

# Wet and Dry Sampler



## Description

The influence that acid precipitations and solid depositions have on natural ecosystems has been known for years and it is object of studies evaluating the risks connected to wet and dry depositions (rain, snow, hail) to which woods, cultivated areas, and surface water are exposed. The Wet & Dry sampler is intended to collect solid depositions, both wet and dry and make them available for further laboratory analysis.

Two cylindrical containers collect alternatively the depositions "with" or "without" precipitation. The position of the mobile lid is defined by a "precipitation presence" sensor and its microprocessor based electronics. With precipitation, the sensor is heated to accelerate the evaporation of superficial wet deposition, to avoid its activation caused by dew phenomena and to recognize at the right time the end of the atmospherical precipitation.

The lid is automatically positioned over one of the two containers thanks to the motor assembly driven by the smart electronics.

Besides the basic model collecting both the depositions, there is also the "WET ONLY" model, collecting only wet depositions and the "WET&DRY - DSSA" model, collecting the dry depositions into a container filled with distilled water. Each model is manufactured with anti corrosion materials and they work automatically; manual interventions are limited to the collecting of the samples and to scheduled service operations.

The electronics is based on the CMOS technology for low power consumption and on a 8 bit microprocessor to control the different operating functions. There is a control panel with led indicators, and three switches. The first switch is for manual operations (movement of lid controlled by operator). The other two are for battery charge activation and to turn the system on. There is a serial RS232 connection to a PC to transfer the data of sampled events. The system has a Lithium battery for memory back up.

The materials used by MTX are highly resistant to atmospheric corrosion. All mechanical and electronic parts of the sampler are positioned inside the body of the instrument in order to protect them against rain and dust and to avoid contacts.

Regarding the parts in movement, no components are introduced which could deteriorate for use (belt drive, pulleys). The system is powered by a motor that guarantees its regular functioning also in the presence of frost and strong wind.

In the design specific attention was paid to the collection phase of precipitation in order to avoid the problem of false sampling.



Campionatore Wet and Dry



Wet and Dry Sampler

Technical specifications may be varied without prior notice

## Technical specifications

<b>Power supply</b>	230Vac + battery 12Vdc/7,2Ah
<b>Internal fuses</b>	2x 0,5A - 5x20mm
<b>Power consumption</b>	10mA - stand-by 600mA - for sensor heating 4A (peak) - for movement
<b>Operating temperature</b>	-20 ... +70°C -30 ... +70°C with heater kit
<b>Containers</b>	Material : polypropylene Area : 660cm <sup>2</sup>
	Material : polyethylene Area : 510cm <sup>2</sup>  To be defined at the order
<b>Panel indicators</b>	5 LED: WORKING - green led blinking CHARGING - green led steady MOTOR FAULT - red led blinking SENSOR SHORT CIRCUITED - red led blinking LOW BATTERY - red led blinking
<b>Manual controls</b>	RESET/MANUAL switch
<b>Dimensions</b>	1400 x 900 x 1350 (mm)
<b>Weight</b>	25kg

## Ordering codes

WET&DRY Sampler	<b>FAS005AC</b>
WET&DRY Sampler with integrated heating system	<b>FAS005CA</b>
WET ONLY Sampler	<b>FAS010AA</b>
DRY ONLY Sampler	<b>FAS010CA</b>
WET&DRY Sampler with DSSA system	<b>FAS006AA</b>

Technical specifications may be varied without prior notice