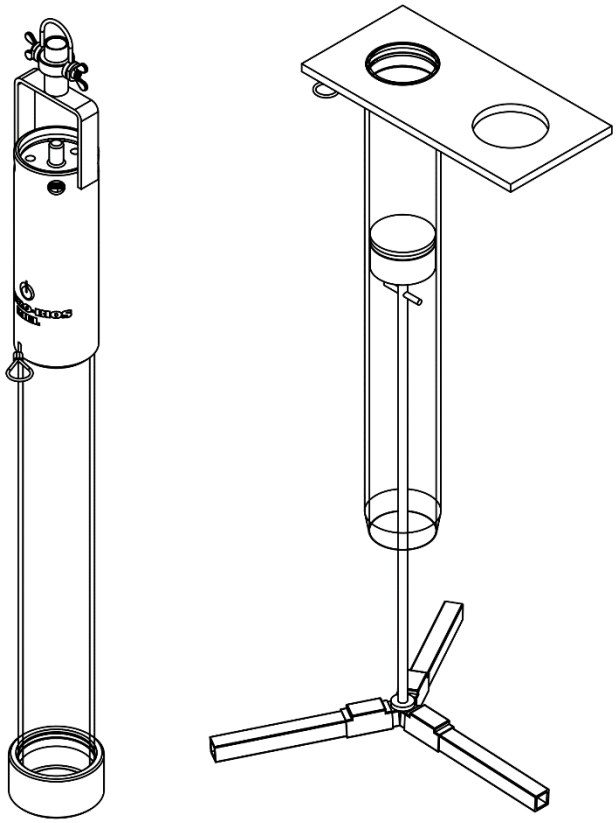


SEDIMENT CORER

OPERATION MANUAL

Product ID 437 400

Edition 11/24

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GENERAL DESCRIPTION

The SEDIMENT CORER is designed to obtain samples from soft, sandy and medium-hard bottoms. It is not suitable for liquid sludge, gravel, clay, stony or other hard bottoms.

The SEDIMENT CORER consists of a tube holder made of stainless steel (Fig. 1 F) with integrated plastic valve (Fig. 1 C) and a core tube for the sample (Fig. 1 I). There are different versions of the core tube.

TECHNICAL DATA

version of tube	**inner Ø [mm]**	**length of tube [cm] (probe)**	**overall length [cm]**	**weight [kg]**
acrylic glass	70	60	100	5,8
optional:				
acrylic glass	70	100	140	6
stainless steel	70	60	100	10

The corer is pushed into the sediment by hand or penetrates into the bottom by its own weight. For using in greater water depths see the following chart.

Max. depth [m]	**Handling options**
up to 1	by hand or with attachment piece (437 410)
up to 2	Push rod / stick with Ø20 mm
> 2	Rope with sufficient length, minimum Ø8 mm

After raising the corer out of the water the supplied piston is put into the lower end of the tube. The cage with rope stirrup is taken off and the tube with the core sample is placed onto the piston. When the tube is now pressed onto the piston the core sample can be removed for examination.

STANDARD EQUIPMENT

1.	1 Tube holder	Abb. 1 F
2.	1 Core tube (acrylic glass or stainless steel)	Abb. 1 I
3.	3 Locking ropes	Abb. 1 H
4.	1 Sealing cap	Abb. 1 K
5.	1 Plastic top	Abb. 2 L
6.	1 Piston rod	Abb. 2 N
7.	3 O-Rings No. 234	Abb. 1 G
8.	1 O-Ring No. 337	Abb. 1 D
9.	1 O-Ring No. 231 / Sh 50	Abb. 1 E
10.	1 O-Ring 80 x 5 / Sh 50	Abb. 1 J
11.	1 O-Ring 60 x 5 / Sh 50	Abb. 2 M

PREPARATIONS FOR USE

The SEDIMENT CORER is delivered in several pieces and has to be assembled for operation:

1. In order to prepare the instrument for operation insert the core tube (Fig. 1 I) carefully into the lower opening of the tube holder (Fig. 1 F). The O-Ring No. 234 (Fig. 1 G) guarantees the sealing between core tube and tube holder.
2. Insert the core tube up to the stop; then slide the locking rope (Fig. 1 H) completely into the boring, so that only the handle loop is visible. Thereby the transparent core tube is connected with the tube holder.
3. For mounting the piston rod, screw the piston onto the rod and the rod onto the tripod (Fig. 2 N).

