511	560	2 x APL-54	153	54	66	213	80	79	497	3/8	4	165
Blood Bank F	2101513	1240	4xAPL-54 o 2xAPL-108	153	124	68	213	139	79	1034	5/8	8	212

They are supplied with trays and wheels.



Blood bank refrigerated cabinets "Blood Bank"A, C and D

FORCED AIR CIRCULATION. FIXED TEMPERATURE +4 °C. STABILITY ±1.5 °C. RESOLUTION 1 °C. SEVEN DAYS GRAPHIC TEMPERATURE REGISTER. CAPACITIES FROM 80 TO 480 BLOOD BAGS.



SAFETY:

ALARMS SYSTEMS VISUAL AND ACOUSTIC: LOW TEMPERATURE (+2°C), OVER TEMPERATURE (+6°C), DOOR OPEN, MAINS FAILURE. INDEPENDENT BATTERY BACKUP GRAPHIC TEMPERATURE REGISTER. 7 DAY RECORDER, AUTONOMY 6 MONTHS. ACOUSTIC ALARM ON ALL FAIL CONDITIONS. REMOTE ACOUSTIC ALARM.









Graphic recorder

APPLICATIONS

AISI 304 storage cabinets specifically designed and manufactured for blood bag storage.

COMMON FEATURES

Model A: interior furniture in painted aluminum and base in stainless steel AISI 304, exterior in white enameled steel.

Models C and D: Stainless steel. AISI 304. external cabinet and interior lining. Double glazed antimist, reversible lockable door, easy to change, self close door if left ajar. Hermetically sealed compressor mounted on shock absorbers with evaporator and forced air condenser.

Fan air circulation maintaining homogeneous temperature distribution.

Temperature sensors are located and calibrated to read simulated blood bag conditions.

Independently powered circular graphic register.

Microprocessor controlled temperature control via a display that can configure the following parameters:

- Adjust SET.
- Adjust alarm.
- Calibration.

OPTIONAL COMPLEMENTS

ETHERNET thermometer module

Temperature Record, with control of programmable warnings and graphic representation. It must be installed at the factory.

ETHERNET connection is needed at the place of use.

Part No. 2101627

Data logger with digital display

PT100 type probe with two meters of cable. Measuring range of -100 °C. at +200 ° C. With GSM module for data transmission.

Part No. 2101520

SPARE PARTS

For 2101519. Part No. 1001864 Additional tray. For 2101512. Part No. 1001862 Additional tray.

Set 2 trays + additional central guide For 2101514. Part No. **1001863**

MODELS	Part No.	Capacity litres	Capacity bags	Heiç	jht / Widt (interior)	h / Depht cm		/ Width xterior)	n / Depht cm	Power W	Power HP	Number of shelves	Weight Kg
Blood Bank A	2101519	235	80	109	51	55	156	61	62	300	1/7	4	90
Blood Bank C	2101512	560	200	153	54	66	213	80	79	497	3/8	4	165
Blood Bank D	2101514	1240	480	153	124	68	213	139	79	1034	5/8	8	212

They are supplied with trays and wheels.



OPTIONAL ACCESSORIES,

Metallic drawers, to be ordered separately.

Modular rack system of drawers, divided into compartments and subdivided by plastic dividers for different bag classification, bags are placed upright longitudinal.

Blood Bank A,

System of 4 drawers for 18 bags per drawer. Capacity 72 bags.

Part No. 1001508

Blood Bank C,

System of 6 drawers for 40 bags per drawer. Capacity 240 bags.

Part No. 1001507

Blood Bank D,

System of 12 drawers (6 in each compartment) for 40 bags per drawer.

Capacity 480 bags. Part No. 1001506



Detailed image of the drawers with dividers

SPARE PARTS

Brackets and shelves

For Bloodbank code	2101499 / 2101500
Brackets - 4 units	1001801
Shelves	1001806

Each shelf requires 4 brackets.

COMECTA

Shaking monitor for blood collection "HEDO2"

FOR BAGS BLOOD COLLECTION PROCESSES, SWINGING PLATFORM.

FEATURES

HEDO2 is a digital blood collection monitor, created to control and monitoring blood collection processes. It has been designed to perform simple, precise and accurate operations.

It is composed of:

- -Easily removable tray.
- -Wired or wireless interface networking.
- -Automatic clamp closing at the end of the donation.
- -Automatic tare calculation.
- -Real time monitoring of the donation showed on the digital display.
- -Stand alone mode (operating with rechargeable battery). 8 hours life.
- -Tube sensor presence.

Power supply: 110-220V / 50-60 Hz.

MODEL

Part No.	Max weight Capacity g	Precision g	Resolution g	Height / Wid (external)		Power W	Weight Kg
5010000	999	± 3	1	19 32	32	60	5

It is supplied with a transport suitcase.



ACCESSORIES

Barcode reader Hedo-2. Part No. 5010003 Alarm lamp pool Hedo-2. Part No. 5010004



Plasma and HPC "PL-3" dry air defroster EASY CLEANING WITH INCORPORATED STERILIZATION SYSTEM.

3 BAGS CAPACITY.

CONSTANT TEMPERATURE OF 37°C. STABILITY ±1.





SAFETY:

SAFETY THERMOSTAT THAT DISCONNECTS THE BATH IN CASE OF OVERTEMPERATURE. PROTECTION DEVICE WITH AUTO DISCONNECTION IN CASE OF DOOR OPENING. VISUAL ALARM OF ELECTRICAL SUPPLY CUTTING.

Soft swing agitation

FEATURES

ABS external case and AISI 304 stainless steel interior.

Swing agitation.

Temperature motorization with direct reading of the bags by infrared.

Temperature reading dual system.

No additional measuring equipment is required.

USB output for data logging.

Fast tempering function button.

CONTROL PANEL

3.5 inch TFT touch screen:

Start-up switch.

Quick temper button.

Time and temperature reading screen. Sterilization button.

MODEL	Part No.	Capacity bags	Height/Width/Depth (exterior) cm	Power W	Weight Kg
PL-3	3001252	3	30 41 54	5000	20



COMECTA

Blood bags tube automatic sealer "Sealcom-B"

FOR TUBES FROM Ø 3 TO 6MM.

FEATURES

Metal epoxy covered external case.

AISI 304 stainless steel sealing head.

A microprocessor provides an automatic sealing by dielectric heating when inserting part of the tube in the piston.

Sealing time from 1 to 2 seconds.

CONTROL PANEL

Main switch, with light indicator.

Light indicating operation, sealing and end of sealing.

MODEL

Part No.	Sealing	Height / Width / Depth	Power	Weight
	width mm Ø	(exterior) cm	sealing W	Kg
5800060	3 to 6	15 16 34	400	7



Manual plasma extractor "PR-B"

EASY TO USE

MANUAL SYSTEM THAT ACCEPTS ALL KINDS OF PLASMA BAGS. TRANSPARENT PLATFORM FOR VISUAL CONTROL OF THE PLASMA. STAINLESS STEEL AISI 304 CABINET.

MODEL

Part No.	Height / Width / Depth (exterior) cm	Weight Kg
5800061	25 17 30	2,6









Water and oil baths with analogue control	pages	84 to 86
Sand baths	page	85
Circulation pump	page	85
Water and oil baths with digital control	pages	86 to 89
Histology paraffin bath	page	90
Bank of water and oil baths	page	91
Precise shaking baths	page	91 and 92
Microprocessor control		
Viscometer bath	page	92
Ultrasonic cleaning baths	page	93 to 95



BATHS; WATER AND OIL, SAND, AND ULTRASONIC Summary table of the different models QUICK OVERVIEW



BATHS WATER / OII Range	L Model	Control	Safety thermostat	1.5 litres	CAF	ACITY / PART N	lo.		Stability	RS-232
+30 110 °C									±2 °C	
+30 110 6	Aquaterm	Thermostat	No	3000916					±2 U	No
				1 litre						
+30 110 °C	Baher	Thermostat	No	7000540					±3 °C	No
				4 litres						
+40 80 °C	Termofin	Thermostat	No	3000459	(Paraffin)				±1 °C	No
				2.5 litres						
+5 110 °C	Univeba	Thermostat	Yes	3000400					±1 °C	No
TJ 110 U	Omvesa	TilGilliostat	163						±1 0	IVU
				2.5 litres						
+5 200 °C	Univeba	Thermostat	Yes	3000401					±2 °C	No
				11 litres						
+5 110 °C	Termobat	Thermostat	Yes	3000587					±2 °C	No
				11 litres						
+5 200 °C	Termobat	Thermostat	Yes	3000588					±3°C	No
				O lituas	E lituas	10 litus	OO lituss	AE litus		
+5 110 °C	Precisterm	Thermostat	Vaa	2 litres	5 litres	12 litres	20 litres	45 litres	±1 °C	No
+5 200 °C				6000137		6000140	6000141	6000142	±1°C	No
+5 200 °C	Precisterm Precisdig	Thermostat	Yes	6000385	6000386 6001120	6000387 6001121	6000388 6001122	6000389	±2 °C	No
+5 200 °C	Precisdig	Digital µ Digital µ	Yes		6001220	6001221	6001122	6001123 6001223	±0.1 °C	No
+5 80 °C	Agibat-20	Digital µ	Yes		-	-	6032015	-	±0.5 °C	No
⊤J 00 U	Ayıbat-20	Digital µ	169	160 litres	220 litres		0032013		±0.0 G	IVU
+5 99.9 °C	Precisbig	Digital µ	Yes	6001240					±2 °C	No
	i recioniy	Digital p	103	2x2 litres	4x2 litres	6x2 litres			±£ 0	110
+5 200 °C	Precisbat	Thermostat	No	6001462		6001482	-	_	±2 °C	No
		···o·····o···u··	110		0001412	030170E				110
Baths with stirring of	•			27 litres	(6)				0-	
	Unitronic Reciprocating		Yes		(Shaker bath)	-	-	-	±0.05 °C	Yes
0 99.9 °C	Unitronic Reciprocating (C Digital µ	Yes	6001173	3 (Shaker bath)	-	-	-	±0.05 °C	Yes
Baths for viscomete	ers									
+5 100 °C	VB-1423	Digital	Yes	-	-	-	3001423	-	±0.05 °C	No

μ: with microprocess	or.
----------------------	-----

+5 indicates ambient temperature +5 °c.

Sand baths								
	Model	Control		:/Widht/ usable) cı			/ Widht usable)	
+400 °C	Combi-San	d Electronic	5	18	38	5	30	30
Part No.			60	00708		6	00070)9
Ultrasonic clean	ing baths with heatir	ng and with digital ele	ctronic	: regulatio	n.			
Part No.	Capacity litres	Height / Widh (usable)		th		Pow	er heate W	r
3000865	5	15 24	14				75	
3000866	6	15 30	15				75	
3000867	10	15 30	24			- 2	225	
3000868	22	15 50	30			3	375	
3000864	30	20 50	30			(900	

eating			
Capacity litres			
1	6	14	14
2,6	9	23	13
4	10	30	14
6	15	30	14
6,5	14	24	Ø
9	15	50	14
9	15	30	23
20	15	50	30
	Capacity litres 1 2,6 4 6 6,5 9	Capacity Heigh (in the second	Capacity litres Height / Widt (usables) 1 6 14 2,6 9 23 4 10 30 6 15 30 6,5 14 24 9 15 50 9 15 30



Water bath "Aquaterm"

ADJUSTABLE TEMPERATURE FROM 30 °C TO 110 °C. STABILITY ±2 °C.

Economic option

FEATURES

AISI 304 stainless steel tank with epoxy coated base.

Heater element embedded in high temperature, corrosive resistant INCOLOY.

CONTROL PANEL

Temperature regulator thermostat switch, synchronised with an indicator lamp.

MODEL

Part No.	Capacity litres	,	leight cm	Ø (exterior)	Height) cm	Power W	Weight Kg
3000916	1.5	20 1	11.5	22	20.5	640	1.3



ACCESSORIES IN AISI 304. STAINLESS STEEL

Perforated	shelf.
Part No. 600	เกดูดูล

Flat Lid with 5 concentric ring set.
Part No. 3000917



Boiling bath "Baher"

ADJUSTABLE TEMPERATURE FROM 30 °C TO 110 °C. STABILITY ±3 °C.

FEATURES

Rapid boiling (6-7 minutes).

AISI 304 stainless steel tank and epoxy coated base.

Heater element embedded in INCOLOY stainless steel.

CONTROL PANEL

Temperature regulator thermostat switch, synchronised with an indicator lamp.

MODEL

Part No.	Capacity	Ø	Height	Ø	Height	Power	Weight
	litres	(usable)	cm	(exterior)	cm	W	Kg
7000540	1	14	11	15	19	640	1



ACCESSORIES MADE OF STAINLESS STEEL

Lid with bakelite handle. Part No. **7000572**

Rack 24 haemolysis tubes up to 13 mm diameter.

Part No. 7004002

Rack for 24 tubes up to 18 mm diameter. Part No. **7000541** Perforated shelf.
Part No. 6000033



Water and oil baths "Univeba"

WATER BATH: ADJUSTABLE TEMPERATURE FROM AMBIENT +5 °C TO 110 °C STABILITY ± 2 °C. Oil bath: Adjustable temperature from ambient +5 °C to 200 °C stability ± 3 °C.

SAFETY

CONFORMS TO THE DIN STANDARD 12877 BY INCORPORATING A MANUALLY RESET OVER TEMPERATURE SAFETY CUT-OUT.

APPLICATIONS

To be used with a rotary evaporator or as a stand alone Bains Marie bath.

FEATURES

Tank interior and exterior case made of AISI 304 stainless steel. The heater element is embedded in a protective INCOLOY stainless steel shield.

CONTROL PANEL

Illuminated main power switch indicator lamp. Hydraulic temperature thermostat regulator synchronised with an indicator lamp. Safety thermostat cut out indicator lamp.



MODELS

Part No.	Maximum Temperature °C	Capacity litres	Ø Height (usable) cm	Height / Widht / Depth (exterior) cm	Power W	Weight Kg
3000400	110	2.5	18 13	19 22 27	390	4
3000401	200	2.5	18 13	19 22 27	640	4

ACCESSORIES MADE OF STAINLESS STEEL

- **1- Heating element cover shelf.** Part No. **6000033**
- 2- Reduction ring cover lid of 110, 80, 60 and 37 mm Ø. With a thermometer location hole in the lid. Part No. 7004001
- **3- Tube rack** for 24 haemolysis tubes up to 13 mm \emptyset . Part No. **7004002**
- **4- Tube support** rack for 24 tubes up to 18 mm \emptyset . Part No. 7000541
- 5- Thermometer.

Part No.

1000100 up to 100 °C. **1095250** up to 250 °C.



Water and oil baths "Termobat"

ADJUSTABLE TEMPERATURE FROM AMBIENT+5 °C TO 110 °C. STABILITY ± 2 °C TO 200 °C. STABILITY ± 3 °C.

SAFETY:

CONFORMS TO THE DIN STANDARD 12877 BY INCORPORATING A MANUALLY RESET OVER TEMPERATURE SAFETY CUT-OUT.

APPLICATIONS

To be used with a rotary evaporator for flasks up to 10 litres or as a stand alone bains marie.

FEATURES

Tank interior made of AISI 304 stainless steel, with an epoxy coated base.

The heater element is embedded in a protective INCO-LOY stainless steel shield.

CONTROL PANEL

Main power switch, with luminous indicator lamp.

A hydraulic temperature thermostat regulator is synchronised with an indicator lamp.

MODELS

INIONET9						
Part No.	Maximum Temperature °C	Capacity litres	Ø Height (usable) cm	Ø Height (exterior) cm	Power W	Weight Kg
3000587	110	11	29 17	29 25	2100	5.5
3000588	200	11	29 17	29 25	2100	5.5

Large capacity



ACCESSORIES MADE OF AISI 304 Stainless Steel

Reduction ring cover lid of 210, 180, 145, 115 and 80 mm Ø. With a location hole for a thermometer.

Part No. 7000589



Heater element cover shelf.

Part No. 6000055



Thermometer.

Part No.

1095100 up to 100 °C. **1095250** up to 250 °C.



Sand baths "Combiplac-Sand"

ADJUSTABLE PLATE TEMPERATURE UP TO 400 °C.



Electronic energy heater controller. The steel hotplate surface has an evenly distributed heater element providing homogeneous heat distribution.

The non warping AISI 304 stainless steel sand bath can be easily removed for cleaning. The Hotplate can be used independently without the sand bath. The hotplate casing is made of AISI 304 stainless steel.



Mains power switch with luminous "On" indicator lamp.

Electronic heater power control between 0 to 100 %.

Heater operation indicator lamp.

The back of the unit is fitted for an electronic thermometer "Sensotherm" or digital electronic controller "Electemp-TFT" described under regulators and controllers (see page 293).



MODELS

Part No.	Height / Widht/ Depth (usable) cm	Height / Widht / Depth (exterior) cm	Power W	Weight Kg
6000708	5 18 38	18 22 41	2300	13
6000709	5 30 30	21 32 35	2800	15



Circulation pump "Ciragit"

FEATURES

The unit can be adjusted to fit most tanks or baths, can be submerged and held in position by an adjustable height support clamp.

Circulation pump allowing external circulation of liquids. ON/ OFF illuminated power switch with light when on.

SPECIFICATIONS

OUTPUT water:

20 °C , 12 I/ min.- 150 mbar

OUTPUT silicon oil:

50 °C 4 I/min.- 130 mbar

Dimensions: 9.5 x 12.5 x 23 cm

Power: 30 W Weight: 2.5 Kg. Part No. 3000402







Water and oil baths "Precisterm"

ADJUSTABLE TEMPERATURE RANGE FROM AMBIENT +5 °C UP TO 110 °C, STABILITY ± 1 °C. Adjustable temperature range from ambient +5 °C up to 200 °C, stability ± 2 °C.

Extensive range of sizes and accessories

Stainless steel interior and external case



FEATURES

Capacity; from 2 litres up to 45 litres.

Double skinned tank of AISI 304 stainless steel with an exterior case of AISI 304 stainless steel. Heating elements embedded in INCOLOY heat and corrosion resistant stainless steel.

CONTROL PANEL

Illuminated mains power switch.

Hydraulic thermostat temperature control, synchronised with the "ON" indicator lamp. Safety thermostat cut out indicator lamp.

MODELS

Part No.	Maximum Temperature °C	Capacity litres		/ Widht usable) (/ Fondo cm	Height / (ex	Widht (terior)		Power W	Weight Kg
6000137	110	2	15	15	13	20	20	27	390	3.5
6000385	200	2	15	15	13	20	20	27	640	3.5
6000138	110	5	15	30	14	20	37	27	600	6
6000386	200	5	15	30	14	20	37	27	1110	6
6000140	110	12	15	30	30	20	40	42	1100	8
6000387	200	12	15	30	30	20	40	42	1400	8
6000141	110	20	15	48	30	20	58	42	1500	10
6000388	200	20	15	48	30	20	58	42	2100	10
6000142*	110	45	15	62	50	22	69	62	2400	18
6000389*	200	45	15	62	50	22	69	62	3800	18

All water baths are supplied with heating elements protection shelf.

SAFETY:

DIN 12877 STANDARD.
THE UNIT WILL CUT OUT IF THERE IS
INSUFFICIENT LIQUID OR IF THE BATH
TEMPERATURE EXCEEDS THE SET
TEMPERATURE.

A MANUAL RESET ADJUSTABLE TEMPERATURE SAFETY THERMOSTAT IS PLACED AT THE BACK OF THE UNIT.



ACCESSORIES. See page 89.

^{*} With built in drain tap.



Water and oil baths "Precisdig" with or without anti-evaporation folding lid

DIGITAL CONTROL AND DISPLAY OF TEMPERATURE AND TIME.

ADJUSTABLE TEMPERATURE RANGE FROM AMBIENT+5 °C TO 99.9 °C, STABILITY ± 0.1 °C, Homogeneity ± 1 °C. Adjustable temperature range from ambient+5 °C to 200 °C, Stability ± 0.5 °C, Homogeneity ± 2.5 °C.

SAFETY: DIN 12877 STANDARD. THE UNIT WILL CUT OUT IF THERE IS INSUFFICIENT LIQUID OR IF THE BATH TEMPERATURE EXCEEDS THE SET TEMPERATURE. A MANUAL RESET ADJUSTABLE TEMPERATURE SAFETY THERMOSTAT IS PLACED AT THE BACK OF THE UNIT.

Programmable temperature and time. Interior and exterior made from Stainless steel





V	0	D	E	LS	
Pa	rt	N	0.		

Part No.	Temperature maximum °C	Capacity litres		/ Widh usable)	t / Depth cm		/ Widh xterior	t / Depth) cm	Power W	Weight Kg
6001120	99,9	5	15	30	14	20	37	27	600	6
6001220	200	5	15	30	14	20	37	27	1100	6
6001121	99,9	12	15	30	30	20	40	42	1100	8
6001221	200	12	15	30	30	20	40	42	1400	8
6001122	99,9	20	15	48	30	20	58	42	1500	10
6001222	200	20	15	48	30	20	58	42	2100	10
6001123	99,9	45	15	62	50	20	69	62	2400	18
6001223	200	45	15	62	50	20	69	62	3800	18

All baths with heating shelf and drainage. Faucet included.

MODELS WITH MAKROLON® FOLDING LID

Part No.	Temperature maximum °C	Capacity litres		/ Widh usable)	nt / Depth) cm	•		t / Depth id) cm	Power W	Weight Kg
6001131	99,9	12	15	30	30	40	40	42	1100	8
6001132	99,9	20	15	48	30	40	58	42	1500	10
6001133	99,9	45	15	62	50	40	69	62	2400	18

All baths with heating shelf and drainage. Faucet included.



Double skinned tank of AISI 304 stainless steel with an external case of AISI 304 stainless steel.

Heating elements embedded in INCOLOY heat and corrosion resistant stainless steel.



CONTROL PANEL

General switch with signal lamp.

Comes complete with drain tap.

- 1. Heating indicators; open thermostat; failure.
- 2. Reading display (temperature or time).
- 3. Setpoint value display (temperature or time).
- 4. Visualization mode change.
- 5. Increase value.
- 6. Decrease value.
- 7. Start / stop button.

MAKROLON® FOLDING LID PROPERTIES

Due to its transparency, you can visualize the bath's inside. It improves temperature stability, and restricts evaporation and pollution

ACCESSORIES. See page 89.



Water bath with inner stirring "Agibat-20" with digital control and display of temperature and time

ADJUSTABLE TEMPERATURE RANGE FROM AMBIENT +5°C UP TO 80°C. STABILITY ±0.1°C. SET TEMPERATURE ACCURACY ±1°C, WORKING TEMPERATURE PRECISION 0.1°C.

SAFETY: DIN 12877 STANDARD. THE UNIT WILL CUT OUT IF THERE IS INSUFFICIENT LIQUID OR IF THE BATH TEMPERATURE EXCEEDS THE SET TEMPERATURE. A MANUAL RESET ADJUSTABLE TEMPERATURE SAFETY THERMOSTAT IS PLACED AT THE BACK OF THE UNIT.

J.P.Selecta original model. More space. More accuracy. Economical.

FEATURES

Double skinned tank, inner case made of AISI 304 stainless steel.

External case of AISI 304 steel.

Submerged heating elements in INCOLOY special alloy.

It comes complete with drain tap.

STIRRING SYSTEM

These baths have an aspiration and outflow internal circulation pump which allow a constant flow stirring.

Flow: 8 litres per minute.

CONTROL PANEL

See page 87.

Three positions switch; only heater, heater + stirring and start/stop.

MODEL WITH MAKROLON® FOLDING LID

Due to its transparency, you can visualize the bath's inside.

It improves temperature stability, and restricts evaporation and pollution.



MODELS

Part No.	Lid Makrolon®	Maximum Temp °C	Litres Capacity	Height/Width/Depth (usable) cm	Height/Width/Depth (exterior) cm	Power W	Weight Kg
6032015	Yes	80	20	15 48 30	40 58 42	2100	11
6032016	No	80	20	15 48 30	40 58 42	2100	12

ACCESSORIES. See page 89.

NEW

All baths with heating shelf and drainage. Faucet included.



Big capacity water baths "Precisbig"

DIGITAL CONTROL AND DISPLAY OF TEMPERATURE AND TIME.

ADJUSTABLE TEMPERATURE RANGE FROM AMBIENT +5 °C TO 99,9 °C. STABILITY: ±0,2 °C. HOMOGENEITY ±2 °C.

SAFETY: DIN 12877 STANDARD. THE UNIT WILL CUT OUT IF THERE IS INSUFFICIENT LIQUID OR IF THE BATH TEMPERATURE EXCEEDS THE SET TEMPERATURE. A MANUAL RESET ADJUSTABLE TEMPERATURE SAFETY THERMOSTAT IS PLACED AT THE BACK OF THE UNIT.

Programmable temperature and time. Interior and exterior made from Stainless steel

FEATURES

Double skinned tank of AISI 304 stainless steel with an external case of AISI 304 stainless steel.

Heating elements embedded in INCOLOY heat and corrosion resistant stainless steel.

CONTROL PANEL

See page 89.

MODELS

Part No.	Temperature maximum °C	Capacity litres	Height / Widht / Depth (usable) cm	Height / Widht / Depth (exterior) cm	Power W	Weight Kg
6001240**	99,9	160	40 80 50	96 100 70	9000	130
6001241**	99,9	220	40 110 50	96 140 70	9000	160

All baths with heating shelf and drainage. Faucet included.

Due to their power consumption are manufactured for three phase 380 V. 4 wheels and gable lids included.

ACCESORIES

Gable lid for bath 6001240. Part No. 6000715 Gable lid for bath 6001241. Part No. 6000716 Silicone oil 4 liters. Temperature up to 300 °C. Viscosity 50 mm2/s at 25 °C. Melting point 318 °C. Part No. 1000027



ACCESSORIES FOR"PRECISTERM", "PRECIDSDIG" AND "AGIBAT-20"

Suitable for all "PRECISTERM", "PECISDIG" and "AGIBAT-20" models.



Removable constant liquid level.
Part No. 6001400
Note: Not compatible with gale and Makrolon® lid.



Fixed, constant liquid level.
Part No. 6000123

Only for baths model "PRECISTERM"



Thermometer support with locking screw (up to 40 mm). Part No. 6000896

Thermometer. Part No. 1000120 up to 100 °C. 1000872 up to 120 °C, extra long, suitable for Gable lid. 1095250 up to 200 °C, extra long,

suitable for Gable lid.

- 1. Gable lid with thermometer location position hole.
- 2. Flat lid with concentric reduction rings of 105, 80, 60 and 37 mm Ø. With thermometer location position hole.

Note: The perforated lid avoids the lock of the Makrolon $\mbox{\ensuremath{\mathfrak{B}}}$ folding lid.

- 3. Support frame for tube racks.
- 4. Tube Racks various tube diameters available.



Capacity litres	Model code AGIBAT-20	Model code PRECISTERM	Model code PRECISDIG	1 Gable lid	2 Lid with concentric reduction rings	3 Support frame
2		6000137 - 6000385		-	6003231 1 place	-
5		6000138 - 6000386	- 6001120*- 6001220*	6000710	6003232 2 places	1001199
12		6000140 - 6000387	' - 6001121*- 6001221*	6000711	6003234 4 places	1001200
20	6032012*6032013*	6000141 - 6000388	3 - 6001122*- 6001222*	6000712*	6003236 6 places	1001201
45		6000142*- 6000389)*- 6001123*- 6001223*	6000714	6001603 12 places	1001205

^{*} Comes complete with drain tap. * For all baths except those carrying Makrolon® lid.

Capacity litres	for PRECISDIG baths with Makrolon® lid	2 Lid with concentric reduction rings	3 Support frame
12	6001131	6003234 4 places	1001200
20	6001132	6003236 6 places	1001201
45	6001133	6001603 12 places	1001205

	4 Tube racks (requires support frame)											
Part No.	Tube Ø mm	Number of tubes per rack	Rack Dimensions Height / Widht / Depth (usable) cm		lumber bath ca 12							
1001202	13	36	8 8.2 23.6	1	3	5	10					
1001203	16	24	8 8.2 23.6	1	3	5	10					
1001204	20	24	8 8.2 23.6	1	3	5	10					

Stabilising rings "circum" prevents flasks from floating when placed in a water bath. Suitable for all types of flasks,erlenmeyers, etc. See page. 176.









Histology paraffin section mounting bath "Termofin"

ADJUSTABLE TEMPERATURE FROM 40 °C TO 80 °C. STABILITY +1 °C.

APPLICATIONS

Suitable for the fusion and preservation of paraffin wax in a liquid state that enables the user to see the floated sections.

FFATURES

Aluminium inner tank and lid with a P.T.F.E. matt black coating. Thermometer location hole in the lid to read temperature.

CONTROL PANEL

Mains power ON/OFF switch. Hydraulic temperature thermostat regulator synchronised with an indicator lamp.

MODEL

Part No.	Capacity	Ø	Height	Ø Height	Power	Weight
	litres	(usable)	cm	(exterior) cm	W	Kg
3000459	4	25	10	34 14	430	2.3

Comes complete with lid and thermometer.



ACCESSORY

Thermometer support (can only be used without the lid).

Part No. 6004591

NOTE: Wax dispenser (see page 217).



Bank of oil and water baths "Precisbat"

ADJUSTABLE TEMPERATURES FROM AMBIENT +5 °C UP TO 200 °C, STABILITY \pm 2 °C. Independent temperature control for each position.

FEATURES

Inner vessel made of AISI 304 stainless steel with the external case made of AISI 304 stainless steel.

The heater element is embedded in stainless steel INCOLOY alloy, that is corrosion and heat resistant.

Each position has a lid with concentric reduction rings of; 105, 80, 60 and 40 mm in \emptyset .

An adjustable support frame is mounted at the back of the unit to facilitate the mounting and support of flasks, condensers and other apparatus, etc.

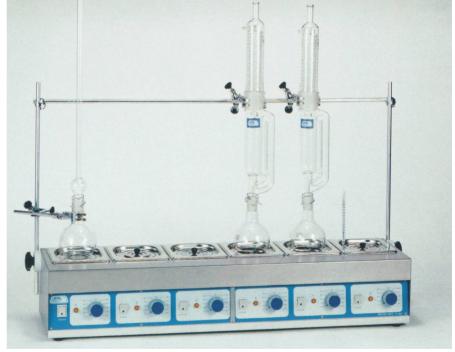
Capacity: 2 litres per position.

CONTROL PANEL

Independent control for each position.

Mains ON/OFF with luminous "ON" indicator lamp for each position.

Hydraulic thermostat temperature control synchronised with the "ON" indicator lamp.



MODELS

Part No.	Temperature maximum °C	Number of places	Height / Widht / Depth (usable each position) cm	Height / Widht / Depth (exterior) cm	Power W	Weight Kg
6001462	200	2	12 14 12	19 35 29	1300	5.5
6001472	200	4	12 14 12	19 67 29	2560	10
6001482	200	6	12 14 12	19 100 29	4200	15

ACCESSORIES



Perforated shelf (One per tank) made of AISI 304 stainless steel. Part No. 6000011



Clamp for supporting flasks and condensers. Part No. 7000403



Thermometer up to 220 °C. Part No.1095250



Bosshead for supporting clamps. Part No. 1000069

Silicone oil 4 liters. Temperature up to 300°C. Viscosity 50 mm²/s at 25 °C. Melting point 318 °C. Part No. 1000027



Precise reciprocal shaking baths controled by microprocessor "Unitronic Reciprocating Shaking Bath" and with refrigeration "Unitronic Reciprocating Shaking Bath C"



UNITRONIC RECIPROCATING SHAKING BATH LINEAR: TEMPERATURE RANGE FROM AMBIENT +5 °C TO 99.9 °C. UNITRONIC RECIPROCATING SHAKING BATH C LINEAR: TEMPERATURE RANGE FROM 0 °C TO 99.9 °C. STABILITY ±0.05 °C HOMOGENEITY ±0.1 °C. SET TEMP. ERROR ±1 °C. RESOLUTION 0.1 °C.

SAFETY:

DIN 12877 STANDARD. THE UNIT WILL CUT OUT IF THERE IS INSUFFICIENT LIQUID OR IF THE BATH TEMPERATURE EXCEEDS THE SET TEMPERATURE. A MANUAL RESET ADJUSTABLE TEMPERATURE SAFETY THERMOSTAT IS PLACED AT THE BACK OF THE UNIT.

Reciprocal linear agitation, controllable from 10 to 100 oscillations per minute

Controllable time from 1 minute to 99 hours 59 minutes

MICROPROCESSOR CONTROL WITH DIGITAL DISPLAY AND PUSH BUTTON TEMPERATURE, SPEED AND TI-ME SELECTION. RS-232 INTERFACE FOR PRINTER OR COMPUTER OUTPUT.



APPLICATIONS

Cell culture and biological samples, yeasts and general applications that require stable and reproducible temperatures.

COMMON FEATURES

Linear motion sliding tray from 10 to 100 oscillations per minute, with a variable stroke length of 32 or 46 mm.

Digital display and selection of temperature, oscillations and time.

Temperature sensor: thermo-resistant Pt100. Rack frame support made of AISI 304 stainless steel incorporated in the tank that can accommodate a selection of flasks and racks.

Internal tank made of AISI 304 stainless steel with an external case of AISI 304 stainless steel.

Built in drain tap.

Ventilated hermetically sealed compressor for refrigeration in the "Unitronic - C".

CONTROL PANEL

- 1. Mains power switch.
- 2. LCD screen that shows:
 - Temperature, oscillations per minute and time.
 - Alarms: set temperature and probe failure.
 - Configuration: °C or °F, temperature calibration and set working temperature limits.
- 3. Push button Start/ Stop
- 4. Push button to decrease value.
- 5. Push button to increase value.
- **6.** Push button for parameter selection: temperature, strokes per min. and time.
- 7. Push button for configuration.



"Unitronic Reciprocating Shaking Bath"



"Unitronic Reciprocating Shaking Bath C" Refrigerated Bath



MODELS	Part No.	Capacity litres	Height / Width /Depth (bath) cm	Height / Width /Depth (support carriage) cm	Height / Width /Depth (exterior) cm	Power W	Weight Kg
UNITRONIC RECIPROCATING	6032011	27	18 48 29	17 35 24	30 74 40.5	1500	25
IINITRONIC RECIPROCATING-C	6001173	27	18 48 29	17 35 24	30 74 63.5	1750	43

ACCESSORIES FOR UNITRONIC RECIPROCATING SERIES



Support Platform for Erlenmeyer flasks.

Made of AISI 304 stainless steel with location holes for various configurations of Erlenmeyer flask clip supports. Sizes: 50, 100, 250, 500 and 1000 ml.

Part No.	Width /Depth (platform) cm			No. of flash 100 ml		acity per pl 500 ml	atform 1000 ml	Weight Kg
3001004	23.5	34.5	20	12	6	6	3	1



Racks: made of AISI 304 stainless steel.

Capacity: 2 racks.

Part No.	Tube Ø mm	No tubes per rack	Height / ' (r		
1001233	13	70	8.5	11	34
1001234	16	48	8.5	11	34
1001235	20	48	8.5	11	34



Adapter clips for Erlenmeyer flasks.

Made of tempered stainless steel. Part No.

1001003	Adapter for	50 ml.
1000978	Adapter for	100 ml
1000979	Adapter for	250 ml.
1000980	Adapter for	500 ml.
1000981	Adapter for	1000 ml.



Gable Lid: made of AISI 304 stainless steel.

Part No. 6000713



Precision Viscometer Bath "VB-1423"

DIGITAL TEMPERATURE CONTROL FROM AMBIENT +5 °C TO 100 °C. STABILITY ±0.1 °C. HOMOGENEITY ±0.1 °C. RESOLUTION 0.1 °C.

SAFETY:

SAFETY THERMOSTAT CONFORMS TO THE DIN 12876. MANUAL RESET.

FFATURES

Temperature sensor; Pt100 thermo-resistor, stainless steel AISI 304 lid with three viscometer locations ports, three independent lids and an additional location port for the control thermometer. The main body of the bath is made of a 20 litre borosilicate glass tank. A white plate is located at the back to help optimize and read the viscometers.

CONTROL PANEL

- 1. Main power switch with luminous ON.
- 2. Temperature regulator:
 - 3. Real time temperature display.
 - 4. Push button increase value.
 - 5. Push button decrease value.
- 6. Push button configure operation.
- 7. Safety thermostat safety lamp.

Precise constant temperature Kinematic Viscometer Bath

Manufactured for the calibration of viscometers, conforms to UNE 400313, ISO3105, ASTM 445 & 2515 specifications





MODEL

Part No.	Temperature control range °C	Capacity litres	Height / Ø (tank) cm	Height / Ø (total) cm	Power W	Weight Kg
3001423	amb.+5 up to 100	20	32 30	47 30	1000	8

ACCESSORIES

Universal viscometer support. made from PTFE with stainless steel AISI 304 support. Suitable for the following viscometers :



- Cannon-Fenske for transparent liquids.
- Cannon-Fenske for opaque liquids.
- Ubbelohde.
- Ostwald.
- BS U Tube.
- -Cannon-Manning semi-micro.
- Ubbelohde type BS/IP/SL, BS/IP/SL(S) & type BS/IP/MSL.
- DIN Ubbelohde.

Part No. 1001453

Calibration Chronometers (see page 295).

Thermometers for viscometer baths.

Part No.

1001454	Thermometer ASTM	120C at	38.6 to	41.4 °C	divisions of	0.05 °C.
1001455	Thermometer ASTM	121C at	98.6 to	101.4°C	divisions of	0.05 °C.
1001456	Thermometer ASTM	91C at	20.0 to	50.0 °C	divisions of	0.1 °C.
1001457	Thermometer ASTM	92C at	40.0 to	70.0 °C	divisions of	0.1 °C.
1001458	Thermometer ASTM	93C at	60.0 to	90.0 °C	divisions of	0.1 °C.
1001459	Thermometer ASTM	94C at	80.0 to	110.0°C	divisions of	0.1 °C.



Ultrasonic Cleaning Baths "Ultrasons",

"Ultrasons UB-1488", "Ultrasons-H", "Ultrasons-HD"and "Ultrasons-P"

FUNDAMENTAL THEORY

The principal of ultrasonic cleaning consists of the use of high frequency sound waves (40 kHz), produced by a generator through a transducer, which propagates them mechanically inside the tank, this produces a cavitation effect which leads to the formation of millions of low pressure microscopical bubbles which carry out molecular cleaning, eliminating impurities, polluting agents and dirt from the parts or material which must be cleaned.

Complex parts can be cleaned without disassembly since the cavitation penetrates wherever the cleaning solution is in contact with the surface.

The generator of these baths is completely transistorised and incorporated, working through the "Sweeping frequency" system, which ensures uniform cavitation at all points of the resonance tank.

COMMON FEATURES

Double bodied tank, made entirely of stainless steel.

Emptying drain, anti-parasite filter, adjustable timer and heating, model dependent.

APPLICATIONS

Laboratories in general: acceleration of chemical reactions, degassing of liquids, cell disruption, cleaning of sieves, pipettes, micro-pipettes, cuvettes, trays, viscometers. decomposition of radioactive substances, etc.

Dentistry: Cleaning of prosthesis, instruments, etc.

Optics: Cleaning of frames, lenses, and contact lenses, etc.

SUMMARY TABLE

Medicine: Cleaning of instruments in general, forceps, probes, scalpels etc.

Jewellery and Watch making: Cleaning of all kind of watches and jewels.

Industry: Cleaning of all electronic components, printed circuit boards, semiconductors, petrol injector sieves and filters, etc.





Ultrasonic bath, Automatic Lift and Dry "Ultrasons-UB-1488"

Selecta original model. Quick dry, without having to control the instrument



MODEL

Part No.	Capacity litres		: / Widt sable) (h /Depth em		t / Widt xterior)	h /Depth cm	Generator power W	Power total W	Weight Kg
3001488	6	15	30	14	30	40	34	150	2150	12

Comes complete with basket.

FEATURES

Bath with automatic basket elevator that operates at the end of the time cleaning cycle.

Hot air drying by two-turbine air fans that switch on at the start of the elevation and finalise the complete operation. Waste drain at the front of the instrument. Removable support basket.



CONTROL PANEL

- 1. Cleaning time control: 0-15 minutes.
- 2. Push button drying time: 0-15 minutes.
- 3. Push button increase value.
- 4. Push button reduce value.
- **5**. Push button stop / start.
- 6. Digital timer display.



Ultrasonic cleaning baths "Ultrasons" without heating





CONTROL PANEL

Timer switch for 0 -15 minutes or continuous operation. Indicator lamp when the unit is in operation.

Part No.		Capacity litres		/ Widtl sable)	h /Depth cm	·	nt / Widtl (exterior)	h /Depth) cm	Generator power W	Timer 0-15'	Waste drain	Weight Kg
3000512	1	1	6	14	14	20	20	18	50	Yes	No	2,5
3000683	2	2,6	9	23	13	22	29	19	100	Yes	No	4
3001208	8	4	10	30	14	24	33	18	100	Yes	Yes	7
3000513	3	6	15	30	14	30	36	20	150	Yes	Yes	9,5
3000837	5	6,5	14	24	Ø	30	27,5	Ø	150	Yes	No	8
3000617	4	9	15	50	14	30	56	20	200	Yes	Yes	10,7
3000514	6	9	15	30	23	30	36	30	200	Yes	Yes	13
3000515	7	20	15	50	30	30	56	36	400	Yes	Yes	22

COMPLEMENT

BIO-SEL

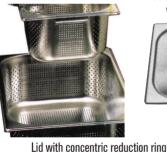
Detergent "BIO-SEL"

Bio-degradable, phosphate free. Excellent cleaning power just by mixing only 20ml per litre of water. BIO-SEL, in a 2% solution has a 9.7 pH level. Low toxicity. This detergent disperses, emulsifies, segregates, dissolves, suspends and breaks down dirtiness.

1000025 Capacity 1 litre. 1000026 Capacity 4 litres.

1000852 Box of 12 x 1 litre bottles. 1000853 Box of 4 x 4 litres bottles.

Baskets



Lids are not compatible with baskets.



ACCESSORIES Baskets and Lids.

Made of AISI 304 stainless steel.

Cleaner model Part No.	BASKET Part No.	Heigh	BASKE t / Widt	:1S h /Depth (cm)		Number of positions	Part No.
3000512	6005123	5	11	11	6005122	1	6005121
3000683	6006833	7	20	12	6006832	1	6006831
3001208	6001209	7	26	13	-	-	6005131
3000513	6005133	12	26	13	6003232	2	6005131
3000837	6008373	13	23	0	-	-	6008371
3000617	6005144	12	46	12	6005134	3	6005124
3000514	6005143	13	29	23	6005142	2	6005141
3000515	6005153	13	49	29	6003236	6	6005151



Ultrasonic Bath "Ultrasons-Digit"

5 CYCLES ELECTRONIC DIGITAL TIME CONTROL CAPACITY 1.4 LITRES

FEATURES

Internal tank made from stainless steel, with minimum and maximum level indicator.

External case, basket and lid made from PVC. Maximum cleaning power, frequency 42 KHz

CONTROL PANEL

Pushbutton start/ stop

Timer 5 programs selection in seconds:

90" - 180" - 280" - 380" and 480".

Wide application range from jewellery, watches, optical components. Dentistry and general laboratory use.

Part No.	Capacity	Height / Width / Depth	Height / Width / Depth	Power	Weight
	litres	(usable) cm	(exterior) cm	W	Kg
5900650	1.4	6 13 16	15 17 22	70	1.75

Comes complete with basket and see through transparent PVC lid.





Heating cleaning bath "Ultrasons-HD"

DIGITAL ELECTRONIC REGULATION OF TEMPERATURE AND TIME FOR TEMPERATURES FROM AMBIENT +5°C TILL 80°C

Optimum cleaning efficiency



Bath Part. No. 3000865 (5 Litres capacity) is also supplied with basket for small items.

FEATURES

Double body container, completely made of stainless steel and with waste drain de-

CONTROL PANEL

Illuminated main switch.

Start-stop push button.

Increase/decrease time push button in minutes (from 0' to 99').

Increase/decrease temperature push button in °C.

MODEL

Part No.	Capacity litres	•	/Width able)		•	:/Widt :erior)	th/Depth cm	Power Generator W	Power Heater W	Weight Kg
3000865	5	15	24	14	27	31	18	120	75	3,8
3000866	6	15	30	15	27	35	18	180	75	5,8
3000867	10	15	30	24	35	38	28	240	225	8,2
3000868	22	15	50	30	27	58	35	600	375	15
3000864	30	20	50	30	40	58	34	800	900	18



Heated Ultrasonic baths "Ultrasons-H"

AJUSTABLE TEMPERATURE FROM AMBIENT +5 °C HASTA 75 °C.

APPLICATIONS

For long pieces cleaning (especially for pipettes).



Note: For cleaning long objects whose length may exceed that of the tank, such as tubes, pipettes, etc, it has been proved that they are submitted to the same cavitation effect by introducing them in a test tube filled with liquid and placed vertically in the cleaner.

FEATURES

Evenly distributed heating element, adhered to the tank for maximum heat transfer. **CONTROL PANEL**

Adjustable thermostat heater.

Heater "on" indicator lamp.

Timer switch from 0-15 minutes or continuous operation.

In operation on indicator lamp.

MODEL

Part No.	Capacity litres	Height/Widtl (usable)			t/Widt terior)	- 1	h Power Generator W	Power Heater W	Weight Kg
3000839	9	15 50	14	30	56	20	200	800	11

Basket, Height 12/Width 46/Depth12 cm. Part No 6005144 3 Lid with concentric reduction ring. Part No 6005134 Lid with handle. Part No 6005124

See page: 92.





Ultrasonic pipette cleaner "Ultrasons-P"

FEATURES

Designed for automatically cleaning and rinsing pipettes, mounted inside a basket, pipettes are ultrasonically cleaned and rinsed.

Minimum rinsing time by using a water siphon action through the inside of the pipettes.

Metallic areas in contact with liquid are made of AISI 316 stainless steel.

The outer casing is made of AISI 304 stainless steel.

Cylindrical vessel in transparent acrylic, with lid to avoid splashing.

Connector(1") water inlet and siphon-drain tube.

Basket with handle in polypropylene for the easy handling and carrying of the pipettes.

CONTROL PANEL

Timer from 0-15 minutes or continuous operation.

Indicator lamp showing when the bath is in operation.

MODEL

Part No.	Capacity	Ø / Height	Height / Widht/ Depth	Power	Weight
	litres	(usable) cm	(exterior) cm	W	Kg
3000910	10	15 64	84 34 40	250	15





Immersion thermostats. Digital & Touch screen control Circulating ultrathermostat Circulating criothermostat	pages page page	98 to 103 100 100
Bath circulators with thermostatic equipment	pages page	101 to 102
Digital & Touch screen control	pages	101 to 102
Immersion thermostat for baths	pages	103 to 104
Refrigerated units for baths	page	105
Water recirculators	page	105
Thermostat dry-blocks	page	106 to 107
Thermo shakers	page	107 to 108



THERMOSTAT BATHS AND IMMERSION THERMOSTATS

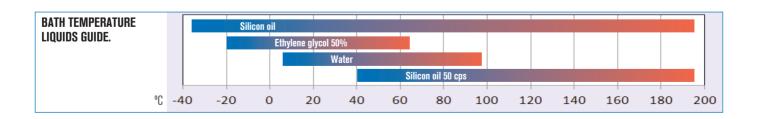
Summary table of the different models



EQUIPMENT F	OR STABLE A	ND PRECISE	TEMPERAT	URE CONTI	ROL.				QUICK OVERVIEW	RS2
Range		Model	Pai	rt No.	Control	Vo	lume máx. litres	Stability °C	Set error °C	RS-232/USB
+5 100 °C	Tern	notronic 100	300	0540	Digital µ		20	±0,2	-	No
+5 150 °C	Digi	term-S-150	300	0543	Digital µ		20	±0,1	±1	No
+5 200 °C	Dinit	erm-TFT-200	300	0544	TFT Touch scree	ın II	20	±0,1	±2	Yes
- C III 200 C	2.9.0	o <u>2</u> 00	000	0011		F		±0,1		
0 100 °C	0	igit-Cool	300	1373	Digital µ		20	±0,1	±1	RS-232
		Ū			•			±0,1		
+5 150 °C		erm-S-150-20		0548	Digital µ		20	±0,1	-	No
+5 150 °C	•	erm-S-150-27		0549	Digital µ		27	±0,1	-	No
+5 200 °C	Digite	m-TFT-200 2	0 300	0550	TFT Touch scree	en µ	20	±0,1	±2	Yes
+5 200 °C	Digite	m-TFT-200 2	7 300	0551	TFT Touch scree	en µ	27	±0,1	±2	Yes
+5 200 °C	Illtroi	term-TFT-200	200	0545	TFT Touch scree	nn.	8	to 100 °C ±0,1	±1	Yes
+3 200 6	Ultrai	LETIII- I F I - 200	300	U040	IFI IUUCII SCIEE	en h	Ö	to 200 °C ±0,1	±2	Yes
								to 100 °C ±0,1		
-10 100 °C	Frigi	term-TFT-10	300	0546	TFT Touch scree	enµ	8	to 0 °C ±0,1	±1	Yes
								to -10 °C ±0,1		
		Frigiterm-TFT-30						to 100 °C ±0,1		
-30 100 °C	Frigi			0547	TFT Touch scree	en µ	μ 8	to 0 °C ±0,1	±1	Yes
								to -10 °C ±0,2		
+5 up to 9	10 °C In	terheater	600	1491	Digital	2	0 I/min.	-	±1	No
Refrigerated coils										
-20 20 °C		Frigedor	300	0778	No controller	•	20	-	-	No
-20 20 °C	Fri	gedor-Reg	300	1214	Digital		20	±1,5	±1,5	No
THERMOSTATS DE Range	RY-BLOCKS Model	Control	Blocks-1	Blocks-3	Blocks-4	Stability				
30 200 °C	Tembloc	Digital µ	7462200	-	-	±0,75 °C	;	With multiple adapte	ers.	
30 200 °C	Multiplaces	Digital µ	-	7471200	-	±0,75 °C	;	With multiple adapte	ers.	
FIXED 37 °C	Clinic-bloc	-	7001569	-	-	±0,5 °C		Capacity 20 tubes of	75 x 13mm. VAC.	
+5 100 °C	Bio-bath 2	-	7001562	-	-	±0,5 °C		Capacity 15 cuvettes	s of 10 x 10mm.	
+5 60 °C	TRM-4	Digital µ	-	-	5109200	±0,5 °C		For 4 microtiter plat	es.	
+5 100 °C	TR100-6	Digital µ	5109100	_	-	±0,5 °C		WITH SHAKING. With		
		J F				-,-				

μ: with microprocessor.

^{+5:} ambient +5 °C.





IMMERSION THERMOSTATS WITH DIGITAL AND TOUCH SCREEN CONTROL

The most precise solution for maintaining constant liquid temperatures

SAFETY:

STANDARD DIN 12876.

ADJUSTABLE OVER TEMPERATURE SAFETY THERMOSTAT WITH MANUAL RESET AND LOW LIQUID LEVEL FLOAT SENSOR. (EXCEPT TERMOTRONIC 100)

COMMON FEATURES

Temperature probe Pt 100.

Heating element made of stainless steel INCOLOY resistant to high temperatures and corrosive environments.

Circulation Pump for internal or external temperature control for:

(Polarimeters, refractometers and viscometers, etc).

Cooling coil to maintain ambient temperatures using tap water.

External metal case in AISI 304 stainless steel.

PARTS THAT ARE IN CONTACT WITH LIQUID

- -Safety over temperature thermostat.
- -Liquid level float.
- -Cooling coil.
- -Heating element made of stainless steel INCOLOY that can withstand high temperatures and is corrosion resistant.
- -Circulation pump.
- -Pump outlet for external circulation.
- -Circulating pump outlet.



- A. Internal stirring within the tank.
- B. External circulation.

H₂O FLOW OUTPUT

Flow I/m Cuvette inner circulation level Up to 7,05 External circulation level raised to a meter. Up to 5,16

Tests made with silicone tubes of 8 mm internal Ø.

TWO DIFERENT CONTROL SYSTEMS:



Digital display and



TFT touch screen.

DIGITERM-S-150, TERMOTRONIC-100

Specific functions of models with digital screen:

- Real time temperature reading.
- Display resolution 0.1 °.
- Permanent view of set temperature.
- Timer from 1 min to 99 h 59 min. (only model DIGITERM S-150) Connection for external probe PT-100 (only DIGITERM S-150 model)
- Heating indicator.
- Monitoring temperature: high limit / low limit.
- Automatic calibration of a point.

DIGITERM TFT-200, ULTRATERM-TFT-200, FRIGITERM-TFT-10, FRIGITERM-TFT-30

Specific functions of models with touch screen:

- Acoustic and visual alarm.
- Clock and calendar.
- Single or cyclic On / Off programming.
- Up to 10 work programs.
- Up to 6 segments per program.
- Stability time in each segment (from 1 min to 99h).
- Alarms and events storage.
- Probe error detection.
- Self Diagnostics.
- Network failure detection and saving.
- Over temperature and low temperature alarms and memorization (date, start time, end time and temperature).
- Connection device for external temperature Pt100 pro-

be (see page 104).

- Safety thermostat (TS) by software.
- Mechanic safety thermostat (TS).
- USB and RS -232 output.
- Configurable parameters: Date / time, temperature correction, data collection interval, language (English, Spanish and French), °C / °F selection, over temperature and low temperature limit.
- Circulation pump speed control (between 0% and 100%).







Immersion thermostat with digital control "Termotronic-100"

ADJUSTABLE TEMPERATURE FROM AMBIENT +5°C TO 100°C.

High precision temperature control

SAFETY:

STANDARD DIN 12876. 1. SAFETY OVER TEMPERATURE THERMOSTAT WITH ADJUSTABLE MANUAL RESET

FEATURES

Maximum working volume to maintain maximum temperature: 20 litres. A clamp and finger screw attach the unit to the tank, alternatively the extendible support bridge accessory can be used.

Minimum fixing depth to the tank: 14 cm.

CONTROL PANEL

- 1. Set temperature display indicator.
- 2. Bath temperature/time display indicator.
- 3. "SET" button.
- 4. Set value decrease/increase button.
- 5. Start/Stop button.









MODELS	Part No.	Control range °C	Stability °C	Height / Width / Depth (exterior) cm	Pump Pressure / Flowrate H ₂ O	Power W	Weight Kg
TERMOTRONIC	100 3000540	Amb +5 to 100	±0,1	28 18 19	150 mbar-12 l/min.	2000	3,9

Accessories (See page. 104).

ACCESSORIES

Methacrylate tank "Clinic-Term"

Part No.	Capacity	Temp. max.	Height / Width / Depth	Capacity	Weight
	litres	°C	(usable) cm	Rack	Kg
1000544	8	60	14 16 39	4	2

Racks for the "Clinic-Term" made of AISI 304 stainless steel.

Racks for 50 micro-tubes of 11mm Ø. Part No. 1000546

Racks for 50 haemolysis tubes and coagulation tests with a diameter of 13 mm. Part No. 1000545

Racks for 14 tubes with a diameter of 18mm. Part No. 1000547

Racks for 8 cuvettes for spectrophotometers, 10 mm square, standard for monotest flask of different sizes. Part No. 1000548

Note: The methacrylate tank should not be used over 60 °C.



Metal baths. Manufactured with a double external AISI 304 stainless steel skin and an AISI 304 stainless steel pressed bath interior

hiessen na	נוו ווונכווטו.				
Part No.	Capacity litres	Height / Width / [(usable) cm		/ Width / Depth xterior) cm	Weight Kg
6000390	9	15 29 2	2 20	34 28	3.5
6000391	12	15 30 3	1 20	37 35	4.3
6000392*	20	15 48 3	0 20	55 35	6.6
6000393*	27	20 48 3	0 25	55 35	7.6
6001093*	45	15 62 5	0 23	70 56	11

^{*} With drain tap and lifting handles.





Immersion thermostat with digital control "Digiterm S-150"

ADJUSTABLE TEMPERATURE FROM AMBIENT +5°C TO 150°C.

High precision temperature control

SAFETY:

STANDARD DIN 12876. 1. SAFETY OVER TEMPERATURE THERMOSTAT WITH ADJUSTABLE MANUAL RESET 2. LOW LIQUID LEVEL FLOAT

FEATURES

Maximum working volume to maintain maximum temperature: 20 litres.

A clamp and finger screw attach the unit to the tank, alternatively the extendible support bridge accessory can be used.

Minimum fixing depth to the tank: 14 cm.

Rear connection for additional OT100 probe. Automatic selection.

Cooling coil.

CONTROL PANEL

- 1. Set temperature display indicator.
- 2. Bath temperature/time display indicator.
- 3. "SET" button.
- 4. Set value decrease/increase button.
- 5. Start/Stop button.









MODELS	Part No.	Control range °C	Stability °C	Height / Width / Depth (exterior) cm	Pump Pressure / Flowrate H ₂ O	Power W	Weight Kg
DIGITERM S-150	3000543	Amb +5 to 150	±0,1	28 18 19	150 mbar-12 l/min.	2000	3,9

Accessories (See page. 104).



Immersion thermostat with TFT touch screen "Digiterm TFT-200"

ADJUSTABLE TEMPERATURE FROM AMBIENT +5°C TO 200°C. With external refrigeration from -20 to 200.

High precision temperature control

SAFETY:

STANDARD DIN 12876. 1. SAFETY OVER TEMPERATURE THERMOSTAT WITH ADJUSTABLE MANUAL RESET 2. OVER TEMPERATURE ALARM - 3. LOW LIQUID LEVEL FLOAT

FEATURES

Maximum working volume to maintain maximum temperature: 20 litres.

A clamp and finger screw attach the unit to the tank, alternatively the extendible support bridge accessory can be used.

Minimum fixing depth to the tank: 14 cm.

RS-232, USB and Ethernet output.

Cooling coil.

CONTROL PANEL

- 1. Set/ current temperature indicator.
- 2. Pump flow indicator (%).
- 3. Stop button.
- 4. Start button.
- 5. Push up parameter.
- 6. Push down parameter.
- 7. Set / current time indicator in hours / minuts.
- 8. Return button.











MODELS	Part No.	Control range °C	Stability °C	Height / Width / Depth (exterior) cm	Pump Pressure / Flowrate H ₂ O	Power W	Weight Kg
DIGITERM TET-200	3000544	amb.+5 to 200	200 °C +0.1	28 18 19	150 mhar-12 l/min.	2060	4.5

Accessories (See page. 104).



Recirculation thermostat "Ultraterm-TFT-200"

ADJUSTABLE TEMPERATURES FROM AMBIENT+5 °C TO 200 °C.









FEATURES

Maximum working volume to maintain maximum temperature: 8 litres. AISI 304 stainless steel top and lid with an inner tank of AISI 304 stainless steel. Complete with a pump for internal and external liquid circulation with inlet and outlet connectors. A cooling coil to maintain ambient temperatures using tap water is also

SAFETY: STANDARD DIN 12876. SAFETY OVER TEMPERATURE THERMOSTAT WITH ADJUSTABLE MANUAL RESET LOW LIQUID LEVEL SENSOR PROTECTION.

A RS-232 interface for print out or computer control comes as standard. A drain tap is also fitted.



MODEL

Part No.	Capacity litres	Control range °C	Stability °C	Height / Width / Depth (usable) cm	Height / Width / Depth (exterior) cm	Pump Pressure / Flowrate H ₂ O	Power W	Weight Kg
3000545	8	From amb. +5 to 200 °C With external refrigeration	to 100 °C ±0.1 to 200 °C ±0.1	15 20 14	36 28 36	150 mbar-12 l/min	2060	9.5
		from -20 to 200						



Refrigerated recirculation baths "Frigiterm-TFT-10" and "Frigiterm-TFT-30"

ADJUSTABLE TEMPERATURE FROM -10 °C TO 100 °C. STABILITY: 0 °C TO 100 °C, ±0.1 °C / -10 °C, ±0.1 °C. ADJUSTABLE TEMPERATURE FROM -30 °C TO 100 °C. STABILITY: 0 °C TO 100 °C, ± 0.1 °C / -30 °C, ± 0.2 °C. SET ERROR: ±1 °C. RESOLUTION: 0.1 °C.



STANDARD DIN 12876. SAFETY OVER TEMPERATURE THERMOSTAT WITH ADJUSTABLE MANUAL RESET. LOW LIQUID LEVEL SENSOR PROTECTION.

FEATURES

Maximum working volume to maintain maximum temperature: 8 litres. AISI 304 stainless steel top and lid with an inner tank of AISI 304 stainless steel. Complete with a pump for internal and external liquid circulation with inlet and outlet connectors. A drain tap is placed at the side of the unit.

A hermetically sealed compressor is mounted on anti-vibration mounts.

A RS-232 interface for connection to a printer or computer.



MODELS

	Part No.	Capacity litres	Control range °C	Height / Width / Depth (usable) cm	Height / Width / Depth (exterior) cm	Pump Pressure / Flowrate H ₂ O	Power W	Compresser power H.P.	Weight Kg
FRIGITERM-10	3000546	8	-10 + 100	12 20 14	36 66 44	150 mbar-12 l/min	1150	1/8	28
FRIGITERM-30	3000547	8	-30 + 100	12 20 14	36 66 44	150 mbar-12 l/min	1460	3/8	30



PRECISE CIRCULATING BATHS **Choice of baths and immersion circulators** "Digiterm-S-150" and "Digiterm-TFT-200"



CONTROLLABLE TEMPERATURES FROM AMBIENT +5 °C TO 150 OR 200 °C. **CAPACITY FROM 20 TO 27 LITRES.**

APPLICATIONS

Incubation processes, Enzymatic reactions, Fermentation, laboratory cultures in general.

COMMON FEATURES

Double skinned baths with an AISI 304 stainless steel internal tank with an AISI 304 stainless steel external, for convenience, handles at the side and drain tap are provided as standard. A detachable immersion thermostat for controlling stirring and temperature is fitted. A cooling coil with the use of tap water or cooled re-circulator can be used to maintain ambient temperatures. Internal or external circulation pump (Polarimeters, refractometers and viscometers, etc)

°C °C 100 200 90 175 80 150 70 60 100 75 40 50 30 25 20 10 15 105 120

Graph of temperature and time for the Tectron Bio 100 and Digiterm-S-100 and Digiterm-TFT-200, units with capacity of 20 litres.

Tests completed with water up to 100°C:

- A. Digiterm-TFT-200 with lid at 100 °C.
- B. Digiterm-TFT-200 no lid at 90 °C.
- C. Digiterm-S-100 with lid at 100 °C.
- D. Digiterm-S-100 with no lid at 90 °C.

Graph of temperature and time for the Digiterm 100 and 200, units with capacity of 20 litres.

Tests completed with Silicon oil up to 200°C:

- A. Digiterm-TFT-200 with lid at 200 °C.
- B. Digiterm-TFT-200 with lid at 100 °C.

27 litres capacity baths take 20% more time to reach the same temperature.



Bath circulators "Digiterm-S-150"

CUVETTES SET OF 20 AND 27 L. CAPACITY, WITH THERMOSTATIC EQUIPMENT INCLUDED. FORT TEMPERATURES FROM AMB+5 TO 150 °C. STABILITY: ±0,1 °C. RESOLUTION: 0.1 °C.

SAFETY:

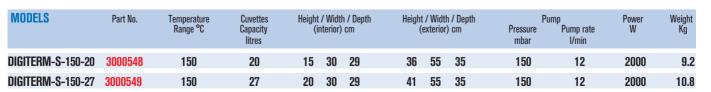
SAFETY STANDARD DIN 12876. SAFETY ADJUSTABLE OVER TEMPERATURE CUT OFF WITH MANUAL RESET. LOW LIQUID LEVEL CUT OFF.

CONTROL PANEL

Display temperature indicator of the bath. Set temperature indicator display. Heater function light indicator. Start/Stop button.

"SET" button (temperature/time).

Push button to decrease set value. Push button to increase set value. PT 100 external probe connection.



ACCESSORIES see page 104.





Bath circulators "Digiterm-TFT-200"



WITH IMMERSION THERMOSTAT DIGITERM-TFT-200. **CUVETTES SET OF 20 AND 27 L.**

FROM AMBIENT +5 °C TO 200 °C. STABILITY ±0.1 °C. SET ERROR ±2 °C. RESOLUTION 0.1 °C.



SAFETY: CONFORMS TO THE DIN 12876, STANDARD, ADJUSTABLE OVER TEMPERATURE SAFETY CUT OFF WITH ADJUSTABLE MANUAL RESET. LOW LIQUID LEVEL CUT OFF. ELECTRICAL FAULT ALARM.



FEATURES

Temperature sensor probe Pt 100.

Heating element made of stainless steel INCOLOY, resistant to high temperatures and corrosive en-

Circulation pump with flow rate, suitable for external temperature control for: (Polarimeters, refractometers, viscometers, etc).

Cooling coil to maintain ambient temperatures, using tap water.

External temperature control connection using a Pt 100 probe (see page104).

External metal case made of AISI 304 stainless steel.

Handles at the side and drain tap.



MODELS	Part No.	Temperatura Range °C	Cuvettes Capacity litres		: / Widt nterior)	h / Depth cm		t / Widt (exterior	h / Depth) cm	Pressure mbar	ımp Pump rate I/min	Power W	Weight Kg
TFT-200 20	3000550	200	20	15	30	29	36	55	35	150	12	2060	10
TFT-200 27	3000551	200	27	20	30	29	41	55	35	150	12	2060	12

ACCESSORIES see page 104.

ACCESSORIES for the DIGITERM-S-150 and DIGITERM-TFT-200. Made of AISI 304 stainless steel.



- 1. Gable lid. Part No. 3001295
- 2. Lifting rack support. Capacity 3 tube racks. Part No. 1001296
- 3. Tube racks for lifting rack support.

	•	• • • • • • • • • • • • • • • • • • • •			
Part No.	For Ø tubes mm	Capacity Rack tubes		t/Widtl xterior)	n/Depth cm
1001202	13	36	8	8.2	23.6
1001203	16	24	8	8.2	23.6
1001204	20	24	8	8.2	23.6



Immersion thermostat for baths "Digit-Cool"

DIGITAL SELECTOR AND TEMPERATURE CONTROL ADJUSTABLE FROM 0 °C TO 100 °C. STABILITY: 100 °C ±0.1 °C, AND AT 0 °C ±0,1 °C. SET ERROR: ±0.1 °C. RESOLUTION: 0.1 °C.



SAFETY: STANDARD DIN 12876. SAFETY OVER TEMPERATURE THERMOSTAT WITH ADJUSTABLE MANUAL RESET. LOW LIQUID LEVEL SENSOR PROTECTION.

FEATURES

Maximum volume to achieve the working temperature: 20 litres. Minimum depth of the elements with contact with the liquid: 15 cm. Hermetically sealed compressor.

RS-232 out put to a computer control or printer.

Portable control and stirring unit with lifting handle.

CONTROL PANEL

Main power switch.

LCD Display showing working parameters.

Push button configuration selector.

Push button parameter selection.

Push button increase/decrease set value.

Start / Stop, push button.

MODEL

MODEL						
Part No.	Control Range	Height / Width / Depth	Pump	Power	Power	Weight
	°C	(exterior) cm	Pressure / Flow H ₂ O	W	H.P.	Kg
3001373	0 +100	45 21 51	150 mbar / 12 l/min	1460	1/5	22

ACCESSORIES See page 104.

Autonomous unit with cooling system

Compressor unit built-in





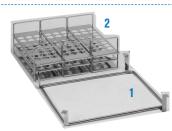
Digitcool thermostat with bath and 4 place ring set lid.

ACCESSORIES for thermostatic unit digit-cool.

Stainless steel baths.

Double skinned with an AISI 304 stainless steel exterior with a bath of AISI 304 stainless steel interior. Supplied with a drain tap and lifting handles.





1. Lifting rack support. .

Capacity 3 tube racks. Part No. 1001296

2. Tube racks for lifting rack support.

Part No.	For Ø tubes mm	Capacity Rack tubes		t / Widt exterior	h / Depth) cm	
1001202	13	36	8	8.2	23.6	
1001203	16	24	8	8.2	23.6	
1001204	20	24	8	8.2	23.6	



HODELO								
Part No.	Capacity litres	•	Height / Width / Depth (usable) cm		Height / (ex	Weight Kg		
6000392	20	15	48	30	20	55	35	6.6
6000393	27	20	48	30	25	55	35	7.6



Ring set lid 105, 80, 60 and 37 mm Ø reduction rings and a check thermometer location hole in the lid. Capacity 4 places.

Part No. 1001374

Digitcool thermostat with bath and 4 place ring set lid.

ACCESSORIES FOR IMMERSION THERMOSTATS

Pt100 temperature sensor with handle

4 mm \emptyset x 135 mm long submersion. Supplied with a 150cm cable and connector Part No. 1000893



Silicone oil 4 liters. Temperature up to 300°C. Viscosity 50 mm²/s at 25 °C. Melting point 318 ° C. Part No. 1000027

Extension support bridge.

Made of AISI 304 stainless steel, adjustable, to fit the immersion thermostat models "Tectron and "Digiterm".

Support for apertures from 22 to 44 cm across.





Example showing the support bridge, Part No. 6001094.

Stainless steel baths.

Double skinned with an AISI 304 stainless steel exterior and internal bath of AISI 304 stainless steel.

MODELS

Part No.	Capacity litres	•	Width able)	/ Depth cm	Height / (ex	Width terior)		Weight Kg	
6000390	9	15	29	22	20	34	28	3.5	
6000391	12	15	30	31	20	37	35	4.3	
6000392*	20	15	48	30	20	55	35	6.6	
6000393*	27	20	48	30	25	55	35	7.6	
6001093*	45	15	62	50	23	70	56	11	

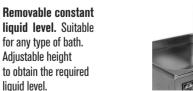
^{*} With drain tap and lifting handle.

Stainless steel baths, thermally insulated. Ideal for low temperatures. Suitable for J.P. Selecta refrigerated units. Similar to our other bath but with additional internal expanded foam insulation that prevents external condensation or heat loss, working temperature range from -40°C to +90°C.

MODELS

Part No.	Capacity litres	•	Width sable)	/ Depth cm	Height / (ex	Width terior)		Weight Kg	
6003901	9	15	29	22	24	40	34	6	
6003921*	20	15	48	30	24	61	41	9	
6003931*	27	20	48	30	29	61	41	11	

^{*} With drain tap and lifting handles.



Part No.

6001400 Bath depth up to 15 cm. 6001800 Bath depth up to 20 cm.



Thermometer support. Stainless steel, suitable for thermometer. Fixation aperture up to 40 mm. Part No. 6000896



Methacrylate baths. Maximum temperature 60 °C.

MODELO

MINDEF9				
Part No.	Capacity litres	Height / Wid (usable		Thickness mm
1000394	8	15 18	31	6
1000544	9,5	14,5 16,	5 39	6
1000395	13	15 23	3 40	8
1000396	30	20 30	1 50	8





Suitable for "Tectron-Bio" immersion thermostat. Scale -10 to 100 °C. See page 296 Part No. 1001257



Refrigerated cooling coils for baths "Frigedor" and "Frigedor-Reg"

TEMPERATURES FROM -20 °C TO +20 °C.

APPLICATIONS

Designed for bath and tank applications that require below ambient temperatures.

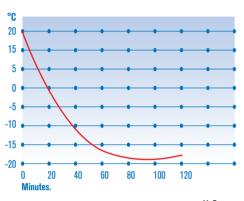
COMMON FEATURES

The unit is bench mountable and contains within the epoxy coated case a CFC free hermetically sealed compressor with condenser and evaporator, the cooling coil is made of AISI 304 stainless steel.

COIL DIMENSIONS

Refrigerated immersion length: 900 mm. Cooling coil Ø: 45 mm.

Coil length: 150 mm.



Graph showing the cooling performance of the 8 litre $H_2\mathbb{O}$ "Frigedor" With insulated stirring tank.

MODEL FRIGEDOR 3000778

No temperature controller incorporated. Continually operates the compressor.

CONTROL PANEL

Mains switch with "ON" indicator lamp.

MODEL FRIGEDOR REG 3001214

Equipped with a temperature controller with digital control and display. Includes a Pt 100 temperature probe. Resolution: 1 digit.

CONTROL PANEL

Mains switch with indicator "ON" lamp. Digital temperature controller with push buttons, connector for the Pt 100 temperature probe.





MODELS	Part No.	Temperature range °C	Stability °C	Height / Width / Depth (exterior) cm	Cooling potential	Power W	Weight Kg
FRIGEDOR	3000778	Fix -20	-	41 21 34	to -20 °C = 50 W	285	14
FRIGEDOR-REG	3001214	-20 to +20	±1.5	41 21 34	to -20 °C = 50 W	285	14

We recommend our thermally insulated baths (see page 104).



Water recirculators "Interheater"

FROM AMBIENT +5°C TO 90°C.

SAFETY: STANDARD DIN 12876. OVER TEMPERATURE SAFETY ADJUSTABLE THERMOSTAT WITH MANUAL RESET.

DESCRIPTION

Water circulation unit, designed to feed closed water loop circuits for condensers, distillation columns, reactor jackets, viscometers, electrophoresis baths etc. designed specifically for:

- Constant temperature.
- Constant pump rate of refrigerated fluid.
- Closed loop circuit, avoids the build up of scale in cooling coils,and cooling circuits.

FEATURES

Digital electronic temperature regulation. Circulation flow: 20 L/min.

Case equipped with wheels.

Hose connectors \emptyset 12mm internal.

230V single phase.

INTERHERATER Heating power 2 or 4 KW control panel selectable.

CONTROL PANEL

Mains switch.

Digital temperature control.

Pressure gauge.

Water level in the reservoir.

MNNFI

Part No.	Height / Width / Depth		Regulation range	Power	Weight
	(exterior) cm		°C	W	Kg
6001491	70 43	56	Amb + 5 to 90	4100	22

ACCESSORY

Roll of 25 m of reinforced silicone hose.

Part number 1001540



SAFETY: CONFORMS TO EN 61010 DIRECTIVE. OVER TEMPERATURE CUT OUT SYSTEM.

High precision. Free from contamination.

APPLICATIONS

Clinical, biochemical and chemical laboratories. Incubation of DNA, enzyme assays, residual testing in dairy, incubation and fusion of AGAR, cell culture. Thermo control to dry, boiling, evaporation, concentration, hydrolysis, digestion etc.

COMMON FEATURES

Dry block systems have several advantages over wet contact methods such as: no risk of evaporation of heating liquid, higher working temperatures, better long term temperature stability and no sample cross contamination or germination of bacteria in the bath. Digital temperature calibration. Timer from 1 to 999 mi

nutes or continuous operation. Over temperature alarm. Heating elements are distributed evenly across the contact surface maintaining an even distribution of heat.

Easy to use digital temperature and time control with a digital display (3 Digits).

Built in temperature sensor Pt 100.

Interchangeable blocks made of anodised DURAL alloy to accommodate a variety of tube diameters.

(Customer specific sizes also available.)

External case made of epoxy covered steel with an AISI 304 stainless steel top.



CONTROL PANEL

- 1. Digital display showing temperature and time in minutes.
- 2. Indicator show displayed parameter (Time or tempe-
- 3. Push button selector to show time or temperature.
- 4. Push button increase displayed value.
- 5. Push button decrease displayed value.
- 6. Push button Start / Stop.
- 7. Over temperature alarm indicator.



Dry block heater for tubes "Tembloc"



ACCESSORIES

Metal blocks, size: 105 Ø x 55 mm high.

Part No.

7000346 for 34 x 6 mm Ø tubes

7000714 for 18 x 1.5 ml. Eppendorf tubes

7001224 for 24 x 12 mm Ø tubes.

7001618 for 18 x 16 mm Ø tubes.

7000208 for 8 x 20 mm Ø tubes.

7000256 for 6 x 25 mm Ø tubes.

7000715 Blank block with no holes for customized demand.

MODEL

Part No.	Temperature	Stability	Homogeneity	Set error	Resolution	Height / Width /Depth	Power	Weight
	°C	°C	%	%	°C	(exterior) cm	W	Kg
7462200	30 - 200	±0.75	±1.5	±2	1	11 19 29	350	3.7

Supplied complete with thermometer 0-200 °C and extraction tool for blocks.



Dry Block heater for tubes "Multiplaces"

CAPACITY: THREE BLOCKS.



Metal Blocks: 55 high x 95 wide x 75 mm deep.

Part No.

7000306 For 30 x 6 mm \emptyset tubes (total 3 blocks = 90 tubes).

7000716 For 20 x 1.5ml, Eppendorf tubes. (total 3 blocks = 60 tubes.)

7031220 For 20 x 12 mm \emptyset tubes (total 3 blocks = 60 tubes).

7031612 For 12 x 16 mm \emptyset tubes (total 3 blocks = 36 tubes).

7003208 For 8 x 20 mm \emptyset tubes (total 3 blocks = 24 tubes). **7001256** For 6 x 25 mm \emptyset tubes (total 3 blocks = 18 tubes).

7000717 Blank block without holes, can be customised to customer

requirements.

7001474 Block for 15 cuvettes 10 x 10. Capacity: 3 blocks.

7001475 Block for 96 well microplates of 1.2 ml. Capacity: 1 block.

MODE

INIUDEL								
Part No.	Temperature °C	Stability °C	Homogeneity %	Set error %	Resolution °C	Height / Width /Depth (exterior) cm	Power W	Weight Kg
7471200	30 - 200	±0.75	±1.5	±2	1	11 31 31	700	7.4

Supplied complete with thermometer 0-200 °C and extraction tool for blocks.



Metallic thermostat dry block "Clinic-Bloc" and "Bio-Bath 2"

CLINIC-BLOC: FIXED TEMPERATURE OF 37 °C WITH CHECK THERMOMETER. BIO-BATH 2: TEMPERATURE RANGE: FROM AMBIENT +5 TO 100 ° C.

SAFETY: NORM EN 61010. OVER TEMPERTURE CUT-OUT FITTED.

"CLINIC-BLOC"

Capacity 20 tubes (5x4) of 75x13 mm. VAC. Part No.7001569

"CLINIC-BLOC" 1537

Capacity 15 cuvettes (5x3) of 10x10 mm. Part No. 7001570

MODEL

Part No.	•	Height / Width /Depth (exterior) cm		Stability °C	Power W	Weight Kg
7001569	11	18	28	±0.5	10	2.4
7001570	11	18	28	±0.5	10	2.4

"BIO-BATH 2"

Capacity 8 tubes (5x4) of 75x13 mm VAC. Adjustable temperature and time.

MODEL

Part No.	Height / Width /Depth	Stability	Power	Weight
	(exterior) cm	°C	W	Kg
7001562	11 11,3 14,5	±0,3	5	0,5









COMECTA Thermo shaker "TRM-4" for Microtiter plates

WITH ELECTRONIC CONTROL AND DIGITAL DISPLAY OF TEMPERATURE. SHAKING SPEED AND TIME. FOR TEMPERATURES FROM AMBIENT +5 °C. TO 60 °C. STABILITY \pm 0.5 °C.

APPLICATIONS

For clinical analysis, immunology and nutritious quality control use.

External ABS case with a platform for heating and shaking 2-4 96-well Microtiter pla-

Upper lid with aluminium plate coated inside, and simultaneous heating system to the main platform.

Digital display of current and set point temperature, time and shaking speed parameters.

Acoustic and luminous indications at the end of the cycle and due to malfunction in temperature or time programmed.

A built-in motor generates a uniform movement depending on the speed programmed, protected to over temperature with auto switch off and switch on activation. Temperature calibration to meet the user's needs.

Protection device for over temperature that provides safety and reliability.

CONTROL PANEL

LCD display indicating temperature, speed in r.p.m. and time.

Push button SET to program temperature, speed in r.p.m. and time.

Push button ▼ increase value. Push button decrease value.

Push button START / STOP for starting and stopping the shaking system.

Push button OFF for any function.

SPECIFICATIONS

Temperature: Ambient +5°C to 60°C. Heating time: \leq 23 min (to 60°C). Shaking range: 100-1200rpm. Orbital rotation: 2mm.

Timer: From 1 min. to 99h. 59 min.







Part No.	Temperature	Stability	Block	Height / Width	Height / Width / Depth	Power	Weight5
	°C	°C	homogeneity °C	(platform) cm	(exterior) cm	W	Kg
5109200 a	ambient +5 to 60	±0,5	±0,5	21,5 30	18 40 39	132	9.5

COMECTA Metallic dry block thermo shaker "TR100-G"



WITH ELECTRONIC CONTROL AND DIGITAL DISPLAY OF TEMPERATURE. SHAKING SPEED AND TIME. FOR ADJUSTABLE TEMPERATURE FROM AMBIENT +5 °C. UP TO 100 °C.

