IMMERSION THERMOSTATS AND DRY-BLOCKS

"It is characteristic of science that the full explanations are often seized in their essence by the percipient scientist long in advance of any possible proof."
John Desmond

Thermostat immersion “Termotronic II”

TEMPERATURE CONTROLLABLE FROM AMBIENT +5 °C TO 100 °C.

SAFETY:
STANDARD DIN 12879.2
SAFETY OVER TEMPERATURE THERMOSTAT WITH SIGNAL LAMP ALARM

FEATURES

Electronic temperature control.
Pt100 temperature sensor.
Maximum volume to maintain maximum temperate: 20 litres. Heater elements made of INCOLoY stainless steel.
Fitted with a stirring circulating pump.
All parts in contact with liquids made of stainless steel AISI 304
Fixing nut on the side.
Minimum required tank depth: 14 cm

MODEL
CONTROL PANEL

Illuminated mains switch.
Temperature control selector.
Heater “on” indicator lamp.

Part No.	Temp. Range °C	Stability °C	Height / Width / Depth (exterior) cm	Pump Pressure / Flowrate H_2O	Power W	Weight Kg
3000389	Amb.+5 to 100	±0.2	32* 11 16	150 mbar 5 l/min.	1000	2.5

* Height measured with the thermometer included.
It is supplied with a thermometer.

ACCESSORIES

Methacrylate tank “Clinic-Term”

Part No.	Capacity litres	Temp. max. °C	Height / Width / Depth (usable) cm	Capacity Rack	Weight 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.

Methacrylate transparent tank.
Designed to be used with the immersion thermostat “Termotronic II”.

Part No.	Capacity litres	Temp. max. °C	Height / Width / Depth (usable) cm	Capacity Rack	Weight Kg
1000397	7	60	10 20 38	4	2

Rack for 24 haemolysis tubes up to 13 mm Ø, made from AISI304 S.S. Part No. 1002532
Rack for 14 test tubes up to 16 mm Ø, made from AISI 304 S.S. Part No. 1002531

Metal baths. Manufactured with a double external AISI 304 stainless steel skin and an AISI 310 stainless steel pressed bath interior.

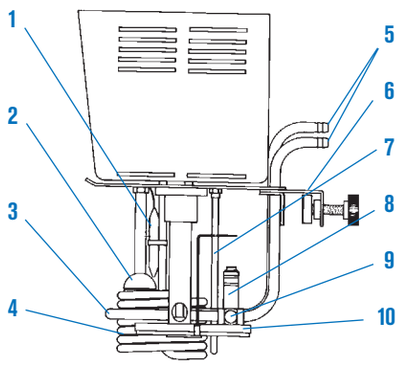
Part No.	Capacity litres	Height / Width / Depth (usable) cm	Height / Width / Depth (exterior) cm	Weight Kg
6000390	9	15 29 22	20 34 28	3.5
6000391	12	15 30 31	20 37 35	4.3
6000392*	20	15 48 30	20 55 35	6.6
6000393*	27	20 48 30	25 55 35	7.6
6001093*	45	15 62 50	23 70 56	11

* With drain tap and lifting handles.

IMMERSION THERMOSTATS WITH ANALOGUE AND DIGITAL CONTROL

The most precise solution for maintaining constant liquid temperatures

SAFETY:
STANDARD DIN 12879.2
ADJUSTABLE OVER TEMPERATURE SAFETY THERMOSTAT WITH MANUAL RESET AND LOW LIQUID LEVEL FLOAT SENSOR.



SCHEMATIC SHOWING ALL PARTS THAT ARE IN CONTACT WITH LIQUID

1. Safety over temperature thermostat.
2. Liquid level float.
3. Cooling coil.
4. Heating element made of stainless steel INCOLOY that can withstand high temperatures and is corrosion resistant.
5. Refrigeration coil connections.
6. Clamp support.
7. Pt 100 temperature probe.
8. Pump outlet for external circulation.
9. Circulating pump outlet.
10. Circulation pump.

