



# HYDRO-BIOS

## Smart Sampling

Datasheet MWS 12 x 10 l ( 436 913 )



### Multi Water Sampler MWS 12 x 10 l

Water Sampling System for Oceanography and Limnology

The approved Multi Water Sampler MWS 12 is an instrument designed for the collection of water samples in successive water layers. Only one operation for 12 different samples! The sturdy stainless steel array is equipped with twelve racks to which Plastic Water Samplers or Free Flow Samplers with a capacity of 10 litres can be mounted. The MWS 12 is equipped with a motor-driven release device with an integrated Depth Meter (measuring range according to customers' requirements). The water samplers are sequentially closed in the succession of their mounting to the array (i.e. No. 1, 2, 3, ..., 10, 11 and 12). The state-of-the-art electronics, optimised in power consumption, are designed for ambient temperatures from - 40°C up to +85°C. The maximum operational water depth is 3000 metres. A special version for operational depths down to 6000 metres is available upon request.

The MWS 12 is generally delivered for combined Online/ Offline use and is therefore the ideal all-purpose rosette system for use on any research vessel worldwide.

## DESCRIPTION

### Online

The water samplers are actuated via push-button control by the mains operated Deck Command Unit. The commands for actuation of the water samplers are given via a single or multi-conductor cable between the Underwater Unit and the Deck Command Unit or PC. The Deck Command Unit is equipped with a serial port for data transfer to PC.

### Offline

In case that a conducting cable is not available on board, the required sampling depth can be pre-programmed via personal computer. The actuation of the water samplers is then carried out automatically according to the pre-selected depth intervals. All measuring data are stored inside the internal data memory (16MB) during the operation and can be read out by a PC when the system is back on board.

### CT-Set

Together with the optional CT-Set the system offers the full capability of a state-of-the-art oceanographic CTD probe. The CT-Set consists of one conductivity sensor, one temperature sensor and an additional electronics board which is completely integrated into the Motor Unit of the MWS 12. From the CTD data the system computes salinity, density and sound velocity according to UNESCO formulas.



# HYDRO-BIOS

Datasheet MWS 12 x 10 l ( 436 913 )

## Accessories

- Additional sensors of various parameters
- Special version for operational depths down to 6000 metres

## TECHNICAL DETAILS

<b>height</b>	140 cm
<b>diameter</b>	110 cm
<b>weight on air</b>	85 kg (empty)
<b>weight on air, equipped</b>	151 - 187 kg
<b>material of frame</b>	stainless steel
<b>material of motor unit and battery housing</b>	Titanium
<b>operational depth</b>	3000 m - optional 6000 m
<b>pressure sensor</b>	0.0 ... 3000.0 dbar $\pm$ 0.1% f.s. (standard)
<b>data memory</b>	16 MB
<b>deck command unit</b>	Metal housing for use in 19" rack or as table housing, push-button control for closing sampler, indication of sample number, pressure, battery status, LCD-display with LED backlight, RS 232 Interface for PC, power supply: 85- 260 V AC
<b>product ID</b>	436 913

## CHARACTERISTICS

- **Combined online/ offline use**
- **Bi-directional communication**
- **Standard depth range 3000 m**
- **Long distance FSK-telemetry (> 10000m)**
- **Low power consumption**
- **Battery operated Underwater Unit, max. voltage of 5 V at the conductor cable**
- **Electronics operate from -40°C up to +85°C**
- **EC-conformity (CE) EN 50081-1, EN 50082-1**