APPLICATIONS

Wide applications of TR100-G for DNA analysis, lipids and other cellular components extraction, DNA libraries creation, DNA amplification, electrophoresis pre-denaturalization, serum solidification, etc.

FEATURES

External ABS case with multiadapter device for different blocks depending on the analysis to be made.

Digital display of current and set point temperature, time and shaking speed parame-

Acoustic and luminous notification at the end of the cycle and due to malfunction in temperature or time programmed.

A built-in motor generates a uniform movement depending on the speed programmed, protected to over temperature with auto switch off and switch on activation. Temperature calibration to meet the user's needs.

The thermostat includes a heater platform to adapt multiple blocks, depending on the analysis to be made.

Protection device for over temperature that provides safety and reliability.

CONTROL PANEL

LCD display indicating temperature, speed in r.p.m. and time.

Push button SET to program temperature, speed in r.p.m. and time.

Push button

increase value.

Push button ▼ decrease value.

Push button START / STOP for starting and stopping the shaking system.

Push button OFF for any function.



SPECIFICATIONS

Temperature: Ambient +5°C to 100°C. Heating time: \leq 23 min (to 100°C). Shaking range: 200-1500rpm.

Orbital rotation: 2mm.

Timer: From 1 min. to 99h. 59 min.

MODEL

Part No.	Temperature	Stability	Block	Height / Width / Depth	Power	Weight
	°C	°C	homogeneity °C	(exterior) cm	W	Kg
5109100	ambient +5 to 100	±0,5	±0,5	18 21 30	88	9.5

ACCESSORIES

ABS coated metallic blocks adapted to TR100-G thermostat by means of fixing screws to the block. Easy to clean and autoclavable.



For 96 microtubes of 0,2 ml. with polypropylene lid. Part No. 5109104

For 54 microtubes of 0,2 ml. with polypropylene lid. Part No. 5109105

For 15 microtubes of 0,5 ml. and 20 microtubes of 1,5 ml. with polypropylene lid. Part No. 5109106

For 35 microtubes of 1,5 ml. with polypropylene lid. Part No. **5109107**

For 35 microtubes of 2 ml. with polypropylene lid. Part No. 5109108

Thermocycler for thermal cycles "B960" See page 238.





Centrifuge comparison by model and tube capacity

Description

Capacity

Micro-

haematocrit

Reaction

vial

0.25/0.5 ml 1.5/2.2 ml

Reaction

vial

Hemolisis

5 ml

Glass

7 ml



SUMMARY TABLE OF CENTRIFUGES By Model in Relation to Volume, Capacity speed and maximum RCF (g).

Part No.

7000014

7000015

7000016

7002240

7002560

7002356

7002357

7002556

7002576

7001768

7001769

7001476

7001477

7001485

7001486

QUICK OVERVIEW

R.p.m.

max.

1500

1500

1500

4000

5000

4500

12000

12000

4200

13500

15300

11000

15000

10000

12000

4600

4070

12619

23470

12296

17706

5370

5430

Max. Volume

of tube ml

15

15

15

5

15

25

100

100

100

200

500

1000

1600

2,2

Max.

Volume ml

30

60

2 x butyrometer

90

20

120

150

400

400

400

800

2000

4000

9600

40,5

)	Dimensions	Ø 1.4 x 75 mm	Ø 6,3/7 x 47/49 mm	Ø 10.7/13 x 42 mm	Ø 12.5 x 75 mm	Ø 12 x 100 mm	
	Description			Tube RIA	Tapval or VAC tube		
	Capacity			5 ml	5 ml		
)	Dimensions			Ø 12 x 55/75 mm	Ø 13 x 75/80 mm		
	R.c.f. max. (xg)						
	360 360 370						
	1760				4		
	2907 2515				8	8	
	14103	24	18	18		•	
	14200				10	4	
	2901				24 16	24	
	19048	24	40	30	24 16	24	
	23550	24	40	30	24 16	24	

30 48

80

48 **28**

80 48

48

96

96

144

See page 132 for tubes and accessories. Tubes supplied as an accessory unless stated.

Model

Manual

Cencom II

Centro 4-BL

Centro 8-BL

Centrolit II-BL

Centromix-BLT

Mixtasel-BLT

Centronic-BLT

Centrofriger-BLT

Meditronic-BLT

Medifriger-BLT

Macrotronic-BLT

Macrofriger-BLT

Megafriger-BLT-Blood 7001488

Macrofriger-BLT-Blood7001490

Plastic with cap	Glass	Glass	Plastic with cap	Glass	Falcon	Glass	Bottle	Glass	Bottle	Bottle	Butyrometer	ASTM
10 ml	15 ml	25 ml	30 ml	50 ml	50 ml	100 ml	200 ml	250 ml	500 ml	1000 ml		
Ø 16.1 x 81.1 mm	Ø 16 x 100 mm	Ø 24 x 100 mm	Ø 25.3 x 92 mm	Ø 34 x 100 mm	Ø 29.5/35 x 117 mm	Ø 44/45 x 100 mm	Ø 56.5 x 104 mm	Ø 56 x 147 mm	Ø 69 x 159 mm	Ø 98/100 x 160-175 mr	n	Ø 58 x 158 mm
Tapval or VAC tube	Falcon				Plastic with cap				Blood bag	Microtiter		ASTM
10 ml	15 ml				80/85 ml				500/600 ml	6x96		100 ml
Ø 16 x 100 mm	Ø 16/23 x 120 mm				Ø 38 x 112 mm					Ø 85 x 130 mm		Ø 37 x 200 mm
	2 4										2	
	6 6											
	8											
4	8	4										
16	18 16	8	8	8	4	4						
10 16	18 16	8	8	8	4	4						
10 16	18 16	8	8	8	4	4						
20 28	28 12	8	6	8	4 6	6	4			6x96		
20 68	68 16	36	20	16	8 6	4	4	4	4	12x96		4 4
	68	36		16		8	4		4	4		4
	102	54		24		12	6		6 12	6		

ALL THE ROTORS, BUCKETS AND ADAPTERS COME WITH LASER ETCHED IDENTIFICATION.



Hand operated centrifuges

FEATURES

For 15 ml and butyrometer tubes.

Comes with a table holding clamp.

Adaptable heads for 2 or 4 x 15 ml tubes or for 2 butyrometer tubes.

MODELS

Part No.	Comes with head for	Max. speed r.p.m.	Max. R.c.f.	Weight Kg
7000014	2 tubes	1500	360	1.1
7000015	4 tubes	1500	360	1.2
7000016	2 butyrometers	1500	370	1.2

Comes with head and metal buckets.



ADDITIONAL ACCESSORIES

Head for two tubes. Part No. 7000017 Head for four tubes. Part No. 7001388

Bucket for 15 ml tubes. Part No. 7001500 Head for two butyrometers. Part No. 7000018



Microcentrifuge "Cencom III"

FOR MICROTUBES OF 2.2/1.5, 0.5 AND 0.2 ML

DIGITAL ELECTRONIC CONTROL OF SPEED AND TIME. ADJUSTABLE SPEED UP TO 14500 r.p.m.



FFATURES

ABS external case.

Maintenance free induction drive motor.

Rubber suspended motor which reduces the vibrations. High speed microcentrifuge that minimizes the samples over temperature.

Extremely quiet operation.

For 12 microtubes with identification code.

Polycarbonate upper lid.

Peephole on the lid to visualize the centrifuge inside.

CONTROL PANEL

Start switch.

Push button Start/Stop.

LCD display indicating time and speed.

Time selector push button.

Speed selector push button.

Push button ▲ increase different parameters.

Push button ▼ decrease different parameters.

Push button motor drive rotation for quick acceleration

Short/Spin.

Push button open lid when cycle has ended.



MODE

Part No.	Tubes capacity	Height/ Width/ Depth (exterior) cm	Max. speed r.p.m.	R.c.f.(xg)	Power W	Time selected	Weight Kg	
5022010	12	15 21 25	14500	14000	105	till 99' 99"	4	

Comes complete with 12 adapters of 0,5 and 0,2ml.



Centrifuge Angle rotor "Cencom II"

WITH ANGLE ROTOR FOR 6 X 15 ml tubes and 6 additional adapters for 15 ml falcon tubes. DIGITAL ELECTRONIC CONTROL OF SPEED AND TIME. ADJUSTABLE SPEED UP TO 4000 r.p.m. (1790 R.c.f.)

SAFETY:

SAFETY ACCORDING TO EN. 61010.2.020 SAFETY MICRO-SWITCH THAT DISCONNECTS THE POWER TO THE MOTOR WHEN THE LID IS OPENED. PROTECTIVE FUSE LOCATED AT THE BACK OF THE INSTRUMENT.

APPLICATIONS

General laboratory use and teaching.

FEATURES

External case made from coated ABS plastic.

Rubber suspended motor, reduces any motor vibrations.

Fixed angle 6 place rotor with identification code.

Transparent polycarbonate lid that allows the user to see inside the centrifuge.

Speed selection from 1000 to 4000 r.p.m. in 500 r.p.m. steps.

Time selection from 1' to 60' in steps of 1'.

CONTROL PANEL

Digital display of speed and time.

Push button Start-Stop.

Push button selector for speed and ti-

Push button increase value. Push button decrease value. Cross section view of the angle rotor showing bucket and bucket support.

MODEL

Part No.	Tube capacity ml	Height/Ø (exterior) cm	Max. speed r.p.m.	Max. R.c.f.	Power W	Weight Kg
7002240	6 x 15	28 26	4000	1790	80	4.5

Supplied complete with 6 x 15 ml tubes with adapters and 6 adapters for 15 ml Falcon tubes.





ACCESSORY

Adapter. Suitable for 13 Ø x 75 mm VAC tubes. Rotor capacity, 6 adapters.

Part No. 1001556



Digital microprocessor controlled Centrifuges, Series BL and BLT



INDUCTION DRIVE, MAINTENANCE FREE (NO CARBON BRUSHES).

- -SPEED CONTROL BY VARIATOR FREQUENCY SYSTEM.
- -RELIABLE FUNCTIONS AND REPEATABILITY.
- -LOGICAL EASY TO USE CONTROL PANEL.
- -SUSPENDED, DAMPENED VIBRATION FREE MOTOR DRIVE, GUARANTEES SMOOTH OPERATION.
- -QUIET OPERATION, INTERNAL INSULATION WHICH ABSORBS NOISE AND VIBRATIONS.
- -SUCTION SUPPORT FEET THAT PREVENTS BENCH CREEP.

SAFETY:

AUTOMATICALLY STOPS IF OUT OF BALANCE. LID CANNOT BE OPENED IF THE MOTOR IS RUNNING. SYSTEM CANNOT BE STARTED IF THE LID IS OPEN. SPEED LIMITED BY EACH ROTOR.

TWO DIFERENT CONTROL SYSTEMS:



Digital display and



TFT touch screen

CENTROLIT II-BL - CENTRO 4-BL - CENTRO 8-BL



Specific functions of models with digital screen:

- -Electronic control of speed.
- -Electronic control of time.





Specific functions of models with touch screen:

- Acoustic and visual alarm
- 10 working programs with 4 parameters for each program: acceleration, braking, rpm, time.
- Network failure detection and storage.
- Safety thermostat (refrigerated models only).
- Temperature correction (refrigerated models only).
- Languages: Spanish, English and French.
- Overtemperature and Low temperature alarm.
- Rotors list available on screen.
- Door open alarm.
- Rotor and motor running hours log.





CENTRIFUGES ELECTRONIC DIGITAL CONTROL "Centrolit II-BL", "Centro-4-BL", "Centro-8-BL", With induction drive maintenance free motor.



SAFFTV

UNE-EN 61010.2.020. ELECTROMAGNETIC LID LOCK, PREVENTS THE OPENING OF THE CENTRIFUGE IF THE ROTOR IS IN MOTION.
PREVENTS THE STARTING OF THE MOTOR IF THE LID IS OPEN. ROTOR AND BUCKETS ARE IDENTIFIED BY LASER SIGNAL.
AUTOCLAVABLE.

COMMON FEATURES

Electronic control with digital display of speed and time, with acceleration and brake ramp.

Timer controllable from 1' to 60' or continuous operation.

Rubber suspended motor that guarantees a smooth operation.

Digital speed display.

Pulse button, that drives the motor while pressed.

Automatic stop if out of balance, with indicator light.

Suction base supports that adhere to the work bench surface.

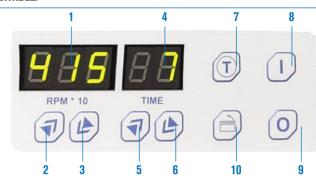
Quiet operation, insulated interior that absorbs noise and vibrations.

In the case of mains failure, manual open override aperture.

Noise level 50-60dBA.

Rotors and buckets with laser identification.

Autoclavable.



CONTROL PANEL

- 1. Speed display.
- 2. Push button increase speed.
- 3. Push button reduce speed.
- 4. Run Time display.
- 5. Push button increase run time.
- 6. Push Button decrease run time.
- 7. Push button pulse start (RUN/STOP).
- 8. Push button start.
- 9. Push button stop.
- 10. Push button open lid.



Centrifuge "Centrolit II-BL"

SUITABLE FOR HAEMATOCRIT AND SMALL VIALS OF 0.25/0.5 ml and tubes of 1.5/2.2 ml. Free Maintenance induction drive motor.





ACCESSORIES

Interchangeable rotors made of hardened anodised aluminium. Autoclavable.

Part No. head	Rotor type	Volume rotor	Tube capacity maximum	Max. R.p.m.	Max. R.c.f. (xg)
7001704	Angle+lid	Micro-haematocrit	24 x 1.4 mm Ø	12000	13143
7001703	Angle+lid	40.5 ml	18 x 0.25/0.5 ml	12000	14103
7001703		40.3 1111	+ 18 x 1.5/2.2 ml	12000	11515
7001702	Angle PCR	6,4 ml	32 x 0.2 mm Ø	12000	9395

Angle rotors supplied without tubes.

Micro-haematocrit rotor supplied with one box of 100 tubes.



Micro-haematocrit reader. Suitable for micro-haematocrit rotor 7001704.

Part No. 7000929



Centrifuge "Centro-4-BL"

WITH SWINGOUT HEAD FOR 4 TUBES OF 75 X 13 mm VAC. FREE MAINTENANCE INDUCTION DRIVE MOTOR.



Control panel features (see page 113).

Centrifuge kit for separating plasma rich platelets from whole blood.





MODEL

Part No.	art No. Height / Width / Depht		Max.	Max.	Weight
	(exterior) cm		R.p.m.	R.c.f. (xg)	Kg
7002560	20 28 34	170	5000	2600	6

Rotor comes without tubes.



Centrifuge "Centro-8-BL"

WITH ANGLE ROTOR FOR 7-15 ml tubes and 75 x 13 mm vac (with adapters). Free maintenance induction drive motor.



Control panel features (see page 113).

ABS plastic moulded external case.



MODEL

	rt No.	Max. Volume ml.	Tube capacity	Height / Width / Depth (exterior) cm	Power W	Max. R.p.m.	Max. R.c.f. (xg)	Weight Kg
70	002356	120	8 x 15 ml	20 28 34	170	4500	2015	6.5

Supplied complete with 8 x 15 ml glass tubes.

ACCESSORIES

Bucket adapter for 7 ml tubes.

Rotor capacity: 8 adapters. Part No. **7000700**

Bucket adapter for 75 x 13 mm VAC. tubes. Rotor capacity: 8 adapters.

Part No. 1001557

SPARES. Tubes (see page 132).



MICROPROCESSOR CONTROLLED CENTRIFUGES "Centromix BLT", "Mixtasel BLT", "Centronic BLT" and "Centrofriger BLT"

COMMON FEATURES

Robust all metal construction:

- -External case made from DUR-Al alloy.
- -Internal bowl and top plate all stainless steel
- -Internal steel safety chamber within the case.



Rotor identification head (only models "Centronic BLT" and "Centrofriger BLT") when the centrifuge lid is closed the rotor communicates all the data of the functions of it. This prevents, before use, any risk of failure of using the wrong rotor in a program or exceeding the rotors running parameters. The advantage of this system is that we can add additional rotors to the range without changing the centrifuge model.

Electronic circuits, microprocessor digital control of all parameters and functions: speed, acceleration, brake, RCF, temperature, timer, 10 program storage, automatic rotor recognition and alarm system.

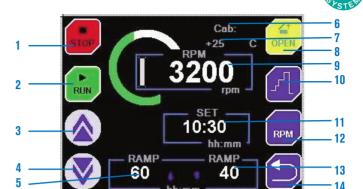
Induction drive maintenance free motor.

Low noise level 50-60 dBa.

Rotors, buckets and adapters are identified with an inalterable engraved laser code. Air circulation system, to limit any excessive rise in temperature within the centrifuge, all air circulated within the chamber is channelled out of the back and is not re-circulated, this means that the centrifuges internal temperature will remain low and constant.

Hermetically sealed compressor, mounted on anti-vibration mounts with re-circulating evaporator around the centrifuge chamber. (only applies to refrigerated centrifuges).

CONTROL PANEL TFT Touch screen



- 1. Stop process key.
- 2. Start process key.
- 3. Increase value key.
- 4. Decrease value key.
- 5. Scheduled acceleration ramp.
- 6. Rotor model in use.
- 7. Reading the real time temperature. (refrigerated models only).
- 8. Door opening key.
- 9. RPM or RCF real-time reading.
- **10.** Sequential operation.
- 11. Time set-up in process.
- 12. Key to change RPM / RCF.
- 13. Braking ramp programmed.
- 14. Return key...





Centrifuge "Centromix BLT"

WITH A CHOICE OF ROTORS AND INTERCHANGEABLE ADAPTERS. FREE MAINTENANCE INDUCTION DRIVE MOTOR.





HEAD AND BUCKET REDUCERS

Reducers for bucket. Part No. 7001066: 7001813 For 1 tube 15 ml (16,5 Ø x 100 mm). 7001814 For 1 tube 10 ml (16 Ø x 80 mm). 7001815 For 1 tube 7 ml (12 Ø x 100 mm). 7001816 For 1 tube 5 ml (12,5 Ø x 75 mm). Reducers for bucket. Part No. 7001067: 1001557 For 1 tube 5 ml (12,5 Ø x 75 mm). Reducers for head. Part No. 7000555: 7000700 For 1 tube 7 ml (12 Ø x 100 mm) Sheath. 1001557 For 1 tube 5 ml (12,5 Ø x 75 mm).

ΝЛ	n	n	Е	п
IVI	U	U		L

Part No.	Max. Volume	Max. Number	Height / Width / Depht	Power	Weight
	ml	of tubes	(exterior) cm	W	Kg
7002556	120	4 x 25 ml	23 30 35	180	12

External DUR-AL case, with AISI 304 stainless steel bowl.

ACCESSO	RIES Rotors a	and intercl	hangeable buck	ets and adapter	S.		
Part No. head	Rotor type	Part No. bucket	Totel max. Volume (4 adapters)	Bucket/Adapter capacity	Ø x Length mm	Max. R.p.m.	Max. R.c.f. (xg)
7000555	Angle	-	150 ml	10 x 15 ml	16.5 x 100	4400	1850
	Swing out	7001066	100 ml	1 x 25 ml	24 x 100	4400	2705
	Swing out	7001067	60 ml	1 x 15 ml	16.5 x 100	4400	2705
7001065	Swing out	7001068	28 ml	1 x 7 ml	12 x 100	4400	2705
	Swing out	7001573	40 ml	2 x 5 ml VAC	13 x 75	4400	2335
	Swing out	7001070	60 ml	VAC	16 x 100	4400	2790
	Swing out	7001072	-	undrilled	-	4400	2705

Note: All buckets and adapters come without tubes unless stated, see page 132 for tubes and accessories. 7001066 7001067





Polyvalent with rotors and interchangeable adapters

Control panel features (see page 116).







7002576	400	4 x 100 ml	34 41 54	210	22
Part No.	Max. Volume ml	Max. Number of tubes	Height / Width / Depht (exterior) cm	Power W	Weight Kg
MODEL					

ACCESSORIES

Swing out rotor with interchangeable sealed buckets and adapters, each with identification code. Autoclavable.











7000736



7001647



7000737

Adapters



7000738 7001648



7000739



7000612

Part No. head	Rotor type	Bucket open	Sealed bucket	Part No. adapter	Totel max. Volume (4 adapters)	Bucket/Adapter capacity	Ø x Length mm	Max. R.p.m.	Max. R.c.f. (xg)
	Swing out	7000731	7000732	7000734	200 ml	1 x 50 ml	34 x 100	4200	4137
	Swing out	7000731	7000732	7000735	200 ml	2 x 25 ml	24 x 100	4200	4137
	Swing out	7000731	7000732	7000736	420 ml	7 x 15 ml and VAC*	16.5 x 100	4200	4137
7009079	Swing out	7000731	7000732	7001647	240 ml	6 x 10 ml	17 x 110	4200	4137
	Swing out	7000731	7000732	7000737	336 ml	12 x 7 ml	12 x 100	4200	4137
	Swing out	7000731	7000732	7000738	240 ml	12 x 5 ml	12.5 x 75	4200	4137
	Swing out	7000731	7000732	7001648	140 ml	7 x 5 ml and VAC*	13 x 75	4200	4137
	Swing out	7000731	7000732	7000739	144 ml	12 x 3 ml	11 x 100	4200	4137
	Swing out	7000731	7000732	7000740	-	undrilled	-	4200	4137
7000612	Swing out	-	-	-	-	4 x 96 microtiter	-	4200	1719

^{*}VAC: Blood tube with stopper.

^{**} Bucket Part No. 7000731 accommodate 1 x 200 ml polypropylene bottle with cap without the need of an adapter. Note: All buckets and adapters come without tubes unless stated, see page 132 for tubes and accessories.

ACCESSORIES

Interchangeable angle rotors with lids, made of hardened anodised aluminium. Rotors come with identification system. Autoclavable rotors and buckets.

Part No. head	Rotor type	Max. volume	Tube capacity	Ø x Length mm	Max. R.p.m.	Max. R.c.f. (xg)
7001705	Angle+lid	270 ml	18 x 15 ml	16.5 x 100	4200	1893
7001711	Angle+lid	400 ml	8 x 50 ml	34 x 100	4200	1921
7001342	Angle+lid	360 ml	24 x 15 ml	16,5 x 100	4200	1893

Note: All buckets and adapters come without tubes unless stated, see page 132 for tubes and accessories.











Swing out rotor, interchangeable buckets and adapters each with identification code. Autoclavable.





BUCKETS















7001073





7000798

7001326

Sealed bucket with hermetically sealed lid.

ADAPTERS









7001316 7001317 7001318

7001319 7001320

7001321

7001322

Part No. Rotor	Rotor type	Part No. bucket	Sealed bucket	Part No. adapter	Totel max. Volume (4 adapters)	Bucket/Adapter capacity	Ø x Length mm	Max. R.p.m.	Max. R.c.f. (xg)
	Swing out	7001700	-	-	400 ml	1 x 100 ml	44 x 104	4200	3030
	Swing out	7000793	-	-	200 ml	1 x 50 ml	34 x 100	4200	3030
	Swing out	7000794	-	-	100 ml	1 x 25 ml	24 x 100	4200	3030
	Swing out	7000795	-	-	240 ml	4 x 15 ml	16.5 x 100	4200	3030
	Swing out	7000796	-	-	140 ml	5 x 7 ml	12 x 100	4200	3030
	Swing out	7000797	-	-	100 ml	5 x 5 ml	12.5 x 75	4200	2441
	Swing out	7000930	-	-	240 ml	4 x 15 ml Falcon	16.5 x 120	4200	3030
	Swing out	7000931	-	-	200 ml	1 x 50 ml Falcon	30 x 117	4200	3030
	Swing out	7001073	-	-	16 VAC	4 VAC*	16 x 100	4200	3030
7001326	Swing out	7001074	-	-	16 VAC	4 VAC*	13 x 75	4200	2441
	Swing out	7000798	-	-	undrilled	-	-	4200	3030
	Swing out	-	7001315	100 ml glass tube**	400 ml	1 x 100 ml	44 x 104	4200	2901
	Swing out	-	7001315	7001316	200 ml	1 x 50 ml	34 x 100	4200	2901
	Swing out	-	7001315	7001317	100 ml	1 x 25 ml	24 x 100	4200	2901
	Swing out	-	7001315	7001318	240 ml	4 x 15 ml	16.5 x 100	4200	2901
	Swing out	-	7001315	7001319	140 ml	5 x 7 ml	12 x 100	4200	2901
	Swing out	-	7001315	7001320	100 ml	5 x 5 ml	12.5 x 75	4200	2901
	Swing out	-	7001315	7001321	64 ml	4 VAC*	13 x 75	4200	2901
	Swing out	-	7001315	7001322	undrilled	-	-	4200	2901

*VAC(r): Blood tube with cap (bung). **Sealed bucket Part No. 7001315 accommodates a 100 ml glass tube without the need of an adapter. Note: All buckets and adapters come without tubes unless stated, see page 132 for tubes and accessories.

HEAD AND BUCKET REDUCERS

Reducers for head. Part No. 7001711: **7001707** For 1 tube 50 ml (29 Ø x 103 mm). **7001708** For 1 tube 25 ml (24 Ø x 100 mm). **7001709** For 1 tube 30 ml (25 Ø x 92 mm). 7001710 For 1 tube 15 ml (16,5 Ø x 100 mm).

 For 1 tube 10 ml (16 Ø x 80 mm). For 4 tubes 7 ml (12 Ø x 100 mm). For 4 tubes 5 ml (12,5 Ø x 75 mm). Reducers for bucket. Part No. 7001700: for 1 tube 85 ml (38 Ø x 112 mm).



High speed centrifuges with microprocessor control "Centronic BLT" and "Centrofriger BLT"



Versatile. Large range of rotors and adapters. Maintenance free induction motor drive.



Model "Centronic BLT"

Control panel features (see page 116).

External case of DUR-AL alloy with ABS plastic coated front AISI 304 stainless steel bowl.



Model "Centrofriger BLT" refrigerated, temperature range -12 °C to 40 °C.

MODEL

Part No.	Max. Volume ml	Max. number of tubes	Height / Width / Depht (exterior) cm	Power W	Weight Kg
7001768	400	4 x 100 ml	34 41 54	440	22

MODEL

Part No.	Max. Volume ml	Max. number of tubes	Height / Width / Depht (exterior) cm	Power W	Weight Kg
7001769	400	4 x 100 ml	34 41 71	960	39

Note: The rotor being used limits the actual temperature in the chamber due to the speed and ambient temperature. Internal temperature indicated on the LCD display.

ACCESSORIES

Angle rotors with lid, made of anodised hardened aluminium with identification system. All rotors are autoclavable.



7001670



7001324



7001706















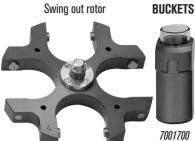
7001325 7001323 7001671 7001672 7001673 7001408 With calculator reader

Part No.	Rotor	Max.	Tubes	Ø x Length		ONIC BLT		RIGER BLT
head	type	volume	capacity	mm	Max. R.p.m	Max. R.c.f. (xg)	Max. R.p.m	Max. R.c.f. (xg)
7001670	Angle+lid	270 ml	18 x 15 ml	16.5 x 100	4200	1893	4200	1893
7001706	Angle+lid	400 ml	8 x 50 ml	34 x 100	6000	3920	6000	3920
7001325	Angle+lid	500 ml	6 x 50 ml	29 x 103	6000	3920	6000	24204
7001324	Angle+lid	180 ml	6 x 30 ml	25 x 92	13500	16900	15300	20410
7001323	Angle+lid	100 ml	10 x 10 ml	16 x 80	13500	18335	15300	23550
7001671	Angle+lid	40.5 ml	18x0.25/0.5 ml + 18x1.5/2.2 ml	-	13500	15992	15300	20541
7001672	Angle+lid	60 ml	40 x 0.25/0.5 ml	-	13500	16250	15000	20100
7001673	Angle+lid	45 ml	30 x 1.5/2.2 ml	-	13500	19048	15000	23716
7001408	Angle+lid	Microhaematocri	t 24	1.4 x 75	12000	15935	12000	15935

Note: All buckets and adapters come without tubes unless stated, see page 132 for tubes and accessories.

ACCESSORIES

Swing out rotor with interchangeable sealed buckets and adapters, each with identification code. Autoclavable.























7001407



Sealed bucket with hermetically sealed lid.

















7001315

7001316 7001317 7001318 7001319 7001320 7001321

Part No. head	Rotor Type	Part No. bucket	Sealed bucket	Part No. adapter	Totel max. Volume (4 adapters)	Bucket/Adapter capacity	Ø x Length mm	Max. R.p.m.	Max. R.c.f. (xg)
	Swing out	7001700	-	-	400 ml	1 x 100 ml	44 x 104	5000	4137
	Swing out	7000793	-	-	200 ml	1 x 50 ml	34 x 100	5000	4137
	Swing out	7000794	-	-	100 ml	1 x 25 ml	24 x 100	5000	4137
	Swing out	7000795	-	-	240 ml	4 x 15 ml	16.5 x 100	5000	4137
	Swing out	7000796	-	-	140 ml	5 x 7 ml	12 x 100	5000	4137
	Swing out	7000797	-	-	100 ml	5 x 5 ml	12.5 x 75	5000	3318
	Swing out	7000930	-	-	240 ml	4 x 15 ml Falcon	16.5 x 120	5000	4109
	Swing out	7000931	-	-	200 ml	1 x 50 ml Falcon	30 x 117	5000	4109
	Swing out	7001073	-	-	16 VAC	4 VAC*	16 x 100	5000	4137
7001407	Swing out	7001074	-	-	16 VAC	4 VAC*	13 x 75	5000	3318
	Swing out	7000798	-	-	undrilled	-	-	5000	4137
	Swing out	-	7001315	100 ml glass tube**	400 ml	1 x 100 ml	44 x 104	5000	4137
	Swing out	-	7001315	7001316	200 ml	1 x 50 ml	34 x 100	5000	4137
	Swing out	-	7001315	7001317	100 ml	1 x 25 ml	24 x 100	5000	4137
	Swing out	-	7001315	7001318	240 ml	4 x 15 ml	16.5 x 100	5000	4137
	Swing out	-	7001315	7001319	140 ml	5 x 7 ml	12 x 100	5000	4137
	Swing out	-	7001315	7001320	100 ml	5 x 5 ml	12.5 x 75	5000	4137
	Swing out	-	7001315	7001321	64 ml	4 VAC*	13 x 75	5000	4137
	Swing out	-	7001315	7001322	undrilled	-	-	5000	4137

^{*}VAC(r): Blood tube with cap.

Note: All buckets and adapters come without tubes unless stated, see page 132 for tubes and accessories.

HEAD AND BUCKET REDUCERS

Reducers for head. Part No. 7001706: 7001707 For 1 tube 50 ml (29 Ø x 103 mm). **7001708** For 1 tube 25 ml (24 Ø x 100 mm). **7001709** For 1 tube 30 ml (25 Ø x 92 mm). **7001710** For 1 tube 15 ml (16,5 Ø x 100 mm). **7001780** For 1 tube 10 ml (16 Ø x 80 mm). **7001781** For 4 tube 7 ml (12 Ø x 100 mm). 7001782 For 4 tube 5 ml (12,5 Ø x 75 mm). Reducers for head, Part No. 7001325:

 For 1 tube 25 ml (24 Ø x 100 mm). For 1 tube 30 ml (25 Ø x 92 mm). For 1 tube 15 ml (16,5 Ø x 100 mm). For 1 tube 10 ml (16 Ø x 80 mm). For 2 tubes 7 ml (12 Ø x 100 mm). For 2 tubes 5 ml (12,5 Ø x 75 mm). Reducers for head. Part No. 7001324: For 1 tube 15 ml (16,5 Ø x 100 mm). For 1 tube 10 ml (16 Ø x 80 mm).

 For 1 tube 7 ml (12 Ø x 100 mm). For 1 tube 5 ml (12,5 Ø x 75 mm). Reducers for head, Part No. 7001670: For 1 tube 7 ml (12 Ø x 100 mm). For 1 tube 5 ml (12,5 Ø x 75 mm). Reducers for head. Part No. 7001323: For 1 tube 5 ml (12,5 Ø x 75 mm). Reducers for bucket. Part No. 7001700: For 1 tube 85 ml (38 Ø x 112 mm).

^{**}Sealed bucket Part No. 7001315 accommodates a 100 ml glass tube without the need of an adapter. Micro-haematocrit rotor comes with a box of 100 tubes and calculus graph.

ACCESSORIES Swing out rotor with interchangeable sealed buckets and adapters, each with identification code. Autoclavable. Swing out rotor Open bucket **Adapters** 7009079 7000734 7000735 7000736 7001647 7000737 7000738 7001648 7000739 7000740 7000613 7000731 Bucket Part No. Rotor Sealed Part No. Total max. Volume Bucket/Adapter Ø x I enoth Max. Max. hucket R.c.f. (xg) adanter (4 adanters) capacity R.p.m. Swing out 7000731 7000732 7000734 200 ml 1 x 50 ml 34 x 100 5000 4200 Swing out 7000731 7000732 7000735 200 ml 2 x 25 ml x 100 5000 4200 Swing out 420 ml 7 x 15 ml and VAC* 5000 7000731 7000732 7000736 16.5 x 100 4200 7009079 Swing out 7000731 7000732 7001647 240 ml 6 x 10 ml 17 x 110 5000 4200 12 x 100 Swing out 7000731 7000732 7000737 336 ml 12 x 7 ml 5000 4200 240 ml 12 x 5 ml Swing out 7000731 7000738 12.5 x 75 5000 4200 7000732 Swing out 140 ml 7 x 5 ml and VAC* 5000 7000731 7000732 7001648 13 x 75 4200 Swing out 7000731 7000732 7000739 144 ml 12 x 3 ml x 100 5000 4200 Swing out undrilled 5000 7000731 7000732 7000740 4200 7000613 Swing out 4 x 96 microtiter 4200 1719



^{**} Bucket part nos. 7000731 and 7000732 accommodate 1 x 200 ml polypropylene bottle with cap without the need of an adapter.

Note: All buckets and adapters come without tubes unless stated, see page 132 for tubes and accessories.



Microprocessor controlled centrifuges "Meditronic BLT", "Medifriger BLT", "Macrotronic BLT" and "Macrofriger BLT"



COMMON FEATURES

Induction drive maintenance free motor.

Low noise level 50-60dBa.

Robust all metal construction:

- -External case made from DUR-Al alloy.
- -Internal bowl and top plate all stainless steel
- -Internal steel safety chamber within the case.

Electronic circuits, microprocessor digital control of all parameters and functions: speed, acceleration, brake, RCF, temperature, timer, 10 program storage, automatic rotor recognition and alarm system.



Rotor identification head, when the centrifuge lid is closed the rotor communicates all the data of the functions of it. This prevents, before use, any risk of failure of using the wrong rotor in a program or exceeding the rotors running parameters. The advantage of this system is that we can add additional rotors to the range without changing the centrifuge model.

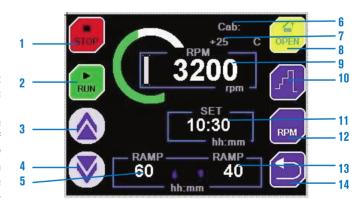
All Rotors, buckets and adapters are identified with an inalterable engraved laser code.

Air circulation system, for centrifuges without refrigeration to limit any excessive rise in temperature within the centrifuge, all air circulated within the chamber is channelled out of the back and is not re-circulated, this means that the centrifuges internal temperature will remain low and constant.

Hermetically sealed compressor, mounted on anti-vibration mounts with re-circulating evaporator around the centrifuge chamber. (only applies to refrigerated centrifuges).

CONTROL PANEL

Touch screen



- 1. Stop process key.
- 2. Start process key.
- 3. Increase value key.
- 4. Decrease value key.
- 5. Scheduled acceleration ramp.
- 6. Rotor model in use.
- **7.** Reading the real time temperature. (refrigerated models only).
- 8. Door opening key.
- 9. RPM or RCF real-time reading.
- 10. Sequential operation.
- 11. Time set-up in process.
- 12. Key to change RPM / RCF.
- 13. Braking ramp programmed.
- 14. Return key..



High speed centrifuges with microprocessor control "Meditronic-BLT" and "Medifriger-BLT"



Weight

Kg

70

1230

Capacity up to 800 ml. Maintenance free induction motor drive.



Model "Meditronic-BLT"

Model "Medifriger-BLT" refrigerated, temperature range -12 °C to 40 °C.

MODEL

Part No.	Max. Volume ml	Max. Number of tubes	Height / Width / Depth (exterior) cm	Power W	Weight Kg
7001476	800	4 x 200 ml	38 46 52	520	44

Height / Width / Depth Part No. Max. Volume Max. Number Power ml of tubes (exterior) cm

4 x 200 ml

Note: The rotor being used limits the actual temperature in the chamber due to the speed and ambient temperature. Internal temperature indicated on the LCD display.

38 68 52

ACCESSORIES

Angle rotors with lid, made of anodised hardened aluminium with identification system. All rotors are autoclavable.

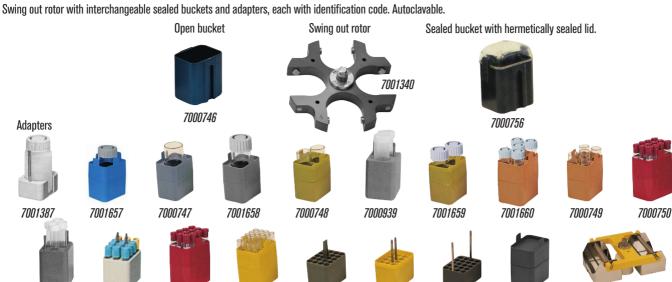


7001477

800

7001449 7001448			7001447			7001446		7001445	70	001444	
Part No. head	Rotor type	Max. volume	(Tube capacity	y	Ø	x Length mm	MEDIT Max. R.p.m	TRONIC BLT Max. R.c.f. (xg)	MEDIFR Max. R.p.m	RIGER BLT Max. R.c.f. (xg)
7000741	Angle+lid	600 ml	6	X	100 ml	44	x 104	4500	3170	4500	3170
7000742	Angle+lid	400 ml	8	X	50 ml	34	x 100	4600	3075	4600	3075
7000743	Angle+lid	360 ml	24	X	15 ml	16.	5 x 100	4800	3761	4800	3761
7001449	Angle+lid	510 ml	6	X	85 ml	38	x 105	8000	6868	12000	15455
7001448	Angle+lid	400 ml	8	X	50 ml	29	x 103	8000	7802	12000	15938
7001447	Angle+lid	180 ml	6	X	30 ml	25	x 92	9000	7424	14000	17965
7001446	Angle+lid	200 ml	20	X	10 ml	16	x 80	9000	8964	12000	15997
7001445	Angle+lid	100 ml	10	X	10 ml	16	x 80	9000	7293	15000	20124
7001444	Angle+lid	45 ml	30	x 1	.5/2.2 ml		-	11000	12619	15000	23470
Note: All bucket	s and adapters come	without tubes unless	s stated, s	ee paç	je 132 for tu	ıbes and	accessorie	S.			

ACCESSORIES



70000	7007007	7007002	7000707	700	700	10100	7000700	7000010	
Part No. head	Rotor type	Bucket open	Sealed bucket	Part No. adapter	Totel max. Volume (4 adapters)	Bucket/Adapter capacity	Ø x Length mm	Max. R.p.m.	Max. R.c.f. (xg)
	Swing out	7000746	7000756	7001387	800 ml	1 x 200 ml	56.6 x 104	5000	4312
	Swing out	7000746	7000756	7001657	500 ml	1 x 125 ml	51 x 115	5000	4312
	Swing out	7000746	7000756	7000747	400 ml	1 x 100 ml	44 x 104	5000	4312
	Swing out	7000746	7000756	7001658	320 ml	1 x 80 / 85 ml	38 x 105	5000	4312
	Swing out	7000746	7000756	7000748	400 ml	2 x 50 ml	34 x 100	5000	4312
	Swing out	7000746	7000756	7000939	400 ml	2 x 50 ml Falcon	30 x 117	5000	4312
	Swing out	7000746	7000756	7001659	400 ml	2 x 50 ml	29 x 103	5000	4312
	Swing out	7000746	7000756	7001660	600 ml	5 x 30 ml	25 x 92	5000	4312
	Swing out	7000746	7000756	7000749	500 ml	5 x 25 ml	24 x 100	5000	4312
7001340	Swing out	7000746	7000756	7000750	720 ml	12 x 15 ml	16.5 x 100	5000	4312
	Swing out	7000746	7000756	7000750	720 ml	12 VAC *	16.5 x 100	5000	4312
	Swing out	7000746	7000756	7000938	240 ml	4 x 15 ml Falcon	16.5 x 120	5000	4312
	Swing out	7000746	7000756	7001661	-	12 VAC *	13 x 75	5000	4312
	Swing out	7000746	7000756	7001662	480 ml	12 x 10 ml	16.8 x 85	5000	4312
	Swing out	7000746	7000756	7000751	560 ml	20 x 7 ml	12 x 100	5000	4312
	Swing out	7000746	7000756	7000752	400 ml	20 x 5 ml	12.5 x 75	5000	4312
	Swing out	7000746	7000756	7000753	240 ml	20 x 3 ml	11 x 100	5000	4312
	Swing out	7000746	7000756	7000754	120 ml	20 de 1.5 / 2.2 ml	-	5000	4312
	Swing out	7000746	7000756	7000755	undrilled	-	-	5000	4312
7000613	Swing out	-	_ d = d==t===	-	-	4 x 96 microtiter	-	4200	2702

*VAC: Blood tube with stopper. Note: All buckets and adapters come without tubes unless stated, see page 132 for tubes and accessories.

HEAD REDUCERS

 For 4 tubes 7 ml (12 Ø x 100 mm). For 4 tubes 5 ml (12,5 Ø x 75 mm). Reducers for head. Part No. 7001449: For 1 tube 50 ml (34 Ø x 100 mm). For 1 tube 50 ml (29 Ø x 103 mm). For 1 tube 25 ml (24 Ø x 100 mm). For 1 tube 30 ml (25 Ø x 92 mm). For 2 tubes 15 ml (16.5 Ø x 100 mm). For 2 tubes 10 ml (16 Ø x 100 mm). For 5 tubes 7 ml (12 Ø x 100 mm). For 5 tubes 5 ml (12,5 Ø x 75 mm). Reducers for head. Part No. 7001448: 7001791 For 1 tube 25 ml (24 Ø x 100 mm). For 1 tube 30 ml (25 Ø x 100 mm).

For 1 tube 10 ml (16 Ø x 80 mm).

 For 1 tube 15 ml (16,5 Ø x 100 mm). For 1 tube 10 ml (16 Ø x 80 mm). For 2 tubes 7 ml (12 Ø x 100 mm). For 2 tubes 5 ml (12,5 Ø x 75 mm). Reducers for head. Part No. 7001447: For 1 tube 15 ml (16,5 Ø x 100 mm). For 1 tube 10 ml (16 Ø x 80 mm). For 1 tube 7 ml (12 Ø x 100 mm). For 1 tube 5 ml (12.5 Ø x 75 mm). Reducers for head. Part No. 7001445/7001446: For 1 tube 5 ml (12,5 Ø x 75 mm). Reducers for head, Part No. 7000743: For 1 tube 7 ml (12 Ø x 100 mm). For 1 tube 5 ml (12,5 Ø x 75 mm).



Microprocessor controlled Centrifuge "Macrotronic-BLT" and "Macrofriger-BLT"



Multi-capability. Capacity from 1.5/2.2 ml vials up to tubes of 500 ml and 500ml blood bags. Maintenance free induction motor drive.

Control panel features (see page 121). External case made of DUR-AL alloy with an AISI 304 stainless steel bowl.





Model "Macrofriger-BLT" refrigerated, temperature range -12 °C to 40 °C.

Model "Macrotronic-BLT"

MODEL

Part No.	Max.	Max. No.	Height / Width / Depth	Power	Weight
	volume ml	of bags	(exterior) cm	W	Kg
7001485	2000	4 x 500 ml	45 60 66	720	76

MODE

Part No.	Max.	Max. No.	Height / Width / Depth	Power	Weight
	volume ml	of bags	(exterior) cm	W	Kg
7001486	2000	4 x 500 ml	97 60 66	1230	156

Note: The rotor being used limits the actual temperature in the chamber due to the speed and ambient temperature. Internal temperature Indicated on the LCD display.

ACCESSORIES Angle rotors with lid, made of anodised hardened aluminium with identification system. All rotors are autoclavable. 7000561 7000560 7001653 7001650 7001651 7001652 7001654

Part No. head	Rotor type	Max. volume	Tube capacity	Ø x Length mm	MACRO Max. R.p.m	TRONIC BLT Max. R.c.f. (xg)	MACROF Max. R.p.m	RIGER BLT Max. R.c.f. (xg)
7000561	Angle+lid	600 ml	12 x 50 ml	34 x 100	4530	3785	4530	3785
7000560	Angle+lid	840 ml	56 x 15 ml	16.5 x 100	4030	3268	4030	3268
7001650	Angle+lid	1500 ml	6 x 250 ml	62 x 122	8000	10373	9000	13129
7001651	Angle+lid	510 ml	6 x 85 ml	38 x 105	10000	10731	12000	15452
7001652	Angle+lid	400 ml	8 x 50 ml	29 x 103	10000	11066	12000	15935
7001653	Angle+lid	360 ml	12 x 30 ml	25 x 92	10000	12296	12000	17706
7001654	Angle+lid	200 ml	20 x 10 ml	16 x 80	10000	11066	12000	15935



12 VAC*

12 x 10 ml

20 x 7 ml

20 x 5 ml

20 x 3 ml

20 de 1.5 / 2.2 ml

*VAC: Blood tube with stopper.

Swing out

7000746

7000746

7000746

7000746

7000746

7000746

7000746

Note: All buckets and adapters come without tubes unless stated, see page 132 for tubes and accessories.

7000756

7000756

7000756

7000756

7000756

7000756

7000756

7001661

7001662

7000751

7000752

7000753

7000754

7000755

480 ml

560 ml

400 ml

240 ml

120 ml

undrilled

5000

5000

5000

5000

5000

5000

5000

13 x 75

16.8 x 85

12 x 100

12.5 x 75

11 x 100

4615

4615

4615

4615

4615

4615

4615

ACCESSORIES





7001451





7001655

Adapters



7001396



7001397

7001450









Bucket for 3 x 96 well plates

1	UU	11:	ายช

7001399

7001400

7001401

7001656

Part No. head	Rotor type	Bucket open	Part No. adapter	Total max. Volume (4 adapters)	Bucket/Adapter capacity	Ø x Length mm	Max. R.p.m.	Max. R.c.f. (xg)
	swing out	7001451	7001395	2000 ml	1 x 500 ml	70 x 165	3200	2358
	swing out	7001451	7001655	1000 ml	1 x 250 ml	62 x 122	3200	2358
	swing out	7001451	7001396	800 ml	1 x 200 ml	56.6 x 104	3200	2358
	swing out	7001451	7001397	800 ml	2 x 100 ml	44 x 104	3200	2358
7001 /E0	swing out	7001451	7001398	800 ml	4 x 50 ml	34 x 100	3200	2358
7001450	swing out	7001451	7001399	900 ml	9 x 25 ml	24 x 100	3200	2358
	swing out	7001451	7001400	1020 ml	17 x 15 ml	16.5 x 100	3200	2358
	swing out	7001451	7001401	672 ml	24 x 7 ml	12 x 100	3200	2358
	swing out	7001656	-	-	3 plates x 96 microtiter	-	3200	2117

Swing out rotor









158 Height x 58 mm Ø max. for buckets Part No. 7000764

ASTM buckets for testing sediments in oil and petroleum



7000552

7000763



Buckets

7001075 7000764

7001088

7000767

Part No. head	Rotor type	Open Bucket	Total max. Volume (4 adapters)	Bucket/Adapter capacity	Ø x Length mm	Max. R.p.m.	Max. R.c.f. (xg)
	swing out	7000763	1000 ml	1 x 250 ml	56 x 147	3720	3567
7000552	swing out	7001075	4 x 1 ASTM	1 x ASTM cylindrical	36 x 200	3720	3567
	swing out	7000764	4 x 1 ASTM	1 x ASTM pear shaped	58 x 158	3720	3567

Note: All buckets and adapters come without tubes unless stated, see page 132 for tubes and accessories.

HEAD REDUCERS

Reducers for head. Part No. 7001650: **7001803** For 1 tube 100 ml (44 Ø x 104 mm). 7001804 For 1 tube 85 ml (38 Ø x 105 mm). **7001805** For 1 tube 50 ml (34 Ø x 100 mm). 7001806 For 2 tubes 50 ml (29 Ø x 103 mm). **7001807** For 1 tube 50 ml (30 Ø x 117 mm). 7001808 For 3 tubes 30 ml (25 Ø x 92 mm). 7001809 For 7 tubes 15 ml (16,5 Ø x 100 mm). 7001810 For 7 tubes 10 ml (16 Ø x 100 mm). 7001811 For 12 tubes 7 ml (12 Ø x 100 mm). 7001812 For 12 tubes 5 ml (12,5 Ø x 75 mm).

Reducers for head, Part No. 7001651:

 For 1 tube 50 ml (34 Ø x 100 mm). For 1 tube 50 ml (29 Ø x 103 mm). For 1 tube 25 ml (24 Ø x 100 mm). For 1 tube 30 ml (25 Ø x 92 mm). For 2 tubes 15 ml (16,5 Ø x 100 mm). For 2 tubes 10 ml (16 Ø x 100 mm). For 5 tubes 7 ml (12 Ø x 100 mm). For 5 tubes 5 ml (12,5 Ø x 75 mm). Reducers for head, Part No. 7001652:

7001791 For 1 tube 25 ml (24 Ø x 100 mm).

7001792 For 1 tube 30 ml (25 Ø x 100 mm).

 For 1 tube 15 ml (16.5 Ø x 100 mm). For 1 tube 10 ml (16 Ø x 80 mm). For 2 tubes 7 ml (12 Ø x 100 mm). For 2 tubes 5 ml (12,5 Ø x 75 mm). Reducers for head, Part No. 7001653: For 1 tube 15 ml (16,5 Ø x 100 mm). For 1 tube 10 ml (16 Ø x 80 mm). For 1 tube 7 ml (12 Ø x 100 mm). For 1 tube 5 ml (12,5 Ø x 75 mm). Reducers for head, Part No. 7000560: For 1 tube 7 ml (12 Ø x 100 mm). For 1 tube 5 ml (12,5 Ø x 75 mm).



Refrigerated high capacity microprocessor controlled centrifuge suitable for tubes, flasks and blood bags "Megafriger-BLT-Blood" and "Macrofriger-BLT-Blood"

Original J.P. Selecta design. With maintenance free induction drive motor

SAFETY:

SAFETY, CONFORMS TO UNE-EN 61010-2-020.

PROTECTIVE INTERNAL CYLINDER BETWEEN THE CASE AND BOWL. THE LID CANNOT BE OPENED WHILE THE ROTOR IS SPINNING. THE MOTOR CANNOT SPIN WHILE THE LID IS OPEN.

IMBALANCE DETECTOR, AUTOMATICALLY STOPS IF THERE IS ANY IMBALANCE. DOUBLE ELECTROMAGNETIC LID LOCK.

IF THERE IS A POWER FAILURE, A FAIL SAFE SYSTEM CAN BE USED TO OPEN THE LID.

EMERGENCY STOP BUTTON.

COMMON FEATURES

7" TFT touch screen.

Furniture: aluminum structure in Megafriger model and in steel tube with Dur-Al sides in Macrofriger model.

Internal Stainless steel bowl .

Aluminium windbreak cover.

Safety shield: 8 mm thick steel.

Swing-out rotor, buckets and adapters made of high-density material, engraved identification unalterable.

Suspended motor with silent-block and shock absorbers that guarantee smooth, quiet operation without vibrations.

Drive force: equipped with an induction drive maintenance free and highly efficient pollution free motor.

Semi-hermetically sealed, compressor pollution free with no hydrocarbons or fluorocarbons.

Mounted on an anti vibration adjustable rubber feet.

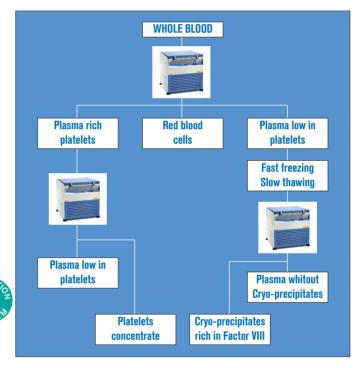
Microprocessor digital control of all functions: speed, acceleration, brake, R.C.F., temperature, time, 10 program memory, rotor identification, operation fault alarm. **Digital indicator of the rotor and blood bag buckets operating hours.**

APPLICATIONS

Specially designed for blood bank applications, where repeatability, precision and reliability of: speed, time, temperature, acceleration and deceleration are significant factors in obtaining perfect separations of the distinct blood fractions.

Serology investigatios. Molecular biology.

Serum separation, pharmaceutical applications.

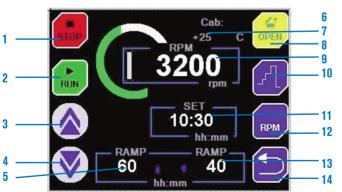


Windbreak cover

Cross-section of the motor, rotor drive mechanism, showing the windbreak protector with lid that reduces the air resistance and maintains a regulated temperature.

CONTROL PANEL

Touch screen



- 1. Stop process key.
- 2. Start process key.
- 3. Increase value key.
- 4. Decrease value key.
- 5. Scheduled acceleration ramp.
- 6. Rotor model in use.
- **7.** Reading the real time temperature. (refrigerated models only).
- 8. Door opening key.
- 9. RPM or RCF real-time reading.
- 10. Sequential operation.
- 11. Time set-up in process.
- 12. Key to change RPM / RCF.
- 13. Braking ramp programmed.
- 14. Return key..



Refrigerated high capacity microprocessor controlled centrifuge suitable for tubes, flasks and blood bags "Megafriger-BLT-Blood" ADJUSTABLE WORKING TEMPERATURES FROM -10 TO 40 ° C. (TEMPERATURE AT STANDSTILL -20 ° C). CAPACITY UP TO 1000 ML BOTTLES AND SPECIAL FOR BLOOD BAGS OF 500 TO 800 ML.

MAXIMUM CAPACITY 4 BAGS.











Features and control panel (see page 129).

TECHNICAL SPECIFICATION

LEGUNICAL SPECIFICATION	
Maximum volume:	l
Maximum bucket volume:1000 m	l
Speed 7001488.:	10 to 4600 r.p.m.
Accuracy:	m.
Resolution r.p.m:	1.
R.C.F.:	to 5700
Imbalance:	
Accuracy:4 g	
Temperature range:from -1	0 °C to 40 °C
Temperature stability:±4 °C	
Resolution:1 °C	
Temperature range:	59 sec.
Centrifuge radius:241 mm	ı
Acceleration profile:5	
Brake profile:	6 quadratic
Voltage:	
Power:	1

MODEL

Part No. Max. Volume Max. Ca		Max. Capacity	Height / Width / Depth Power				Weight
ml			(exterior) cm W				Kg
7001488	4000	4 bags x 1000 ml	97	70	72	1700	190

ACCESSORIES FOR PART NO. 7001490

Swing out rotor 4 places, treated steel.



Part No. 7001343

Interchangeable buckets and reducers with identification sign. Autoclavable.



Single bucket. Bags of 500 to 800 ml. Part No.7001344



Single bucket.
Capacity: 1 blood bag of 500 to 800 ml or 1 flask of 1 litre or with tube adapters.
Part No. 7001393

Adapters for single bucket Part No. 7001393.

Bottle

















1001394	7001395	7001396	7001397 7001398	7001399	7001400	7001401
Single Bucket	Part No. adapter	Total max. Volume (4 adapters)	Capacity: bags, tubes by adapter	Ø x Length mm	R.p.m. Min./Max.	R.c.f. (xg) Min./Max.
7001344	-	3200 ml	2 bag 500 or 800 ml	-	300/4600	24/5520
7004000	Bottle 1000 ml 1001394	4000 ml	1 bottle 1000 ml or 1 bag	98 x 175	300/4600	24/5520
7001393 Capacity	7001395	2000 ml	1 bottle 500 ml	70 x 165	300/4600	24/5520
without adapter:	7001396	800 ml	1 bottle 200 ml	56.6 x 104	300/4600	24/5520
1 bag of	7001397	800 ml	2 tubes 100 ml	44 x 104	300/4600	24/5520
500 to 800 ml	7001398	800 ml	4 tubes 50 ml	34 x 100	300/4600	24/5520
or 1x bottle	7001399	900 ml	9 tubes 25 ml	24 x 100	300/4600	24/5520
1000 ml	7001400	1020 ml	17 tubes 15 ml	16.5 x 100	300/4600	24/5520
	7001401	672 ml	24 tuhes 7 ml	12 x 100	300/4600	24/5520

Note: All buckets and adapters come without tubes, see page 132 for tubes and accessories. Other adapters can be manufactured as per customers specification.

COMPLEMENTS



Blood bank refrigerated cabinets "Blood Bank" A, C and D

FORCED AIR CIRCULATION.

FIXED TEMPERATURE +4 °C. STABILITY ±1.5 °C. RESOLUTION 1 °C. SEVEN DAYS GRAPHIC TEMPERATURE REGISTER. CAPACITIES FROM 80 TO 480 BLOOD BAGS.

FEATURES

See page. 79





MODELS	Part No.	Capacity litres	Capacity bags	Height / Width / Depht (interior) cm	Height / Width / Depht (exterior) cm	Power W	Power HP	Number of shelves	Weight Kg
Blood Bank A	2101519	235	80	109 51 55	156 61 62	300	1/7	4	90
Blood Bank C	2101512	560	200	153 54 66	213 80 79	497	3/8	4	165
Blood Bank D	2101514	1240	480	153 124 68	213 139 79	1034	5/8	8	212

They are supplied with trays.



Refrigerated high capacity microprocessor controlled centrifuge suitable for tubes, flasks and blood bags "Macrofriger-BLT-Blood" ADJUSTABLE WORKING TEMPERATURES FROM 0 TO 40 ° C. (TEMPERATURE AT STANDSTILL -20 ° C). CAPACITY UP TO 1000 ML BOTTLES AND SPECIAL FOR TRIPLE AND QUADRUPLE BLOOD BAGS OF 500 TO 800 ML.

MAXIMUM CAPACITY 12 BAGS.







Image showing the rotor and double buckets for quad and triple blood bags of 500 and 800 ml.

Features and control panel (see page 129).

TECHNICAL SPECIFICATION

I EUTINICAL OF EUTITOATION	
Maximum volume:	600 ml
Maximum bucket volume:	600 ml
Speed 7001490.:	om 300 to 4070 r.p.m.
Accuracy:±	
Resolution r.p.m:	
R.C.F.:	
Imbalance:±	
Accuracy:	•
Temperature range:fr	•
Temperature stability:	
Resolution:1	
Temperature range:	9 min. 59 sec.
Centrifuge radius:	
Acceleration profile:	
Brake profile:9	linear 6 quadratic
Voltage:	
Power:	•
1 011011 111111111111111111111111111111	000 IA

MODEL

Part No.	Part No. Max. Volume Max. Capacity		Height / Width / Depth			Power	Weight
	ml		(exterior) cm			W	Kg
7001490	9600	12 bags x 800 ml	105	96	96	5500	420

ACCESSORIES FOR PART NO. 7001490

Swing out rotor 6 places, treated steel.

Interchangeable buckets and reducers with identification sign. Autoclavable.



Buckets with two compartments for blood bags of 500 to 800 ml. For triple and quad bags Part No.7001392



Single bucket. Capacity: 1 blood bag of 500 to 800 ml or 1 flask of 1 litre or with tube adapters. Part No. 7001393

Bags holder set for double cup 7001392 Part No. 0928292

Adapters for single bucket Part No. 7001393.

Part No. 7001391

Bottle

















1001394	
---------	--

7001395

1001330

7001397

7001398

7001399

7001400

7001401

Double Bucket	Single Bucket	Part No. adapter	Total max. Volume (6 adapters)	Capacity: bags, tubes by adapter	Ø x Length mm	R.p.m. Min./Max.	R.c.f. (xg) Min./Max.
7001392	-	-	9600 ml	2 bags 500 or 800 ml	-	300/4070	29/5450
-		Bottle 1000 ml 1001394	6000 ml	1 bottle 1000 ml or 1 bag	98 x 175	300/4070	29/5430
-	7001393	7001395	3000 ml	1 bottle 500 ml	70 x 165	300/4070	29/5430
-	Capacity	7001396	1200 ml	1 bottle 200 ml	56.6 x 104	300/4070	29/5430
-	without adapter: 1 bag of	7001397	1200 ml	2 tubes 100 ml	44 x 104	300/4070	29/5430
-	500 to 800 ml	7001398	1200 ml	4 tubes 50 ml	34 x 100	300/4070	29/5430
-	or 1x bottle	7001399	1350 ml	9 tubes 25 ml	24 x 100	300/4070	29/5430
-	1000 ml	7001400	1530 ml	17 tubes 15 ml	16.5 x 100	300/4070	29/5430
-		7001401	1008 ml	24 tubes 7 ml	12 x 100	300/4070	29/5430

Note: All buckets and adapters come without tubes, see page 132 for tubes and accessories.

Other adapters can be manufactured as per customers specification.

ACCESSORIES FOR PART NO. 7001490

Swing out rotor 4 places, treated steel.





Biological single bucket safety with screw cap for 2 bags of 450 ml blood or 1 bag of 1200 ml.











7001332

7001333

Double Bucket	3	Part No. adapter	Total max. Volume (4 adapters)	Capacity: bags, tubes by adapter	Ø x Length mm	R.p.m. Min./Max.	R.c.f. (xg) Min./Max.
-	7001330	-	4800 ml	2 bags of 450 or 1 of 1200 ml	-	300/4070	32/5944
-	Capacity	7001331	1600 ml	8 x 50 ml falcon tubes	34 x 120	300/4070	27/4944
- 1	without adapter: 2 bags	7001332	2100 ml	35 x 15 ml VAC tubes	15,5 x 100	300/4070	25/4722
_ 0	of 450 ml or 1 of 1200 ml	7001333	700 ml	35 x 5 ml VAC tubes	12,5 x 75	300/4070	24/4444

COMMON ACCESSORIES. Tubes of glass and plastic.

Plastic tubes and flasks with screw cap lids.

	Volume ml	Dimensions mm	Туре	Part No.	Material	Max. (xg) range	Temperature °C
			Comecta	5752399	Polypropylene	50000	4 121
	10	16 Ø x 80	Herolab	5752421	Polypropylene	57000	-180 14 5
			Herolab	5752401	Polycarbonate	57000	-150 121
			Comecta	5752398	Polypropylene	50000	4 121
	30	25 Ø x 92	Herolab	5752955	Polypropylene	64000	-180 14 5
			Herolab	5752951	Polycarbonate	64000	-150 121
ı			Comecta	5752397	Polypropylene	50000	4 121
	50	29 Ø x 103	Herolab	5753205	Polypropylene	69000	-180 14 5
			Herolab	5753201	Polycarbonate	69000	-150 121
ı			Comecta	5752396	Polypropylene	40000	4 121
	80	38 Ø x 105	Herolab	5753243	Polypropylene	50000	-180 14 5
			Herolab	5753241	Polycarbonate	50000	-150 121
ı	200	56.6 Ø x 104	Herolab	5715202	Polypropylene	10000	-180 14 5
	200	30.0 Ø X 104	Herolab	5715203	Polycarbonate	10000	-150 121
ı			Comecta	5752395	Polypropylene	13200	4 121
	250	62 Ø x 122	Herolab	5753411	Polypropylene	33000	-180 14 5
			Herolab	5753401	Polycarbonate	33000	-150 121
Ì	500	70 Ø 40E	Herolab	5753512	Polypropylene	14000	-180 14 5
	500	70 Ø x 165	Herolab	5753501	Polycarbonate	14000	-150 121
i	1000	00 G 475	Herolab	5752571	Polypropylene	4936	-180 145
	1000	98 Ø x 175	Herolab	5752561	Polycarbonate	4936	-150 121
1.							



Type HEROLAB
polycarbonate tubes
transparent Polypropylene
tubes translucent.
Autoclavable.

Type COMECTA polypropylene translucent. Autoclavable.





Glass Tubes.			
Volume	Din	nensions mm	Part No.
Micro-haematocrit*	1.4	Ø x 75	7000910
7 ml	12	Ø x 100	7000773
15 ml	16.5	Ø x 100	7000772
25 ml	24	Ø x 100	7000771
50 ml	34	Ø x 100	7000770
100 ml	44	Ø x 104	7000769
250 ml	56	Ø x 147	7000768
ASTM	C	onical	7001088
ASTM	Pea	r shape	7000767
*Box of 100 tubes.			

ırs.			
Part No.	Part No.	Part No.	Part No.
7001403	7001500	7005000	7001000 100 ml
plastic	plastic	metal	metal
.,			
Yes			
	Voc		
	169		
	Rotor		
	7000550		
	Rotor	Rotor	Rotor
	7000743	7000742	7000741
	Rotor	Rotor	Rotor
	7000743	7000742	7000741
	Rotor	Rotor	
	7000560	7000561	
	Rotor	Rotor	
	7000560	7000561	
	7001403 15 ml	Part No. 7001403 15 ml plastic 15 ml plastic Yes Yes Rotor 7000550 Rotor 7000743 Rotor 7000743 Rotor 7000743 Rotor 7000560 Rotor	Part No. Part No. Part No. 7001403 15 ml plastic plastic Too Too

ALL THE ROTORS, BUCKETS AND ADAPTERS COME WITH LASER ETCHED IDENTIFICATION.

ACCESSORIES for cytology

Description	Part No,
1. Slide clip fastener	5004050
2. Sample container	5004051
3. Two samples container	5004052
4. Filter	5004053
5. Cyto slide of 1 circle	5004054
6. Cyto slide of 2 circles	5004055
7. Disposable container 1 sample	5004056
8. Disposable container 2 samples	5004057

















Drying and sterilization ovens
Universal precision ovens
High temperature ovens
Vacuum ovens
Desiccators
Bacteriological incubators
Cooled low temperature incubator
Incubator chamber
CO ₂ incubator
Precise cooled incubators
Electric muffle furnaces

page	136
pages	137 to 149
pages	142 and 143
page	146
pages	147 and 148
page	149
pages	150 to 153
pages	154 and 155
page	156
page	157
page	158 and 160
pages	161 to 163



LABORATORY OVENS AND INCUBATORS

Leading edge technology. Maximum Precision.



Drying and sterilization ovens:

Drying: For all drying processes of diverse laboratory material or glass material in general, printed circuits, granule and powder, etc. **Sterilization:** They quarantee microorganisms destruction, either pathogen ones or not, which will be over or inside the material. They allow sterilization of powder and

non-volatile viscose substances. For a good sterilization, a temperature between 160 °C and 180 °C and 2 hours exposition is usually required.

Vacuum drying ovens:

They are developed for applications of thermal and drying treatments of heat-sensitive products.

Bacteriological culture ovens:

For microorganisms or culture incubation in clinical diagnosis, in sanitary or nutritious industry. The samples are preserved at a determined temperature and period of time.

Cooled low temperature ovens:

For microorganisms or culture incubation, in clinical diagnosis, in sanitary or nutritious industry. The samples are preserved at a determined temperature and period of time.

Anaerobic cell and tissue cultures for CO2 ovens:

Essential element in laboratories for research, cell biology, molecular biology, different cancer sorts and general pharmaceutical laboratories.

Conforms to the international directives for safety and precision. MODEL RANGE:

- Drying and sterilization.
- Universal: Programmed for cultures and sterilization.
 - Vacuum drying.
 - Bacteriological cultures.
 - Low temperature- High Precision Peltier systems.
 - CO₂ Incubators.
 - Precise refrigerators and cooled incubators.
- More than 70 models with capacities from 19 to 720 litres.
- Controllable temperatures from −10 to 250 °C and 400 °C.
- Analogue or digital control through a microprocessor for temperature and time.
 - Wide range of accessories for varying applications.



OVENS, INCUBATORS AND FURNACES Summary table of the different models



							ŲUIUK (UVERVIEL	W	
MODEL RANGE Sterilizers poupinel	MODELS	CONTROL	1.5 litres	19 litres	CAPACITY			Safety	RS-232	USB
50 220 °C	DRYTIME II	ANALOGUE	2000912	-				YES	-	-
60 250 °C	DRYTERM	ANALOGUE	-	2000787				YES	-	-
GLASS DRYING			126 litres							
40 170 °C	DRYGLASS	ANALOGUE	2000381					YES	-	-
CONVECTION NATURAL			19 litres	36 litres	52 litres	80 litres	150 litres			
40 250 °C	CONTERM	Digital LED µ	2000250	2000251	2000252	2000253	2000254	YES		-
Ambient+5 250 °C	DIGITHEAT-TFT	TFT Touch screen µ	2001251	2001252	2001253	2001254	2001255	YES	YES	YES
FORCED AIR, FAN CONVECTION BEN	CH TOP	<u> </u>		33 litres	47 litres	76 litres	145 litres			
Ambient+5 250 °C	DIGITRONIC-TFT	TFT Touch screen µ		2005163	2005165	2005167	2005169	YES	YES	YES
Ambient+5 250 °C D	IGITRONIC-TFT glass door	•		2005164	2005166	2005168	2005170	YES	YES	YES
FORCED AIR, FAN CONVECTION FLO		<u> </u>	216 litres	288 litres	400 litres	720 litres	4200 litres			
Ambient+5 250 °C [DRYBIG 230/400V III PHAS	SES DIGITAL µ	2002961	2002971	2003721	2003741	2003743	YES	YES	-
Ambient+5 250 °C	DRYBIG 230V I PHASE	DIGITAL µ	2002962	2002972	_	_		YES	YES	-
HIGH TEMPERATURE		·	80 litres							
60 400 °C H	IGHTEMP 230/400V III PHA	SES DIGITAL µ	2001406					YES	-	-
VACUUM OVEN		,	3 litres	47 litres						
35 200 °C	VACIOTEM T	DIGITAL µ	-	4001489				YES	YES	-
35 200 °C	VACIOTEM TV	DIGITAL µ	-	4001490				YES	YES	-
Ambient+5 170 °C	VACUO-TEMP	DIGITAL	4000474					YES	-	-
DESICCATOR			55 litres							
			1001403					-	-	-
INCUBATION CHAMBER			110 litres							
Ambient+5 57 °C	BOXCULT	DIGITAL	3000957					YES	-	-
INCUBATORS BENCH TOP			19 litres	36 litres	52 litres	80 litres	150 litres			
Ambient+5 80 °C	INCUBAT	Digital LED µ	2000260	2000261	2000262	2000263	2000264	YES	-	-
Ambient+5 80 °C	INCUDIGIT-TFT	TFT Touch screen µ	2001261	2001262	2001263	2001264	2001265	YES	YES	YES
INCUBATORS LARGE AND FLOOR ST	ANDING	<u>.</u>	288 litres	400 litres	720 litres					
Ambient+5 80 °C	INCUBIG-TFT	TFT Touch screen µ	2000238	2000239	2000240			YES	YES	YES
LOW TEMPERATURE CABINETS			36 litres	80 litres	150 litres					
5 60 °C	PREBATEM-TFT	TFT Touch screen µ	2000963	2000964	2000965			YES	YES	YES
CO2 INCUBATOR					150 litres					
Ambient+5 50 °C	INCUBATOR CO2	DIGITAL µ			4002628			YES	YES	YES
WITH REFRIGERATION			160 litres	600 litres	670 litres					
+5 65 °C	HOTCOLD S	DIGITAL µ	2101518					YES	-	-
-10 60 °C	HOTCOLD UC	TFT Touch screen µ			2101515			YES	-	YES
6 20 °C (with humid	ity) HOTCOLD F	TFT Touch screen µ		2101517				YES	-	-
6 20 °C (with humid		TFT Touch screen µ		2101518				YES	-	-
MUFFLE FURNACE			3 litres	3.6 litres	8 litres	9 litres				
Up to 1150 °C	SELECT-HORN-TFT	TFT Touch screen µ	-	2000376	-	2000377		YES	-	YES
Up to 1100 °C	R	TFT Touch screen µ	2000368	-	2000369	-		YES	-	YES
with microprocesor										

μ: with microprocessor.



Poupinel dry heat sterilizer "Drytime II"

ADJUSTABLE TEMPERATURES FROM 50 °C UP TO 200 °C.

STABILITY: ±6 °C.



For quick surgical sterilization of diverse instruments surgical odontological, etc.

FEATURES

Heating by shielded elements in the base which provide a rapid temperature rise.

Flap door.

Inner chamber in AISI 304 stainless steel. Removable tank with extraction clamps.

Epoxy-coated outer casing.

SAFETY

Over temperature cut out incorporated. EN.61010 Standard.

CONTROL PANEL

Mains switch.

Mains indicator lamp.

Hydraulic thermostat for temperature control.

Timer 0 to 120 min. with automatic off.



MODEL

Part No.	Capacity	Height / Width / Depth	Height / Width / Depth	Power	Weight
	litres	(interior) cm	(exterior) cm	W	Kg
2000912	1,5	6,5 25 12	15 31 20	300	4



Poupinel dry heat sterilizer "Dryterm"

ADJUSTABLE TEMPERATURES FROM 60 °C UP TO 250 °C. STABILITY: ± 10 °C.

APPLICATIONS

For surgical sterilization of diverse instruments surgical odontological,etc.

FEATURES

Heating by shielded elements in the base that provides a rapid rise in temperature.

Flap door.

Inner chamber made of AISI 304 stainless steel, complete with a heater cover, three shelf runners and two perforated shelves 10 mm high.

Epoxy-coated outer casing.

SAFETY

Over temperature cut out incorporated. EN.61010 Standard.

CONTROL PANEL

Hydraulic thermostat temperature control. Locking device for thermostat knob.

Timer 0 to 120 min. with automatic switch off.

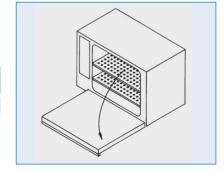
Heater "ON" indicator.

Analogue temperature reading thermometer.

TOTAL STATE OF THE STATE OF THE

MODEL

Part No.	Capacity	Height / Width / Depth	Height / Width / Depth	Power	Weight
	litres	(interior) cm	(exterior) cm	W	Kg
2000787	19	25 32 23	37 54 34	770	19





SAFETY:

EN.61012 STANDARD OVER TEMPERATURE SAFETY CUT OUT FITTED.

DIN 12880. STANDARD (CLASS 2 AND 3.1) ADJUSTABLE SAFETY THERMOSTAT FITTED.

FEATURES

Hydraulic thermostat for temperature control. Air circulation by turbo fan.

Inner chamber made of AISI 304 stainless steel with shelf

Removable tempered glass sliding doors.

Ventilation port for steam.

Epoxy coated external case.

STANDARD EQUIPMENT

2 shelves and 4 shelf guides.

CONTROL PANEL

Dual heating power selector switch.
Mains indicator lamp.
Hydraulic thermostat for temperature control.
Locking system of thermostat knop.
Heater "ON" operation indicator lamp.
Analogue thermometer.

Adjustable over temperature safety thermostat, that cuts off the power if the control thermostat fails, manual reset with "on" indicator lamp.



MODEL

Part No.	Capacity	Height / Width / Depth	Height / Width / Depth	Shelf	Power	Weight
	litres	(interior) cm	(exterior) cm	Positions	W	Kg
2000381	126	45 70 40	66 94 54	8	3000	65

ACCESSORIES

Accessories must be factory installed.



Part No.

2000002 Timer switch 0-120 minutes.

2000009 24 hour programmer with continuous on/off cycling up to every 15 minutes.

SPARES

Part No.

2000081 Shelf guides x 2.

2000091 Shelf.

Each shelf requires 2 guides.



OVENS AND INCUBATORS PREMIER RANGE

MODELS:

- NATURAL AIR CONVECTION, DRYING AND STERILIZATION.
- FAN ASSISTED CIRCULATION, UNIVERSAL APPLICATIONS.
- NATURAL AIR CONVECTION, BACTERIOLOGY AND INCUBATION.
 CONTROL: DIGITAL MICROPROCESSOR CONTROL OF TEMPERATURE AND TIME. MODEL DEPENDENT.

COMPLIES WITH THE STANDARDS: DIN 50011 - DIN 58945. REQUIRED FOR HEATING. STABILITY AND HOMOGENEITY.



SAFETY:

STANDARD EN.61010. INCORPORATED FIXED OVER TEMPERATURE DEVICE .
STANDARD DIN 12880. (CLASS 2 AND 3.1)SAFETY THERMOSTAT CONTROLLER FITTED.

Leading edge technology





Detailed longitudinal cross section.

COMMON FEATURES

Construction.

- **1.** External case treated with a corrosive resistant epoxy coating.
- 2. Internal part: Easy to clean AISI 304 stainless steel double chamber, self adjusting door seal and adjustable shelves and guides.
- **3.** Control panel: independent insulated control panel to facilitate all types of instruments, controls and regulators.
- 4. Adjustable air inlet.

Technical Properties.

- 5. Excellent thermal qualities of the insulation has the optimum performance according to heater capacity and power consumption, with minimal external temperature less
- **6.** Independent heating chamber for the heating elements to obtain an even heat distribution and rapid temperature equilibrium and stabilization.

Fan assisted convection models have a turbo fan. All incubators for bacteriology and cell culture have a second inner door of tempered glass.

Technology from J. P. Selecta:

- 7. Adjustable guide and shelf positions.
- 8. Double seal around the chamber to provide a gentle but effective seal.
- Floating spring door that adjusts the pressure and absorbs the thermal expansion.
- 10. Adjustable door pressure system closure. Internal tempered glass door.

NOTE:

For all models, the values for stability and homogeneity shown are based on temperature conditions with the ventilation closed.

The optimum homogenization of temperature within the chamber is based on a reasonable load that does not surpass more than 70 % of the volume of the chamber. The graphic results shown for temperature for each model are based on the above criteria.

CONTROL PANELS

Models with digital LED.

- 1. Main switch.
- 2. Regulator with digital double temperature display and programmable timer.
- 3. Security thermostat.



Models with 4.3 inches TFT touch screen.



2. TFT touch screen:

Visual audible alarm.

Clock calendar.

Single or cyclic On / Off programming.

Up to 10 work programs.

Up to 6 segments per program.

Stability time in each segment (from 1 min to 99h).

Alarms and events storage.

Probe error detection.

Self Diagnostics.

Ramps between segments.

Network failure detection and saving.

Over temperature and low temperature alarms and memorization (date, start time, end time and temperature).

Safety thermostat (TS) by software.

Mechanic safety thermostat (TS).

Temperature control auto-tuning.

Configurable parameters: Date / time, temperature correction , data collection interval, language (English, Spanish and French) , $^{\circ}$ C / $^{\circ}$ F selection , over temperature and low temperature limit.

- 3. RS-232 output.
- 4. USB output.
- 5. Security thermostat.



MODEL SUMMARY TABLE

Models	CONTERM	DIGITHEAT	DIGITRONIC	DRYBIG	INCUBAT	INCUDIGIT	INCUBIG
TYPE	Drying Oven	Drying Oven	Universal	Universal	Bacteriological	Bacteriological	Bacteriological
CONTROL DISPLAY	Digital LED	TFT Touch screen	TFT Touch screen	Digital LCD	Digital LED	TFT Touch screen	TFT Touch screen
AIR	Convection	Convection	Fan assisted	Fan assisted	Convection	Convection	Convection
CIRCULATION	natural	natural			natural	natural	natural





2000009 24 hour programmer with continuous on/off cycling up to every 15 minutes.
Suitable for CONTERM and INCUBAT.



DRYING AND STERILIZATION OVENS





Drying and sterilization ovens "Conterm"

NATURAL CONVECTION.

TEMPERATURE THERMOSTAT CONTROL WITH DIGITAL THERMOMETER. FOR ADJUSTABLE TEMPERATURES FROM 40 °C UP TO 250 °C. STABILITY: ± 0.5 °C UP TO 150 °C. HOMOGENEITY: ± 1.5 °C UP TO 150 °C.



SAFETY:

STANDARD EN.61010. INCORPORATED FIXED OVER TEMPERATURE DEVICE .
STANDARD DIN 12880. (CLASS 2 AND 3.1) SAFETY THERMOSTAT CONTROLLER FITTED.

FEATURES, CONTROL PANEL, SAFETY, STANDARD AND ACCESSORIES (see pages 138 and 139).



Models Conterm, Part No. 2000250, 2000251 and 2000253.



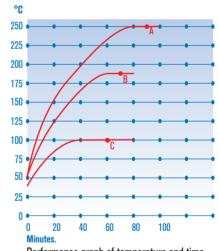
Model Conterm type Poupinel, Part No. 2000252 and 2000254.

