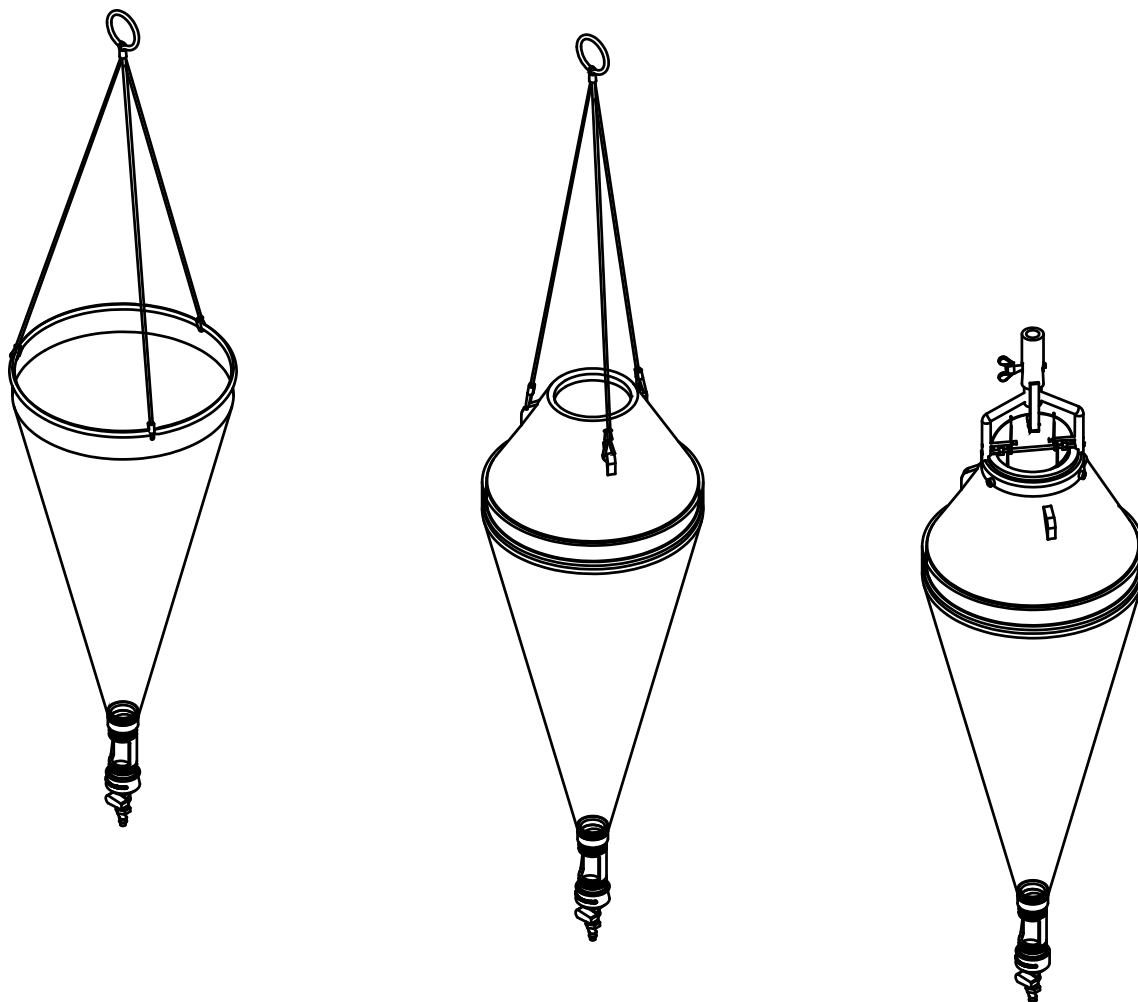




PLANKTON NET acc. to APSTEIN

OPERATION MANUAL

Product ID 438 001 - 050

Edition 06/26



CONTENTS

GENERAL DESCRIPTION.....	3
TECHNICAL DATA	3
PREPARATION	4
PREPARATION: BASIC APSTEIN NET	4
PREPARATION: APSTEIN NET W/ TOP CONE	4
PREPARATION: APSTEIN NET W/ CLOSING MECHANISM	4
DEPLOYMENT	5
IF SAMPLING AN ENTIRE WATER COLUMN	5
IF SAMPLING DEFINED PARTS OF A WATER COLUMN	5
REELING IN COMPLETE / NET BACK ABOARD	5
MAINTENANCE	5
REP SET	5

GENERAL DESCRIPTION

Designed for limnological investigations plankton nets acc. to Apstein come in various shapes and sizes:

- The basic version, used in **qualitative** sampling, comprises of a conical net bag attached to a stainless steel ring.
- Versions equipped with a rigid top cone are used in **quantitative** sampling. Their reduced inlet area increases the filtering efficiency of the attached conical net bag.
- If additionally equipped with a closing mechanism the plankton net according to Apstein can sample defined depth levels. Its butterfly valve is remotely triggered by the weighted messenger (400 grams) included.