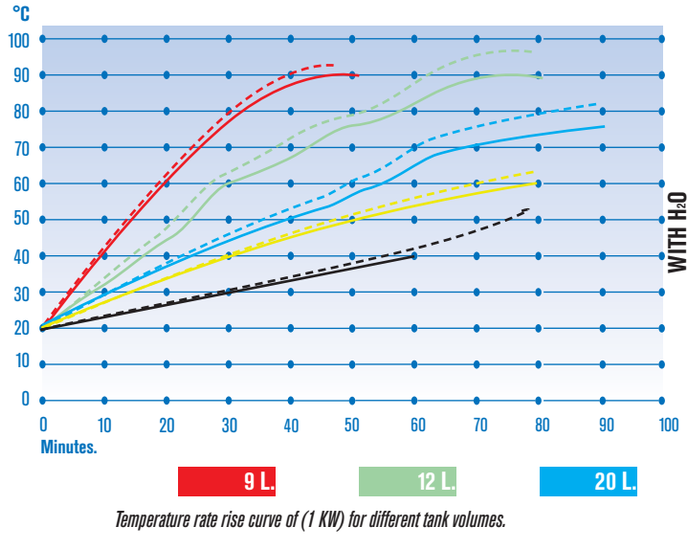
Outlet nut of the fluid flow fixed in A or B interchangeable:
A. Internal stirring within the tank.
B. External circulation.

H_2O FLOW OUTPUT

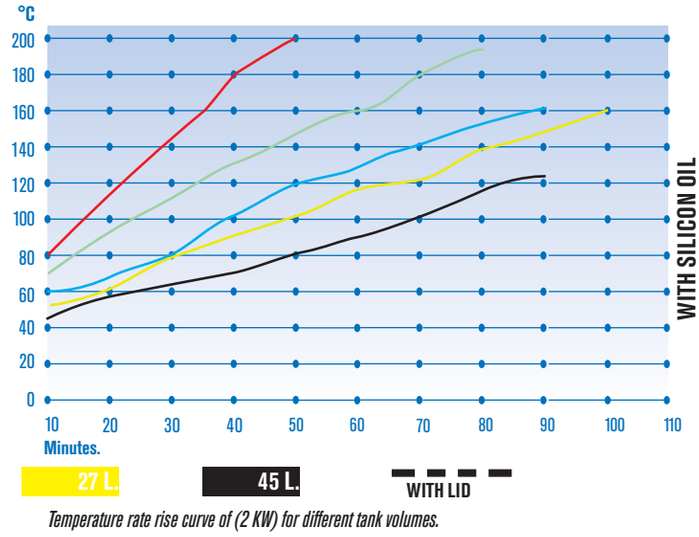
	Flow l/m
Cuvette inner circulation level	**Up to 7,05**
External circulation level raised to a meter.	**Up to 5,16**

Tests made with silicone tubes of 8 mm internal Ø.

TEMPERATURE RATE RISE FOR DIFFERENT TANK VOLUMES USING STAINLESS STEEL TANKS MADE BY SELECTA.



Temperature rate rise curve of (1 KW) for different tank volumes.



Temperature rate rise curve of (2 KW) for different tank volumes.

Immersion thermostat for baths with analogue control "Tectron Bio-100"

ADJUSTABLE TEMPERATURES FROM AMBIENT +5 °C TO 100 °C.

Temperature selector range: 25 - 30 - 37 and 56 ºC and linear control from 0 to 100 ºC.

SAFETY:
STANDARD DIN 12879.2
ADJUSTABLE OVER TEMPERATURE SAFETY THERMOSTAT WITH MANUAL RESET AND LOW LIQUID LEVEL FLOAT SENSOR.

COMMON FEATURES

Temperature sensor: Pt 100 probe. Maximum volume at maximum attainable temperature: 20 litres. Circulation pump internal or external: (Polarimeters, refractometers and viscometers, etc). Cooling coil for maintaining ambient temperature using tap water. External case made of metal with an epoxy corrosive resistant coating, all parts in contact with liquid are made of AISI 304 stainless steel.
Fixed to the tank by a clamp and screw nut at the back or by extension bridge that can be added as an accessory.
Minimum fixing height 14 cm.

