

Sediment Trap

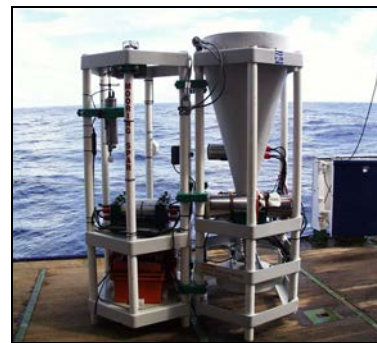
Sediment traps are used to investigate the vertical flux of particles in a water column for deployment in both oceans and inland waters.

They are descended to a certain water depth where sinking particles are picked up through a funnel and then collected into sample bottles.

The collected material enables qualitative and quantitative investigations of its biological, chemical and mineralogical composition.



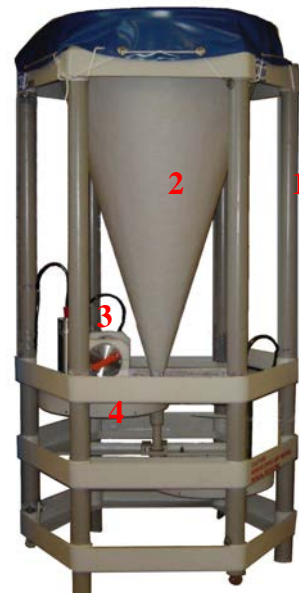
The housing is an open framework (1) to reduce the current resistance. Its almost hexagonal shape enables traps to be easily linked together in order to cover larger areas. (see image right).



The sediment is collected through a funnel (2) which is fixed to the framework. A hexagonal lattice grid baffle made of special sealed paper is used to cover the funnel. This serves as current stabilizer and also reduces wash out.

The control unit with battery compartment (3) and the drive unit are placed above the collection turntable. They are mechanically separated and linked together with an underwater cable. An easy mounting and demounting of the control unit for programming, battery change and maintenance is guaranteed.

The multi bottle sample collection turntable (4) exists of a basic plate under which the sample are aligned in a circle at an axial face seal ring. The drive unit places the sample bottles sequently under the funnel's bottom orifice. Through a special construction it is guaranteed that all the other sample bottles not being in use are sealed against the outer medium.



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Types of Sediment Traps

The multi bottle sample collection turntables are available with a funnel diameter of 0,25m² or 0,5m², the funnel slope angle is at 34° each.

Type	Collection area /m ²	Samples	Funnel height /mm	FunnelØ/mm	Total height/mm	Width/mm
K/MT 236	0,25	14	940	565	1480	910
K/MT 234	0,5	21	1313	800	1900	1079
K/MT 320	0,5	41	1313	800	2230	1146

All Sediment Traps are equipped with the lattice grid baffle as funnel cover and the single-side suspension. The scope of supply contains a maintenance set, a manual as well as the software.

K/MT 236: Multi bottle sample collection turntable for 14 samples; 14 sample bottles (400ml); collection area: 0,25m², max. operation: 12 months (option 24 months), max. operation depth: 3000m

K/MT 234: Multi bottle sample collection turntable for 21 samples; 21 sample bottles (400ml), collection area: 0,5m², max. operation: 12 months (option 24 months), max. operation depth: 6000m

K/MT 320: Multi bottle sample collection turntable for 41 samples (2 sampler); 41 sample bottles (400ml), collection area: 0,5m², max. operation: 24 months, max. operation depth: 6000m

Technical Data

Operation depth:	max. 6000m
Operation time:	max. 12 months with batteries of full capacity (option 24 months)
Bottle volume:	400ml (14oz.)
Power supply:	9V DC, 6 Alkaline 1.5V batteries
Material:	GRP sealed with special resin and titanium
Housing:	hexagonal; combination of several sediment traps is possible
Funnel slope angle:	34°
Attachment:	a.) single side suspension b.) 3-point-suspension (option)
Temperature:	operation: -10°C to +40°C
Weight:	K/MT 236: ~ 53kg (air) K/MT 234: ~ 98kg (air) K/MT 320: ~ 131kg (air) ~ 62kg (water)



Control Unit

Programmable microprocessor electronics control the collection turntable. Sample duration is programmable between 1 min. and 12 months (option 24 months). Programming is menu guided with a PC, the connection to the sediment trap is effected via a RS 232 standard interface. After programming the sediment trap is put into sleeping mode and can be separated from the PC. Hence programming is even onshore possible.

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Accessories

Programmation cable:	For programming the sediment trap before deployment and for data read out after recovery; length: 5m; applicable for all types <i>Product no.: K/MT 310-02</i>
PP-Sample bottles:	Sample bottle with screw top; content: 400ml <i>Product no.: K/MT 320-06</i>
Protection cap:	Canvas cover with wooden inlay for protection of the grid during transport and for storage <i>Product no.: K/MT 320-02</i>
Maintenance set:	O-Rings for drive unit, shaft, electronics housing, silicone paste and drying agent bags, support rings, bearing rings <i>Product no.: K/MT 310-01</i>
Spare set:	O-Rings for drive unit, shaft, electronics housing, silicone past and drying agent bags <i>Product no.: K/MT 310-01-1</i>
Crowfoot fastening eyes:	Kit for the central suspension of the sediment trap <i>Product no.: K/MT 320-04</i>
For the collection turntable:	<p>a. Tool for turning the collection turntable by hand to save battery <i>Product no.: K/MT 320-03</i></p> <p>b. Mounting kit for the collection turntable (21 retainer tubes for demounting / mounting the collection turntable for cleaning purposes) <i>Product no.: K/MT 310-06</i></p>