STANDARD EQUIPMENT

2 shelves and 4 shelf guides.

MODELS

Part No.	Capacity litres	•	Width terior)	/ Depth cm	Height / Width / Depth (exterior) cm		Shelf Positions	Power W	Weight Kg	
2000250	19	30	25	25	50	60	44	5	580	27
2000251	36	40	30	30	60	65	49	7	870	35
2000252	52	33	47	33	53	82	52	5	980	44
2000253	80	50	40	40	70	74	59	8	1150	54
2000254	150	50	60	50	70	95	68	8	1900	76



Performance graph of temperature and time.

- A. Set at 250 °C: 1 h 30'.
- B. Set at 180 °C: 1 h 12'.
- C. Set at 100 °C: 1 h.

ACCESSORIES

Accessorie must be installed in the factory.



2000009 24 hour programmer with continuous on/off cycling up to every 15 minutes.

SPARES

Shelves and guides.

Oven Part No.	2000250	2000251	2000252	2000253	2000254
Guides set (2 units)	2000011	2000012	2000012	2000013	2000015
Shelves	2000021	2000022	2000024	2000023	2000025
Each shelf requires two qui	ides (one set).				



Drying and sterilization ovens "Digitheat-TFT"

NATURAL CONVECTION.

MICROPROCESSOR CONTROL WITH TFT TOUCH SCREEN. ADJUSTABLE TEMPERATURE FROM AMBIENT +5 °C UP TO 250 °C.

STABILITY: ±0.3 °C, UP TO 150 °C. HOMOGENEITY: ±1 °C, UP TO 150 °C. SET ERROR: ±2 % OF THE WORKING TEMPERATURE. RESOLUTION: 1 °C.





SAFETY:

STANDARD EN.61010. INCORPORATED FIXED OVER TEMPERATURE DEVICE .
STANDARD DIN 12880. (CLASE 2 AND 3.1)CONTROLLABLE SAFETY THERMOSTAT FITTED.



Reaches working temperature with minimum delay

FEATURES, CONTROL PANEL, SAFETY, STANDARD AND ACCESSORIES (see pages 138 and 139).





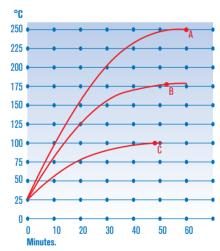
Model Digitheat, Part No. 2001251, 2001252 and 2001254.

STANDARD EQUIPMENT

2 shelves and 4 shelf guides.

MODELS

Part No.	Capacity litres	•	/ Width iterior)	/ Depth cm	Height / Width / Depth (exterior) cm		Shelf Positions	Power W	Weight Kg	
2001251	19	30	25	25	50	60	44	5	600	24
2001252	36	40	30	30	60	65	49	7	900	35
2001253	52	33	47	33	53	82	52	5	1000	44
2001254	80	50	40	40	70	74	59	8	1200	59
2001255	150	50	60	50	70	95	68	8	2100	73



Performance graph of temperature and time.

A. Set at 250 °C: 60'.

B. Set at 180 °C: 54'.

C. Set at 100 °C: 48'.

ч	п	A.	п	Е	е.
	т.	ш	п	г.	
•		•	•		•

Shelves and guides.

Oven Part No.	2001251	2001252	2001253	2001254	2001255				
Guides set (2 units)	2000011	2000012	2000012	2000013	2000015				
Shelves	2000021	2000022	2000024	2000023	2000025				
Each shelf requires two guides (one set).									



Universal precision ovens "Digitronic-TFT"

FAN ASSISTED CIRCULATION.

BACTERIOLOGICAL ASSAYS, DRYING PROCESSES AND STERILIZATION.

MICROPROCESSOR CONTROL WITH TFT TOUCH SCREEN.

ADJUSTABLE TEMPERATURES FROM AMBIENT +5 °C UP TO 250 °C.

STABILITY: ± 0.3 °C, UP TO 100 °C. HOMOGENEITY: ± 1 °C, UP TO 100 °C. GLASS DOOR ± 2 UP TO 100 °C.

SET ERROR: ±2% OF THE WORKING TEMPERATURE. RESOLUTION: 1 °C.

UP TO 6 PROGRAMMABLE TEMPERATURE STEPS



SAFETY:

EN.61012 STANDARD OVER TEMPERATURE SAFETY CUT OUT FITTED.

ADJUSTABLE OVER TEMPERATURE SAFETY THERMOSTAT DIN 12880. (CLASS 2 AND 3.1) FITTED.

Multipurpose oven. Fast response and recuperation of temperature.

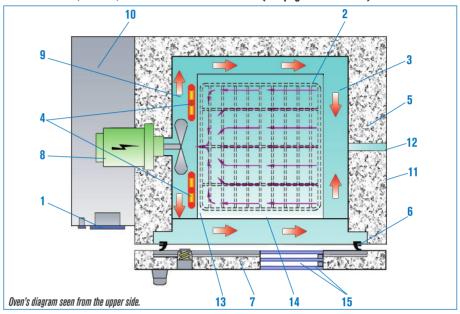
FEATURES

- 1. TFT touch screen.
- 2. Inner chamber made of AISI 304 stainless steel.
- 3. Pre-mixing chamber made of AISI 304 stainless ste-
- **4.** Homogeneously distributed shielded heating elements with complete air circulation throughout.
- **5.** Low external temperature due to excellent thermal insulation.
- **6.** Flexible silicon door gasket around the entrance of the chamber.
- **7.** Excellent door seal due to the floating inner door that adjusts and absorbs the thermal expansion.
- **8.** Turbo fan made of AISI 304 stainless steel that makes to circulate the air at the working temperature.
- **9.** Diagram showing the air flow from the pre-mixing chamber around the heating elements prior to entry to the oven's chamber.
- 10. Independent insulated control box.
- 11. Epoxy coated outer case.
- **12.** Ventilator with adjustable outlet (access at the back of the unit).
- 13. Adjustable height positions for guides and shelves.
- 14. Shelves made of AISI 304 stainless steel.

27,3 ℃

15. Toughened double safety glass door for viewing the contents of the oven without having to open the door. (Model dependent).

CONTROL PANEL, SAFETY, STANDARD AND ACCESSORIES (see pages 138 and 139).





Temperature steps graphic.

Model Digitronic with solid metal door. Part No. 2005163 and 2005167. (With toughened glass window door. Part No. 2005164 and 2005168).









Model Digitronic type Poupinel, door with toughened double glass window Part No. 2005166 and 2005170. Model Digitronic type Poupinel, Part No. 2005165 and 2005169.

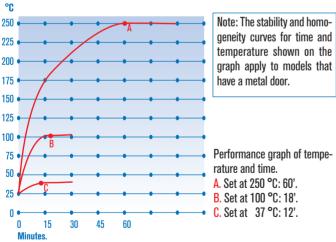
STANDARD EQUIPMENT

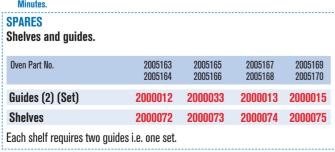
2 shelves and 4 shelf guides.

MODELS

MODELO														
Part No.	Capacity litres	Door Type	Heating rate to 100 °C minutes	Recovery time* minutes	Complete air exchange per hour		t / Widt interior	th / Depth) cm		Widtl (terior)	h / Depth) cm	Shelf Positions	Power W	Weight Kg
2005163	33	metal	15	7	16	40	28	30	60	65	55	7	1200	38
2005164	33	glass	15	7	16	40	28	30	60	65	55	7	1200	40
2005165	47	metal	16	7	16	33	45	32	53	81	58	5	1200	46
2005166	47	glass	16	7	16	33	45	32	53	81	58	5	1200	50
2005167	76	metal	17	9	14	50	38	40	70	75	65	8	1600	58
2005168	76	glass	17	9	14	50	38	40	70	75	65	8	1600	64
2005169	145	metal	17	10	12	50	58	50	70	95	72	9	2000	74
2005170	145	glass	17	10	12	50	58	50	70	95	72	9	2000	79

^{*} Recovery time: the door was opened for 1 minute. After that, this is the time to recover the set temperature to 100 °C.





ACCESSORIES



Preparation of furnaces for drying moisture saturated samples. (Arids, muds, sands ...)
When adding turbine, the number of renewals of the air inside the furnace per hour multiplies by 10.

Must be factory installed Part No. 2000095



Drying and sterilization ovens "Dry-Big"

FAN ASSISTED CIRCULATION.

DIGITAL CONTROL AND DISPLAY OF TEMPERATURE AND TIME ADJUSTABLE TEMPERATURES FROM 40 °C UP TO 250 °C

STABILITY: ± 0.4 °C, UP TO 100 °C. HOMOGENEITY: ± 2 °C, UP TO 100 °C SET ERROR : $\pm 2.5\%$ OF the working temperature. Resolution: 1 °C



SAFETY:

STANDARD EN.61010. FIXED OVER TEMPERATURE DEVICE FITTED.
STANDARD DIN 12880. (CLASS 2 AND 3.1)ADJUSTABLE SAFETY THERMOSTAT FITTED.

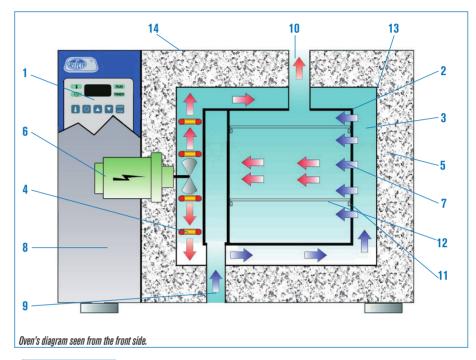
Fast working and recovery temperature

FEATURES

- 1. Microprocessor controlled with digital display of temperature and time, pre-programmable time start and run time once the set temperature has been achieved through the Pt100 temperature sensor.
- 2. Inner chamber made of AISI 304 stainless steel.
- 3. Pre mixing chamber made of AISI 304 stainless ste-
- **4.** Shielded heating elements with complete air circulation, homogeneously distributed throughout.
- **5.** Low external temperature due to excellent thermal insulation
- 6. Ventilation fan to force the air to circulate in the oven.
- Diagram showing the air flow from the premixing chamber round the heating elements to the oven chamher.
- 8. Independent insulated control box.
- 9. Air inlet.
- 10. Ventilator with adjustable outlet of 120 Ø mm.
- 11. Shelf guides.
- 12. Shelves made of AISI304 stainless steel.
- **13.** Flexible silicon door gasket around the entrance of the chamber.
- 14. Epoxy coated outer case.

CONTROL PANEL

- 1. Illuminated mains switch.
- 2. Temperature mode indicator.
- 3. Time mode indicator.
- 4. Display for temperature and time.
- 5. Operating, Status mode.
- 6. Delay time state indicator.
- 7. Push button temperature selector.
- 8. Push button time selector.
- 9. Push button "increase" value or parameter.
- 10. Push button "decrease" value or parameter.
- 11. Push button Stop/Start.
- 12. Set temperature.
- **13**. Set run time: time period from 1 minute to 9 hours 59 minutes, or up to 99.9 hours, once the set temperature value has been reached.
- **14.** Set wait time before starting the run, time period from: 1 to 24 hours.
- **15.** RS-232 Interface output to a computer or for printer.
- **16.** Adjustable safety thermostat that overrides the microprocessor in case of failure, with manual reset and indicator lamp.







216 litres model. Part No. 2002961

720 litres model. Part No. 2003741



STANDARD EQUIPMENT

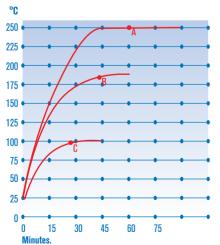
2 Shelves.

MODELS

MUDELS										
Part No.	Voltage	Capacity litres	Heating rate to reach 100 °C, minutes	Recovery time* minutes	Air exchanges per hour	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	Number of shelf positions	Power W	Weight Kg
2002961	230 / 400 three phase 230 single phase	216	16	10	12	60 60 60	87 112 84	6	4000	150
2002971	230 / 400 three phase 230 single phase	288	18	10	11	80 60 60	107 112 84	8	5000	161
	OOR CABINET									
2003721	230 / 400 three phase	400	18	13	6	100 80 50	128 132 74	10	5250	200
2003741	230 / 400 three phase	720	19	13	6	120 100 60	150 152 80	12	6000	264
2003743	380 / 400 three phase	4200	30	13	6	180 175 135	216 231 178	10	11000	1200

Energy saving, three phase units are recommended.

Upon request, large capacity equipment can be manufactured.

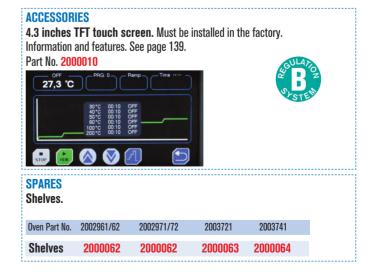


Performance graph of temperature and time.

A. Set at 250 °C: 1 h 6'.

B. Set at 180 °C: 42'.

C. Set at 100 °C: 24'.



^{*}Recovery time, the door was opened for 60 seconds, time taken to recover to the set temperature of 100 $^{\circ}$ C.



High temperature oven "Hightemp"

FAN CONVECTION.

DIGITAL CONTROL AND DISPLAY OF TEMPERATURE AND TIME.

ADJUSTABLE TEMPERATURES FROM 60 °C UP TO 400 °C.

STABILITY: ±1,5 °C, UP TO 300 °C. HOMOGENEITY: ±3 °C, UP TO 300 °C

SET ERROR: ±2 % OF THE WORKING TEMPERATURE.

SAFETY:

STANDARD DIN 12880. ADJUSTABLE OVER TEMPERATURE THERMOSTAT FITTED.

FFATURE

Digital electronic temperature control. Independent control box chamber thermaly insulated.

Shielded heating elements.

Fan circulation motor with thermal cut out, motor operates independently from the heating elements, the motor can be activated during the cooling cycle.

Inner chamber in AISI 310 heat resistant stainless steel with a high tolerance against corrosion and high temperatures.

Fixed position shelf guides.

Ventilation device with adjustable outlet. Epoxy-coated outer casing.

STANDARD EQUIPMENT

2 shelves made of AISI 310 stainless steel.

CONTROL PANEL

Main switch.

Mains indicator lamp.

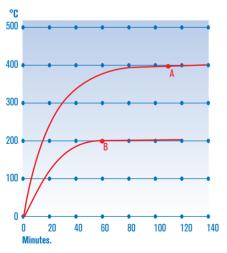
Heater switch.

Heater operation indicator lamp.

Digital electronic temperature control.



Electronic safety thermostat with a K type probe that cuts off power to the heating elements in case of a controller fault. (standard to DIN 12.880 class 2)



Performance graph of temperature and time. A. Set at 400 $^{\circ}$ c: 1h 50'.

B. Set at 200 °c: 1h.

ACCESSORIES. Shelves made of AISI 310 stainless steel. Part No. 2000071

MODEL

Part No.	Voltage	Capacity litres		/ Width terior) (shelf	/ Depth cm	•	t / Width exterior)	/ Depth cm	N° of shelf positions	Power W	Weight Kg
2001406	230 / 400 three phase	80	50	40	40	80	120	61	4	4000	158

ACCESSORIES

Accessories that must be installed in factory.

Part No.



0002 Timer switch 0-120 minutes.



24 hour programmer with continuous on/off cycling up to every 15 minutes.



Vacuum drying oven "Vaciotem-TV"

DIGITAL TEMPERATURE CONTROL, ELECTRONIC VACUUM PRESSURE DISPLAY AND TIMER. CONTROLLABLE TEMPERATURE FROM 35 °C TO 200 °C

STABILITY ± 1 °C, up to 100 °C. Homogeneity ± 3 °C, up to 100 °C. Set error ± 2 °C. Resolution 1 °C.

SAFETY:

OVER TEMPERATURE CUT OUT FITTED IN ACORDANCE WITH THE EN.61010 STANDARD.
DIN 12880. STANDARD ADJUSTABLE SAFETY THERMOSTAT FITTED.

FEATURE

Digital electronic control of: temperature, vacuum pressure and pre-selected programmable timer.

Temperature sensor Pt100

Automatic air inlet at the end of the operation cycle.

Heating element placed evenly around the chamber.

Chamber made of AISI 304 stainless steel.

Trays made of anodised aluminium.

Door with hardened glass window, which sits on to a silicon gasket that absorbs any contractions and expansions that may occur.

Vacuum port with bleed valve.

Air valve at the front.

Vacuum pump connection at the back.

Epoxy covered outer case.

RS-232 Interface output for parameters to a computer or printer.



CONTROL PANEL

- 1. RS232 interface.
- 2. Air inlet.
- 3. Air inlet valve.
- 5. Vacuum pressure indicator lamp.
- **6.** Air inlet valve indicator lamp, end of cycle.
- 7. Running indicator lamp.
- 8. Under vacuum indicator lamp.
- 9. Digital vacuum display in mbar.
- 10. Push button to select vacuum.
- **11.** Push button to select electronic valve at the end of the cycle.
- 12. Push button to increase value.
- 13. Push button to decrease value.
- 14. Push button to STOP/START.
- 15. Indicator of mode temperature.
- 16. Indicator of mode time.
- 17. Indicator of operating.
- **18.** Indicator of mode waiting time.
- 19. Digital display of temperature or time.

- 20. Push button to select temperature.
- 21. Push button to select time.
- 22. Push button to increase value.
- 23. Push button to decrease value.
- **24.** Push button to STOP/START.
- 25. Mains switch.
- **26.** Safety thermostat in operation.

28 5 H040 6 14 29 10 13 11 17 12 18 19 15 80AV 24 16 23 20 21 22 26

BACK

- 27. Air inlet.
- 28. Pump power connection.
- 29. Vacuum connection.
- 30. Adjustable safety thermostat

MODEL

Part No.	Vacuum Max.	Capacity litres	Ø / Depth (interior) cm	Height / Width / Depth (exterior) cm	Shelves	Power W	Weight Kg
4001490	10 ⁻² mm Hg	47	34 52	54 76 70	2	2000	73

Note: To obtain the optimum homogeneity at the set temperature, the load should not surpass more than 70 % of the volume of the chamber.

SPARE PARTS

Shelves. (2) Part No. **2000030**



Vacuum oven "Vaciotem-T"

DIGITAL TEMPERATURE AND TIMER CONTROL. Controllable temperature from 35 °C to 200 °C.

STABILITY ± 1 °C, up to 100 °C. Homogeneity ± 2 °C, up to 100 °C. Set error ± 1 °C. Resolution 1 °C.

SAFETY:

OVER TEMPERATURE CUT OUT FITTED IN ACORDANCE WITH THE EN.61010 STANDARD.

DIN 12880. STANDARD ADJUSTABLE SAFETY THERMOSTAT FITTED.

FEATURE

Digital electronic control of temperature and pre-selected programmable timer

Running time range: from 1 minute to 9hrs 59 min. or 99.9 hrs.

Pre-program start time, (wait time range): 1 hr to 24 hrs

Temperature sensor Pt100

Heating element placed evenly around the chamber.

Chamber made from AISI 304 stainless steel.

Trays made from anodised aluminium.

Door with hardened glass window, which sits on to a silicon gasket that absorbs any contractions and expansions that may occur.

Vacuum port with bleed valve

Air valve at the front

Vacuum pump connection at the back.

Epoxy covered outer case.

RS-232 Interface output of parameters for a computer or printer.



CONTROL PANEL

- 1. RS 232 connector.
- 2. Air inlet.
- 3. Air inlet valve.
- 4. Vacuum gauge.
- **15.** Temperature mode indicator.
- 16. Time mode indicator.
- 17. Operation indicator.
- 18. Waiting time indicator.
- 19. Time and temperature digital display.
- 20. Push button to select temperature.
- 21. Push button to select time.
- 22. Push button to increase value.
- 23. Push button to reduce value.
- 24. Push button to STOP/START.
- 25. Mains switch.
- 26. Safety thermostat indicator lamp.
- **27.** Vacuum pump control switch.

RΔCK

- 28. Vacuum pump power connection.
- 29. Vacuum connection.
- 30. Air inlet.
- 31. Adjustable safety thermostat.



MODEL

Part No.	Vacuum Max.	Capacity litres	Ø / Depth (interior) cm	Height / Width / Depth (exterior) cm	Shelves	Power W	Weight Kg
4001489	10⁻² mm Hg	47	34 52	54 76 70	2	2000	73

Note: To obtain the optimum homogeneity at the set temperature, the load should not surpass more than 70 % of the volume of the chamber.

SPARE PARTS

Shelves. (2)

VACUUM EQUIPMENT ACCESSORIES FOR VACIOTEM-T AND VACIOTEM-TV



Vacuum pump "VACUM-10 Pa"

ROTARY VEIN PUMP WITH ANTI RETURN VALVE PREVENTS OIL FLOW BACK. SUITABLE FOR GENERAL LABORATORY APPLICATIONS. OVER TEMPERATURE MOTOR PROTECTION CUT-OUT AND MAIN ON/OFF SWITCH. RECOMMENDED FOR THE "VACIOTEM T AND TV" AND THE DESICCATOR "VACUO-TEMP".



Heat resistant veins and internal joints Aspiration inlet flange: 16 mm Ø. High oil volume and forced lubrication. Exhaust filter and ballast.

Shock absorber mounted. Free from vibrations Low noise level (62db).

Maximum working temperature 40 °C. Portable, with lifting handle included.

MODEL

Part No.	Pump rate m³/h	Vacuum limit mbar	Height / Width / Depth (exterior) cm	r.p.m.	Power W	Weight Kg
5900621	3,6	0.06	27 35 14	1400	180	11





Heated vacuum desiccator "Vacuo-Temp"

WITH TEMPERATURE THERMIC LIMITER. TIME AND TEMPERATURE DIGITAL ELECTRONIC CONTROL. ADJUSTABLE TEMPERATURE FROM AMBIENT +5 °C TO 170 °C. STABILITY: ±2 °C. RESOLUTION: 1 °C. TIME FROM 1' TO 999', OR CONTINUOUS.

FEATURES

AISI 304 stainless steel outer casing.

Polished aluminium alloy flat surface plate with an effective vacuum seal.

Tempered glass bell jar with silicon gasket seal. Shielded heating element.

Pt 100 temperature probe.

Vacuum pump connection at the back of the unit. Vacuum bleed valve.

CONTROL PANEL

Analogue vacuum gauge.

Overheating alarm.

Visualized parameter indicator.

Push button for the visualized parameter.

Push button to increase the parameter.

Button On-Off.

Main switch.

Digital time & temperature display.

Push button to decrease the parameter.

MODEL

Part No.	Vacuum	Usable volume	Ø heating plate	Heigth / Width /Depth	Power	Weight
	Max	litres	cm	(exterior) cm	W	Kg
4000474	10 ⁻² mm Hg	3	23.5	17 28 34	540	9

Supplied complete with bell jar and silicon seal.



SPARES

Tempered glass bell 15 cm high and 23 cm Ø. Part No. 4000475 Silicon seal, Part No. 4000476



Desiccator for materials

WITH HYDROMETER CONTROL.

APPLICATIONS

Cabinet with protection against humidity and dust for anhydrous, biological and chemical preservation of samples.

FEATURE

Made of robust transparent 12mm thick methacrylate. The door has a silicon seal and magnetic catch.

Volume: 55 Litres.

Dimensions 50 cm high x 38 cm wide x 29 cm deep. Supplied complete with three perforated shelves and a stainless steel AISI 304 tray to hold desiccating material.





BACTERIOLOGICAL INCUBATORS





Bacteriological incubators "Incubat"

NATURAL CONVECTION.

TEMPERATURE THERMOSTAT CONTROL WITH DIGITAL THERMOMETER. ADJUSTABLE TEMPERATURES FROM AMBIENT +5 °C up to 80 °C. Stability: ±0.1 °C, up to 37 °C. Homogeneity: ±0.5 °C, up to 37 °C internal glass door.





FEATURES, CONTROL PANEL, STANDARD AND ACCESSORIES (see pages 138 and 139).

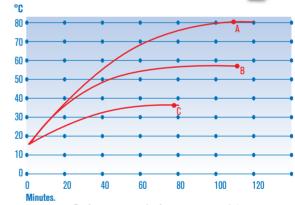
SAFFTV

OVER TEMPERATURE CUT OUT INCORPORATED ACCORDING TO THE EN.61010 STANDARD.

ADJUSTABLE SAFETY THERMOSTAT DIN 12880. FITTED.







STANDARD EQUIPMENT

2 shelves and 4 shelf guides.

MODELS

Part No.	Capacity litres	•	/ Width terior) o	n / Depth cm	•	/ Width terior)	r / Depth cm	Shelves positions	Power W	Weight Kg
2000260	19	30	25	25	51	57	49	5	165	26
2000261	36	40	30	30	60	62	54	7	245	36
2000262	52	33	47	33	53	79	57	5	275	46
2000263	80	50	40	40	70	72	74	8	325	54
2000264	150	50	60	50	70	92	74	8	545	78

SPARES

Shelves and guides.

· ·									
Oven Part No.	2000260	2000261	2000262	2000263	2000264				
Set guides (2 units)	2000011	2000012	2000012	2000013	2000015				
Shelves	2000021	2000022	2000024	2000023	2000025				
Each shelve requires two guides (one set).									

Performance graph of temperature and time.

- A. Set at 80 °C: 1 h 54'.
- B. Set at 56 °C: 1 h 46'.
- C. Set at 37 °C: 1 h 18'.

ACCESSORIES

Accessorie must be factory installed.



Part No.
2000009 24 hour programmer with continuous on/off cycling up to every 15 minutes.



Digital bacteriological incubators "Incudigit-TFT"

NATURAL CONVECTION.

DIGITAL CONTROL AND DISPLAY OF TEMPERATURE AND TIME.

ADJUSTABLE TEMPERATURE FROM AMBIENT +5 °C UP TO 80 °C.

STABILITY: ±0.1 °C, UP TO 37 °C. HOMOGENEITY: ±0.5 °C, UP TO 37 °C.

SET ERROR: ±2% OF THE WORKING TEMPERATURE, RESOLUTION 0.1 °C

INTERNAL TEMPERED GLASS DOOR.

DOUBLE CHAMBER, MINIMUM RISK OF SAMPLE CONTAMINATION.

INSIDE WITHOUT OPENINGS AND WITH ROUNDED CORNERS, EASY TO CLEAN.

FEATURES, CONTROL PANEL AND STANDARDS (see pages 138 and 139).

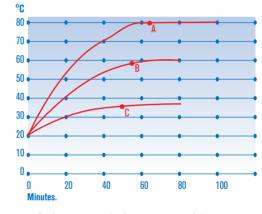
SAFETY:

OVER TEMPERATURE CUT OUT INCORPORATED ACCORDING TO THE EN.61010 STANDARD.

ADJUSTABLE SAFETY THERMOSTAT DIN 12880. FITTED.





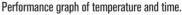


STANDARD EQUIPMENT 2 shelves and 4 shelf guides.

MODELS

Part No.	Capacity litres	•	/ Width terior) (n / Depth cm	•	Height / Width / Depth (exterior) cm		Shelves positions	Power W	Weight Kg
2001261	19	30	25	25	51	57	49	5	170	26
2001262	36	40	30	30	60	62	54	5	225	36
2001263	52	33	47	33	53	79	57	5	275	46
2001264	80	50	40	40	70	72	64	8	300	54
2001265	150	50	60	50	70	92	74	8	525	75

SPARES Shelves and guides. Oven Part No. 2001262 2001263 2001265 2001261 2001264 Guides (2) (Set) 2000011 2000012 2000012 2000013 2000015 **Shelves** 2000021 2000022 2000024 2000023 2000025 Each self requires two guides i.e. one set.



A. Set at 80 °C: 1 h 12'.

B. Set at 56 °C: 54'.

C. Set at 37 °C: 48'.













Incubators for bacteriology and cell culture "Incubig-TFT"

NATURAL CONVECTION.



SET ERROR: ±2% OF THE WORKING TEMPERATURE, RESOLUTION 0.1 °C

INTERNAL TEMPERED GLASS DOOR.









SAFETY:

STANDARD EN.61010 OVER TEMPERATURE CUT OUT FITTED. STANDARD DIN 12880. ADJUSTABLE SAFETY THERMOSTAT FITTED.

Capacities up to 720 litres

FEATURE

Microprocessor control and 4.3 inches TFT touch screen display.

Large surface area heating elements.

Inner chamber made of AISI 304 stainless steel.

Double door, interior door of tempered glass that allows the user to see the contents of the chamber without opening the door.

Adjustable air vent.

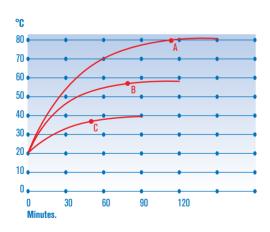
Epoxy covered external case.

STANDARD EQUIPMENT

For Part No. 2000238, 2 shelves and 4 shelf guides. For Part No. 2000239 and 2000240, 2 shelves.

Cie

Model Part No. 2000238.



Performance graph of temperature and time.

- A. Set at 80 °C: 1 h 45'.
- B. Set at 56 °C: 1 h 10'.
- C. Set at 37 °C: 54'.

Note: To obtain the optimum homogeneity at the set temperature, the load should not surpass more than 70 % of the volume of the chamber.



Models Part No. 2000239 and 2000240.

CONTROL PANEL

4.3 inches TFT touch screen models:

- 1. Main switch.
- 2. TFT touch screen:

Visual audible alarm.

Clock calendar.

On / Off programming.

Up to 10 work programs.

Up to 6 segments per program.

Stability time in each segment (from 1 min to 99h).

Alarms and events storage.

Probe error detection.

Self Diagnostics.

Ramps between segments.

Network failure detection and saving.

Over temperature and low temperature alarms and memorization (date, start time, end time and temperature).

Safety thermostat (TS) by software.

Mechanic safety thermostat (TS).

USB and RS -232 output.

Temperature control auto-tuning.

Configurable parameters: Date / time, temperature correction, data collection interval, language (English, Spanish and French), °C / °F selection, over temperature and low temperature limit.

- 3. RS-232 output.
- 4. USB output.
- 5. Security thermostat.



MODELS

MODELO											
Part No.	Туре	Capacity litres	•	/ Widtl nterior)	n / Depth cm	Ŭ	Width terior)		№ of shelf guides	Power W	Weight Kg
2000238	1 door	288	80	60	60	97	91	76	8	570	87
2000239	2 door	400	100	80	50	130	114	75	10	1100	160
2000240	2 door	720	120	100	60	152	134	85	12	1600	225

SPARES Shelves and guides.									
Oven Part No.	2000238	2000239	2000240						
Shelves	2002372	2000063	2000064						
Guides (2) (Set)	2002371	-	-						
Each self requires two guides i.e. one set.									



Incubator for Petri capsules

NATURAL CONVECTION.

MICROPROCESSOR REGULATION AND TEMPERATURE DIGITAL CONTROL. FOR ADJUSTABLE TEMPERATURES FROM AMBIENT +5°C TO 60°C.

STABILITY: ±0,1°C TO 37°C. HOMOGENEITY: ±0,1°C TO 37 °C. SETPOINT ERROR: ±0,1°C. RESOLUTION: 0,1°C.

Small size. Culture visual control. Transportable.

APPLICATIONS

Specially designed for bacteria and fungi cultures in Petri capsules at the same temperature of human body.

FEATURES

Culture surface 320 x 220 mm (Inner height: 20mm)

Culture visual monitoring.

Transparent cover.

Easy access to samples.

Approximate capacity: (single level) (mm)

15 Petri capsules of Ø55.

10 Petri capsules of Ø80.

7 Petri capsules of Ø90.

6 Petri capsules of Ø100.

3 Petri capsules of 120x120.

2 Petri capsules of Ø140.

MODEL

Part No.	Margin T ^a °C	Height / Width / Depth (Exterior) cm				/ Width terior)	n / Depth cm	Power W.	Weight Kg
4002629	Amb +5 to 60	9	45	24	2	32	22	200	3.5





Cooled low temperature incubator "Prebatem-TFT"

FORCED AIR FAN CIRCULATION.

MICROPROCESSOR CONTROLLED WITH DIGITAL DISPLAY

ADJUSTABLE TEMPERATURES FROM 5 °C UP TO 60 °C. RESOLUTION 0.1 °C SEMICONDUCTOR HEATING AND COOLING SYSTEM.

QUIET-STABLE - FREE FROM VIBRATIONS - VERY ACCURATE - LOW POWER CONSUMPTION.

INNER TEMPERED GLASS DOOR.

UP TO 10 PROGRAMMABLE TEMPERATURE PROFILES



PREMIER



SAFETY: CONFORMS TO THE DIN 50011 STANDARD FOR TEMPERATURE STABILITY AND HOMOGENEITY. CONFORMS TO THE DIN 12880.STANDARD ADJUSTABLE SAFETY THERMOSTAT FITTED.

Leading edge technology, Peltier effect. No compressor.

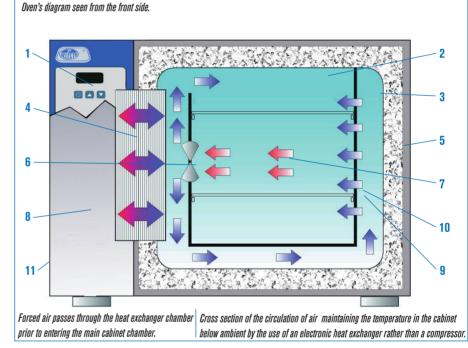
APPLICATIONS

Biotechnology, Bacteriology, Plasma fractionation, Biology, Enzymatic test, Research, Serum studies, metrology, Botany, Phytopharmacy, Cosmetics, Water analysis and Agricultural research, feeding, new techniques for protein crystallization.

		••		_
ГL	ΑІ	u	n	L

- 1.4.3 inches TFT touch screen.
- 2. Inner chamber and elements made of AISI 304 stainless steel.
- 3. Premixing temperature chamber.
- 4. Semiconductor- static radiator for heating and coo-
- 5. Excellent thermal insulation within the chamber.
- 6. Turbo fan to make the air circulate.
- 7. Diagram showing the homogeneous air flow from the premixing chamber of the semiconductor cooling / heating system.
- 8. Independent insulated control box .
- 9. Support rack for trays.
- 10. Shelves of AISI 304 stainless steel.
- 11. Epoxy coated outer case.

PERFORMANCE	Specification						
	at 10 °C	at 37 °C					
Stability	±0.1 °C	±0.1 °C					
Homogeneity	±0.3 °C	±0.2 °C					
Set error	±0.4 °C	±0.2 °C					



CONTROL PANEL

- 1. Main switch.
- 2. TFT touch screen:

Visual audible alarm.

Clock calendar.

Cycle start planning

Single or cyclic On / Off programming.

Up to 10 work programs.

Up to 6 segments per program.

Stability time in each segment (from 1 min to 99h).

Alarms and events storage.

Probe error detection.

Self Diagnostics.

Adjustable ramp between segments.

Network failure detection and saving.

Over temperature and low temperature alarms and me-

morization (date, start time, end time and temperature).

Safety thermostat (TS) by software.

Mechanic safety thermostat (TS).

USB and RS -232 output.

Configurable parameters: Date / time, temperature correction, data collection interval, language (English, Spanish and French), °C / °F selection, over temperature and low temperature limit.

3. USB output.

- 4. Security thermostat.
- 5. Ethernet output para for LAN connection.
- 6. Serial output for pc connection.









STANDARD EQUIPMENT

2 shelves and 4 shelf guides.

MODELS

Part No.	Capacity litres	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	Shelf guides	Power consumption W/hr. at 5 °C at 40 °C	Power W	Weight Kg
2000963	36	40 30 30	60 65 49	7	70 50	310	54
2000964	80	50 40 40	70 75 59	8	75 55	310	73
2000965	150	50 60 50	70 95 68	8	90 60	310	94

SPARES

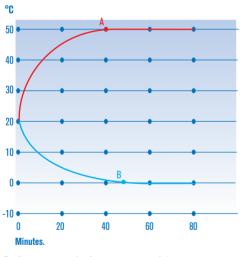
Oven Part No.

Shelves

Shelves and guides.

Guides (2) (Set)

Each self requires two guides i.e. one set.



Note: To obtain the optimum homogeneity at

the set temperature, the

load should not surpass

more than 70 % of the volume of the chamber.

Performance graph of temperature and time.

A. Set at 50 °C: 40'.

B. Set at 0°C: 48'.



2000964

2000013

2000023

2000965

2000015

2000025

2000963

2000012

2000022



Incubation chamber "Boxcult"

FAN CONVECTION.

ADJUSTABLE TEMPERATURES FROM AMBIENT +5 °C UP TO 57 °C. STABILITY: ± 0.25 °C, up to 37 °C homogeneity: ± 1 °C, up to 37 °C. Set error: ± 2 % of the working temperature. Resolution 0.1 °C.

SAFETY:

SAFETY STANDARD EN 61010. OVER TEMPERATURE SAFETY THERMOSTAT FITTED.

FEATURE

Made of transparent methacrylate that allows the user to see inside the incubator during operation. To facilitate the access to the working area the unit has a wide front door, and a removable base made of AISI 304 stainless steel. The fan convection circulation system ensures an even and rapid recovery of temperature.

A 30 mm \emptyset port at the rear can be used to connect power to apparatus inside the chamber.

Supplied as accessories, the removable base allows the Boxcult to be mounted on the "Rotabit" reciprocal / orbital shaker. (described in the stirrer section.)

The metallic top of the chamber includes the heating elements, air circulation fan and temperature control.

CONTROL PANEL

Main switch.

Digital electronic temperature control.



Incubation chamber "Boxcult" Part No. 3000957 with base Part No.3001172 and support rack with two shelves Part No. 1000973. Supplied as accessories.

MODEL

Part No.	Capacity litres	Height / Width / (interior) c			/ Width exterior)	n / Depth cm	Power W	Weight Kg
3000957	110	50 47	47	61	51	51	220	18

Supplied without bottom base, or stainless steel rack and shelves.



Orbital & shaker stirrer "Rotabit" part number 3000974 with incubation chamber "Boxcult"

For an easy handling, all control devices are outside the chamber enclosure

ACCESSORIES

Removable bottom base made of AISI 304 stainless steel, Part No. 3001172

Stainless steel rack with 4 shelves positions, each one separated by 9 cm. Comes complete with 2 removable shelves. Useful dim. 43 cm long and 41 cm wide. Part No. 1000973



CO₂ Incubators for anaerobic cell and tissue cultures "Incubator CO₂"

MICROPROCESSOR CONTROL WITH DIGITAL DISPLAY OF TEMPERATURE AND CO2.

ADJUSTABLE TEMPERATURES FROM AMBIENT +5 °C TO 50 °C

STABILITY: ±0.2 °C. UP TO 37 °C. HOMOGENEITY: ±0.5 °C. UP TO 37 °C. RESOLUTION: 0.1 °C.

ALARM RANGE: FROM AMBIENT+5 °C TO 50 °C. RESOLUTION: 0.1 °C. CO₂ RANGE: FROM 0 TO 20%. STABILITY: ±0.3%. RESOLUTION: 0.1%



SAFETY:

STANDARD DIN 12880. DOUBLE INDEPENDENT OVER TEMPERATURE SAFETY THERMOSTAT.

CO2 DEVIATION FROM SET VALUE. OPEN DOOR INDICATOR, ELECTRICAL FAULT INDICATOR. LOW CO2 PRESSURE.

Infrared CO2 sensor

Chamber sterilization function

FEATURE

External case of steel coated with epoxy with insulated chamber.

The chamber is made of stainless steel with removable shelf supports and easy clean system.

Two doors; one interior of tempered glass with silicon gasket and a heated external steel door with magnetic seal to prevent condensation on the glass door.

Smooth door action, to prevent jolts or vibrations disturbing the contents of the incubator.

The CO_2 input is by a metal tube of 6 mm Ø x 4 mm at the back of the unit.

RS-232 Interface output for a computer or printer.

CONTROL SYSTEM

Digital electronic control of temperature and CO_2 , by a single multilevel control button and LCD screen, that controls all functions within the chamber.

HUMIDITY CONTROL

The humidity level within the chamber is at a constant 98% RH level, that is produced directly by water evaporation previously introduced at the bottom of the chamber.





CONTROL PANEL

- 1. Visual alarm indicator.
- 2. LCD display of all parameters.
- 3. Button single control of multilevel functions.
- 4. Printer (Optional)
- 5. Main On switch.

MODEL

Part No.	Capacity litres	Height/Width/Depth (interior) cm	Height/Width/Depth (exterior) cm	Shelf guide positions	Power W	Weight Kg
4002628	150	65 50 46	95 65 73	9	1100*	110

Comes with two shelves.

* 2025 W In sterilization mode.

ACCESSORIES

Printer: temperature, CO₂, time and status.

(Needs to be factory fitted.)

Part No. 4001676



Fyrite CO₂ analyser.

Monitor for checking the CO_2 % concentration. The unit has a graduated scale of 0 to 20 %. Reagent valid for 300 analysis. Should not be used with explosive gasses.

Part No. 4000632

Reagent flask 64 ml. Part No. 4000635

ADDITIONAL Shelves stainless steel. Part No. 1001675



PRECISE COOLED INCUBATORS HOTCOLD

HOTCOLD S HOTCOLD UC HOTCOLD F-J CONTROLLABLE TEMPERATURES FROM +5 °C TO 65 °C CONTROLLABLE TEMPERATURES FROM -10 °C TO 65 °C CONTROLLABLE TEMPERATURES FROM 6 °C TO 20 °C (WITH HUMIDITY)



SAFETY:

DIN STANDARD 12880.2

SAFETY THERMOSTAT FITTED THAT DISCONNECTS POWER TO THE HEATER IF THE CONTROLLER FAILS. MANUAL RESET.

APPLICATIONS

Enzymatic tests, serum and plasma fractions BOD tests, cosmetics, botany, pharmacy, industry, agriculture, bacteriology, biotechnology and research,



Refrigerated cabinet "Hotcold S"

FORCED AIR CIRCULATION. DIGITAL ELECTRONIC CONTROL OF TEMPERATURE AND TIME, ADJUSTABLE FROM +5 °C TO 65 °C. STABILITY ± 0.1 °C, UP TO 20 °C. HOMOGENEITY ± 0.5 °C, UP TO 20 °C. SET ERROR ±2 °C. RESOLUTION 0.1 °C.



FEATURES

Epoxy coated external case. Interior AISI304 stainless steel. Door with double glazed glass to maintain internal temperature. Illumination switch with internal fluorescent light. Side port for the introduction of external cables probes and tubes etc.

Cooling gas R134a.

4 wheels with brake.

CONTROL SYSTEM

Electronic digital controller for temperature and time. Timer and off programmable from 1' to 99 hrs 59'.

Programmable defrost.

High and low temperature alarm.

Temperature calibration.

CONTROL PANEL

- 1. Display for temperature / time.
- 2. Temperature indicator.
- 3. Time indicator.
- 4. Alarm indicator.
- 5. Heater functioning indicator.
- 6. Push button for set temperature.
- 7. Push button for set time.
- 8. Mains switch.
- 9. Push button to increase value.
- 10. Push button to decrease value.
- 11. Push button to confirm value.

STANDARD EQUIPMENT

2 shelves and 4 shelf guides.

MODEL

MODEL					South Toda and House and the Total and Formation						
HOTCOLD	Part No.	Range	Capacity	Height / Width / Depth	Height / Width / Depth	Number of	Motor	Power	Weight		
		ე°	litres	(interior) cm	(exterior) cm	shelves	HP	W	Kg		
S	2101618	+5 +65	160	65 50 43	128 63 63	10	3/8	400	70		

Guides (2) (Set).

Shelves.

SPARES

Part No.

1001619

1001620

10

11







Precise refrigerated cabinet "Hotcold UC"



FORCED AIR CIRCULATION.

DIGITAL ELECTRONIC CONTROL OF TEMPERATURE AND TIME. HOTCOLD UC ADJUSTABLE TEMPERATURE FROM -10 °C TO 65 °C.

SAFETY:

DIN STANDARD 12880.2 SAFETY THERMOSTAT FITTED THAT DISCONNECTS POWER TO THE HEATER IF THE CONTROLLER FAILS. MANUAL RESET.

FEATURES

Exterior case, door and interior made from AISI 304 stainless steel.

Steel shelves, PVC laminated.

Door with lock and easy to replace gasket, with automatic return mechanism and manual lockout.

Hermetically sealed compressor with anti vibration mounts with fan forced evaporation unit with ventilated condenser.

Homogeneous internal temperature by forced circulating air.

Supports for shelves adjustable in height

Integrated interior light.

Adjustable front footrest.

Refrigerant R404a.

Side hole for entry and exit connections.

Two safety power sockets.

Two external ports protected by magnetothermic for external connections.

Download records in USB memory.

Automatic defrosting function.

Indoor air circulation for a correct homogenization of the temperature.

Graphic visualization of the program.

Supplied with wheels.

CONTROL PANEL

Model with 4.3 inches TFT touch screen.

Main switch.

TFT touch screen:

Visual alarm .

Clock calendar.

Single or cyclic On / Off programming.

Up to 10 work programs.

Up to 6 segments per program.

Stability time in each segment (from 1 min to 99h).

Alarms and events storage.

Probe error detection.

Self Diagnostics.

Network failure detection and saving.

Over temperature and low temperature alarms and memorization (date, start time,

end time and temperature).

Safety thermostat (TS) by software.

Mechanic safety thermostat (TS).

Temperature control auto-tuning.

Configurable parameters: Date / time, temperature correction , data collection interval, language (English, Spanish and French) ,

°C / °F selection, over temperature and low temperature limit.







MODELS

UC	2101515	-10 +65	670	154 61 63	213 73 84	Metallic	3	520	120
HOTCOLD	Part No.	Range °C	Capacity litres	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	Door	Included shelves	Power W	Weight Kg
MINDEF9									

They are supplied with 3 steel trays, plasticized in PVC.

NOTE: the HOTCOLD has internal power sockets that allows the use of a non-heating mixer shaker or stirrer or equipment for BOD assays to be powered internally. Alternatively power cables can be fed through external ports at each side of the unit. See chapter Mixers stirrers and shakers.



Tray + 2 guides. Part No. 1001858





Refrigerated ovens with fixed humidity Hotcold Humidity F & J



WITH FORCED AIR CIRCULATION DIGITAL TEMPERATURE ELECTRONIC REGULATION FOR ADJUSTABLE TEMPERATURES FROM 6°C TO 20°C.

SAFETY:

DIN 12880 STANDARDS. ADJUSTABLE SAFETY THERMOSTAT INCORPORATED WHICH DISCONNECTS HEATING IN CASE OF THE HEATER'S REGULATOR FAILURE, WITH MANUAL RESET.

APPLICATIONS Refrigerated oven for conservation and products storage which require temperatures

FEATURES

Colour TFT touch screen.

Exterior case, door and interior enclosure covered in stainless steel AISI 304.

Door with lock and easy to replace gasket, with automatic return mechanism and manual lockout.Resistant to chemical agents.

Tropicalized hermetic compressor group.

below ambient and a controlled fixed humidity.

Automatic defrosting with water evaporation due to tempered electric defrost.

Supports for shelves adjustable in height.

Front foot supports adjustable in level.

Integrated interior light.

Entry port for external probes introduction.

Supplied with wheels.

HOTCOLD F	
	PRECISION
6 °C:	
8 °C:	. 31% HUMIDITY ±3 %.
12 °C:	. 30% HUMIDITY ±3 %.
16 °C:	. 29 % HUMIDITY ±3 %.
20 °C:	. 26 % HUMIDITY ±3 %.

HOTCOLD J	
	ACCURACY
6 °C:	60% HUMIDITY ±3 %.
8 °C:	57% HUMIDITY ±3 %.
12 °C:	
16 °C:	
20 ºC·	

CONTROL PANEL

Model with 4.3 inches TFT touch screen.

Main switch.

Visual alarm.

Probe error detection.

Self Diagnostics.

Over humidity alarm.

Safety thermostat (TS) by software and mechanical.

ACCURACY - TEMPERATURE TABLE:







MODE

HOTCOL	_	Range °C	Humidity Range	Capacity litres	Height / V (inte	Vidth / rior) cı		Height / ' (ext	Width erior)		Trays number	Power W	Weight Kg	SPARES Tray + 2 quides.	
F	2101517	6 +20	26% a 33%	600	138	62	68	210	73	84	3	1350	125	Part No. 1001858	
J	2101518	6 +20	47% a 60%	600	138	62	68	210	73	84	3	1350	125		

Supplied with 3 steel trays, PVC laminated.

ACCESSORIES

Data logger with digital screen "View 2"

Working temperature from -25°C to +85 °C. Humidity 0-100% RH

IP65 protection.

Capacity up to 30000 logs.

Two programmable alarms.

Log intervals of 1 second up to 10 days.

Data download option on standby or operating.

Display mode in °C or °F.

Part No. 2101508



OPTIONAL COMPLEMENTS

ETHERNET thermometer module

Temperature Record, with control of programmable warnings and graphic representation. It must be installed at the factory.

ETHERNET connection is needed at the place of use.

Part No. 2101627

Data logger with digital display

PT100 type probe with two meters of cable. Measuring range of -100 °C. at +200 ° C. With GSM module for data transmission.

Part No. 2101520

NEW

Muffle Furnaces



Electric Muffle Furnaces "Select-Horn-TFT"

TEMPERATURE CONTROLLABLE UP TO 1150 °C.

SET ACCURACY: ±1 °C OF THE SET VALUE. RESOLUTION: 1 DIGIT.

DIGITAL ELECTRONIC CONTROLLER FOR TEMPERATURE AND TIME WITH TFT COLOUR TOUCH SCREEN.

UP TO 10 PROGRAMABLE TEMPERATURE PROFILES.



SAFETY:

PROBE BREAK DISCONNECTS THE POWER TO THE FURNACE AUTOMATICALLY. MICROSWITCH THAT DISCONNECTS THE POWER OF THE HEATER ELEMENTS WHEN THE DOOR IS OPEN. FLIP DOOR THAT CAN ALSO BE USED AS A SUPPORT TRAY AND USER PROTECTED FROM THE HOT INTERNAL SURFACE.

APPLICATIONS

Incineration processes, drying, degradation, re-heating, thermal treatments etc.

FEATURES

Interior chamber constructed from high quality lightweight refractory bricks, with a high alumina content with no asbestos or iron oxide.

Evenly distributed exceptional long life heating elements, annealed frequently at a high fusion point. Excellent thermal insulation made from Ceramic fibre of low density and thermal conductivity.

Low consumption with maximum performance.

Rapid temperature recovery after the door has been

Flap door with easy to change components.

Support tray made from special steel used as a base to support assay material.

USB output.



General

Main switch.

TFT touch screen 4.3".

Clock calendar.

Two working modes, normal or programming.

SPA - FRE - ENG menu.

Self-test on starting.

Temperature control auto-tuning.

°C/°F selection.

Type K probe.

Normal mode

Set point temperature selection

Up ramp.

Stability time from 1 min to 99h or continuous.

Programming mode

10 profiles capacity.

6 segments per profile.

Stability time in each segment from 1 min to 99h (or continuous in the last segment)

Up ramps between segments.

Daily - weekly On / Off programming.





Temperature ramps graph

Alarms

Network failure detection alarm.

Probe error detection alarm.

Over temperature and low temperature alarms.

Visual audible warning alarms.

Up to 100 alarms storage (date, start time, end time and alarm type).

Datalogging

Datalogging memory up to 15000 data. Logging interval from 5 seconds to 30 min.

Data download via USB.



Image of the flap door system in operation.

Part No.	Capacity litres	Height / Width / Width (interior) cm	Height / Width / Depth (exterior) cm	Power W	Weight Kg
2000376	3.6	10 15 24	52 54 56	2500	54
2000377	9	15 20 30	58 59 65	3000	70

Supplied complete with support tray, made from annealed steel.

SPARES

Support tray made from special steel used as a base to support assay material.

Code **0203681** for furnace Part No. 2000376 Code 0203692 for furnace Part No. 2000377



ACCESSORIES

Adaptable only for "Select-Horn-TFT" furnaces Part No. 2000376 and 2000377 All accessories need to be fitted in the factory prior to delivery.





Exterior exhaust tube.

Located at the furnace back with a ventilator motor to extract gases and vapours. With an 80 mm Ø hat adapter.

Gases and Vapours can be extracted outside through the connecting tube.

Power consumption: 30 W.

Part No. 2001477

COMPLEMENTS



Gloves Thermal "Keylar 800"

Conforms to EN 388, EN407 and EN420 standards. For use with temperatures up to 800 °C, Made from seamless terry knit, with double face fibres, high level of protection against heat and flame.

Length 36 cm, universal fit.

Part No. 5000042



Crucible tongs.

With thermally protected plastic coated handles. With bow, curved tips.

Part No. 1001590 Total length 220 mm. Part No. 1001591 Total length 330 mm.



Crucibles made of zirconium Zr. Crucibles made of pure nickel Ni. Crucibles made of glazed porcelain. Crucibles made of stainless steel. Crucibles made of quartz. (See page 181).



Electric muffle furnaces "R-3 L" and "R-8 L" 1100 °C

FOR TEMPERATURES ADJUSTABLE FROM AMBIENT +5°C. UP TO 1100 °C. MICROPROCESSOR CONTROL WITH TFT TOUCH SCREEN.

PRECISION ±2 °C OF THE SET VALUE.

RESOLUTION: 1 DIGIT.





FEATURES

Metal external case with vent at the back of the unit. Interior and door made of ceramic fibre, resistant and durable (No asbestos). Heater situated at the side and bottom of the chamber.

USB output.



General

Main switch.

TFT touch screen 4.3".

Clock calendar.

Two working modes, normal or programming.

SPA - FRE - ENG menu.

Self-test on starting.

Temperature control auto-tuning.

°C/°F selection.

Type K probe.

Normal mode

Set point temperature selection

Up ramp.

Stability time from 1 min to 99h or continuous.

Programming mode

10 profiles capacity.

6 segments per profile.

Stability time in each segment from 1 min to 99h (or continuous in the last segment)

Up ramps between segments.

Daily - weekly On / Off programming.



Alarms

Network failure detection alarm.

Probe error detection alarm.

Over temperature and low temperature alarms.

Visual audible warning alarms.

Up to 100 alarms storage (date, start time, end time and alarm type).

Datalogging

Datalogging memory up to 15000 data. Logging interval from 5 seconds to 30 min.

Data download via USB.

MODEL	Part No.	Capacity litres	Height / Width / Depht H		Height / Width / Depht (exterior) cm			Power W	Weight Kg		
N-3	2000368	3	11.5	12.5 2	0	43	34	47	1700	18	
N-8	2000369	8	13	20 30)	51	44	56	1800	28	
Supplied co	Supplied complete with a refractory ceramic tray as a base and support for material to be assayed.										



Temperature ramps graph

ACCESSORIES

Must be factory installed.

Exterior extractor tube.

Located at the furnace back with a ventilator motor to extract gases and va-

Gases and Vapours can be extracted outside through the connecting tube. Power: 20 W.





Electric muffle furnace "N-30 L", "N-40 L" and "N-80 L" 1100 to 1300 °C TEMPERATURE ADJUSTABLE UP TO 1300 °C FOR MODEL "N-30 L", 1200 °C FOR MODEL "N-40 L" AND 1100 °C FOR MODEL N-80 L.



ELECTRONIC DIGITAL TEMPERATURE CONTROL.

PRECISION ±2 °C OF THE SET VALUE.

RESOLUTION: 1 DIGIT.

FEATURES

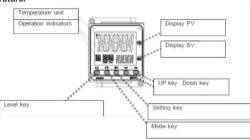
Metal external case with vent at the back of the unit. Interior and door made from ceramic fibre, resistant and durable (No asbestos). Heater situated at the side and bottom of the chamber.

CONTROL PANEL

Illuminated mains On/Off switch. Temperature control with digital display of both the set and actual temperature.

Programmable in steps of 1 °C.







MODEL	Part No.	Capacity litres	Height / Width / Depht (interior) cm	Height / Width / Depht (exterior) cm	Power W	Voltage V	Weight Kg
N-30 L	2200853	30	29 20 44	87 64 84	4600	230	120
N-40 L	2200857	40	29 29 42	87,5 65 83,5	3400	230	105
N-80 L	2200855	80	48 40 40	157 94 98	7500	400 / 3 N	170

Supplied complete with a refractory ceramic tray as a base and support for material to be assayed.

Electric muffle furnaces "N-3 L", "N-8 L", "N-13 L", "N-22 L", "N-39 L' 1100 °C

FOR TEMPERATURES ADJUSTABLE UP TO 1100 °C. **ELECTRONIC DIGITAL TEMPERATURE CONTROL.** PRECISION ±2 °C OF THE SET VALUE. RESOLUTION: 1 DIGIT.

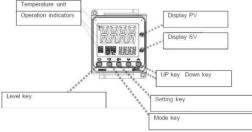
FEATURES

Metal external case. Interior and door made from ceramic fibre, resistant and durable (No asbestos). Heater situated at the side and bottom of the chamber.

CONTROL PANEL

Illuminated mains On/Off switch. Temperature control with digital display of both the set and actual temperature. Programmable in steps of 1 °C. Fitted with a type K probe.







ACCESSORIES

Must be factory installed.

Exterior extractor tube.

Located at the furnace back with a ventilator motor to extract gases and vapours. Gases and Vapours can be extracted outside through the connecting tube. Power: 20 W. Código 2200858



				i			
MODELO	Part No.	Capacity litres	Height / Width / Depht (interior) cm	Height / Width / Depht (exterior) cm	Power W	Voltage V	Weight Kg
N-3 L	2200850	3	11,5 12,5 20°	43 34 47	1700	230	18
N-8 L	2200851	8,2	14 20 30	50 44 53	1800	220	33
N-13 L	2200852	13	18 22,5 36	55 50 70	1800	230	38
N-22 L	2200854	22	15,5 27,5 50	61 60 89	3000	230	58
N-39 L	2200856	39	24 31,5 49,5	74 65 90	6000	400 / 3 N	75

Supplied complete with a refractory ceramic tray as a base and support for material to be assayed.



Clamps and Stands Spatulas, scoops and vessels	pages pages	165 to 176 177 to 181
Stainless steel. Series Labor-Hospital + Racks, baskets and storage for tubes,	pages	182 to 183
pipettes and flasks Flakes ice maker	pages page	184 to 193 190
Burners and hot air gun Diverse laboratory instruments	pages pages	194 to 197 198 to 211



Clamps and Stands

CLAMPS MADE OF LIGHT WEIGHT "DURAL CROM" ALLOY EXTRAORDINARILY STRONG.
TONGS MADE OF AISI 304 STAINLESS STEEL.
RETORT STANDS - LABORATORY JACKS AND SCAFFOLDING.







BOSSHEAD

Chrome plated. For \emptyset from 5 to 17 mm.

Part No. 1000069



BOSSHEAD "MINI"

Chrome plated. For Ø from 5 to 12 mm. Part No. 1001460

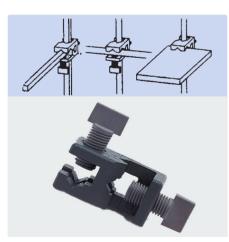


BOSSHEAD "SUNTECH"

For retort bars of 5 to 22 mm \emptyset . With screw clamp joints. Ideal for supporting overhead

stirrers.

Part No. **5900600**



BOSSHEAD "PASS"

Original Phywe.

For joining and clamping multipurpose, round or rectangular rods up to $12\ \text{mm}$ across.

For cross T and parallel arrangements.

Part No. **7204055**



BOSSHEAD XL

Maximum opening. For rods 13 to 32 mm \emptyset . Part No. **5057022**



BOSSHEAD "MAXIM"

For large diameters.

Chrome plated with one opening to hold rods up to 30 mm \emptyset . Second opening up to 20 mm \emptyset .

Part No. 7000408



BOSSHEAD "GIROFIX"

Conforms to DIN standard 12895-E16.

Chrome plated with swivel toothed clamp for holding rods at any angle. For rod \emptyset from 5 to 15mm.

Part No. 7000531



BOSSHEAD "MEDI"

For Ø from 5 to 20 mm.

Part No. 1001461 Chrome plated. Part No. 1001462 Anodised black.



OIRIGINAL BOSSHEAD "TREVINGE"

Made of chrome plated "Dural" alloy.

Due to its strength, it is suitable for multilevel and three dimension constructions.

Part No. **7008133** Part No. **7008253** For \emptyset of 9 to 13 mm. For \emptyset of 19 to 25 mm.



BOSSHEAD FOR THERMOMETERS

Thermometer support for water and oil baths with locking screw (up to 40 mm). Thermometer rod diameters up to 7mm Ø.

Part No. 6000896



THERMOMETER CLAMP

Swivel bosshead and press lock, made of AISI 304 stainless steel. For Ø from 6-15 mm. Part No. 6000036

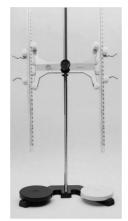


THERMOMETER CLAMP

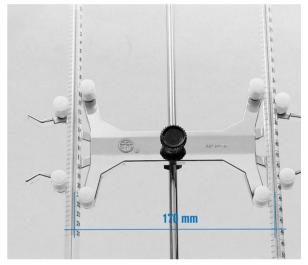
Hook at one end for a thermometer. Chrome plated.

Part No. 1000037





Model burette stand Part no. 6000117 and double burette part no. 7000181



BURETTE STAND

With AISI 304 stainless steel rod of 10 mm Ø x 600 mm high. Weight 2 Kg. Made specifically for the "DUPLEX" burette clamp with two plates at the base, black and white. Part No. 6000117

DOUBLE BURETTE CLAMP "DUPLEX"

Self adjusting clamp for 2 burettes, with central bosshead screw. Made of Chrome plated metal with PVC coated jaws. Enables complete visibility of the burette scale while being held. Part No. 7000181



BURETTE CLAMP "TRIPS"

Made of chrome plated metal for \emptyset from 4 to 20 mm.

Part No. 7000521



BOSSHEAD BURETTE AND TUBE CLAMP "TRIPS"

Made of chrome plated metal for \emptyset from 4 to 20 mm. Part No. 7005211



SPRING CLAMP FOR BURETTES AND THERMOMETERS "AUTOMATIC"

Made of chrome plated metal with spring clamp jaw. For Ø from 0 to 25 mm.

Designed for test tubes.

Part No. 7000025



BOSSHEAD WITH "AUTOMATIC" CLAMP FOR BU-RETTES AND THERMOMETERS

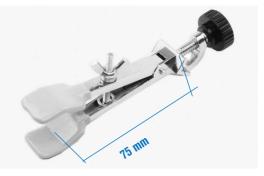
Made of chrome plated metal with spring clamp jaw. For Ø from 0 to 25 mm.



CLAMP FOR BURETTES AND TUBES

Made of chrome plated metal with two prong jaws coated with PVC. For 0 from 7 to 25 mm.

Part No. 7000130



BOSSHEAD WITH BURETTE AND TUBE CLAMP

Made of chrome plated metal with PVC coated double prong jaws. For \emptyset from 7 to 25 mm.

Part No. 7000140



CLAMP FOR BURETTES AND CONDENSERS

Made of chrome plated metal with PVC coated jaws. For \emptyset from 12 to 45 mm.

Part No. 7000131



SWIVEL CLAMP BOSSHEAD FOR CONDENSERS

Swivel clamp with double PVC lined jaws For \emptyset from 12 to 45 mm. Part No. 7000141



CLAMP "TRIPLEX"

Three pronged PVC coated clamp made of chrome plated metal. For \emptyset from 0 to 35 mm.

Part No. **7000160**



CLAMP "TRIPLEX"

Three pronged PVC coated clamp made of chrome plated metal.

For Ø from 0 to 60 mm.

Part No. 7000161



UNIVERSAL CLAMP "MINIMAX"

Made of Dur-aluminium with cork lined jaws.

For Ø from 0 to 80 mm.



SWIVEL UNIVERSAL CLAMP "MINIMAX"

For Ø from 0 to 80 mm. Part No. **7000404**



UNIVERSAL CLAMPS"GIROMAX" WITH METAL ROTATION

With cork lined jaws. With a hinge joint of 180° rotation angle. For \emptyset from 0 to 80 mm. Part No. 7004031



BEAKER CLAMP "MAXIM"

Made of chrome plated metal with clamp end covered with stabilized glass fibre. For Ø from 80 to 180 mm.

Part No. 7000406



CLAMP "MEDIMAX"

With chain and spring clamp made of AISI 304 stainless steel. For Ø from 90 to 145 mm.

Part No. 7000405



CONICAL JOINT CLIPS

Made from AISI 304 stainless steel. Part No.

i di tito.		
1000716	joint	7.5/16
1001019	"	10/19
1001221	66	12/21
1001423	"	14/23
1001926	"	19/26
1002429	66	24/29
1002932	"	29/32
1004540	"	45/40

GROUND ROUND JOINT CLIPS

Made of chromed steel.

Part No.

1040913	joint	round	13 mm.
1040919	"	"	19 mm.
1040929	66	"	29 mm.
1040935	"	"	35 mm.



CONICAL JOINT CLIPS

Made of PMP (polymethyl pentane).

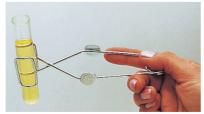
Part No.	joint	colour
1001095	10/19	black
1001096	14/23	yellow
1001097	19/26	blue
1001098	24/29	green
1001099	29/32	red
1001100	34/35	orange
1001101	45/40	hrnwn



GROUND ROUND JOINT CLIPS

Made of AISI 304 stainless steel with ratchet fixed pin.

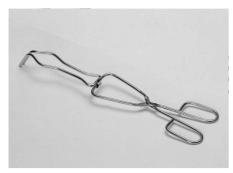
Part No. 1001720 round joint 19 mm. Part No. 1000285 Part No. 1001464 round joint 29 mm. Part No. 1001465 round joint 35 mm.



TEST TUBE TONGS

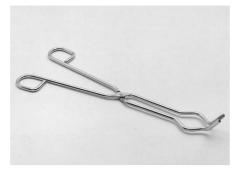
Made of nickel plated steel. For tubes up to 30 mm Ø. Total length 145 mm. Part No. 1000285





CRUCIBLE TONGS

Original "J.P.Selecta" design with opposite equilibrium. Made of Electro-bright finished AISI 304 stainless steel. Part No. 1001330 Total length 400 mm.



CRUCIBLE TONGS

With bow, curved tips and flat hinge.

Electro-bright AISI 304 stainless steel finish.
Part No. 1010420 Total length 200 mm.

Part No. 1010430 Total length 300 mm.
Part No. 1010440 Total length 400 mm.
Part No. 1010450 Total length 500 mm.



CRUCIBLE TONGS

With bow, curved tips.

With thermally protected plastic coated handles.

Part No. 1001590 Total length 220 mm.
Part No. 1001591 Total length 330 mm.



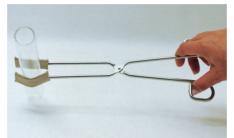
STERILIZATION TONGS

Made of AISI 304 electro-bright finished stainless steel.

Total length 200 mm.

Part No. 1002801 Straight end. Part No. 1002802 Curved end.

 $\label{thm:continuous} \textbf{Used for bandages, syringes, instruments, test tubes etc.}$

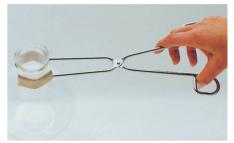


TONGS FOR FLASKS AND TUBES

Electro-bright finished AISI 304 stainless steel. For diameters from 15 to 60 mm.

Tong tips covered with stabilized glass fibre.

Part No. 1028130 Total length 300 mm.
Part No. 1028140 Total length 400 mm.



TONGS FOR FLASKS AND TEST TUBES

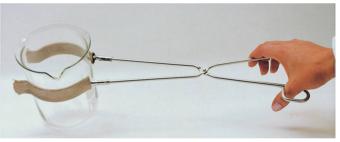
Sterilization Tongs. Made of AISI 304 electro-bright finished stainless steel. For diameters from 25 to 60 mm. Tong ends covered with stabilized glass fibre.

Part No. 1028230 Total length 300 mm.
Part No. 1028240 Total length 400 mm.



DISH TONGS

Made of eletro-bright finished AISI 304 stainless steel. Part No. 1000283 Total length 250 mm.



BEAKER TONGS

Made of AISI 304 electro-bright finished stainless steel. Made for beakers from 150 to 1000 ml.

For diameters from 60 to 100 mm.

Tong tips covered with stabilised glass fibre.

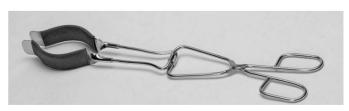
Part No. 1000284 Total length 450 mm.



BEAKER TONGS "PROTECVAS"

Clamps beakers up to 2000 ml. With a span from 50 to 120 mm Ø. Jaws protected with rubber pads. Total length 300 mm.

Part No. 7000532



BEAKER TONGS

Original "J.P.Selecta" design with opposite equilibrium. Made of Electrobright finished AISI 304 stainless steel.

For beakers from 150 to 1000 ml.

For diameters from 60 to 100 mm.

Tong ends covered with a glass fibre sleeve.

Part No. 1001331 Total length 450 mm.



LABORATORY SCISSORS

AISI 410 stainless steel.

1 Scissors universal "Multi purpose" with a serrated/ dented blade. Suitable for cutting hard plastic, cardboard and soft wire etc. Total length 180 mm.

Cut length 50 mm. Part No. 1001468

2 Long laboratory scissors.

Part No. 1001469 Cut length 100 mm. Total length 250 mm.

3 Straight multi purpose scissors. General use and bandage dressing. Cut length 50 mm. Total length 140 mm. Part No. 1001470

4 Curved multi purpose scissors. General use and bandage dressing. Part No. 1000806 Cut length 40 mm. Total length 145 mm.

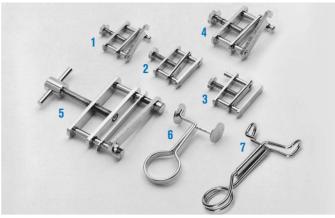
5 Dissection scissors

Part No. 1000807 Cut length 35 mm. Total length 125 mm.

6 Small dissection scissors

Part No. 1001471 Cut length 25 mm. Total length 110 mm.

7 Flat serrated scissors ideal for laminates, negatives, chromatography, etc. Flat Length 40 mm. Total length 160 mm. Part No. 1001472



HOFFMAN CLAMPS / MOHR CLAMPS

1 Hoffman clip dual, open-close.

Part No. 1000063 Maximum opening: 15 mm.

2 Hoffman clip closed

Part No. 1000662 Maximum opening: 15 mm.

3 Hoffman clip open

Maximum opening: 15 mm. Part No. 1000661

4 Hoffman clip dual medium, open-closed. Part No. 1001467 Maximum opening: 25 mm.

5 Hoffman clip large, open and close.

Part No. 1000064 Maximum opening: 30 mm.

6 Mohr clamp, stainless steel AISI 304 electro bright finish.

Part No. 1000067 Total length: 70 mm.

7 Mohr clamp, nickel wire.

Part No. 1001337 Total length: 70 mm.



FORCEPS FOR LIFTING SLIDES

Made of AISI 304 stainless steel, with flat jaws. Length: 105 mm. Suitable for lifting, slides, watch glass

or small flat object. Part No. 1000105



DISSECTING FORCEPS

1 Dissecting Straight forceps round tips, made of AISI304 stainless steel. Part No. 1000580 Total length 140 mm.

2 Dissecting Straight forceps fine tips, made of AlSl304 stainless steel. Total length 140 mm. Part No. 1000801

3 Dissecting curved forceps round tips, made of AISI 304 stainless steel. Part No. 1000865 Total length 140 mm.

4 Dissecting curved forceps fine tips, made of AISI304 stainless steel.

Total length 140 mm. Part No. 1000864

MAXIMUM OPENING

5 Sprung straight forceps with curved fine tips, made of AISI 304 stainless steel. Total length 160 mm. Part No. 1001190

6 Sprung straight forceps with fine tips, made of AISI 304 stainless steel. Part No. 1001189 Total length 160 mm.

7 Curved point, AISI 304 stainless steel forceps. Part No. 6000128 Total length 160 mm.

8 Fine point, AISI 304 stainless steel forceps. Part No. 1001191 Total length 120 mm.



HEAT AND SPILLS PROTECTION PAD GLOVE

Made of flexible silicon that fits all hand sizes. Part No. 1001255



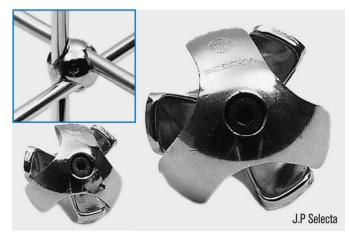


BOSSHEAD "P" TYPE

Nickel alloy bosshead.
For fixing perpendicular structures.
For 12 mm Ø bars.
Part No. 1000011

ACCESSORY





ORIGINAL BOSSHEAD "TREVINGE"

Made of chrome plated "Dural" alloy.

Due to its strength, suitable for multilevel and three dimension constructions.

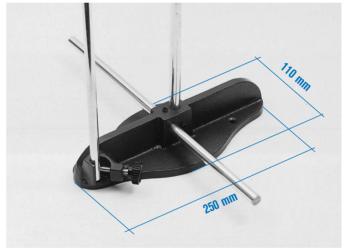
Part No. 7008133 For Ø of 9 to 13 mm. Part No. 7008253 For Ø of 19 to 25 mm.



RODS AND TUBES

12 mm Ø bars and rods. To be used with the "TREVIN" and "P" type bossheads.

Dur-alumin	ium rods.	AISI 304 stainless steel tube.		
Part No.	Length	Part No.	Length	
6000026	60 mm.	6000016	60 mm.	
6000220	200 mm.	6000120	200 mm.	
6000235	350 mm.	6000135	350 mm.	
6000270	700 mm.	6000170	700 mm.	
6002100	1000 mm.	6001100	1000 mm.	
6002150	1500 mm.	6001150	1500 mm.	
6002200	2000 mm.	6001200	2000 mm.	
6002300	3000 mm.	6001300 (rod)	3000 mm.	



UNIVERSAL MOUNTING BASE

Bench top multiple rod support.

Suitable for mounting and supporting vertical and horizontal bars.

Part No. 1000050



MOUNTING FOOT SUPPORT FOR RODS

For rod Ø of 12 mm.

Part No. 1000101 Rod position horizontal.
Part No. 1000049 Rod position vertical.



SIMULTANEOUS FOOT SUPPORT

For rod Ø of 12 mm.

Simultaneous positions, horizontal and vertical. Part No. 1001102



BENCH CLAMP "PASS"

Original Phywe. Clamps to the bench while holding from 4 to 12 mm diameter rod. Bench top width up to 40mm. Part No. 1394855

SUPPORT STAND KITS



700 high x 700 mm long.

Made up of:

8 rods 700 mm long.

2 rods 350 mm long.

16 "P" type bossheads.

4 foot supports.

1 Allen kev.

Part No. 6000090 Dur-aluminium

Part No. 6000190 AISI 304 stainless steel



1000 high x 1000 mm long.

Made up of:

10 rods of 1000mm long.

2 rods 700 mm long.

3 rods 350 mm long.

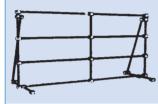
34 "P" type bossheads.

6 foot supports.

1 Allen key.

Part No. 6000902 Dur-aluminium

Part No. 6001902 AISI 304 stainless steel



700 high x 1000 mm long.

Made up of:

4 rods 1000 mm long.

5 rods 750 mm long.

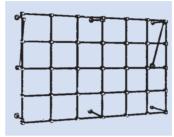
2 rods 350 mm long.

20 "P" type bossheads.

4 foot supports.

1 Allen key.

Part No. 6000901 Dur-aluminium
Part No. 6001901 AISI 304 stainless steel



1000 high x 2000 mm long.

Made up of:

5 rods 2000 mm long.

7 rods 1000 mm long.

8 rods 200 mm long.

o rous zoo mini long

2 rods 350 mm long.

45 "P" type bossheads.

8 foot supports.

1 Allen key.

Part No. 6000903 Dur-aluminium

Part No. 6001903 AISI 304 stainless steel



SUPPORT "STAND"

Solid base, three vertical rods of 800 mm in height, two horizontal rods of 500 mm in length, six "P" type bossheads. Made of Dur-aluminium.

Weight: 6.5 Kg. Part No. 6000482



CENTRAL ROD RETORT STAND

Vertical rod of Dur-aluminium of 10 Ø x 600mm high. Weight: 3 Kg. Base dimensions 315 x 200 mm. Part No. 6000046



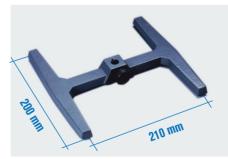
TRIPOD SUPPORT "PASS"

Original Phywe.

To support square and round rods from 6 to 14 mm dia. Weight: 2 Kg.

Base with levelling screws.

Part No. 6200255

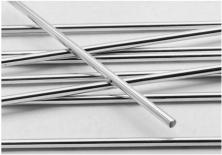


DOUBLE BASE SUPPORT T "MINI"

Small foot support with screw clamp for removable rods from 8 to 12 mm \emptyset .

Weight: 1.2 Kg.

Part No. 6001103



STANDARD RODS

Made from AISI 340 stanless steel. Suitable for double "T MINI" and Tripod "PASS"

Part No. 6001160
Part No. 6000534

 $8\ \emptyset\ x\ 500\ mm$ length $10\ \emptyset\ x\ 600\ mm$ length

Part No. 6000535 12 Ø x 700 mm length



U SHAPED STAND

AISI 304 stainless steel of 20 Ø x 800 mm high. Very stable. Weight: 7 Kg. Part No. 6000411



TRIPOD SUPPORT STAND

AISI 304 stainless steel rod.

Part No.	Ø x Height	Weight Kg
6002278	8 x 500	1.4
6022710	10 x 600	1.8
6022712	12 x 700	2.5



Rods made of Dur-aluminium

Part No.	Ø x Height	Weight Kg
6000798	8 x 500	1.2
6000799	10 x 600	1.5
6007912	12 x 700	2

UNIVERSAL ARM SUPPORT

With holder for up to 4 sensors or electrodes.

Very stable heavy base. Ideal for working at varying heights. Part No. 1001552



DOUBLE BASE SUPPORT T "MAXI"

Rod of AISI 304 stainless steel of 20 Ø x 800 mm high. Designed to support weights up to 20 Kg at 300 mm height from the base. Useful for stirrers.

Weight: 7 Kg. Part No. **6000410**



DOUBLE BASE SUPPORT T TELESCOPE

Stainless steel base AISI 304 of 32 mm Ø.
Telescopic elevation from 725 to 1025 mm.
Maximum support weight 20 Kg. Actual weight: 7.7 Kg
Compatible with Part No. 5057022 (See page 165).
Part No. 5057011



RETORT STAND

6077812

Rods made of AISI 304 stainless steel

12 x 800 mm.

	Rod	Plate size	
Part No.	Ø x height	length x width	Weight Kg
6022614	10 x 600 mm.	215 x 130 mm.	3
6022612	12 x 700 mm.	315 x 200 mm.	3.6
6022613	12 x 800 mm.	315 x 200 mm.	3.8
Rods of Dur	-aluminium		
	Rod	Plate size	
Part No.	Ø x height	length x width	Weight Kg
6007714	10 x 600 mm.	215 x 130 mm.	2.7
6007712	12 x 700 mm.	315 x 200 mm.	3

315 x 200 mm.

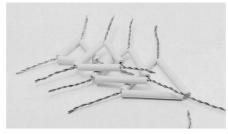
3.4



TRIANGLE SUPPORTS

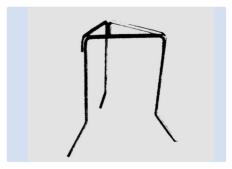
Made of 4 mm \emptyset AISI 304 stainless steel with electrobright finish.

Part No.	Side	Part No.	Side
1002874	40 mm.	1002877	70 mm.
1002875	50 mm.	1002878	80 mm.
1002876	60 mm.	1028710	100 mm.



REFRACTORY TUBE AND WIRE TRIANGLE SUPPORTS

Part No.	Side
1000825	50 mm.
1000826	60 mm.
1000827	75 mm.



TRIPOD STAND "TRISOP"

Made of galvanised steel.

Part No. Side Total height
1000524 130 mm. 200 mm.



TRIPOD SUPPORTS WITH ROUND TOP

AISI 304 stainless steel

Part No.	Ø ext. ring	Total height
6002868	80 mm.	210 mm.
6028610	100 mm.	210 mm.
6028612	120 mm.	210 mm.
6028614	140 mm.	210 mm.

Nickel plated steel

Nickei piateu steei				
Part No.	Ø ext. ring	Total height		
1000818	80 mm.	210 mm.		
1008110	100 mm.	210 mm.		
1008112	120 mm.	210 mm.		
1008114	140 mm.	210 mm.		
1008116	160 mm.	210 mm.		



