## 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 / Width / Depth (exterior) cm | 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 ºC to 450 ºC.
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.

### 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.




*Electronic controller RAT-2*



**Tube support rack.**
Made of chemically treated no corrosive Dural, with handles and side panel that prevents heat loss.



**Fume extraction**
Unit for collecting fumes supplied with a support rack. Made of borosilcate glass and stainless steel.

| Models | Part No. | No. of places | Height / Width / Depth (exterior) cm |
|---|---|---|---|
| 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 / Depth (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 |



**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



**Water jet pump for vacuum extraction.** Made of PVC designed for the fume extraction of the 20 and 40 place models.
Part No. 4000633



**Water Jet pump for vacuum extraction.** Metallic, suitable for the extraction of fumes for the 6, 12 and 24 place models. Part No. 7000293

# 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.

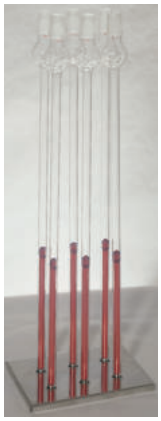


| Part No. | No. of places | Ø tube mm | Height / Width / Depth (exterior) cm | Temperature °C | Power W | Weight Kg |
|---|---|---|---|---|---|---|
| 4000507 | 6 | 42 | 18 33 28 | 45 - 450 | 1500 | 18 |
| 4000508 | 12 | 42 | 18 39 33 | 45 - 450 | 2100 | 25 |
| 4000509 | 20 | 42 | 18 44 39 | 45 - 450 | 2500 | 31 |



**System programmer for temperature/time RAT-2.** Part No. 4001538

**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).



**Features**
Display of time, temperature and program. Selectable temperature from 45 to 450 °C. Memory capacity: 10 programs of 5 stages of each program. Maximum time per stage: 600 minutes. Visual and 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.

**Condenser tubes for C.O.D. process.**
Part No. 1000642



**Tubes for C.O.D.**
Part No. 1000641