CONTROL PANEL

Main power switch with power "ON" indicator lamp.
Temperature selector.
Adjustable fine control OFFSET of 1 °C.
Heater "ON" indicator lamp.
Indicator lamp showing alarm status.
Temperature selector range:
25, 30, 37 and 56 °C, and linear control from 0 to 100 °C.

MODELS	Part No.	Control range °C	Stability °C	Height / Width / Depth (exterior) cm	Pump Pressure / Flowrate H_2O	Power W	Weight Kg
TECTRON BIO	3473100	**Amb.+5 to 100 with external cooling from 0 to 100**	**±0.05**	**28 18 19**	**150 mbar-5, l/min.**	**1050**	**3**

A check thermometer location position and thermometer come as standard.

ACCESSORIES

Extension support bridge.
Made of AISI 304 stainless steel, adjustable, to fit the immersion thermostat models "Tectron and "Digiterm".
The bridge can span baths of 22 to 44 cm across.
Part No. 6001092

Methacrylate tank "Clinic-Term". Specially designed for clinical assays .

Part No.	Capacity litres	Maximum temperature °C	Height / Width / Depth (usable) cm	Capacity Racks	Weight Kg
1000544	8	60	14 16 39	4	2

AISI 304 stainless steel racks for the "Clinic-Term" tank.
Racks for 50 micro-tubes of 11mm dia. 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 18 mm. Part No. 1000547
Racks for 8 cuvettes for spectrophotometers 10 mm square, standard for monotest flask of different sizes. Part No. 1000548
See accessories (page 100).

IMMERSION THERMOSTAT
WITH DIGITAL MICROPROCESSOR CONTROL

DIGITAL TEMPERATURE DISPLAY AND CONTROL.
STABILITY: 100 °C ±0.05 °C SET ERROR: ±1 °C. RESOLUTION: 0.1 °C.
200 °C ±0.1 °C SET ERROR: ±2 °C. RESOLUTION: 0.1 °C.

RS232

High precision temperature control

SAFETY:
STANDARD DIN 12879.2
1. SAFETY OVER TEMPERATURE THERMOSTAT WITH ADJUSTABLE MANUAL RESET
2. OVER TEMPERATURE ALARM - 3. MAIN POWER FAILURE - 4. LOW LIQUID LEVEL FLOAT

DIGITERM 100 – DIGITERM 200
ULTRATERM 200
FRIGITERM-10 – FRIGITERM-30
DIGIT-COOL

COMMON FEATURES

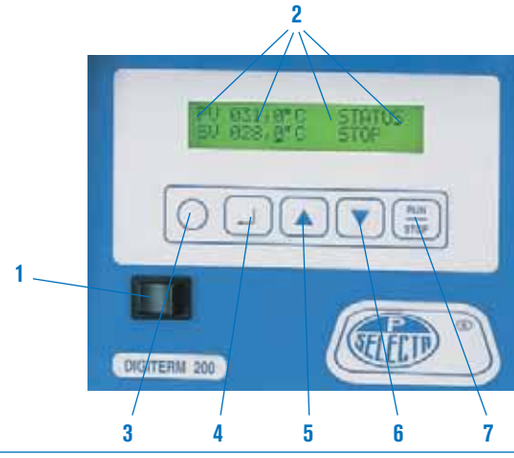
Microprocessor temperature control. The following parameters can be configured and shown on the LCD display:
- Maximum and minimum temperature limits.
- Select °C or °F
- Display resolution 0.1 °C
- External temperature (Probe).
- Over temperature set limits for alarm.
- Calibration
- Low liquid level indicator.

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).

Units with a RS-232 connection can be controlled by a computer and can print out parameters.