TRIPOD STAND WITH RING TOP.

Galvanised steel.

Part No.	Ø ext. ring	Total height
7000808	80 mm.	210 mm.
7008010	100 mm.	210 mm.
7008012	120 mm.	210 mm.



TRIPOD STAND WITH RING TOP, ADJUSTABLE HEIGHT

Galvanised steel.

Part No. Ø ext. ring Adjustable height
7022810 100 mm. 170 to 250 mm.
7022812 140 mm. 170 to 250 mm.
7022814 180 mm. 170 to 250 mm.



1. DECANTING FLASK SUPPORT

Made of polypropylene. With support flasks up to 12 cm \emptyset . Part No. 1001346

2. DECANTING FLASK SUPPORT WITH BOSSHEAD

Made of polypropylene. With support flasks from 30 to 150 mm \emptyset . Complete with reduction ring.



CIRCULAR SUPPORT PLATFORMS WITH BOSSHEAD

To support flat bottom vessels and instruments. Chrome plated bosshead.

Part No. Plate Ø 6000879 80 mm. 6000880 150 mm.



OPEN RING BOSSHEAD SUPPORTS

Made of galvanised steel.

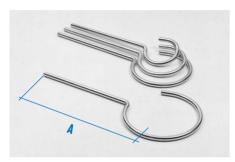
Part No.	Ring exterior Ø	Usable length A
7000506	60 mm.	100 mm.
7000508	80 mm.	130 mm.
7005010	100 mm.	160 mm.
7005012	120 mm.	170 mm.
7005014	140 mm.	180 mm.



CLOSED RING BOSSHEAD SUPPORTS

Made of galvanised steel

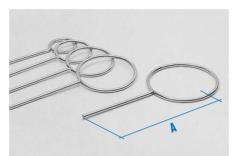
waue or yarvariiseu steet.				
Part No.	Ring exterior Ø	Usable length A		
7000536	60 mm.	100 mm.		
7000538	80 mm.	130 mm.		
7005310	100 mm	160 mm.		
7005312	120 mm.	170 mm.		
7005314	140 mm.	180 mm.		



OPEN RING RETORT SUPPORTS

Made of galvanised steel.

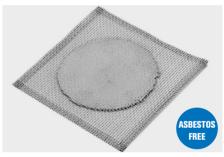
Part No.	Ring exterior Ø	Usable length A
1000206	60 mm.	180 mm.
1000208	80 mm.	195 mm.
1002010	100 mm.	200 mm.
1002012	120 mm.	215 mm.
1002014	140 mm.	225 mm.



CLOSED RING RETORT SUPPORTS

Made from galvanised steel.

Part No.	Ring exterior Ø	Usable length A
1000236	60 mm.	180 mm.
1000238	80 mm.	195 mm.
1002310	100 mm.	200 mm.
1002312	120 mm.	215 mm.
1002314	140 mm.	225 mm.



GAUZE IRON WIRE WITH CERAMIC FIBRE

Part No.

1087102	100 mm Side.
1087122	120 mm Side.
1087142	140 mm Side.
1087162	160 mm Side.
1087182	180 mm Side.
1087202	200 mm Side.

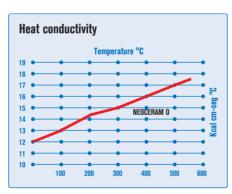


CERAMIC PLATES "NEOCERAM"

Resistant to temperatures from -200 °C to 700 °C.

Part No.

1000684 120 x 120 x 5 mm. 1000685 140 x 140 x 5 mm. 1000686 160 x 160 x 5 mm.





Resistant to temperatures from -200 °C to 700 °C. Excellent heat conductor.

20% better heat transfer compared to a conventional gauze ceramic.

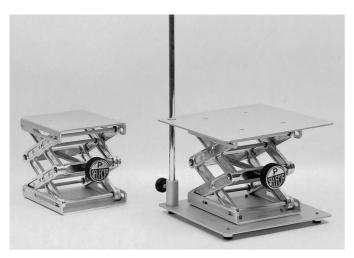
High chemical resistance to aggressive compounds. Easy to clean and long lasting.

TRIPOD STAND FOR CERAMIC PLATES

With adjustable sides to prevent the plate from moving or tilting.

Total height 210 mm.

Part No. For plates of 1000687 120 x 120 mm. 1000688 140 x 140 mm. 1000689 160 x 160 mm.



LABORATORY JACK "LAB-ELE"

With anodised aluminium base.

Part No. 1000294 Usable platform: 115 x 140 mm.

Elevated height: 260 mm. Maximum support weight: 1 kg.

Part No. 7000295 Top plate: 200 x 200 mm.

Maximum elevated height: 260 mm. Max. support weight: 1.7 kg. With hole and clamp screw for a support rod of 10 Ø x 600 mm high.



LABORATORY JACKS "LAB-STEEL"

Made completely of AISI 304 stainless steel.

Models:

"LAB-STEEL" MINI

Part No. 1001104 Platform Dims.: 145 x 145 mm. Elevation height

55 to 155 mm. Maximum support weight: 1.3 Kg.

"LAB-STEEL" MEDI

Platform Dims.: 200 x 200 mm. Elevation height Part No. 1001161

65 to 270 mm. Maximum support weight: 2 Kg.

"LAB-STEEL" MAXI

Part No. 1001105 Platform Dims.: 250 x 250 mm. Elevation height

65 to 270 mm. Maximum support weight: 3 Kg.

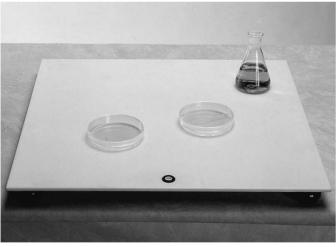


TABLE TOP "ALMANDINE"

Made of polyester mineral resin.

Features:

Excellent chemical resistance, with resistance to class 1 and 2 chemicals. Resists abrasion, boiling water, dry heat, fire and scratches.

Stains easily removed with a detergent or abrasive cleaner.

Applications:

Protects bench top surfaces against aggressive chemicals, burns and scratches. Suitable for working with: Acids, alkali bases, solvents or dyes.

Preparation of horizontal agar gels.

Preparation of petri dishes, etc.

Part No. Width Thickness Depth

1001090 48 cm 0.6 cm 45 cm Without level

1001091 48 cm 0.6 cm With adjustable level supports



P.V.C coated steel.

Applications:

The weight of the ring stabilises and prevents flasks from floating when placed in a water bath. Suitable for Conical, volumetric and all types of flasks.

Part No.	Colour	Mode	Ø interior mm.	Weight g.
1001169	red	open	50	207
1001170	red	open	70	340
1001171	red	open	100	470
1001734	blue	closed	48	270
1001735	blue	closed	70	360
1001736	blue	closed	90	440

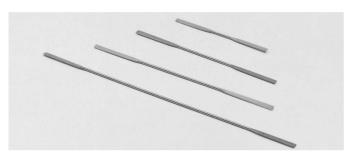
Ring support holder, made of stainless steel.



Spatulas, scoops and vessels.

STAINLESS STEEL AND NICKEL EVAPORATING BASINS. STAINLESS STEEL, NICKEL AND ZIRCONIUM CRUCIBLES.





MICRO SPATULA WITH FLAT ENDS

Made od AISI 304 stainless steel. Part No. Length Width 1027680 80 mm. 4 mm. **1276120** 120 mm. 4 mm. 1276150 150 mm. 4 mm. **1276210** 210 mm. 4 mm.



MICRO-SPATULA CURVED ENDS

Made of stainless steel AISI 304. Part No. 1001581 Length 150 mm.



SPATULA WITH CURVED ENDS

Made of stainless steel AISI 304. Part No. Length Width 130 mm. 11 mm. 1010313 11 mm. 150 mm. 1001518 1010318 180 mm. 11 mm. 1010321 210 mm. 11 mm.



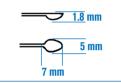
SPATULA WITH SPOON AND FLAT ENDS

Part No. Length Width 1096120 120 mm. 18 mm. stainless steel AISI 304. 1096150 150 mm. 20 mm. stainless steel AISI 304. 1196120 120 mm. 18 mm. Pure nickel. 1196150 150 mm. 20 mm. Pure nickel.



MICRO SPATULA WITH FLAT AND SPOON ENDS

Made of AISI 304 stainless steel. Part No. Length Width 1277100 100 mm. 4 mm. 1277150 150 mm. 4 mm. 4 mm. 210 mm. 1277210





SPATULA FLAT AND GROOVED ENDS

Made of Stainless steel AISI 304.

Part No. 1000855 Total length 180 mm. Flat width 9 mm. Grooved width 8 mm.



CHISEL AND GROOVED SPOON END SPATULA

Part No. Length Width 6021312 120 mm. 18 mm. stainless steel AISI 304. 6021315 150 mm. 20 mm. stainless steel AISI 304. 6121312 120 mm. 18 mm. Pure nickel. 6121315 150 mm. 20 mm. Pure nickel.



FLAT SPATULA WITH SPOON

Made of Stainless steel AISI 304. Length 180 mm. Part No. 1001583



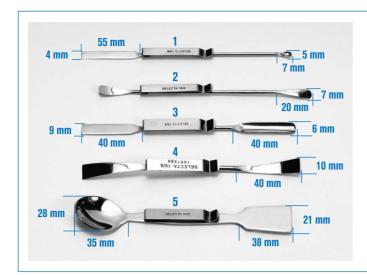
SPATULA DOUBLE SPOON ENDS

Made of Stainless steel AISI 304. Length 150 mm. Part No. 1001582



DOUBLE SPATULA SEMI-MICRO

Made of Stainless steel AISI 304. Total length 140 mm Rectangular end: 35 long x 7 mm wide. Oval end: 35 long x 7mm wide.



SPATULA WITH POCKET CLIP

Part No.

1. 1001585 Micro-spatula flat spoon end. Length 150 mm.

2. 1001586 Micro-spatula curved end. Length 150 mm.

3. 1001587 Spatula flat with grooved end. Length 150 mm.

4. 1001588 Spatula double end flat. Length 150 mm.

5. 1001589 Spatula flat and spoon ends. Length 150 mm.



Specially designed for lab coats with upper pocket.



FLAT AND CURVED END SPATULA

Made of AISI 304. stainless steel.

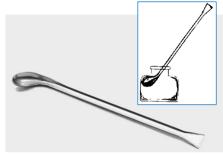
Part No.	Length	Width
6099120	120 mm.	20 mm.
6099150	150 mm.	24 mm.
6099180	180 mm.	24 mm.
6099210	210 mm.	24 mm.



SPATULA DOUBLE CURVED ENDS

Made of AISI 304, stainless steel,

Part No.	Length	Width
6100120	120 mm.	15 mm
6100150	150 mm.	25 mm
6100180	180 mm.	25 mm
6100210	210 mm.	25 mm



GROOVED SPATULA

Grooved spoon, made of AISI 304 stainless steel.

Total length: 190 mm.

Designed to remove residues from flasks and bottles due to the flat sharp end and curved spoon.

Part No. 1096190



SPATULA SPOON FLAT-CONCAVE

Made Stainless steel AISI 304.

Part No. 1001584 Length 250 mm.



FLAT SPATULA WITH SPOON

Analytical type, made of AISI 304 Stainless steel. Total length: 210 mm.

Rectangular end: 40 long x 9 mm wide.

Spoon end: 30 long x 18 mm wide.

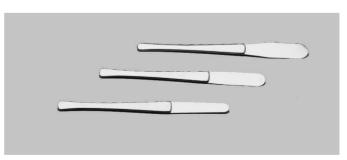
Part No. 1095210



PASTE KNIFE WITH WOODEN HANDLE

Blade made from tempered Stainless steel.

Part No.	Blade length	Blade width	Part No.	Blade length	Blade width
1010280	80 mm.	14 mm.	1102160	160 mm.	24 mm.
1102100	100 mm.	16 mm.	1102200	200 mm.	29 mm.
1102120	120 mm.	18 mm.	1102240	240 mm.	34 mm.
1102140	140 mm.	22 mm.	1102280	280 mm.	34 mm.



FLEXIBLE SPATULA

With stainless steel AISI 304 blade and handle.

 Part No.
 Total length
 Blade length
 Blade width

 1000856
 160 mm.
 52 mm.
 11 mm.

 1000857
 160 mm.
 52 mm.
 15 mm.

 1000858
 170 mm.
 60 mm.
 20 mm.



MULTI PURPOSE KNIFE

With a black bakelite® handle. Designed for comfort and safety

Made of tempered stainless steel.

Total length: 230 mm. Blade length: 95 mm. Part No. 1000862



SPATULA POCKET POUCH

Part No. 1001530

Contents:

- 1 Flexible spatula. Part No. 1000856 . 1 Semi micro spatula. Part No. 1278140
- 1 Micro spatula flat spoon. Part No. 1277150. 1 Dissection scissors. Part No. 1000807
- 1 Forceps blunt end. Part No. 1000580



SODIUM SPOON

With brass basket. Ø 25 mm. Total length: 190 mm.

Part No. 1000805

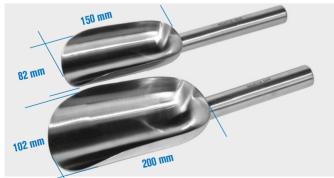


POWDER SCOOPS

Length: 100 mm. Width: 26 mm.

Part No. 6000278 Stainless steel AISI 304.

Part No. 6001278 Pure nickel.



SCOOPS WITH HANDLE

Made of stainless steel AISI 304.

Part No. 1001592 Medium Total length 320 mm.
Part No. 1001593 Big Total length 360 mm.





VIBRATING SPATULA AND BALANCE WEIGHT FORCEPS

Vibrating spatula.

With manual vibrating device. Made of AISI 304 stainless steel.

Part No. 1000413 Curve end. Total length 176 mm. Width 12 mm.
Part No. 1000412 Grooved end. Total length 176 mm. Width 12 mm.

Balance weight forceps.

Made of AISI 304 stainless, electrobright finish. Total length 93 mm.

Part No. 1000217

Forceps for balance weights.

Made of AISI 304 stainless, electrobright finish. Total length 100 mm.

Part No. 1000216



FUSION SPOONS

Made of AISI 304 stainless, wooden handle. Total length: 350 mm.

Flat base. Volume 90 ml. Part No. **6000093**

Round base. Volume 75 ml.

Part No. 6000094



SCOOPS WITH HANDLE

Made of stainless steel AISI 304.

Part No.	Total length	Total length Usable length		Capacity
1000859	180 mm.	100 mm.	50 mm.	120 ml.
1000860	260 mm.	150 mm.	75 mm.	450 ml.
1000861	310 mm.	200 mm.	100 mm.	1500 ml.
1001354	330 mm.	210 mm.	150 mm.	2000 ml.



FUNNEL WITH HANDLE

Made of AISI304 stainless steel.

Part No. 1000906 100 mm Ø x 100 mm high x 10 mm exit.

Part No. 1000907 120 mm Ø x 112 mm high x 10 mm exit.

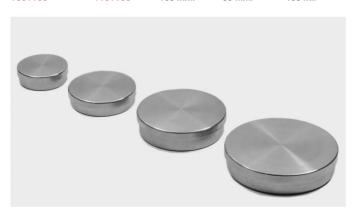
Part No. 1000908 150 mm Ø x 159 mm high x 20 mm exit.

Part No. 1000909 200 mm Ø x 183 mm high x 20 mm exit.



FLAT BOTTOM BASINS

Stainless steel AISI 304	Nickel Ni			
Part No.	Part No.	Ø	Height	Volume
1009160	1019160	60 mm.	25 mm.	40 ml.
1009170	1019170	70 mm.	25 mm.	60 ml.
1009180	1019180	80 mm.	30 mm.	90 ml.
1091100	1191100	100 mm.	35 mm.	180 ml.



PETRI DISH WITH LID

Stainless steel AISI 304	Nickel Ni			
Part No.	Part No.	Ø	Height	Volume
1002126	1012126	60 mm.	20 mm.	50 ml.
1002128	1012128	80 mm.	20 mm.	90 ml.
1021210	-	100 mm.	25 mm.	150 ml.
1021212	-	120 mm.	25 mm.	260 ml.
1021215	-	150 mm.	30 mm.	550 ml.

SPOON WITH HANDLE

Made of AISI304 stainless steel.

Part No. 1001594 Capacity 100 ml. Total length 240 mm. Ø 83 mm
Part No. 1001595 Capacity 200 ml. Total length 280 mm. Ø 92 mm
Part No. 1001596 Capacity 300 ml. Total length 360 mm. Ø 102 mm



EVAPORATION BASINS, ROUND BOTTOM

Stainless steel AISI 304	Nickel Ni			
Part No.	Part No.	Ø	Height	Volume
1009260	1019260	60 mm.	25 mm.	35 ml.
1009270	1019270	70 mm.	25 mm.	50 ml.
1009280	-	80 mm.	30 mm.	75 ml.
1092100	_	100 mm.	35 mm.	125 ml.



BUCKETS WITH HANDLES

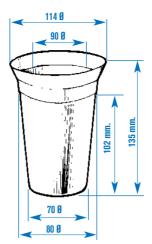
Without graduation. Made of AlSl304 stainless steel. Part No. Height Ø Capacity 1001599 270 mm 270 mm 10 litres 1001600 320 mm 350 mm 19 litres

BUCKET LIDS

Part No. 1001601 Suitable for buckets 10 litres Part No. 1001599
Part No. 1001602 Suitable for buckets 19 Litres Part No. 1001600



DYE BEAKER
Stainless steel AISI 304.
Volume: 500 ml.
Part No. 6000291





CRIICIRI ES

3				
TAINLESS ST	TEEL			Lids
Ø	Height	Thickness	Volume	Part No.
30 mm.		2 mm.	20 ml.	6009730
40 mm.	42 mm.	2 mm.	45 ml.	6009740
30 mm	32 mm.	0.6 mm.	20 ml.	6009730
40 mm.	42 mm.	0.6 mm.	45 ml.	6009740
50 mm.	55 mm.	0.8 mm.	85 ml.	6009750
60 mm.	65 mm.	0.8 mm.	140 ml.	6009760
(EL Ni				Lids
Ø	Heiaht	Thickness	Volume	Part No.
30 mm.		2 mm.	20 ml.	6019730
40 mm.			45 ml.	6019740
50 mm.			85 ml.	6019750
60 mm.	65 mm.		140 ml.	6019760
30 mm.	32 mm.	0.6 mm.	20 ml.	6019730
40 mm.	42 mm.	0.6 mm.	45 ml.	6019740
50 mm.	55 mm.	0.6 mm.	85 ml.	6019750
60 mm.	65 mm.	0.6 mm.	140 ml.	6019760
Л 7r				Lids
	Heiaht	Thickness	Volume	Part No.
-			20 ml.	6000567
			50 ml.	6000568
			75 ml.	6000569
59 mm.	51 mm.	1 mm.	100 ml.	6000570
ASS				Lids
	Heinht	Thickness	Volume	Part No.
~	-			1000620
				1000621
				1000622
35 mm.				1000623
		1,5 mm.	40 ml.	1000624
50 mm.	62 mm.	2 mm.	75 ml.	1000625
	7 AINLESS ST	AINLESS STEEL Ø Height 30 mm. 32 mm. 40 mm. 42 mm. 30 mm 32 mm. 40 mm. 42 mm. 50 mm. 55 mm. 60 mm. 65 mm. AUDER STEEL Ø Height 30 mm. 32 mm. 40 mm. 42 mm. 50 mm. 55 mm. 60 mm. 65 mm. 30 mm. 32 mm. 40 mm. 42 mm. 50 mm. 65 mm. 30 mm. 32 mm. 40 mm. 65 mm. 30 mm. 32 mm. 40 mm. 65 mm. 50 mm. 51 mm. 60 mm. 51 mm. 60 mm. 65 mm. 41 Zr Ø Height 33 mm. 30 mm. 47 mm. 43 mm. 52 mm. 48 mm. 59 mm. 51 mm. ASS Ø Height 45 mm. 36 mm. 50 mm. 40 mm. 50 mm. 40 mm. 60 mm. 48 mm. 35 mm. 44 mm. 40 mm. 50 mm.	Name	Name

QUARTZ GLASS FOR INCINERATION

Ø

27 mm.

25 mm.

Height

45 mm.

38 mm.

Thickness

1,5 mm.

1,5 mm.

Part No.

1000576

1000577

STAINLESS STEEL AISI 304- PURE NICKEL - ZIRCONIUM - QUARTZ

STAINLESS STEEL is usable at temperatures from -180 °C to +500 °C. Resistant to nitric acid, nitrate and potassium permanganate. Good resistance to concentrated alkaline solutions. Average resistance to acetic acid, hydrogen sulphide diluted, phosphoric low concentration, and solutions of sulphites, boric acid, organic acids and bromides.

NICKEL unalterable in the air and stainless up to temperatures of 500 °C, good resistance to molten alkali and seawater.

Excellent performance in the presence of wet chlorine or hydrochloric acid gas up to 500 °C. Slowly attacked by organic acids, hydrochloric and sulfuric acids. Low resistance to diluted nitric acid.

THE ZIRCONIUM unalterable in the air and clean, resistant up to 550 °C in an oxidizing atmosphere at 1500 °C in inert gas (argon or nitrogen), in many cases to replace platinum crucibles in all melting and in particular the sodium peroxide and carbonates. About 100 melting per crucible, making them very economical with reference to the others, either porcelain crucibles, steel or nickel. Resistant to most alkali solvents (Na, K, Li), carbonates, hydroxides, peroxides, borates, nitrates, chlorides, some fluorides and sulfuric acid up to 75% concentrate.

Hydrofluoric acid attacks it.

Lids

Part No.

Included

Included

Volume

15 ml.

10 ml.

QUARTZ GLASS has a high temperature resistant (liquid glass transition 1130°C) as well as a low thermal expansion. It is considered a unique material for several scientific applications due to its purity (can only be attacked by hot phosphoric acid and hydroflouric acid) and thermal characteristics. Furthermore, quartz glass has extraordinary optical properties through its spectral transparency and high irradiation resistance.

COMECTA Stainless steel receptacles.

QUALITY AISI 304.

LABORATORY-HOSPITAL + SERIES





ROUND BASINS

Part No.	Ø exterior	Ø interior	Height	Volume
8081810	133 mm.	118 mm.	45 mm.	400 ml
8081812	175 mm.	157 mm.	58 mm.	850 ml.
8081814	217 mm.	199 mm.	66 mm.	1650 ml.
8081815	255 mm.	245 mm.	110 mm.	3400 ml
8081817	318 mm.	297 mm.	117 mm.	7000 ml.



RECTANGULAR TRAYS

Conical shape

	Exterior	Exterior	Exterior	Interior	Interior
Part No.	Height	Width	Depth	Width	Depth
8080801	40 mm.	190 mm.	125 mm.	158 mm.	112 mm.
8080802	45 mm.	244 mm.	161 mm.	211 mm.	147 mm.
8080803	50 mm.	305 mm.	195 mm.	270 mm.	177 mm.
808080 <i>4</i>	55 mm.	338 mm	261 mm.	301 mm.	241 mm

Long shape

	Exterior	Exterior	Exterior	Interior	Interior
Part No.	Height	Width	Depth	Width	Depth
8080208	18 mm.	175 mm.	62 mm.	145 mm.	49 mm.
8080207	28 mm	380 mm	160 mm	351 mm	145 mm



STERILIZATION BOXES WITH LID

Height Width Part No. Depth 8085504 30 mm. 170 mm. 70 mm. 8085505 50 mm. 200 mm. 100 mm.



BOXES WITH ROUND LIDS

Part No.

8085514 140 Ø x 65 mm high. Volume 1000 ml. 180 Ø x 75 mm high. Volume 1500 ml. 8085515



KIDNEY DISHES

8085303

Part No. 8085301 8085302

32 high x 200 mm long. 37 high x 250 mm long. 42 high x 300 mm long.

COMECTA



TALL BEAKERS AND JUGS

Mirror finish stamped beakers and jugs with a curved lip.

Easily cleaned and resistant to large numbers of chemical agents.

1 Standard	2 With Spout	3 With handle and	d spout	
Part No.	Part No.	Part No.	Ø x Height	Volume
8002902	8012902	8092902	72 x 84 mm.	250 ml.
8002905	8012905	8092905	86 x 129 mm.	500 ml.
8029010	8129010	8929010	102 x 150 mm.	1000 ml.
8029020	8129020	8929020	132 x 184 mm.	2000 ml.
8029030	8129030	8929030	160 x 180 mm.	3000 ml.
8029040	8129040	8929040	180 x 200 mm.	4000 ml.
8029050	8129050	8929050	200 x 220 mm.	5000 ml.



LIDS FOR BEAKERS AND JUGS

Part No.	Beaker size	Part No.	Beaker size
8000250	250 ml.	8003000	3000 ml.
8000500	500 ml.	8004000	4000 ml.
8001000	1000 ml.	8005000	5000 ml.
ดบบอบบบ	2000 ml		



BUCKET WITH HANDLE

Buckets. Graduated from 1 to 12 litres. 320 \emptyset x 300 mm high. Volume 12 litres.

Part No. **8000252 Bucket lids**Part No. **1002521**



MEDICINE CUPS

Part No.

8085530 Graduated. Capacity 30 ml. 8085531 Graduated. Capacity 50 ml.

8085532 With handle, no graduations. Capacity 300 ml.



SERILISATION JAR 100 Ø x 155 mm high. Volume 1000 ml. Part No. 8080904



ROUND BASIN370 Ø x 145 mm high. Volume 9000 ml.
Part No. 8000140



SUPPORT FOR ROUND BASIN
Portable with rubber wheels and brake.
Pagin Part No. 9000140

Basin Part No. 8000140. Part No. 6010140



SUPPORT FOR BUCKETS

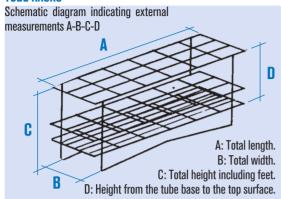
Portable with rubber wheels and brake.

For bucket Part No. 8000252. Part No. 6010252



Racks, baskets and storage for tubes pipettes and flasks

TUBE RACKS



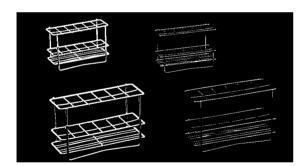




Part No.	Made of	Number	For tube	Dime	Dimensions ext.		t. mr	n
		of tubes	Ø up to	Α	В	C	D	
1001563	Stainless steel	24 (6 x 4)	13 mm VAC	95	70	70	60	



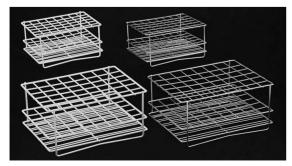
Part No.	Made of	Number	For tube	Dime	nsio	ns e	xt. mr	n
		of tubes	Ø up to	Α	В	C	D	
1001212	PVC coated wire	12 (4 x 3)	13 mm	65	50	65	50	
1025500	Stainless steel wire AISI 304	12 (4 x 3)	13 mm	65	50	65	50	



Part No.	Made of	Number of tubes	For tube Ø up to	Dimens A F		s ext C	
1026112	PVC coated wire	12 (6 x 2)	16 mm			80	_
	PVC coated wire	12 (6 x 2)	25 mm		_	110	
	Stainless steel wire AISI 304	12 (6 x 2)	16 mm		5		65
1025812		12 (6 x 2)	25 mm		_	110	
		(* / _/			•		••



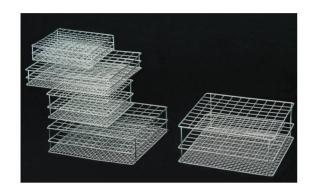
Part No.	Made of	Number	For tube	Dime	ensio	ns ex	t. mm
		of tubes	Ø up to	Α	В	C	D
1026124	PVC coated wire	24 (8 x 3)	16 mm	160	65	80	65
1026424	PVC coated wire	24 (8 x 3)	25 mm	235	95	110	95
1025524	Stainless steel wire AISI 304	24 (8 x 3)	16 mm	160	65	80	65
1025824	Stainless steel wire AISI 304	24 (8 x 3)	25 mm	235	95	110	95



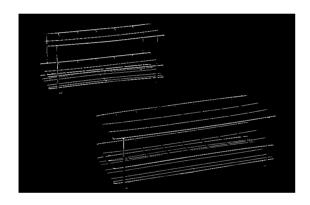
Part No.	Made of	Number	For tube	Dimensions ext. mm
		of tubes	Ø up to	$A \;\; B \;\; C \;\; D$
1026148	PVC coated wire	48 (8 x 6)	16 mm	160 125 80 65
1026448	PVC coated wire	48 (8 x 6)	25 mm	235 180 110 95
1025548	Stainless steel wire AISI 304	48 (8 x 6)	16 mm	160 125 80 65
1025848	Stainless steel wire AISI 304	48 (8 x 6)	25 mm	235 180 110 95



Part No.	Made of	Number	For tube	Dime	nsion	ıs ex	t. mm
		of tubes	Ø up to	Α	В	C	D
1000603	Stainless steel wire AISI 304	50 (10 x 5)	13 mm	162	84	35	35
1000605	Stainless steel wire AISI 304	50 (10 x 5)	13 mm	162	84	60	60
1000607	Stainless steel wire AISI 304	50 (10 x 5)	18 mm	210	110	40	40
1000609	Stainless steel wire AISI 304	50 (10 x 5)	18 mm	210	110	60	60
1000611	Stainless steel wire AISI 304	50 (10 x 5)	18 mm	210	110	85	85



Part No.	Made of	Number	For tube	Dime	ension	s ext	t. mm
		of tubes	Ø up to	Α	В	C	D
1000604	Stainless steel wire AISI 304	100 (10x10)	13 mm	162	162	35	35
1000606	Stainless steel wire AISI 304	100 (10x10)	13 mm	162	162	60	60
1000608	Stainless steel wire AISI 304	100 (10x10)	18 mm	210	210	40	40
1000610	Stainless steel wire AISI 304	100 (10x10)	18 mm	210	210	60	60
1000612	Stainless steel wire AISI 304	100 (10x10)	18 mm	210	210	85	85



Suitable for Nessler tubes

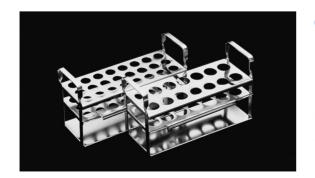


Part No. Made of Number For tube Dimensions ext. mm A B C D 260 90 110 95 of tubes Ø up to 1004012 Stainless steel wire AISI 304 12 (6 x 2) 40 mm 24 (8 x 3) 345 130 110 95 Stainless steel wire AISI 304 40 mm 1004024

Suitable for Falcon tubes with lids



Part No.	Made of	Number	For tube	Dime	nsior	is ex	t. mm	
		of tubes	Ø up to	Α	В	C	D	
1001715	Stainless steel wire AISI 304	15 (5 x 3)	16 mm	120	80	90	75	
			Falcon 15 ml					
1001716	Stainless steel wire AISI 304	8 (4 x 2)	30 mm	145	80	90	75	
			Falcon 50 mm					



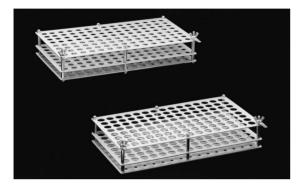
With rack linking guides

Part No.	Made of	Number	For tube	Dimensions ext		t. m	m	
		of tubes	Ø up to	Α	В	C	D	
1002532	Stainless steel AISI 304	24 (8 x 3)	12 mm	160	62	65	-	
1002531	Stainless steel AISI 304	14 (7 x 2)	16 mm	160	62	65	_	



Suitable for butyrometer

Part No.	Made of	Number of tubes	For tube			ns ex C	ct. mm D
1025412	Stainless steel AISI 304 Stainless steel	12 (6 x 2)	Butyrometer	200	70	165	-
1023424	AISI 304	24 (8 x 3)	Butyrometer	285	95	165	-



With decanting aid

Part No.	Made of	Number	For tube	Dimensions ext. mm
		of tubes	Ø up to	A B C D
1000433	Anodised aluminium colour silver	120 (15 x 8)	11 mm	300 170 50 -
1000434	Anodised aluminium colour silver	120 (15 x 8)	14 mm	300 170 50 -

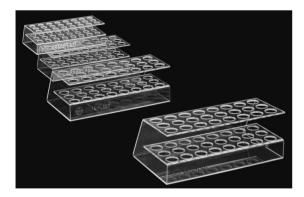


Stackable and numeric

Stackable racks

Made of anodised aluminium with alphanumeric from 1 to 10 and A to E.

Part No.	External dimensions mm.		Tube Capacity	For tubes of Ø up to
	Height Wid	th Depth		•
1000830	60 165	5 95	50	11 mm
1000831	60 195	5 100	50	14 mm
1000832	60 220) 110	50	16 mm

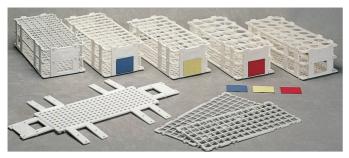


Transparent methacrylate racks

Part No.	Made of	Number	For tube	Dime	Dimensions (ext. mm	
		of tubes	\emptyset up to	Α	В	C	D	
1052012	Transparent methacrylate	24 (8 x 3)	12 mm	170	90	50	50	
1052016	Transparent methacrylate	24 (8 x 3)	16 mm	190	100	60	60	
1052022	Transparent methacrylate	24 (8 x 3)	22 mm	255	150	80	80	
1052026	Transparent methacrylate	24 (8 x 3)	26 mm	300	170	110	110	



Part No.	Made of	Number	For tube	Dim	ensid	ns ex	ct. mm
		of tubes	Ø up to	Α	В	C	D
1001251	Methacrylate	25 (5 x 5)	11 mm	85	80	35	30
1001252	Methacrylate	25 (5 x 5)	12 mm	85	80	55	50



PROPISEL RACKS

Made of high density white polypropylene.

Easy to assemble. Stackable. Autoclavable. These racks do not float and are suitable for water baths for temperatures up to 140 °C.

Each rack has a cross reference numbering systems for easy tube identification. Easily cleaned with a disinfectant. Colour white.

Accessory rack identification cards are available in: yellow, blue and red.

MINNEIS					
Part No.	Number	For tubes	External dims. (s. cm
	of tubes	up toØ mm	Height	Width	Depth
1001115	90	13	7	10.5	25
1001116	60	16	7	10.5	25
1001117	40	20	7	10.5	25
1001118	24	25	7	10.5	25
1001119	21	30	7	10.5	25

ACCESSORY

Indentification cards, autoclavable.

Part No.

Modele

1001120 Yellow

1001121 Blue

1001122 Red

	PROPISEL-FIX RACKS Made of high density polypropylene. Comes with
999999999	
	THE CONTROLL OF THE CONTROL O

decanting aid that holds the tubes in place in the

rack while the complete rack is emptied in one ope-

ration. Features: Same feature as the "Propisel".

<i>Image</i>	showing	the	decanting	aid	in
iise an	d tuhes si	till in	n nlace		

Models					
Part No.	Number	For tubes	External dims. o		
	tof tubes	up toØ mm	Height	Width	Depth
1001123	90	11 to 13	7	10.5	25
1001124	60	14 to 16	7	10.5	25
1001125	40	19 to 20	7	10.5	25

ACCESSORY

Indentification cards, autoclavable.

Part No.

1001120 Yellow

1001121 Blue

1001121 Blue

RACK FOR 20 10 mm ✓ SQUARE CUVETTES

Made of polypropylene. Positioning cross-reference. Height 35 mm. Width 70 mm

Depth 210mm Colour: white Part No. 1001528



CIRCULAR RACK

Made in polyethylene for 4 tubes of 25 mm 0, 8 tubes of up to 19 mm 0 and 16 up side down peg tube supports.

Dimensions: 95 high x 180 mm Ø.

Part No. 1001339



RACK FOR 1.5 AND 2 ml MICROTUBES

Made of Polycarbonate, stackable, numbered positions and autoclavable. Number of tubes: 24 microtubes. Diameter: up to 11 mm \emptyset .

Part No. 1001340



RACK FOR 1.5 AND 2 ml MICROTUBES

Made of solid polypropylene, ideal for refrigerator and freezer storage. Numbered positions and autoclavable. Capacity: up to 80 micro-tubes.

Part No. 1001341



RACK FOR 20 MICROTUBES OF 1.5 TO 2 ml

Made of polypropylene. Racks can be linked and fitted together. Numbered locations. Total length 21 cm.

Part No. 1001523



THREE LEVEL MICROTUBE RACK FOR 0.2 - 0.5 AND 1.5 ml

Made from polypropylene and can be linked at either end to form longer racks. Numbered positions. Lower level 24 micro tubes of 0.2 ml. Middle level 14 micro tubes of 0.5 ml. Upper level 12 micro tubes of 1.5 ml. Standard colour yellow.

Part No. 1001542



MULTI SUPPORT TUBE RACK TUBE SIZE Ø 10/13 AND 14/17 mm

Suitable for drying and storing of tubes. Autoclavable. Suitable for use in a water bath.

Standard colour blue.

Part No. 1001543 Group of 80 spikes for tubes of 10-13 mm \emptyset .

Part No. 1001544 Group of 50 spikes for tubes of 14-17 mm \emptyset .



REVERSIBLE TUBE RACK FOR MICROTUBES 0.2/0.5 AND 1.5/2 ml

Made from polypropylene with removable lid that fits on any side.

Alphabetic identification positions.

Face A for 168 micro tubes of 0.2 ml and 12 x 1.5 ml. Face B for 40 micro tubes of 0.5 ml and 12 x 1.5 ml. Standard colour yellow.

Part No. 1001545



REVERSIBLE TUBE RACKS FOR 0.5 - 1.5 AND 2 mi

Face A for 96 micro tubes of 0.5 ml.
Face B for 96 micro tubes of 1.5 to 2 ml.
Made from polypropylene with removable lid.
Alphabetic tube position identification.
Height 26 mm, with lid 50 mm. Width 115 mm. Length 250 mm.

Standard colour yellow.

Part No. 1001524



BOX TO STORE 100 CRYO VIALS AND 1.5 TO 2 ml microtubes

Made from polyethylene, with hinged, lid and pressure latch close.

Height with lid 57 mm. Width 141 mm. Length 151 mm. Standard neutral colour.

Part No. 1001525



BOX FOR 50 CRYO VIALS AND 1.5 TO 2 ml Microtubes

Made from polyethylene, with hinged, lid and pressure latch close.

Alphabetical grid tube location within the lid. Height with lid 55 mm. Width 80 mm. Length 140 mm. Standard neutral colour.

Part No. 1001526



STORAGE BOX FOR 96 TUBES OF 0.2 ml

Made from polypropylene, with hinged lid and pressure latch close.

Alphanumeric identification positions. Height with lid 30 mm. Width 90 mm. Length 130 mm. Standard colour yellow.

Part No. 1001527



BOX FOR STORING 12 X 10 mm ☐ CUVETTES

Made from Polypropylene, with hinged lid and pressure latch close.

Removable base.

Cuvette heights up to 60 mm high.

Height with lid 60 mm. Width 115 mm. Length 115 mm. Standard colour neutral.

Part No. 1001529



FREEZER BOXES FOR VIAL STORAGE

Made from polycarbonate.

Suitable for freezer or liquid nitrogen storage for temperatures between -196 °C to +121 °C.

Alphanumeric identification, with ventilation holes and drain. Pressure lid.

Part No. 1001713 Box of 25 vials.

Height with lid 55mm. Width 75 mm. Length 75 mm. Part No. 1001714 Box of 100 vials, Lid with hinge. Height with lid 55mm, Width 130mm. Length 130 mm.



COMECTA Chiller and cooler storage boxes



COMMON FEATURES

Specially designed for protecting and maintaining PCR* reagents, enzymes, bacteria, viruses and other biological samples cool or frozen during use. Also provides protection from temperature fluctuation, defrost cycles and freezer power failure.

Made from polycarbonate with a pre-filled chamber of non-toxic gel, complete with alphabetical identification grid in the lid.

Freezer temperature resistant down to -135 °C.

Tubes are isolated and have no contact with the cooling solution.

^{*} Note: PCR is a registered name of Hoffman-La Roche.



"OUICK FREEZE" CONTAINER

Ouick freeze container with the capacity for 12 tubes 0.5 ml or 2 ml tubes.

Unique reproducible freezer system for biological samples using ethanol samples of DNA and RNA.

It will maintain the interior temperature for up to 45 minutes after removal from a freezer.

Freezing speed:

2 ml solution of alcohol at -20 °C. 3 minutes.

2 ml solution of water 0 °C, 4 minutes.

Size (with lid): 95 high x 100 depth x 140mm width.

Part No. 5601050



MINI FREEZER CONTAINERS "COOLER 1051" AND "COOLER 1052"

Cooler 1051

Freezer container at 0 °C with the capacity for 12 tubes of 0.5 to 2 ml.

Alphanumeric matrix on the lid.

It will maintain temperature for up to 2 to 5 hours

Size (with lid): 95 high x 100 depth x 140mm width.

Part No. 5601051

Cooler 1052

Freezer container at 0 °C to -20 °C with a capacity for 32 tubes of 0.5 to 2 ml.

Alphanumeric matrix on the lid.

Double insulation body and lid that can maintain the internal temperature for a period of up to 2 hours.

Size (with lid): 105 high x 130 depth x 270 mm width.

Part No. 5601052



MINI FREEZER CONTAINERS "COOLER 1053"

Freezer container at 0 °C with the capacity for 12 tubes of 16/17 mm Ø and 15 ml centrifuge tubes. Alphanumeric matrix on the lid.

It will maintain temperature for up to 2 to 5 hours.

Size (with lid): 150 high x 140 depth x 190 mm width.

Part No. 5601053



CONTAINER "CRYO 1 °C COOLER"

Freezer container with constant reproducible progressive cooling rate of 1 °C/min with a capacity for 18 cryo tubes of 1.2 to 2 ml

Operation: fill the container with alcohol isopropanol (C₂H₈O) and place tube rack inside replace the lid and put into a freezer.

The container can be placed in a water bath for thawing.

Capacity of C₃H₈O = 250ml

Size (with lid): 86 high x 117 mm Ø.

Part No. 5601055



"ICE BUCKET"

Container with lid, made of double-bodied polystyrene of 2 mm thickness with thermal insulation that is chemically resistant, made from expanded polystyrene.

Ideal for maintaining samples submerged in ice for short time periods. Capacity 3-5 litres.

External dimensions: 19 height x 27 width x 27 cm depth. Internal dimensions: 17 height x 25 width x 25 cm depth.

Part No. 5601054



COMECTA Flake ice maker "COM-50", "COM-85" and "COM-150"



"COM-50" MODEL: PRODUCTION 58 kg-24 HOURS. "COM-85" MODEL: PRODUCTION 89 kg-24 HOURS. "COM-150" MODEL: PRODUCTION 142 kg-24 HOURS.

APPLICATIONS

For preservation and storage of analytic samples, biological tissues, cellular cultures and other applications that require maintenance of the temperature below ambient.

FEATURES

External case made of stainless steel.

Thermal isolated inside.

High capacity for flake ice production from running or purified

Tropicalized (Class T).

The installation of an anti-scale filter and periodic cleaning are advised in areas with

medium or high limescale content (hard water)

CONTROL PANEL

Main power switch.



MODELS	Código	Production Kg (24h.)	Capacity Kg (tank)	Height / Width / Dept cm	h Power supply	Power W	Weight Kg
COM-50	5020104	58	20	79 47 60	220V 50Hz	470	58
COM-85	5020105	89	20	79 47 60	220V 50Hz	550	58
COM-150	5020106	142	60	136 51 55	220V 50Hz	900	75

COMPLEMENT "ICE BUCKET"

See page 189.



Manual hidraulic press "PM-15"

MAXIMUM PRESSURE LOAD: 15 TONS

FEATURES

Compact and easy to use, designed for a maximum pressure load of 15 tons, especially for pressing in chemical research laboratories and materials for preparing ceramic composite. This machine has an integrated auto return hydraulic pump.

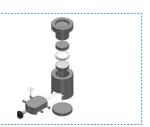
Tablets from 6.3mm to 19mm can be compacted with the MT matrix accessory, for KBR compression technique and fluorescence analysis works. Cylinder elevation of 0-25mm.

MODEL

Part No.	Max. Pressure tons		Width mm	n / Depth	Weight Kg	Max. Working area mm Height / Width / Depth
5810200	15	55	13	21	30	150 x 160 x 160

ACCESORIES

Part No. 5810201 MT Matrix 12.5mm MT Matrix 6.3mm Part No. 5810202 MT Matrix 19mm Part No. 5810203 Part No. 5810204 MT Matrix 3.2mm









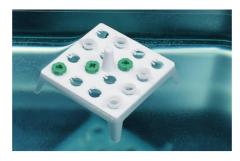
FREEZING CONTAINER

For sample freezing with liquefy gas (liquid nitrogen), liquids and solutions.

Spherical inside. Exterior made of AISI 304 stainless steel. Double body with thermal isolated PRTFE joint. Hit-resistant.

External measures: 14 high x 24cm wide. Capacity: 1.5 L. Weight Kg: 2,9.

Part No. 1001640



FLOATING TUBE RACK 1.5 AND 2 ml MICRO-TUBES

Made of polypropylene, with a support to hold microtubes. Ideal for constant temperature application. Capacity: 16 microtubes.

Dimensions: 4 high x 10 wide x 10 cm deep.

Part No. 1001342



THERMOMETER AND PIPETTE RACK

Made of polypropylene. No. of positions: 12 positions.

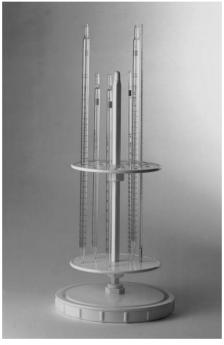
Part No. 1001314



PIPETTE RACK "CIRPIP"

Portable upright rack for pipettes and thermometers, made of PVC. No. of positions: 93 of various sizes. Stable heavy base with drain Weight 0.4 Kg.

Part No. 1001254



PIPETTE RACK "STABIL"

Pipette rack made from polyethylene for 28 pipettes or thermometers up to 14 mm Ø. Stable heavy base with drain and two adjustable height supports. Weight 1.5 Kg.

Part No. 1001466

SAMPLE CONTAINERS "CONTESEL"

Applications: designed for dispensing, storage or preservation of organic and inorganic samples. Polypropylene container and quick fit screw cap lid. Lid system with flap AQUISEL (international patent.) That allows the manipulation of the sample without having to remove the lid and maintains a seal. Dosing by means of an automatic or standard pipette. Vessel graduated to: 20, 40, 60, 80 and 100 ml, frosted screen for writing.

Includes aullet for pouring.

Comes complete with violet coloured lid valve.

Part No. colour capacity total quantity ml height cm 300

1001699 violet 100

CIRCULAR RACKS

Made of AISI 304 stainless steel.

138 mm Ø x 120 mm high, Suitable for the "Baher" and "Univeba" baths (see BATHS for more details).

Part No. 7000541 for 24 tubes up to 18 mm in \emptyset . Part No. 7004002 for 24 tubes up to 13mm in \emptyset .







SUPPORT AND DRAIN RACK FOR PIPETES "SOPPIP"

Made AISI 304 stainless steel. Holds up to 112 pipettes of different sizes. Part No. 1001223



PIPETTE RACK

Made of AISI 304 stainless steel. No. of places: 6 dosing pipettes of various sizes up to 28 cm in length. (See pages 220 - 221).

Part No. 1001215



TILTED SUPPORT RACK "SOP-INC"

Suitable for pipettes, hydrometers and thermometers rack, made of methacrylate. 6 positions.

Part No. 1000015

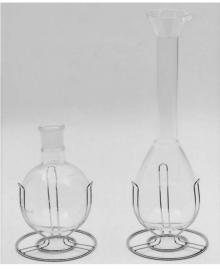


SUPPORT RACK FOR PIPETTE AID "COM-PIP"

Made of AISI 304 stainless steel.

No. of places: 6 dosing pipettes of various sizes.
(See page 220-221).

Part No. 1001702



KJELDAHL FLASK SUPPORT

Made of AISI 304 stainless steel with electrobright finish. Suitable for flasks up to 500 ml.

Part No. 1000002



ROUND BOTTOM FLASK SUPPORT

Made of moulded rubber (E.P.D.M.). Temperature resistance up to 100 °C. Specially designed with stepped surface to support different flask diameters. From 100 ml up to 10 litre capacity.

Dimensions: 50 mm high x 160 mm Ø.

Part No. 1000863



TABLE TOP OR WALL MOUNTABLE DRAIN RACK

Made of PCV coated wire. 640 high x 500 mm wide. With 79 positions, complete with drip tray. Part No. 1000481

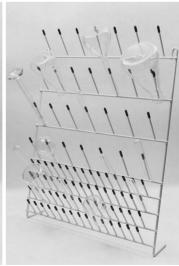


DRAIN RACK

Made of PCV coated wire. **32 positions.**300 high x 400 mm wide.
Part No. 1024132







88 positions. 620 high x 500 mm wide. Part No. **1024188**



WIRE BASKETS

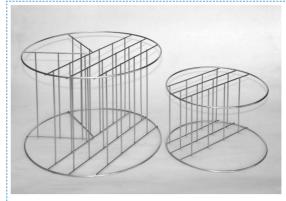
Made of AISI 304 stainless steel sheet with electro-bright finish. Designed to fit the Selecta autoclaves. (See page 53).

Part No.

220 Ø x 140 mm high. 1004771 1004772 220 Ø x 240 mm high. 1000495 265 Ø x 185 mm high.

Part No.

1000496 365 Ø x 265 mm high. 1000780 435 Ø x 205 mm high.

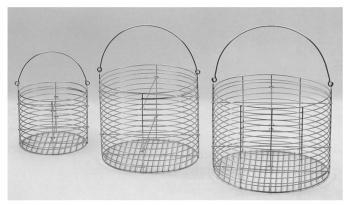


ACCESSORY

Basket dividers, stainless steel AISI304, electrobright finish.

For baskets, Part No. Part No.

1000495 1001217 4 compartment divider 1001218 6 compartment divider 1000496 1000780 1001222 7 compartment divider



WIRE BASKETS

Electropolished stainless steel AISI 304.

Dimensions Part No. 1025115

210 Ø x 180 mm high 1025121 150 Ø x 120 mm high 240 Ø x 180 mm high 1025124

With cross dividers.

1125115 1125121

1125124

Part No.



STERILIZATION DRUMS

Made from AISI 304 stainless steel. Designed to fit the Selecta autoclaves. (See page 53.)

Part No. Ø cm Height cm 1002418 28 1002419 35

1002420 28 18 Doesn't match Selecta autoclaves.



STERLIZER CAN FOR **PIPETTES**

Made from Stainless steel AISI 304.

Part No. height Ø mm mm 1000829 400 72 1001126 400 130

STERILIZATION CONTAINER FOR PETRI DISHES

Made of AISI 304 stainless steel. Complete with Petri dish rack for up to 120 mm Ø.

Models height / Ø No. of Part No. $\,\mathrm{mm}$ plates 1001127 260 / 130 10 1001128 400 / 130 18



PETRI DISH RACK

Made of AISI 304 stainless steel, with electrobright finish. For 10 dishes of 80 to

100 mm Ø. Part No. 1000259



PIPETTE BASKET

Made of AISI 304 stainless steel with electrobright finish. 90 mm Ø x 250 mm high.

Part No. 1000251



STERILIZATION CONTAINER FOR PIPETTES

Made from Stainless steel AISI 304. Lid interior and base lined with silicon to protect pipette end and tip.

Part No. height mm **⊿** mm 1001597 290 65 340 65 1001598



Burners, alcohol, butane, propane and natural gas



ALCOHOL BURNER
Screwcap jar with wick.
Capacity 120 ml.
Part No. 1001256



ALCOHOL BURNER

Chrome plated top with wick height control.
With lid and chain.
Capacity 85 ml.
Part No. 1001434



BUNSEN BURNER

With both gas and air regulator. Tube \emptyset exterior: 11 mm. Total height: 140 mm. Part No.

7000134 For butane/propane gas.7009133 For natural gas.



SIMPLE BUNSEN BURNER

Air regulator only, nickel plated. External tube $\emptyset:11$ mm. Total height: 130 mm. Part No.

7000044 For butane/propane gas. **7000937** For natural gas.



MEKER BURNERS

With gas and air regulator.

Model Small. External tube \emptyset at its maximum point: 22 mm. Total height: 175 mm. Part No.

7001108 For butane/propane gas.7001109 For natural gas.

Model Medium. External tube \emptyset at its maximum point: 27 mm. Total height: 185 mm.

Part No.
7001110 For butane/propane gas.

7001111 For natural gas.

Model Large. External tube Ø at its widest part:

Model Large. External tube Ø at its widest par 32 mm. Total height: 190 mm.
Part No.

7001112 For butane/propane gas.7001113 For natural gas.



TECLU BURNER

With air and gas regulator. External tube \emptyset : 13 mm. Total height: 180 mm. Part No.

7094519 For natural gas.



MEKER BURNER

With permanent flame. Gas and air control. External tube \emptyset at its widest point: 22 mm. Total height: 175 mm.

Part No.

7001106 For butane/propane gas.7001107 For natural gas.



NATURAL GAS BURNERS

With air and gas regulator.

With approved gas pressure connection 1/2" nut and olive, supplied as an accessory.

External tube Ø: 11 mm. Total height: 165 mm.
Part No. For gas Working Normal Weight

pressure power Kg 7001551 natural 18 mbar 0.69 kw 1.6

ACCESSORY

Gas tube with connections (see page 195).



BUNSEN BURNER WITH SAFETY GAS CUT OUT

With gas and air regulator

Designed for maximum laboratory safety.

Equipped with a flame detector that will shut off the gas supply within 20 seconds if the flame is extinguished. With tube connection.

Tube Ø ext.: 11 mm. Total height: 140 mm.

Part No.	Gas type	Pressure	Nominal
			power
7001546	butane	28/37 mbar	0.69 kw
7001547	natural	18 mbar	0.69 kw



BURNER FOR BUTANE GAS

Suitable for use with bottled gas "International Camping Gas". Approved following ACTA of the GENE-RAL LABORATORY ANALYSIS AND SERVICES FOR INDUSTRY. Manufactured in accordance with the "regulation for apparatus used with combustible gasses" decree 1651/1974. External tube Ø: 14mm. Direct regulated pressure. Nominal power 0.72 Kw at 1 bar. Part No. 7000666

ACCESSORIES



Wide flame burner head made of tin. Suitable for the "Camping Gas" burner.

Part No. 7003612



Tripod support with flat ring, fitted with a burner, suitable for "Camping Gas Internatio-nal" bottle.

Exterior Ring \emptyset : 140 mm. Interior Ring \emptyset : 110 mm. Part No. 7000489



BUNSEN BURNER WITH SAFETY GAS CUT OUT, NATURAL GAS

With gas and air regulator.

Designed for maximum laboratory safety.

Equipped with a flame detector that will shut off the gas supply within 20 seconds if the flame is extinguished. Tube connection of 1/2 inch. Supplied as an accessory. Tube Ø ext.: 11 mm. Total height: 165 mm.

 Part No.
 Gas type
 Pressure
 Nominal Weight power
 Kg

 7001539
 natural
 18 mbar
 0.69 kw
 1.6

ACCESSORY

Gas cable with connections, flexible coated stain-



less steel 100 cm long with 1/2 inch connection with quick fit and safety valve. Conforms to the UNE 60715 & BS669. Safety regulations.

Part No. 1001541



HIGH POWER BURNER

With air and gas regulators. Tube \emptyset ext. at its maximum diameter 21 mm. Total height 170 mm.

Part No. 7000225 Suitable for butane/propane. Part No. 7009223 Suitable for Natural gas.



BUNSEN BURNER

With air and gas regulators.

Ø ext. tube: 11 mm. Total height: 140 mm.

Part No. Gas type Pressure Nominal power

7000657 butane 28/37 mbar 0.69 kw **7000658** natural 18 mbar 0.69 kw Tube Ø ext. : 13 mm. Total Height: 170 mm.

Compliant with Spanish Royal Decree RD 919/2006

Part No.	Gas type	Pressure	Nominal
7000660 7000661	butane natural	28/37 mbar 18 mbar	power 1.14 kw 1.14 kw



BUNSEN WITH PERMANENT PILOT FLAME

Permanent flame. Total height: 150 mm. Part No.

1000875 For butane/propane gas (45/57 mbar). **1000876** For natura gas (18/25 mbar).



BUNSEN BURNER WITH CONICAL TUBE TECLU

With air and gas regulators. Total height: 150 mm.

Part No. Gas type Pressure Nominal power 7000663 butane 28/37 mbar 0.69 kw 7000664 natural 18 mbar 0.69 kw



BUNSEN J3000 BLUE UNIVERSAL

For Butane gas. Instant safety flame push button ignition incorporating a LOCK/ON mechanism that prevents accidental fires, Unit switches off when the users hand is removed. Regulation of flame intensity and flame color. Gas fill by a simple lighter gas fuel as used common gas lighters. Long life flint. Power by a 1.5 V battery. Flame temperature: 1300 °C.



APPLICATIONS

Microbiology, bacteriology, dentistry and for general use where a fine hot flame is required for fast heat and fusion.

Part No. 1001134



BURNER "MICROTORCH"

APPLICATIONS:

Used for soldering, dentistry, general laboratory use. Suitable for plastic moulds, glass and metal tubes. etc. Butane gas.

Portable with a removable bench top base. Microflame instant piezo electric start. Flame temperature controllable to 1300 °C. Refill using common gas lighter cartridge. Gas capacity: 26 g. Total time before refill: 2 hours.

Part No. 5000011

BLOW PIPES

Part No.

1000877 Butane gas.1000878 Natural Gas.

ACCESSORIES

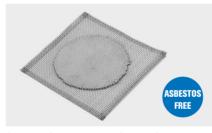
FLAME SPREADER BURNER HEAD



Stainless steel AISI 304.

Straight form.

Part No. 7003611 For tube of \emptyset 11 mm. Part No. 7003613 For tube of \emptyset 13 mm.



GAUZE IRON WIRE WITH CERAMIC FIBRE

Part No.

1087102 100 mm side. 1087122 120 mm side. 1087142 140 mm side. 1087162 160 mm side. 1087182 180 mm side. 1087202 200 mm side.

FLAME SPREADER BURNER HEAD



Straight form. Made of tin.

Part No. **7003612** For tube of Ø 11 mm. Part No. **7003614** For tube of Ø 13 mm.



TRIPOD STAND WITH RING TOP

Galvanised steel.

 Part No.
 Ø exterior ring
 Total height

 700808
 80 mm.
 210 mm.

 7008010
 100 mm.
 210 mm.

 7008012
 120 mm.
 210 mm.

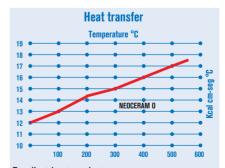
 (For variable height tripods see page 174).



CERAMIC PLATES "NEOCERAM"

Resistant to temperatures from -200 °C to 700 °C. Part No.

1000684 120 x 120 x 3 mm. 1000685 140 x 140 x 3 mm. 1000686 160 x 160 x 3 mm.



Excellent heat conductor.

20% better heat transfer compared to a conventional gauze ceramic.

High chemical resistance to aggressive compounds. Easy to clean and long lasting.



Infrared tip sterilizer "Sterilbio"

APPLICATIONS

Sterilization of culture tips, needles and small instruments. Incinerates organic material at 900 °C for 5/8 seconds.

FEATURES

Made from ceramic elements with a quality quartz tube interior. Does not need purged oxygen and can be used in anaerobic environments. Eliminates problems of aerosols and bacterial contamination.

Support at the side for 4 Kolle handles, needles, lancet or dissecting forceps etc.

MODEL

Part No.	Heigh	t/Width	/Depth	Ø/Le	ngth	Power	Weight
	(e.	xterior)	cm	(tube inte	erior) cm	W	Kg
3000788	20	13	18	1.4	15	110	1.5





COMECTA Hot Air gun "Salki 1500"

WORKING TEMPERATURE 400 °C AND 590 °C.

APPLICATIONS

Suitable for heating liquids, solids and gasses:

- Dry
- Soft solder
- Fusions
- Evaporation
- Curing adhesives
- Plastic moulds
- Softening surfaces
- Fast defrost
- Film drying R.X.
- Chromatography applications drying paper and elec-
- Heating moulds and drying dental moulds etc.

Industrial model with vertical angle support. Brushless motor.

Three positions:

- Position 0 stop.
- Position I temperature 400 °C.
- Position II temperature 590 °C.

MODEL

Part No.	Temperature °C	Power W	Weight Kg
5000750	until 590	1500	0.8



Burner head 75 mm. Part No. 5011148





Tube deflector. Surface 75 mm. Part No. 5014449

Diverse laboratory instruments

COMECTA Pocket Balance "Pocket Scale"

FEATURES

Capacity up to 200 g, measuring in g, oz and qty.

Digital LCD display.

Stabilization time ±3 seconds.

Tare by subtraction to maximum weight.

Piece counting function and automatic reset to zero.

Automatic calibration, external.

Batteries 3 x 1.5 V.

Lid to cover the weighing pan and operation menu.

MODEL

Part No.	Max. weight.	Precision	Height / Width / Deptl	n Width / Depth	Weight
	capacity g	±g	(exterior) mm	(plate) mm	Kg
5830024	200	0.1	24 74 120	74 71	0.13

Comes with protective cover.





DIAMOND POINT PENCILFor glass engraving.
Part No. 1001130



TUNGSTEN SCRIBE

For glass engraving, slides, ceramics, plastic etc. Retractable tip and pocket clip.

Part No. 1001674



GLASS TUBE CUTTER

For tubes with diameters up to 30 mm. Part No. 1000016



CORK PRESS

Model Crocodile shape. Part No. **6000070**





LABORATORY VIBRO-ENGRAVER SIGNOGRAPH-COM 25 DIAMOND

For engraving all types of glass, metal, plastic material, ceramic etc. Mains voltage 220-230 V. 50Hz. Power consumption: 25 W. Comes complete with a set of 5 engraving tips: Diamond, carbide, tempered steel and two for decorative work.

Part No. 1001129



WATER JET VACUUM PUMPS

Part No. Material Pressure Pump rate Aspiration 4000633 PVC 2 Kg 8 I/min 2.6 I/min 1 I/min 7000293 Metal 2 Kg 5 I/min 7000292 5 I/min 0.5 I/min Metal 2 Kg



BLOW PIPE

Student model. Total length: 250 mm. Part No. 1000595



MORTARS WITH PESTLE

Made of grey steel. Only suitable for dry products.

Part No. Ø Usable Height 1004713 130 mm 65 mm 1004715 150 mm 75 mm



CORK BORER SHARPENER

With a wooden handle, blade of tempered steel. Part No. 7000004

CORK BORER

Electrobrite finish. Electrobrite finish. Individual handle. Universal handle. Part No. Part No. 7000846 6 bores. 7000856 6 bores. 7000848 8 bores. 7000858 8 bores. 7008412 12 bores. 7008512 12 bores.



MINI CORK BORER

1001332 6 bores: 4, 4.9, 5.5, 6.4, 8 and 9.5 mm Ø.



PIPETTE FILLER, RUBBER BULB.

With three glass ball valves for filling, fine adjustment and empty. Accepts pipettes from 6 to 10 mm \emptyset .

Part No. 1001733



RICHARDSON RUBBER BULB

With net covered decompression bulb. For blowing out bench top automatic burettes.

Part No. 1001168





2. GOGGLES FLEXIBLE "IVYMEN 3000"

Ideal for general laboratory use.

Conforms to: EN-166.

Panoramic view. Prescription spectacles can be used underneath the

Made from transparent flexible plastic that moulds to the face. Held on by an stretch band. Indirect vents at the side prevent misting.

Part No. 5028196

1. SPECTACLES "IVYMEN 1000"

Ideal for general laboratory use. Conforms to: DIN 4646-47 and DIN 58211.

Safety Spectacles of one single lightweight lens, comfortable protection. With a wide panorama of 180°. Adjustable legs: length and angle.

Removable frame for easy cleaning. Style: Sporty.

Part No. 5028195

3. SPECTACLES "IVYMEN 2000"

Ideal for general laboratory use. Conforms to: DIN 4646-47 and DIN 58211

Safety spectacles of one single lightweight anti scratch lens. Perceptual panoramic vision of 180°. Can be use over normal prescription spectacles.

Indirect vents at the side of the legs prevent misting.

Part No. 5028193

GLOVES ANTI-ACID "SOLVEX-PLUS"

Conforms to CE standards.

Effective protection against chemical products and solvents, manufactured with a thick coating of strong durable Nitrile. Flexible with anti bacterial and fungal protection for hygiene and against skin irritations.

Length 32 cm. Universal fit.

Part No. 5000044



GLOVE HAND PROTECTOR AGAINST HEAT AND SPILLS

Adaptable silicon glove. Part No. **1001255**



GLOVES THERMAL "KEVLAR 400"

Conforms to: EN-388 and EN407

These gloves can withstand temperatures up to 400 °C. Manufactured from Kevlar terry knit, seamless, with double face fibres, ambidextrous fit, high level of protection against heat and flame. Length 25 cm, universal fit.

Part No. 5000041



APRON ANTI-ACID "DELNEO 125"

Conforms to: EN 342 and EN 511 standards. For effective protection against chemicals and solvents, made from high resistant Neoprene.

Part No. **5000045**



GLOVES THERMAL "KEVLAR 800"

Conforms to EN 388 and EN407 standards. For use with temperatures up to 800 °C, Made from terry knit, seamless, with double face fibres, high level of protection against heat and flame. Length 36 cm, universal fit.

Part No. 5000042



PROTECTIVE MASK "P3-SL"

Conforms to DIN-EN 149:2001 standards. High range auto-filtering mask, for particles, dust, mists and smoke use. Made of cellulose and with a filtration valve.

Part. No 5000046





TABLE TOP MAGNIFIERS WITH ILLUMINATION

Magnifiers with high quality lenses and double lateral illumination, plastic body.



Extendable and height adjustable angle poise, 89 cm With support base, large base with adjustable height made from epoxy coated metal.

Lens size cm Magnification Power Weight Kg 15 height x 19 width 3 x 2 x 9 W 3.5 Part No. **5310500**

and orientation.

Lens size cm Magnification Power Weight Kg 16 height x 19 width 3 x 2 x 7 W Part No. 5310506



VERNIER CALLIPERS WITH DIGITAL DISPLAY DIN 862

5 digits display.

AISI 304 Stainless steel with double measuring scale. Reproducibility: 0.01 mm or 0.0005 inches

1.5 V battery power.

Battery life: 1 year of continuous use. Comes complete with wooden case.

Part No.

5900601 Measuring range: 0 - 150 mm or 0 - 6". Measuring range: 0 - 300 mm or 0 - 12". 5900603



BIFOCAL AND MONOFOCAL "MAGNIFIER"

Magnifying glass bifocal "Magnifier"

Completely made of high impact plastic.

Magnification Part No. Ø Lens **Bifocal** 5310501 65 mm 3 x 5 x 5310502 90 mm 2 x 5 x

Magnifying glass monofocal "Magnifier"

Lens made of high quality ground crystal.

Rim made from chromed steel with plastic handle.

Magnification Part No. Ø Lens 5310503 50 mm 2 x 75 mm 5310504 2 x 5310505 100 mm 2 x



PALMER MICROMETER WITH DIGITAL DISPLAY DIN 862

5 digits.

Measuring range: 0-25 mm or 0-1 inch. Resolution: 0.001 mm or 0.0001 inches.

Precision: 0.002 mm. 1.5 V battery power. Battery life: 1 year of continuous use.

Comes complete with wooden case.

Part No. 5900602



AUXILIARY TABLES HEIGHT ADJUSTABLE FOR LABORATORY

Cabinet in a corrosive resistant epoxy coated.

Supplied with 4 lockable wheels for an easy transportation and 4 suction cups for a static clamping.

Specially designed to support different laboratory instruments (Ovens, furnaces, centrifuges, etc...).

5 adjustable heights: 72, 75, 78, 81 or 84 cm.

Part No.	Measurements	Load	Weight
	cm	Capacity Kg	Kg
1001781	75 width x 60 depth	120	25
1001780	100 width x 70 depth	150	29



MEASURING RANGE

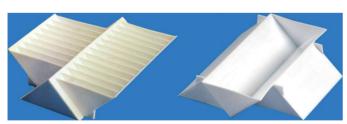
Made of polypropylene with silicon joints, for volumes up to 25 ml. Precise and safe, ergonomic design that allows filling and emptying without having to change the setting. Flexible thermoplastic seal against any type of burette. A button on the side empties the burette automatically. Easily dismantled and cleaned.

Part No.	Capacity	Identification color
1001131	0 to 2 ml	Blue
1001132	0 to 10 ml	Green
1001133	0 to 25 ml	Red



PIPETTE RACK "COM-PIP"

Made from AISI 304 stainless steel.
Capacity 6 pipettes of differing sizes.
Part No. 1001702



REVERSIBLE POLYPROPYLENE UNIVERSAL TRAY

Suitable for 8 and 12 channel micro-pipettes, 5 ml capacity per channel or 1 single capacity of 50 ml, graduated at 10-25-40 and 50 ml.





BRUSHES "COMCEP"

Made with natural bristles. Applications:

- 1 Pipettes and capillaries of 3 to 5 mm Ø. (Brush)
- 2 Graduated pipettes and tubes from 5 to 10 mm Ø. (Brush)
- 3 Haemolysis tubes 8 to 10 mm Ø. (Brush)
- 4 Test tubes and graduated flasks of 10 to 16 mm Ø. (Brush)
- 5 Burettes of 25 to 50 ml and tubes of 15 to 20 mm Ø. (Brush).
- 6 Cylinders, flasks and test tubes etc. from 20 to 32 mm Ø. (Fan Brush).
- 7 Erlenmeyer flasks, test tubes, flasks etc. from 25 to 45 mm Ø. (Fan Brush).
 8 Flasks, Erlenmeyer flasks and test tubes etc. 35 to 80 mm Ø. (Fan Brush).
- **9** Beakers cylinders and Erlenmeyers etc. from 50 to 100 mm Ø. (Brush).
- 10 Test tubes of 16 to 25 mm Ø. (Brush).
- 11 Test tubes of 16 to 25 mm Ø. (Fan Brush).
- 12 Flasks, round bottom flasks of 0 to 100 mm Ø.
- 13 Beakers of 50 to 250 mm Ø. (brush with handle).

Part No.	Style	Brist	de mm	Length total	Bristle
		Ø	lenght	mm	type
1001143	1	4	90	400	Goat hair
1001144	2	10	100	700	Goat hair
1001145	3	10	90	240	Pig bristle
1001146	4	15	100	320	Pig bristle
1001147	5	25	100	700	Pig bristle
1001148	6	30	100	300	Pig bristle
1001149	7	35	100	440	Pig bristle
1001150	8	55	100	440	Horse hair
1001151	9	80	130	700	Horse hair
1001333	10	25	130	350	Pig bristle
1001334	11	25	100	320	Pig bristle
1001335	12	110	450	450	Nylon
1001336	13	40	250	400	Nylon



POLYCARBONATE CONICAL FLASKS

DURABLE,

CAPACITY 250 ml

Rigid, transparent, autoclavable, unbreakable, reusable.

Density: 1.20 g/ml.

Temperature resistance from -135 °C to +135 °C.

Excellent chemical resistance including acids. Exceptions chemical that attack

polycarbonate. Two models with or without screw-top, PP caps included.

Part No.	Capacity	PP cap	Specific
	ml		weight
5310100	250	Not	1.2
5310101	250	Yes	1.2

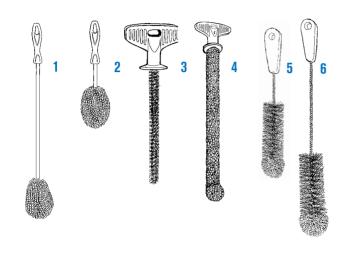


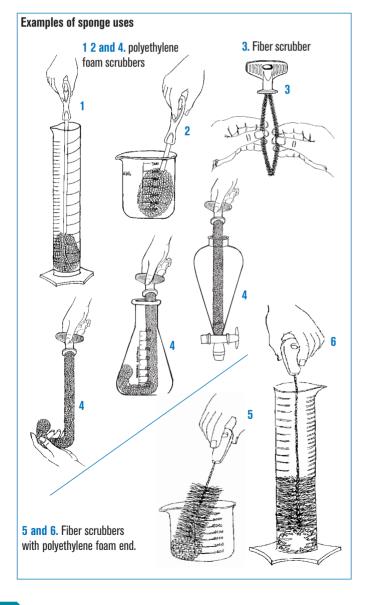
Laboratory sponges and fiber scrubbers

Features

Designed specially for cleaning plastic and glass items.

Made from polyethylene foam that is durable and long lasting (20 times more than a sponge or brush.) Do not absorb water, easily cleaned with hot or cold water.







Models

1. Used for all types of tubes and cylinders such as: test tubes distillation tubes, thermal flasks, cryogenic vessels, measuring cylinders etc.

Nº	Part No.	Sponge width	Sponge length	Total length
		mm	mm	mm
1	1001435	70	100	480

2. Used for cleaning short vessels such as: jars, beakers, etc.

N^o	Part No.	Sponge width	Sponge length	Total length
		mm	mm	mm
2	1001436	70	100	250

3. Scrubber suitable for all types of assay tube up to 25 mm \emptyset . Adjustable width.

N^{o}	Part No.	Sponge width	Sponge length	Total length
		mm	mm	mm
3	1001437	22	170	220

4. Suitable for all types of tubes and vessels including Conical flasks, etc. Very flexible, can be used in vessels with small necks, such as separating funnels, by simply pressing down the scrubber that is sufficiently flexible to take the internal shape and also be easily extracted.

N^o	Part No.	Sponge width	Sponge length	Total length
		mm	mm	mm
4	1001438	20	380	440

5. Fiber scrubber with brush polyethylene at the end, suitable for cleaning flasks, culture jars and vessels in general.

N^{o}	Part No.	Sponge width	Sponge length	Total length
		mm	mm	mm
5	1001439	50	140	300

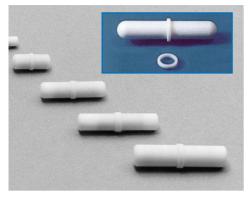
Fiber scrubber with brush polyethylene at the end, suitable for any kind of vessels cleaning, test-tubes, culture jars and flasks in general.

oloui	oroannig, toot taboo, cartaro jaro ana naono in gonoran					
N^o	Part No.	Sponge width	Sponge length	Total length		
		mm	mm	mm		
6	1001440	50	180	500		



Stirrer bars and propellers

TO CHOOSE THE CORRECT STIRRER BAR: THE LENGTH SHOULD BE APPROX. 2/3 OF THE DIAMETER OF THE VESSEL BEING USED.



STIR-BARS FOLLOWERS FOR MAGNETIC STIRRERS.

Encased in PTFE with pivot ring, temperature resistant to +275 °C.

Part No.

i ui t ivo.		
1000009	6 Ø x 10 mm long	without pivot ring.
1000012	4 Ø x 12 mm long	without pivot ring.
1000019	7 Ø x 20 mm long	with pivot ring.
1000032	8 Ø x 32 mm long	with pivot ring.
1000039	8 Ø x 40 mm long	with pivot ring.
1000045	10 Ø x 45 mm long	with pivot ring.
1001061*	12 Ø x 75 mm long	with pivot ring.
1001062*	16 Ø x102 mm long	with pivot ring.
1001063*	16 Ø x127 mm long	with pivot ring.
1001064*	19 Ø x150 mm long	with pivot ring.

^{*} With pivot ring for large volumes.



CONCENTRIC STIR-BAR WITH BEAKER COVER "CENTRIMAN"

Encased in PTFE with an adjustable axis bar made of AISI 304 stainless steel. Suitable for applications with volumes of 100 to 2000 ml.

Soft start stirring and adjustable height prevents the stirbar jumping inside the vessel.

Conical fitting lid of polypropylene with excellent chemical and thermal properties that resists temperatures up to 160 °C. The lid has an auto-lubricating central axis hole with two lateral air displacement holes.

Part No.

1000900 Concentric stir-bar with conical fitting lid for beakers volumes of 100 ml to 500 ml. Length

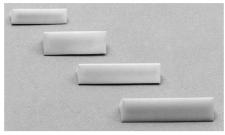
32 mm.

Beaker capacities of 500 ml up to 1000 ml. 1000901

Stir-bar length 50 mm.

Beaker volumes of 1000 ml up to 2000 ml. 1000902

Stir-bar length 55 mm.



TRIANGULAR STIR-BAR "TRIMAG"

Encased in heat resistant PTFE of temperatures up to 275 °C. useful for "dissolving solids" and stirring silts. Liquids flow upwards as well as sideways. Quiet with excellent stability. Suitable for flat bottomed vessels.

Part No.

1000536 9 side x 35 mm long. 1000538 12 side x 50 mm long. 14 side x 40 mm long. 1000537 1000539 14 side x 55 mm long.



STARHEAD STIR BAR

Circular, encased in heat resistant PTFE for temperatures up to

°C. 275 Useful tubes,matrix flasks and round bottom vessels.

Part No. 25 Ø x 15 mm high. 1000790 1000791 40 Ø x 17 mm high.



BOX OF 17 ASSORTED STIR BARS

Box with 17 assorted stir-bars encased in temperature resistant PTFE for temperatures up to 275 °C. Contents:

1 stir-bar with pivot ring 6x10 mm.

1 stir-bar with pivot ring 4 x12 mm.

1 stir-bar with pivot ring 7x20 mm.

2 stir-bars with pivot ring 8x32 mm.

2 stir-bars with pivot ring 8x40 mm.

2 stir-bars with pivot ring 10x45 mm.

1 triangular stir-bar of 9x35 mm.

1 triangular stir-bar of 14x40 mm.

1 triangular stir-bar of 12x50 mm.

1 triangular stir-bar of 14x55 mm.

1 stir-bar Rotor-Pat of 11x35 mm.

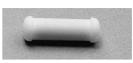
1 oval stir-bar of 16x30 mm.

1 oval stir-bar of 20x40 mm.

1 star head stir-bar of 20x15 mm.

1 star head stir-bar of 40x17 mm.

Part No. 1000487



STIR BAR "ROTOR-PAT"

Encased in PTFE useable up to temperatures of 275 °C.

Excellent stability with strong vortexing turbulence, useful for round bottom or convex bottom flasks. Part No.

1000001 10 Ø max. x 32 mm long.



OVAL STIR-BARS

Encased in PTFE for temperatures up to 275 °C. Can be used in all types of vessel and recommen-

ded for round bottom flasks. Part No.

1000788 16 Ø x 30 mm long. 1000789 20 Ø x 40 mm long.



FLOATING MAGNETIC STIR-BAR "IMANFLOTER"

Encased completely in PTFE. Dismountable structure, autoclavable. Designed specifically for low constant speed stirring. Recommended for tissue culture applications.

The floating conception of the Imamfloter minimises the grinding effect of cell damage as there is no friction on the bottom of the flask.

Medium speed levels prevent the IMANFLOTER from jumping within the vessel.

Stir bar length Part No. Total length 1000897 50 mm. 39 mm. 1000898 60 mm. 45 mm.



STIR-BAR RETRIEVER

Flexible, encased in PTFE.

Part No.

1000020



OVERHEAD STIRRER ACCESSORIES "RZR"



STIRRING SHAFTS WITH ROTORS

Shaft with AISI 304 stainless steel rotor. Shaft: 7mm Ø.

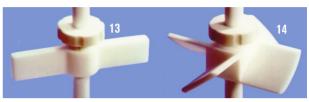
Part No.	Rotor type	Ø shaft mm	Total length mm	Features
6002891	1	90	400	Double fly vane
6002892	2	60	400	Fly vane
6002893	3	50	400	Fixed blade
6002894	4	50	400	Double cross vane
6002895	5	58	400	Helix
6002896	6	70	450	Six hole paddle
6002897	7	70	450	Three hole paddle
5050921	8	46	400	Radial turbine
5050932	9	45	400	Turbo helix 45 mm Ø
5050933	10	66	400	Turbo helix 66 mm Ø



SHAFTS WITH PTFE PADDLES

Shaft of 8 mm Ø.

Part No.	Rotor type	Ø shaft mm	Total Length mm	Features	Speed range r.p.m.
5050934	11	50	500	Helix PTFE	500
5050935	12	80	500	Anchor PTFE	500



ADJUSTABLE HEIGHT SHAFT STIRRERS

Shafts made of AISI 304 stainless steel coated in PTFE and PTFE stirrer paddles. Shaft: 7 mm \emptyset . Adjustable height paddles using a locking thread.

Can be used with differing paddles on the same shaft to create a multiple mixing action.

