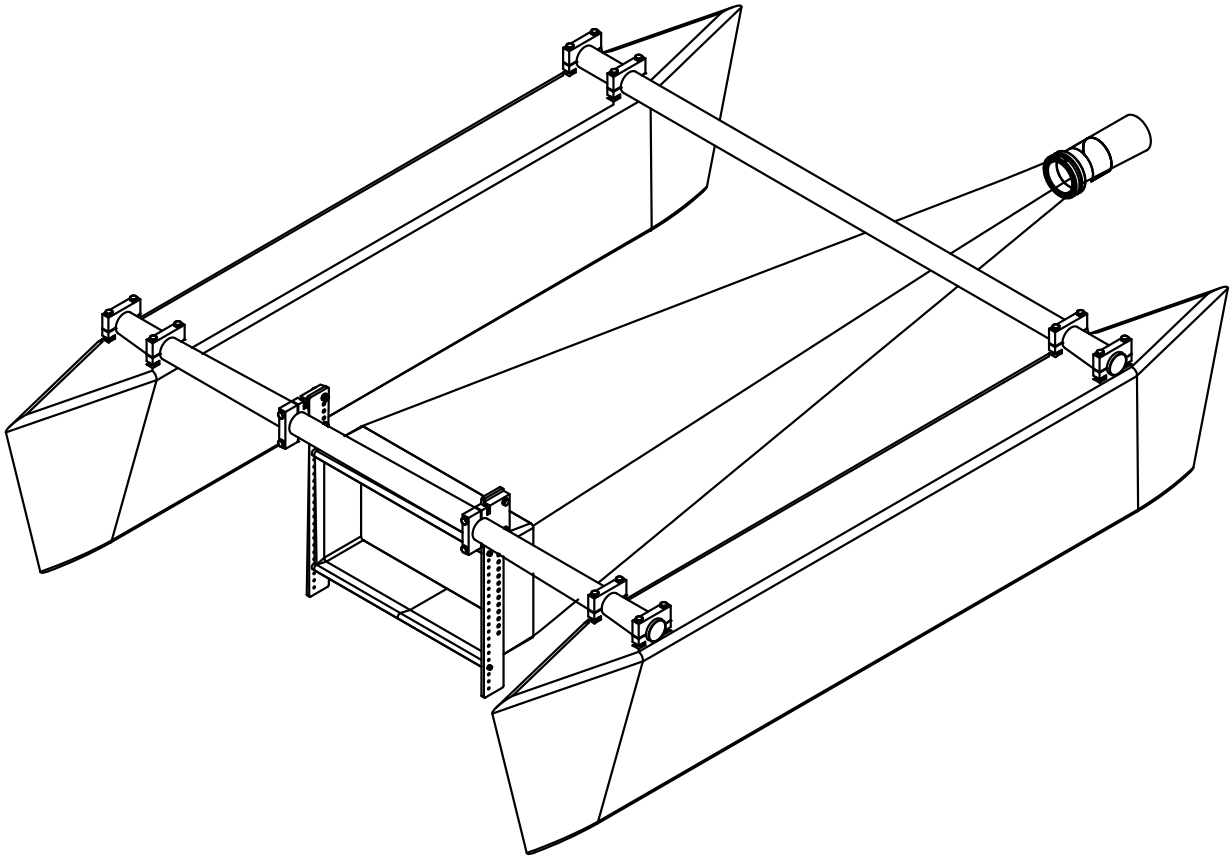


NEUSTON NET for Microplastics

OPERATION MANUAL

Product ID 438 211

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GENERAL DESCRIPTION

The NEUSTON NET FOR MICROPLASTICS is made for operation at inland waters, coastal areas and the open sea.

For microplastics sampling the traditional NEUSTON NET is equipped with a single net with a large opening of 40 x 70 cm.

The gear consists of a slender catamaran swimmer body of aluminium with high draft, caring for a stable position even under choppy conditions at sea with towing speeds of up to 4 knots.

Adjustable holding racks allow for individual selection of the submerging depth of the rectangular net bag.

For easy retrieval the sample is concentrated inside a removable soft net bucket.

A bridle with one adjustable leg is used to operate the net from starboard, portside or stern.

Plastic debris in the environment - a problem which is drawing more and more attention. One reason for this is that plastic will never really biologically degrade and disappear from our environment but become so called microplastic. Microplastics are small particles ranging from 1 µm to 5 mm.

Tons of those particles get into our natural waters and end up in our oceans. Up to now it is not yet fully understood what physical and chemical impacts microplastic is having on any kind of living organism.

The establishment of a reliable, verified and standardized method to quantify the amount of microplastic particles in the environment plays a key role to assess the consequences of plastic debris in aquatic ecosystems.