Cooling coil to maintain ambient temperatures using tap water.
External temperature control connection using a Pt 100 probe (see page 100).
RS-232 interface for computer control or printing data.
External metal case coated in a corrosive resistant epoxy.
All parts in contact with liquid are made of AISI 304 stainless steel.

DIGITAL CONTROL AND LCD DISPLAY THAT CLEARLY SHOW THE SET AND ACTUAL PARAMETERS.



CONTROL PANEL

1.- Main power switch.
2.- LCD Display showing working parameters.
3.- Push button configuration selector.
4.- Push button parameter selection.
5.- Push button increase set value.
6.- Push button decrease set value.
7.- Start / Stop, push button.

Thermostat immersion “Digiterm-100” and “Digiterm-200”

ADJUSTABLE TEMPERATURE
DIGITERM 100: FROM AMBIENT +5°C TO 100°C.
With external refrigeration from -20 to 100.
DIGITERM 200: FROM AMBIENT+5°C TO 200°C.
With external refrigeration from -20 to 200.

SAFETY:
STANDARD DIN 12879.2 SAFETY OVER TEMPERATURE
THERMOSTAT WITH ADJUSTABLE MANUAL RESET
LOW LIQUID LEVEL SENSOR PROTECTION.

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.
Output: RS-232 that can be used direct with a printer or computer.

MODELS	Part No.	Control range °C	Stability °C	Height / Width / Depth (exterior) cm	Pump Pressure / Flowrate H_2O	Power W	Weight Kg
DIGITERM 100	3000542	From amb. +5 to 100	±0.05	28 18 19	150 mbar-12 l/min.	1060	3.9
DIGITERM 200	3000613	From amb. +5 to 200 °C	to 100 °C ±0.05	28 18 19	150 mbar-12 l/min.	2060	4.5

See accessories (page 100).

ACCESSORIES

Extension support bridge.
Made of AISI 304 stainless steel, adjustable, to fit the immersion thermostat models “Tectron and “Digiterm”.
The bridge can span baths of 22 to 44 cm across.
Part No. 6001092

Recirculation thermostat “Ultraterm-200”

ADJUSTABLE TEMPERATURES
FROM AMBIENT+5 °C TO 200 °C.

SAFETY:
STANDARD DIN 12879.2 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 310 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 litres	Control range °C	Stability °C	Height / Width / Depth (usable) cm	Height / Width / Depth (exterior) cm	Pump Pressure / Flowrate H_2O	Power W	Weight Kg
6000383	8	From amb. +5 to 200 °C With external refrigeration from -20 to 200	to 100 °C ±0.05 to 200 °C ±0.1	15 20 14	36 28 36	150 mbar-12 l/min	2060	9.5

Refrigerated recirculation baths “Frigiterm-10” and “Frigiterm-30”

ADJUSTABLE TEMPERATURE FROM -10 °C TO 100 °C. STABILITY: 0 °C TO 100 °C, ±0.05 °C / -10 °C, ±0.1 °C.
ADJUSTABLE TEMPERATURE FROM -30 °C TO 100 °C. STABILITY: 0 °C TO 100 °C, ±0.05 °C / -30 °C, ±0.2 °C.
SET ERROR : ±1 °C. RESOLUTION: 0.1 °C.

SAFETY:
STANDARD DIN 12879.2 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 310 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 H2O	Power W	Compresser power H.P.	Weight Kg
FRIGITERM-10	6000382	8	-10 + 100	12 20 14	36 66 44	150 mbar-12 l/min	1150	1/8	28
FRIGITERM-30	6001091	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 “Tectron Bio-100”, “Digiterm-100” and “Digiterm-200”