Part No.	Rotor type	Ø shaft mm	Total Length mm	Features	
5050936	13	70	400	Shaft PTFE	
5050937	14	40	400	Helix PTFE	
5050938	Shaft PTFE Spare or additional paddle for multiple stir effect				
5050939	Helix PTFE Spare or additional paddle for multiple stir effec				









- Shafts with rotors made from AISI 316Cb stainless steel. Shaft: 10 mm Ø.
- Shaft made from AISI 316Cb stainless steel with POM plastic rotor. Shaft: 10 mm \emptyset .

Part No.	Rotor type	Ø shaft mm	Total Length mm	Features	Speed range r.p.m.	
5050950	15-S	60	500	Doble cone-S Stainless	200 - 800	
5050951	16-M	80	500	Triple cone-M Stainless	200 - 700	
5050952	17-M	80	500	Triple cone-M Plastic	200 - 700	
5050953	18-L	120	500	Triple cone-L Stainless	120 - 500	
5050954	19-L	120	500	Triple cone-L Plastic	120 - 500	

VISCO-JET®

A suitable system for all types of stirring.

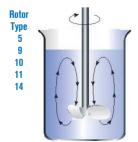
Dynamic stirring with turbulent flow on vessel walls and bottom.

Homogenised liquids and fluids of low viscosity.

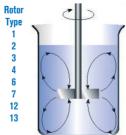
The fluid is aspirated by the widest part of the cone and is expulsed by acceleration from the smaller \emptyset , creating in the middle a turbulent effect; prevents the formation of foam, clots, aeration and heating up of the sample, degasses the medium being stirred.

Reduces the vortex formed, for short stir periods.

Graphic effect of the incident fluid flow using differing paddle forms: paddle, helix, turbine and conical Visco-Jet®



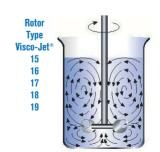
Axial flow, diagram showing the agitation flow. Representative of rotors with blades angles of 90° in relation to the stirring axis. (Rotor type; Helix).



Radial flow, diagram showing the agitation within the liquid medium. Representative of rotors such as paddles and anchors that run parallel to the stirring axis



Radial flow, diagram showing the agitation within the liquid. Representative of radial turbine rotors that run parallel to the stirring axis.



Dynamic radial flow, diagram showing the principal of agitation through a cone within the liquid. Representative of the Visco-Jet*. Rotors. Excellent results for minimum power consumption.

Sterile stoppers



Features

Designed for microbiology and cell culture applications.

Made from very flexible cellulose, tapered to fit most sizes of: Erlenmeyer, matrix flasks and tubes.

Sterile to 200 °C.

Permeable to air.

Transpirable.

Hermetically adjustable by pressing on the top of the glass vessel.

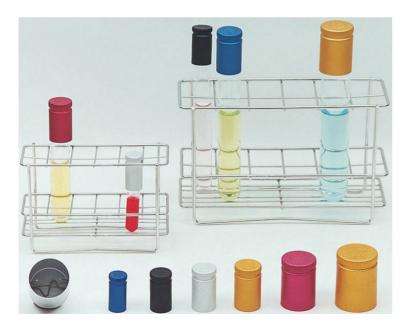
RANGE OF SIZES

For Ø of 9 to 11.5 mm. Part No. 1001478
For Ø of 12.5 to 14.5 mm. Part No. 1001479
For Ø of 13.5 to 15.5 mm. Part No. 1001480
For Ø of 17.5 to 18.5 mm. Part No. 1001481
For Ø of 18 to 22 mm. Part No. 1001482
For Ø of 25 to 27 mm. Part No. 1001483
For Ø of 28 to 31 mm. Part No. 1001484
For Ø of 31 to 35 mm. Part No. 1001485
For Ø of 36 to 42 mm. Part No. 1001486
For Ø of 44 to 48 mm. Part No. 1001487



Caps for biological culture tubes "Sero-Tap"

Made of anodised aluminium with internal AISI 304 stainless steel spring inside the cap. Not hermetically sealed. Autoclavable at 1 bar.





Made of anodised aluminium with internal AISI 304 stainless steel spring inside the cap. Not hermetically sealed. Autoclavable at 1 bar.

For tubes	Part No.	For tubes
Ø 12 - 13 mm		Ø 19 - 20 mm
Colour Blue	1019201	Colour Blue
Colour Silver	1019202	Colour Silver
Colour Gold	1019203	Colour Gold
Colour Garnet	1019204	Colour Garnet
Colour Black	1019205	Colour Black
For tubes	Part No.	For tubes
Ø 15 - 16 mm		Ø 24 - 26 mm
Colour Blue	1024261	Colour Blue
Colour Silver	1024262	Colour Silver
Colour Gold	1024263	Colour Gold
Colour Garnet	1024264	Colour Garnet
Colour Black	1024265	Colour Black
For tubes	Part No.	For tubes
Ø 17 - 18 mm		Ø 28 - 30 mm
Colour Blue	1028301	Colour Blue
Colour Silver	1028302	Colour Silver
Colour Gold	1028303	Colour Gold
Colour Garnet	1028304	Colour Garnet
Colour Black	1028305	Colour Black
	Ø 12 - 13 mm Colour Blue Colour Silver Colour Gold Colour Garnet Colour Black For tubes Ø 15 - 16 mm Colour Blue Colour Silver Colour Gold Colour Garnet Colour Black For tubes Ø 17 - 18 mm Colour Blue Colour Silver Colour Gold	Ø 12 - 13 mm Colour Blue 1019201 Colour Silver 1019202 Colour Gold 1019203 Colour Garnet 1019204 Colour Black 1019205 For tubes Part No. Ø 15 - 16 mm 1024261 Colour Blue 1024262 Colour Gold 1024263 Colour Garnet 1024264 Colour Black 1024265 For tubes Part No. Ø 17 - 18 mm 1028301 Colour Silver 1028302 Colour Gold 1028303 Colour Garnet 1028304





POLYPROPYLENE TOPS FOR CULTURE TUBES "BACTI-CAPS"

General features:

Adaptable to the tubes by three flexible internal flaps that hold onto the edge of the tube, not a hermetic seal, for minimal sample evaporation.

Highly resistant to culture media, acids, alkalis, alcohol and ether.

Easy to clean, can be sterilized at 121 °C (1 atm, vapour pressure).

Not suitable for dry sterilization.

Come in 5 colours:

YELLOW, BLUE, WHITE, RED and GREEN.

Part No.	For tube Ø 12 - 13 mm	Part No.	For tube Ø 15 - 16 mm
5726013	Yellow Colour	5726016	Yellow Colour
5726113	Blue Colour	5726116	Blue Colour
5726213	White Colour	5726216	White Colour
5726413	Red Colour	5726416	Red Colour
5726513	Green Colour	5726516	Green Colour
Packet of 10	0 units.	Packet of 10	00 units.

Part No.	For tube Ø 18 - 19 mm
5726019	Yellow Colour
5726119	Blue Colour
5726219	White Colour
5726419	Red Colour
5726519	Green Colour
Packet of 10	00 units.

Part No.	For tube Ø 24 - 25 mm
5726025	Yellow Colour
5726125	Blue Colour
5726225	White Colour
5726425	Red Colour
5726525	Green Colour
Packet of 1	00 units.

Part No.	For tube Ø 37 - 38 mm
5726238	White Colour

Boxes of 25 units



WEIGHING BOATS "ACCU-WEIGH"

Anti-static, Suitable for weighing with reproducible tare weight. Free from contaminants, Wide range of sizes.



General features:

Made from high impact polystyrene with a flat base, round edge, smooth surface, contamination free and hydrophilic.

Flexible and easy to manipulate, suitable for liquids and solids.

Supplied in two forms:

- Diamond, black or white colours.
- Rectangular, white colour.

Part No.	Shape	Capacity ml	Externa Height	al dimensi Width	ons mm Depth	Weight g	Colour	Quantity
5726004	Diamond	5	3.8	31	54	0.25	White	100 units
5726005	Diamond	5	3.8	31	54	0.25	Black	100 units
5726006	Diamond	30	13.5	55	85	1.00	White	100 units
5726007	Diamond	30	13.5	55	85	1.00	Black	100 units
5726008	Diamond	100	20	92	132	2.6	White	100 units
5726009	Diamond	100	20	92	132	2.6	Black	100 units
5726010	Rectangular	7	8.5	44	44	0.65	White	100 units
5726011	Rectangular	100	24	80	80	2.2	White	100 units
5726012	Rectangular	250	24	134	134	6.1	White	100 units







ALUMINIUM DISHES

Pressed with crenulated edge.

No static.

Withstands temperatures up to 450 °C.

Can be used as a lid by mounting one on top of another.

Ideal for sample testing of solids, humidity, mixtures of emulsions and moisture determinations by weight loss.

Suitable use as a weighing boat, cooling or evaporation of samples. Single use and disposable.

Part No.	Thickness mm	Height. / Ø (usable) mm	Quantity
5726000	0,2	5 42	packet of 112 units
5726001	0,2	10 57	packet of 110 units

COMECTA Graduated jars

FEATURES

Graduated and stackable jars. Made of natural colour transparent polypropylene. Graduation in liters and ml. Resistant to chemical products as well as high temperatures (121 °C for 20 minutes)

MODELS

Part No.	Capacity ml
8000028	500
8000025	1000
8000026	2000
8000027	3000

COMECTA Frasco lavador

FEATURES

Bottles made of translucent polyethylene of natural colour, with lid and outlet tube of different colours to choose. Wide neck for an easy filling. Capacity of 500ml and numerical graduation every 100ml..

MODELS

Part No.	Colour	Capacity ml
5113640	Neutral	500
5113644	Red	500
5113646	Blue	500
5113641	Yellow	500

10 units are supplied.

Self-sealing parafilm ® M













APPLICATIONS

Parafilm [®] M, is ideal for laboratories because it is a thermoplastic, self-sealing film that enables to cling even to irregular surfaces, culture tubes, flasks, Erlenmeyers, bottles, Petri capsules and any kind of recipients with an adequate sealing, protected against moisture loss, spillage, pollution or evaporation.

FEATURES

Parafilm $^{\circledR}$ M, is a translucent waxy polyethylene film of 127 μ m width which slowly stretches to about three or four times its original length.

PROPERTIES

It is resistant to acids, gases and alkaline solutions as well as methanol and many common reagents. It resists operating temperatures from -45 $^{\circ}$ C to 50 $^{\circ}$ C. It can be sterilized by using radiation techniques as hydrogen peroxide.

MODELS

Part No.	Roll width mm.	Roll length m
1012201	50	75
1012202	100	38
1012203	100	75

ACCESSORIES

Paraffin dispenser $^{\circledR}$ made of blue ABS plastic for 50 and 100 mm. width Parafilm $^{\circledR}$ rolls, with built-in cutter

Capacity: One or two 50 mm. rolls or one 100 mm. roll.

Part No: 1012200



GLAZED PORCELAIN, RESISTANT TO THERMAL SHOCK UP TO 1050 $^{\circ}$ C. BETTER CHEMICAL AND ACID RESISTANCE COMPARED TO GLASS. INCOMPATIBLE WITH HYDROFLUORIC ACID AND ALKALI SALTS.



GLAZEN PORCELAIN TRAVS

ULALLD	OHOL	LAIN I	IIAIO		
Part No.	Height	Length	Base	Width	Base
	mm	mm	length mm	mm	width mm
5310001	15	50	42	28	17
5310002	15	60	52	30	20
5310003	18	87	80	60	50
5310004	18	120	110	60	45



GLAZED PORCELAIN EVAPORATION BASINS. ROUND BOTTOM WITH SPOUT

HOURD BOTTOM WITH OF COT				
Part No.		Capacity	Length	Ø exterior
		ml	mm	mm
	5310005	35	25	60
	5310006	60	30	74
	5310007	100	35	90
	5310008	300	52	126
	5310009	500	58	168



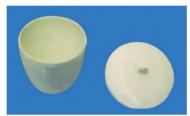
FLAT BOTTOM CRUCIBLE WITH HANDLE AND **SPOUT**

Part No.	Capacity	Height	Ø Top	Ø Bottom
	ml	mm	mm	mm
5310010	50	34	60	36
5310011	100	45	80	52
5310012	200	52	96	56
5310013	300	62	110	66
5310014	500	70	132	80



SPATULA SPOON GLAZED

Part No. Total Length mm 5310022 140



CRUCIBLES MEDIUM HEIGHT WITH GLAZED LIDS

	UIIUUIDLI	LO IVILDIUI	VI IILIUII	I WIIII ULAZ	TED FIDS
Part No.		Capacity	Height	Ø Bottom	Ø Top
		ml	mm	mm	mm
	5310015	15	30	21	35
	5310016	25	36	23	40
	5310017	50	46	30	53
	5310018	100	57	34	63



CRUCIBLES, LOW FORM WITH LIDS, GLAZED

Part No.	Capacity	Height	Ø Bottom	Ø Top
	ml	mm	mm	mm
5310019	15	23	19	43
5310020	25	27	24	47
5310021	50	38	28	59



MORTAR AND PESTLE. WITH SPOUT. UNGLAZED INTERIOR AND PESTLE

		,	0. 00., 0			
Part No.	Capacity	Length	Ø Bottom	Ø superior	Handle	Ø Pestle
	ml	mm	mm	mm	length mm	mm
5310023	100	45	60	100	110	30
5310024	300	62	80	130	140	37
5310025	500	74	90	160	170	42
5310026	1000	90	114	216	200	48



COMBUSTION BOATS, **UNGLAZED**

Part No.	Height	Width	Depth	Exterior
	mm	mm	Width mm	length ml
5310027	10	15	9	95

AGATE MORTAR AND PESTLE

Suitable for grinding and mixing, medium and hard substances.

Very resistant to abrasions and contamination.

Hardness: 7 Mohs scale.

Compression resistance: 110 Kg/mm² Breaking resistance: 210 Kg/mm²

Mortar and pestle polished externally and internally.

Models	Capacity	Ø / Base	Dimensions
Part No.	ml	(interior) mm	(exterior) mm
5310029	15	45 11	60
5310030	30	65 16	80
5310031	70	80 24	100
5310032	140	100 30	120



SPARES		
Pestle		
Part No.	For Mortar Part No.	Handle
5310033	5310029	

Pai e length mm 53 77 95 5310034 5310030 5310031 5310035 100 5310032 5310036 130

GREY IRON MORTAR WITH PESTLE

In grey iron.

Part No. Ø usable Height 1004713 130 mm 65 mm 1004715 150 mm 75 mm



COMECTA Chairs for laboratory



FEATURES

Chairs for laboratory with adjustable height of 60 to 80cm. Seat made of polyurethane foam. Available with or without wheels and in aluminium or chromed.

MODELS

Part No.	Ø base cm	Made in	Wheels	Adabtable weight cm
5609601	40	Aluminium	Yes	60 to 80
5609602	40	Chromed	Yes	60 to 80
5609603	40	Aluminium	No	60 to 80
5609604	40	Chromed	No	60 to 80



COMECTA Transport Refrigerator HJ-1 DESIGNED TO TRANSPORT AND PRESERVE LABORATORY BIOLOGICAL SAMPLES.

MEDICAL DIRECTIVE CERTIFICATE: CLASS 1-93/43 EEC

FEATURES

Strap and handles for transportation.

Opening on both sides.

Supplied with 10 packs of cooling gel. Easy access by opening at the top. Extra aluminium insulation.

Integrated thermometer with LCD screen for reading the temperature.





MODEL

Part No.	Height / Width / Depth	Height / Width / Deptl	n Capacity	Capacidad	Weight	Weight
	Interior cm	Exterior cm	litres without gel	litres with gel	without gel Kg	with gel Kg
5601057	25 33 17	32 39 27	14	4.2	4.5	9.8

COMECTA Sealer "305-C"

FEATURES

Sealer for any type of thermo-plastic material up to 0.4 mm thickness.

Easy to use: Pressure and release.

Manual cutting by slip cutting edge.

Energy saving system by a micro-switch, activated only when the sealing arm is in place.

Heat impulse for only 0.2 to 1.3 seconds.

Time controll according to the thickness of plastics to

A LED and audible beep are activated when the seal is complete.



MODEL

Part No.	Seal Width mm	Maximum seal length mm	Maximum plastic thickness mm	Seal time seconds	Height / Width / Depth (exterior) cm	Power W	Weight Kg
5800042	5	300	0.4	of 0.2 to 1.3	19 48 8.2	1100	5.2

Supplied complete with 2 heaters, 2 PTFE heater covers and cutting blade.

ADDITIONAL SPARES: Maintenance kit 305-C: 2 heaters, 2 PTFE heater covers and cutting blade Part No. Part No. 5800044

COMECTA Sealer "455"

HIGH THROUGHPUT SEALER.

FEATURES

Ideal for large size samples.

Sealer for any type of thermo-plastic material up to 0.8 mm thickness.

Easy to use by pressing a foot pedal which enables to have the hands free in order to manipulate the bag. Includes a platform of 45 cm wide x 12 cm depth to support the sample. This platform is adjustable in height up to 19.5 mm to adapt different volumes.

Energy saving system by a micro-switch, activated only when the sealing arm is in place.

Heat impulse for only 0.2 to 2.2 seconds.

Time controll according to the thickness of plastics to be seal.

A LED and audible beep are activated when the seal is complete.

Replaceable PTFE anti stick coated heaters. The pressure of the pedal can be adjusted.

Includes a recoil mains cable at the back of the unit. All metal robust construction.

Adjustable base level.





MODEL

Part No.	Seal Width	Maximum seal	Maximum plastic	Seal time,	Height / Width / Depth	Power	Weight
	mm	length mm	thickness mm	seconds	(exterior) cm	W	Kg
5800047	5	450	0.8	of 0.2 to 2.2	90 54 38	1000	29

Supplied complete with 2 heaters and a fuse.

ADDITIONAL SPARES: Maintenance kit 455: 2 heaters and fuse. Part No. 5800049

COMECTA Portable sealer "150-C"

Plastic sealer, PE, PP and thermoplastic material such as cellophane, Aluminium covered paper and craft paper up to 0.6 mm thickness.

Easy to use pressure clamp.

Parallel seal for both sides of the bag.

Superior heaters covered in PTFE that produces a parallel hermetic seal.

Two temperature selection switch 120 °C and 180 °C





MODEL						
Part No.	Seal Width mm	Maximum seal length mm	Maximum plastic thickness mm	Height / Width / Depth (exterior) cm	Power W	Weight Kg
5800038	14	150	0.6	9 17 18	50	0.6



Vacuum sealer "Sealcom-V"

OPTIMUM QUALITY SEAL AND PRESERVATION. SUITABLE FOR SEALING SOLIDS AND LIQUIDS.

APPLICATIONS

Vacuum seal for any type of thermoplastic material: polyethylene, polypropylene, polyester, aluminium etc. Ideal for sealing solids, liquids, powders, granules, seeds, fruit, food, medical apparatus, forensics, chemical products, sludge samples, mud, cores, etc. Prevents the oxidation, mould and decomposition. Prolongs the quality, durability and freshness of items to be stored.

FFATURES

Bench top. Stainless steel AISI 304 robust construction with transparent lid. Easy to use and program. After closing the door the complete process is automatic. Operates using a oil vacuum pump (type AV-30 or N32).

CONTROL PANEL

Vacuum gauge with scale 0 to -0.1 Mpa.

Sealer temperature adjustment, high, medium or low.

Push button emergency stop.

LED indicator of operation.

Digital selection and display of the following parameters:

- Vacuum time 0-99 seconds.
- Seal time 0 to 9.9 seconds
- Discharge time 0 to 9.9 seconds



MODEL	Part No.	Seal Width mm	Max. seal length mm	Pump rate m³/h	Vacuum limit Mpa	Height / Width / Depth (usable) cm	Height / Width / Depth o (exterior) cm	Power W	Weight Kg
SEALCOM-V	4100050	10	260	10	-0.1	5 28 39	36 35 52	370	35

Supplied with a maintenance kit that includes 2 heaters, 3 PTFE heater covers. 1 lid seal and a 250 ml bottle of oil.

ADDITIONAL SPARES

Maintenance kit for Sealcom-V: 2 heaters, 3 PTFE heater covers. 1 lid seal. Part No. 4100051 Vacuum pump oil: 1 litre bottle (Type AV-30). Part No. 4100052



Bag sealer "S-400-B"

SUITABLE FOR POLYPROPYLENE-POLYESTER STERILIZING BAGS WITH A PAPER BASE.

FEATURES

CONTROL PANELS

Metal epoxy covered case. Pressure sealer. Manual cut. Illuminated mains switch.

Lamp "ON" when the thermostat has reached the pre-set working temperature.

MODEL

Part No.	Seal Width	Maximum seal	Height / Width / Depth	Power	Weight
	mm	length mm	(exterior) cm	W	Kg
4100047	12	300	12 35 21	100	4,8

SEALING MACHINE ACCESSORIES

Rolls of paper for sterilisation "Polisteril"

Paper base polypropylene and polyester bags showing differing ink prints of sterilized items.

Part No.	Bag width cm	Bag length m
4100075	7,5	100
4100100	10	100
4100200	20	100





SEE A FULL RANGE OF BAG SEALERS FOR STERILIZATION AND ACCESSORIES ON PAGE 68 AND 69

Automatic bag sealer "Seal-Com 2". Part No: 4100044



Bag sealer "Seal-1000". Part No: **4101712**





RECTANGULAR HOTPLATE "PLACFIN"



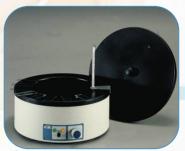
KOLLE MANDLES LOOPS
Infrared sterilizers.



LABORATORY LIGHT



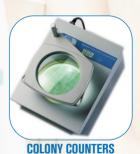
PIPETTE DISPENSERS AND AUTOMATIC DISPENSERS



PARAFFIN WAX FLOATING BATHS



BLOOD AND CELL COUNTERS



OULDIN' OUDIN'ELIN

Instruments for dissection and slide boxes
Magnifier screen
Hand microtome
Wax dispenser and paraffin wax floating
Cooling plates and baths
Stackable anatomy - Histology
Dispensing pipettes
Digital counter for blood and colony counter
Ultraviolet sterilizer and westergren supports

pages 213 to 216
page 216
page 217
page 217
pages 217 to 219
page 219
pages 220 to 222
pages 223 to 224
page 224



1 Scissors universal "Multi purpose" with a serrated/notched blade. Suitable for cutting hard plastic, cardboard and soft wire etc.

Cut length 50 mm. Total length 180 mm. Part No. 1001468

2 Large laboratory scissors.

Total length 250 mm. Part No. 1001469 Cut length 100 mm.

3 Multipurpose straight scissors, general use and bandages.

Part No. 1001470 Cut length 50 mm. Total length 140 mm.

4 Multipurpose scissors, general use and bandages.

Part No. 1000806 Cut length 40 mm. Total length 145 mm. 5 Dissection scissors.

Part No. 1000807 Cut length 35 mm. Total length 125 mm.

6 Mini dissection scissors.

Part No. 1001471 Cut length 25 mm. Total length 110 mm.

7 Flat scissors with serrated safety lock, ideal for laminates,

negatives and chromatography.

Part No. 1001472 Flat length 40 mm. Total length 160 mm.



DISSECTION NEEDLES

Plastic handled, AISI 304 stainless steel needle.

Part No. **Point** Total length 1000431 140 mm Lancet 140 mm 1000275 Fine



DISSECTION NEEDLES

Hexagonal metallic handle with a AISI 304 stainless steel needle.

Part No. **Point Total length** 40 mm 1001359 Lancet 1001360 140 mm Fine



Model Student.

Contains: 1 fine point probe, 1 lancet probe, 1 blunt end forceps, 1 fine tip forceps, 1 scalpel handle no 4, 3 sterile blades for scalpel handle no 4, 1 scissors, 1 magnifying glass, 1 style probe, 1 scalpel.

Part No. 1001365



SCALPEL HANDLE No. 4

Made of AISI 304 stainless steel, comes with three sterile blades 20. 22 and 23.

Part No. 1001361

Spares: Part No.

1001362 10 sterile blades nº 20

1001363 10 sterile blades nº 22 1001364 10 sterile blades nº 23



ANATOMY SCALPEL

Made of AISI 304 stainless steel. Blade length: 35 mm. Part No. 1000809



FORCEPS RING SHAPED TIP

AISI 304 stainless steel forceps for picking up swabs and textiles etc. Part No. 1001192





DISSECTION KIT

Wooden box.

Contents: 1 fine needle, 1 lancet needle, 1 dissection forceps blunt end, 1 forceps fine point, 1 scalpel handle no 4 with 3 sterile blades Nos. 20, 22 & 23, 1 scalpel and 1 scissors.

Part No. 1001152



DISSECTING FORCEPS AND GENERAL LABORATORY USE

Made of AISI 304 stainless steel with electro-bright finish.

Туре	Description	Total length	Part No.
1	Dissecting Straight forceps round tips	140 mm	1000580
2	Dissecting Straight forceps fine tips	140 mm	1000801
3	Dissecting curved forceps round tips	140 mm	1000865
4	Dissecting curved forceps fine tips	140 mm	1000864

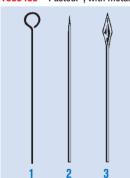
5	Sprung straight forceps with curved fine tips with wood laminate sides	160 mm	1001190
6	Forceps straight serrated fine point, with wood laminate sides.	160 mm	1001189
7	Laboratory forceps curved point	160 mm	6000128
8	Laboratory forceps fine point	120 mm	1001191



Nickel metal handle with loop end of Ni-Cr. Handle length: 43 mm. Internal loop Ø: 3 mm. Part No.

1000033 ABS handle. Handle length: 200 mm.

1000488 "Pasteur", with metal handle. Handle length: 290 mm.



1. CULTURE LOOP FOR KOLLE HANDLE

Loop end.

Handle length: 43 mm. Loop Ø: 3 mm. Part No.

1000013 Made of Ni-Cr.

1000014 Made of Platinum iridium (10% iridium).

2. NEEDLE FOR KOLLE HANDLE

Made of Ni-Cr.

Part No. 1000802

3. LANCET TIP FOR KOLLE HANDLE

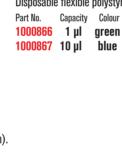
Made of Ni-Cr. Total long: 50 mm.

Part No. 1000803



STAND

Support rack for Kolle handles dissection needles made of hardened methacrylate. Capacity: 6 places. Part No. 1000903





internal loop Ø

1 mm

4 mm



In packets of

20 units

20 unts

INFRARED TIP STERILIZER "STERILBIO"

Applications

Sterilization of culture tips, needles and small instruments. Incinerates organic material at 900 °C for 5/8 seconds.

Features

Made from ceramic elements with a quality quartz tube interior.

Does not need purged oxygen and can be used in anaerobic environments.

Eliminates problems of aerosols and bacterial contamination.

Support at the side for 4 Kolle handles, needles, lancet or dissecting forceps etc.

Model

Part No.	Height/Width/Depth		Ø/Length		Power	Weight	
	(exterior) cm		(tube interior) cm		W	Kg	
3000788	20	13	18	1.4	15	110	1.5



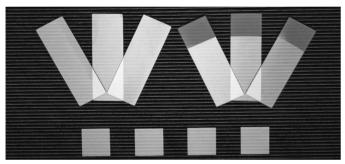
BUNSEN J3000 BLUE UNIVERSAL

For Butane gas. Instant safety flame push button ignition incorporating a LOCK/ON mechanism that prevents accidental fires, Unit switches off when the users hand is removed. Regulation of flame intensity and flame color. Gas fill by a simple lighter gas fuel as used common gas lighters. Long life flint. Power by a 1.5 V battery. Flame temperature: 1300 °C.

APPLICATIONS

Microbiology, bacteriology, dentistry and for general use where a fine hot flame is required for fast heat and fusion.

Part No. 1001134



GLASS SLIDES

Slides, unground of 26 x 76 x 1.5 mm thickness. Box of 72 units.

Part No. 5600400

Slides of 26 x 76 x 1.5 mm with ground end of 26 x 20 mm for writing. Box of 72 units. Part No. 5600399 Cover slide of 18 x 18 mm. Box of 100 units. Part No. 5600396

1 art No. 3000030

Cover glass of 22 x 22 mm. Box of 100 units. Part No. 5600397

Cover glass of 24 x 24 mm. Box of 100 units. Part No. 5600398



RECTANGULAR HOTPLATE "PLACFIN"

Adjustable temperature from ambient+5 °C to 130 °C.

Stability ±3 °C. Not suitable for boiling.

Coated with chemically treated aluminium, enamelled outer case.

 Part No.
 Width/Depth (plate) cm
 Height/Width/Depth (exterior) cm
 Power Weight W Kg

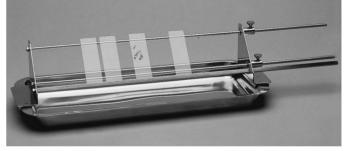
 7000497
 23
 22
 8
 22
 30
 1500
 3.7

ACCESSORY: Slide support rack for Placfin

"Placfin" slide support adapter. Made of AISI 304 stainless steel. Capacity: up to 18 slide of 76 x 25 mm (in a horizontal or inclined position).

Part No. **7000498**





SLIDE STAINING STAND

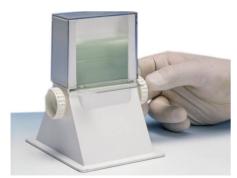
Extendible and made of AISI 304 stainless steel. Fits tanks and trays up to 50 cm in length. Capacity 12 to 14 slides inclined at an angle.

Part No. 6000904

 ${\bf ACCESSORY: Long\ rectangular\ instrument\ tray.}$

Made from AISI 304 stainless steel, 350mm long x 150mm wide.

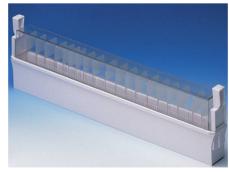
Part No. 8080207



SLIDE DISPENSER

Made of ABS plastic with a transparent polycarbonate lid. With single slide manual extraction. Capacity 50 slides of 76 x 26 mm.

Part No. 1001366



SLIDE SUPPORT RACK, FOR 26 x 76 mm SLIDES

Made from ABS plastic with transparent polycarbonate lid. Holds 100 slides in a vertical position, with numbered guides and index table.

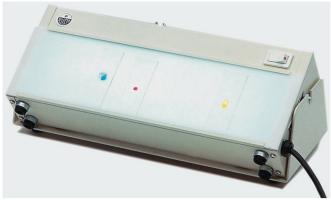
Part No. 1001367



FORCEPS FOR LIFTING SLIDES

Made of AISI 304 stainless steel, with flat jaws. Length: 105 mm. Suitable for lifting, slides, watch glass or small flat object.

Part No. 1000105



LABORATORY LIGHT "LABOR-LAM"

Used for the classification and manipulation of blood images of; anti serum transparencies, albumin control, RH tests, colony counting, micro examination, colloidal rings, observation of precipitates, acid and oil filters etc. Swivel accessory for bench or wall mount bracket. Light: white light with diffusing methacrylate screen. Temperature 30 °C to 35 °C on the screen surface. Screen light: 300 mm long x 85 mm wide. External dimensions: 320 mm long x 130 mm wide x 55 mm high. Power: 8 W.

Part No. 3000438

ACCESSORY: Table top support. Swivel type. Part No. 7000483



STORAGE BOX FOR 26 x 76 mm SLIDES

Made of white ABS with a hinge lid and catch, numbered slots for slides and a cork base. An index for slide identification is placed inside the lid. Part No. 1001371 for 100 slides



SLIDE BOXES

Holds 5 slides, made of polypropylene. Ideal for personal use. Dimensions:82 mm long x 30 mm wide.

Part No. 1000869



Hand microtome

Cylindrical hand microtome, that can achieve a minimum cut of 10 μ m, using a manual advanced mechanism.

External milled knob with a micrometer scale of 50 divisions of 10 $\mu m.$

Maximum sample section of 20 mm.

Precise internal sample holder with a maximum aperture of 8 mm.

Part No. 5900019

Supplied complete with a carry case, dissection forceps, blade and a $5\ \mathrm{mm}$ thick glass base.



SLIDE BOX FOR STORING 26 x 76 mm SLIDES

PVC base, colour white, with numbered dividers.

Index in the lid interior.

Part No. 1052050 for 50 slides Part No. 1052100 for 100 slides



STORAGE BOX FOR SLIDES OF 26 x 76 mm

Made of polystyrene with numbered slots and index in the lid.

Part No. 1001368 for 25 slides
Part No. 1001369 for 50 slides
Part No. 1001370 for 100 slides



EPS SLIDE HOLDER FOR 5 SLIDES

Polystyrene slide holder designed for transporting and preservation of samples and the mailing of slides with safety, such as blood samples, serum and section samples. System of 5 divided sections to prevent rubbing against each other in transit. Up to 10 slides (75 x 24mm). A fitted lid holds the slides in place.

Dimensions: 53 mm height x 100 mm long x 63 mm deep.

Part No. 1001717 Packs of 25 units







Cooling plate "Plac-Center"

DIGITAL DISPLAY WITH ANALOGUE TEMPERATURE CONTROLLER.

ADJUSTABLE TEMPERATURES FROM -10 TO 5 °C.

APPLICATIONS

Designed to keep material in a solid state.

FFATURES

External case made of AISI 304 stainless steel. Cooling plate made of black anodised aluminium. Anti vibration, hermetically sealed CFC free compressor.

CONTROL PANEL

Illuminated Mains ON/OFF switch.

Analogue electronic temperature control with digital display (2 digits).

Resolution: ±1 digit.
Temperature probe: PTC.

MODEL

Part No.	Width/Depth	Height/Width/Depth	Power	Power	Weight
	(plate) cm	(exterior) cm	HP	W	Kg
4000501	30 15	27 33 50	1/3	160	15





Wax dispenser "Dispenser"

ADJUSTABLE TEMPERATURE FROM AMBIENT +5 TO 100 °C. STABILITY ±1.5 °C.

FEATURES

External metal case coated with epoxy. Internal tank made of aluminium coated with black indelible PTFE. Independently heated tap.

CONTROL PANEL

Illuminated Mains switch.

Indicator lamp shows when the heater is on.

Adjustable temperature thermostat controller.

Adjustable tap temperature controller.

MODEL

Part No.	Capacity	Ø / Height	Ø / Height	Power	Weight
	litres	(usable) cm	(exterior) cm	W	Kg
4000490	4	20 15	28 30	400	5





Paraffin wax floating out bath for histology samples "Termofin"

ADJUSTABLE TEMPERATURE FROM 40 °C TO 80 °C. STABILITY ±1 °C.

APPLICATIONS

Suitable for the fusion and preservation of paraffin wax in a liquid state that enables the users to see the floated sections.

FEATURES

Bath and lid made of black PTFE. coated aluminium with a location hole in the lid for a thermometer.

CONTROL PANEL

Mains ON/OFF switch. Adjustable temperature thermostat synchronised with an indicator lamp while heating.

MODEL

Part No.	Capacity	Ø / Height	Ø / Height	Power	Weight
	litres	(usable) cm	(exterior) cm	W	Kg
3000459	4	25 10	34 14	430	2.3

Supplied complete with lid and thermometer.

ACCESSORY

Thermometer support (can only be used without the lid).

Part No. 6004591

PTFE coated lid







STAINING TANK

OTAIIIII II	AITH C						oon bormotically acaled lid
Part No.	Type	Height A	/ Width / I	Depth	Slide quantity	Applications	cap hermetically sealed lid.
		(ex	cterior) mr	n			
1001138	1	85	105	70	10 of 76 x 26 mm	Tank with lid,	requires rack No. 2 that is placed inside.
1001139	2	30	90	48	10 of 76 x 26 mm	Tank rack, bot	tomless, submerge in No.1 tank.
1001140	3	105	60	55	16 of 76 x 26 mm	Hellendahl ver	tical tank with lid.
1001141	4	50	85	70	10 of 76 x 26 mm	Horizontal sta	ning tank with lid.
1001142	5	105	45	45	10 of 76 x 26 mm	Coplin, vertica	l staining tank with lid.
1001352	6	110	56	56	10 of 76 x 26 mm	Coplin, stainin	g tank made of polyethylene with lid.



1. ANGLE FORM MOULDS

For paraffin wax covers.

Supplied as two separate angular plates made of AISI 304 stainless steel.

Part No.	Height / Width / Depth	Part No.	Height / Width / Depth
	(usable mould) mm		(usable mould) mm
6051622	14 22 44	6051645	20 45 85
6051635	20 35 65	6051690	25 90 150

2. ROUND INSERT MOULDS

Made of perforated AISI 304 stainless steel with lid.

Part No.	Ø mm	Height mm	
1051837	37	8	



Cooling bath "Refricub" ELECTRONIC CONTROL WITH DIGITAL DISPLAY

ADJUSTABLE TEMPERATURE DOWN TO -25 °C.

APPLICATIONS

Suitable for maintaining paraffin wax and waxes in a solid form for long periods of time, etc.

Temperature homogeneity: ±2 °C.

Precision of temperature controller: 1 °C.

External case made of epoxy covered metal with AISI 304 stainless steel tank and top.

An anti vibration hermetically sealed CFC free compressor is mounted in the base of the unit, supplied with ventilated evaporator, regulating valve and condenser.

CONTROL PANEL

Illuminated mains indicator switch.

Electronic controller for temperature with two digit digital display with a resolution of: ±1 digit. PTC probe.

Part No.	Capacity	Height/Width/Depth	Height/Width/Depth	Power	Power	Weight
	litres	(tank) cm	(exterior) cm	HP	W	Kg
4100519	18	20 30 31	80 46 44	3/8	350	22





Chromatography tanks

APPLICATIONS

For quantitative analysis. Useful for storing and protecting the plates by means of the hermetic upper lid.

FEATURES

Made of heavy thick glass, with a flat bottom, ground rims with rounded edges. Solid glass rectangular lid, smooth base with ground edges to make an air tight fit tank. Rectangular glass lid with handle, smooth base and ground surface for hermetically sealed closure with the tank.

MODELS	Part No.	Heigh/Width/Depth mm	Nº of plates	With Lid
MINICROM	1001162	139 135 80	1	Yes
CROMACROM	1001163	240 236 118	1	Yes
MULTICROM	1001164	240 236 118	5	Yes

The model MULTICROM has 5 plate slots to maintain the plate upright.





Stackable Anatomy - Histology sample storage chest

FEATURES

Manufactured in steel epoxy coated. Resistant to corrosive atmospheres.

STACKABLE MODULAR SYSTEM

Cabinet for storing slides.

Complete with 14 drawers for slides of 26 x 76 mm.

Drawer capacity: 350 slides.

Part No. 1052014

Cabinet for storing transparencies.

Complete with 7 drawers for transparencies of 50 x 60 mm.

Drawer capacity: 230 transparencies.

Part No. 1005207

Cabinet for storing paraffin wax mounted samples.

Complete with 10 drawers.

Part No. **1052010**

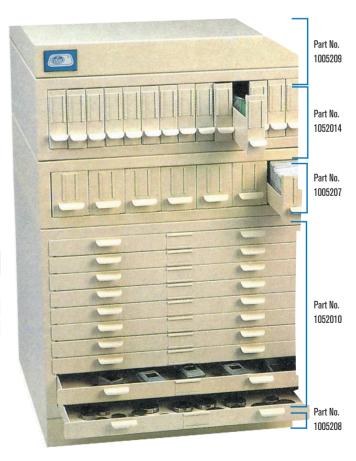
MODELS

Part No.	•	t / Width (usable) c		Ŭ	/ Width cterior)	r / Depth cm	Weight Kg
1052014	9	2.6	45	14	48	48	9.5
1005207	7.2	5.8	47	12	48	48	6.5
1052010	2.6	43.5	47	34.5	48	48	18.5

Base and lid units

Mounted on the top or as a support base. Fits the individual modules to form distinct user definable cabinets.

Part No.		Height / Width / Depth (external) cm	Weight Kg
1005208	Base	5,5 48 48	2,5
1005209	Lid	5,5 48 48	2,5



Fixed volume dispensing pipettes "Dispen-Fix" with validation test according to serial number.

FEATURES

Fixed volume pipettes from 1 to 1000 µl, model dependent.

Simple and easy to use.

Discard tip ejection for all models.

Comes complete with calibration tool.

MODELS	Part No.	Capacity µl	Accuracy %	Precision %
Dispen-Fix	5904009	5	±2.0	< 0.8
Dispen-Fix	5904010	10	±1.6	< 0.5
Dispen-Fix	5904011	20	±1.0	< 0.3
Dispen-Fix	5904012	25	±1.0	< 0.3
Dispen-Fix	5904013	50	±0.8	< 0.3
Dispen-Fix	5904014	100	±0.8	< 0.25
Dispen-Fix	5904015	200	±0.8	< 0.15
Dispen-Fix	5904017	500	±0.8	< 0.2
Dispen-Fix	5904018	1000	±0.8	< 0.13



COMECTA Variable volume dispensing pipettes "Dispen-Var"

WITH VALIDATION TEST ACCORDING TO SERIAL NUMBER. **AUTOCLAVABLE UP TO 121 °C.**

FEATURES

Variable volume from 1 to 5000 µl, model dependent. Simple and easy to use adjustable dispense volume.

Digital set volume selection.

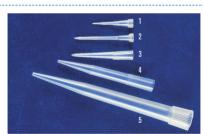
Discard tip ejection for all models up to 1000 µl.

Comes complete with calibration tool.

MODELS	Part No.	Capacity µI	Divisions µl	Precision %
Dispen-Var	5900010	1 - 10	0.1	< 1.5 - < 0.4
Dispen-Var	5900020	2 - 20	0.1	<1.5 - < 0.8
Dispen-Var	5900100	10 - 100	1	<1.0 - < 0.3
Dispen-Var	5900200	20 - 200	1	<1.0 - < 0.5
Dispen-Var	5901000	100 - 1000	10	< 0.8 - < 0.28
Dispen-Var	5905006	1000 - 5000	10	< 0.4 - < 0.2



Models № image	Part No.	Range µl	Colour	Qty. tips x part No.	Suitable for pipette part No.	Volumes pipette µl
	- 5400040	04 40	T	4000	5904009	5
1	Tips 5490040 Rack 5490035		Transparent	1000 96	5904010	10
	Rack 3490033	U.1- IU	Transparent	90	5900010	1 - 10
2	Tips 5490041	2 - 20	Transparente	1000	5900020	2 - 20
	Rack 5490036	2 - 20	Transparente	96	3300020	2 - 20
	Tips 5490042 5 - 200 Rack 5490037 5 - 200	Transparent		5904011	20	
			1000	5904012	25	
				5904013	50	
3			•	96	5904014	100
		J - 200			5904015	200
				5900100	10 - 100	
					5900200	20 - 200
	5490044	101 - 1000) Blue	1000	5904017	500
4	5490034	101 - 1000		96	5904018	1000
	J45UUJ4	101 - 1000	o blue	3 0	5901000	100 - 1000
5	5490047	1000 - 5000) Blue	500	5905006	1000 - 5000
U	5490039	1000 - 5000	Blue	500	J30J000	1000 - 3000





Pipette rack. Made of AISI 304 stainless steel. No. of places: 6 dosing pipettes up to 28 cm in length. Part No. 1001215

COMECTA





COMECTA

COMECTA Multichannel variable volume dispensing pipettes

NUMBER OF CHANNELS: 8.

FEATURES

Due to its excellent tips alignment, they offer a great advantage in microtitrer techniques such as: agglutination, immunological radio assays, hemagglutination, antibiotic test, etc. (All models are calibrated according to DIN 12600 recommendations)

MODELS	Part No.	Tips Range µl		ninal Accuracy ±%	Nomina	nt variation al volume <%	Increments µI	Tips types µl
			Min %	Max %	Min %	Max %		
Multi-Var 8	5905027	5-50	8.0	6	0.4	3	0.1	200
Multi-Var 8	5905028	10-100	0.8	4	0.3	2	0.2	200/300
Multi-Var 8	5905029	20-200	0.8	4	0.3	1.5	0.2	200/300



ACCESSORIES

Pipette tips rack. Part No. 5490037

Carousel support for a maximum 3 multichannel pipettes. Part No. 5490038



COMECTA Repeat multi dispenser "Repette-HW"

UP TO 49 SUCCESSIVE DISPENSES WITHOUT THE NEED TO REFILL. DISPENSING VOLUME FROM 2 µl UP TO 5000 µl.

FEATURES

Multi dispenser pipette.

Precise repeat dispenser.

Ideal for dispensing low and high viscosity liquids.

Designed for rapid dispensing.

Depending on the setting, the dispenser can discharge up to a maximum of 49 times successively, without the need to be refilled. Accepts 8 different syringes.

Precision table using COMECTA syringes. (These values are based on a maximum volume for each pipette using distilled water at ambient temperature):

Type syringe ml	Volume doses µl	Prec nominal A ≤	volume	Variation continual CV <	volume
		10%	2%	-10%	2%
0.5	10 - 50	0.8	4.0	0.6	1.4
1.25	25 - 125	0.8	4.0	0.3	0.8
2.5	50 - 250	0.7	3.5	0.2	0.8
5	100 - 500	0.5	2.5	0.2	0.6
12.5	250 - 1250	0.3	1.5	0.2	0.4
25	500 - 2500	0.3	1.5	0.2	0.4
50	1000 - 5000	0.3	1.5	0.15	0.4

-								
	-	_	-	-	-	-		_
Λ	19	C.F		ч	ш	וט	ш	u
ш	ш	ш	т	nı		nı	ш	-

Steril syringes. Supplied in individual bag.

_		_
Part No.	Volume ml	Syringes x part No.
5490053	0,5	100
5490054	1,25	100
5490055	2,5	100
5490056	5	100
5490057	12,5	50
5490058	25	50
5490059	50	50

Dispense volumes from 2 µl up to 5000 µl, depending on syringe used.

Maximum viscosity per syringe is:

50 ml = 20 mPas, 5 ml = 260 mPas and 1.25 ml = 977 mPas.

Maximum pressure: 500 mbar.

Operating temperature: from 15 to 40 °C.

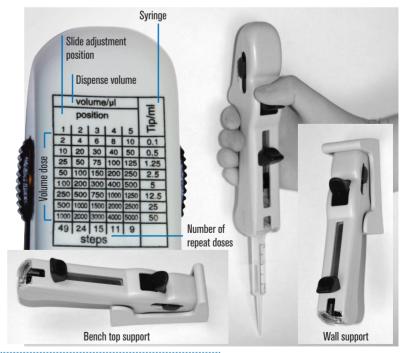
At the back of the dispenser shows a quick table reference of the volume and dose, that shows the repeatable dose from the syringe to be used and the correct slide position.

Includes an easy to locate wall or bench support.

Supplied complete with a 5 ml syringe and an autoclavable PP adapter for 25 and 50 ml syringes.

Repeat multi dispenser "Repette HW".

Part No. 5490050



SPARE	
8 5490060	Adapter made from PP or 25 and 50 ml syringes

COMECTA Motorized pipette dispenser "Rota-Filler 3000[®]"

FOR ANY KIND OF PIPETTES FROM 1 TO 100 ML.

FEATURES

Three positions switch for fast or slow aspiration and dispensation or gravitatorial dispensation for free dispensing.

The pressure over the ergonomic bulbs allows modulation, speed control of aspiration and dispensation.

It is supplied with a couple of 0,45 µm filter by default for and effective protection against contaminated air either of the equipment during aspiration or of the sample during dispensation.

Two rechargeable and interchangeable batteries.

Low-battery light indicator signal.

Can be used while recharging.

TECHNICAL DATA

Charger of 65/12 mA. Charge time: 14 hours.

Weight: 215 a.

Dimensions: 170 height x 47 width x 143 length mm. Pipettes: from 1 to 100 ml (glass and plastic).

Motorized pipette dispenser "Rota-Filler 300[®]".

Part no: 5900700

COMPLEMENT

5 hydrophobe filters pack of 0,45 µm.

Part no: 5900701





COMECTA Manual pipette dispenser "Pipet"

FOR ANY KIND OF PIPETTES FROM 1 TO 100 ML.

FEATURES

Ergonomic, comfortable, solid, lightweight and ease of use.

It has been designed with an ultracompressor silicone bulb that provides a soft manual control of the pipette, either in aspiration or dispensation.

Once the bulb is squeezed, control with the toggle both speeds, the aspiration and dispensation one. Push the middle button to expel blowing-out any liquid remaining in the pipette. $0,45 \mu m$.

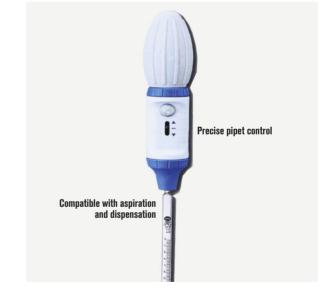
Measure: 25 mm Ø. Weight: 130 g.

Manual pipette dispenser "Pipet". Part no 5900800

COMPLEMENT

5 hydrophobe filters pack of 0,45 µm.

Part no: 5900801





Measuring range "COM-PIP"

FEATURES

Made of polypropylene with silicon joints, for volumes up to 25 ml. Precise and safe, ergonomic design that allows filling and emptying without having to change the setting. Flexible thermoplastic seal against any type of burette. A button on the side empties the burette automatically. Easily dismantled and cleaned.

Part No. Capacity Identification colour 1001131 0 to 2 ml 1001132 0 to 10 ml 1001133

Blue Green 0 to 25 ml Red



PIPETTE RACK "COM-PIP"

Made from AISI 304 stainless steel. Capacity 6 pipettes of differing sizes. Part No. 1001702





Digital cell counter for blood components "CC-1431"



FFATURES

Designed for any type of cell or type counting and blood analysis. Languages: Spanish, English and French.

Operating menu displayed on the screen, 4 LCD lines of 20 characters per line.

Visualization of data can be displayed as partial, total, and absolute or percentage of key strokes.

Possibility to correct the last count.

Memorizes the last pulsed count and identifies it on the screen.

Audible pulse control when the key is pulsed, advises when the count limit is reached.

Up to 14 separate key inputs per program. Power: 12 V. Includes mains adapter.

USB interface for download of results to a computer.

Includes software for PC with the following parameters: Patient Number, Laboratory name, Date, Hour, Comments and comparison of previous results after treatment.

FOUR PROGRAMS INCLUDED:

LEUC (leukocytes)

- Leukocyte count.
- 14 different cell types.
- 3 Keys for counts that are not used in the final count: («11. Normo» «12. Tox Gr» «14. Ery»).
- Total cell count (at the end of counting) selectable from 100 to 1000 in steps of 100. MYEL (myelocytes).
- Myelocytes count.
- 14 different cell types that accumulate to the total count.
- Total cell count selectable from 100 to 1000 in steps of 100.

RETI (reticuloecytes/erythrocytes)

- Reticuloecytes count.
- No. of cells by configurable view from 50 to 250.
- 1 Key for reticulocyte fields.
- 1 Key for erythrocytes that are not included in the final count.
- Total (end of count) fixed at 1000.

FREE (program, customer set)

- Configurable count.
- Each key can be activated or deactivated for the count.
- Total cell count (at the end of counting) selectable from 100 to 1000 in steps of 100.

KEYS

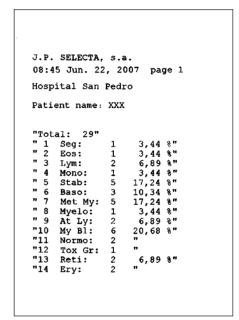
Two control keys:

- SELECT: choose one program or one option.
- ENTER: accept the option choose.
- 14 Keys for different cell types:

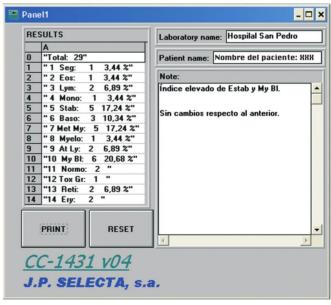
- Seg:	Segments or granulocytes.	- Myelo:	MieloBlasts.
- Eos:	Eosinocytes.	- At Ly:	Linfocytes untypical.
- Lym:	Linfocytes.	- My Bi:	Mielococytes Binucleads.
- Mono:	Monocytes.	- Normo:	NormoBlasts.
- Stab:	Bands.	- Tox. Gr.:	Granulocytes toxic.
- Baso:	Basocytes.	- Reti:	Reticulocytes.
- Met My:	Metamielicocytes.	- Ery:	Eritrocytes / EritoBlasts.



MODEL			
Part No.	Height / Width / Depth cm	Power W	Weight Kg
7121431	7 15 22	6	0.6



Report.



Software download and report.



Colony counter "Digital S"

FOR PETRI DISH OF UP TO 100 mm DIAMETER. Led Illumination.

APPLICATIONS

Molecular Biology, Genetics and microbiology.

FEATURES

The unit records each pulsed colony count on the digital screen to a total of 999 counts.

Pressure to count can be made by any way (pencil, or pen tip etc.).

Epoxy coated casing. Reversible interior background part in white or black.

Steady, (glare free) LED illumination, clear and wide view visibility.

Removable plates for housing varying sizes of Petri dishes.

Location for reversible contrast plates.

Magnifying glass X2 with adjustable height and rotation support

CONTROL PANEL

Mains switch.

Numerical digital display: 3 digits. Audible confirmation beep for each count. Zero reset button. RESET.



MODEL					
Part No.	Ø of magnifying glass cm	Magnification	Height / Width / Depth (exterior) cm	Power W	Weight Kg
4905002	12.5	2x	25 23 30	20	3.5

Supplied complete with Wolffhuegel disc.



ACCESSORY	
5 Wolffhuegel discs.	
Part No. 4905001	



Bench top ultraviolet radiation sterilizer

Fast destruction of germs by U.V. radiation based on the principle that albuminoid bodies absorb energy that which prevents germination and reproduction of the bacteria. Suitable for destroying: bacterias, virus, spores, yeast and mildew.

FEATURES

Main body made of expanded polystyrene, with a polished AISI 304 stainless steel tray that reflects the U.V radiation and a protective smoke coloured methacrylate top that allows the samples to be seen and at the same time, it is opaque to U.V. light. U.V. Wave length: U.V. 2537 Angstroms.

U.V. lamp life span: 5000 hours approx.

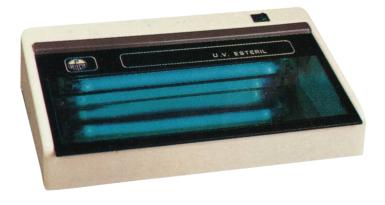
CONTROL PANEL

Illuminated Mains switch.

To prevent accidental sight or skin damage a safety micro-switch that cuts off the power if the U.V. protective cover is removed.

MODEL

Part No.	Height/Width/Depth	Height/Width/Depth	Power	Weight
	(interior) cm	(exterior) cm	W	Kg
3000416	7 to 9 50 20	17 57 38	15	7.5



SPAREGermicidal tube. Part No. 0022113



Westergren sedimentation pipette support stand

Sedimentation tube support stand.

Made of AISI 304 stainless steel.

Supports pipettes with a replaceable vial type rubber plug. Easy to clean.

Sectioned, tilted, 45 °C front panel scribble board for notes.

Designed so that the tubes can be mounted only with one hand.

Part No.

1000093 Three Place. **1000096** Six place.

1000912 Twelve place.





HEATING MANTLES

Two position heating	page	227
Heating mantles with digital electronic regulation	page	228
Heating mantels made with a double woven mineral wool	page	229
Banks of heating mantles for Kjeldahl and soxhlet	page	230
Flexible heatings	page	231

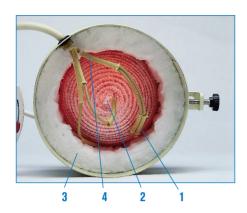
HOT PLATES

Round hotplates	pages	232 to 234
Ceramic top hotplates	page	233
Rectangular hotplates	pages	234 to 235
Bank of circular hotplates and for kjeldahl and soxhlet	page	236

HEATING MANTLES FOR FLASKS

SAFETY:

FOLLOWING CE STANDARDS, IN THE CASE OF LIQUID SPILLS AN EARTH WIRE IS WOVEN INTO THE MANTLE TO PREVENT ELECTRIC SHOCKS.



COMMON FEATURES

- 1. Hand woven mineral wool with flexible braiding, which adapts snugly around the flask, with drain hole, replaceable.
- 2. The heating element is distributed homogeneously throughout the mantle. Connectors and cables are protected by mineral fibre tubes. Efficient low power consumption of 1 w/cm². Maximum mantle temperature of 400 °C.
- 3. Double walled fibre wool thermally insulated casing.
- 4. Pure Nickel connection terminals protected by mineral fibre tubing that prevent the deterioration of the contact due to high temperature. Support for retort bar.

APPLICATIONS

For digestion distillation, extraction, evaporation and boiling processes.



MODELS SELECTION SUMMARY TABLE

Capacity ml	Ø flask mm	Fibroman C 2 positions	Fibroman D Woven	Fibroman O Funnel hole	Agiman Woven	Fibroman HT-W Electronic regulator	Micro for Kjeldahl banks banks	No. Places	For Kjeldahl/Soxhlet banks	No. Places
100	65	3003141	-	-	-	3031470	6014204	4	-	-
100	65	-	-	-	-	-	6014206	6	-	-
250	83	3003142	3004192	-	3000447	3031471	-	-	-	-
500	102	3003145	3004195	-	3000448	3031472	-	-	6003294	4
500	102	-	-	-	-	-	-	-	6003296	6
1000	132	3031410	3041910	3049110	3000449	3031473	-	-	-	-
2000	164	3031420	3041920	3049120	3000450	3031474	-	-	-	-
3000	190	3031430	-	-	-	-	-	-	-	-
5000	222	3031450	-	3049150	-	-	-	-	-	-
10000	290	3314100	-	3491100	-	-	-	-	-	-
20000	365	3314200	-	3491200	-	-	-	-	-	-

With power heating switch selector

FEATURES

Two position isolated rocker switch heating control with power on indicator lamp.

TECHNICAL DESCRIPTION

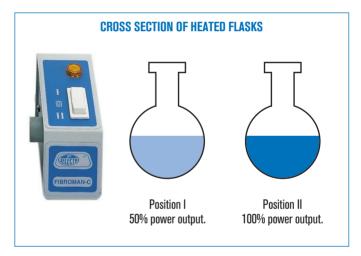
- DUR ALLOY aluminium exterior case with epoxy coating.
- Suspended mineral wool woven heating mantle.
- Heating element homogeneously distributed throughout the woven mantle.
- Thermally insulated case, mineral wool fibre insulation.
- Nickel connectors.
- Retort stand clamp at the back of the unit.
- To prevent breakage or spills a drain hole is provided at the bottom of the mantle.
- · Safety earth connection.

MODELS

Part No.	Flask capacity ml	Flask Ø approx. mm	Ø / H (exteri	· ·	Power W	Weight Kg
3003141	100	65	16	11	130	1
3003142	250	83	18	11	130	1,1
3003145	500	102	20	12	270	1,2
3031410	1000	132	22	13,5	410	1,4
3031420	2000	170	26	14	530	2
3031430	3000	190	29	18	620	2,2
3031450	5000	222	33	19	840	3,2
3314100	10000	290	38	22	2250	4,7
3314200*	20000	365	48	26	2300	11

^{*} The mantle part no. 3314200 supplied without the 2 position controller and switch. See Accessories on (page 30) and Regulators and controllers (pages 293 and 294).











Heating mantles for flasks "Fibroman HT-W"

FOR ADJUSTABLE TEMPERATURES FROM AMBIENT +5 °C TO 400 °C. STABILITY ±0,5 TO 1 °C ACCORDING TO TEMPERATURE.

ELECTRONIC REGULATION OF TEMPERATURE WITH DOUBLE SCREEN TO SHOW THE PRESENT TEMPERATURE AND THE PROGRAMMED ONE.



FEATURES

External case made of AISI 304 stainless steel. Heating elements homogeneously distributed inside of the mineral wool woven and thermically insulated. Pure nickel connection terminals.

Temperature control system by inner thermocouple. TC probe connector included in the equipment for the liquid temperature control inside the flask. Device to hold support bar.

CONTROL PANEL

On / Off switch.

Digital display indicating set and real temperature.

Heating operating led.

Push button A increase temperature.

Push button ▼ decrease temperature.

Side: TC probe connector for the liquid real temperature



Device that allows to hold the rod has supported.

MODELS

Part No.	Flask Capacity ml	Ø Flask mm	Height / Width / Depth (exterior) cm	Ø Lenght Sensor TC mm	Stability °C	Power W	Weight Kg
3031470	100	65 to 67	13 22 26	4 170	±0.5 to 1	130	1,5
3031471	250	83 to 87	13 26 29	4 170	±0.5 to 1	216	3
3031472	500	102 to 105	13 26 29	4 170	±0.5 to 1	220	3,5
3031473	1000	132 to 139	14 30 33	4 170	±0.5 to 1	500	4
3031474	2000	164 to 170	16 31 34	4 200	±0.5 to 1	760	5

Note: the heating mantles are supplied with TC probe connected to the case.

ACCESSORIES



Support bar Dur-Aluminium, 12 mm Ø x 700 mm long. Part No. **6000270**



Double bosshead. Part No. 1000069



Spring clamp to hold thermometers. Part No. **7000025**



Clamp to support and hold condensers or other glassware. Part No. 7000161



Heating mantle for flasks "Fibroman-D"

FEATURES

Soft mantle made with a double woven mineral wool. A mains switch and safety earth are also fitted. The mantle can be supported by a retort ring or tripod stand.

MODELS

Part No.	Flask capacity ml		leight ior) cm	Power W	Weight Kg
3004192	250	15	6.5	130	0.8
3004195	500	17	7	270	0.9
3041910	1000	20	8.5	410	1
3041920	2000	24	11	530	1.5

See accessories (page 230) and controller (pages 293 and 294).

ACCESSORI	ES	
Retort Part No.	Tripod Ring Part No.	Mantle Part No.
7041921	7041922	3004192
7041951	7041952	3004195
7419101	7419102	3041910
7419201	7419202	3041920





Heating mantle for flasks and funnels "Fibroman-0"

WITH TRIPOD SUPPORT STAND.

APPLICATIONS

Suitable for round bottom flasks, decanting funnels and reaction flasks with a bottom drain.

FEATURES

- Woven mineral fibre mantle.
- Epoxy coated exterior.
- On/Off switch.
- Safety earth.

MODELS

Part No.	Flask capacity ml	Ø /He (Exterior d		Ø cm Bottom hole	Tripod Height cm	Power W	Weight Kg
3049110	1000	24	10.5	8	34	410	1.5
3049120	2000	28.5	12	8	36	530	2.5
3049150	5000	37.5	17.5	9	38	840	3.5
3491100	10000	43.5	20	9	43	1400	5
3491200	20000	48	25	12	36	2300	13

Due to its capacity the part no. 3491200, 20000 ml capacity is manufactured in a cylindrical case. See accessories (page 230) and controller (pages 293 and 294).





Heating mantle for flasks

ADAPTABLE FOR THE "AGIMAN" STIRRER UNIT.

MODELS

Part No.	Flask capacity ml	Ø / H (Exterior o		Power W	Weight Kg
3000447	250	15	6.5	130	0.8
3000448	500	17	7	270	0.9
3000449	1000	20	8.5	410	1
3000450	2000	24	11	530	1.5

ACCESSORIES

Mantle magnetic stirrer "Agiman". With interchangeable mantle adapters. Electronic control of stir speed (up to 1600 r.p.m.). Part No. 7000446 See page 26. With connection at the back for an electronic contact thermometer "Sensoterm" or digital electronic regulator "Electemp-TFT".

See controller (pages 293 and 294).



Stirring mantle with adapter device.



Stirring mantle, complete.



Banks of heating mantles for digestion, Kjeldahl, Soxhlet extraction and round bottle flasks

CONTROLLABLE MANTLE TEMPERATURE UP TO 550 °C.

FEATURES

Independent heating control for each position.

2 height and angle adjustable bars to support condensers or other glassware for digestion or extraction.

External case made of AISI 304 stainless steel.

Safety earth strip fitted.

CONTROL PANEL

Temperature control with a pulsed energy regulator. An indicator lamp shows when the mantle is on.

MODELS

Part No.	For flasks	Flask volume ml	No. He of places		/ Width kterior)	/ Depth cm	Power W	Weight Kg
6003294	Kjeldahl / Soxhlet	300-500	4	18	76	25	1500	12
6003296	Kjeldahl / Soxhlet	300-500	6	18	105	25	2200	16
6014204	Micro-Kjeldahl	100	4	16	59	21	510	9
6014206	Micro-Kjeldahl	100	6	16	81	21	900	12

Supplied with:

2 bars and 4 clamps for Kjeldahl/Soxhlet models. 1 bar and 2 clamps for Micro-Kjeldahl models.

ACCESSORIES (DIGESTION)



Fume extractor tube clips made of AISI 304 stainless steel.

Part No.

6000008 For bank of Macro-Kjeldahl. **6000009** For bank of Micro- Kieldahl



Part No.

1000104 For: Bank Macro-Kjeldahl,

4 positions.

1000106 For: Bank Macro-Kjeldahl,

6 positions.

1042044 For: Bank Micro-Kjeldahl,

4 positions.

1042066 For: Bank Micro-Kjeldahl,

6 positions.



Kjeldahl flask support made of AlSl304 stainless steel. Flasks 300-500 ml.

Part No. 1000002

ACCESSORIES EXTRACTION



Double nut boss head. Part No. 1000069



Clamp for holding condensers. Part No. 7000403



EXTRACTION AND NEUTRALIZATION OF GASSES.

Reduces water wastage.



"Scrubber" Re-circulation pump

Designed to neutralize and absorb fumes generated in the Kjeldahl digestion process.

Composed of a "Scrubber unit" that blocks the passage and neutralizes the condensed acids, and a re-circulating water pump that produces sufficient vacuum to aspirate the vapours.

No mains water connection required. Prevents waste contamination. Low noise level (<65dBA).

Re-circulating pump made from chemically resistant materials.

It is essential to put the "Scrubber" unit together with the neutralizer solution between the digestion block and the re-circulating pump.

"Scrubber" unit

Part No.	•	Width terior)	/ Depth cm	Weight Kg
4001611	32	31	16	2

It is supplied with 3 Kg. acid vapours neutralizer solution.

Re-circulation water vacuum numn

ne-chiculating water vacuum pump.							
Part No. Height / Width / Depth					Vacuum level	Pump rate	Weight
Ì		(ext	erior) (cm	bar	litre/minute	Kg
į	4001612	44	39	28	0.98	10	10

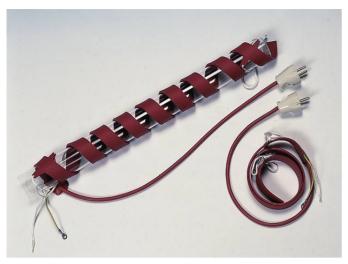
Spare part

3 Kg. acid vapours neutralizer solution. Part No. 4001610



Heating tapes

HEATING TAPE SURFACE TEMPERATURE UP TO 210 °C. CONFORMS TO VDE EN 60335-A.



FEATURES

Heating elements distributed homogeneously between flexible moulded sheets of silicon.

APPLICATIONS

Used for heating small areas such as heating ducts for distillation, valves and

MODELS

Part No.	Length m	Width mm	Power W
3003178	0.80	25	180
3031710	1	25	210
3031715	1.5	25	265



Flexible heating cord



FEATURES

For tape surface temperatures up to 180 °C. Thermally insulated using flexible silicon tube.

APPLICATIONS

For heating small areas such as heating ducts, distillation, valves and pipes etc.

MODELS

Part No.	Length m	Ø Cord mm	Power W
1000781	1.5	3	45
1000782	3	3	90
1000783	6	3	180
1000784	12	3	360



Large surface area heating mats MAT SURFACE TEMPERATURES UP TO 210 °C.

CONFORMS TO VDE STANDARD EN 60335-A.



FEATURES

The heating element is insulated and distributed homogeneously between two sheets of flexible moulded silicon.

Heating Power: 0.39 W cm2.

Mat surface temperature up to 210 °C. Held in place by hooked spring fittings.

Suitable for heating drums up to 200 litres \emptyset 60 cm. Total: 3 bands of 171 cm in length x 15 cm wide.

Power consumption 3000 W.

Part No. 4000200

ACCESSORIES

Controller (pages 293 and 294).







Round Hotplates

HOTPLATE TEMPERATURE UP TO 400 °C. WITH 6 PLACE HEATING POWER CONTROLLER.

FEATURES

Cast steel plate with embedded heating elements throughout the plate surface. &

Fast heating rate at maximum power setting.

Enamelled outer casing that is resistant to high temperatures and corrosive agents.

CONTROL PANEL

Controller 6 position power settings.

MODELS







Hotplate double circular "Duplac"

FOR PLATE TEMPERATURES UP TO 400 °C.

FEATURES

Hot plate with non warping cast steel plate with embedded heating elements throughout the hot plate surface.

Independent plate temperature control is maintained by pulsed energy controllers. The exterior is epoxy covered steel.

CONTROL PANEL

Two temperature energy controllers.

Two indicator lamps function when the heaters are on.

MODEL

Part No.	Plate Ø	Height / Width / Depth	Power	Weight
	cm	(exterior) cm	W	Kg
4000634	19	15 47 24	1750	8.5





Ceramic top hotplates "Ceramic-plac"

ADJUSTABLE HOT PLATE TEMPERATURE UP TO 400 °C. MAXIMUM SUPPORTABLE WEIGHT: 40 KG.

SAFETY

CONFORMS TO THE EN 61010 STANDARD, OVER TEMPERATURE CUT-OUT FITTED.

Excellent resistance to chemicals. Unaffected by thermal shock



FEATURES AND ADVANTAGES

The "CERAMIC-PLAC" has the following features and advantages:

- Flat, smooth surface.
- Excellent resistance to chemical agents.
- High heating power within the heated area that permits extreme temperature within a short heat up time.
- Excellent thermal qualities and penetration of infrared radiation.
- Easy to clean.

FEATURES

- External case of AISI 304 stainless steel.
- Heating elements mounted on ceramic fibre thus making an insulated compact block.
- Temperature energy control from 6 % to 70 % of nominal power. (Model Part No. 3000919 and 3000920).
- Hydraulic thermostat temperature control up to 400 $^{\circ}\text{C}$ (Model Part No. 3000921).

MODELS

Part No.	Heating Zones	Heating area in cm	•	/ Width . xterior) (Power W	Weight Kg	Control system
3000919	1	18 Ø	10	28	33	1800	5.5	Energy controller
3000920	2	14 Ø + 14 x 14 🗹	10	27	47	2200	7.5	With individual energy controllers for each zone
3000921	1	30 x 30 ⊄	10	49	49	3700	11	With hydraulic thermostat



Hotplate-Rectangular "Combiplac"

PLATE TEMPERAURE ADJUSTABLE UP TO 400 °C.

FEATURES

Electronic energy temperature control.

The non warping steel hotplate has heating elements embedded throughout the hotplate surface maintaining the heat distribution. The main case is made of AISI 304 stainless steel.

CONTROL PANEL

Main power switch with "ON" indicator lamp. Electronic energy control from 0 to 100 %.

An indicator lamp shows when the unit is hot.

Connector at the back for the external digital thermometer, "Sensoterm" or "Electemp-TFT".

See Regulators and Controllers (pages 293 and 294).

MODELS

Part No.	Width / Depth (plate) cm	Height / Width / Depth (exterior) cm	Power W	Weight Kg
3000156	20 40	12 22 55	2300	9
3000718	30 30	13 33 46	2800	13

Hotplate-Circular "Combiplac"

PLATE TEMPERATURE ADJUSTABLE UP TO 400 °C.

FEATURES

Electronic energy controller and embedded heating element throughout the non warping steel hotplate surface.

A retort bar can be located in a hole at the back of the unit.

The main case is made of AISI 304 stainless steel.

CONTROL PANEL

Main power switch with "ON" indicator lamp.

Temperature controlled by a 0 - 100 % energy controller.

A lamp indicates when the hot plate is "ON".

A Thermometer "Sensoterm" or "Electemp-TFT" that can be added and are listed as accessories.

See section Regulators and Controllers (288 and 289).



ACCESSORIES

Sand bath adapters. Made entirely of AISI 310 stainless steel, removable for

easy cleaning.

rait Nu.	Part No.	(Sand tray dims) cm		
6000719	3000156	5.5	20	40
6000720	3000718	5.5	31	31





MODELS

Part No.	Plate Ø cm	Height / Width / Depth (exterior) cm	Power W	Weight Kg
3002301	12	10 16 27	550	2
3002302	19	13 21 30	950	3

ACCESSORIES

Suitable for the 12 cm Ø hotplates only Part No.3002301:

Bath of AISI 304 stainless steel of 140 mm Ø x 75mm high, with concentric reduction ring lid, Suitable for water, oil or sand. Part No. 7002510

Round bottom flask adapter made of aluminium and suitable for Kjeldahl flasks of 50 to 100 ml and 50 to 100 ml round bottom flasks. Part No. 1002290

Round bottom flask adapter made of aluminium and suitable for Kjeldahl flasks of 300 to 800 ml and round bottom flasks of 250 to 500 ml. Part No. 1002280

Support rod of 12mm Ø and 500 mm high, fits on to the main body of the hotplate. Suitable for the circular Combiplacs 3002301 and 3002302.

Part No.1000725



Electronic contact thermometers with digital readout "Sensoterm".

With Pt100 sensor with stainless steel AISI 304 sheath.

Part No. 1001009

Features. See Regulators and Controllers (pages 293 and 294).





Part No.	Height / Width / Depth			Max power	Weight
	(exterior) cm			(at 230 V) W	Kg
3000897	10.5	13.5	21	3100	1.250

Features. See Regulators and Controllers (see pages 293 and 294).





Rectangular precision hotplate "Plactronic"

ADJUSTABLE TEMPERATURE FROM AMBIENT +5 UP TO 200 °C STABILITY ±0.5 °C. WITH ELECTRONIC DIGITAL TEMPERATURE AND TIME CONTROL DISPLAY. SUITABLE FOR THERMAL TESTS (NOT SUITABLE FOR BOILING TESTS). SURFACE PLATE COATED WITH P.T.F.E. FOR PROTECTION AGAINST CHEMICALS.

FEATURES

Digitalelectronic temperature and timer control. and Digital display (3 digits).

Display resolution: 1°C.

Temperature probe Pt 100.

DUR aluminium alloy hotplate's coated with P.T.F.E., with heating elements embedded in the plate surface. Main case, heater element and protective grill, made of AISI 304 stainless steel.

SAFETY:

CONFORMS TO EN61010. OVER TEMPERATURE SAFETY CUTOUT FITTED.

Maximum precision





CONTROL PANEL

- 1. Digital display of temperature and time.
- **2.** Indicator lamp to show the parameters (temperature or time).
- 3. Push button to select visualised parameter.
- 4. Push button to increase parameter value.
- 5. Push button to decrease parameter value.
- 6. Push button start and stop.
- 7. Indicator alarm if the plate is over temperature.

MODELS

Part No.	Width / Depth (plate) cm	Height / Width / Depth (exterior) cm	Power W	Weight Kg
6155100	24 24	13 25 42	700	7.5
6156100	20 40	13 22 57	800	8
6157100	25 60	13 27 77	1000	16.5



Rectangular hotplate "Placfin"

ADJUSTABLE HOT PLATE TEMPERATURE FROM AMBIENT +5 °C UP TO 130 °C. STABILITY ±3 °C. Suitable for Thermal Tests (but not boiling).

FEATURES

Temperature control by a hydraulic thermostat.

Protected thermometer from 0 °C to 130 °C.

Hotplate surface protected by chemically treated aluminium, with heating elements distributed throughout the hotplate's surface.

Enamelled external case, resistant against corrosive chemicals.

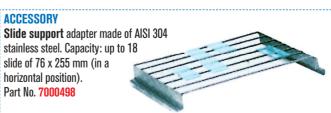
CONTROL PANEL

Hydraulic thermostat control, synchronised with an indicator lamp when in operation.

MODEL

Part No.	Width / Depth	Height / Width / Depth	Power	Weight
	(plate) cm	(exterior) cm	W	Kg
7000497	23 22	11 22 30	1500	3.7







Bank of circular hotplates "Uniplac"

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

FEATURES

Independent hotplate control using pulsed energy regulators.

Cast steel hotplates with embedded heating elements distributed throughout the hotplate's surface. 🛳

Adjustable height and angle stand bars for supporting condensers and other glassware etc.

External case made of AISI 304 stainless steel.

CONTROL PANEL

Independent temperature control for each position.

- Temperature control by pulsed energy regulators.
- Indicator lamps showing when the hotplate is on.

MODELS

Part No.	No. of places	Plate Ø cm	Height / Width / Depth (exterior) cm		Power W	Weight Kg	
6002314	4	12	23	77	27	2200	15
6002316	6	12	23	105	27	3300	22

ACCESSORIES

Bath of AISI 304 stainless steel of 140 mm Ø x 75mm high, with concentric reduction ring lid, Suitable for water, oil or sand.

Part No. 7002510



Round bottom flask adapter made of aluminium and suitable for Kjeldahl flasks of 50 to 100 ml and 50 to 100 ml round bottom flasks.

Part No. 1002290



Round bottom flask adapter made of aluminium and suitable for Kjeldahl flasks of 300 to 800 ml and round bottom flasks of 250 to 500 ml.

Part No. 1002280



ACCESSORIES FOR KJELDAHL DIGESTION



Clamp for Kjeldahl condenser tubes

made of AISI 304 stainless steel. Part No. 6000008



Part No. 1000104 4 place Part No. 1000106 6 place



EXTRACTION AND NEUTRALIZING SYSTEM FOR GASSES AND VAPOURS.

Prevents water wastage.



"Scrubber

Recirculating pump.

Features (see page 251).

Models

Unit "Scrubber"

Part No.	Height / \ (ext	Width . erior) o		Weight Kg
4001611	32	31	16	2

It is supplied with 3 Kg. acid vapours neutralizer solution.

Water recirculating vacuum pump

Part No.	Height / Width / Depth		Vacuum	Vacuum pump rate	Weight	
	(exterior) cm		level bar	litres/minute	Kg	
4001612	44	39	28	0.98	10	10

ACCESSORIES SOXHLET EXTRACTION



Boss head for supporting clamps. Part No. 1000069



Clamp for flasks or condenser tubes. Part No. 7000403



Thermocycler for thermal cycles 238 page **Spectrophotometers** 239 to 242 pages **Colorimeters** 243 pages Microtiter strip reader and water quality meter 244 page Microplate reader and washer 245 page **pH-meters** 246 to 247 pages **Conductivity meter** page 248



COMECTA Thermocycler for thermal cycles "B960"

FOR FOUR ADAPTER MODULES FOR 0.2ML VIALS, 0.5ML VIALS AND WELLS. ADJUSTABLE TEMPERATURES FROM 0°C TO 99 °C.



Advanced technology. Peltier effect.

APPLICATIONS

It is used in molecular biology to amplify DNA via a method based in the polymerase chain reaction process.

BASIC PRINCIPLE

The equipment performs a certain quantity of thermal cycles depending on the method used and repeat them many times for a while, and at the end, the initial DNA fragment Fiber have been replicated thousands times.

For a better process output, changes between temperature levels must be made with minimum time. With thermocycler K96, the cycle temperature can be reached in seconds, even if beginning from remote positions of the last set point. These changes take place by keeping a perfect uniformity between different block points.

The system can also be programmed to produce a linear gradient of temperature widthways the block. This achieves that the highest level of productivity points of the process is optimized and located.

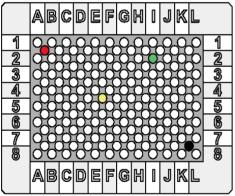
The thermocycler is composed of an inner lid system with heater and with adjustable height in order to perfectly adapt to the samples size. This prevents condensations in the upper side of the samples.

The equipment is based on a heat bomb controlled by continuous electric current and composed by several thermo electrical modules of Peltier effect, a low thermal resistance radiator and a fan convention system.

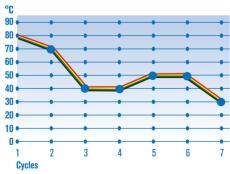
As it is integrated in the same block, this system allows increasing the process output and also fast transferring and extracting the block's temperature, going from the highest temperature level to the lowest in a minimum time.

The powerful control microprocessor allows monitoring the point where the process is at any moment, and showing it on the screen with real-time graphic images.

There is a useful elaborated software for processes organization, accessible by means of the keyboard and a high resolution LCD screen.



384 wells block, with red, yellow, green and black identification in diferent positions.



Graphic detail that shows temperature perfect uniformity in the different block wells, distinguished by different colours: red, yellow, green, black. It also shows how uniformity is maintained during all the thermal cycle periods, previously programmed in the display.



INTERCHANGEABLE BLOCKS

Each block incorporates a connector that identifies it and allows the thermocycler to recognize it. There's also an extractor handle which makes easy the block support use.



