

-4H-Active/Passive Sampler

Operating principle:

The **-4H-Passive Sampler** is a flow-through tube array, which can be equipped with different receiving membranes (e.g. diffusive gradients in thin films, low-density polyethylene or silicone rubber strips).

The **-4H-Active Sampler** is a specially designed flow-through tube array that includes a set of sieves or nets with different mesh sizes.

Both system principles can be combined in one array for simultaneous active and passive sampling.

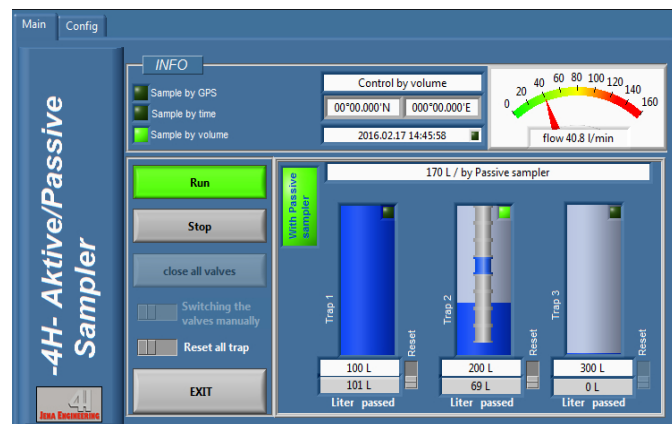
The tubes can be cascaded from one up to an arbitrary number according to the customer needs. They are flushed with sea water through a separate water system or the outlet of the **-4H-FerryBox** water system. The **-4H-Active/Passive Sampler** is controlled by the **-4H-FerryBox** PC or a stand-alone PC.



-4H-Active/Passive Sampler combination

Software controlled sampling modes:

- Stop after a defined volume (for example 18.000 l)
- Sampling over a fixed time period
- Start in and stop outside a selected area (GPS position control)
- Stop when nets/filters are full or blocked (water level detection)
- No sampling, e.g. in dirty harbor areas (GPS position control)
- Information of sampling volume in every operational mode available



-4H-JENA engineering provides the software for volume, time or GPS position-controlled sampling

-4H- JENA engineering GmbH

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Passive sampler features:

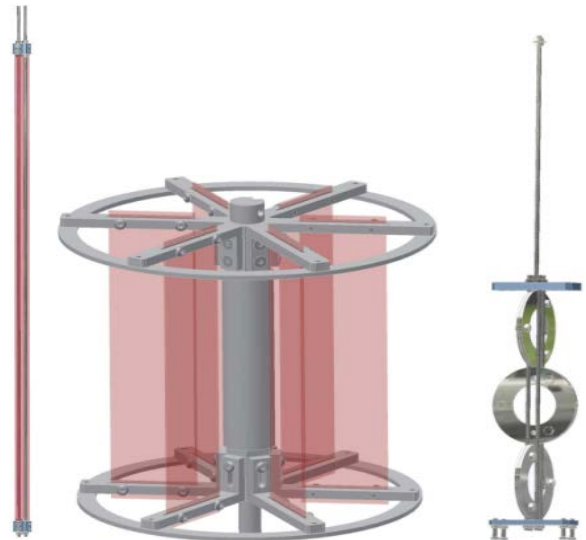
- Screening or monitoring of organic and inorganic water pollutants
- Different types of active foils (e.g. thin-layer film gels (DGT)) can be hold in the sampler tubes
- Tracking of pollutants by sequential sampling in the arrays' tubes during a research cruise
- In contrast to traditional passive sampling methods, the **-4H-Passive Sampler** has a flow-meter enabling a **calculation of the concentration** after sampling
- High internal currents and convections prevent from forming a boundary layer at the surface of the foil

Active sampling applications:

- (Micro)plastics
- Phytoplankton
- Zooplankton
- Fractionated sampling of suspended matter



-4H-Active Sampler array



Different passive sampling holders for silicone rubber strips, low-density polyethylene and diffusive gradients in thin films



Active sampling insets such as cylindrical nets and cascaded sieves with different mesh sizes

Customized specifications:

The number of tube units as well as volume, size, connectors, and material of the sampler are chosen and specifically designed to the customer's demands and the field of application.

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