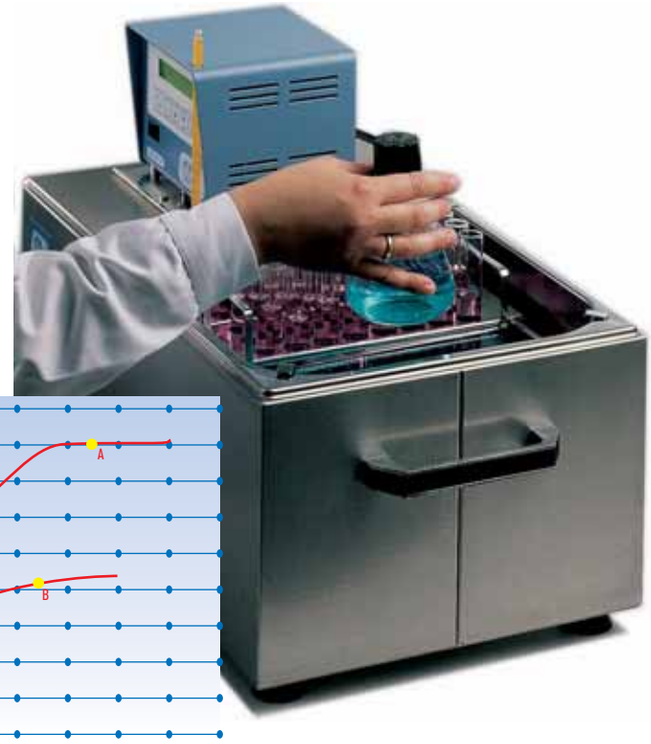
CONTROLLABLE TEMPERATURES FROM AMBIENT +5 °C TO 100 OR 200 °C.
CAPACITY FROM 20 TO 27 LITRES.

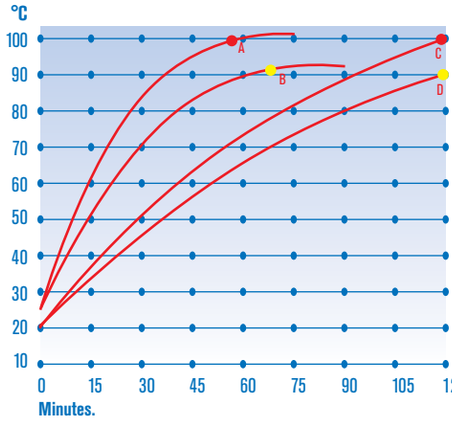
APPLICATIONS

Incubation processes.
Enzymatic reactions, Fermentation, laboratory cultures in general.

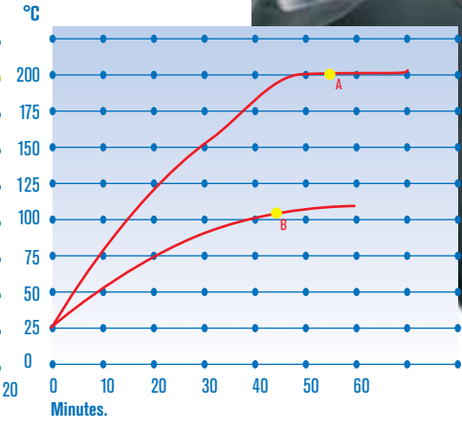
COMMON FEATURES

Double skinned baths with an AISI 310 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)





Graph of temperature and time for the Tectron Bio 100 and Digiterm 100 and 200, units with capacity of 20 litres.
Tests completed with water up to 100°C:
A. Digiterm 200 with lid at 100 °C.
B. Digiterm 200 no lid at 90 °C.
C. Tectron-Bio 100 and Digiterm 100 with lid at 100 °C.
D. Tectron-Bio 100 and Digiterm 100 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 200 with lid at 200 °C.
B. Digiterm 200 with lid at 100 °C.
27 litres capacity baths take 20% more time to reach the same temperature.

Bath circulators “Tectron Bio-100”

CUVETTES SET OF 20 AND 27 L. CAPACITY, WITH THERMOSTATIC EQUIPMENT INCLUDED.
ANALOGUE CONTROL.
TECTRON-BIO: TEMP. LINEAR FROM AMB+5 TO 100 °C AND FIXED TEMPERATURE SETTINGS OF: 25, 30, 37 AND 56 °C. STABILITY: ±0.05 °C.
TECTRON-200: LINEAR TEMPERATURE FROM AMB+5 TO 100 °C OR UP TO 200 °C. STABILITY ±0.1 °C.