TECHNICAL SPECIFICATIONS

Temperature range: 0°C to 99°C. Durability: 99min. 99sec. Warming-up speed: 4°C/sec. Cooling down speed: 4°C/sec. Uniformity: At 95°C ±0.4°C.

From 20°C to 75°C ±0.2°C. Precision: ±0.2°C. Programmed gradient: From 2°C to 30°C according to the program. Temperature range gradient: 30-99 °C.

Heater lid: From 70 to 115°C according

to the program. Max. cycles number: 299. Stored programs: Up to 1000. Graphic display of 14.5cm, 320x240 pi-USB 2.0, LAN and RS232 output.

CONTROL PANEL

START switch. Interactive graphic display. Numeric and functions keyboard. Height levelling control of the inner lid.

MODEL

Part No.	Height / Width / Depth (exterior) cm		Power supply	Power W	Weight Kg	
5109000	25	27	38	220V/50-60Hz	780	7,8

ACCESSORIES

Interchangeable modules:

A. 96 vials of 0,2 ml. Code: 5109001 C. 96 vials of 0,2 ml + 77 vials of 0,5 ml. Code: 5109003

B. 54 vials of 0,5 m.l Code: 5109002 D. 384 wells Code: 5109004



Visible range spectrophotometers "V-1100" and "VR-2000"

"V-1100" MODEL WITH MANUAL WAVELENGTH SETTINGS AND AUTOMATIC BLANK.
"VR-2000" MODEL WITH AUTOMATIC WAVELENGTH SETTINGS AND BLANK.



They are widely used in colleges and enterprises for general quantitatives analysis and experiments based in absorbance measurements.

COMMON FEATURES

High quality silicon photometric diode detector and **1200 lines/mm** diffraction grating ensure the high quality accuracy and precision.

Digital display for an easy readout.

Automatic zero and blank (easy to use). Easy switching of transmittance, absorbance and concentration modes, just by pressing one key.

Large sample compartment, which can accommodate 5 to 100mm path length cuvettes with optional holders.

Its pre-aligned design makes it possible to change the halogen lamps by the user himself.

Optional:

Optional software based on Windows $^{\circledR}$ which can expand the applications to standard Curve and kinetics.

V-1100 MODEL

Easy of use.

Ergonomic and solid design for a continuous suitable use, for students and workers.

VR-2000 MODEL

Large LCD screen (128x64bits).

It can display a total of 50 groups of data (3 groups per screen).

It can display standard curve and kinetics curve graphic.

The system can also save the test results.

A total of 50 data groups and 10 standard curves can be saved in the RAM memory.

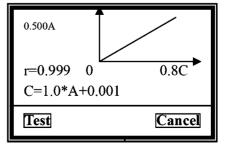
At most 9 standard samples can be used to establish a standard curve. The curve and the curve equation will be displayed simultaneously on the screen. The unknown concentration solutions, can be measured by the curve. If one knows the coefficient **k** and **b** of the formula: **C**=**kA+b**, one can input the value directly.

Data is stored in the memory in case of power cut.

ACCESSORIES

Profesional software. Part No. **4312001** (see page 241).

MODEL	V-1100	VR-2000				
Part No.	4120025	4120026				
Wavelength range	325-	1000 nm				
Spectral bandwidth	5 nm	4 nm				
Optical system	Single beam, diffraction	n grating 1200 lines/mm				
Wavelength adjustment	Manual	Automatic				
Wavelength accuracy	±2 nm	±1 nm				
Wavelength repeatability	1 nm	0,5 nm				
Photometric accuracy	±0,3% T	±0,5% T				
Photometric repeatability	±0,3% T					
Photometric range	-0,3-3 A, 0-200% T. 0-9999 Concentration					
Stray light	0,5% T	0,3% T				
Stability	± 0,004 A/h @ 500 nm	± 0,002 A/h @ 500 nm				
LCD Display	3,5 Digits	128x64 pixels				
Detector	Silic	on				
Sample compartment 1	0 mm path length standa	rd cuvette (100mm optional)				
Light source	Tungsto	en lamp				
Output	USB, Paralle	l port (printer)				
Mains supply	220 V / 50Hz AC o	r 110 V / 60 Hz AC				
External dimensions (HxWxD)	160 x 480 x 360 mm	180 x 470 x 370 mm				
Weight (Kg)	8	12				
SPARE	V-1100	VR-2000				
Halogen lamp (visible)	4312004	4312007				



Graphic display visualized detail of a regression line for concentration calculation. (VR-2000)



Ultraviolet and visible range spectrophotometers "UV-2005" and "UV-3100"

AUTOMATIC WALVELENGTH POSITIONING AND BLANK SETTING



APPLICATIONS

Suitable for pharmaceutical and biochemical laboratories, kinetics, quantitative analysis, wavelength scanning, multiple components and DNA/protein analysis.

COMMON FEATURES

Spectrophotometers UV-2005 and UV-3100 have been developed for accurate tests; Its stray light is only of 0.05% T. They are flexible, easy-to-use and maximize value. Value is provided from every day perfomance. The independent local software provides the following functions: Basic Mode, Quantitative Test, Kinetics and System Utilities.

Data is stored in the memory in case of power cut.

The Special application software provides a complete control of the spectrophotometer from a PC, through the built-in USB port.

Wavelength scanning models can be upgraded when connected to the PC via the special software based in Windows®.

Automatic wavelength settings.

Halogen and deuterium lamps can be switch on/off individually to extend lamp lifetime. Its pre-aligned design makes it possible to change lamps for the user himself.

Large sample compartment for 5-100mm path length cuvettes, with optional holders. A wide range of optional accessories can also be selected.

UV-2005 MODEL

Large LCD screen (128x64bits).

It can display a total of 200 groups of data (5 groups per screen).

It can display standard curve and kinetics curve graphic.

The system can also save the test results.

A total of 200 data groups and 200 standard curves can be saved in the RAM memory.

UV-3100 MODEL

Absorbance, transmittance and concentration measurements.

It establishes or uses stored calibration equations to measure solutions of unknown

Spectrum scan of sample at any selected wavelength range with choice of scanning speed and wavelength interval.

Measurement of absorbance changing versus time with reaction rate calculation function.

Measurement at multiple wavelengths to analyse and determine the composition of the mixtures.

Calculation of concentration and DNA purity.

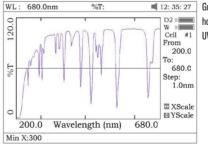
Note: ratio at other wavelengths can be measured.

ACCESSORIES

(see page 241).



MODELS	UV-2005	UV-3100			
Part No.	4120020	4120021			
Wavelength range	190-1	1100 nm			
Spectral bandwidth	2	! nm			
Optical system	Single beam, diffraction	n grating 1200 lines/nm			
Wavelength accuracy	±0	,5 nm			
Wavelength repeatability	0,	3 nm			
Photometric accuracy	±0,	3% T			
Photometric repeatability	±0,	2% T			
Photometric range	-0,3-3 A, 0-200% T. 0-9999 Concentration				
Stray light	0,05% T @220 nm, 340 nm				
Stability	± 0,002 A	/h @ 500 nm			
LCD Display	Graphic(128x64)	Graphic(320x240)			
Scanning velocity	- High,Med,	Low.Max 3000 nm/min.			
Uniformity	-	± 0,002 A (200-1000nm)			
Sample compartment	10mm path length standard c	uvette (100mm optional)			
Light source	Halogen and deuteriu	m lamps (pre-aligned)			
Output	USB, parallel	USB, parallel port (printer)			
Power requirements	220 V / 50Hz AC or	110 V / 60 Hz AC			
External dimensions (HxWxD)	180 x 470 x 370 mm	160 x 480 x 360 mm			
Weight (Kg)	14	16			



Graphic display visualized detail of holmium crystal scanning, from a UV3100 spectrophotometer.

SPARE PARTS	UV-2005	UV-3100
Halogen lamp (visible)	431	2007
Deuterium lamp (UV)	431	2006

ACCESSORIES

Thermostatted flow Peltier cuvette holder (only compatible with UV-2005 and UV-3100 models)

Temperature range: from 15 °C. to 40 °C. in steps of 0.1 °C (ambient temperature \pm 22°C.)

Precision: ± 0,2 °C.

Sample suction volume: 1, 2, 3, 4, 5, 7.5, 10, 12.5, y 15 ml/min.

LCD Display: 128x64 pixels.

Model

Part No.	Height / Width / Depth	Height / Width / Depth	Power	Weight
	(controller) cm	(cuvette holder) cm	W	Kg
4120018	11,5 27 17	10 12 7	30	3,5

Cuvette holder

For long cuvettes, pathlength between 1 and 50 nm. Part No. 4120030 For path leength100 mm. cuvettes. Part No. 4120031

Test tubes holder

For tubes from 10 to 20 mm. Ø Part No. 4120032

Ink printer (not thermal). Paper 2 1/4" (56 mm) wide roll. Includes power transformer and interface cables. (5V-3A)

Model

Part No.	Height / Width / Depth cm	Weight Kg
4120117	4 16 10	1





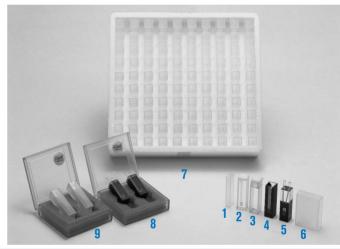






FEATURES

Range of polystyrene, glass and quartz cuvettes. Standard size pathlength 10mm x 45mm high. Special cuvette pathlength 40mm x 45 mm high (fig 6). Special cuvette pathlength 4mm x 45 mm high (fig 1).



MODELS

Standard cuvettes	3				
Part No.	Figure	Material	Optical path length	Description	Presentation
5100020	9	Quartz	10 mm	Standard square, "macro"	Pack of 2 units
5100021	9	Glass	10 mm	Standard square, "macro"	Pack of 2 units
5100022	7	Polystyrene	10 mm	Standard square, "macro", disposable	Box of 100 units
5100025	8	Glass	10 mm	Flow through cell, square "micro"	Pack of 2 units

Special cuvettes					
Part No.	Figure	Material	Optical path length	Description	Presentation
5100014	6	Glass	40 mm	Rectangular	Pack of 1 unit
5100015	5	Glass	10 mm	Flow through cell. Window 5 x 10 mm	Pack of 1 unit
5100016	4	Glass	10 mm	Standard square, "micro"	Pack of 1 unit
5100017	3	Glass	10 mm	Standard square, "macro" with round lid	Pack of 1 unit
5100018	2	Quartz	10 mm	Semi-micro	Pack of 2 units
5100019	2	Glass	10 mm	Semi-micro	Pack of 2 units
5100023	7	Polystyrene	10 mm	Square Semi-Micro, disposable	Box of 100 units
5100024	1	Glass	5 mm	Square Semi-Micro	Pack of 1 unit









Double Beam Spectrophotometer "UV-2300 II"

BAND WIDTH 1.5 nm. TOTAL STABILITY DOUBLE BEAM OPTICS. AUTOMATIC WAVELENGTH CORRECTION CALIBRATION. USB PORT FOR DATA STORAGE. WIDE RANGE OF ACCESSORIES.



APPLICATIONS

Research, chemistry, biotechnology, general spectroscopy analysis applications, environmental applications.

FEATURES

Monochromator high resolution optics that eliminate any optical aberrations, monochromator "Seya-Namioka", manufacturer of exclusive beam technologies and diffraction gratings in Japan.

Bandwidth 1.5 nm in accordance with European pharmacopoeia recommendations. (the relation between the maximum and minimum absorbence in Toluene and Hexane at 0.02% (V/V) should be more than 1.5T).

Several modes of operation including spectral scanning, time base scanning, multi wavelength determinations, peak and trough detection, etc.

Fast spectra scan displayed on a screen covering the whole spectral range: quick scan 3600 nm/minute, range 190 to 1100 nm

Validation function for GLP/GMP:

This function maintains and assures the optimum working parameters of the instrument. Parameter such as the wavelength precision and noise are monitored.

Memory facilities of analytical results:

The analytical parameters and results can be stored in the "flash" memory, connected by the USB. The stored information can be stored as text and can be transferred to a computer for reporting using MS WORD/EXCELL.

A DNA/RNA function is fitted to quantify the ratio at 260/280 nm.

Controllable from a computer with application specific optional software: "UV-Analyst Spectrum", (see accessories).



SPECIFICATIONS

Optical system: Double beam optics. Wavelength range 190 nm to 1100 nm.

Band pass: 1.5 nm

ABS range: -3.000 to 3.000 A or 0 to 300% T.

Stray light: less than 0.05% (220 nm Nal, 340 nm NaNO₂). Scan speed: 10, 100, 200, 400, 800, 1200, 2400 and 3600 nm/minute.

Wavelength accuracy: ±0.3 nm.

Photometric accuracy: \pm 0.002 A from 0 to 0.5 A.

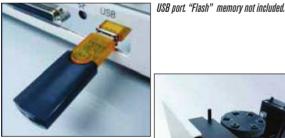
± 0.002 A from 0.5 to 1.0 A.

Baseline stability: 0.0003A/hr (500 nm after 2 hours of use.).

Noise level: 0.0003 A (at 500 nm).

Light source: Deuterium D2 and Halogen lamps.
Built in screen: LCD back light of 165 x 122 mm.
Connections: RS232 and parallel port.





Constant temperature 6 place cell changer, 10mm cuvettes, ideal for Kinetics.

Part No. 5110029



SPARES

Tungsten halogen lamp.Part No. **5110021**

Deuterium lamp (UV).Part No. **5110022**

ACCESSORIES

Part No. **5110023** Flow cell 10 mm path length.

Part No. 5110024 Constant temperature single cell holder for 10mm flow cell.

Part No. 5110025 Micro cell holder for 10mm (50 µl) cell.
Part No. 5110026 Long path length cell holder for 100mm cells.

Part No. 5110027 5 Position cell changer for 10mm cuvettes.

Part No. 5110028 Constant temperature cell holder for 10mm cuvettes
Part No. 5110029 6 place constant temperature cell changer for 10mm cuvettes.

Part No. 5110033 Software UV-Analyst Spectrum. Simple and logical, enhanced software for multiple applications and results and manipulation of

data, calculation such as DNA/RNA ratios.



Semi Automatic clinical analyser "Photometer S-2000"

LOW PROFILE FUNCTIONAL CLINICAL ANALYSER.

APPLICATIONS

Clinical laboratories, Clinical Biochemistry, Haematology, E.I.A. Electrolytes and Innes

FEATURES

47 most commonly used Pre-programmed clinical methods: cholesterol, glucose, blood iron, LHD, AST, UREA etc.

Storage for up to 134 methods and up to 1000 stored results.

6 analytical fitting routines: final point, bio-chromatic, regression fit, multi-standard curve, best fit and kinetics.

Graphic display LCD (640 x 240 pixels, 256 colours).

Lamp life save function.

Graphic display.

Quality control of analysis function.

Built in printer.

Control by "roller ball mouse" or "external mouse."

Temperature conditions: 15 °C to 32 °C: Maximum humidity 85%

RS232 out put interface.

SPECIFICATIONS

Solid state photodiode detector.

Bichromatic optical system with 7 filters, 340, 405, 500, 546, 578, 620 and 670 nm.

Band pass: 10 nm. Flow cell: 30 ul.

Measuring range: from 0.000 to 2.500 ABS.

Resolution: display 0.001 ABS, calculations to 0.0001ABS.

Thermostatted Peltier cuvette holder: 25, 30 and 37 °C Precision ±0.1 °C.

Tungsten halogen lamp of 6V 10 W.

Comes complete with protective cover, spare lamp and two rolls of printer paper.



MODEL

Part No.	Height	Height / Width / Depth cm		Power rating	Power W	Weight Kg
4120010	14	45	33	110-220V/50-60Hz	150	10

ACCESSORY

Metallic thermostat dry block "BIO-BATH"

Small size with a fixed temperature of 37 $^{\circ}\text{C}$ with check thermometer, 8 tube positions for 75x13 VAC tubes.

Note: Accelerates the extraction of plasma for faster results and waiting time for the patient.

MODEL

Part No.	Height / Width / Depht			Stability	Power	Weight
	(exterior) cm			°C	W	Kg
7001561	8.8	9.6	7	0.5	8	0.5

SPARE. Halogen lamp 6 V 10 W. Part No. 4312015



Digital colorimeter "Clormic"

MICROPROCESSOR CONTROLLED.
AUTOMATIC ZERO ABSORBANCE AND 100% TRANSMITTANCE.
ALPHANUMERIC 20 CHARACTER 2 LINE L.C.D. DISPLAY.

APPLICATIONS

Chemistry Laboratory, quality control, environmental control.

FEATURES

Wavelength range: 400 to 800 nm, by using special filters with a 30 nm band pass.

12 position Filter disc wheel selection.

Standard filters: 420, 440, 490, 520, 550, 580, 620 and 680 nm

Expanded Absorption range: -0.3 to 3.5 O.D. in real ti-

me.
Transmission: 0 to 100 T %.
Photometric accuracy: >1 %.
Photometric precision: ±1 %.
Photometric stability: 0.004 A/hr.
Light source: Long life tungsten lamp.

Detector: Solid state.

Sample chamber: 10 mm cuvettes or test tubes of 12 and 16 mm \emptyset .

Minimum volume: 1 ml.

Display: Alphanumeric LCD display of 2 lines of 20 characters.

Calculation functions: Transmission T

Absorbence, Concentration by factor or standard concentrations.

Calibration: Self adjusting by software. **RS-232 interface.**

CONTROL PANEL

ON/OFF switch. Interactive LCD display. Numeric and function keypad.



MODEL

Part No.	Built	Height / Width / Dep	oth Power	Weight
	in printer	cm	W	Kg
4120009	NO	11 18 28	l 10	4.5

SPARE

Lamp of 6 V / 6 mm. Part No. **4512009**



Microtiter Strip Reader "Reader M-2000"

STORAGE MEMORY FOR UP TO 59 METHODES INCLUDING: FACTORS, STANDARDS OR CALIBRATION CURVES WITH UP TO 10 STANDARDS. ADDITIONAL CALCULATION FEATURES.

APPLICATIONS

Clinical diagnostics, E.I.A., Veterinary, quality control.

FEATURES

Spectral range: 400 to 700 nm. interference filter of 10 nm band pass.

Supplied complete with a filter of 450 nm (other wave-

lengths available consult for options.)
Measuring range: -0.2 to 3.5 0.D.
Photometric accuracy: >1%.
Photometric precision: ±1%.
Light source: Long life LED.

Detector: solid state. 59 method memories. Curve point editing feature.

Software: ABS. Concentration and polynomial curve fitting with up to 10

standards

RS-232 output to connect a printer or to a PC.

Interface RS-232.



MODEL

Part No.	Heigh	ht / Wid	th / Depth	Power W	Weight Kg
4120013	11	18	28	7	2

ACCESSORY

Ink printer (not thermal). Paper 2 1/4" (56 mm) wide roll. Interface RS232. Includes power transformer and interface cables. (5V-3A)

Model

	Part No.	Height / Width / Depth cm	Weight Kg
ĺ	4120113	4 16 10	1



SPARE

Lamp of 4 mm Ø 5 V. Part No. **4313030**



Multi-parameter water quality meter "MP-2006"

LARGE TOUCH SCREEN. TO MEASURE PH, ORP, CONDUCTIVITY, TDS, SALINITY, DISSOLVED OXYGEN, IONS & TEMPERATURE SUPPLIED WITH ELECTRODES: OF CONDUCTIVITY, PH, DISSOLVED OXYGEN AND TEMPERATURE PROBE.



5.7 inches touch screen.

Capacity to store up to 2200 sets of data. GLP method. Possibility of storing, printing and deleting measuring data. USB and RS-232 ports for PC connection.

Measuring modes: continuous, timing and balance measuring modes.



	Range	Accuracy	Resolution
pH:	-2 to +19,999	±0,002 FS	0,001
ORP:	±1999,99 mV	±0,03 FS	0,01 mV
Conductivity:	0,001 µS to +199,9mS	±0,5 FS	0,001µS
TDS:	0,000 mg/L to 19.99g/L	±0,5 FS	0,001 mg/L
Salinity:	(0,0 to 8,00)%	±0,1%	0,1%
Dissolved oxygen:	0,00 to 19.99 mg/L	±0,5 mg/L	0,01 mg/L
lons:	0 to 19990(ug/L, mol/L)	±0,5%	±1
Ta:	-0.5 to +135	±0.5 FS	0.1



MODEL					
Code	Height /	/ Width . cm	/ Depth	Power	Weight Kg
4120700	29	20	7	230V/50-60Hz	1

ACCESSORIES

Standard electrodes of pH, conductivity and temperature. See page 247. Special electrodes:

Code	Electrode type	Working temperature	Body material	Measure mm	Code	Electrode type	Working temperature	Body material	Measure mm
4120183	Platinum	0-50°	Glass	Ø 12 x 120	4120189	Calcium	5-60°	Glass	Ø 12 x 120
4120184	Platinum-2	? 0-50°	Glass	Ø 12 x 120	4120190	Nitrate	5-60⁰	Glass	Ø 12 x 120
4120185	Antimony	0-50°	ABS	Ø 12 x 120	4120191	Copper	5-60⁰	Glass	Ø 12 x 120
4120186	Tungsten	0-50⁰	Glass	Ø 12 x 120	4120192	Chloride	5-60⁰	Glass	Ø 12 x 120
4120187	Silver	0-50⁰	ABS	Ø 12 x 120	4120193	Oxygen	5-40⁰	ABS	Ø 12 x 120
					4120194	Reference	5-55⁰	Glass	Ø 12 x 120



APPLICATIONS

Clinical diagnostics. Quality control in food analysis, Haematology.

Bi-chromatic optical system with 4 wavelength selection: 405, 450, 492, 630 nm, (other filters from 405 to 700nm available). Memory for up to 500 programs, 10000 sample results and 1000 pa-

Patient data software, laboratory personnel and analysis reports.

100 typical analysis methods pre programmed.

Capable of performing up to 12 different tests per plate.

Calculations: ABS, Cut-Off, Curve fitting: regression, linear, logarith-

mic, exponential and potential. Measuring absorbance range: 0-2.5A Displayed absorbance range: 0-3.5A Accuracy: ±1.0% or ±0.007 A. Precision: ±0.5% or ±0.005 A.

Linearity: r > 0.995.

Resolution: 0.001 ABS (display); 0.0001 ABS (calculated).

Measuring time: Continuous mode < 5 s, step by step mode < 15 s.

Output RS-232 for download to a computer or a printer.

Parallel printer interface.

Programmable plate vibrating for mixing with control of time and speed.

CONTROL PANEL

LCD display (320 x 240 pixels) of 5.7 inches.

Operating system WINDOWS CE.

Operation by touch screen or optional "Mouse" control (mouse not included).



MODEL	Part No.	Height / Widt (exterior)		Voltage	Weight Kg
2100-C	5109999	19 45	33	AC 110-250 V / 50-60 Hz	10

ACCESSORIES

Software for data transfer to computer. Part No. 5109997



COMECTA Microplate washer 2600-C

COMPLETELY AUTOMATIC. EASY TO USE. 50 WASH PROGRAMS.



APPLICATIONS

Clinical laboratories.

Blood banks.

Quality control food laboratories.

FEATURES

Wash head of 8 x 1. (12 x 1 optional).

Plate wash by 12 x 8 strips or 8 wells/strip.

Plate clean for flat, round and V bottom plates.

Automatic wash and rinse processes.

Reservoirs: 2 litre, wash solution.

2 litre, waste, with liquid level sensor.

Memory for up to 50 wash programs.

Software controll of head's depth adjust and horitzontal position.

Wash cycle times from 1 sec. to 2 hrs.

Wash dosing range: from 50 to 2000ul.

Dosing resolution: 5% CV (based on 350ul of distilled water)

Residual volume (after aspiration):

 $< 1 \,\mu$ l (Cells, bottom U and V well plates.).

< 5 μ l (Cells, bottom of flat well plate.)

CONTROL PANEL

LCD graphic display of 90 x 50mm Membrane key pad of 9 keys. Emergency stop button.



MODEL	Part No.		/ Widt	h / Depth) cm	Voltage	Weight Kg
2600-C	5110000	14	45	33	AC 110-250 V / 50-60 Hz	12



FEATURES

Manual temperature compensation from 0 to 60 $^{\circ}$ C with sample temperature key pad entry (does not read temperature).

Automatic buffer recognition of two of those three buffers: pH4, pH7 and pH9. Electrode connector: BNC type.

Includes: carry case and pH electrode.

SPECIFICATIONS

	Range	Precision	Resolution
pH:	0 to 14	±0.03	0.01
mV:	±1400	±2	1
Impedance:	5 x 10 ¹¹ Ohm.		

MODEL

Part No.	Height / Width / D cm	epth Power source	Weight Kg
4120300	17 7.5	3 2 x 1.5V batteries	0.5



Digital pH meter "pH-2004"

PORTABLE METER WITH IP65 PROTECTION AGAINST WATER AND DUST.

FEATURES

Automatic temperature compensation and read out from 0 to 60 °C with temperature sensor Rt-2252. Results memory for up to 250 readings.

Protection against water and dust IP65 (Impermeable to water splashes from any direction.) Automatic buffer recognition and calibration for 1 or 2 buffers, recognition of up to 5 selectable buffers.

RS-232 output to connect a printer or a computer. Electrode connector: BNC type. Includes: carry case, pH electrode and temperature sensor Rt-2252.

Direct connection to printer Part No. 4120113 (see page 247).

Universal arm support not included. Part No. 1001552 (see page 248).

SPECIFICATIONS

	Range	Precision	Resolution
pH:	0 a 14	±0.02	0.01
mV:	±1800	±2	1
Ta:	0 to 60	±0.5	0.1
Impedance:	1 x 10 ¹² Ohm.		

MNNFI

Part No.	Height / Width / Depth	Power	Weight
	cm	source	Kg
4120400	20 10 4.5	4 x 1.5V AA Batteries	0.5



Digital pH meter "pH-2005"

BENCH TOP MODEL WITH LARGE SCREEN.

FFATURES

Automatic or manual temperature compensation from 0 to 99.9 $^{\circ}$ C Automatic buffer recognition and calibration of 2 buffers, recognition of up to 3 buffers: pH 4, pH 7 and pH9.21.

RS-232 output to connect a printer or a computer.

Electrode connection BNC.

Temperature sensor connection Rt-2252.

Includes electrode's support stand.

SPECIFICATIONS

	Range	Precision	Resolution
pH:	0 to 14	±0.02	0.01
mV:	±1999	±1	1
Ta (°C):	0 to 99.9	±0.5	0.1
Imnedance:	1 x 10 ¹² Ωhm		



See "Accessories for pH meters" for selection of electrodes (Page 247).



ACCESSORY

pH probe and additional temperature sensor, gel filled. Temperature sensor Rt 2252. With IP65 protective connectors.

Part No. 4120401







MODEL

Part No.	Height / Width / Depth cm	Weight Kg
4120500	30 20 7.2	1.5

See accessories for electrode, temperature sensor and buffer solutions. Not compatible with printer Part No. 4120113 (see page 247).



Digital pH meter "pH-2006"

BENCH TOP, LARGE GRAPHIC TOUCH SCREEN CONTROL.

FEATURES

Ergonomic touch screen control functions. Includes support arm. Automatic temperature compensation from -5 to 105 °C.

Up to 5 buffer calibration with 10 buffer recognition.

Stores up to 200 results.

RS-232 output to connect a printer or a computer.

Electrode connector: BNC type.

Rt-2252 Temperature port.

Selectable resolution range.

Direct interface for printer Part No. 4120113 (see accessories).

SPECIFICATIONS

	Range	Precision	Resolution
pH:	-2 to 18	±0.01	0.001
mV:	±1999.9	±0.1	0.01
Ta (°C):	-5 to 105.0	±0.3	0.1

Impedance: 1 x 10¹² Ohm.

See accessories for electrodes, temperature probes, buffers and printer.



MUDEL		
Part No.	Height / Width / Depth cm	Weight Kg
4120600	29 20 7	1



Universal arm support.

With holder for up to 4 sensors or electrodes. Very stable heavy base. Ideal for working at various heights.

Part No. 1001552



pH E	lectrodes				ı			
Fig.	Part No.	Range pH	Sensor T ^a	Temperature Range	Electrolyte	Dimensions mm	Material Body	Application
1	4120102	0 - 14	No	0 - 80°	Liquid	Ø 12 x 120	Glass	General laboratory use.
2	4120125	0 - 14	Yes	0 - 60°	Gel	Ø 12 x 120	Ероху	Protective cover. General laboratory and external use.
3	4120101	0 - 14	No	0 - 60°	Gel	Ø 12 x 120	Ероху	Protective cover. General laboratory and outside use.
4	4120114	0 - 10	No	0 - 60°	Gel	Ø 12 x 120	Ероху	Surface analysis, Skin, meat, moist semisolids, culture media.
5	4120104	0 - 14	No	0 - 60°	Gel	Ø 12 x 120	Glass	Pointed sensor. Suitable for food, semi-solids, fruit meat etc.
6	4120103	0 - 14	No	0 - 80°	Gel	Ø 8 x 60	Glass	For measuring in tubes. Liquid solutions in general.
7	4120126	0 - 14	Yes	0 - 80°	Liquid	Ø 12 x 120	Glass	Fast response, liquids in general.

Te	mı	ner	atı	ire	sei	ารเ	rs

Fig.	Part No.	Range	Туре	Dimensions mm	Material
8	4120121	0-100	Rt-2252	Ø 5 x 120	Stainless steel
9	4120120	0-100	Rt-2252	Ø 12 x 120	Glass

Ion selective electrodes

Part No.	lon	Range	Limits	Range °C	Range pH
4120168	Chloride Cl ⁻	1-3 x 10 ⁻⁶	35.500 - 1	5-50	1-12
4120174	Nitrate NO⁻₃	1-7 x 10 ⁻⁶	62.000 - 0.4	0-50	2-11
4120177	Potassium K ⁺	1-10-6	39.000 - 0.04	0-50	1-9

pH Buffer solutions.

4120107	Flask 250 ml Buffer ±0.02 pH 4.00 at 20 °C; 4.01 at 25 °C
4120108	Flask 250 ml Buffer ±0.02 pH 7.02 at 20 °C; 7.001 at 25 °C
4120127	Flask 250 ml Buffer ±0.02 pH 9.23 at 20 °C; 9.18 at 25 °C
4120109	Frasco 250 ml KCl 3M solution (Electrolyte for pH electrodes)

MAGNETIC STIRRER "AGIMICRO" Features

Maximum stir volume: 2 litres. Adjustable stir speed from 40 to 1400 r.p.m.

Excellent chemical resistance.

Location hole at the back for a retort rod. (Accessory)

Ink printer (Not thermal).

For use with pH and conductivity meters . Paper 2 1/4" (56 mm) wide roll. Interface RS232.

Includes power transformer and interface cables. (5V-3A)



Control panel

Mains switch with luminous on indicator. Analogue control of speed in r.p.m.



Part No.	Medidas	Power	Weight
	cm	source	Kg
7001638	Ø 12 x 5	230 V 1 W	0.5

Supplied complete with a 8 Ø x 32 mm P.T.F.E. coated



ACCESSORY Support bar and electrode clamp. Part No. 7001639

Model			
Part No.	Height / Width / Depth cm	Power source	Weight Kg
4120113	4 16 10	DC 5 V, 3 A	1



Conductivity meter "CD-2004"

PORTABLE EQUIPMENT WITH IP65 PROTECTION AGAINST WATER AND DUST.

FEATURES

Measures conductivity, TDS and salinity.

Automatic range switching.

Automatic temperature compensation.

Calibration using standards for conductivity, TDS and

RS-232 output to connect a printer or a computer. Direct printer connection, see part no. 4120113.

Temperature coefficient programable. Conductivity cell constant adjustment.

Memory for 250 results.

Ambient protection IP65 (protection against water splashes from any direction).

Includes Carry case, conductivity cell K= 1 and temperature sensor Rt-2252.

Conductivity cell with epoxy body. Temperature sensor Rt-2252.

Conductivity cell and temperature sensor.

IP65 protection connectors. Part No. 4120411

SPECIFICATIONS

Reading ranges: (automatic) Conductivity TDS

0.00 to 19.99 µS/cm 0.00 to 10.00 mg/L 20.0 to 199.9 uS/cm 10.00 to 100.0 mg/L 200 to 1999 µS/cm 100.0 to 1000 mg/L 2.00 to 19.99 mS/cm 1.000 to 10.00 g/L 20 to 199.9 mS/cm 10.00 to 19.99 a/L (Cell constant K=10) (Cell constant K=5 or 10)

Salinity range: 0.00 to 8.00 Temperature range: 0.0 a 40.0 °C Precision:

Temperature:

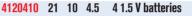
Conductivity: 1.5% base scale Salinity: 0.20%

0.3 °C



MODEL

Width / Height / Depth Power Weiaht Kg source





ACCESSORY

Conductivity meter "CD-2005"

BENCH TOP METER WITH LARGE SCREEN.

FEATURES

Measures conductivity and TDS.

Automatic or manual setting temperature compensation with fixed coefficient of 2%.

Calibration with standards of conductivity and TDS. RS-232 output to connect a printer or a computer. Cell constant adjustment.

Temperature sensor connection Rt-2252. Temperature measuring range: 0 to 60 °C.

SPECIFICATIONS

Conductivity ranges: (Manual range change)

0 to 20.00 µS/cm

0 to 200.0 µS/cm 0 to 2000 uS/cm

0 to 10.00 mS/cm

Precision: 1.5% base scale + 1 digit.

TDS ranges: 0 to 1000 mg/L.



Part No.	Width / Height / Depth cm	Weight Kg
4120510	30 20 7.2	0.5

Accessories to complement the meter, conductivity cells, temperature sensors and standards (see accessories). Not compatible with the printer 4120113.

Includes sensor stand.



Conductivity cell

Glass body. Working temperature range 0-100 °C

K Sensor T^a (°C) Dimensions mm Applications Fig. Part No.

Ø 12 x 120 General laboratory use up to 2000 µs Yes 3 41202220.1 Yes Ø 12 x 120Pure water up to 20 μS

4 4120223 10 Yes Ø 12 x 120High conductivity up to 200 ms

Temperature sensors

Fiç	g. Part No.	Range	Туре	Dimensions mm	Material
5	4120121	0-100	Rt-2252	Ø 5 x 120	Stainless steel
6	4120129	0-100	Rt-2252	Ø 12 x 120	Glass

Conductivity standards.

4120160 Flask 250 ml Standard ±0.05 of 1278 mS/cm at 20 °C; 1413 mS/cm at 25 °C 4120161 Flask 250 ml Standard ±0.025 of 4.915 mS/cm at 20 °C; 5.446 mS/cm at 25 °C 4120162 Flask 250 ml Standard ±0.06 of 11.67 mS/cm at 20 °C; 12.88 mS/cm at 25 °C

MAGNETIC STIRRER "AGIMICRO" Features

Maximum stir volume: 2 litres.

Adjustable stir speed from 40 to 1400 r.p.m.

Excellent chemical resistance.

Location hole at the back for a retort rod. (Accessory)

Control panel

Mains switch with luminous on indicator. Analogue control of speed in r.p.m.

Model

Part No.	Medidas cm	Power source	Weight Kg
7001638	Ø 12 x 5	230 V 1 W	0.5

Supplied complete with a 8 Ø x 32 mm P.T.F.E. coated stir bar.

Universal arm support.

With holder for up to 4 sensors or electrodes. Very stable heavy base. Ideal for working at varying heights.

ACCESSORY

Support bar and electrode clamp.

Part No. 7001639

Part No. 1001552









Kjeldahl digestion unit Steam distillation unit kjeldahl "Pro-Nitro M"	page page	251 to 252 253
Automatic NaOH dosage and temporized stop. Steam distillation unit kjeldahl "Pro-Nitro S" Automatic boracic and Naoh dosage, sample drainage and	page	254
temporized stop. Steam distillation unit kjeldahl "Pro-Nitro A" Fully automatic operation. From reagent dosage to the titration	page	255 to 256
Extractor for fats and oils "Det-Gras N"	page	257
Extractor for determination of cellulose and fibre	page	258
Alcohol disitillation	page	259 to 260
"DQO" and "DBO" water analysis	page	261
Flocculator and water distiller	page	262 to 265



NUTRITIONAL AND WATER ANALYSIS APPARATUS

EXTRACTION

Organic nitrogen determination by Kjeldahl "BLOC-DIGEST"
Steam distillation of protein, PRO-NITRO "M"
Steam distillation of protein semiautomatic, PRO-NITRO "S"
Kjeldahl distillation automatic PRO-NITRO "A"
Extractor for the determination of cellulose and fibre, "DOSI-FIBER"
Cold extraction unit, "EF-1425"
Solvent extractor unit for the determination of residues, oils and fats in nutritional and other materials DET-GRAS "N"

Sample Hydrolysis unit, "HI-1427" Wine (Alcohol), distillation unit "DE 1626"

WATER ANALYSIS

Chemical Oxygen Demand in residual water "C.O.D."

Constant temperature refrigerated incubator cabinets, B.O.D. "MEDILOW S, M, L , LG"

Pro-Nitro M S and A Dosi-Fiber FF-1425 Det-Gras N Rloc-Dinest

Flocculator for water analysis, laboratory "FLOCUMATIC" Flocculator for water analysis, portable "JARTEST" De-mineraliser "LAB-ION" Water Distillation unit , "AQUASEL", "L-3" and "AC-L8"

RECOMMENDED METHODS AND EQUIPMENT: PRO-NITRO M, S and A, DOSI-FIBER, EF-1425, HI-1427, DET-GRAS N, BLOC-DIGEST, DE-1626 and C.O.D.*

Reference

ANALYSIS OF CEREAL AND DERIVATIVES	Reference	Pro-Nitro M,S and A	Dosi-Fiber	EF-1425	Det-Gras N	Bloc-Digest
Determination index for cellulose	Method Wladesco		YES	YES		
Insoluble fibre in food	Method Van Soest		YES	YES		
Crude Fibre	Method Weende & Wijkströn		YES	YES		
Proteins	Method Kjeldahl	YES				YES
Soxhlet extraction for fat identification	Soxhlet Extraction				YES	
Crude Fat	Soxhlet Extraction				YES	
Arsenic	Determination A. A.					YES
Mercury	Determination A. A.					YES
ANALYSIS OF MILK AND DERIVATIVES	Reference	Pro-Nitro M,S and A	Dosi-Fiber	EF-1425	Det-Gras N	Bloc-Digest
Crude Fat	Soxhlet Extraction				YES	
Crude Protein	Method Kjeldahl	YES				YES
Casein M	lethod Kjeldahl through precipitation of c	asein YES				YES
ANALYSIS OF ALCOHOLIC BEVERAGES	Reference	DE-1626	Dosi-Fiber	EF-1425	Det-Gras N	Bloc-Digest
Degree of alcohol	Method Volumetric	YES				
/olatile Acid	Method Volumetric	YES				
ron	Method Volumetric					YES
ANALYSIS OF FODDER AND RAW MATERIAS	Reference	Pro-Nitro M,S and A	Dosi-Fiber	EF-1425	Det-Gras N	Bloc-Diges
Raw Cellulose	Method Weende & Wijkströn		YES	YES		
Raw Protein	Method Kjeldahl	YES				YES
Raw Fat	Soxhlet estraction				YES	
Volatile base nitrates	Distillation Kjeldahl	YES				
Soluble Raw Fat en hydrochloric acid and Pipsin	Method Kjeldahl	YES				YES
Casein total	Method Kjeldahl in casein precipitate	YES				
Phosphorus	Method Photometric					YES
Hydrocyanic Acid	Distillation in Silver Nitrate	YES				
Pure zolidine	Soxhlet Extraction				YES	
ANALYSIS OF FRUIT BEVERAGES AND DERIVA	TIVES Reference	Pro-Nitro M,S and A	Dosi-Fi	ber [DE-1626	Bloc-Diges
Total Nitrogen	Method Kjeldahl	YES				YES
/olatile Acids	Distillation measurement				YES	
Arsenic	Dichromate Determination					YES
ANALYSIS OF WATERS	Reference	Pro-Nitro M,S and A	Dosi-Fiber	r D.Q.O. /	/ECO-8/ECO16	Bloc-Diges
Total Nitrogen	Method Kjeldahl	YES				YES
Total Phosphorus	Method Photometric					YES
C.O.D.	Determination by Dichromate				YES	

^{*} Reference: Methods are official publications issued by the MAPA (Ministry of Agriculture, Fisheries and Nutrition) 1993.



Dry block for Determination of Organic Nitrogen by the Kjeldahl method

Models Macro and Micro

THE EQUIPMENT FOR THE DETERMINATION OF ORGANIC NITROGEN IS MADE OF TWO BASIC ELEMENTS:

- BLOCK DIGESTER (MINERALISATION) WITH PROGRAMMABLE TEMPERATURE CONTROL AND GLASSWARE (MACRO 250 ml and micro 100 ml).
- DISTILLATION UNIT "PRO-NITRO M", "PRO-NITRO S" (SEMIAUTOMATIC) AND "PRO-NITRO A" (AUTOMATIC).





Digestion Block "Bloc-digest"

FEATURES

Minimal sample manipulation

Uniform heating.

Capacity to store 20 programs of 4 steps for temperature and time.

RS-232 port for temperature register and digestion programation from a PC.

Gas collection system that does not require special water jet pumps.

Supplied complete with:

1 metal heater block.

1 programmer for time and temperature

1 tube support rack

1 gas collector

Digestion tubes.

Complete unit with: Dry-block connected to a programmable process unit, (time and temperature) rack support for tubes and fume extractor.





MODELS - COMPLETE UNIT MACRO

MACRO	Part No.	No. of positions
Bloc Digest 6	4000629	6
Bloc Digest 12	4000630	12
Bloc Digest 20	4000631	20

MODELS - COMPLETE LINIT MICRO

modelo comi lei e ci	iii iiiioiio	
MICRO	Part No.	No. of positions
Bloc Digest m 12	4001047	12
Bloc Digest m 24	4001048	24
Bloc Digest m 40	4001049	40

ACCESSORIES: EXTRACTION SYSTEM AND NEUTRALIZATION OF ACID VAPOURS



Specially designed to absorb and neutralize vapours generated in the Kjedahl diges-

Composed of a "Scrubber unit" that blocks the passage and neutralizes the condensed acids, and a re-circulating water pump that produces sufficient vacuum to aspirate the vapours.

It is essential to put the "Scrubber" unit together with the neutralizer solution between the digestion block and the re-circulating pump. Digester "Bloc Digest 20" requires 2 "Scrubber" units for a proper neutralization of fumes. Note: Pump with part number 4001612 has 2 suction inlets.

Reduces water consumption, no requirement for a constant connection for mains water.

Prevents emission of gas vapours and acidic water to

Low noise level (<65dBA)

Re circulating pump made from chemically resistant materials

"Scrubber" unit

Part No.	Height / Width / Depth (exterior) cm	Weight Kg
4001611	32 31 16	2

It is supplied with 3 Kg. acid vapours neutralizer solution.

Spare part:

3 Kg. acid vapours neutralizer solution.

Part No. 4001610

Water recirculation vacuum pump

	oulution i	uou.	pa	.h		
Part No.	Height / Width / Depth (exterior) cm		Vacuum level bar			
4001612	44	39	28	0.98	10	10

PARTS LIST AND ACCESSORIES

Heating blocks

To function correctly it is important to include in the purchase the controller unit for time and temperature RAT-2, The block should not be connected directly to the mains supply.



Models	Part No.	No. of positions	Ø tube mm	Height / (ext	Width a		Temperature °C	Power W	Weight Kg
MACRO	4000507	6	42	18	33	28	45 to 450	1500	18
MACRO	4000508	12	42	18	39	33	45 to 450	2100	25
MACRO	4000509	20	42	18	44	39	45 to 450	2500	31
MICRO	4001050	12	26	18	33	28	45 to 450	1500	16
MICRO	4001051	24	26	18	39	33	45 to 450	2100	22
MICRO	4001052	40	26	18	44	39	45 to 450	2500	27

Process programmer for time / temperature RAT-2. Part No. 4001538

Features

Temperature range from 45 °C to 450 °C. Memory for 20-4 steps programs. Maximum time per step: 600 minutes. Acoustic indication for digestion end of program. Two selectable temperature gradients: kjeldahl/D.Q.O. Temperature sense breakage alarm.

Independent control of safety maximum temperature. Bidirectional RS-232 serial connection. For temperature registration and digestion program edition with the RAT connected to a PC.

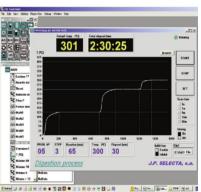
Software included.



Electronic controller RAT-2

Control Panel

The control panel and the RAT-2 display allow the creation and execution of the digestion program. During the digestion, it shows the block temperature, the elapsed time in the program step.



The software included makes easier the digestion program edition and the digester temperature register.

Tube support rack.

Made of chemically treated no corrosive Dural, with handles and side panel that prevents heat loss.



Models	Part No.	No. of places	•	/ Width exterior) (
MACRO	4005071	6	15	17.5	12.5
MACRO	4005081	12	15	23	18
MACRO	4005091	20	15	28.5	23.5
MICRO	4001053	12	15	17.5	12.5
MICRO	4001054	24	15	23	18
MICRO	4001055	40	15	28.5	23.5



Models	Part No.	No. of places	Height / Width (exterior)	
MACRO	4005072	6	15 18	12
MACRO	4005082	12	15 23	18
MACRO	4005092	20	15 29	23
MICRO	4001056	12	15 18	12
MICRO	4001057	24	15 23	18



		places	(exterior) cm
MACRO	4005072	6	15 18 12
MACRO	4005082	12	15 23 18
MACRO	4005092	20	15 29 23
MICRO	4001056	12	15 18 12
MICRO	4001057	24	15 23 18
MICRO	4001058	40	15 29 23



MACRO of 250 ml volume. Graduated to Series MICRO of 100 ml volume. 100 ml 42 mm Ø x 300 mm high. Part No. 4042300



26 mm Ø x 300 mm high. Part No. 4001045



Part No. 4000633



Digestion and distillation tube Series Tube for digestion and distillation Water jet pump for vacuum extrac- Water Jet pump for vacuum extraction. Made of PVC designed for the fume tion. Metallic, suitable for the extraction extraction of the 20 and 40 place models. of fumes for the 6, 12 and 24 place models. Part No. 7000293



Steam distillation unit Kjeldahl "Pro-Nitro M"

DETERMINATION OF ORGANIC NITROGEN (KJELDAHL METHOD). AUTOMATIC NAOH DOSAGE AND TEMPORIZE STOP.

Steam distillation Kjeldahl unit.

Simple secure systematic analysis suitable for small to Medium throughput of samples.

FEATURES

Steam distillation system.

Compact steam generator with safety over temperature thermostat and over pressure device.

Safety door, the system will not operate if the door is open.

"Tube in place" sensor: if the tube is not located, the dosing process of NaOH will not take place.

Universal adapter for digestion/distillation tubes MACRO (Ø 42 mm) and MICRO (Ø 26mm)

Small footprint, saves bench top space: The $\rm H_2O$ and NaOH reservoirs are placed within the unit.

Stainless steel case with reinforced ABS plastic front. Automatic distillate titration kit. (See accessories).

SPECIFICATIONS

Measuring range: from 0.2 to 200 mg of Kjeldahl Nitrogen.

Programmable distillation time. Nitrogen recovery >99.5%

Distillation speed: from 35-40ml/minute
Typical distillation time: from 7-10 minutes.
Water consumption rate: from 80-100 litres/Hr.
Steam generator water consumption: 2,5 Litres/ Hr.
Water reservoir for steam generator: 6 litres

NaOH reservoir: 2 Litres.

ALARMS

Low water level for the steam generator.

Safety door open or no distillation/digestion tube in place.

Steam generator over temperature.

AUTOMATED SEQUENCES

Open and closure of cooling water to the cooling coil.

Automatic load of NaOH once the distillation has started.

Select NaOH volume.
Stop at the end of the pre-set programmed time.

ADDITIONAL REQUIREMENTS

To complete Kjeldahl Nitrogen analysis a digestion block is also required. (See Bloc Digest pages 251 and 252).

MODEL

MODEL			
Part No.	Height / Width / Depth	Power	Weight
	cm	W	Kg
4002627	75 50 50	1800	30

Supplied with a MACRO \emptyset 42mm tube, set of reagent containers and tubing.





CONTROL PANEL

- 1. Low water indicator.
- 2. Door open or no tube presence indicator.
- 3. Over temperature indicator.
- 4. Mains on indicator.
- **5.** Push button and indicator start/stop distillation.
- 6. NaOH volume selection.

ACCESSORIES

Tube for digestion and distillation Series MICRO of 100 ml volume.

Part No. 4001045

Digestion and distillation tube Series MACRO of 250 ml volume.

Part No. **4042300**



Adapter kit for automatic determinations. Vessel with location positions for pH electrode, stirrer and reagents and distillate sample.

Part No. 4001724



Polycarbonate conical flasks durable. CAPACITY 250 ml Part No. 5310100 with cap. Part No. 5310101 without cap.





Steam distillation unit Kjeldahl Semi-Automatic "Pro-Nitro S"

DETERMINATION OF ORGANIC NITROGEN (KJELDAHL METHOD). AUTOMATIC BORACIC AND Naoh Dosage, sample drainage and temporized stop.

Semi-automatic steam distillation Kjeldahl unit. Simple secure systematic analysis suitable for medium to large throughout of samples.



Steam distillation system. Compact steam generator with safety over temperature thermostat and over pressure device. Safety door, the system will not operate if the door is open.

"Tube in place" sensor: if the tube is not located, the dosing process of NaOH will not

Universal adapter for digestion/distillation tubes MACRO (Ø 42mm) and MICRO (Ø 26 mm). Small footprint, saves bench top space: The H₂O, NaOH and H₃BO₃ reservoirs are placed within the unit.

Empty Digestion/Distillation tube system.

Stainless steel case with reinforced ABS plastic front.

Green LED 2 digit display.

Distillation program: (Add NaOH, Add Boric Acid, Distillation time, Empty tube.) Automatic distillate titration kit. (See accessories).

SPECIFICATIONS

Measuring range: from 0.1 to 200 mg Nitrogen.

Programmable distillation time. Nitrogen recovery >99.5%

Distillation speed: from 35-40ml/minute Typical distillation time: from 7-10 minutes. Water consumption rate: from 80-100 litres/Hr. Steam generator water consumption: 2.5 Litres/ Hr. Water reservoir for steam generator: 6 litres

NaOH reservoir: 2 Litres. Boric Acid reservoir: 2 Litres

ALARMS

Low water level for the steam generator. Safety door open or no distillation/digestion tube in place. Steam generator over temperature.

AUTOMATIC

Single push button to start the distillation cycle:

- Boric acid dosing
- Start distillation.
- NaOH dosing
- Stop Distillation (Programmed time transpired.)
- Acoustic indicator at the end of the cycle.

ADDITIONAL REQUIREMENTS

To complete Kieldahl Nitrogen analysis a digestion block is also required. (See Bloc Digest pages 251 and 252).

MODEL

Part No.	Height .	ght / Width / Depth cm		Power W	Weight Kg
4002851	75	50	50	1800	32



CONTROL PANEL

- 1. Illuminated indicator. Steam generator
- 2. Low water in the steam generator
- 3. Door open or no tube present indicator.
- 4. Over temperature indicator.
- 5. Push button and display to select parameters.
- 6. Mode push button, Manual or Automatic.
- 7. Push button, dose Boric Acid/Push button START in automatic mode.
- 8. Dose NaOH push button.
- 9. Push button, start the distillation in manual mode.
- 10. Push Button, empty sample tube.

Supplied complete with a MACRO Ø 42 mm tube, set of connection tubes, set of reservoirs.

ACCESSORIES

Tube for digestion and distillation Series MICRO of 100 ml volume.

Part No. 4001045

Digestion and distillation tube Series MACRO of 250 ml volume.

Part No. 4042300



Adapter kit for automatic determinations. Vessel with location positions for pH electrode, stirrer and reagents and distillate sample.

Part No. 4001724



Polycarbonate conical flasks durable. CAPACITY 250 ml Part No. **5310100** with cap.

89

(1) (A)

(

10

口面。

Part No. 5310101 without cap.





Automatic steam distillation unit Kjeldahl "Pro-Nitro A"





DETERMINATION OF ORGANIC NITROGEN (KJELDAHL METHOD) FULLY AUTOMATIC OPERATION. FROM THE REAGENT DOSAGE TO THE TITRATION.

Steam distillation system Kieldahl, complete with automated "ON-LINE" analysis (evaluation in real time). For systematic precise analysis, with minimum personnel intervention, simple and safe. Adequate for a laboratory with a medium to large throughput of samples.

The Kjeldahl steam distillation unit «PRO-NITRO A» evaluates the distillate at the same time as it is produced (evaluation «On-Line»), the evaluation and distillation are completed as one operation, reducing drastically the analysis time. This type of evaluation offers the following additional advantages: detects the point where the sample no longer produces Nitrogen, which means that, the distillation stops at the optimum maximum Nitrogen recovery and does not prolong the analysis longer than necessary.

The titration is a colorimetric method and is accepted by AOAC and does not require any periodic calibration.

FEATURES

Distillation by steam generation.

Automatic «On-line» colorimetric evaluation.

Steam generator with safety thermostat, over temperature and over pressure device. Safety, door closed, that prevents distillation if open.

Detects that a digestion/distillation tube is present. This prevents the dosing of NaOH if there is no tube located.

Universal adapter for MACRO (Ø 42 mm) and MICRO (Ø 26 mm) distillation tubes.

Space saving in the laboratory: the reservoirs for the H2O, NaOH, Boric Acid and HCl are located inside the unit.

Empties the digestion/distillation tubes and the collector automatically.

Automatic stop when distillation is complete.

Large LCD display of 20 x 4 characters.

RS232 output to results printer.

Main system made from stainless steel with an ABS plastic front.

SPECIFICATIONS

Measuring range: 0.2 to 200 mg Nitrogen.

Nitrogen recovery:>99.5%

Distillation speed: from 35 to 45 ml/minute

Coolant water consumption: 80 to 100 litres per hour. Steam generator water consumption: 2.5 Litre/Hr. Steam generator water reservoir capacity: 6 litres.

NaOH reservoir capacity: 2 Litres.

Boric Acid reservoir capacity: 2 Litres.

Titrant reagent reservoir capacity: 2 Litres.

Evaluation precision: 1.5% Minimum reagent dose 0.01ml.

ALARMS

Low water level for the steam generator.

Safety door open or no distillation/digestion tube in place.

Steam generator over temperature.

ADDITIONAL REQUIREMENTS

To complete Kjeldahl Nitrogen analysis a digestion block is also required. (See Bloc Digest pages 251 and 252).



8.5		ь	-	
nл	•		-	
IVI	u	u	_	L

Part No.	Height / Width / Depth	Power	Weight
	cm	W	Kg
4002430	75 50 50	1800	38

Supplied complete with a MACRO Ø 42 mm tube, set of connection tubes, set of reservoirs, 250 ml. of mixed indicator 4.8 and 100 gr. of sulphate ammonium.

Closing and opening of the condenser cooling water in line with the distillation process. Dosing of Boric Acid.

Dosing of NaOH once the distillation has started.

Select NaOH and Boric Acid volume.

«On-line» evaluation of distillate.

Auto detection of the end of the distillation process.

Special functions to maximise performance.

Special functions for maintenance.

REAGENTS

All the reagents used in the «PRO-NITRO A» are easily located:

- Solution of 30-40% NaOH.
- Solution of Boric Acid at 1% concentration (approx.) with mixed indicators (Bromo-cresol green and methyl red).
- Reagent for titration: HCl or H2SO4 from 0.05N or 0.25N adjusted to 0.001 Normal.





CONTROL PANEL

- 1. Menu to configure the date, time and selectable parameters.
- 2. Print the analysis information using the optional printer 4120113, purchased as an accessory.
- 3. <<ESC>> to cancel changes and escape from the menu.
- 4. Increase values and navigation through the menu.
- 5. Decrease values and navigate through the menu.
- **6.** <<ENTER>> to accept changes to parameters and navigation through the menu.
- 7. LCD display to visualise parameters and results

ADVANTAGES

Excellent precision on results. Complete Nitrogen recovery from the sample. Minimum operator intervention. No calibration required. Minimum analysis time.

RESULTS

The results can be downloaded to a printer (Optional), required for GLP, and includes the following data:

- Consecutive unrepeatable I.D. number of analysis.
- Date and time.
- Volume of NaOH.
- Volume of Boric acid.
- Reagent normality.
- Nitrogen detected.

15/10/05 12:16:08 Analysis Nr: 087598 NaOH: 75ml. Boric: 25ml.

Normality: 0.1503

Results:

Reagent: 10.521ml

Nitrogen: 22.1382mg

ACCESSORIES



Ink printer (not thermal paper), size (4/6/10 cm) suitable for use with the PRONITRO A.

Paper 2 1/4" (56 mm) wide. Interface RS232.

Includes interface and mains cables. Part No. 4120113

Digestion and distillation tube. Series MACRO of 250 ml volume. Graduated to 100 ml 42 mm Ø x 300 mm high. Part No. 4042300



Tube for digestion and distillation. Series MICRO of 100 ml volume. 26 mm Ø x 300 mm high.

Part No. 4001045





OUALITY CONTROL INFORMATION

ALL OF THE KJELDAHL DISTILLATION UNITS 4002430 REQUIRE A PROTOCOL ASSAY FOR THE RECOVERY OF NITROGEN WHEN MANUFACTURED. THESE RESULTS COME WITH THE EQUIPMENT AND ARE VALID FOR IQ AND OQ CLARIFICATION.

COMPLEMENT



Digital colorimeter "Pro-A 520"

MICROPROCESSOR CONTROLLED. **AUTOMATIC ZERO ABSORBANCE AND 100% TRANSMITTANCE.** ALPHANUMERIC 20 CHARACTER 2 LINE L.C.D. DISPLAY.

APPLICATIONS

Reagent preparation for Pro-Nitro A.

FEATURES

Wavelength range: 400 to 800 nm, by using special fil-

Standard filter: 520 nm.

Expanded Absorption range: -0.3 to 3.5 O.D.

Transmission: 0 to 100 T %.

Photometric accuracy: >1 %. @ 1.000 A. Photometric precision: ±1 %. @ 1.000 A. Photometric stability: 0.004 A/hr. @ 0.000 A. Light source: Long life tungsten lamp.

Detector: Solid state.

Sample chamber: 10 mm cuvettes.

Minimum volume: 1 ml.

Display: Alphanumeric LCD display of 2 lines of 20 cha-

racters.

Calculation functions: Transmission T %.

Absorbence, Concentration by factor or standard con-

centrations.

Calibration: Self adjusting by software.

RS-232 interface.



CONTROL PANEL

ON/OFF switch. Interactive LCD display. Numeric and function keypad.

SPARE

Lamp of 6 V / 6 mm. Part No. 4512009

MODE

Part No.	Built	Height / Width / Depth	Power	Weight
	in printer	cm	W	Kg
4120029	NO	11 18 28	10	4.5



Solvent recovery extractor for fats and oils "Det-gras N"

FOR THE DETERMINATION OF FATS BY SOXHLET METHOD. SAFETY PROTECTION 1P65.

Equipment for the extraction of fats and soluble substances that will dissolve in solvents. Based on the Soxhlet methods by Randall, the DET-GRAS-N extracts fats (and or other substances) from the sample by dissolving them in a solvent. If compared to the classic standard soxhlet method, a time saving of between 30-70% can be obtained due to a two stage extraction process and high speed in obtaining high temperatures.

APPLICATIONS

Practically all methods of classic soxhlet extraction can be substituted by the DET-GRAS N. Typical fat determinations are: in meat products, animal fodder, pre-prepared foods, fish etc. Also suitable for the extraction of soluble components in paper paste, textile fibres etc.

FEATURES

Heating by protected electric heater, distributed throughout the radiator surface that provides homogeneous heating throughout the samples. Electrical safety according to IP65.

Robust temperature control by a durable thermocouple.

Safety over temperature device.

Outer case made of solvents resistant epoxy coated steel.

Extractions can be completed using glass or cellulose thimbles.

Compatible with most common solvents: Petroleum ether. Diethyl ether, hexane, acetone acetonitrile etc.

Supplied complete with 2 sets of seals, adapters for different solvent types.

Typical extraction time (food fats) 50 minutes.

SPECIFICATIONS

Cellulose extraction thimbles $\emptyset_{\rm ext}$ 26 x 60 mm. Working temperature of 90 to 240 °C. Solvent recovery 60 to 80 %.

Solvent volume (by sample): up to 50 ml. Program memories: 16.

Extraction time <
boiling>>: from 0 to 99 minutes.
Extraction time <<ri>rinsing>>: from 0 to 99 minutes.
Time to recuperate solvents: from 0 to 99 minutes.



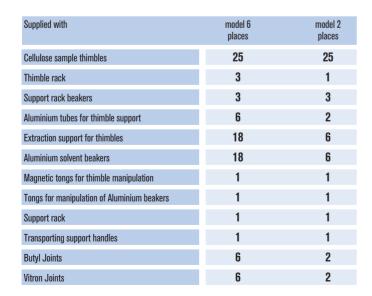
CONTROL PANEL

LCD display of 2 lines of 20 characters.

Keypad with 4 push buttons to select temperature, time and programs.

MODELS

Part No.	No. of places	Height /	Width cm	/ Depth	Water consumption litres/minute	Power W	Weight Kg
4002841	2	70	45	40	1	200	19
4002842	6	70	75	40	2	600	25





Accessories supplied with the 6 place model.



Extractor for the determination of cellulose and fibre "Dosi-fiber"

APPLICATIONS

Total Fibre (WEENDE,VAN SOEST or similar). Dietary fibre. Neutral detergent fibre. Acid detergent fibre. Other extraction processes which do not use acetic acid, acetic trichloric acid or nitric acid. Textile fibre. Wood and paper fibre.

EQUIPMENT DESCRIPTION

Integral extraction and filtration.

No sample transfer reduces the risk of sample loss, since the tubes, crucibles and filtre are transferred with the samples in place.

Excellent results due to reproducible operating conditions.

Easy sample handling due to the special crucible support stand.

Versatile and precise test procedure that allows the samples to be weighed at various stages in the extraction process.

FEATURES

Rugged external case with a "RILSAN" protective coating. All equipment components; condenser, valves, heater, compressed air valves and controls are all protected within the main case. Infrared heating elements.

CONTROL PANEL

Mains illuminated ON/OFF switch. Switch for compressed air pump. Heating element with electronic control.

TECHNICAL DATA

Sample size: 0.5 to 3 g (Normally 1 g). Reproducibility: approximately ±1 % for fibre

level between 5-30 %.

Measuring range: 0.1 to 100 %.
Cooling water consumption: 1 litre/minute.

EQUIPMENT

Comes complete with: crucible with a porosity P-2, Crucible support rack, heater lid and holder manipulator.

MODELS

Part No.	No. of places	Height / Width / Depth (exterior) cm	Power W	Weight Kg
4000599	4	56 43 32	1000	19
4000623	6	56 57 32	1500	25



6 places extractor, part no. 4000623.

ACCESSORIES

Double hotplate for reagents. Power consumption 1750 W.

Part No. 4000634

Beaker for reagents.

Part No. 1000635



SPARES

Support rackSupport rack4 crucibles.for 6 crucibles.Part No. 4000600Part No. 4000624

Crucibles with a P - 2 porosity. Part No. 4000601

EQUIPMENT FOR THE DETERMINATION OF TOTAL DIETARY FIBRE, ENZYMATIC METHOD

THE DETERMINATION OF TOTAL DIETARY FIBRE BY THE ENZYMATIC METHOD (AOAC, AACC) IS VERY DIFFERENT TO THE WEENDE AND THE DE VAN SOEST METHODS. THE EQUIPMENT FOR THIS ANALYSIS DEPENDS ON THE ENZYME KIT THAT YOU ARE GOING TO USE. ONCE THE TYPE OF ENZYME KIT IS SELECTED THE KIT INSTRUCTIONS WILL INDICATE THE NECESSARY EQUIPMENT TO COMPLETE THE ANALYSIS. THE COLD EXTRACTION UNIT EF-1425 PART NO 4001425 AND THE RECIPROCAL BATH PART NO 6032011 ARE FREQUENTLY USED (SEE PAGE 91).



Cold extraction unit "EF-1425"

DESCRIPTION

Specifically designed unit for cold extraction of up to 6 samples simultaneously, using acetone or other solvents. Complements the Dosi-Fiber for the analysis of crude fibre.

Components: 1 litre receptacle for solvent recovery, suction tube and 6 adapters to hold the filtration crucibles Part No. 4000601.

A pump or jet pump will be required to connect to the suction tube.

Comes complete with: blank stoppers in the case that not all of the 6 crucible places are used and a 1 litre solvent recovery vessel.

FEATURES

Stainless steel AISI 304, extractor, modular construction, easy to use and fast removal for efficient cleaning. Support and crucible rack, made from hardened glass.

MODEL

Part No.	Height .	/ Width	Weight	
	(ext	erior) c	Kg	
4001425	45	20	34	3

ACCESSORY

Jet pump. Part No. **7000293**







Oenological Distillation unit "DE-1626"

APPARATUS TO OBTAIN THE DISTILLATION OF ALCOHOL FROM ALCOHOLIC BEVERAGES IN ACCORDANCE WITH CEE NO. 2676/90 (WINE ANALYSIS) AND CEE NO. 2870/2000 (ANALYSIS OF SPIRITS.)

APPLICATIONS

Degree of alcohol in wines, Degree of alcohol in spirits, Volatile acids and Sorbic acid.

FEATURES

Vapour distillation.

Designed especially to obtain the distillation of wines and spirits to determine the alcohol grade by volume, volatile acid, ascorbic acid and other components.

Distillation volume up to 400 ml.

Auto stop at the end of the distillation.

Simple operation with minimum service.

Vapour generator protection system.

- Tube Ø 42 mm for volatile acid samples.
- Tube Ø 52 mm for volatile acid samples and 100 ml proof alcohol.
- Tube Ø 80 mm for samples of 200 ml for proof alcohol.
- 200 ml Matrix flask to collect distillate.

TECHNICAL SPECIFICATIONS

Validated to the criteria of CEE No. 2676/90 and CEE No. 2870/2000 Distillation speed: 30-40 ml/min (Recover of 200 ml of distillate in 5/6 minutes).

Condenser coolant water rate: 80-100 l/hr.

Generator water consumption: 1 and 1.25 ml for each ml of disti-

Vapour generator power: 2400 W.

CONTROL PANEL

Control Panel.

Electronic controller.

Mains switch.

START Push button.

STOP Push button.

ADD Push button.

By the use of the ADD button allows the distillate to set burette level, then, there is no need to fill up with water to a level of 200 ml.

VALIDATION

The oenological DE-1626 has been validated by the oenological laboratory INCAVI in Vilafranca del Penedés. This laboratory has completed analysis from the distillation unit DE-1626 for the determination of alcohol proof by volumetric analysis, following the criteria of CEE No 2676/90 and CEE 2870/2000. They have analysed samples of hydrated alcohol, different wines and spirits with a high alcohol content. The unit was successfully appraised by the laboratory.

MODEL

Part No.	Height A	/ Width cm	/ Depth	Power W	Weight Kg
4001626	90	30	30	2400	20

Supplied with tubes and flasks Ø 42, 52 and 80 mm and a 200 ml matrix flask.



Automatic termination of final distillation at 200 ml of distillate. By using the ADD function small quantities of distillate can be added to accurately fill the matrix flask to the mark without having to add water to the distillation.











Glass tube adapters. Part No. Dimensions 4042300 Ø 42 x 300 mm 1001422 Ø 52 x 300 mm 1000646 Ø 80 x 300 mm



Support rack for 6 tubes, made of stainless steel. Part No. Suitable tubes dimensions 4000648 Ø 42 mm 4001473 Ø 52 mm 4001613 Ø 80 mm



Alcoholmeters, graduations in 0.1 grade alcohol. Part No. Graduations 0 - 10 1001629 10 - 20 1001630 1001631 20 - 30 1001632 30 - 40 1001633 40 - 50 1001634 50 - 60 Part No. 1001636 1001635 90 - 100



Alcoholmeters stand 6 places. Part No. 1000015

COMPLEMENTS FOR THE OENOLOGICAL DISTILLER "DE-1626"

ALL BASIC WINE ANALYSIS WITH A SIMPLE MANUAL EQUIPMENT, COMPOSED OF: OENOLOGICAL ANALYSER PHOTOMETER "M-3000", MICRO-CENTRIFUGE "CENCOM-1" AND DRY-BLOCK THERMOSTAT "ENOBLOC".



Oenological analyser photometer "M-3000"

SMALL BENCHTOP ANALYSER.

FOR COLOR MEASUREMENT, FOLIN-CIOCALTEAU INDEX AND FOR ENZYMATIC ANALYSIS.

APPLICATIONS

With the oenological application photometer, the following determinations can be performed:

- 1. Wine colouring intensity (absorbances addition at: 420, 520 and 620 nm.)
- 2. Folin index (polyphenols).
- 3. Grapes phenolic colour and maturity by means of Cromoenos® method.
- 4. Enzymatic analysis for grape juice, grape juice-wine and wine. Acids: acetic, malic, gluconic and lactic, glucose, fructose and alvoerine.

FFATURES

Wavelength range: from 340 to 750 nm, with interference filters with a 10 nm band pass.

Manual filter selection (12 positions filter disc).

Supplied with filters: 340, 420, 520, 620 and 750nm. Other optional filters posible.

ABS, T% and concentration reading.

ABS reading range: from -0.3 to 3.5 OD.

T% reading range from 0 to 100%T.

Concentration range: from 0.001 to 9.999

Photometric accuracy: 1%.

Precision: ±1 %.

Photometric stability: better than 0.004 A/h.

Light source: halogen lamp 6V/12W.

Cell holder for 10 mm, path length cuvettes.

Internal calibration by software.



Filter change knob.

Numeric keypad and for functions.

Alphanumeric display with interactive messages.

RS-232 interface for connection to printer or computer.

MODEL

Part No.	Height / Width / Depth			Power	Weight
	mm			W	Kg
4120019	11	18	28	35	3



SPARE

Halogen lamp 6 V 12 W.

Part No. 4313040

Note: A visible ultraviolet range spectrophotometer UV-2005 is needed for a total polyphenols index determination (absorbance 280 nm) and the Cromoenos® method exact and accurate measurement.

Part no. 4120020, Page: 240

ACCESSORIES

Glass cuvettes 10 mm. path length. 2 units pack. Part No. 5100021 Glass cuvettes 1 mm. path length. 2 units pack. Part No. 4120034

Polystyrene cuvette, semi-micro, 10 mm, path length, 100 units box, Part No. 5100023

Cuvettes adapter of 1 mm. Part No. 4120033

Microcentrifuge "Cencom III"

FOR MICROTUBES OF 2,2/1,5, 0,5 AND 0,2 ML.

DIGITAL ELECTRONIC CONTROL OF SPEED AND TIME. ADJUSTABLE SPEED UP TO 14500 r.p.m.



ABS external case.

Maintenance free induction drive motor.

Rubber suspended motor which reduces the vibrations. High speed microcentrifuge that minimizes the samples over temperature.

Extremely quiet operation.

For 12 microtubes with identification code.

Polycarbonate upper lid.

Peephole on the lid to visualize the centrifuge inside.

CONTROL PANEL

Start switch.

Push button Start/Stop.

LCD display indicating time and speed.

Time selector push button.

Speed selector push button.

Push button ▲ increase different parameters.

Push button ▼ decrease different parameters.

Push button motor drive rotation for quick acceleration

Push button open lid when cycle has ended.



Part No.	Tubes capacity	Height/ Width/ Depth (exterior) cm	Max. speed r.p.m.	R.c.f.(xg)	Power W	Time selected	Weight Kg	
5022010	12	15 21 25	14500	14000	105	till 99' 99"	Δ	

Comes complete with 12 adapters of 0.5 and 0.2ml.



Metallic thermostat dry block "Enobloc"

To use the enzymatic reagents performing at full capacity, it is recommended to incorporate the thermostat dry-block incubator for tubes/cuvettes at a fixed temperature of 35 °C. Part No. 7001570

Capacity: 15 cuvettes pathlength 10 mm, which can be macro or semi-micro of 1,5 ml..

W	U	U	t	L
_				

Part No.	. 3	/ Widt terior)	h /Depth cm	Stability °C	Power W	Weight Kg
7001570	11	18	28	±0,5	10	2,4



Cromoenos® is a registered trademark by Bioenos S.L

http://www.bioenos.com

(for analytical applications, please check out the website).

APPARATUS FOR WATER ANALYSIS



Thermo reactor for determining COD Chemical Oxygen Demand of waste water plants

STANDARD TO C.E.E. AND UNE 77-004. REFLUX METHOD.

FEATURES

Composed of a Hot block for 6,12 or 20 samples, process programmer and lifting racks. Uniform heating throughout the block to all samples. Automatic temperature and time control during digestion.

C.O.D. unit comprises of:

- 1 metallic hot block.
- 1 Processor for temperature and time.
- 1 Support rack for tubes.
- 1 Support rack for condensers.
- C.O.D. tubes with an aperture of 29/32.
- Condensers for C.O.D.

MODELS - EQUIPMENT DESCRIPTION

	Part No.	No. of places
DQO. - 6	4000638	6
DQO 12	4000639	12
DQO. - 20	4000640	20



INDIVIDUAL PARTS LIST AND SPARES

Hot block. This block cannot be used without the RAT controller of temperature and time.



Part No.	No. of places	Ø tube mm	Height / Width / Depth (exterior) cm	Temperature °C	Power W	Weight Kg
4000507	6	42	18 33 28	45 - 450	1500	18
4000508	12	42	18 39 33	45 - 450	2100	25
4000509	20	42	18 44 39	45 - 450	2500	31



System programmer for temperature/time RAT-2. Part No. 4001538

capacity: 10 programs of 5 stages of each program.

Maximum time per stage: 600 minutes. Visual and

Condenser tube support.

Part No.

4000643 6 places. 4000644 12 places. 4000645 20 places.



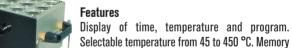
Tube support rack.

Made of chemically treated dural sheet metal, with handles and removable panels that maintain the heat around the tubes and allow the user to examine the samples during the process. Part No.

4005071 for C.O.D. 6 (block 4000507). 4005081 for C.O.D. 12 (block 4000508). 4005091 for C.O.D. 20 (block 4000509).

Condenser tubes for C.O.D. process.

Part No. 1000642



acoustic alarm at the end of the cycle. Alarm if the temperature probe fails. **Control Panel** Mains switch.

Temperature display. Push button to select temperature. Push button to increase value.

Push button to start.

Push button to stop.

Push button to decrease value.

Push button to select time.

Display time and program number Push button to select program.









Laboratory flocculator "Flocumatic"

FOR THE DETERMINATION OF THE NECESSARY AGENTS REQUIRED FOR SEDIMENTATION. DIGITAL ELECTRONIC CONTROL OF SPEED AND TIME FUNCTIONS. **NEW LIGHTING SYSTEM.**



Maximum torque per stirring unit is 40 Ncm. Maximum viscosity 30.000 mPas.

APPLICATIONS

Optimization of coagulant additives and poly-electrolytes for surface and residual water treatment.

Evaluation of the efficiency of an absorbent in toxic agents.

Polyvalent. Without transmissions by belt. Due to its powerful torque it allows stirring and mixing high viscosity substances.

FEATURES

Stirring equipment for 4 or 6 places that accommodates beakers up to 1000 ml tall shape or 2000 ml short shape.

Stirring speed from 15 to 200 r.p.m.

Silent running.

Adjustable timer from 1 to 999 minutes or continuous operation.

Easily adjusted height over head stir, bars made of AISI 304 stainless steel are easily fixed in position.

Two vertical and horizontal adjustable illumination units can be placed in the unit. This adjustable accessory allows the light angle to be varied according to the samples being run. An original Selecta design. See accessories part numbers 3000821 and 3000823, 4 and 6 place models that obtain simultaneous front and back lighting.

The main case of the unit is made of epoxy coated steel, with AISI 304 stainless steel supports with anti slip rubber feet.

CONTROL PANEL

- 1. Alphanumeric display. Indicates rpm and time.
- 2. Parameter invalidate button.
- 3. Parameter value decrease button.
- 4. Parameter value increase button.
- 5. Parameter validation button.





Flocculator "Flocumatic" with horizontal and vertical illumination (6 places).



with horizontal illumination (4 places).

MODELS

Part No.	No. of places	Speed r.p.m.	•	Height / Width / Depth (exterior) cm		Illumination power W	Power W	Weight Kg
3000820	4	15 - 200	52	70	23	40	160	24
3000822	6	15 - 200	52	99	23	50	170	36

ACCESSORIES

Illumination units, simultaneous lighting horizontal and vertical. Model part No. Part No.

3000820 4 places. 3000821 3000823 3000822 6 places.





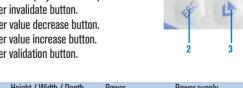
Mains voltage or portable connection to a cigarette lighter within a car (12 V DC). for achieving analysis for a site chemical dose measurements of waste water treatment plants.

Head stirrers made of AISI 304 stainless steel with variable height.

Suitable for vessels up to 1 litre capacity.

CONTROL PANEL

- 1. Alphanumeric display. Indicates rpm and time.
- 2. Parameter invalidate button.
- 3. Parameter value decrease button.
- 4. Parameter value increase button.
- 5. Parameter validation button.



ACCESSORY.	
Carrying case	

Part No. 3000836



MNNFI

Part No.	Height / Width / Depth (exterior) cm			Power W	Power supply	Weight Kg
3000835	37	25	27	20	12 volts	6



Made from stainless steel and glass, easy disassembly for cleaning and storage.

COMMON FEATURES

Easy to use, suitable for continuous distilled water requirements.

Boiler unit and heater element made of AISI 304 stainless steel, with lid and condenser made of orosilicate glass. The glassware pressure seal connection is an original Selecta design.

Safety system cuts off power to the heater element if there is not enough water. Distilled water produced is pyrogen free.

MODELS	Part No.	Distillation capacity I/h	Water consumption I/min	Conductivity at 20 °C	Ø / Height (ext.) cm	Power W	Weight Kg
Aquasel 4	4903004	3	1	3 µs/cm	18 43	2400	5
Aquasel 6	4903006	6	2	3 µs/cm	23 68	4800	8

Supplied complete with silicon seals.





Distillation still "L-3"

DISTILLATION CAPACITY: 3 LITRE PER HOUR.

FEATURES

Made entirely of borosilicate glass.

Functions: automatic with continuous water production. Produces distilled water of a high purity, free of pyrogens and metal ions.

Equipped with quartz heater elements and protection device using a safety thermostat that is activated in the case of low water pressure to the condenser or boiler unit. The unit automatically reactivates when the water pressure is restored.

Suitable for wall mounting.



MODEL

Part No.	Distillation capacity I/h	Water consumption I/min	Conductivity at 20 °C	Height / Width / Depth (exterior) cm		Power W	Weight Kg	
4903000	3	1	3 µs/cm	34.5	56	19	2200	4.5



Water distiller "D-4 Large" and "D-10 Large"

DISTILLATION CAPACITY: 4 AND 10 LITRES/HOUR.

FEATURES

Equipment entirely made of borosilicate glass.

Automatic operation.

Continuous production of high purity distilled water, free of dissolved gases, metals, salts and pyrogens.

Spiral heating system.

Double safety system:

1. By a presostat that turns the heater off in case of lack of water supply. 2. Water level device that avoids the computer to function until the heating element is covered with water.

CONTROL PANEL

Power switch.

Lack of water flow indicator lamp.

MODEL

Part No.	Distillation capacity I/h	Water consumption I/min	Conductivity at 20° C	/ Widt	h / Depth) cm	Power W	Weight Kg	
4903001	4	1	2 µs/cm	69	28	30	3000	6,3
4903015	10	2	1,5 µS/cm	96	36	40	6600	23





Water distillers, "AC-L4" and "AC-L8"

DISTILLATION CAPACITY: 3.5 AND 8 LITRES/HOUR.

FEATURES

Tank and heating element made from stainless steel.

External case made from epoxy covered steel.

Easily dismantled for cleaning and service. All seals made from silicon.

In the case of over temperature or low water supply, a safety thermostat cuts power to the heater.

Water supply tube 3/4" mm.

Distilled water tube connection Ø 12 mm.

Voltage: 230 V / 50/60 Hz

CONTROL PANEL

Illuminated power switch.

Safety switch thermostat with rearm system.

