

Pump for Micro Plastic Particles

Model 23.565 - 750 W

Manual

KC Denmark A/S

Research Equipment
Limnology • Oceanography • Hydrobiology


Pump for Micro Plastic Particles - 1 x 230 V AC/750 W



KC Denmark A/S is not, and cannot be held, responsible for any damage(s) made to equipment or to operators who ignore safety precautions or because of misuse or wrong operation.


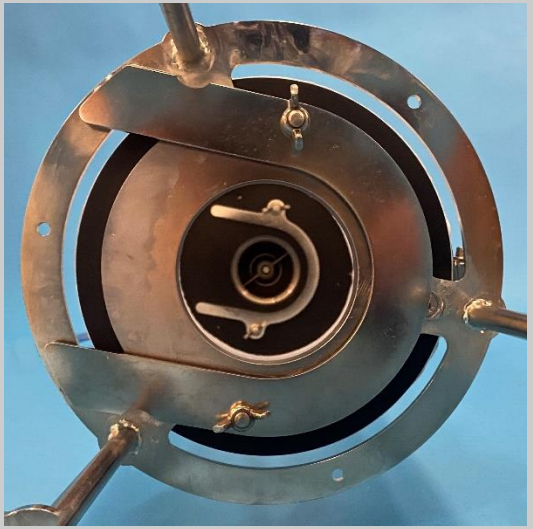
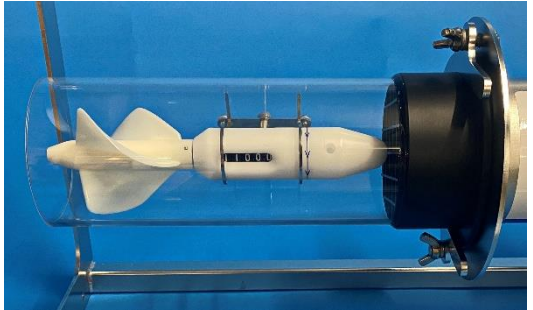
Deploy the pump into the water before it gets started. Operating in dry condition may damage the pump.

If using the pump in salt water, it is very important to rinse the pump and the flow meter by pumping fresh water for a few minutes.

Maximum depth: 7 m.

Item	Description	
	<p>Attach a steel wire or rope to the lifting point which has more holes so the pumps horizontal orientation can be adjusted.</p> <p>IMPORTANT: The pump must be deployed by a separate steel wire or similar, as the power cable cannot bear the pump's weight. Deploying the pump requires a constant relief of the cable in its entire length, to avoid any cable damage because of the cable's weight.</p>	

Preparing the pump		
1	<p>The pump supports up to 4 different filter sizes and standard delivery comes with a coarse mesh net of 3-5000 µm and 3 nets of 1000, 500 and 300 µm.</p> <p>Replacing one or more filters with dummy ring(s) (not shown) allows a setup with less (or none) filters.</p>	
2	Two wing nuts, A and B, secures the filter section.	

3	<p>Stack the filters, mounting the coarse filter on top and gradually smaller sizes beneath.</p> <p>Push the filter section against the lock pins. Secure the filters using the two wing nuts, see previous item.</p> <p><i>Ensure the nuts are secured properly; otherwise, you may lose the filters.</i></p>	
4	<p>The guiding rails for mounting the flow meter. Loosen the two wing nuts, slide in the flow meter and fasten it by means of the two wing nuts.</p> <p><i>Ensure the nuts are secured properly; otherwise, you may lose the flow meter.</i></p>	
5	<p>Correct mounting of the flow meter.</p>	
6	<p>Deploy the pump to the desired depth (<i>max. 7 m</i>) and switch on the power supply.</p>	

Determination of volume

Formula for calculating the pumped volume:
Indicated number of revolutions x 0,3 x opening area (m²) x 1000 = water volume (L).

The tube has an inner diameter of 85 mm, i.e. the opening area is 0,00567 m².

7

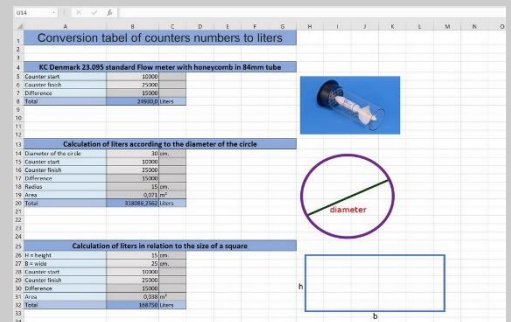
Example:
 If the number of revolutions associated with a pump session is 500 (noted from the digital flow meter counter), the water volume passed through the pump is:

$$\text{Volume} = 500 \times 0,3 \times 0,00567 \text{ m}^2 \times 1000 = 850 \text{ L}$$

If more convenient, you can download a spreadsheet [here](#) or using the QR code below. It has a simple, intuitive design for calculating the water flow in L corresponding to the actual read-out of the flow meter. for 3 different options as follows:

1. Our standard 84 mm tube (23.095) with built-in flow meter
2. Individual input of diameter for a plankton net
3. Typing in height and width in cm for a square or rectangular design

8



Maintenance	
9	<p>The pump: It is very important to rinse the pump and the flow meter by pumping fresh water for a few minutes. Also, flush on the outer side of the pump.</p>
10	<p>The flow meter: After use, you must clean the flow meter with fresh water and washing out any polluted or salt water from the gear counter assembly. Otherwise, a residue of salt or dirt can be built up and avoid a smooth running and poor performance.</p>



Specifications

Power:	
Power requirements:	1 x 230 V AC, 50 Hz, 1 ph.
Power consumption:	750 W
Cable, power supply:	10 m of 3 x 1,5 mm ²
Plankton pump:	
Capacity:	Up to 12000 L/hour (app. 200 L/min. at 0 m water column) with no filters
Material:	The pump itself: AISI 304 stainless steel, all other parts: AISI 316 stainless steel
Dimensions:	
Length:	81 cm
Height and width, max.:	26 x 23 cm
Weight:	22 kg

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