

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.

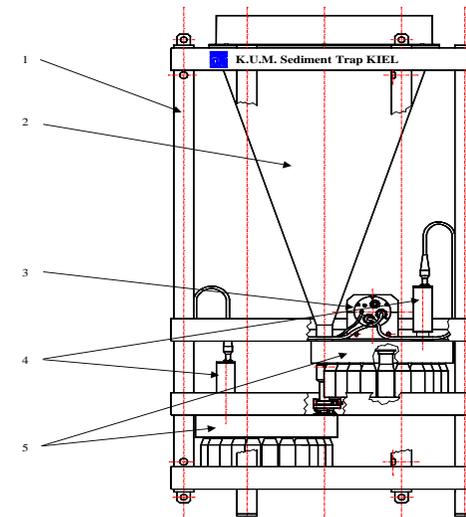


The **housing** is an open framework to reduce the current resistance. Its almost hexagonal shape enables traps to be easily linked together in order to cover larger areas.

The sediment is collected through a **funnel** 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 as well as the **drive unit** are placed above the collection turntable, they are mechanically separated and only linked together through an underwater plug cable. An easy mounting and demounting of the control unit for programming, battery change and maintenance is guaranteed.

The **multi bottle sample collection turntable** exists of a basic plate under which the sample bottles 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.



- 1 frame
- 2 funnel with cover
- 3 control unit with batteries
- 4 drive unit
- 5 top and bottom collection turntable

K/MT 320 - K/MT 234 - K/MT 236

III

Sediment trap type K/MT 320

41 samples / 2 multi bottle sample collection turntables

Instrument versions

Sediment traps are available in two models: either with single bottle sampler or with multi bottle sample collection turntable.

Sediment traps with

0,25m² collection area (funnel):

- 1 sample type: K/MT 235
- 14 samples type: K/MT 236

0,5m² collection area (funnel):

- 1 sample type: K/MT 232
- 21 samples type: K/MT 234
- 41 samples type: K/MT 320

Version	Collection area/m ²	Sample bottles	Funnel height/mm	Funnel diameter/mm	Total height/mm	Width/mm
K/MT 235	0,25	1	940	565	1480	910
K/MT 236	0,25	14	940	565	1480	910
K/MT 232	0,50	1	940	800	1900	1079
K/MT 234	0,50	21	1313	800	1900	1079
K/MT 320	0,50	41	1313	800	2230	1146

The funnel slope angle is at 34° each.

Technical Data

- working depth: max. 6000m
- operation time: max. 12 months with batteries of full capacity (optional 24 months)
- bottle volume: 400ml (14oz.)
- collection turntable: microprocessor controlled
- power supply: 9V DC, 6 alkali 1.5V batteries (LR20/AM1) (optional 12 batteries for 24 months)
- trickle battery: 3,6V 1,5Ah
- 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 (optional)
- temperature: operation: -10°C to +40°C
storage and transport: -30°C to +70°C
- weight/air:
 - K/MT 236: appr. 70kg (steel),
appr. 53kg (titanium)
 - K/MT 234: appr. 115kg (steel),
appr. 98kg (titanium)
- weight/water:
 - K/MT 236: appr. 30kg (steel)
 - K/MT 234: appr. 50kg (steel)



Control unit

Programmable microprocessor electronics control the collection turntable. Sample duration is programmable between 1 min. and 12 months (opt. 24 months). Programming is menu guided with a PC. The connection to the sediment trap is done by a RS 232 standard interface. After programming the sediment trap is put into sleeping mode and can be separated from the PC. Protocol data is saved on diskette and then printed out. Hence programming is even onshore possible.