- Large variety of mesh sizes
- Light weight but robust
- Easy to handle

TECHNICAL DATA

Length:	300 cm (Catamaran)
Overall length (from bridle to net bucket)	app. 600 cm
Width:	220 cm (Catamaran)
Height:	60 cm
Net opening:	70 x 40 cm (0.028 m^2)
Weight on air:	100 kg
Material of frame:	anodized aluminium
Material of net bag:	MOnyl
Standard mesh size:	300 µm

STANDARD EQUIPMENT

1. Catamaran swimmer body with 2 distance tubes
   dimensions: 220 x 60 x 300 cm (w x h x l)
2. 2 Adjustable net holding racks
3. 4 Bracing rods for nylon webbing
4. 1 Nylon webbing with zip fastener
5. 1 Net bag of synthetic material with zip fastener
   front opening 70 x 40 cm
   back opening Ø 11 cm
   length 260 cm
6. 1 Fixing ring for soft net bucket
7. 1 Soft net bucket
   with side window, covered with sieve gauze
8. 1 Bridle
9. 2 Shackles Ø 10 mm
10. 1 Chain Ø 6 mm, 26 links, ca. 1.1 m
11. 2 Shackles Ø 6 mm
12. 1 Hexagon socket screw key 5 mm
13. 1 Hexagon socket screw key 8 mm
14. 1 Wrench 17 mm
15. 2 Wrench 19 mm
16. 4 Hexagon socket screw M6x20 DIN 912
17. 4 Washers 6.4 DIN 125

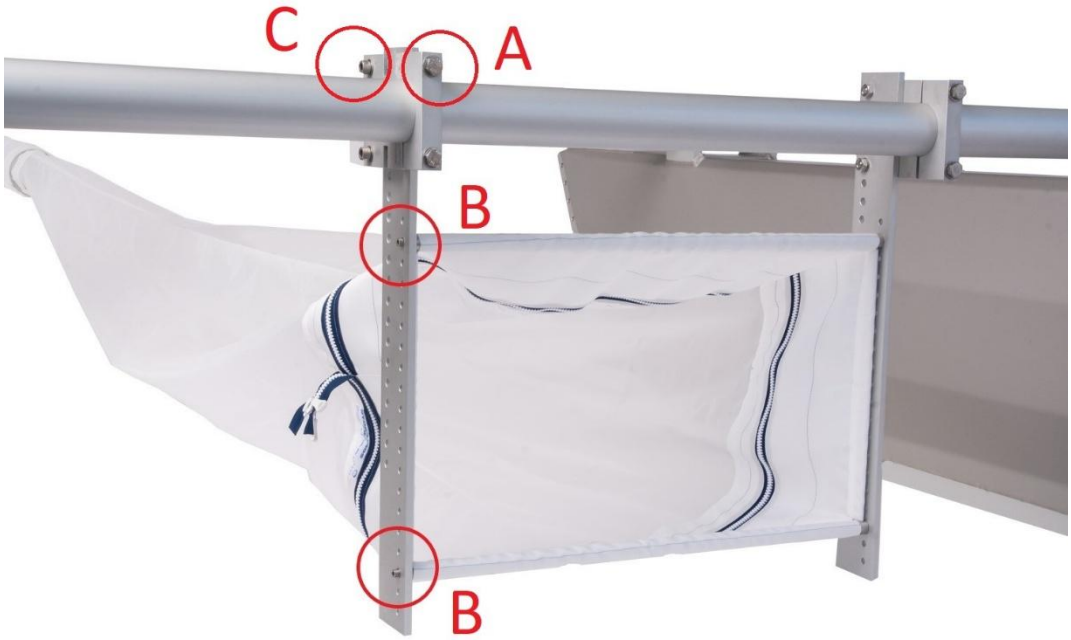
ASSEMBLY INSTRUCTION

1. Connect the swimmer bodies by means of the distance tubes.

   Tool: 2 x wrench 19 mm



2. Mount the holding rack and the nylon webbing.
   Tools: A: 2 x wrench 19 mm
   B: hexagon socket screw key 5 mm
   C: hexagon socket screw key 8 mm and wrench 17 mm



As it should be done with all offshore equipment the user should regularly check all screwing.

3. Connect net bag to nylon webbing by means of the zipper.
4. Fit the fixing ring for the soft net bucket to the end of the net bag.
5. Mount the soft net bucket to the fixing ring.
6. Fix the bridle with the shackles at the front holes of the swimmer bodies.

If the Neuston Net is to be towed on the starboard side of the ship the link of the chain (of the bridle) has to be fixed on the starboard side of the catamaran swimmer body. In order to avoid collisions of the Neuston Net with the ship the bridle is mounted asymmetrically by shackling in a link of the chain. Thus the swimmer body runs free from the ship's side.

If the Neuston Net is to be towed from the port side the above applies in mirrored arrangement.

If operating the Neuston Net from the stern the bridle is to be mounted symmetrically.