SAFETY:
SAFETY STANDARD DIN 12879.2 .
SAFETY ADJUSTABLE OVER TEMPERATURE CUT OFF WITH MANUAL RESET.
LOW LIQUID LEVEL CUT OFF.

CONTROL PANEL

Mains switch with indicator “ON” lamp. Temperature selection control.
Fine temperature control to 1 °C. Indicator lamp when the heater is on.
Alarm lamp showing over temperature failure.

MODELS	Part No.	Temperature Range °C	Cuvettes Capacity litres	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	Pump Pressure mbar	Pump Pump rate l/min	Power W	Weight Kg
TECTRON BIO-100 20	3001287	100	20	15 30 29	36 55 35	150	12	1060	9.2
TECTRON BIO-100 27	3001288	100	27	20 30 29	41 55 35	150	12	1060	10.8

ACCESSORIES see page 99 and 100.

Bath circulators “Digiterm-100” and “Digiterm-200”

CUVETTES SET OF 20 AND 27 L. CAPACITY, WITH THERMOSTATIC EQUIPMENT INCLUDED.
DIGITAL TEMPERATURE CONTROL AND DISPLAY.
DIGITERM 100: TEMP. RANGE AMB.+5 °C TO 100 °C. STABILITY ±0.05 °C. SET ERROR ±1 °C. RESOLUTION 0.1 °C.
DIGITERM 200: TEMP. RANGE AMB.+5 °C TO 200 °C. STABILITY ±0.1 °C. SET ERROR ±2 °C. RESOLUTION 0.1 °C.

SAFETY:
CONFORMS TO THE DIN 12879.2 STANDARD. ADJUSTABLE OVER TEMPERATURE SAFETY CUT OFF WITH ADJUSTABLE MANUAL RESET.
LOW LIQUID LEVEL CUT OFF. ELECTRICAL FAULT ALARM.

FEATURES

Microprocessor temperature control. The following parameters can be configured and shown on the LCD display.
- Maximum and minimum temperature limits.
- Select °C or °F.
- Display resolution 0.1 °C
- Over temperature set limits for alarm.
- Calibration.
- Low liquid level indicator.

Temperature sensor probe Pt 100.
Heating element made of stainless steel INCOLOY, resistant to high temperatures and corrosive environments.
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 page 100).
RS-232 interface for computer control or printing data.
External metal case with a corrosion resistant epoxy coating.
All parts in contact with liquid are made of AISI 304 stainless steel.
Handles at the side and drain tap.

CONTROL PANEL

Main power switch.
LCD Display showing working parameters.
Push button configuration selector.
Push button parameter selection.
Push button increase set value.
Push button decrease set value.
Push button Start/Stop.

MODELS	Part No.	Temperatura Range °C	Cuvettes Capacity litres	Height / Width / Depth (interior) cm	Height / Width / Depth (exterior) cm	Pump Pressure mbar	Pump Pump rate l/min	Power W	Weight Kg
DIGITERM-100 20	3001291	100	20	15 30 29	36 55 35	150	12	1060	10
DIGITERM-100 27	3001292	100	27	20 30 29	41 55 35	150	12	1060	12
DIGITERM-200 20	3001293	200	20	15 30 29	36 55 35	150	12	2060	10
DIGITERM-200 27	3001294	200	27	20 30 29	41 55 35	150	12	2060	12

ACCESSORIES see page 99 and 100.

ACCESSORIES for the TECTRON-BIO, TECTRON-200, DIGITERM-100 and, DIGITERM-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	Height/Width/Depth (exterior) 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 TEMPERATURE FROM 0 °C TO 100 °C.
STABILITY: 100 °C ±0.1 °C, AND AT 0 °C ±0.05 °C. SET ERROR: ±0.1 °C. RESOLUTION: 0.1 °C.

SAFETY:
STANDARD DIN 12879.2
SAFETY OVER TEMPERATURE THERMOSTAT WITH ADJUSTABLE MANUAL RESET LOW LIQUID LEVEL SENSOR PROTECTION.