MODELS	Part No.	Distillation capacity I/h	Water consumption I/min	Conductivity at 20 °C	Height / Width / Depth cm		Power W	Weight Kg	
AC-L4	4903007	4	1	2 μs/cm	44	25	23	3000	8
AC-L8	4903008	8	1.4	2 us/cm	61	26	26	6000	14



Water distillers "L-4 Cabinet" and "L-8 Cabinet"

DISTILLATION CAPACITY: 4 AND 8 LITRES/HOUR.

FEATURES

Equipment entirely made of borosilicate glass, with protective case with transparent plastic door that allows an easy access to the glass and heating elements.

The water distiller incorporates a boiler, a large surface cooling and two heating elements with protective quartz. Desktop model with device to hang it on the wall.

Continuous production of high purity distilled water free of dissolved gases, metals, salts and pyrogens.

Easy to dismantle for a complete cleaning.

Automatic operation.

Totally automatic operation:

- The equipment disconnects when the distilled water tank is full.
- The equipment reconnects when emptied.
- Automatic operation of the distiller.

Double safety system: 1. By a thermostat that turns the heater off in case of lack of water supply. 2. Water level device that avoids the computer to function until the heating element is covered with water.

CONTROL PANEL

Start up main switch.

Light indicators of heating, cleaning, of lack of water and tank full.

MODEL

Part No.	Distillation capacity I/h	Water consumption I/min	Conductivity Height / Width / Depth at 20° C (exterior) cm		Power W	Weight Kg		
4903002	4	1	1.5 µs/cm	40	69	26	1x3000	12
4903016	8	2	1,5 µ\$/cm	48	69	40	2x3000	22



Water distillers "R-4 Reser" and "R-8 Reser"

DISTILLATION CAPACITY: 4 AND 8 LITRES/HOUR. STORAGE TANK: 8 LITRES.

FEATURES

External case epoxy covered.

Cooling and heating elements made of stainless steel.

Easy to dismantle for cleaning.

Thermostat that disconnects the heater when there's lack of water supply.

Monitoring function that disconnects the distiller when the storage tank is complete

full, and resumes as it empties.

Distilled water dispenser located in the front part.

Distilled water and water supply racords of 3/4 inch.

Desktop model with device to hang it on the wall.

CONTROL PANEL

Illuminated power switch.

Lack of water flow indicator lamp.



Part No.	Distillation capacity I/h	Water storage tank l	Water consumption I/min	Conductivity at 20° C	3		Power W	Weight Kg	
4903005	4	8	1	1,5 µs/cm	50	63	32	1x3000	24
4903017	8	16	1,4	1,5 µS/cm	60	71	34	2x3000	34





Note on the outlet water: Depending on the inlet water quality, it can be of type II or III (according to ASTM). All parameters have been tested under standard laboratory conditions.



NEW





Water double distillation "L-4B"

DISTILLATION CAPACITY: 4 LITRES/HOUR.



FEATURES

Made completely from borosilicate glass with protective case that has easy access to the heater elements and glass parts.

Automatic function and continuous production.

Produces high quality double distilled water free from pyrogen and metallic ions. It functions through a dual distillation process:

The distilled water from the first stage is collected by the heater reservoir of the second stage, that starts the double distiller function when when the water's level is optimum, thus providing double distilled process.

Protection with a safety thermostat is activated if there is insufficient cooling water. Reactivated automatically when the water supply is re-established.

Water flow stop if there is an electrical fault.

If it is required to store the distilled water and to prevent over filling, the system stops, switches off power and disconnects the water flow when is full.

Voltage: 230 V / I, 50/60 Hz



Part No.	Distillation capacity I/h	Water consumption I/min	Conductivity at 20 °C	Height/Width/Depth cm	Power W	Weight Kg
4903010	4	2	0.5 us/cm	48 69 40	2x3000	22



SPARES

Heater element made of guartz. Part No 4903011

Glass still, borosilicate glass (the equipment comes with 2 condensers, Price provided is for 1 spare condenser). Part No. 4903012

Condenser, borosilicate glass (the equipment comes with 2 condensers. Price provided is for 1 spare condenser). Part No. 4903014



Water distiller, specially for autoclaves "Dest-4"

DISTILLATION CAPACITY: 1.2 LITRES/HOUR. INTERNAL CAPACITY 4 LITRES.

Case made from thermo resistant plastic. Internal stainless steel. Cooling by forced air though a condenser. Without glass heater elements, Easy to use. Safety cut out if over temperature due to insufficient water.

Supplied complete with a 4 litres plastic bottle and three dispenser tap with filter. Note: for daily use it is recommended to change the filter every 3 months.

No external additional water required.



SPARE. Dispensing filter tip. Part No. 4001730

MODEL

Part No.	Distillation capacity I/h	Conductivity µs/cm	Ø Height cm	Power W	Weight Kg
4001729	1.2	5	29 39	750	3.5

COMECTA Descaler "C-3"

APPLICATIONS

Pre-treated water that contains large quantities of CaCO3 (lime). For general laboratory use.

Recommended for use with distillation units where water hardness is above 25° french.

TECHNICAL SPECIFICATIONS

Metal container of AISI 304 stainless steel with regeneration of salt by using a two way reverse valve system. Resin capacity: 12 litres. Regeneration salt: 2 Kg. Regeneration cycle: 1200 litres to 60° french / 4800 litres to 35° french.

Regeneration cycle for distillation of: 300 to 800 litres. Maximum mains water pressure: 4.5 Kg/cm². Maximum supplied admissible hardness: 60° french. Out put hardness: 1° french.

External measurement: 62 cm high x 19 cm Ø.

Weight: 20 Kg. Part No. 0703052



Comes complete with in and out 3/4" tubing.

COMECTA 50 Litre distilled water reservoir

Recommended for the storage of distilled water. Made of high density polyethylene. 50 litre capacity, with handles and dispenser tap. 15cm Ø top lid with stopper.

Dimensions: 68 cm high x 35 cm Ø.

Part No. 0106006



Robust steel trolley with epoxy coating. Lockable wheels, Inner section for holding iars and carbovs etc.

Fits containers 38 cm Ø. Height 48 cm.

Part No 5903049

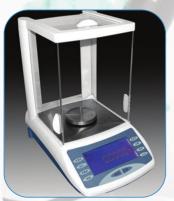




ANTIVIBRATION BALANCE TABLE



MELTING POINT APPARATUS



PRECISE BALANCES



LIGHT SOURCE



MICROSCOPES

Precise balances
Balance accessories and precision weights
Stereomicroscopes
Microscopes
Microcameras and polarimeter
Refractometers
Melting point apparatus

page267pages268 to 269pages270 to 271pages272 to 278page278pages279 to 280

page 281

COMECTA Precise analytical balance "FA-2204B"

FEATURES

Digital 7 segment screen.

Time to stability: 8 seconds.

Adjustable time and sensitivity control.

ON/OFF automatic zero adjustment.

Manual external 220g calibration.

Tare range by subtraction up to the maximum capacity.

Piece counting function.

Density measurement in the base of the unit.

Units of measurement in g, ct, and oz.

Level adjustment (bubble).

Data interface: RS-232 for connection to a printer.

Operable ambient temperature 5 to 40 °C Power supply: 110/220 V-50/60Hz.

Supplied complete with cover.



MODELS	Part No.	Maximum weight capacity g	Precision ±g	Linearity ±g	Height / Width / Depth (exterior) cm	Height / Width / Depth (Draft shield) cm	Ø plate cm	Weight Kg
FA-2204B	5830039	220	0.0001	0.0002	35 21 34	24 19 17.5	8	8.5



COMECTA Electronic Balance "Laborcom"



COMMON FEATURES

Easy to read seven segments display. Stabilization time: 3 seconds. ON/OFF. Automatic Zero adjustment External automatic calibration.

Tare range by subtraction up to maximum capa-

Piece couting function. Overload indicator. Operating temperature: from 5 to 35 °C. Voltage: 220 V ±10 V / 50 Hz.

MODELS	Part No.	Maximum weight capacity g	Precision ±g		t / Width exterior)		n Ø plate cm	Weight Kg
LABORCOM 110-L	5830025	110	0.01	7	17.5	24	12.5	1.6
LABORCOM 210-L	5830026	210	0.02	7	17.5	24	12.5	1.6
LABORCOM 600-L	5830031	600	0.1	7	17.5	24	12.5	1.6
LABORCOM 1100-L	5830032	1100	0.1	7	17.5	24	12.5	1.6
LABORCOM 2100-L	5830033	2000	0.1	7	17.5	24	12.5	1.6
LABORCOM 11000-L	5830027	11000	1	7	17.5	24	16.5 x 16.5	1.8



COMECTA Shaking monitor for blood collection "HED02"

FOR BLOOD COLLECTION PROCESSES IN BAGS

HED02 is a digital blood collection monitor, created to control and monitoring blood collection processes. It has been designed to perform simple, precise and accurate operations.

It is composed of:

Easily removable tray.

Wired or wireless interface networking.

Automatic clamp closing at the end of the donation.

Automatic tare calculation.

Real time monitoring of the donation showed on the digital display.

Stand alone mode (operating with rechargeable battery). 8 hours life.

Sensor to detect the tube presence.

Power supply: 110/220 V-50/60Hz.

MODEL

Part No.	Max weight Capacity g	Precision g	Resolution g	Height / Width / Depth (external) cm	Power W	Weight Kg
5010000	999	± 3	1	19 32 32	60	5

It is supplied with a transport suitcase.



ACCESSORIES

Barcode reader Hedo-2, Part No. 5010003 Alarm lamp pool Hedo-2. Part No. 5010004



WEIGHING DISHES "ACCU-WEIGH"

Anti static. Reproducible tare weighing. Contamination free. Large selection of sizes.

Common features:

Made from high density polystyrene with flat base, round edge, contamination free surface and hydrophilic. Flexible in form for easy manipulation of the sample either liquid or solid.

Manufactured in two forms:

- Diamond form, colours white and black.
- Square form, colour white.

Part No.	Form	Capacity	Height /	Width	/ Depth	Weight	Colour
5726004	Diamond	5	3.8	31	54	0.25	White
5726005	Diamond	5	3.8	31	54	0.25	Black
5726006	Diamond	30	13.5	55	85	1.00	White
5726007	Diamond	30	13.5	55	85	1.00	Black
5726008	Diamond	100	20	92	132	2.6	White
5726009	Diamond	100	20	92	132	2.6	Black
5726010	Square	7	8.5	44	44	0.65	White
5726011	Square	100	24	80	80	2.2	White
5726012	Square	250	24	134	134	6.1	White

Comes in packets of 100 units.



ALUMINIUM WEIGHING BOATS

Static free, pressed dishes with rolled edge.

Withstands temperatures up to 450 °C.

Due to their form the dishes can be used one on top of another to protect samples. Suitable for testing, solid samples and mixtures of emulsions for moisture content, by differential weight loss method.

Useful for weighing, comparing, freezing or evaporation.

Consumable, single use.

Part No.	Thickness mm	Height / Ø (usable) mm	Comes in
5726000	0.2	5 42	packets of 112 units
5726001	0.2	10 57	nackets of 110 units



ANTIVIBRATION BALANCE TABLE

Formica covered metal table with central polished granite plate to support the balance, mounted on silent blocks.

Adjustable shock device. Maximum weight 40 Kg.

Part No.	Height / Width / Depth	Height / Depth	Weight
	(exterior) cm	(balance support) cm	Kg
5838101	80 90 70	45 39	70





BALANCE DENSITY MEASUREMENT "PR-SE" (PATENTED)

Applications: System for reading the density of liquids using the immersion of a glass sinker of known volume. Can be used for opaque and viscous liquids for all classes of liquid.

Features: Made of borosilicate glass of low dilatation coefficient and a constant volume. Mode of operation:

- Locate the tube with liquid on an electronic balance.
- Push the TARE to achieve a zero stable reading
- Introduce and submerse the measuring suspended sinker centrally without tilting the tube, keep suspended.

At this moment the screen will indicate the DIFFERENTIAL WEIGHT, that is exactly the same as the density of the liquids multiplied by 10.

To obtain a density value in mS, it is necessary to have a balance with a minimum resolution of 0.01 g.

Part No.	Density interval	Maximum tolerance	Temperature
	g/ml	error g/ml	assay/reference °C
5600000	0.600 - 2.000	±0.0005	20 / 20



COMECTA Calibrated precision weights class E2 and F1. **Certification W.E.C.C.** (Western European Calibration Co-operation)

COMMON FEATURES

In the manufacturing of these weights the meteorological requirements are applied to conform with the OIML verification for accuracy, raw material, geometric form, identification and conservation. To guarantee their accuracy, the individual weights are supplied in a partitioned wooden case with a clasp lid and a small tray housing for locating the mg weights. The wooden boxes are lined with velvet for the g and Kg weights.

Weight	Part No. Weight Class E2	Part No. Certificate E2	Tolerance Max. error ± mg	Part No. Weight Class F1	Part No. Certificate F1	Tolerance Max. error ± mg
1 mg	5838102	5838124	0.006	5838146	5838169	0.020
2 mg	5838103	5838125	0.006	5838147	5838170	0.020
5 mg	5838104	5838126	0.006	5838148	5838171	0.020
10 mg	5838105	5838127	0.008	5838150	5838172	0.025
20 mg	5838106	5838128	0.010	5838151	5838173	0.03
50 mg	5838107	5838129	0.012	5838152	5838174	0.04
100 mg	5838108	5838130	0.015	5838153	5838175	0.05
200 mg	5838109	5838131	0.020	5838154	5838176	0.06
500 mg	5838110	5838132	0.025	5838155	5838177	0.08
1 g	5838111	5838133	0.030	5838156	5838178	0.10
2 g	5838112	5838134	0.040	5838157	5838179	0.12
5 g	5838113	5838135	0.050	5838158	5838180	0.15
10 g	5838114	5838136	0.060	5838159	5838181	0.20
20 g	5838115	5838137	0.080	5838160	5838182	0.25
50 g	5838116	5838138	0.10	5838161	5838183	0.30
100 g	5838117	5838139	0.15	5838162	5838184	0.5
200 g	5838118	5838140	0.30	5838163	5838185	1
500 g	5838119	5838141	0.75	5838164	5838186	2.5
1 Kg	5838120	5838142	1.5	5838165	5838187	5
2 Kg	5838121	5838143	3.0	5838166	5838188	10
5 Kg	5838122	5838144	7.5	5838167	5838189	25
10 Kg	5838123	5838145	15	5838168	5838190	50

Weight material

From 1 to 5 mg = aluminium, density approx. 2.7 g/cm^3 .

From 10 to 500 mg = alpaca, density 8.6 g/cm^3 .

From a and Ka = antimagnetic polished stainless steel, density approx. 8.0 g/cm³, Without adjustable chamber E2 and with adjustable chamber F1. The calibration certificate is expedited by DKD (member of the W.E.C.C.), which contains the determination and deviation between the nominal mass values, the actual measured value and the tolerance measurement.



SET OF STANDARD WEIGHTS WITH BOX AND MATCHING CERTIFICATE

Set of weights E2 of **1 mg** to **500 mg** Part No. **5831822** Set of weights F1 of 1 mg to 500 mg Part No. 5832822

Material: Wooden box (E2), or resin box (F1), with clasp, tweezers and a small brush.

Part No. 5832304

Weight details: 1 mg, 2 mg, 2 mg, 5 mg, 10 mg, 20 mg, 50 mg, 100 mg, 200 mg, 200 mg and 500 mg. Total 12 weights = 1.11 g

Set of weights E2 of 1 mg to 50 g Part No. 5831302 Set of weights F1 of 1 mg to 50 g Part No. 5832302 Certificate for set of weights E2 of 1 mg to 50 g Part No. 5862301 Certificate for set of weights F1 of 1 mg to 50 g Part No. 5862401

Certificate for set of weights F1 of 1 mg to 500 mg

Material: Wooden box with clasp, lined with velvet, a special glove, housing for extractable fractional weights, tweezers and a small brush. Weight details: 1 mg, 2 mg, 2 mg, 5 mg, 10 mg, 20 mg, 50 mg, 100 mg, 200 mg, 200 mg, 500 mg, 1 g, 2 g, 2 g, 5 g, 10 g, 20 g, 20 g, 20 g y 50 g Total 20 weights = 111.11 g

Set of weights E2 of 1 mg to 100 g Part No. 5831303 Set of weights F1 of 1 mg to 100 g Part No. 5832303 Certificate for set of weights E2 of 1 mg to 100 g Part No. 5862302 Certificate for set of weights F1 of 1 mg to 100 g Part No. 5862402

Certificate for set of weights E2 of 1 mg to 500 mg Part No. 5862350

Material: Wooden box with clasp, lined with velvet, a special glove, housing for extractable fractional weights, tweezers and a small brush. Weight details: 1 mg, 2 mg, 2 mg, 5 mg, 10 mg, 20 mg, 50 mg, 100 mg, 200 mg, 200 mg, 500 mg, 1 g, 2 g, 2 g, 5 g, 1 0 g, 2 0 g, 50 g and 100 g **Total 21 weights = 211.11 g**

Set of weights E2 of 1 mg to 200 g Part No. 5831304

Set of weights F1 of 1 mg to 200 g

Certificate for set of weights E2 of 1 mg to 200 g Part No. 5862303 Certificate for set of weights F1 of 1 mg to 200 g Part No. 5862403

Material: Wooden box with clasp, lined with velvet, a special glove, housing for extractable fractional weights, tweezers and a small brush.

Weight details: 1 mg, 2 mg, 2 mg, 5 mg, 10 mg, 20 mg, 20 mg, 50 mg, 100 mg, 200 mg, 200 mg, 500 mg, 1 g, 2 g, 2 g, 5 g, 10 g, 20 g, 20 g, 50 g, 100 g, 200 g y 200 g Total 23 weights = 611.11 g

Part No. 5862450



COMECTA Stereomicroscope "XTX-3C LED and ZTX-20 LED"







APPLICATIONS

By design and quality optics, these microscopes are recommended especially for long duration work. Ideally suited for biology, botany, archaeology, geology, teaching and electronics.

COMMON FEATURES

Three dimensional optical resolution, wide field of view without side aberrations, excellent crisp contrast and true colour.

Rechargeable battery 3x1800Ah and external charger.

Binocular head inclined at 45° with adjustable interpupillary distance from 55 to 75 mm.

Rotating head of 360° with easy access for large items.

Dioptric correction in the left eyepiece of ±5dp.

Ocular head held with secure fixing screws.

Rubber eyecups.

Pair of eyepieces, wide field of view WF 10x (23 mm \emptyset). In the model ZTX-3C. Pair of eyepieces, wide field of view WF 20x (20 mm \emptyset). In the model ZTX-20. Objectives of 2 x and 4 x, located in a double objectives support turret with rotation in both directions.

Double focus: by means of a vertical slip clutch of the head up and down a column, with fine adjustment using a bilateral macrometer with rack and pinion tension and control.

Solid base consisting of a platform with double contrast (black and white) circular plate and translucent etched light diffuser, with fixing screw and holding clips.

Model XTX-3C LED: System with double illumination of low voltage 12 V/10 W, with incident light (episcopic) in the head and transmitted (diascopic) in the circular platform.

Model ZTX-20 LED: system with triple illumination of low voltage, with incident light (episcopic) in the head and transmitted (diascopic) in the circular platform, Activated individually or simultaneously, with controllable intensity. Also the incident light incorporates a condenser lens with an extractable blue filter.

Dimensions: XTX-3C LED: 270 high x 117 wide x 190 mm deep. Dimensions: ZTX-20 LED: 350 high x 320 wide x 190 mm deep.

Stereomicroscope modelXTX-3C LED.Part No. 5313113Stereomicroscope modelZTX-20 LED.Part No. 5313090

ACCESSORIES

Eyepiece with wide field of view WF 5x (single).
Eyepiece with wide field of view WF 10x (single).
Eyepiece with wide field of view WF 15x (single).
Eyepiece with wide field of view WF 20x (single).
Eyepiece with wide field of view WF 20x (single).
Wooden box with handle and lock.
Ocular with scale 10/100 mm (each unit).

Part No. 5313091
Part No. 5313092
Part No. 5313092

SPARES

Set of LED lamps (for XTX-3C LED).Part No. 5313013Set of LED lamps (for XTX-20 LED).Part No. 5313015

MODELS	Part No.	Objectives	Eyepieces	Magnification	Ø Field of view mm	Working Distance mm	Illumination	Weight kg
XTX-3C LED	5313113	2x 4x	WF-10x	20x 40x	10.0 5.0	57	Transmitted or incident	2.8
ZTX-20 LED	5313090	2x 4x	WF-20x	40x 80x	5 2.5	40	Transmitted or incident independent or simultaneous	3.6

Comes complete with key for tightening the axis tension, spare lamp and plastic dust cover.









COMECTA Stereomicroscopes with Zoom "SQF-L LED, SQF-D LED and SQF-E LED" VY TEN





APPLICATIONS

By design and quality optics, these microscopes are recommended especially for long duration work. Ideally suited for biology, botany, archaeology, geology, teaching and electronics.

COMMON FEATURES

Variable magnification using a continuous zoom control, with control knobs on either side to enable parfocal centralised focus.

Three dimensional optical resolution, wide field of view without side aberrations, excellent crisp contrast and true colour.

Optics are protected against knocks.

Binocular or Trinocular head (Model dependent), inclined at 45°.

Adjustable interpupillary distance from 54 to 75 mm.

Rotating head of 360° with easy access for large items.

Dioptric correction of ± 5 dp in both eyepieces.

Ocular head fixed with secure screws.

Rubber eyecups.

Pair of eyepieces wide field of view WF20x (12 Ø) or WF10x (22 Ø) model dependent.

Macrometric focus: by means of a vertical slip clutch with a fine adjustment using rack and pinion tension control.

Solid base consisting of a platform with double contrast (black and white) circular plates and translucent etched light diffuser, with fixing screw and holding clips.

Triple illumination LED system, low voltage with incident light (episcopic) in the head and transmitted (diascopic) in the circular platform: activated individually or simultaneously, with controllable intensity.

Model SQF-E LED trinocular

Same characteristics to the SQF-D LED model, except that the head is trinocular and it is supplied with a photography adapter and eyepiece WF 10x with an adjustable focus visor. The photographic eyepiece and camera with support T2 PK and trigger cable have to be ordered as accessories.

ACCESSORIES

AUGEOGOTILE	
Supplementary objective 0.5x. SQF-L	Part No. 5313096
Supplementary objective 0.75x. SQF-L	Part No. 5313097
Supplementary objective 1.5x. SQF-L	Part No. 5313098
Supplementary objective 2x. SQF-L	Part No. 5313099
Eyepiece with wide field of view HWF 10x (single).SQF-D & E	Part No. 5313081
Eyepiece with wide field of view HWF 15x (single).SQF-D & E	Part No. 5313082
Eyepiece with wide field of view HWF 20x (single).SQF-D & E	Part No. 5313083
Video camera for eyepiece (See page 273)	Part No. 5435030
Adapter CCD of 0.5x suitable for a video camera.	Part No. 5313089
Eyepiece WF10x with grid (single). (Model SQF-D and E)	Part No. 5313084
Wooden case with handle and lock.	Part No. 5313016
The state of the s	

SPARES

Set of LED lamps SQF-L Part No. 5313015
LED lamp 3 W SQF-D LED and SQF-E LED (transmitted). Part No. 5313044
LED lamp 3 W SQF-D LED and SQF-E LED (incident). Part No. 5313045

Technical table with the different magnifications, working distance and Ø of the field of view resulting in the configuration of the diverse eyepieces and supplementary objectives available.

MODELS	Part No.	Head	Zoom Range	Eyepieces	Standard magnification	Ø Field of view mm	Working distance mm	Illumination system	Weight kg
SQF-L LED	5313311	Binocular	1x - 4x	10x	1x - 4x	26 - 5.8	90	Transmitted	5.5
SQF-D LED	5313309	Binocular	0.67x - 4.5x	20x	13.4x - 90x	17.9 - 2.7	105	or incident or both	6.1
SQF-E LED	5313308	Triocular	0.67x - 4.5x	20x	13.4x - 90x	17.9 - 2.7	105	simultaneously	6.4

Comes with a dust cover.





Optical



COMECTA Microscope Monocular "M-100 FL LED"

APPLICATIONS

Directed at the requirements of higher education, universities and suitable for: veterinary, dentistry, biology,

FEATURES

Monocular head inclined angle 45° and rotatable through 360°

Eyepiece, with wide field of view WF 10x (18 Ø) fixed in position using secure screw.

Objectives, parfocal DIN 45 mm achromatic brightfield of 4x (A.N. 0.10), 10x (A.N. 0.25) and 40x retractable (A.N. 0.65).

Total magnification: 40x, 100x and 400x.

Revolving triple objectives turret, rotation in either direction with a fixed axis stop locator.

Focus, vertical slip clutch, bilateral micrometer adjustment of 0.002 mm, separate macrometer with adjustable tension. Safety fixing screw for tension adjustment and end of focus limit stop.

Stage with spring clip slide holder of 110 x 126 mm. Condenser, fixed lens and aperture (A.N. 0.65), with diaphragm disk of 5 apertures.

Illumination, transmitted light (diascopic), LED 0.5 W, with collimator lens and blue filter for chromatic corrections.

Robust construction, with power switch and illuminator built into the base.

Dimensions: 360 height x 130 width x 175 mm depth. Weight 2.8 kg.

Supplied complete with key to adjust the tension of the slip clutch and cover.

Microscope monocular M-100 FL LED (400x). Part No. 5313119

ACCESSORIES

Eveniece Widefield WF-15x with cross hairs (Pointer). Part No. 5313076

Evepiece Widefield WF-20x with reticule. Part No. 5313077

Condenser ABBE 1.25 A.N. with filter and iris diaphragm. Part No. 5313003

Graduated mechanical stage.

Part No. **5435030**

Video Micro-camera, 3.1 MP-:

- with connection USB for direct connection to a PC. including software.

Part No. 5435034

Wooden case with carry handle and lock.

Part No. 5313022

SPARE

LED lamp 0.5 W.

Part No. 5313028



ACCESSORY

Set of polarisers with circular graduated base and Part No. 5313075 filter.



COMECTA Microscope Binocular "701 LED"

FEATURES

Binocular head with 45° tilt and full 360° rotation. Interpupillary distance: 52 to 72 mm.

Dioptric adjustment of ±5 dp in both eyepieces, sharpness compensation for visual differences.

Pair of eyepieces DIN standard WF10x (18 mm Ø) and WF16x(11mm Ø)

Objectives DIN standard, achromatic, brightfield of 4x (A.N. 0.10), 10x (A.N. 0.25), 40x (A.N. 0.65) retractable and 100x (A.N. 1.25) immersion oil and retractable. Colour coded objectives for easy identification.

Total magnification: 1600x.

Four position objectives turret rotating in both directions with stop locator when it is in the correct position. Large sub stage 135x145 mm, variable height with a rack and pinion mechanism with bilateral coaxial control. Micrometer adjustable stage graduated to 0.002 mm and macrometer adjustment tension, Movement up to 30 mm.

Safety stop with pre-set adjustable safety level. Adjustable slide holder, with 0.1 mm scale with a smooth X-Y 40 mm longitudinal and 80 mm traversal movement.

Condenser Abbe of 1.25 A.N. with diaphragm iris and exchangeable filters. Rack and pinion height, adjustable.

Illumination transmitted (diascopic), with removable condenser lens and pre-centred lamp LED 3W, with variable intensity control. Suitable for use with an external light source using a plan or concave reflector mirror. Robust construction that incorporates the illumination source and mains switch in the base.

Size: height 370 x width 200 x depth 225 mm. Weight 6 Kg.

Supplied complete with blue set filters, matt glass filter, fuse, oil, dust cover.

Power supply: 110/220 V-50/60Hz.

Microscope Binocular 701 LEd. Part No. 5313111



ACCESSORIES

Eyepiece with wide angle lens WF-5x (single).

Part No. 5313034

Eyepiece with wide angle lens WF-15x (single).

Part No. 5313004

Eyepiece with wide angle WF-10x with reticule (single).

Part No. **5313035**

Eyepiece with wide angle WF-10x with pointer (single). Part No. 5313007

Video camera for eyepiece (see page. 273)

Part No. 5435030

SPARE

LED lamp 3 W. Part No. 5313027







COMECTA Polarising Binocular Microscope 206 LED



APPLICATIONS

Wide range of applications, includes bright-field, dark-field, polarization and phase contrast. Ideal for universities, clinics, biology, bacteriology, agriculture and industry.

FEATURES

Binocular head inclined 30° rotatable through 360°.

Adjustable interpupillary distance of 55 to 75 mm.

Diopter adjustment of ± 5 dp. in the right eyepiece, compensation for any differences in sharpness.

Paired eyepieces DIN, wide field of view WF10x (180) and a pair of WF16x (\emptyset). **Objectives DIN**, achromatic brightfield of 4x (A.N. 0.10), 10x (A.N. 0.25), 40x (A.N. 0.65) retractable and 100x (A.N.1.25) oil immersion retractable; colour coded for rapid identification.

Total magnification: 1600x

Quadruple revolving objectives turret, rotates in both directions with notched location positions.

Large stage of **160 x 140 mm**, height adjustable by mechanical rack and pinion bilateral coaxial focus; 0.002 mm graduated **micrometer** and **macrometer** with adjustable tension (distance 30 mm).

Pre-adjusted, Safety stop limit.

Mechanical stage, (slide holder), graduated scale of 0.1 mm, adjustable in both (x-y) using a smooth rack and pinion movement of **50 mm longitudinal** and **70 mm** transversal.

Condenser Abbe of 1.25 A.N. with iris diaphragm and replaceable filters. Adjustable height by rack and pinion.

Illumination: transmitted (diascopic), with removable condenser lens and LED 3 W lighting with regulable intensity.

Strong and robust, illuminator incorporated into the base.

Set of simple polarisers: controllable analysis polariser.





Set of simple polarisers.

Comes complete with a set of blue, green and yellow filters, set of simple polarisers, lamp, 2 spare fuses, bottle of immersion oil and plastic cover

MODEL	Part No.	Height / Width / Depth mm	Power supply	Weight Kg
206	5313115	425 245 335	220 V / 50 Hz	7.5

SPARE

3W LED lamp. Part No. **5313046**

ACCESSORIES

Eyepiece with wide angle lens WF-5x (single) Part No. 5313034
Eyepiece with wide angle lens WF-15x (single) Part No. 5313004
Eyepiece with wide angle lens WF-10x with reticule (single) Part No. 5313005
Eyepiece with wide angle lens WF-10x with pointer (single) Part No. 5313007

Complete kit for phase contrast, made of: Objectives DIN plan negative phase contrast: 10x (A.N. 0.25), 40x (A.N. 0.65) and 100x (A.N. 1.25) retractable oil immersion, condenser turret phase A.N. 1.25, central telescope and blue filter.

Part No. 5313017

Darkfield condenser: Permits the observation of low contrast and small size, dispersed in a homogeneous substrate samples which they appear luminescent under a uniform darkfield.

Darkfield condenser A.N. 0.83 - 0.91 dry (operable under low magnification).

Part No. **5313018**

Darkfield condenser A.N. 1.25 - 1.36 oil immersion (operable under high magnification). Part No. 5313019

Video camera for eyepiece

Part No. **5435030**



5313017



5313018



5313019



5435030





COMECTA Microscopes "3000-A LED, 3000-B LED and 3000-C LED"



EXCELLENT RESOLUTION PLANACHROMATIC OPTICS. HIGH SPECIFICATION OPTICAL MICROSCOPES, MAXIMUM VERSATILITY WITH A WIDE RANGE OF CONFIGURATIONS. MODELS SHOWN ARE BINOCULAR AND TRINOCULAR WITH PHASE CONTRAST. BRIGHT AND DARK FIELD OPTICS. THIS INSTRUMENT IS IDEAL FOR A WIDE RANGE OF APPLICATIONS.

Optics Anti mould / Anti fungal

APPLICATIONS

Biology, bacteriology, cytology, immunology, diagnostics, pathology, agriculture,industry and university laboratories.

3000-A LED (BINOCULAR) AND 3000-B LED (TRIOCULAR).

FEATURES

Head, binocular or trinocular (model dependant), inclined 30° with 360° ro-

Interpupillary distance adjustable from 53 to 75 mm.

Dioptric adjustment of ±5 dp in the left eyepiece, to compensate any visual diffe-

Pair of DIN eyepieces wide field of view WF 10x (20 mm Ø).

DIN objectives, planachromatic bright field of 4x (A.N. 0.10), 10x (A.N. 0.25), 40x (A.N. 0.65) retractable and 100x (A.N. 1.25) oil immersion retractable, colour coded for rapid identification.

The planachromatic objectives provide an excellent image to the edge of the optical field of view.

Quadruple revolving objectives turret, rotates in both directions with spring ball stop locator when it is in the correct position.

Large substage of 180x140 mm, rack and pinion adjustable height. Coaxial focus using controls located on both sides, graduated micrometer in steps of 0.002 mm and macrometer (with adjustable tension of up to 30 mm).

Safety stop with present adjustment.

Adjustable slide holder with a graduated scale of 0.1 mm, made up of a smooth (X-Y) rack and pinion mechanism, longitudinal and transversal movement of 50 mm and 75 mm respectively.

Abbe condenser of 1.25 A.N. precentred, with double lens, iris diaphragm and retractable from the front. Adjustable height using a rack and pinion mechanism.

The Abbe condenser can be easily replaced for special applications with a phase contrast condenser or a darkfield condenser (see accessories).

Transmitted illumination with LED that is formed with a condenser lens, viewing diaphragm removable filters and a precentred, low voltage, adjustable intensity.

Robust stable structure that includes the illumination system in the base, adjustable intensity potentiometer and On/Off switch.

Dimensions: 410 Height x 200 Width x 310 mm Depth.

Microscope Binocular Part No. 3000-A LED. Part No. 5901981 Microscope Triocular Part No. 3000-B LED. Part No. 5901982



Model "3000-B". Part No. 5901982.

MODEL 3000-C LED PLAN PHASE CONTRAST - BINOCULAR.

FEATURES

Similar characteristics to the model 3000-A LED except for a special configuration of Plan Phase Contrast objectives:

The objectives, DIN quality, are planachromatic with positive phase contrast of 10x (A.N. 0.25), 25x (A.N. 0.40) 40x (A.N. 0.65) retractable and 100x (A.N. 1.25) retractable and oil immersion.

The condenser is a phase turret A.N. 1.25, with central telescope and a set of white, blue and green filters. With sharp detail for examination of transparent thin sections that can differentiate the refraction index that the human eye cannot differentiate. Excellent for applications in biology, medicine, crystallography, agriculture, industrial plastics and rubber etc.

Microscope Binocular model 3000-C LED. Part No. 5901983

MODELS	Part No.	Head	Eyepieces	Objectives	Technique	Illumination	Weight kg
3000-A LED 3000-B LED	5901981 5901982	Binocular Triocular	WF 10x	Planachromatic (PL) 4x - 10x - 40x - 100x	Brightfield	3 W	8.4 8.7
3000-C LED	5901983	Binocular	(20 Ø)	Planachromatic (PL) phase contrast 4x - 25x - 40x - 100x	Phase contrast	LED	8.4

Supplied complete with matt glass filter, fuse and a dust cover.

SPARE	ACCESSORIES
LED lamp 3. Part No. 5313026	See page: 278









COMECTA Trinocular fluorescence microscope "3002-F"



EXCELLENT RESOLUTION. POLYVALENT. CAN WORK IN EPIFLUORESCENT OR TRANSMITTED LIGHT MODE. WITH TRINOCULAR ADAPTER FOR CAMERA AND VIDEO CAMERA, PHASE CONTRAST AND DARK FIELD MODES AS ACCESSORIES.

OPTICS ANTI MOULD / ANTI FUNGAL

APPLICATIONS

Biology, cytology, oncology, genetics, scientific investigation, clinical diagnostics, epidemic prevention and embryology.

FEATURES

Trinocular head, inclined 30° and rotatable through 360°.

Interpupillary distance adjustable from 55 to 75 mm.

Dioptric adjustment of ±5 dp in the left eyepiece, to compensate for any visual differences.

Pair of wide field DIN eyepieces WF 10x (22 Ø).

Bright field planachromatic DIN objectives of 4x (A.N. 0.10), 10x (A.N. 0.25), 40x (A.N. 0.65) retactable, and an oil immersion retractable 100x (A.N. 1.25) they are colour codified for a quick identification.

Planachromatic objectives provide an excellent image to the edge of the optical

Quadruple revolving objective turret, with both sides rotation and with a roller baring and a notch stop.

Large sub stage of 180x150 mm, rack and pinion height adjustable, by coaxial focus bilateral controls, graduated micrometer in steps of 0,002 mm and macrometer with adjustable tension (30 mm path). With transmitted light lock plate and **UV** radiation protection screen.

Safety stop with preset adjustable safety level.

Mechanical slide holder (moveable), with graduated scale of 0.1 mm, made up of a smooth movement mechanism (x-y), by a 50mm longitudinal and a 75mm transversal rack and pinion movement.

Abbe condenser of 1.25 A.N., precentred, with double lens, iris diaphragm and retractable frontal lens. Rack and pinion height, adjustable.

Abbe condenser can be easily replaced by a phase turret condenser (for contrast) or dark field condenser, for special observation conditions (see accessories).

Transmitted illumination (diascopic), according to Kölher, that consists of a condenser lens, a field diaphragm, removable filters and low voltage halogen precentred lamp of 12V/30W with adjustable intensity.

Robust stable structure that includes the illumination system, the intensity potentiometer and the On/Off switch on its base.



Mercury lamp of 100 W/DC

Lamp power supply connected to 110 V/220 V with intensity, voltage and power adjustable by a knob.

Illumination module for reflected fluorescence (Waveband B and G, N free).

The unit includes diaphragm, selectable attenuation filter and 5 positions filter disk: ultraviolet, violet, blue and green filters, and a empty position for transmitted light.

ACCESSORIES

Waveband V and UV. Part No. 5901986

MODEL	Part no.	Eyepieces	Objectives	Technique	Illumination	Weight kg
3002-F	5901984	WF 10x (22 Ø)	Planachromatics (PL)	Epifluorescent	Transmitted 12v / 30w	10,5
			4x- 10x- 40x-100x		& Mercury fluorescence 100w / DC	

Supplied complete with a set of blue, green and white filters, bottle of immersion oil \(\gamma \) 1.515, mercury lamp 100 w, spare fuse and dust cover.

SPARE PARTS Halogen lamp 12 V / 30 W. Part No. 5313021. Mercury lamp 100 W DC. Part No. 5313055 Block with omega fluorescence filter: U V. Part No. 5313060 Violet. Part No. 5313061 Blue. Part No. 5313062 Green. Part No. 5313063

ACCESSORIES FOR MICROSCOPES MODELS "3000-A LED", "3000-B LED", "3000-C LED" AND "3002-F"

Eyepiece with wide angle lens WF-15x (single). Part No. 5313073. Eyepiece with wide angle lens WF-20x (single). Part No. 5902074

Contrast phase kit: Objectives DIN, planachromatic positive phase contrast of 10x (A.N. 0.25), 25x (A.N. 0.4), 40x (A.N.0.65) retractable and 100x (A.N.1.25) retractable oil immersion and phase condenser turret, A.N. 1.25, with central telescope and green filter. Part No. 5901985

Dark Field condenser: Permits the observation of low contrast particles dispersed in a homogenous substrate, that appear luminous in a dark field.

- Dark field condenser: A.N. 0.77 ~ 0.91 dry (low magnification). Part No. 5313071
- Dark field condenser: A.N. 1.25 ~ 1.40 immersion (high magnification). Part No. 5313072

Micrograph Kit, camera mechanism WF 10x with a visor for focus correction and a photographic objective of 2.5 -4x. (Adaptable for Digital reflex photographic kit). Part No. 5902008

Digital reflex photographic kit Composed of a mount, a shutter and a SD memory card of 2Gb. Part No. 5531322 Adapter for a CCD video camera: attachment. Part No. 5313070

Wooden case. Part No. 5313016







5901985

5313222





COMECTA Microscope biological inverted, trinocular "XDS-1B LED"





APPLICATIONS

Optical microscope with many benefits, specially designed for biomedicine, biology and for culture analysis in matrix flasks and in microtitre plates, flasks, culture vessels, tubes etc. through the use of its objectives and long working distance condenser, technique uses brightfield or phase contrast.

FEATURES

Robust stable design with lateral arm wrist supports for maximum comfort and easy manipulation.

Trinocular head, inclined 45°.

Interpupillary distance adjustable from 53 to 77 mm.

Diopter correction of $\pm 5 \text{dp}$ in the left eyepiece, used to correct differences in sharpness.

Pair of DIN wide field **WF 10x** (22 \emptyset), telescopic central eyepiece phase contrast DZ11x DZ11x and trinocular photography eyepiece **S 5x** (9.5 \emptyset).

Objectives DIN planachromatic brightfield,long working distance LWD PL of 10x (A.N. 0.25/working distance W.D.=4.3 mm), **20x** (A.N. 0.40/W.D.=8 mm), **40x** (A.N. 0.40/W.D.=3 mm) and on **negative phase contrast LWD PL ph of 10x** (A.N. 0.25/W.D.=5 mm), colour coded for rapid identification.

Maximum thickness acceptable for receptacle bases 1.2 mm.

Quadruple objectives turret with rotation in both directions with a roller baring and notch stop. Rack and pinion height adjustment mechanism with bilateral coaxial focus controls: **micrometer** of 0.2 mm rotation graduated at 0.002 mm increments and **macrometer** with adjustable tension.

Total working distance 12 mm.

Condenser with long working distance (55 mm), brightfield and phase contrast. Precentred, with iris diaphragm and flip out phase contrast. **Including a phase ring of 25x**. Rack and pinions mechanism for height regulation or lateral removal for more height receptacles of up to 145 mm.

Large stage: dimensions 227x208 mm. Includes 3 stages for optimum accommodation of differing sample vessels: plates and or culture flasks, microtitre plates, etc.

Mechanical sub-stage with graduated scale of 1 mm and vernier of 0.1 mm, made up of a smooth mechanism (x-y) rack and pinion drive with 77 mm longitudinal and 114 mm transversal.

Illumination system, **diascopic** transmitted light by a halogen lamp of 6 V / 20W, precentred by external knobs and controllable intensity.

The unit includes a field diaphragm with filter carousel of green and grey.

MODEL	Part No.	Height / Width / Depth exterior cm	Weight Kg
XDS-1B LED	5901988	58 30 53	17



Comes complete with 2 flasks, 2 culture plates, wooden holder for eyepieces, objectives and accessories, 2 lamps, 2 spare fuses and a protective cover.

ACCESSORIES

Objectives planachromatic long working distance

Negative phase contrast:

Objective PLL ph 20x

(A.N. 0.40 W.D.=8 mm)
Part No. **5313065**

Objective PLL ph 40x

(A.N. 0.60 W.D.=3,5 mm)

Part No. **5313066 Adapter thread CCD 0.5** x

Part No. **5313067**Part No. **5313068**

Adapter thread 1 x

Eyepiece WF10x (22 mm)With reticule Part No. 5313064

5313066



5313065



5313064

Digital reflex photographic kit, composed of a mount, a shutter and a SD memory card of 2Gb. Part No. **5313222**

5313222

SPARES

3W LED lamp. Part No. **5313029**







COMECTA

Microscope metallographical inverted "18AT"

IVYMEN SYSTEM

EXCELLENT RESOLUTION. PLANACHROMATIC OPTIC.

APPLICATIONS

Microscope with high capabilities.

Made for large sample observations. Samples are placed on top of an open obstruction free stage.

Binocular or Trinocular configuration with a range of accessories, that convert the instrument into an versatile microscope ideal for the identification and analysis of different materials and alloys. Suitable for a wide range of scientific research applications in metallurgy, physical properties of metals, heat treatments and quality control.

FEATURES

Head, binocular or trinocular (model dependent), 45° inclined angle.

Adjustable interpupillary distance from 53 to 77 mm.

Dioptric adjustment of ±5 dp in the left eyepiece, compensating for any visual differences.

Paired eyepieces, DIN quality. Wide field of view WF 10x $(22 \text{ mm } \emptyset)$.

Objectives DIN grade, planachromatic brightfield of **10x** (A.N. 0.25), **20x** (A.N. 0.50), **50x** (A.N. 0.70), retractable, and **100x** (A.N. 0.85), retractable, using immersion oil. Colour coded for easy and rapid identification.

Magnification range: 100x, 200x, 500x and 1000x.

The planachromatic objectives provide an excellent image, free from aberrations at the edge of the field of view.

Quadruple rotating objectives turret, rotates in both directions with stop locator when in the correct position.

Large sub stage of **242x200 mm**, rack and pinion adjustable height, with bilateral coaxial focus. Micrometer graduated in 0.002 mm steps and **macrometer**, with adjustable tension up to 19 mm.

Safety stop with a pre-set safety level.

Slide holder with scale of 0.1 mm, with a smooth X and Y rack and pinion movement of 15 mm **longitudinal** and 15 mm **traversal** movement.

Illumination: incidental (episcopic), Kölher, that consists of a condenser lens, condenser Abbe of 1.25 A.N., pre-centred with an iris diaphragm,



filters and a pre-centred halogen 6 V / 30 W low voltage controllable light source. **Structure**, **robust** with an illumination system in the base, intensity potentiometer and illumination switch.

Dimensions: 40 height x 25 Width x 61 cm depth.

Weight: 15 Kg.

Comes complete with a set of filters: blue, yellow, green and matt glass filter.

Microscope Triocular Part No. 18AT. Part No. 5901990

SPARE

Halogen lamp 6 V / 30 W. Part No. 5313069

ACCESSORIES



5313222

Digital reflex photographic kit composed of a mount, a shutter and a SD memory card of 2Gb. CMOS sensor higher than 10 megapixels. Speed up to 3 pictures per second. LCD display of 2,5 inches. Processed with total image control. Large area viewfinder and high luminosity.

Part No. **5313222**

Eyepiece with wide field, of view WF-10x (22 mm) with reticule. Part No. 5313064

Adapter thread CCD 0.5x.

Part No. 5313067

Adapter thread CCD 1x.

Part No. **5313068**

Micrograph Kit comprising of:

Photographic adapter mechanism with eyepiece WF-10x with focus adjustment visor and objective of 4x (adaptable to **Digital reflex photographic kit**).

Part No. 5902014









COMECTA Eyepiece video camera

ADAPTS DIRECTLY ONTO THE EYEPIECE OF THE MICROSCOPE OR TRINOCULAR HEAD.

Micro video camera 3.1 MP with a USB connection, direct to a PC, includes software. Part No. 5435030



COMECTA Light source, cold source, fibre optic "Z-150"



APPLICATIONS

Microscopy illumination for small samples free from colour alteration.

Especially recommended for microphotography of live biological samples, cultures, micro-organisms, process control, electronic components, dental studies, etc.

Halogen lamp 150 W. Adjustable illumination intensity control. Forced air circulation. Heat absorption filter. Safety transformer fitted. Primary fuse protection.

CONTROL PANEL

Mains switch. Potentiometer controlled light intensity.

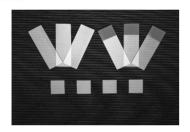
Part No.		/ Widtl terior o	n / Depth cm	Power W	Weight Kg
5901016	15	19	25	150	4

SPARE Lamp 150 W. Part No. 5901017

Supplied with double flexible arm 50 cm long.



Microscope accessories and consumables



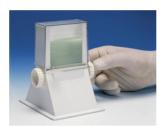
GLASS SLIDES

Glass slides (smooth): 26 x 76 x 1.5 mm.

Part No. 5600400 Box of 72.

Glass slides (matt end for notes): 26 x 76 x 1.5 mm.

Part No. 5600399 Box of 72. Cover slip: 18 x 18 mm. Part No. 5600396 Box of 100. Cover slip: 22 x 22 mm. Part No. 5600397 Box of 100. Cover slip: 24 x 24 mm. Part No. 5600398 Box of 100.



SLIDE DISPENSER

Base made of ABS with a transparent Polycarbonate lid, with rotating manual dispenser of individual slides. Capacity 50 slides of 76 x 26 mm.

Part No. 1001366



CLEANING KIT

Suitable for optical micros-

Part No. 5313000



WOODEN MICROSCOPE BOX

Solid wood, microscope box, of 3 mm thickness, treated with varnish, fitted with a metallic door, clasp lock and a carry handle.

Microscope Box suitable for Model M-100FL, XTX-3C and ZTX-20.

420 high x 255 wide x 285 mm deep. Part No. 5313022 Microscope Box suitable for Model SQF-L, SQF-E, 2000-A, 2000-B and 2000-C.

Internal dimensions: 420 high x 265 wide x 317 mm deep. Part No. 5313016

Slide support, Slide box for storing slides, slide staining stands, etc. (See pages 215 to 219).



COMECTA Disk polarimeter "polar-2010" LED

LAURENT TYPE MODEL LED LAMP ILLUMINATION

APPLICATIONS

Designed for colleges and universities, chemical laboratories, pharmaceutical, clinics, cosmetics and food industry.

FEATURES

Vernier reading definition. Angle ± 0,05 °.

Measuring range of optical rotation: ± 180 °.

Rotation scale division: 1º.

Measuring lens 4x.

Ocular with dioptres adjustment.

Slide rack compartment length: for tubes up to 220 mm.

Monochromatic lamp wave length: 589,3 nm.

MODEL

Part No	External measurements cm.	Consumption	Power	Weight
	Height / Width / Depth	W	V / Hz	Kg
5120220	32 43 14	20	110-220 / 50-60	5



SPARE PARTS

(

Sodium lamp. Part No. 5120221







COMECTA Refractometer ABBE "2WAJ"

LCD DIGITAL THERMOMETER BUILT-IN.

APPLICATIONS

Ideal for measuring the refractive index ηD of liquids. solids and sugar concentrations (0 - 95% = η D 1.333-

Indispensable instrument for industrial chemistry, petroleum, pharmaceutical, food oils and fats, sugars, universities etc.

FEATURES

Telescopic system X2 magnification.

Eveniece with dioptric correction.

Connection for external water bath.

Thermometer 0-70 °C. To see the sample temperature. Robust metallic construction.

Weight: 2.6 Kg.

Measurements: 240 mm high x 100 mm wide x 200 mm depth.

Measuring range:

Refraction index \(\partial D: 1300 - 1700. \) Brix: 0 - 95%.

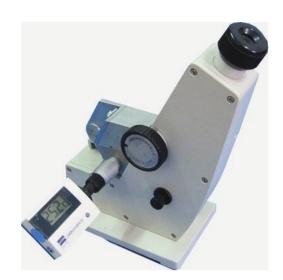
Measuring definition:

Refraction index nD: 0.0005. Precision ηD : ± 0.0002 . Brix: 0.25%. Precision: ±0.1%.

Part No. 5901008

Supplied complete with

- Aluminium carry case.
- 1 bottle of Naphthalene Bromide,
- 1 calibration standard,
- 1 screwdriver and dust cover.





COMECTA Digital ABBE refractometer "WYA-2S"

APPLICATIONS

Ideal for measuring the refractive index of liquids, solids and sugar concentrations (° Brix), industry: chemical, petroleum, food, pharmaceutical, universities and research etc.

FEATURES

Apparatus equipped with an optical system made of a telescope with dispersion correction, used to define the division line between dark and bright areas.

Precise optics with automatic temperature compensation displayed as °Brix and sample temperature.

Stabilized temperature connection for a water bath. RS-232 output with software included.

Measuring range:

Refraction index 10: 1.3000 - 1.7000

Brix Bx - TC: 0 - 95% Brix Bx: 0 - 95%

MODEL

Part No.	Height / Width / Depth (exterior) cm	Power supply	Weight Kg

5901007 38 18 33 220V ±20V 50/60Hz 10

Measurement scale definition:

Refraction index ηD : ± 0.0002 Brix Bx - TC: ± 0.1% Brix Bx: ± 0.1%

Temperature:

Working range: 0 - 50 °C.

Correction range of Bx, in respect to temperature: 15 - 45 °C.



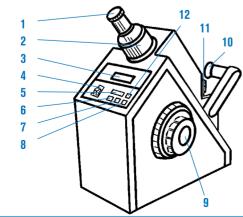
Supplied complete with dust cover and maintenance box that includes:

- 1 bottle of Naphthalene Bromide,
- 1 calibration standard,
- 1 Hex key,
- 3 lamps 6.3V, 0.25 A.
- 3 fuses 1 A.

Optimum precision







Technical description

- 1. Monocular system.
- Telescope adjustment.
- Digital display.
- Mains switch "POWER".
- Push button "READ".
- Push button for Brix with temperature correction "Bx TC".
- Push button for the refractive index "ηD".
- Push button for Brix without temperature correction "Bx".
- Optical control.
- 10. Light intensity unit.
- 11. Refractometer prism.
- 12. Push button for temperature indicating. "TEMP".





COMECTA Refractometers



COMMON FEATURES

Robust metal construction.

Excellent optical quality.

Eyepiece with adjustable dioptric ring to compensate any visual sharpness.

Easy to use, with direct easy to read scales.

Adjustable calibration screw.

Supplied complete with pouch, Pasteur pipette and screwdriver.



REFRACTOMETER FOR SALINITY ‰ AND DENSITY "C-1"

APPLICATIONS

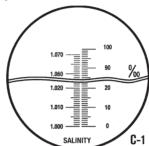
For the investigation in clinical laboratories (solutions and dissolutions). Industry, food provisions (vegetables, fruit, fish and shell fish).

TECHNICAL SPECIFICATION

Automatic compensation

Salinity range: 0 to 100 %. Division Scale: 1 ‰.

Part No. 5901001





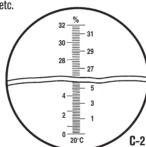
REFRACTOMETER BRIX% INDEX "C-2", "C-3", "C-4" AND "C-5"

Concentrates of sugar in fruit, juices, gaseous drinks, milk, wine, industrial oils etc.

TECHNICAL SPECIFICATION

"C-2" Range Brix: 0 - 32 %. "C-3" Rango Brix:28 - 62 %. Precision±0.2 %.

"C-4" Rango Brix 0 - 10 %. "C-5" Rango Brix 0 - 20 %. Division scale:0.1 %. Precision:±0.1 %.





Part No.

5901002 Model C-2

5901020 Model C-2 with temperature compensation

5901003 Model C-3

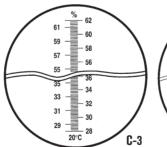
5901021 Model C-3 with temperature compensation

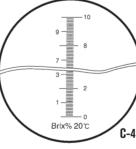
5901022 Model C-4

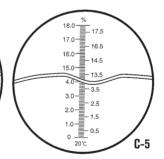
5901023 Model C-4 with temperature compensation

5901024 Model C-5

5901025 Model C-5 with temperature compensation







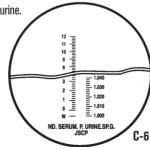
CLINICAL REFRACTOMETER 2 SCALES "C-6" APPLICATIONS

Suitable for the determination of proteins, serum and specific gravity (density) of urine.

TECHNICAL SPECIFICATION

Proteins in serum: 1 - 12 g/100 ml. Urine density:1000 - 1040.

Part No. 5901006













Automatic Melting Point Apparatus "WRS-1B" "WRS-2A" AUTOMATIC DETERMINATION NO VISUAL CONTROL REQUIRED.



A different conception.

Totally automatic, without the need to visually determine the melting point process

APPLICATIONS

Research laboratories, quality control. Test and control of purity after synthesis in pharmaceutical laboratories.

AUTOMATIC MELTING POINT WRS-1B

Single sample analysis

LCD display, simple alphanumeric keypad.

Melting point determination by photoelectric detection.

Automatic functions. Reads and registers the starting point, fusion point and end point.

Part No. 5609401

AUTOMATIC MELTING POINT WRS-2A

Simultaneous analysis, three samples.

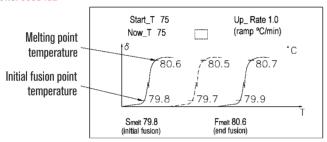
LCD graphic display and 16 keys numeric keypad.

Melting point determination detector photoelectric.

Automatic functions. Reads and registers the starting point fusion point, end point, melting point curve and average value determination.

Part No. 5609402

MODELS



Details of graphic display, calculated average of melting point curves.



MUDELS		WKS-1B	WRS-2A			
Part No.		5609401	5609402			
Digital LCD screen		Numeric	Numeric and graphical			
Maximum capillary tube capacity, 1.4 mm Ø ext.		1	3			
Temperature range		from 50 °C	to 300 °C			
Readable temperature resolution		0.1	°C			
Melting point measurement precision		Upto 200 °C ±0.5 °C a	nd from 200 °C to 300 °C ±0.8 °C			
Selectable ramp rate in °C/minute		0.2 - 0.5 - 1 - 1.5 - 2	- 3 - 4 and 5 °C/min.			
		0.4 °C	0.3 °C ramp rate of 1 °C/min.			
Repeatability		ramp rate of 1 °C/min	0.2 °C ramp rate of 0.2 °C/min.			
	increasing	from 50 °C of 300 °C 3 minutes				
Decending time to reach the start temperature	decreasing	from 300 °C of	50 °C 5 minutes			
Sample holder		for capillary tubes of 1	.4 mm Ø ext. / 1 mm Ø int.			
Sample fill height		3 n	nm			
Output interface RS-232		9600 baudrate, 1 bit	stop and 8 data bits			
Power		110 W				
Power supply		220V-50/60Hz				
Weight		9.5 Kg	12.5 Kg			
Weight /Dimensions, height x width x depth in mm		380 x 315 x 200 398 x 278 x 210				
Cumplied complete with 1000 capillary tubes	of 1 / mm () out out of main	sintenance tools comprising of stay and flat covaridrings a drill hit of 1.5 mm (1 allen lay 2 mm.)				

Supplied complete with 1000 capillary tubes of 1.4 mm Ø ext set of maintenance tools comprising of star and flat screwdrivers, drill bit of 1.5 mm Ø, allen key 3 mm, lamp and fuse, software and protective cover.

ACCESSORY Capillary tubes of 1.4 mm Ø ext. 1.0 mm Ø int. Box of 5000 tubes Part No. 5609404

SPARE Lamp 6.5 V 0.3 A. Part No. **5609405**

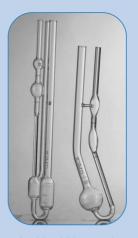








FLOW CUPS



GLASS VISCOMETERS



MONITOR AND CONTROL



GLASS THERMOMETERS



REACTORS



LABORATORY FUME CUPBOARDS

Laboratory fume cupboards
Biological safety cabinets
Rotary viscometers
Flow cups for measuring liquid viscosity
Viscometer precision bath
Glass viscometers
Monitor and control apparatus
Glass thermometers
Laboratory reactors
Molecular distillator

Filters

Analytical consumables

page 283 and 284
page 285
pages 286 to 288
pages 289 to 290
page 290
page 291 to 292
pages 293 to 297
pages 296 to 297
pages 298 to 301
pages 302 to 303
pages 304 to 305

pages 306 to 317



COMECTA Laboratory fume cupboards "VG-BS"



FOR STEAM, ACIDS, BASES AND SOLVENTS EXTRACTING.

SAFETY: DESIGNED AND BUILT MEETING EUROPEAN STANDARD UNE-EN 14175-2

COMMON FEATURES

Antiacid continuous ceramic worktop with anti-dumping peripheral rim and evacuation sink. Polypropylene basin for lateral evacuation.

Inner working chamber built in thermo stable compact resins, antiacids and anti-moisture. M1 fire resistance.

Extraction system with perfectly balanced injected polypropylene turbine. Coupled and protected engine outside the fumes way.

Vertical guillotine door with adjustable height in any position and three sections of 3 + 3mm laminated glass slide which creates a high resistance protection shield.

Self-supporting structure, made of structural elements with 2 mm steel tube, degreased, phosphated and coated with a 70 μ layer of epoxy paint vitrified in the oven. This structure is completely isolated from the working cabin and from the gases contact.

External cover in white melamine board or thermo stable resins in high humidity environments.

ASSEMBLY SYSTEM INTO TWO BODIES

Upper body with cabinet and embedded extractor.

Lower body with a structure, ceramic worktop and remote control panel for fluids and gases in an horizontal housing.

Optional: working system (Walking) at ground level for the input and working with machinery, reactors and organic synthesis appliances. (Request information).

TECHNICAL FEATURES

Lighting level: More than 500 Lux in working area IP 55 or ATEX*.

Extraction volume: from 420 to 4.500 m3/h. Engines: from 0,37 to 2,2 CV - IP55 or ATEX*. Voltage: 220V/50Hz. Single phase / three phase.

*ATEX: if we work with flammable, solvents or hydrocarbons.

On request: Automatic control unit for variable flow (motor) depending on door's opening.

Failure alarm.

On request: Perimeter and ceiling in continuous tiles, for working with sulfuric acid. On request: Perimeter and ceiling in continuous tiles, for working with perchloric acid. It comes with gas washing.



Can be supplied with custom measurements on demand.

Safety cabinets

*G = Antacid stoneware throughout the interior of the upper cabin

CONTROL PANEL

ON / OFF push button with green LED and electrical sockets 230V/16A. Fuel regulator knob (Yellow). Nitrogen regulator knob (Blue/ green button). Vacuum regulator knob (Grey/ black button). Air regulator knob (Blue/ yellow button). Water regulator knob (Green/ blue button). Safety locking pin on door for recommended working position.

MODELS	Part No.			n/ Depth erior) cm			h/ Depth terior) cm			n/ Depth iner) cm			n/ Depth inner) cm	Upper Weight Kg	Lower Weight Kg
VG-BS-1220	5001613	180	120	90	90	120	90	130	95	69	72	95	55,5	104	64
VG-BS-1420	5001614	180	150	90	90	150	90	130	125	69	72	125	55,5	102	96
VG-BS-1720	5001615	180	180	90	90	180	90	130	155	69	72	155	55,5	180	128
VG-BS-2020	5001616	180	200	90	90	200	90	130	175	69	72	175	55,5	208	160
VG-BS-1220	5001631 Atex+	G* 180	120	90	90	120	90	130	95	69	72	95	55,5	124	64
VG-BS-1420	5001632 Atex+	G* 180	150	90	90	150	90	130	125	69	72	125	55,5	162	96
VG-BS-1720	5001633 Atex+	G* 180	180	90	90	180	90	130	155	69	72	155	55,5	200	128
VG-BS-2020	5001634 Atex+	G* 180	200	90	90	200	90	130	175	69	72	175	55,5	248	160

ACCESORIOS

Kit de montaie

2 tubos PVC Ø200 x 200 cm. Código 5001617 2 codos PVC Ø200 de 90°. Código 5001623 1 codo PVC Ø200 de 45°. Código 5001621 1 salida antipájaros Ø200. Código 5001629 1 codo PVC Ø200 de 45°. Código 5001621 2 flexibles Ø200 (25 cm por tubo). Código 5001619 Part No. Acids & base Doors Flammables 5001625 Yes No 5001626 Yes No 5001627 No Yes No 5001628 Yes



COMECTA Laboratory fume cupboards "Walking" to the ground



FOR STEAM, ACIDS, BASES AND SOLVENTS EXTRACTING

SAFETY: DESIGNED AND BUILT MEETING EUROPEAN STANDARD UNE-EN 14175-2



COMMON FEATURES

Inner working chamber built in thermo stable compact resins, anti-acid and anti-moisture. M1 fire resistance.

Extraction system with perfectly balanced injected polypropylene turbine. Coupled and protected engine outside the fumes way.

Vertical guillotine door with adjustable height in any position and 3 + 3 mm laminated glass slide in three sections creating a high resistance protection screen.

Self-supporting structure made of structural elements with a 2 mm thick steel tube, degreased, phosphated and coated with a 70 μ layer of epoxy paint vitrified in the oven. This structure is completely isolated from the work cabin and the contact with gases. External cover in white melamine board or thermo stable resins with a high degree of environmental humidity.

Fume cupboard specially designed for pilot plant assemblies or special techniques where a large free interior space is required, fully accessible within the cabin.



Lightning level: More than 500 Lux in working area IP 55 or ATEX*.

Extraction volume: from 420 to 4.500 m3/h. Engines: from 0,37 to 2,2 CV - IP55 or ATEX*. Voltage: 220V/50Hz. Single phase/three phase

ATEX*: if we work with flammables, solvents or hydrocarbons.

On request: automatic control unit for variable flow (motor) depending on the door

opening function. Failure alarm.

On request: Perimeter and roof in GRES continuous for working with sulfuric acid. **On request:** Perimeter and roof in GRES continuous for working with perchloric acid.

Includes gas scrubber.

CONTROL PANEL

ON/OFF push button with green LED and electrical sockets 230V/16A. Fuel regulator knob (Yellow).

Nitrogen regulator knob (Blue/green button).

Vacuum regulator knob (Grey/black button).

Air regulator knob (Blue/yellow button).

Water regulator knob (Green/blue button)

Safety locking pin on door for the recommended working position.

It can be supplied with customized measures on demand.

Standardized stainless steel supports for general use supplied on demand.





MODELS	Part No.	Height / Width / Depth (exterior) cm	Height / Width / Depth (interior) cm	Weight Kg
VG-VW-1420	5001642	270 150 90	182 125 63	116
VG-VW-1720	5001643	270 180 90	182 155 63	148
VG-VW-2020	5001644	270 200 90	182 175 63	180

ACCESORIOS

Kit de montaje

2 tubos PVC Ø200 x 200 cm. Código 5001617

2 codos PVC Ø200 de 90°. Código 5001623

1 codo PVC Ø200 de 45°. Código 5001621

1 salida antipájaros Ø200. Código 5001629

1 codo PVC Ø200 de 45°. Código 5001621

2 flexibles Ø200 (25 cm por tubo). Código 5001619



COMECTA Biological safety cabinets "H-1" and "H-2"



CLASS 1

SAFETY:

US STANDARD ST 209 (CLASS 100) EUROPEAN STANDARD ISO 14644 (CLASS 5) HEPA FILTER (HIGH EFFICIENCY PARTICULATE AIR)

APPLICATIONS

Water quality control, laboratories and food industries, pharmacies services, haematology and clinical analysis, drug-injecting antibiotics, microscopic analysis, assisted fertilization, cell cultures, etc...

FEATURES

Lower setting made of PMMA transparent methacrylate.

Working surface made of stainless steel AISI 304.

Ultraviolet lamp.

Metallic parts coated with protective polymerization.

Extraction system with silent turbine.

Operating hours counter for HEPA filter replacement.

TECHNICAL SPECIFICATIONS

Illumination level (W-Lux): 500. Airflow speed (M/S): 0.7 - 1.0. Noise level (dB): < 67. Power supply (V-Hz): 220/50.

HEPA filter class H14: 99,999% efficiency for particles of 0.5 microns. Working

temperature in °C: between 15 and 35.

CONTROL PANEL

Stop/start push button. Light push button. Sterilization push button. Ventilation push button.



MODELS	Part No.	Height / Width / Depth (exterior) cm	Height / Width / Depth (interior) cm	Fluorescent Lamp (W)	UV lamp W	Power W	Weight Kg
H1	5609511	78 46 55	40 38 54	15x1	15x1	150	40
H2	5609510	90 55 70	50 45 68	18x1	18x1	160	60

ACCESSORIES	Supporting	Supporting tables for cabinets				
FOR MODEL	Part No.	Height / Width / Depth (exterior) cm	Weight Kg			
H1	5609512	78 55 47	5			
H2	5609513	78 70 55	8			





Shoe soles coater "ZA-1"

DIGITAL TEMPERATURE CONTROL OF AIR.

FEATURES

Shoe soles coated with a PVC film.

It cuts the film by thermal contraction providing hot air with temperature control. Different sizes shoes coated in seconds.

It saves on consumables. A roll of film can be coated up to 1000 shoes. According with CE and ROHS regulations. Consumables 100% recyclable.

MODEL

Part No.	art No. Dimensions cm Height / Width / Depth			Voltage	Power W	Weight Kg
5000051	33	45	80	220V-50Hz	1300	27



SPARE PARTS

PVC coil for 1000 coatings. Part No. 5000052





Rotary Viscometers

Rotary viscosimeters "ST-2020"

INTRODUCTION

Rheology is the study of the effects experimented in a substance when a mechanical force is applied on a it (flow and deformation) under different external conditions. It is used to describe the consistency of different products and is normally defined by the components: viscosity and elasticity.

Measuring viscosity is determined by the tangible force required to displace the materials particles with a specific deformation-flow i.e. velocity. The relationship between the tangible force and the deformation flow obtains the viscosity result. Ambient conditions such as temperature and pressure also have an effect on viscosity.

The measurement of viscosity is not just limited to the research laboratory, it has progressively entered the field of industrial quality control.

PRINCIPLES OF VISCOSITY

These instruments operate by means of a cylinder or disk (spindle) that is submerged into the material to be analysed and by measuring the resistance of the substance at a selected known speed. This resistance results is the measurement of the viscosity according to the flow characteristics of the reference spindle; the instrument calculates the result and directly displays the viscosity that is reported in **cP** (**CGS**) or **mPa-s** (**SI**).

A wide range of viscosity can be measured using viscometers that are equipped with different types of spindles and speed ranges. The design of the spindles and the principals of measurement principles are regulated by **ISO 2555** and **ISO 1652** standards. All spindles are made of AISI 316 stainless steel. Each spindle can be identified by a letter and a number.

SELECTION TABLE

Standard measuring range of the viscometers, without additional accessories $ \\$						
Part no	1001616	1001617				
Model	ST-2020 L	ST-2020 R				
Units	centiPoise (cP)	centiPoise (cP)				
Standard spindle	L1 to L4	R2 to R7				
Speed range r.p.m.	1 to 60	0,1 to 100				
Measuring range	20 to 600.000 cP	20 to 40.000.000 cP				
Temperature range °C	0,0 to 100,0	0,0 to 100,0				
Power requirement	115/230V to 12VDC 1.2A	115/230V to 12VDC 1.2A				
Power	15 W	15 W				
Weight	5 Kg	5 Kg				

FEATURES

L.C.D. display of parameters and results:

- Selected speedr.p.m
- Selected spindle
- Viscosity result
- Base scale percentage%
- Sample temperature:°C or ° F
Auto alarm in the case of any fault being detected.
Off scale detection and indication by an audible
and visual signal.

Step controlled speed to prevent spindle vibrations.

Velocity from 0,1 to 100 r.p.m.

Mains power surge protection.

RS 232 unidirectional interface, download to a computer.

TECHNICAL DATA

Precision: ±1% base scale.

Repeatability: 0.2%.

Supplied complete with:

- Anti shock carry case.
- Main unit.
- Support base.
- Spindle protector.
- Spindle support.
- Set of spindles (model dependant)
- Temperature prove

DIGITAL THERMOMETER

Temp range:- from 0.0 $^{\circ}$ C to + 100.0 $^{\circ}$ C (+ 32.0 $^{\circ}$ F to + 212.0 $^{\circ}$ F).

- Resolution: 0.1 °C (0.1722 °F).
- Precision: ± 0.1 °C.



ACCESSORIES

Standard spindles for L model.

L1 Part No. **1000998**

L2 Part No. 1000999

L3 Part No. 1001000

L4 Part No. 1001001

Standard spindles for R model.

R1 Part No. 1000995 (for low viscosity samples)

R2 Part No. <mark>1001030</mark>

R3 Part No. 1001031

R4 Part No. 1001032

R5 Part No. 1001033

R6 Part No. <mark>1001034</mark>

R7 Part No. 1001035



Rack of standard spindles L1, L2, L3,L4 : Suitable for models L.



Saindle R1

Rack of standard spindles R2, R3, R4, R5, R6 and R7: Suitable for model R.



Wide range rotary viscosimeters "STS-2011"

MODEL WITH TEMPERATURE READOUT AND SHEAR RATE MEASUREMENT AND SHEAR STRESS.

FEATURES

10 different options of language.

L.C.D. display of parameters and results.

Parameters display:

- Selected speedr.p.m.

- Selected spindle

- Base scale percentage%. - Sample temperature:°C or ° F.

- Deformation ratio (with special spindle)

- Torsion force (with special spindles)

- Density

This instrument determines both relative and absolute viscosity.

Data can be changed between S.I. and C.G.S.

Automatically checks for correct operation point by scanning at different speeds.

Auto alarm in the case of any fault being detected. Off scale detection and indication by an audible and visual signal.

Step controlled speed to prevent spindle vibrations. Calibration by the user himself.

18 preselected speeds from 0.01 a 200 r.p.m. The operator can select any speed within this range.

USB port.

Mains power surge protection. 10 memoirs of working programs.

TECHNICAL DATA

Temperature range:- from -40 °C to + 300.0 °C

(-40.0 °F to +572.0 °F).

- Resolution °C: 0.1 °C (0.1722 °F).

- Precision °C: ± 0.1 °C.

- Probe type: Pt 100.

Direct results in cP(mPa-s) or cSt.: models STS-2011 L &

Direct results in Poise (Pa-s) or St.: model STS-2011 H.

Precision: ±1% base scale. Supplied complete with:

- Anti shock carry case.

- Main unit.

- Support base.

- Spindle protector.

- Spindle support.

- Set of spindles (model dependant) (see table).



MODELS	Part No.	Measuring range	Standard spindles	Power requirement	Power W	Weight Kg
STS-2011 L	1001611	20 to 2.000.000 cP	L1, L2, L3, L4	100-240 V 50/60 Hz	25	5
STS-2011 F	R 1001612	100 to 13.000.000 cP	R2, R3, R4, R5, R6, R7	100-240 V 50/60 Hz	25	5
STS-2011 H	l 1001613	200 to 106.000.000 cP	R2, R3, R4, R5, R6, R7	100-240 V 50/60 Hz	25	5

ACCESSORIES

Standard spindles for L model.

L1 Part No. 1001036 L2 Part No. 1001037

L3 Part No. 1001038

L4 Part No. 1001039

Standard spindles for R and H model.

R1 Part No. 1000990 (for low viscosity samples)

R2 Part No. 1001070

R3 Part No. 1001071 R4 Part No. 1001072

R5 Part No. 1001073

R6 Part No. 1001074 R7 Part No. 1001075

Small sample volume adapters (APM).

Suitable for sample volumes from 6,7 to 13,5 ml.

Requires the "TL" or "TR" set of spindles.

Unit suitable for temperatures from 0 °C to +100 °C.

Part No. 1000987 Small sample adapter APM with water jacket and temperature sensor incorporated.

Special Spindles

Part No. 1001224 set of spindles TL5 - TL6- TL7 for models L.

Part No. 1001225 set of spindles TR8 - TR9 - TR10 - TR11 for models R and H.

Low viscosity adapters. (LCP).

Required if low viscosity measurements are necessary.

Reproducible results and measurements of viscosity from 1 cP.

Suitable for models L and R. Sample volume: 16 to 18 ml. Includes special spindle LCP.

Part No. 1000985. Adapter LCP with water jacket. Part No. 1001624 Temperature sensor suitable for LCP.

Displacement spiral helix adapter.

Required for low fluidity samples.

Part No. 1000988









Part No. 1000986

Part No. 1000988



Temperature control equipment for viscosity measurements for viscome-

ters "ST-2020" and "STS-2011"

The influence of temperature while measuring viscosity is considerable, lower temperatures increase viscosity. Therefore it is indispensable to control temperature when precise viscosity measurements are required. The control of temperature by using a thermostatically controlled bath is the most efficient, because of the recirculation of liquid produces a rapid and stable temperature.

We recommend our range of immersion thermostats for this application.

TEMPERATURE CONTROL AND CONFIGURATION FOR VISCOSITY MEASUREMENTS:

FRIGITERM-TFT-10 Part No. 3000546, FRIGTERM-TFT-30 Part No. 3000547 Suitable for below ambient working environments (see page 101 for specifications).

For temperatures above ambient see the **DIGITERM-S-150** Part No. 3000543, or **DIGITEM-TFT-200** Part No. 3000544 complete with 12 litre tank Part No 6000391, (see pages 98 and 100 for specifications).

An adapter kit for the thermostat bath is required:

Part No. 1001625 for STS-2011 Part No. 1001626 for ST-2020

Adapter for thermostat bath comprising of an extension spindle and 4 leg adjusters for the bath. (Kit can be fitted by the user.)

This kit adjusts the bath measuring height to enable samples to be placed inside.

Part No. 1001627. Support for 2 500 ml beakers, to be placed inside the bath (only for bucket 6000391).

Part No. 1001628 Support base for the **DIGITERM** immersion thermostats. This accessory is recommended to close the bath and maintain a constant temperature.

CONSTANT TEMPERATURE CONTROL ACCESSORY FOR SMALL SAMPLE VO-LUME ADAPTERS. USE WITH THE RE-CIRCULATING JACKET ACCESSORIES.

To work below ambient temperatures, we recommend the use of the **FRIGITERM**-TFT-10 Part No. 3000546, or FRIGTERM-TFT-30 Part No. 3000547 (see page 101 for specifications.)

For temperatures above ambient see the **DIGITERM-S-150** Part No. 3000543, or **DIGITEM-TFT-200** Part No. 3000544 complete with 12 litre tank Part No. **6000391**, (see pages 98 and 100 for specifications).

It is necessary to configure the immersion thermostats for "external re-circulation." The Bath adapter kit is not required.



Part No. 1001625, fitted with a rotary viscometer.



Digiterm thermostat bath with support base Part No. 1001628. 12 litre bath Part No. 6000391 and adapter kit Part No. 1001625 or 1001626 To be used with a rotary viscometer and beaker support Part No.



Immersion thermostat Digiterm controlling temperature of viscometer.



COMECTA Rotary Viscometer "NDJ-1"

APPLICATIONS

The instrument operates by rotating a disk or cylinder, (spindle), that is submerged in the liquid or fluid to be analysed. A pre-selected speed is set, the unit measures the absolute resistance from viscosity of the fluid being analysed. Suitable for samples such as: foods, cosmetics, fats and oils, pharmaceutical products, paints and plastics, etc.

FEATURES

The asynchronous motor is connected to a graduated disk with 4 different speeds that propel the spindle via a spiral and die.

Supplied complete with a set of 4 spindles in a box, numbered 1 to 4 with spindle stand.

The viscometer includes a level and adjustable screw feet support base and protective case.

MODEL	Part No.	Measuring range	Tolerance	Spindle Speed r.p.m. for 1 to 4	Power W	Weight Kg
NDJ-1	5120230	10-100.000 mPaS	±5% Liquid Newtons	6 - 12 - 30 - 60	15	6





Flow cups for measuring liquid viscosity

CUP N° 4 STANDARD DIN 53211. CUPS STANDARD ISO 2431. CUP FORD STANDARD ASTM D-1200. CAPACITY: 100ML.

FEATURES

Suitable for measuring kinematic viscosities from 5 to 700 cSt, model dependent. Metallic cups, chrome finished and calibrated.



Flow cups with handle. Models DIN 53211 N° 4 and Ford ASTM D-1200.



Flow cups. Standard models.

ACCESSORY

Support stand with adjustable level. Part No. **7001021**



Heated cups with threaded base, can be connected to a water bath or to a temperature regulator Electemp.

