

NANSEN CLOSING NET

OPERATION MANUAL

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GENERAL DESCRIPTION

The Nansen Closing Net is a vertical net with messenger operated closing mechanism. A 70 cm diameter stainless steel ring with a 3 meter long net bag made of Tetex (upper part) gaze of 100 µm (middle part) and gaze of 55 µm (lower part and side window of net bucket) is operated in conjunction with a heavy net bucket frame for high rope speed during decent.

For easy retrieval the sample is concentrated inside a removable plastic net bucket with side window (covered with sieve gaze). The open net is brought to the greatest scheduled depth. During ascent the net can be closed in the intended depth by strangulating the net bag below the net ring. This allows for sampling defined depth layers.

The Nansen Closing Net can be used in conjunction with one mechanical Flow Meter with back-run stop for measurements of filtered water volume.

STANDARD EQUIPMENT

1. 1 Messenger-operated closing mechanism — Fig. 1 B
   including messenger 800 g and closing rope — Fig. 1 A, C
2. 1 Bridle of polyester rope with thimble and shackles 10 mm — Fig. 1 D
3. 1 Net ring of stainless steel, with Nylon webbing and zip fastener — Fig. 1 E
4. 3 Bucket ropes with shakles 6 mm and adjustment clamp — Fig. 1 F
5. 1 Net part consisting of: — Fig. 1 G
   a) Tetex part with zip fastener and loops for the closing rope, length: 100 cm
   b) Net part of synthetic material, mesh size: 100 µm, length: 100 cm
   c) Net part of synthetic material, mesh size: 55 µm, length: 100 cm
6. 1 Plastic net bucket consisting of: — Fig. 1 H
   a) Net bucket frame made of stainless steel, weight: approx. 16 kg
   b) Fixing ring with overcentre fasteners
   c) PVC net bucket with side window covered with net gauze

TECHNICAL DATA

Length:	350 cm
Diameter:	70 cm
Net opening:	0.385 m^2
Standard mesh size:	Tetex + 100 µm + 55 µm
Weight on air:	30 kg
Material of frame:	stainless steel
Material of net bag:	MOnyl (PA 6.6)

DEPLOYMENT

PREPARATION: NET

- Fix the upper end of the net part (Fig. 1 G) to the zip fastener of the Nylon webbing (mounted to the net ring, Fig. 1 E).
- Put the lower end of the net part on the fixing ring of the net bucket (Fig. 1 H b) and fasten it hand-tight with the band clamp so it can be easily adjusted in a later step.
- Place the plastic bolt of the fixing ring into the tube of the net bucket frame (Fig. 1 H a) until it snaps in.
- Connect the bucket ropes to the loops of the net ring and the net bucket frame. Make sure that the bucket ropes are not twisted and run straight from the net ring to the net bucket frame.
- Stretch the net part by pulling at the net bucket frame. The lengths of the bucket ropes should be adjusted with the grey plastic adjustment clamp until the weight of the net bucket frame is carried by the bucket ropes and **NOT BY THE NET PART**. On the other hand the net bucket ropes should not be so short that the net bags have folds and thus the collected material cannot flow freely into the net bucket.
- Make sure that the net part is not twisted. Otherwise the end of the net part must be rotated at the fixing ring by hand until the seam of the net part runs straight from the Nylon webbing to the net bucket.
- Fasten the band clamp at the fixing ring.
- Fix the net bucket at the fixing ring with the overcentre fasteners.
- Connect the bridle to the loops of the net ring.
- Optional: Fix a mechanical Flow Meter (438 110 or 438 115) with the Nylon ropes at the inner loops of the net ring.

PREPARATION: CLOSING MECHANISM

- Guide towing rope from top side of the closing mechanism through the slot of the anvil (Fig. 2 A). Fix end-eye of the towing rope to the upper wing screw of the closing mechanism (Fig. 2 B).
- Remove the security pin from the closing mechanism (Fig. 2 C).
- Open snap hook of the closing mechanism by pressing the anvil downwards (Fig. 2 D, A).
- Connect the centre-eye of the net's bridle to the snap hook of the losing mechanism and close the snap hook.
- Insert the security pin into the boring inside the closing mechanism and secure it on the backside with the locking clip (Fig. 2 F). Locking clip and security pin are released **directly** before an operation **only**!
- Connect the thimble of the closing rope to the lower wing screw of the closing mechanism (Fig. 2 E).