Autonomous unit with cooling system

Compressor unit built-in

Features and control panel see page 98.

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.

MODEL

Part No.	Control Range °C	Height / Width / Depth (exterior) cm	Pump Pressure / Flow H.O	Power W	Power H.P.	Weight Kg
3001373	0 +100	45 21 51	150 mbar / 12 l/min	1460	1 / 5	22

ACCESSORIES

Stainless steel baths.
Double skinned with an AISI 304 stainless steel exterior with a bath of AISI 310 stainless steel interior.
Supplied with a drain tap and lifting handles.

MODELS

Part No.	Capacity litres	Height / Width / Depth (usable) cm			Height / Width / Depth (exterior) cm			Weight Kg
6000392	20	15	48	30	20	55	35	6.6
6000393	27	20	48	30	25	55	35	7.6

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	Height / Width / Depth (exterior) 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

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 Ø x 135 mm long submersion.
Supplied with a 150cm cable and connector .
Part No. 1000893

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.
Part No. 6001092

Example showing the support bridge. Part No. 6001092.

Stainless steel baths.
Double skinned with an AISI 304 stainless steel exterior and internal bath of AISI 310 stainless steel.

MODELS

Part No.	Capacity litres	Height / Width / Depth (usable) cm			Height / Width / Depth (exterior) cm			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	Height / Width / Depth (usable) cm			Height / Width / Depth (exterior) cm			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.

Methacrylate baths. Maximum temperature 60 °C.

MODELS

Part No.	Capacity litres	Height / Width / Depth (usable) cm			Thickness mm
1000394	8	15	18	31	6
1000544	9.5	14.5	16.5	39	6
1000395	13	15	23	40	8
1000396	30	20	30	50	8

Removable constant liquid level. Suitable for any type of bath. Adjustable height to obtain the required liquid level.

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

Thermometer.

Suitable for "Tectron-Bio" immersion thermostat. Scale 0-100 °C.
Part No. 3009100

Refrigerated cooling coils for baths “Frigedor” and “Frigedor-Reg”

TEMPERATURES FROM -20 °C TO +20 °C.

APPLICATIONS

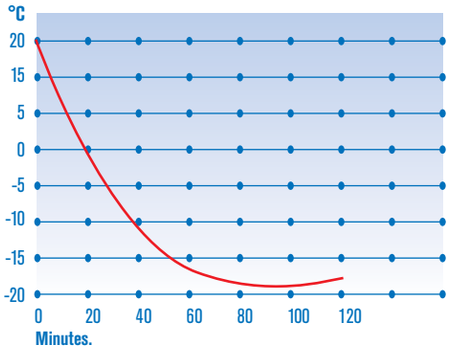
Designed for bath and tank applications that require below ambient temperatures.

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_2O “Frigedor” With insulated stirring tank.

MODEL FRIGEDOR

No temperature controller incorporated.
Continually operates the compressor.

CONTROL PANEL

Mains switch with “ON” indicator lamp.

MODEL FRIGEDOR REG

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. (See accessories).

MODELS	Part No.	Temperature range °C	Stability °C	Height / Width / Depth (exterior) cm	Cooling potential	Power W	Weight Kg
FRIGEDOR	3000778	-20 to +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 100).

Water recirculator “Intercooler”

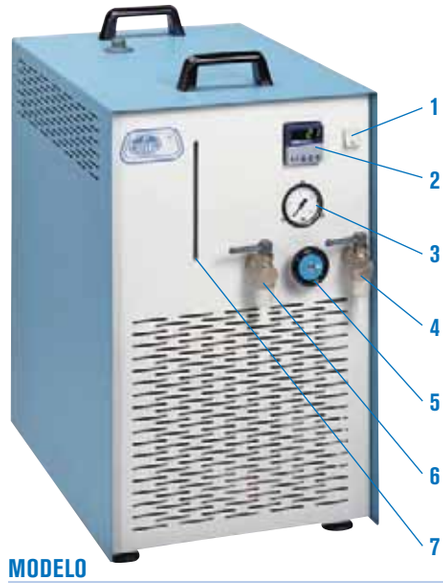
TEMPERATURES FROM +3°C TO AMBIENT.