ACCESSORIES

Water bath with heater and screw on disk, with level. Part No. 7001022 Temperature controller Electemp-TFT. Part No. 3000897 Pt 100 sensor probe for the Electemp-TFT and water bath. Part No. 7001496

MODELS

Part No.	Standard	Bore Ø mm	Format	Range cSt	Admisable fall times
1000123	DIN 53211	4	Standard	90 to 700	25" to 100"
7001239	DIN 53211	4	Heated	90 to 700	25" to 100"
1000347	DIN 53211	4	With handle	90 to 700	25" to 100"
1001013	ISO 2431	3	Standard	5 to 42	30" to 100"
7001017	ISO 2431	3	Heated	5 to 42	30" to 100"
1001014	ISO 2431	4	Standard	35 to 135	30" to 100"
7001018	ISO 2431	4	Heated	35 to 135	30" to 100"
1001015	ISO 2431	5	Standard	100 to 350	30" to 100"
7001019	ISO 2431	5	Heated	100 to 350	30" to 100"
1001016	ISO 2431	6	Standard	190 to 680	30" to 100"
7001020	ISO 2431	6	Heated	190 to 680	30" to 100"
		2.53		25 to 120	20" to 100"
1000705	ASTM D-1200	3.40	Standard	40 to 220	20" to 100"
		4.12		70 to 370	20" to 100"
		2.53		25 to 120	20" to 100"
7000706	ASTM D-1200	3.40	Heated	40 to 220	20" to 100"
		4.12		70 to 370	20" to 100"
		2.53		25 to 120	20" to 100"
1000707	ASTM D-1200	3.40	With handle	40 to 220	20" to 100"
		4.12	.12	70 to 370	20" to 100"

Comes with a calibration certificate with results traceable to know standards and equipment

J.P. SELECTA	i, 5.	a,	Número de certificado: Number ot certificate:	100
CERTIFICADO	DE (CALIB	RACIÓN	
CALIBRAI	10 N	RECO	ORD	
				Pag: 1 de 1
1. Identificación:				
Fechs cathración;	11/05/96			
Código copa (Code):	7001020			
Norma (Standard):	ISO 2431	. ø 6		
Descripción (Description):	ISO 2431	Ø 6 Cale	facción	
2. Patrón utilizado:				
Patrón utilizado:	C200			
Lote (Lot number):	97701			
Viscosidad patron (Standard Viscosity):	468	(oSt @25°C)		
3. Resultados de la medida:				
Tiempo 1 (Flow time 1):	69	(%)		
Tiempo 2 (Flow time 2):	67.1	(a)		
Media (Average):	68.05006	(s)		
Viscosidad (Viscosity);	461.17	(cSt)		
Temperatura (Temperatura):	25 ± 0,	(°C)		
d. Aceptación de la medida según la Norma:				
4. [Repetibilidad:				
100*(Tiempo † - Media)/ Media;	1.4 %	(Max 5%)	Correcte	
100°(Tiempo 2 - Media / Media:	1.4 %	(Max 5%)	Correcto .	
ton (Hempo & - mode) Rodid.	no	(WAX 370)	COLLEGED .	
4.2 Error:				
180°(Media - Patrón)/ Patrón:	1.5 %	(Max 3%)	Correcto	
Aprobado/Aproved by :				
				5
Este documento no es válido si no va acompañado por el nos attached with standard liquid certificate.	certificado de	liquido patrón	. This document is no ac	ceptable (f
J.P. SELECTA, s.a. or una empresa certificada 18O 9001 trazabilidad a patrones reconocidos. J.P. SELECTA, s.a. propely cultivated and trazable to recognized standards.	y los egutpos is à company	le medidas se c SO 9001 certif	allbran adecuadamente y ied and our messurement	con facilities are



Ford cup thermostat for viscosity measurement "TV-1452"

CUP MODELS THAT CONFORM TO THE FOLLOWING STANDARDS: DIN 53211, ISO 2431 AND ASTM 1200. ELECTRONIC DIGITAL CONTROL FROM 10°C TO 60°C.

Heating and cooling by Peltier effect

APPLICATIONS

Thermostat Ford cups for viscosity measurement need to be maintained at a precise temperature of 10 and 60 $^{\circ}\text{C}.$

FEATURES

Made up of an independent Peltier thermostat control system that heats and cools. Made from AISI 304 stainless steel, with adjustable levelling feet supports, and central orifice for locating the cup.

CONTROL PANEL

Illuminate ON/OFF switch
Digital temperature display
Key pad to select readout and temperature.



Part No.	Temperature °C	Stability °C	Homogeneity °C	Read error	Resolution	Height	/ Width cm	/ Depth	Power W	Weight Kg
3001452	10 to 60 °C	±0.1	±0.2	±0.5	0.1	23	34	30	130	5

See the different standards, models and cups (see page 289.)



Viscometer Precision Bath "VB-1423"

FOR CONTROLLABLE TEMPERATURES FROM AMB.+5 °C TO 100 °C.
STABILITY ±0.1 °C. HOMOGENEITY ±0.1 °C. READING ERROR ±0.09 °C. RESOLUTION 0.1 °C.

SAFETY:

STANDARD DIN 12879.2 CONTROLLABLE SAFETY THERMOSTAT WITH MANUAL RESET.

FEATURES

Temperature sensor Pt100 thermo-resistor, stainless steel AISI 304 lid with three viscometer locations ports, three independent lids and an additional location port for the control thermometer. The main body of the bath is made of a 20 litre borosilicate glass tank. A white plate is located at the back to help optimise and read the viscometers.

CONTROL PANEL

- 1. Mains power iluminated switch.
- 2. Temperature regulator:
 - 3. Real time temperature display.
 - 4. Push button to increase value.
 - 5. Push button to decrease value
 - **6.** Push button to configure operation.
- 7. Safety thermostat safety lamp.

Used for measurements with glass viscometers

Made for the calibration of viscometers according to the following standards UNE 400313, ISO 3105, ASTMD 445 and 2515





MODEL

Part No.	Control range	Capacity	Height / Ø	Height / Ø	Power	Weight
	°C	litres	(tank) cm	(total) cm	W	Kg
3001423	amb.+5 up to 100	20	32 30	47 30	1000	8

ACCESSORIES

Universal viscometer support made from PTFE with stainless steel AISI 304 support. Suitable for the following viscometers :



- Cannon-Fenske for transparent liquids.
- Cannon-Fenske for opaque liquids.
- Ubbelohde.
- Ostwald.
- BS U Tube.
- -Cannon-Manning semi-micro.
- Ubbelohde type BS/IP/SL, BS/IP/SL(S) & type BS/IP/MSL.
- DIN Ubbelohde.

Part No. 1001453

Calibration Chronometers (see page 295).

Thermometers for viscometer baths.

Part No.

1001454 Thermometer ASTM 120C at 38.6 to 41.4°C divisions 0.05°C.

1001455 Thermometer ASTM 121C at 98.6 to 101.4 °C divisions 0.05 °C.

1001456 Thermometer ASTM $\,$ 91C at 20.0 to $\,$ 50.0 °C divisions 0.1 °C.

1001457 Thermometer ASTM 92C at 40.0 to 70.0 °C divisions 0.1 °C.

1001458 Thermometer ASTM 93C at 60.0 to 90.0 °C divisions 0.1 °C.

1001459 Thermometer ASTM 94C at 80.0 to 110.0 °C divisions 0.1 °C.

COMECTA Glass Viscometers

VISCOMETER "UBBELOHDE"

ASTM D445 - ASTM D446 - ISO 3104 - ISO 3105. Suitable for transparent liquids. Complete with calibration certificate. Total length 283 mm. Permanent amber markings.

ACCESSORY

Viscometers support rack. Part No. 1025812 Capacity: 6 viscometers.





Part No.	Size	Nominal constant	Viscosity	y ran	ge in cSt
5600001	0	0.001	0.3	to	1
5600002	OC	0.003	0.6	to	3
5600003	OB	0.005	1	to	5
5600004	1	0.01	2	to	10
5600005	1 C	0.03	6	to	30
5600006	1B	0.05	10	to	50
5600007	2	0.1	20	to	100
5600008	2 C	0.3	60	to	300
5600009	2B	0.5	100	to	500
5600010	3	1.0	200	to	1000
5600011	3C	3.0	600	to	3000
5600012	3B	5.0	1000	to	5000
5600013	4	10.0	2000	to	10000
5600014	4C	30.0	6000	tn	30000

VISCOMETERS "CANNON-FENSKE" TRANSPARENT

ASTM D445 - ASTM D446 - ISO 3104 - ISO 3105 - IP 71. Suitable for transparent liquids. Complete with calibration certificate. Constant at 40 °C to 100 °C. Total length 250 mm. Permanent amber markings.



Transparent

Part No.	Size	Nominal constant	Viscosi	ty ra	nge in cSt
5600050	25	0,002	0,4	a	1,6
5600051	50	0,004	0,8	a	3,2
5600052	75	0,008	1,6	a	6,4
5600053	100	0,015	3	a	15
5600054	150	0,035	7	a	35
5600055	200	0,1	20	a	100
5600056	300	0,25	50	a	200
5600057	350	0,5	100	a	500
5600058	400	1,2	240	a	1200
5600059	450	2,5	500	a	2500
5600060	500	8	1600	a	8000
5600061	600	20	4000	а	20000

VISCOMFTERS	"CANINIONI	EENIGVE"	UDVUILE
VIALLUVIETENA	I.AIVIVIII	-FEMORE	HEALILIE

ASTM D445 - ASTM D446 - ISO 3104 - ISO 3105. Suitable for opaque and transparent liquids. Complete with calibration certificate. Constant at 40 °C and 100 °C. Total length 295 mm. Permanent amber markings.



Opaque

Part No.	Size	Nominal constant	Viscosity	y ra	nge in cSt
5600065	25	0,002	0,4	a	1,6
5600066	50	0,004	0,8	a	3,2
5600067	75	0,008	1,6	a	6,4
5600068	100	0,015	3	a	15
5600069	150	0,035	7	a	35
5600070	200	0,1	20	a	100
5600071	300	0,25	50	a	200
5600072	350	0,5	100	a	500
5600073	400	1,2	240	a	1200
5600074	450	2,5	500	a	2500
5600075	500	8	1600	a	8000
5600076	600	20	4000	a	20000

MICRO-UBBELOHDE VISCOMETER 3 ml

Suitable for transparent liquids. Calibration certificate. Nominal overall length 290 mm. Permanent ring marks in amber. Sample filling volume: 3 ml.



Micro-Ubbelohde

Code	Size	Nominal constant	Viscosit	y range	e in cSt
5600020	1	0,01	0,4	to	6
5600021	lc	0,03	1,2	to	18
5600022	II	0,1	4	to	60
5600023	llc	0,3	12	to	180
5600024	III	1,0	40	to	800

"U-TUBE REVERSE FLOW" VISCOMETER BS/IP/RF

Suitable for opaque liquids. With calibration certificate at 40 and 100 °C. Nominal overall length 275 mm. Permanent ring marks in amber.



U-TUbe reverse flow

Code	Size	Nominal constant	Viscosit	y rang	e in cSt
5600025	1	0,003	0,6	to	3
5600026	2	0,01	2	to	10
5600027	3	0,03	6	to	30
5600028	4	0,1	20	to	100
5600029	5	0,3	60	to	300
5600030	6	1,0	200	to	1000
5600031	7	3,0	600	to	3000
5600032	8	10	2000	to	10000
5600033	9	30	6000	to	30000
5600034	10	100	20000	to '	100000
5600035	11	300	60000	to :	300000

BS/U TUBE VISCOMETER

Suitable for transparent liquids. With calibration certificate at 40 and 100 °C. Nominal overall length 300 mm. Permanent ring marks in amber.



BS/U Tube

Code	Size	Nominal constant	Viscosity	rang	e in cSt
5600036	A	0,003	0,9	to	3
5600037	В	0,01	2	to	10
5600038	C	0,03	6	to	30
5600039	D	0,1	20	to	100
5600040	E	0,3	60	to	300
5600041	F	1,0	200	to	1000
5600042	G	3,0	600	to	3000
5600043	Н	10,0	2000	to	10000

OSTWALD PATTERN VISCOMETER

Suitable for transparent liquids. Calibration certificate at 20°C. Nominal overall length 250 mm. Permanent ring marks in amber. Sample filling volume 10 ml.



Ostwald

Code	Size	Nominal constant	Efflux time between ring marks Water at 20 °C. (seconds)
5600044	45	0,022	45
5600045	85	0,011	85
5600046	100	0,01	100
5600047	125	0.008	125

Monitor and Control Apparatus



Electronic controller "Electemp-TFT"

FEATURES

Reading temperature range: -150 °C to 1300 °C Stability: ±0.1 °C.

Resolution: ±0.1 °C Pt 100 /±1 °C K Type probe.

Touch screen

- Main On/Off switch.
- Acoustic and visual alarm.
- Clock calendar.
- Up to 10 work programs.
- Up to 6 seaments per program.
- Stability time in each segment (from 1 min to 99h).
- Ramps between segments.
- Alarms and events storage.
- Probe error detection.
- Self Diagnostics .
- Network failure detection and saving.
- Over temperature and low temperature alarms and memorization (date, start time, end time and temperature).
- Safety thermostat (TS) by software .
- RS-232 and USB output.
- Temperature control auto-tuning.
- Configurable parameters: Date / time, temperature correction , data collection interval, language (English, Spanish and French) , °C / °F selection , over temperature and low temperature limit.

Cool/heat regulation.

CONTROL PANEL

Setpoint temperature and time indicator.

Temperature limit indicator.

Timer virtual pushbutton.

Reverse virtual pushbutton.

Start virtual pushbutton.

Stop virtual pushbutton.

Programming virtual pushbutton.

BACK PANEL

Power output (SCHUKO plug) 3100 W at 230 V.

Protection fuse.

Pt100 probe connection.

K type probe connection.

APPLICATIONS

Digital thermometer from -150 °C to 1300 °C.

To control and display temperature in any equipment with temperature control system, that uses a contact thermometer, such as: Baths, Immersion thermostats, Hotplates and Hotplate stirrers, Heating and cooling equipments, etc... (temperature from ambient +5 °C to 1300 °C

Can also be used by a immersion thermostat controlling a heater element. (maximum power 3100 W).



MODEL

Part No.		Width / I (exterior)		Max. power W (at 230 V)	Weight Kg
3000897	10.5	13.5	21	3100	1.250

ACCESSORIES

Pt 100 probe. Immersion dimensions: $4 \text{ mm } \emptyset$, 130 mm length. Cable: 150 cm length.

Part No. 1000893

Type K probe. Immersion dimensions: $2 \text{ mm } \emptyset$, 150 mm length. Cable: 150 cm length.

Part No. 1000895



Electronic contact thermometer "Sensoterm II"

DIGITAL DISPLAY, PT 1000 PROBE, AISI 304 STAINLESS STEEL. STABILITY ± 1 °C, ± 1 Digit. Resolution ± 1 °C.



FEATURES

Advantages include a separate temperature probe that maintain the main body away from steam and other vapours. Safer than a glass contact thermometer, eliminating the risk of broken it and a mercury spillage. Main body made of ABS plastic.

TECHNICAL DATA

Temperature range: from -50 °C to 300 °C.
Temperature probe: 3.5 mm Ø x 250 mm immersion.
Temperature Display: 8 mm high LCD display.
Ambient working range: 0 to 60 °C and a relative humidity of 80 %.



Part No.	Height / Width / Dept cm (exterior)	th Weight Kg
1001009	13 7 2.4	0.250





Instruments that can use the electronic controller "Electemp-TFT" and the electronic contact thermometer "Sensoterm".



Sand Bath
"Combiplac-Sand"
Parts No. 6000708 and 6000709.



Hotplate - Rectangular "Combiplac" Parts No. 3000156 and 3000718.



Hotplate - Circular "Combiplac" Parts No. 3002301 and 3002302.



Magnetic Stirrers "Agimatic" Parts No. 7000271, 7000273, 7000272, 7000280, 7000281, 7000837 and 7000838.



Electronic temperature controller "Electemp-B"

ADJUSTABLE TEMPERATURE FROM 0 °C TO 310 °C.

FEATURES

Regulates the power to the heating element by pulsing electronic circuit, free of noise and interferences

APPLICATIONS

Regulates the power of temperature in ovens baths, radiators, hotplates, etc.

CONTROL PANEL

Temperature display indicator. Set temperature display indicator. Set value increase/decrease button.

Output of power (Schuko plug system). Protection fuse.

Connection for a PT100 probe (included)





Part No.		t / Width / m (exterio		Max. power W (at 230 Vav)	Max. power W (at 110 Vav)	Weight Kg
3000896	15	15.5	19	2500	1700	1.2



"Electemp-B" application to a hotplate, showing the unit connected with an electronic contact thermometer.

COMECTA Digital thermometer "TC-9226-A"

FEATURES

Main body made of PVC with anti-slide for better stability.

Temperature range from -200 °C to 1370 °C (-328 to 2498 °F).

Reads °C or °F, reading within 1 second.

Memorizes the last 10 temperature readings. Displays the reading for 3 seconds. It is posibles to hold the reading on the screen.

Switches off automatically after 1 hour (if it is in a continuous mode).

LCD with back light illumination.

Low battery power indicator.

Powered by 3 x 1.5V "AAA" batteries".

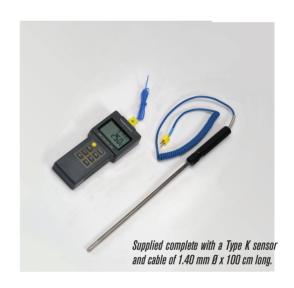
Compatible with most Type K sensors.

Operating conditions: from -10 to 50 °C

Dimensions: (height x width x depth): 17 x 7 x 3 cm. Weight 150g.

MODEL	Part No.	Temp. range °C	Resolution °C	Precision °C
CT-9226-A	5903030	-200 to 1370	0.1	from -200 to -50: ±2 from -50 to 740: ±1 from 740 to 1370: ±2

The precision figures supplied are based on a measurement range from 18 to 28 °C (does not include the sensor error).



ACCESSORY

Sensor type K of 8 mm Ø x 30 cm length. Part No. 5903025

COMECTA Digital Humidity meter with Thermometer "HT-305E"

Part No. 5903023

protective cover and carry case.

Supplied complete with humidity / temperature sensor,

Temperature range from 0 °C to 60 °C. Humidity range from 10% to 95% RH.

Digital Display °C or in °F Fast response: 0.4".

Power: battery 9 V.

Dimensions: (height x width x depth): 3.2 x 6 x 13.25 cm.

Weight: 264 g.

MODEL	Part No.	Temp. range °C	Resolution °C	Precision °C	Humidity range %	Humidity resolution %	Humidity precision %
HT-305E	5903023	from 0 to 50	0.1	±0.8	from 10 to 95	0.1	> 70%: ±3% +1% < 70%: ±3%





Ink Printer "Microprinter"

APPLICATIONS

Small ribbon printer (not thermal) with paper roll 2 1/4" (56 mm) wide.

Interface connection: RS232.

Applications: Measuring equipment, pH meters, conductivity meters, spectrophotometers, etc.

Includes interface cable and power transformer 5V - 3A and cable.



Part No.	Height	/ Width cm	n / Depth	Power supply	Weight Kg
4120113	Δ	16	10	DC 5V 3A	1



Automatic programmer "Promat" 24 H

Connects and disconnects electrical power by a pre-programmed timer switch.

Adjustable timer: Cycles up to 24 hours, with controllable connection disconnection up to every 15 minutes. Manual interrupt setting to disconnect the program, luminous indicator shows when power is being applied.

Maximum current: 16 Amp.

Part No. 1000500



COMECTA Timer alarm "Relavis"

Audible sound when the program time has lapsed. Time setting from 0 to 60 minutes in 1 minute intervals.

Part No. **5900499**





COMECTA Digital alarm timer "Count Down-Up"

Maximum count time 99 min. 59 sec. Timer: count-down and count-up. Portable: table top with magnetic holder or clip if used on a pocket or overall.

Audible alarm fitted. Part No. **5900500**



COMECTA Digital Chronometer "Diamond"

Maximum timer: 23 hr 59 min 59 sec. Division 1/100 seconds. Control: LAP/SPLIT (timer: split time and accumulative time). Date incorporated.

Audible Alarm (duration 60 seconds).

Audible Alarm "snooze" function (once pressed the stop alarm goes off every 5 minutes until it is completely shut off).

Part No. 5900501



COMECTA Thermometer reader "Micro-Temp"

SUITABLE FOR MEASURING TEMPERATURE FROM -50 °C TO +300 °C OR FROM -58 °F TO +527 °F.

Applications: process control, laboratories, pharmacies, food processes and agriculture in general. Digital screen readout in °C or °F.

Stainless steel penetration probe of 3.5 mm Ø x 120 mm long. Retention memory of minimum and maximum data readout.

Disconnects automatically after 1 hour.

Powered by a 5V - 3A battery.



MODEL		
Part No.	Precision	Resolution
5903029	±1 °C / 1 °F	0.1 °C / 0.1 °F
•		1 . 0

Comes complete with protective cover and support clip.









GLASS THERMOMETERS

COMMON FEATURES

All thermometers are made of glass rod or with an opal scale, with a reinforced bulb. A wide selection of scales and temperature ranges is available.

Scales etched in acid and graduated with indelible ink.

Resistant to most chemical agents.

All thermometers are supplied with a protective plastic cover.





Solid stem Themometers

Yellow backed, mercury filled.

Part No.	Range °C	Division scale °C	Total length cm
1090100	-10 +100	1/1	30
1092050*	0 +50	0.1	45

* White back.



White back, with red liquid content. Suitable for measuring samples where mercury is not permitted. E.g. food products, drinks, etc.

Part No.	Range	Division scale	Total length
	°C	°C	cm
1001257	-10 +100	1/1	30

Yellow backed with suspension ring, mercury filled.

Part No.	Range °C	Division scale °C	Immersion length cm	Total length cm
1001299	0 +200	1/1	5	25
3009200	0 +200	1/1	15	34
1009100	0 +60	0.5	15	30



Enclosed scale thermometers

With prismatic capillary, with easy to read scale. Contains mercury.



•		•		
Part No.	Range °C	Division scale °C	Immersion length cm	Total length cm
	Ü		OIII	OIII
1095060	-10 +50	1/1	3	30
1095100	-10 +100	1/1	3	30
1095150	-10 +150	1/1	3	30
1095250	-10 +250	1/1	3	30
1095360	-10 +360	1/1	3	30
1096050	-10 +50	0.5	3	30
1096100	-10 +100	0.5	3	30
1097050	-10 +50	0,1	3	45
1000100	-10 +100	1/1	13	25
1000872	-10 +120	1/1	15	33



Precision thermometers

Mercury thermometers.

Complete with calibration certificate PROTON registration control no. 02-C.37 and 02-V.06 (Meteorological control).

Traceable certificate indicating the proof of continued quality of workmanship against different temperatures, with method and conditions of measurement against known traceable standards.



Part No.	Range	Division scale	Type	Total length
rait ivu.	°C	OL SPAIG	туре	cm
1001258	-10 +100	1/1	solid stem	30
1001259	-10 +250	1/1	solid stem	30
1001260	-10 +50	0.5	solid stem	30
1001261	-10 +100	0.5	solid stem	30
1001262	0 +50	0.1	solid stem	45
1001263	-10 +100	1/1	enclosed scale	30
1001264	-10 +250	1/1	enclosed scale	30
1001265	-10 +50	0.5	enclosed scale	30
1001266	-10 +100	0.5	enclosed scale	30
1001267	-10 +50	0.1	enclosed scale	45

Case with 7 glass rod mercury thermometers, white back, scale in 0.1 °C.

Range °C*	Total length
-30 +20	45 cm
0 +50	45 cm
+50 +100	45 cm
+100 +150	45 cm
+150 +200	45 cm
+200 +250	45 cm
+250 +300	45 cm
*One thermom	otor nor rango

*One thermometer per range.

Part No.

1001268 with calibration certificate PROTON.

1001298 without calibration certificate.





Electric contact thermometers

Adjustable temperature setting with the use of a dial on the top of the thermometer. To provide better mercury flow, the capillary interior is filled with an inert gas. Supplied complete with a 100 cm cable with the appropriate connection on the end.

Part No.	Range °C	Division scale °C	Immersion length cm	Total length cm
3521015	0 +100	1/1	15	39
3522015	0 +200	2/1	15	39
3523015	0 +300	5/1	15	39
3352604	0 +60	1/1	4	28
3352104	0 +100	1/1	4	28
3352204	0 +200	2/1	4	28





Pocket infrared thermometer

Thermometer to measure temperature remotely used in laboratories. These contactless thermometers are used to measure temperatures of any liquid, solid or semi-solid. It includes calibration certificate. It uses two LR44 batteries.

Part No.	Range °C	Total length cm
1097100	-33 +220	6,8





NEW



Universal reactor for laboratory "RV-12"

ADAPTABLE TO ALL NORMALIZED GLASS ELEMENTS WITH 100 MM MOUTH. REACTOR CAPACITY: 6 OR 12 LITRES.

APPLICATIONS

Universal reactor suitable for all laboratory and pilot plant's operations.

FEATURES

Standard mouth for connection to DN100 glass reactor's covers.

Reactor in AISI 316 stainless steel, with a capacity of 12 litres and with a drain tap.

STANDARD EQUIPMENT

- 1. Standard support. Part No. 1001748
- 2. **Reactor** in stainless steel AlSI 316, capacity: 12 litres with drain tap. External sizes: Height 38cm x 25cm Ø. Weight: 4.5 Kg Part No. 1001746 or 6 litres with drain tap. External sizes: Height 28cm x 25cm Ø. Weight: 3 Kg. Part No. 1001726.
- 3. Clamp with support ring for the reactor. Part No. 1001747 + 1001974 for 10-20 litres.

COMPLEMENTOS

- 4. Addition graduated funnel of 250 ml. PTFE frosted wrench 29/32. Part No. 1001795.
- 5. Frame for stirrer clamping. Part No. 1001770
- 6. HEI-Torque stirrer with adjustable speed, Part No. 5016041
- 7. PTFE stirrer guide. Part No. 1001788
- 8. Double effect Refrigerant "Dimroth". 30 cm de length. Part No. 1001792
- **9. Electronic regulator ELECTEMP-TFT.** Part No. **3000897** with connector for internal emperature control, if the heating mantle is used.
- 10. Support plate with bosshead for Electemp-TFT regulator. Part No. 1001750
- 11. Pt100 probe Part No. 1001749 400 mm length x \emptyset 4 mm, with connection cable to Electemp-TFT regulator.
- 12. 5 mouths cove type UK. Part No. 1001790
- 13. Ring holder with double bosshead for heating mantle. Part No. 1001751
- 14. Heating mantle with double heating element for temperatures up to 400°C. Power consumption 1400W. Part No. 3001752
- 15. Double bosshead MAXIM. Part No. 7000408 and clamp for refrigerant. Part No. 1001765
- **16. Anchor shape stirring shaft**, Ø 9,5 mm in PTFE. (length 65 x shovel width 10 cm), Part No. 1001822
- 17. Helix shape stirring shaft, Ø 9,5 mm in PTFE. and PTFE shovel (length 65 x shovel width 7cm). Part No. 1001789
- **18. Folding shovels stirring shaft**, Ø 9,5 mm in PTFE. (length 65 x shovel width 7cm). Part No. **1001859**
- 19. Clamp resistance with internal ceramic insulation and AISI 304 stainless steel exterior. 400°C, 1500W power consumption. Part No. 1001947

High vacuum grease. Dow Corning. -40 to +200°C. For pressures up to 10-6 mm Hg use. Part No. 1001915

20. PTFE expansion/contraction bellows for coupling between mouth and coolant. Part No. 1001825

Faucet in PTFE frosted 29/32. Part No. 1001793

Adapter set for PT100 probe. Frosted 14/23. Part No. 1001933

Adjust 29/32 to olive 12mm for coolant and funnel. Part No. 1001794

Stopper 29/32 for lid and funnel. Part No. 1001796

For DN150 type GR reactors:

Standard support for frame and clamp. Part No. 1001748

- 21. Clamp for DN150 type GR reactors subjection. Part No. 1001787
- **22. Frame for clamp** Supplied with two AISI 304 stainless steel bars Ø 20mm and 500 mm length. Part No. **1001767**

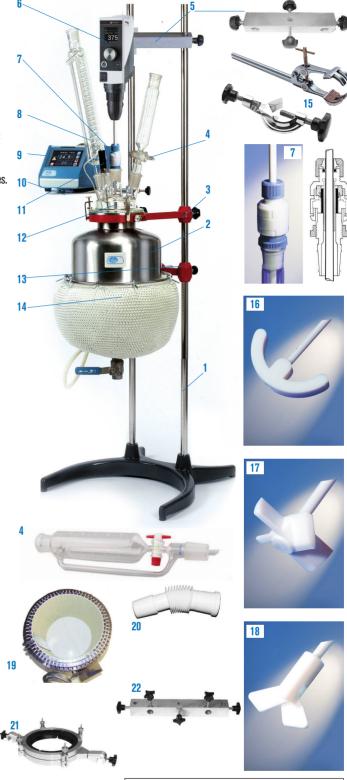
OPTIONAL

23. . AISI 304 stainless steel device, with double standard mouth and coil for heating or cooling the liquid inside the reactor. Coil measures: A: 26 cm. B: 15 cm. C: 10 cm. Part No. 1001755

This device can be coupled to the universal reactor Part No. 1001746.

Note: To be able to hold the Part No. 1001755 to the reactor, a ring holder Part No. 1001758 and a clamp bracket set Part No. 1001852 is necessary.

Note: By using the coil (23) laboratory tests have been carried out with silicone oil "47 V50" (Part No. 1000027 4 litres) and with **Ultraterm-TFT-200** thermostaat. Part No. 3000554 (See page. 101) reaching temperatures up to 170°C in 35' inside the reactor properly insulated with "durablanket120". With the methanol fluid transmitter liquid and the **Frigiterm-TFT-30** thermostat. Part No. 3000553 (See page. 101) temperatures up to -21°C have been reached in 57' inside the isolated reactor with "durablanket120".









Customizable reactors on demand

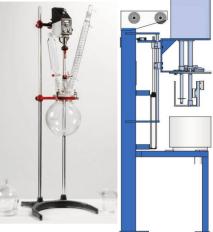
FOR LABORATORY AND PILOT PLANT WITH HEATING ANS COOLING SYSTEMS BOROSILICATE GLASS 3.3. CAPACITY: FROM 0.5 UP TO 100 LITRES. AISI 304 - 316 - 316L STAINLESS STEEL LITRES CAPACITY: FROM 12 UP TO 100 LITRES.

Borosilicate class 3.3: Spherical, cylindrical and thermostatic with or without PTFE release valve with temperature control accessories, PH, oxygen, turbidity, etc. Heidolph stirring systems and variable PTFE blades.

Aisi 304 - 316 - 316 L: Cylindrical and thermostatic with or without release valve. With temperature control accessories, PH, oxygen, turbidity, etc.

Fixed and variable stirring systems of different powers according to viscosity and density, combined with stirring elements, dispersers and emulsifiers micronizers and helical. REQUEST INFORMATION.







Parts and assembly of reactors. Ø 100 UK

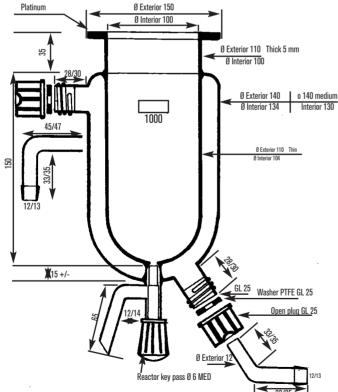
NEW



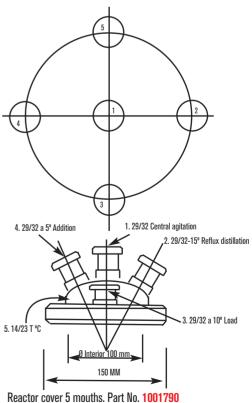








Reactor 0,5 liters. Part No. 1001960 Reactor 1 liters. Part No. 1001880 Part No. 1001879 Reactor 2 liters. Reactor 10 liters. Part No. 1001961



Reactor cover 5 mouths. Part No. 1001892 With SAV thread.



Reactor for pilot plant "RE-605" and "RE-620"

CAPACITY UP TO 20 LITRES

FOR ATMOSPHERIC PRESSURE OR VACUUM

APPLICATIONS

This equipment is designed for reflux and distillation operations with a stirring element, for all laboratory's pilot plant operations and small productions.

FEATURES

Reactor module built-in, base made of glazed steel in epoxy and tubular structure in stainless steel AlSI 304, equipped with an engine group stirring and a reaction jacketed borosilicate glass 3.3 with graduation to temper, for a volume of 4-20 liters in "RE-620" model and 1-5 liters in "RE-605" model.

Stirring anchor blade and elements in contact with the liquid or reaction steam, composed of borosilicate glass and PTFE.

Addition and reflux models.

Optional:

- Configurations for distillation can be supplied.
- Amber glass finish.
- Voltage 110V / 60 Hz.

CONTROL PANEL

Main switch ON / OFF.

Regulator knob for stirring speed from 0 to 500 rpm.

Temperature and RPM digital indicator

MODELS

Part No.			nsions n / Depth	Reactor capacity	Operating temperature	Power W	Weight Kg
1001710	130	70	35	5	-50 °C to 200 °C	90	10
1001711	180	62	50	20	-50 °C to 200 °C	250	68





ACCESORIES

pH analyser temperature from -10°C up to 140°C.

3.5" color touch screen. 8 digital inputs, 2 configurable analog and 6 relay outputs for signaling and control. Communications: 485 for ARC sensor network. IP-65 box. RS-232 output for connection to a computer. Possibility of performing PID control loops. GSM, RED, TCP / IP modem connections, Probes: 02, CON, VCD and Redox.

Part number 4120824 (For measurement and reading only).

Part number 4120823 (For measurement, reading and control). HT glass sensor pH 0-14 + T^a -10 at 100 °C. Part number 4120801 ARC HT sensor pH 0-14 + T^a -10 at 140 °C. Part number 4120822

Glass sensor adapter for R-605. Part number 4120802 Glass sensor adapter for R-620. Part number 4120803

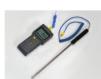
Digital thermometer "TC-9226-A"

Temperature range: -200 °C. to 1370 °C. Part No. **5903030**

See page. 294

PTFE expansion/contraction **bellows** for coupling between mouth and coolant Part No. 1002932

Stirring rod in the shape of a helix, \emptyset 9.5 mm in PTFE. and shovel in PTFE (length 65 x width shovel 7 cm). Part No. 1001789



26 567







COMMON COMPLEMENTS

Silicone oil 4 liters. Temperature up to 300°C. Viscosity 50 mm2/s at 25 °C. Melting point 318 ° C. Part No. 1000027

Peristaltic dosing pump "Peristaltic PR-2003."

For PH stabilisation (acid-base). Also applicable to dosages in process.

Features: See page. 47. Part No. 4129050

Recirculation cryothermostat "CC-505".

For adjustable temperatures from -50 °C. to 200 °C.

Part No. 5910062

FOR REACTOR R-605

Recirculation thermostat "Ultraterm-TFT-200".

For adjustable temperatures from ambient +5 °C. to 200 °C.

Part No. 3000545 See page. 101.

Recirculation cryothermostat "Frigiterm-TFT-30".

For adjustable temperatures from -30 °C. to 100 °C.

Part No. 3000547 See page. 101.

FOR REACTOR R-620

High power recirculation thermostat "Interheater"

For adjustable temperatures from ambient +5 °C. up to 90 °C.

Part No. 6001491 See page. 105.

Water refrigerador and recirculator "Unichiller 015"

For temperatures from -20°C to +40 °C.

Part No. 5910049



Reactor for pilot plant "RE-650" and "RE-6100"

CAPACITY: 50 AND 100 LITERS FOR ATMOSPHERIC PRESSURE OR VACUUM

APPLICATIONS

This equipment is designed for reflux and distillation operations with a stirring element, for all laboratory's pilot plant operations small and medium productions.

FEATURES

Reactor module built-in, made of glazed steel in epoxy and structure in stainless steel AISI 304, composed of an engine group stirring and a reaction borosilicate glass 3.3 with graduation and dual Camera to temper, for a volume of 10-50 liters in "RE-650" model and 20-100 liters in "RE-6100" model.

Stirring anchor blade and elements in contact with the liquid or reaction steam, composed of borosilicate glass and PTFE.

Optional:

- Configurations for distillation can be supplied.
- Amber glass finish.
- Voltage 110V / 60 Hz.

CONTROL PANEL

Main switch ON / OFF.

Regulator knob for stirring speed from 0 to 500 rpm.

Temperature and RPM digital indicator.

MODELS

Part No.		l dime ' Width	nsions n / Depth	Reactor capacity	Operating temperature	Power W	Weight Kg
1001840	268	68	68	50	-50 °C to 200 °C	300	82
1001841	268	68	68	100	-50 °C to 200 °C	500	119

SPECIAL STIRRING MODELS

Main switch ON / OFF.

Control by variable frecuency drive 200-240 VAC (II-III) filter EMC-IP55 and IP66.

Part No.	Working conditions	RPM	Power W	Voltage V
7000386	Atmospheric pressure	0-1450	650	230-400 III 50Hz IP55
7000387	Vacuum pump	0-1450	650	230-400 III 50Hz IP55

ACCESORIES

pH analyser temperature from -10°C up to 140°C.

3.5" color touch screen. 8 digital inputs, 2 configurable analog and 6 relay outputs for signaling and control. Communications: 485 for ARC sensor network. IP-65 box. RS-232 output for connection to a computer. Possibility of performing PID control loops. GSM, RED, TCP / IP modem connections. Probes: 02, CON, VCD and Redox.



Part number 4120824 (For measurement and reading only). Part number 4120823 (For measurement, reading and control). HT glass sensor pH 0-14 + T^a -10 at 100 °C. Part number 4120801 ARC HT sensor pH 0-14 + T^a -10 at 140 °C. Part number 4120822 Glass sensor adapter for R-605. Part number 4120802

Ph 9.129 T. 26.567

Glass sensor adapter for R-620. Part number 4120803

Digital thermometer "TC-9226-A"Temperature range: -200 °C. to 1370 °C.
Part No. 5903030

See page. 294





COMMON COMPLEMENTS

Silicone oil 4 liters. Temperature up to 300°C. Viscosity 50 mm $_2$ /s at 25 °C. Melting point 318 ° C. Part No. 1000027

Peristaltic dosing pump "Peristaltic PR-2003."

For PH stabilisation (acid-base).

Also applicable to dosages in process.

Features: See page. 47. Part No. 4129050

Recirculation cryothermostat "CC-505".

For adjustable temperatures from -50 °C. to 200 °C.

Part No. 5910062

FOR REACTOR R-605:

Recirculation thermostat "Ultraterm-TFT-200".

For adjustable temperatures from ambient +5 °C. to 200 °C.

Part No. 3000545 See page. 101.

Recirculation cryothermostat "Frigiterm-TFT-30".

For adjustable temperatures from -30 °C. to 100 °C.

Part No. 3000547 See page. 101.

FOR REACTOR R-620:

High power recirculation thermostat "Interheater"

For adjustable temperatures from ambient +5 °C. up to 90 °C.

Part No. 6001491 See page. 105.

Water refrigerador and recirculator "Unichiller 015"

For temperatures from -20°C to +40 °C.

Part No. 5910049



APPLICATIONS

Cannabinoids separation.

Thermal separation of chemical compounds sensitive to heat. Organic synthetic material purification.

Effective components separation for biological extraction solution. Recycling of industrial waste.

Elimination of toxic substances in the food industry. Decolouration of organic compounds and elimination of unusual smell.

FEATURES

Low operating pressures

Short residence time.

High evaporation rates.

Under incrustation in the evaporator's wall.

Magnetic sealed bearing without grease, valves and joints.

Perfect for heat-sensitive materials.

Operating temperature: up to 200/300°C.

Cold operating temperature: -30 °C.

Electric requirement: 220V / 50-60Hz.

Engine power: 120 W.

STANDARD EQUIPMENT

- 1. Jacketed feeding flask with manual feed valve.
- 2. Stirrer magnetic driving.
- 3. Glass tank lined with internal condenser.
- 4. Siphon of dry and cold ice.
- 5. Heating circulator for jacketed feed container.
- 6. Heating circulator for coated glass tank.(-30°C.)
- 7. Heating/ cooling circulator for internal condenser (< 5 pa.)
- 8. Vacuum pump.
- 9. Control system.
- 10. Reception flasks (distilled and residual).

MODELS

MODELO									
Part No.	Barrel diameter liters	Feeding alimentación (g / hr)	Final Yield liters	Max speed rpm	Supply Voltage	Distillate receiver bottle	Waste receiving the flask	Effective Area	
1001962	100	750-1500	3-8	0 a 500	220v/50-60 Hz	2	2	0.15	
1001963	150	1500-3000	6-15	0 a 500	220v/50-60 Hz	3	3	0.24	

On demand, equipment with other productions / performances is supplied.



Recirculation thermostat "Ultraterm-TFT-200"

ADJUSTABLE TEMPERATURES FROM AMBIENT+5 °C TO 200 °C.











STANDARD DIN 12876. SAFETY OVER TEMPERATURE THERMOSTAT WITH ADJUSTABLE MANUAL RESET LOW LIQUID LEVEL SENSOR PROTECTION.

FEATURES

Maximum working volume to maintain maximum temperature: 8 litres.
AISI 304 stainless steel top and lid with an inner tank of AISI 304 stainless steel.
Complete with a pump for internal and external liquid circulation with inlet and outlet connectors. A cooling coil to maintain ambient temperatures using tap water is also provided.

A RS-232 interface for print out or computer control comes as standard. A drain tap is also fitted.

MODEL

Part No.	Capacity	Control range	Stability	Height / Width / Depth	Height / Width / Depth	Pump	Power	Weight
	litres	°C	°C	(usable) cm	(exterior) cm	Pressure / Flowrate H ₂ O	W	Kg
3000554	8	From amb. +5 to 200 °C	±0.1	15 20 14	36 28 36	150 mbar-12 l/min	2060	9.5



Refrigerated recirculation baths "Frigiterm-TFT-10-S" and "Frigiterm-TFT-30-S"

ADJUSTABLE TEMPERATURE FROM -10 °C TO 100 °C. STABILITY: 0 °C TO 100 °C, \pm 0,1 °C / -10 °C, \pm 0.1 °C. ADJUSTABLE TEMPERATURE FROM -30 °C TO 100 °C. STABILITY: 0 °C TO 100 °C, \pm 0,1 °C / -30 °C, \pm 0.2 °C. SET ERROR : \pm 1 °C. RESOLUTION: 0.1 °C.

SAFETY:

STANDARD DIN 12876. SAFETY OVER TEMPERATURE THERMOSTAT WITH ADJUSTABLE MANUAL RESET. LOW LIQUID LEVEL SENSOR PROTECTION.

FEATURES

Maximum working volume to maintain maximum temperature: 8 litres.

AISI 304 stainless steel top and lid with an inner tank of AISI 304 stainless steel.

Complete with a pump for internal and external liquid circulation with inlet and outlet connectors. A drain tap is placed at the side of the unit.

A hermetically sealed compressor is mounted on anti-vibration mounts.

A RS-232 interface for connection to a printer or computer.

MODELS











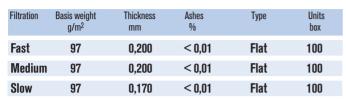
COMECTA FILTRATION. FILTER PAPER FOR LABORATORY



Quantitative filter papers

ASH CONTENT LESS THAN 0.01%. CRITICAL GRAVIMETRIES AND ANALYSIS





Fast: Ø 70: 5301070. Ø 90: 5301090. Ø 110: 5301110. Ø 125: 5301125. Ø 150: 5301150. Ø 180: 5301180.

Medium: Ø 70: 5302070, Ø 90: 5302090, Ø 110: 5302110, Ø 125: 5302125, Ø 150: 5302150, Ø 180: 5302180,

Slow: Ø 70: 5303070, Ø 90: 5303090, Ø 110: 5303110, Ø 125: 5303125, Ø 150: 5303150, Ø 180: 5303180,

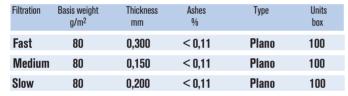




General use qualitative filter papers

FILTRATIONS FOR ROUTINE ANALYSIS IN ALL KINDS OF LABORATORIES





Fast: Ø 70: 5304070. Ø 90: 5304090. Ø 110: 5304110. Ø 125: 5304125. Ø 150: 5304150. Ø 180: 5304180.

Medium: Ø 70: 5305070, Ø 90: 5305090, Ø 110: 5305110, Ø 125: 5305125, Ø 150: 5305150, Ø 180: 5305180,

Slow: Ø 70: 5306070, Ø 90: 5306090, Ø 110: 5306110, Ø 125: 5306125, Ø 150: 5306150, Ø 180: 5306180,





Filter paper reams

PROTECTION AND ABSORPTION IN WORKBENCHES IN ALL KIND OF LABORATORIES

Grade	Basis weight g/m2	Thickness mm	Absorption speed* mm/10 min	Moisture resistance kN/m	Units box
1305	73	0.170	75/70	0.290/0.260	500
1510	60	0.130	60/55	0.280/0.230	500

1305: 42 x 52 (cm): 5130502. 32 x 42: 5130501. 1510: 42 x 52(cm): 5151002. 32 x 42: 5151001.





Absorbent paper with polyethylene

PROTECTION AND ABSORPTION THANKS TO ITS DOUBLE LAYER: ONE OF ABSORBENT PAPER AND THE OTHER OF WATERPROOF POL-**YETHYLENE**

Grade	Basis weight g/m ²	Thickness mm	Area absorption g water/m²
1505	125	0.250	240

1505: 42 x 52 (cm): 5150502. 32 x 42: 5150501. 50 (cm) Width x 50 (meters): 5150503





Glass microfiber filters without binders

RECOMMENDED IN AIR AND WATER ANALYSIS ACCORDING TO INTERNATIONAL STANDARDS

Grade	Retention µm	Basis weight g/m ²	Thickness mm	Retention DOP %	Binders	Units Box
MFV1	1.6	52	0,26	99.998	No	100
MFV3	1.2	52	0,26	99.998	No	100

MFV1: mm Ø 47: 5291047. Ø 70: 5291070. Ø90: 5291090. Ø 110: 5291110. Ø 125: 5291125. Ø 150: 5291150.

MFV3: mm Ø 47: 5293047. Ø 70: 5293070. Ø90: 5293090. Ø 110: 5293110. Ø 125: 5293125. Ø 150: 5293150.





Cellulose extraction cartridges

NOBLE CELLULOSES AND COTTON LINERS TOTALLY FREE FROM IMPURITIES. FOR REMOVING PAINTINGS, ANIMAL FAT, COSMETICS, VARNISHES, LACQUERS, OIL SEEDS, RESINS AND WOOD FATS, ETC... WALL THICK-NESS: BETWEEN 1 AND 2 MM. UNITS PER BOX: 25

Part No.	Interior Dimensions mm Ø/ L	Part No.	Interior Dimensions mm Ø/ L	Part No.	Interior Dimensions mm Ø/ L
5297001	19 x 90	5297005	28 x 100	5297009	33 x 94
5297002	22 x 80	5297006	30 x 80	5297010	33 x 100
5297003	22 x 100	5297007	30 x 100	5297011	35 x 100
5297004	25 x 100	5297008	33 x 80	5297012	43 x 123





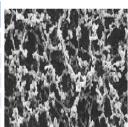
COMECTA Cellulose Acetate Membrane Filters

LOW PROTEIN ABSORPTION FOR FILTERING DIFFERENT SAMPLES: BIOLOGICAL, AQUEOUS, ALCOHOLS, OILS AND HIDROCARBONS. AVAILABLE IN PORES FROM 0.22 UP TO 5 M AND IN DIAMETERS FROM 13 UP TO 293 MM.

AVAILABLE ON DEMAND IN Ø 13 - 25 - 142 Y 293 MM.

PH COMPATIBILITY: 4-8.

Part No.	Membrane Material	Diameter mm	Pore µm	Colour	Surface	Format	Units x box
5297013	Cellulose acetate	47	0.22	White	Flat	Non-Sterile	100
5297014	Cellulose acetate	47	0.45	White	Flat	Non-Sterile	100
5297015	Cellulose acetate	47	0.8	White	Flat	Non-Sterile	100
5297016	Cellulose acetate	47	3.0	White	Flat	Non-Sterile	100
5297017	Cellulose acetate	47	5.0	White	Flat	Non-Sterile	100
5297018	Cellulose acetate	90	0.22	White	Flat	Non-Sterile	100
5297019	Cellulose acetate	90	0.45	White	Flat	Non-Sterile	100
5297020	Cellulose acetate	90	0.8	White	Flat	Non-Sterile	100
5297021	Cellulose acetate	90	3.0	White	Flat	Non-Sterile	100
5297022	Cellulose acetate	90	5.0	White	Flat	Non-Sterile	100





COMECTA Glass filtration equipment

TECHNICAL SPECIFICATIONS

Materials:

100% borosilicate glass 3.3 except aluminium clamps.

Capacities:

Funnel 300 ml. Filtration flasks 1000 ml.

Plate porosity: Grade 2/3

Sterilization: Autoclave (max. 134°C), dry heat (max. 180°C).

Diameter filters: 47 mm

Output connections to vacuum: Tube 8 - 10 mm. diameter.

Complete equipment. Part No. 5297023



Vacuum pumps. See page 48 and 49.



AQUISEL

MEDICAL DEVICES PRODUCTOS SANITARIOS

SELECTA GROUP

MEDICAL DEVICES MANUFACTURER FOR DISPOSABLE IN VITRO DIAGNOSTIC. SINGLE USE.

FABRICANTE DE PRODUCTOS SANITARIOS PARA DIAGNÓSTICO IN VITRO. UN SOLO USO.



Eliminate unnecessary risks with the AQUISEL Valve-Stopper system.

Evite riesgos innecesarios con el sistema Tapón-Válvula AQUISEL.



Container with AQUISEL Valve-Stopper. Contenedor con Tapón-Válvula AQUISEL.



Fixation and concentration of faecal parasites "Aquisfek-2" Fijación y concentración de parásitos fecales "Aquisfek-2"





Pipettes for E.S.R. with zero levelling and automatic closure system for conventional tubes or AQUISEL Valve-Stopper.

Pipetas VSG de enrase a cero. Con émbolo de presión para tubos convencionales o con Tapón-Válvula AQUISEL.

EN-ISO-9001 QUALITY MANAGEMENT SYSTEMS / EN-ISO-13485 MEDICAL DEVICES EN-ISO-9001 SISTEMAS DE GESTIÓN DE LA CALIDAD / EN-ISO-13485 PRODUCTOS SANITARIOS











® AQUISEL VALVE-STOPPER

System available for sample manipulation without the need of uncorking the tube, maintaining it hermetically sealed and avoiding the risk of contamination.

TAPÓN- VÁLVULA AQUISEL

Sistema que permite su manipulación sin necesidad de destaponar, permaneciendo hermético y evitando el riesgo de contaminación.

The AQUISEL system consist of a tube, valve-stopper and an appropriate reagent for specific use.

The AQUISEL tube is made of a high resistance transparent polypropylene. The valvestopper is an elastic material and has a special cross-cut design which allows an automatic recover to its initial closed position, after insertion or extraction of the sample.

The tube's reagent contents is offered through different possibilities identified by stopper colour in accordance with International Standards.

It can be used by most of the current analytical procedures, even if they are manual, semi-automatic or automatic procedures.

El sistema AQUISEL se compone de tubo, tapón-válvula y del reactivo apropiado para su uso específico.

El tubo del sistema AQUISEL está fabricado en polipropileno de alta resistencia y transparencia. El tapón-válvula es de material elástico y **posee unos cortes que por su diseño especial recuperan automáticamente su hermeticidad, después de la introducción o extracción de la muestra.**

Su contenido en reactivo ofrece diferentes posibilidades que se distinguen por el color del tapón según Normas Internacionales.

Puede ser utilizado con la mayoría de los procedimientos analíticos actuales, ya sean manuales, semiautomáticos o automáticos.

USE AND APPLICATIONS

- 1. Inserting (blood) samples with syringe (without needle).
- 2. Extraction and dosage with semi-automatic pipette.
- 3. Capillary blood extraction.
- 4. Capillary filling for microhematocrite.
- 5. Automatic sampling for haematology in primary tubes.
- 6. Sample road transport.
- 7. Centrifuge heads adaptable.

USO Y APLICACIONES

- 1. Introducción de muestra con jeringuilla (sin aguja).
- 2. Extracción y dosificación con pipeta semiautomática.
- 3. Recogida de sangre capilar.
- 4. Llenado de capilar para microhematocrito.
- 5. Toma de muestras automática para hematología en tubos primarios.
- 6. Transporte neumático de muestras.
- 7. Adaptable a cabezales de centrífuga.













Tubes with AQUISEL Valve-Stopper Tubos con Tapón-Válvula AQUISEL

There are different size and volume tubes with additives: anticoagulant, antiglicolytics, clotting accelerators or empty tubes.

Diferentes formatos y volúmenes de tubos con aditivos: anticoagulantes, antiglicólicos, aceleradores de la coagulación o vacíos.



Tubes for small blood volume, size 12x55Tubos para pequeños volúmenes de sangre de 12x55.

Suitable for paediatrics or small sample volumes.

Indicados para pediatría, o para pequeños volúmenes de muestra.



Product presentation

Presentación del producto

The tubes are presented in polystyrene racks of 100 units. Every 50 units are covered with a transparent lid for protection.

Los tubos van colocados en gradillas de poliestireno de 100 unidades. Cada 50 unidades se cubren con una tapa transparente de protección.







Accesory: CAP-GALET

Accesorio: CAP-GALET

Funnel shaped adapter designed to allow blood collection inside the tube, extracted by capillary puncture.

It also allows the AQUISEL valve cap system to be kept open when an inner manipulation is required without having to be unblocked.

Once the CAP GALET has been extracted, the tube remains closed again for its conservation or disposal.

Adaptador en forma de embudo diseñado para permitir la recogida de sangre al interior del tubo, extraída mediante punción capilar.

También permite mantener abierto el sistema de tapón válvula AQUISEL del tubo, cuando se requiere una manipulación del interior sin necesidad de ser destaponado. Una vez extraído el CAP GALET, el tubo permanece de nuevo cerrado para su conservación o desecho.





Tubes for pediatrics and for low blood volumes (up to 1 ml)

Tube dimensions: 11x40 (ØxL)

Upper ring that allows to enter a 13x75 tube to be centrifuged.

Tubos para pediatría y para bajos volúmenes de sangre (hasta 1 ml)

Dimensiones de los tubos : 11x40 (ØxL)

Anillo superior que permite introducirse en un tubo de 13x75 para ser centrifugado.

General content of tubes / color: Contenido general de los tubos / color:



EDTA 3K & EDTA 2K / Mauve EDTA 3K y EDTA 2K / Malva



Citrate 3Na / Blue Citrato 3Na / Azul



Li Heparin & Li Heparin + gel / Green Heparina Litio y Heparina Litio + gel / Verde



Empty / White Vacíos / blanco



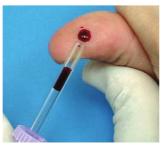
Clotting activator / Red Activador coagulación / rojo

Accesory: CAPILLARY Accesorio: CAPILAR

Accessory that together with the AQUISEL tubes for low blood volumes, allows the collection of blood extracted by capillary extraction directly into the tube. The capillary effect facilitates collection of blood drop by drop. Once the capillary is removed, the tube is closed again thanks to its valve-stopper.

Accesorio que junto con los tubos AQUISEL para bajos volúmenes de sangre, permite recoger directamente al tubo la sangre extraída mediante extracción capilar. El efecto de capilaridad facilita la recogida de la sangre gota a gota. Una vez extraído el capilar el tubo de nuevo permanece cerrado gracias a su tapón válvula.





Accesory: MINI-GALET Accesorio: MINI-GALET

Funnel-shaped accessory that, together with AQUISEL® tubes for low blood volumes, allows the collection of blood extracted by capillary extraction directly into the tube. Once the Mini Galet is removed, the new tube remains closed thanks to its valve-stopper.

Accesorio con forma de embudo que junto con los tubos AQUISEL para bajos volúmenes de sangre, permite recoger directamente al tubo la sangre extraída mediante extracción capilar. Una vez extraído el Mini Galet el tubo de nuevo permanece cerrado gracias a su tapón válvula.





Product table - Cuadro de productos



AQUISEL TUBES WITH VALVE-STOPPERS - TUBOS AQUISEL CON TAPÓN-VÁLVULA

Uts/Box		600		800		1000		800		800		1000)	1000		1000	- NI
Uds/caja		(6x100)	(8x100)	(10x100)	(8x100)	(8x100))	(10x10		(10x100		(10x10	
Size (Ø x L) Tamaño (Ø x L)		16X10	0	16X75		16X55 Flat botto Con faldo		13X80		12X70)	12x5	5	11X40 Conica Cónico	al	11X4 Flat bot Con falo	tom
Content /Contenido	Stopper / Tapón	Ref	ml	Ref	ml	Ref	ml	Ref	ml	Ref	ml	Ref	ml	Ref	ml	Ref	ml
K2E / EDTA 2K	Mauve Malva															1501028	0,25 -0,5
						1501103	4	1581104	4	1581105	3	1501106	2			1501118	1
						1501113	2	1581114	2,5			1501116	1			1501128	0,25 -0,5
K3E / EDTA 3K	Mauve Malva					1501123 (1)	4	1581124 (1)	4			1501126	0,5				
	IVIAIVA					1501133 (1)	2	1581134 (1)	2,5			1501136	0,25				
						()		1681154 (2)	3								
	Black					1501223	2	1581209 (3)	1	1581205	1,2	1501206	1				
4NC / CITRATE 3Na 0,109M (1:4 - ESR/VSG)	Negro							(3)				1501226 (4)	0,32				
9NC / CITRATE 3Na	Light blue							1581304	4	1581305	2	1501306	1			1501308	1
IO 100M	Azul claro											1501326	0,5			1501328	0,5
LH / Li HEPARIN	Green	1561401	10					1581404	4	1581405	2	1501406	1			1501408	1
LH / Li HEPARIN + SEPARATOR GEL	Verde											1501416	1			1501418	0,8
IODOACETATE Li + GRANULES ACTIVATOR	Grey Gris	1561521	8					1581524	4	1581525	2						
FX / FLUORIDE Na + OXALATE K	Grey Gris							1581704	4	1581705	2	1501706	1			1501708	0,5
Z / VACIO – EMPTY	White	1561961	10	1581962	7	1501963	5	1581964	5	1581965	3	1501966	2	1501967	1,5	1501968	1
Z / VACIO EMPTY WITH LABEL - CON ETIQUETA	Blanco															1501998	1
Z / VACIO EMPTY FOR SERUM - PARA SUERO		1561971	10					1581974	5	1581975	3	1501976	2			1501978	1
Z / SEPARATOR GEL FOR SERUM Z / GEL SEPARADOR PARA SUERO	White Blanco	1561981	9					1581984	4			1501986	1,5			1501988	0,8
Z / PS GRANULES FOR SERUM Z / GRANULOS PS PARA SUERO		1561951	9	1581952	6			1581954	4			1501956	1,5				
CAT / CLOT ACTIVATOR FOR SERUM CAT / ACTIVADOR COAGULACIÓN PARA SUERO												1501806	2			1501808	0,5 -1
CAT / CLOT ACTIVATOR + SEPARATOR GEL FOR SERUM CAT / ACTIVADOR COAGULACION + GEL SEPARADOR PARA SUERO	Red Rojo	1561811	9					1581814	4			1501816	1,5			1501818	0,5 -0,8
CAT / CLOT ACTIVATOR PS GRANULES FOR SERUM CAT / ACTIVADOR COAGULACIÓN GRANULOS PS PARA SUERO		1561941	9	1581942	6			1581944	4	1581945	3	1501946	1,5				

- (1). Small cut plug. (2). Uncut plug (no valve). (3). Pipette special tube P-3. (4). Pipette special tube P-4 micro.
- (1). Tapón corte pequeño. (2). Tapón sin cortar (no válvula). (3). Tubo especial pipeta P-3. (4). Tubo especial pipeta P-4 micro.

Accesories

Accesorios

CAP-GALET for 12 to 16 mm Ø tubes.

CAP-GALET para tubos de 12 a 16 mm Ø. Code 1650000. Supplied in bags of 500 units.

Código 1650000. Se suministra en bolsas de 500 unidades.



MINI-GALET for 11 mm Ø tubes.

MINI-GALET para tubos de 11mm Ø. Code 1650050. Supplied in bags of 500 units.

Código 1650050. Se suministra en bolsas de 500 unidades.



GALET for urine container.

GALET para contenedor de orina. Code 1600230. Supplied in bags of 500 units.

Código 1600230. Se suministra en bolsas de 500 unidades.



13x75 CARRIER TUBE for 11 mm Ø tubes.

TUBO CARRIER de 13x75 para tubos de 11mm Ø. Code 1500100. Supplied in bags of 100 units.

Código 1500100. Se suministra en bolsas de 100 unidades.



Blood extraction Blood-Gas/Capillary.

CAPILARES para extracción de sangre. Code **1650100** empty 1,6x2,3x75 mm Code **1650200** with EDTA 1.6x2.3x75 mm Code **1650300** with Li HEP. 1,6x2,3x75 mm

Código **1650100** vacío 1,6x2,3x75 mm Código **1650200** con EDTA 1,6x2,3x75 mm Código **1650300** con Li HEP. 1,6x2,3x75 mm



AQUISEL PIPETTE

PIPETTES FOR ERYTHROCYTE SEDIMENTATION READ E.S.R. WESTERGREN METHOD.

Pipettes made in polystyrene with similar properties as glass ones.

The ZERO-CLOSURE system allows the pipette filling, preventing that the blood exceeds the zero point and also avoiding total or partial loss. Automatic sealing makes it a disposable product.

PIPETA AQUISEL

PIPETAS PARA LA DETERMINACIÓN DE LA VELOCIDAD DE SEDIMENTACIÓN GLOBULAR V.S.G. MÉTODO WESTERGREN.

Pipetas fabricadas en poliestireno con un comportamiento equivalente al vidrio.

El sistema de CIERRE-CERO permite el llenado de la pipeta impidiendo que la sangre supere el punto cero y evitando el vaciado total o parcial. Al quedar automáticamente sellado se convierte en un artículo de un solo uso.

AQUISEL Pipette A-2 without rubber.

For any kind of tube use, even with AQUISEL or with a conventional stopper.

Suitable for mechanical or manual aspiration.

Pipeta AQUISEL A-2 sin émbolo.

Para cualquier tipo de tubo, con tapon AQUISEL o convencional.

Llenado por aspiración mecánica o manual.





AQUISEL Pipette P-2 with rubber.

For 75x13 tubes with AQUISEL or with a conventional stopper.

Pipette filling by pressure till the bottom of the tube.

Pipeta AQUISEL P-2 con émbolo.

Para tubos de 75x13 con tapon AQUISEL o convencional.

Llenado de la pipeta por presión hasta el fondo del tubo.







AQUISEL Pipette P-3 and P-4 MICRO systems

Set of AQUISEL pipettes and tubes. Tubes come with the valve-stopper which allows the pipette insertion without the need of uncorking. Pipette filling by pressure.

Sistemas Pipeta AQUISEL P-3 y P-4 MICRO

Conjuntos formados por pipetas y tubos AQUISEL. Los tubos llevan incorporado el TAPÓN-VALVULA lo que permite la introducción de la pipeta sin necesidad de destaponar. Llenado por presión.









PRODUCT PRESENTATION PRESENTACIÓN DEL PRODUCTO



AOUISEL Pipettes A-2

Expanded polystyrene packaging of 500 units

Pipetas AOUISEL A-2

Envase de P.S. expandido. De 500 pipetas de capacidad.



AOUISEL Pipettes P-2

200 units cardboard package. Supplied in 800 units boxes.

Pipetas AOUISEL P-2

Envase de cartón de 200 unidades. Se suministran en cajas de 800 unidades.



Set P-3. AQUISEL Pipette and tube

200 units cardboard package and 100 tubes rack made of expanded polystyrene, supplied in 600 sets

Conjunto P-3. Pipeta con tubo AOUISEL

Envase de cartón de 200 pipetas y de P.S. expandido de 100 tubos. Se suministra en cajas de 600 conjuntos.



AOUISEL Pipette and

100 pipettes cardboard package and 100 tubes rack made of expanded polystyrene, supplied in 400 sets box.

Conjunto P-4 Micro. **Pipeta con tubo AOUISEL**

Envase de cartón de 100 pipetas y de P.S. expandido de 100 tubos. Se suministra en caias de 400 coniuntos.

MODEL Modelo	CODE Código	UNITS / BOX n° unidades caja	BOX WEIGHT Kg Peso Caja Kg	BOX DIMENSIO Width Ancho	NS cm - MEDI Depth Fondo	DAS CAJA cm Height Alto
A-2	1750224	500	1,5	27	14	11
P-2	1780225	800	4	55	27	26
Set P-3	1760200	600 pipettes + 600 tubes	6	47	43	26
Set P-4 Micro	1740100	400 pipettes + 400 tubes	3,6	20	40	37

COMPLEMENTS - COMPLEMENTOS



Methacrylate rack

10 place rack. For P-3 / P-4 set. Code

1770003 For tube Ø 13 mm - set P-3 1770004 For tube Ø 12 mm - set P-4 Micro

Gradilla en metacrilato

10 plazas numeradas. Para conjunto P-3 / P-4.

1770003 Para tubo Ø 13 mm - conjunto P-3 1770004 Para tubo Ø 12 mm - conjunto P-4 Micro

Metallic Westergren stand

10 place autoclavable stand.

For any kind of AQUISEL pipettes with Ø 13 mm tubes and A-2 pipettes with Ø 16 mm tubes. Easy and functional system that allows the total set disposal.

Code

1770001 For Ø 13 mm tubes

1770002 For Ø 16 mm tubes

Loose tubes for pipettes:

1581209 for AQUISEL P-3 (800 units/box)

1501226 for AQUISEL P-4 Micro (1000 units/box)



Soporte Westergren metálico

10 plazas numeradas. Autoclavable.

Para todo tipo de pipetas AQUISEL con tubos de Ø 13 mm y para pipetas A-2 con tubos de Ø 16 mm. Sistema simple y funcional que permite el vertido total del conjunto.

Código

1770001 Para tubo Ø 13 mm

1770002 Para tubo Ø 16 mm

Tubos sueltos para pipetas:

1581209 para AQUISEL P-3 (800 uds/caja)

1501226 para AQUISEL P-4 Micro (1000 uds/caja)



FOR THE DETERMINATION OF THE GLOBULAR SEDIMENTATION SPEED VSG

Westergren model. Pipette manufactured in sterilizable borosilicate graduated from 0 to 20 cm.

CODE Código		Ø Exterior mm Exterior Ø mm	•
1001943	3	7	300



PIPETA EN BOROSILICATO

PARA LA DETERMINACIÓN DE LA VELOCIDAD DE SEDIMENTACIÓN GLOBULAR VSG Modelo Westergren. Pipeta fabricada en borosilicato esterilizable graduada de 0 a 20 cm.



AQUISEL URINE CONTAINER

CONTAINER FOR URINE SAMPLES COLLECTION WITH AQUISEL VALVE-STOPPER.The AQUISEL VALVE-STOPPER allows the urine manipulation without uncorking, eliminating the contamination risks, samples loss, spillage, odours, etc.

All the AQUISEL urine container presentations will be supplied with the GALLET accessory, which makes easy the sample dosage to a tube for sedimentation analysis, or the urine test strip insertion.

CONTENEDOR PARA ORINA AQUISEL

CONTENEDOR PARA LA RECOGIDA DE MUESTRAS DE ORINA CON TAPÓN-VÁL-VIII A AQUIISFI

El TAPÓN-VÁLVULA AQUISEL permite la manipulación de la orina sin destaponar. Evita los riesgos de contaminación, pérdidas de muestra, derrames, malos olores, etc. Todas las presentaciones del contenedor de orina AQUISEL incorporan el accesorio GALET que facilita la dosificación de la muestra a un tubo para el análisis de sedimentación, o la introducción de la tira reactiva.





Insertion of the GALET in the AOUISEL VALVE-STOPPER.

Introducción del GALET en el TAPÓN-

Urine sample extraction through the GALET.

Extracción de la muestra de orina a



Urine test strip insertion.

Introducción de la tira reactiva.



Dosage through automatic or conventional pipette.

Dosificación por medio de pipeta automática o convencional.

Code 1600230 GALET CONTAINER (500 units package).

Código 1600230 GALET CONTENE-DOR (paquetes de 500 unidades).



AQUISEL URINE CONTAINER

CONTAINER FOR URINE SAMPLES COLLECTION WITHOUT AQUISEL VALVE-STOPPER.

Watertight, made of polypropylene. Graduated and transparent Individual sterilized bagging.

CONTENEDOR PARA ORINA AQUISEL

CONTENEDOR PARA LA RECOGIDA DE MUESTRAS DE ORINA SIN TAPÓN-VÁLVULA AQUISEL. Estanco, fabricado en polipropileno. Graduado y transparente.

Embolsado individual esterilizado.

CODE Código	BAG Bolsa	UNITS BOX UDS. CAJA	CAPACITY ML Capacidad ML	DIMENSIONS cm - MEDIDAS cm Ø Ø Height Alto
1951300	YES SI	250	100	60 73
1951301	YES SI	300	60	53 65





FIXATION AND CONCENTRATION OF FAECAL **PARASITES "AOUISFEK-2"**

New compact design of Aquisfek-2 device, which allows an easy and convenient sample collection, a safe transportation with an easier handling system and a more effective filtration.

FIJACIÓN Y CONCENTRACIÓN DE PARÁSITOS FECALES "AQUISFEK-2"

Nuevo diseño compacto del dispositivo Aquisfek-2, el cual permite una recogida de la muestra fácil y cómoda, un transporte seguro con un sistema de manipulación más sencillo y una filtración más eficaz.









Procedure

SAMPLE COLLECTION.

EASY TO HANDLE BY THE PATIENT.

Separate the two parts (A and B) of the device and with the aid of the spoon built-in at the end of the filter, collect the sample.

Introduce the spoon with the sample back into the liquid and screw to close.

PROCESSING THE SAMPLES IN THE LABORATORY.

FAST AND EASY.

Once the sample has been homogenized, the whole device is centrifuged.

After centrifugation, discard the part A (spoon) and with the aid of a pipette, remove the supernatant in the tube (Part B).

The concentrated sample residue is transferred to a slide for a further microscopic observation.

TWO DIFFERENT FORMATS

KIT 1. WITH FORMALIN / ACETATE. PARASITE COMMONL FIXER. KIT 2. WITHOUT FORMALIN TO MINIMIZE THE RISK OF ENVIRONMENTAL CON-TAMINATION.

KIT 1. Con formol.

1800508 Se suministran 99 unidades (33 bolsas de 3 unidades).

1800505 Se suministran 100 unidades individuales.

KIT 2. Sin formol.

Código

1800503 Se suministran 99 unidades (33 bolsas de 3 unidades).

1800500 Se suministran 100 unidades individuales.

Metódo de utilización

RECOGIDA DE LA MUESTRA.

GRAN SENCILLEZ DE MANIPULACIÓN POR EL PACIENTE.

Separar las dos partes (A y B) del dispositivo y con ayuda de la cucharilla incorporada al filtro coger la muestra.

Introducir y cerrar el sistema.

PROCESO DE LAS MUESTRAS EN EL LABORATORIO.

FÁCIL Y RÁPIDO.

Después de homogenizar la muestra, sin extraerla del tubo de recogida, se centrifuga

Desechar la parte de la cuchara del dispositivo (Parte A) y separar, con una pipeta, el sobrenadante del tubo (Parte B).

El residuo centrifugado se transifere a un porta para la observación de los parásitos al microscopio.

DOS FORMATOS DIFERENTES.

KIT 1. Con Formol / Acetato. Fijador habitual de parásitos.

KIT 2. Sin formol para minimizar el riesgo de contaminación ambiental.

KIT 1. With formalin.

Part number

1800508 99 units supplied (33 bags of 3 units).

1800505 100 individual units supplied.

KIT 2. Without formalin

Part number

1800503 99 units supplied (33 bags of 3 units).

1800500 100 individual units supplied.

Note: For centrifugation, Cencom 2 is recommended. Part number 7002240. See page 112

Nota: Para su centrifugación se recomienda la centrifuga Cencom 2. Código 7002240. Ver pág 112

CONTAINER FOR FECAL AND MISCELLANEOUS SAMPLES

CONTAINER FOR THE COLLECTION OF FECAL SAMPLES

Made of polypropylene. Opaque, with spoon for sampling. Individual sterilized bagging.

CONTENEDOR PARA MUESTRAS FECALES Y MUESTRAS VARIAS

CONTENEDOR PARA LA RECOGIDA DE MUESTRAS FECALES

Fabricado en polipropileno. Opaco, con cuchara para toma de muestras.

Embolsado individual esterilizado.

CODE	BAG	UNITS BOX	CAPACITY ML	DIMENSIONS cm - MEDIDAS cm
CÓDIGO	Bolsa	UDS. CAJA	Capacidad ML	Ø Ø Height Alto
1951302	YES SI	300	60	48 47



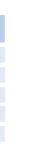
Silicone and viton hoses, borosilicate glass and polypropilene tubes





Silicone hoses

MODEL				
Part No.	Composition	Ø Interior mm	Ø Exterior mm	Quantity meters
8991208	Traslucent silicone 60 SH	4	8	10
8991209	Traslucent silicone 60 SH	6	9	10
8991210	Traslucent silicone 60 SH	8	12	10
8991219	Traslucent silicone 60 SH	12	14	10
8991211	Traslucent silicone 60 SH	12	17	10

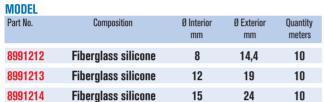








Reinforced silicone hoses







Viton hoses

MODEL Part No.	Composition	Ø Interior mm	Ø Exterior mm	Quantity meters
8991215	Black Viton 75 SH	6	10	10
8991216	Black Viton 75 SH	6	12	10
8991217	Black Viton 75 SH	10	14	10
8991218	Black Viton 75 SH	12	16	10





Borosilicate glass tubes

MODEL					
Part No.	Composition	Capacity ml	Height mm	Ø Exterior mm	Quantity units
7000774	Borosilicate glass	5	75	11	1000
7000775	Borosilicate glass	7	100	12	1000
7000776	Borosilicate glass	10	100	15	1000
7000777	Borosilicate glass	15	100	16,5	1000



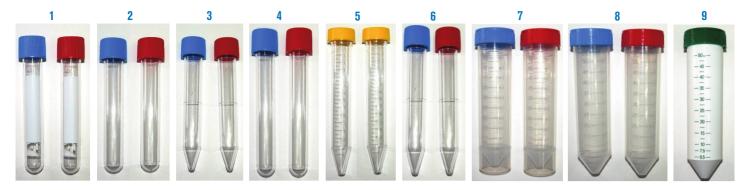


Translucent polypropylene tubes

MODEL					
Part No.	Composition	Capacity ml	Height mm	Ø Exterior mm	Quantity units
1001395	Polypropylene	2,5	40	11	1000
1001396	Polypropylene	4	80	13	1000
1001397	Polypropylene	10	100	16	1000



COMECTA Tubes with screw cap



1. 10 ml round bottom tubes Ø16 x 100mm.

Polystyrene, screenprinted and with screw cap. Packed 50 units.

Part No. 5004000 Non-sterile. Part No. 5004001 Sterile.

2. 10 ml round bottom tubes Ø16 x 100mm.

Polystyrene and with screw cap.

Part No. 5004002 Non-sterile. Packed 1000 units.

Part No. 5004003 Sterile. Packed 200 units.

3. 13.5 ml conical bottom tubes. Ø16 x 110mm.

Polystyrene and with screw cap.

Rcf: 8.000 a.

Part No. 5004004 Non-sterile. Packed 1000 units. Part No. 5004005 Sterile. Packed 200 units.

4. 15 ml round bottom tubes Ø16 x 120mm.

Polystyrene and with screw cap.

Part No. 5004006 Non-sterile. Packed 750 units. Part No. 5004007 Sterile. Packed 150 units.

5. 15 ml conical bottom tubes. Ø17 x 120mm.

Polystyrene, screenprinted and with screw cap. Rcf: 3,500 g.

Packed 150 units.

Part No. 5004008 Non-sterile.

Part No. 5004009 Sterile.

6. 15 ml conical bottom tubes. Ø17 x 120mm.

Polystyrene, screenprinted and with screw cap.

Rcf: 5,000g, Autoclavables.

Packed 150 units.

Part No. 5004010 Non-sterile..

Part No. 5004011 Sterile.

7. 50 ml flat bottom conical tubes. Ø30 x 115mm.

Polystyrene, screenprinted and with screw cap. Autoclavables.

Packed 100 units.

Part no. 5004012 Non-sterile.

Part no. 5004013 Sterile.

8. 50 ml conical bottom tubes. Ø30 x 115mm.

Polystyrene, screenprinted and with screw cap.

Rcf: 5,000g, Autoclavables.

Packed 100 units.

Part no. 5004014 Non-sterile.

Part no. 5004015 Sterile.

9. 50 ml conical bottom tubes. Ø30 x 115mm.

For photosensitive materials.

Polystyrene, screenprinted and with screw cap.

Rcf: 5,000g, Autoclavables at 121 °c. Resistant to temperatures -80°C.

Packed 25 units.

Part no. 5004016 Sterile...

10. Racks for cylindrical and conical tubes

Part no.	Made of	Tubes	For tubes
		number	up to Ø
1001715	inox. AISI 304	15 (5 x 3)	17 mm
1025524	inox. AISI 304	24 (8 x 3)	17 mm
1001716	inox. AISI 304	8 (4 x 2)	30 mm



COMECTA Petri dishes In polystyrene.

1. Plates without compartments. Ø 90 mm, 3 winds

Part No. 5004017 Aseptic. Packed 20 units. Part No. 5004018 Sterile. Packed 20 units.

2. Two compartment plates. Ø 90 mm. 3 winds.

Part No. 5004019 Aseptic. Packed 20 units. Part No. 5004020 Sterile. Packed 20 units.

3. Three compartment plates. Ø 90 mm. 3 winds.

Part No. 5004021 Aseptic. Packed 20 units. Part No. 5004022 Sterile. Packed 20 units.

4. Four compartments plates, Ø 90 mm, 3 winds.

Part No. 5004023 Aseptic. Packed 20 units. Part No. 5004024 Sterile. Packed 20 units.

5. Contact Petri dishes crosslinked for counting.

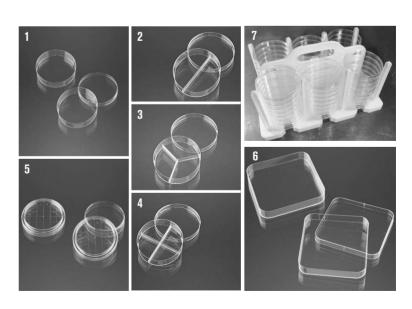
Part No. 5004025 Sterile. Ø 55 mm. Packed 10 units. Part No. 5004026 Sterile, Ø 90 mm, Packed 20 units.

6. Square Petri dishes. 120x120 mm. 3 winds.

Part No. 5004027 Sterile. Packed 10 units.

7. Transport and storage support for Petri dishes of Ø 90 mm.

Capacity: 48 plates. Part No. 5004028





Sterile serology pipettes

APPLICATIONS

Generally used to accurately measure and transfer a liquid of a certain volume. It is widely used for cell culture, bacteriology, clinical research, etc...

FEATURES

Made of high quality polystyrene (GPPS). Calibrated graduations with a ±2% accuracy. Easy to distinguish, different colours corresponding to different specifica-

Easy reading graduation.

Each pipette passes a strict quality test. DNAse free and non-pyrogenic RNAse.

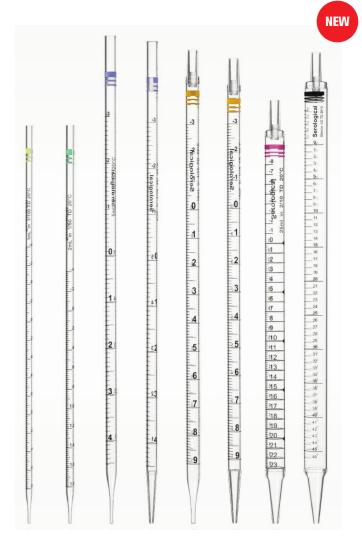




MODELS

Part No.	Material	Colour	Measurement mm	Volume ml	Presentation 1 bag with	Quantity per box
1951201	GPPS	Yellow	Ø5 x 280	1	100	300
1951202	GPPS	Green	Ø6 x 280	2	100	300
1951205	GPPS	Blue	Ø8 x 347	5	50	200
1951210	GPPS	Orange	Ø10 x 340	10	50	200
1951225	GPPS	Fuchsia	Ø15 x 310	25	25	100
1951250	GPPS	Black	Ø18 x 355	50	25	100

Each pipette is supplied individually packaged in a plastic paper.

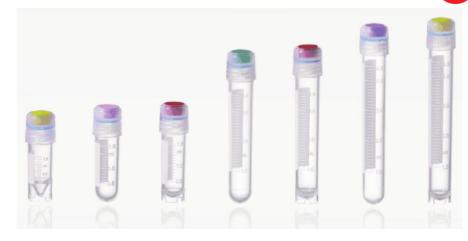


COMECTA Non-sterile cryovial tubes with external thread



FEATURES

Manufactured in polypropylene, to be used up to -196°C Transparent with white graduation. Centrifugal up to 17.000 RCF and autoclavable up to 121°C. Stoppers made of silicone gel. Supplied with markers.



TURES MODELS

TODES MODELS						
Part No.	Material	Measurements mm	Volume ml	Presentation 1 bag with	Resistant to Temperatures	
5004030	Polypropylene	Ø12,5 x 42	1	500 u	-196 to 121°C	
5004031	Polypropylene	Ø12,5 x 49	1,8	500 u	-196 to 121°C	
5004032	Polypropylene	Ø12,5 x 47	1,8	500 u	-196 to 121°C	
5004033	Polypropylene	Ø12,5 x 90	4,5	200 u	-196 to 121°C	
5004034	Polypropylene	Ø12,5 x 89	4,5	200 u	-196 to 121°C	

NOTES

NOTES

NOTES