TIPS FOR DEPLOYMENT

- Locking clip and security pin of the closing mechanism are released **directly** before an operation **only**.
- The Nansen Closing Net should not exceed a speed of 0.5 meters per second during lowering downcast or heaving upcast.
- During lowering do not stop the winch to avoid contamination of the sample with material from undesired depths.
- During heaving do not stop the winch to avoid loss of sample.
- To close the Nansen Closing Net use the delivered messenger. To open the messenger turn core of the messenger counter-clockwise. Place the messenger at the towing rope and close it by turning the core of the messenger clockwise.

MAINTENANCE

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

After use thoroughly rinse the complete Nansen Closing Net with fresh water to avoid salt incrustation and to remove residue of the previous deployment.

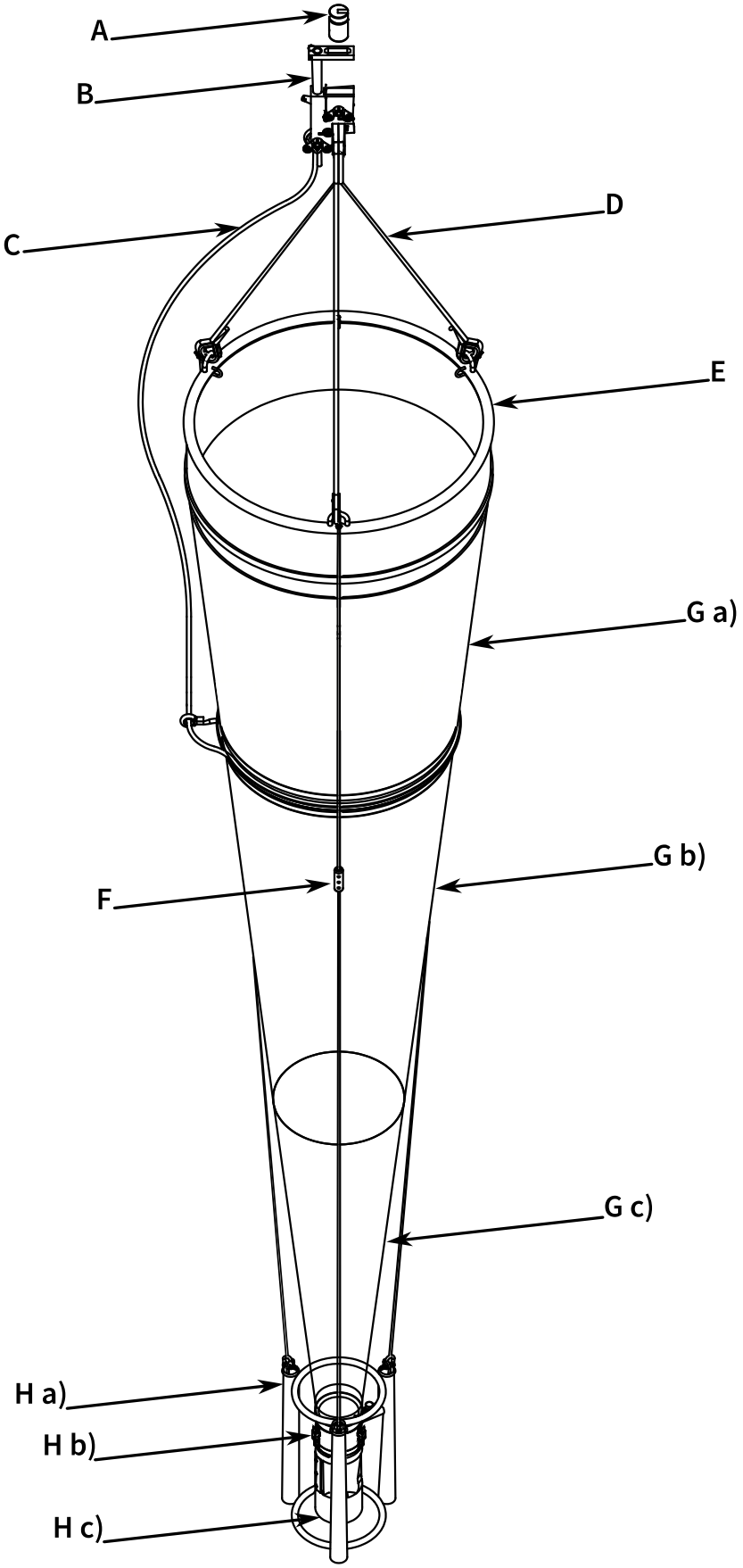


Fig. 1

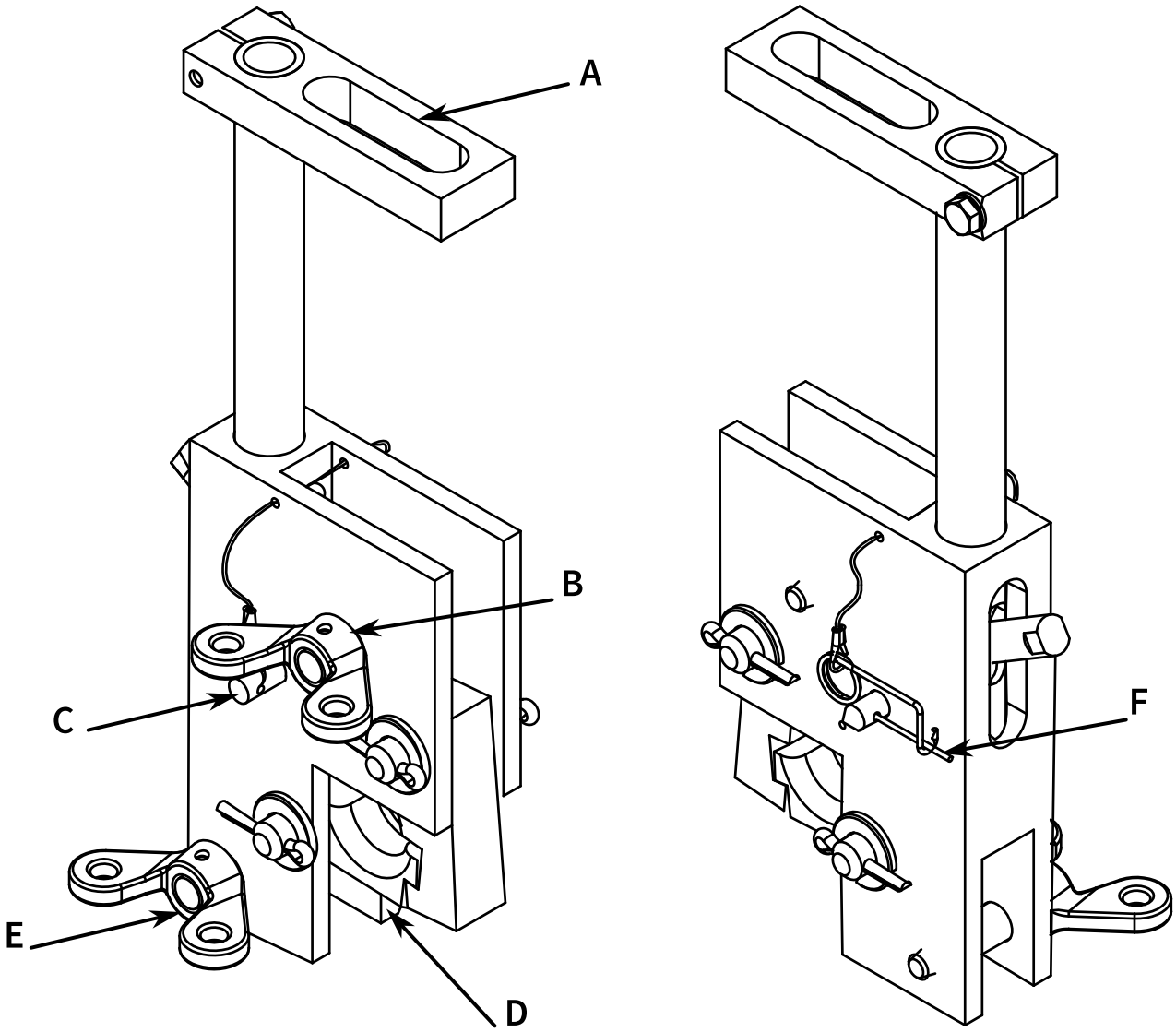


Fig. 2