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.
- Reduced running costs, eliminates the waste of thousands of litres of water that are daily drained away within the laboratory.

FEATURES

Controllable temperature from +3 °C to ambient.
Digital electronic temperature control.
Circulation pump.
Hermetically sealed compressor, ventilated condenser and refrigerated cooling coil, made of AISI 304 stainless steel.
Refrigerant pump rate: 350 litres per hour.
Maximum pressure: 1 bar.
Epoxy covered steel case, bench top.



CONTROL PANEL

1. Mains switch.
2. Digital temperature control.
3. Pressure gauge.
4. Entry valve.
5. By-pass pressure valve control.
6. Exit valve.
7. Water level in the reservoir.

MODELO

Part. No.	Height / Width / Depth (exterior) cm.	Cooling capacity W 3 °C / 10 °C / 20 °C	Power W	Weight Kg
6001421	65 40 60	508 696 1031	670	52

THERMOSTAT DRY-BLOCKS

WITH DIGITAL ELECTRONIC CONTROL OF TEMPERATURE AND TIME

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 minutes 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 temperature.).
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 °C	Stability °C	Homogeneity %	Set error %	Resolution °C	Height / Width / Depth (exterior) cm	Power W	Weight 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.

ACCESSORIES

Metal Blocks: 55 high x 95 wide x 75 mm deep.
Part No.
7000306 For 30 x 6 mm Ø 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 Ø tubes (total 3 blocks = 60 tubes).
7031612 For 12 x 16 mm Ø tubes (total 3 blocks = 36 tubes).
7003208 For 8 x 20 mm Ø tubes (total 3 blocks = 24 tubes).
7001256 For 6 x 25 mm Ø 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.

MODEL

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”

FIXED TEMPERATURE OF 37 °C WITH CHECK THERMOMETER.

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

For VAC tubes (75x13)
Part No. 7001569

For cuvettes (10x10)
Part No. 7001570

NEW

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”
Capacity 8 tubes (5x4) of 75x13 mm VAC.

MODEL

Part No.	Height / Width / Depth (exterior) cm	Stability °C	Power W	Weight Kg
7001561	8.8 9.6 7	±0.5	8	0.5

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 ± 0,5 °C.

NEW

APPLICATIONS

For clinical analysis, immunology and nutritious quality control use.

FEATURES

External ABS case with a platform for heating and shaking 2-4 96-well Microtiter plates.
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.

Cover inner plate with heating system.

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 +5ºC to 60ºC.
Heating time: ≤23 min (to 60ºC).
Shaking range: 100-1200rpm.
Orbital rotation: 2mm.
Timer: From 1 min. to 99h. 59 min.

MODEL

Part No.	Temperature °C	Stability °C	Block homogeneity °C	Height / Width (platform) cm	Height / Width / Depth (exterior) cm	Power W	Weight5 Kg
5109200	ambient +5 to 60	±0,5	±0,5	21,5 30	18 40 39	132	9.5

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 ºC. UP TO 100 ºC.

NEW

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 parameters.
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 +5ºC to 100ºC.
Heating time: ≤23 min (to 100ºC).
Shaking range: 200-1500rpm.
Orbital rotation: 2mm.
Timer: From 1 min. to 99h. 59 min.

MODEL

Part No.	Temperature ºC	Stability ºC	Block homogeneity ºC	Height / Width / Depth (exterior) cm	Power W	Weight 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 24 tubes of Ø 11mm.
Depth: 30 mm.
Part No. 5109101

For 12 tubes of 15 ml.
Ø Up to 15 mm.
Depth: 100 mm.
Part No. 5109102

For 6 tube of 50 ml.
Ø Up to 28 mm.
Depth: 100 mm
Part No. 5109103

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 “K96” See page 232.