For easy retrieval the sample is concentrated inside of a detachable bucket featuring a weighted stainless steel ring, a metal drain cock and an integrated window covered with corresponding mesh fabric.

Standard mesh sizes are 55 µm for collecting phytoplankton and 335 µm for collecting zooplankton. Custom mesh sizes range from 10 µm to 780 µm.

TECHNICAL DATA

Versions:	product-ID:	length [cm]:	opening diameter [cm]:	Net bucket opening diameter [cm]:	opening area [m ²]:
standard	438 001	50	25	3.2	0.05
with cone	438 010	50	10	3.2	0.00785
with cone and closing mechanism	438 020	50	8.5	3.2	0.00567
standard	438 030	100	40	6.3	0.125
with cone	438 040	100	17	6.3	0.0227
with cone and closing mechanism	438 050	100	16	6.3	0.0201

PREPARATION

PREPARATION: BASIC APSTEIN NET

Ensure that the net bucket (3) is screwed tight into the cod-end ring and that the bucket's drain valve (1) is closed.

Fix your towing rope (min. dia. 5 - 6 mm) or steel cable (min. dia. 2 - 3 mm) to the bridle at the very top of the net using a snap hook, a shackle, or a bowline knot.

PREPARATION: APSTEIN NET W/ TOP CONE

Connect the net bag to the cone using the clamps included. Make sure the clamp rests behind the webbing's tuck to prevent the net bag from slipping off.

Ensure that the net bucket (3) is screwed tight into the cod-end ring and that the bucket's drain valve (1) is closed.

Fix your towing rope (min. dia. 5-5 mm) or steel cable (min. dia. 2-3 mm) to the bridle at the very top of the net using a snap hook, a shackle, or a bowline knot.

PREPARATION: APSTEIN NET W/ CLOSING MECHANISM

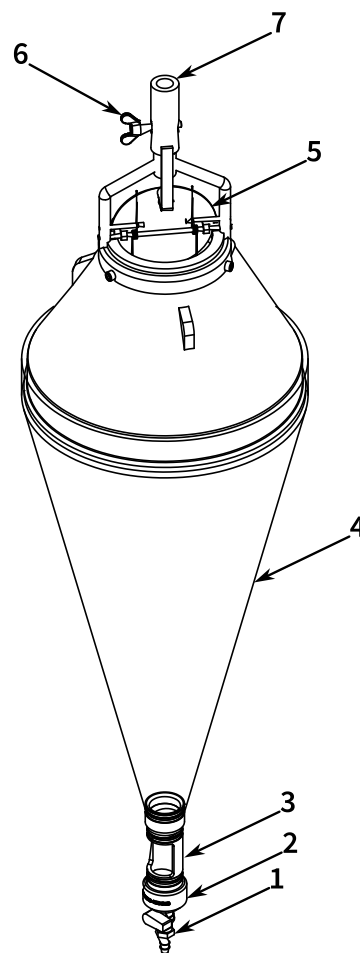
Connect the net bag to the cone using the clamps included. Make sure the clamp rests behind the webbing's tuck to prevent the net bag from slipping off.

Ensure that the net bucket (3) is screwed tight into the cod-end ring and that the bucket's drain valve (1) is closed.

Fix your towing rope (min. dia. 5 - 6 mm) or steel cable (min. dia. 2 - 3 mm) to the wing bolt of the closing mechanism's anvil (7) by either a small thimble or a bowline knot.

Only immediately before deployment start arming the closing mechanism by opening the lid and holding it in place. Then, arrest the anvil's lower end into the hook on the lid.

Keep the weighted messenger ready but do not fit it to your rope / cable until you intend to close net's inlet.



DEPLOYMENT

IF SAMPLING AN ENTIRE WATER COLUMN

(basic / top cone versions)

Provided the net was prepared as per the above lower the net to the designated depth then, slowly heave it all the way up again.

IF SAMPLING DEFINED PARTS OF A WATER COLUMN

(versions with closing mechanisms)

Provided the net was prepared as per the above lower the net to the designated depth then, slowly heave it up again until the determined part of the water column was traversed.

Stop heaving and fit the weighted messenger lettering facing up to your rope / cable.

Release the messenger. Depending on the depth your net currently is at, it may take the messenger several seconds to reach the net.

After the net was closed slowly heave it all the way up again.

REELING IN COMPLETE / NET BACK ABOARD

(all versions)

Wash any plankton still adhering to the inside of the net bag down into the net bucket by keeping the net upright and spraying its outer surface with water.

The net bucket (3) can now be detached from the cod-end ring and the sample be released by opening the ball valve (1).

MAINTENANCE

A minimum of maintenance is required since all metal parts are protected against corrosion.

It is recommended to rinse the plankton net with fresh water after use to avoid salt incrustation.

REP SET

Every HYDRO-BIOS plankton net acc. to Apstein comes with a spare parts kit. To watch a video tutorial on how to replace your net bucket's mesh fabric kindly be referred to our website.