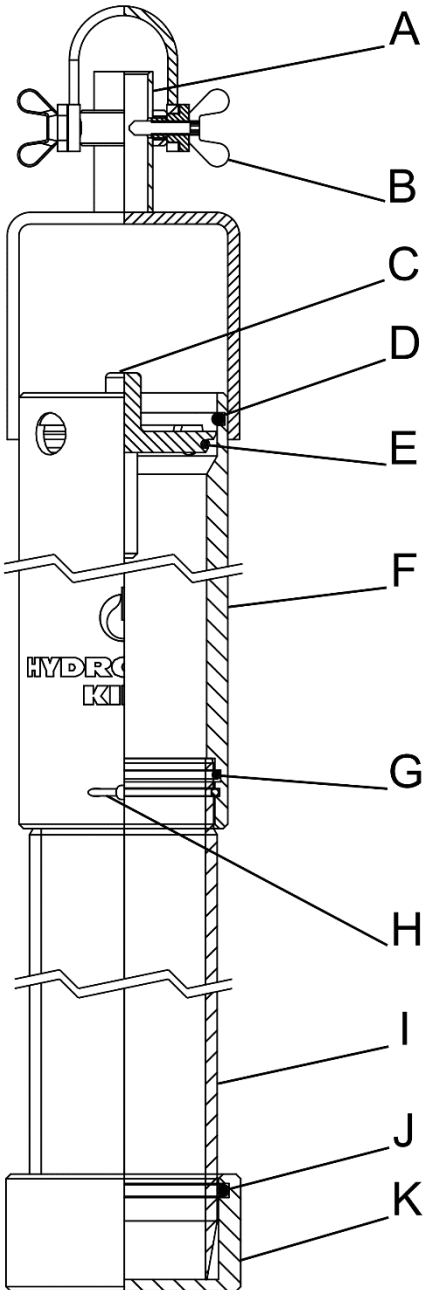


Fig. 1

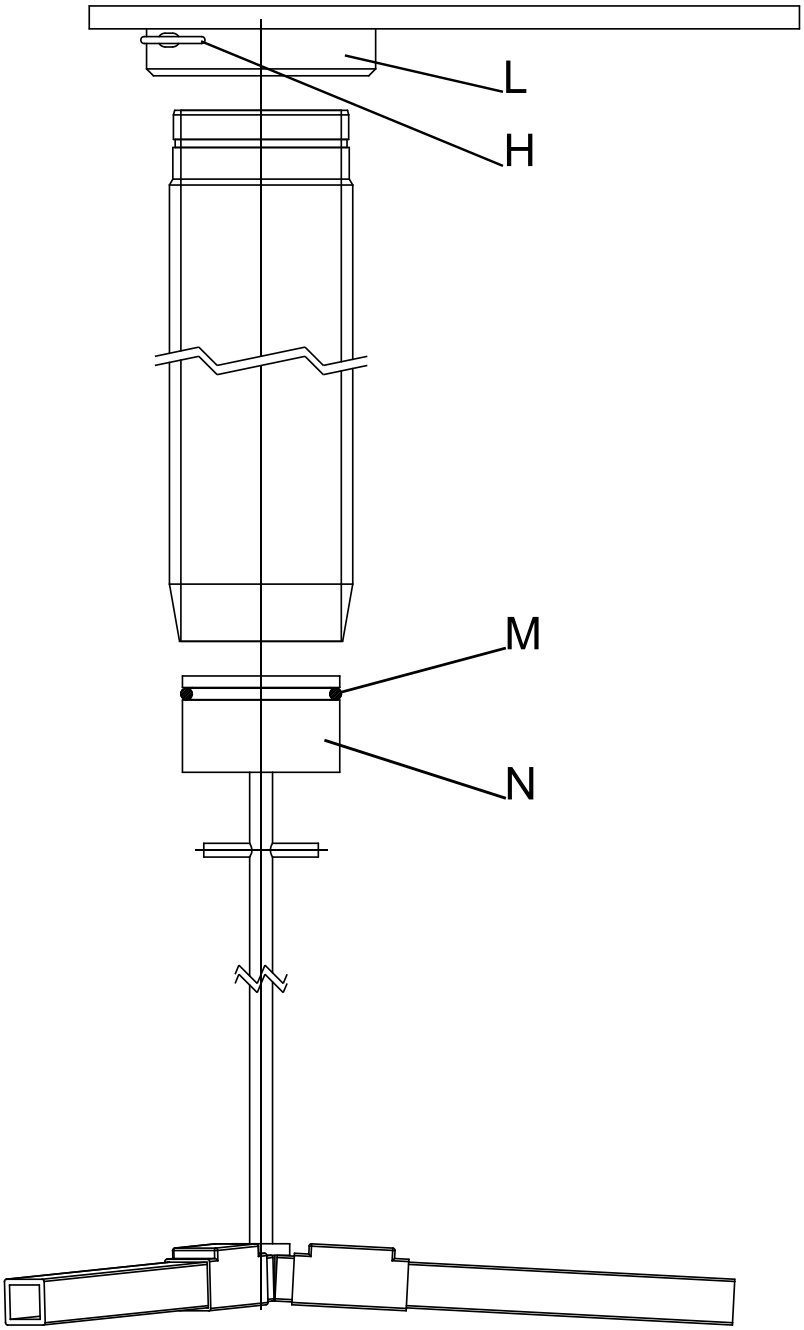


Fig. 2

DEPLOYMENT

The Sediment Corer is pushed by hand into the sediment (using the traverse bar or a rod) or penetrates into the bottom by its own weight (using a rope or wire).

While the instrument is lowered in the water, the valve flap (Fig. 1 C) is held open and ensures free flow of the water through the core tube.

When the desired sample has been taken and the corer is lifted out of the sediment, the water pressure onto the valve flap closes the tube during heaving. Upward movement creates a vacuum so that the sediment sample is retained in the tube and cannot get lost as the corer is retrieved.

After raising the sediment corer out of the water, the sealing cap (Fig. 1 K) is put onto the lower end of the core tube in order to retain the sediment sample.



AFTER DEPLOYMENT

It is important to avoid a sloping position so that the sediment will not be mixed with the water at the upper end of the core sample. In order to make a first examination of the sediment sample, the outside of the core tube should be cleaned.

2 persons required

Then pull the locking rope (Fig. 1 H) out of the tube holder (Fig. 1 F) and remove the acrylic glass tube (Fig. 1 I).

Now put the plastic top (Fig. 2 L) onto the upper end of the core tube and fix it by the locking rope. Then remove the sealing cap (Fig. 1 K), insert the piston rod (Fig. 2 N) from the lower end into the core tube and press the sediment sample out of the tube. The sediment can be separated at the plastic top (Fig. 2 L) by using a sharp knife.







CLEANING

1. The tube holder (Fig. 1 F) with its valve flap should be carefully cleaned after use. Therefore it is advisable to put the tube holder into a bucket with water for cleaning.
2. Remove the O-ring No. 337 (Fig. 1 D) before cleaning the valve flap; this O-ring can easily be taken out of its setting by pressing with a finger through the borings of the tube holder.
3. Then the valve flap (Fig. 1 C) can be taken out. The O-ring 231/Sh 50 (Fig. 1 E) has to be removed from the groove by using a blunt object (e.g. a ball point pen cartridge or a match). The O-ring has to be cleaned and also the groove must be free from sediment remains.
4. After cleaning the tube holder can be reassembled by proceeding in reverse order.