

Net-to-cod-end coupling device for oceanographic sampling gear



A novel continuous-geometry assembly system that eliminates internal dead zones, facilitates rapid on-deck cleaning without disassembly and guarantees the reproducibility of scientific results between successive sampling stations.

Intellectual Property

Priority patent application filed.

Stage of development

Prototype validated in a relevant environment for oceanographic sampling (TRL 6).

Intended Collaboration

Licensing and/or co-development

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Market need

Net sampling is a fundamental technique in oceanography for collecting plankton, ichthyoplankton, microplastics and suspended particles. Conventional net-cup attachment systems create internal cavities where biological material and particles accumulate, leading to cross-contamination between successive samples, sample loss and cleaning difficulties, which slow down operations in campaigns where time is a critical resource. There is therefore a clear need in the sector for a net-to-cod-end coupling system that eliminates internal dead zones, facilitates rapid on-deck cleaning and guarantees sample integrity throughout the entire survey.



Proposed solution

The device addresses the problem through a continuous geometry with no internal cavities. The sampling net incorporates an inner skirt and an outer skirt at its narrower end, which are assembled onto a polymeric coupling cylinder using an outer clamp and an inner retention ring. This ring, easily removable without tools, ensures that the sample flow is directed straight into the cod-end with no retention zones. The result is a robust, lightweight system compatible with standard sampling nets that allows complete pressure-washing without disassembly and eliminates the risk of cross-contamination between sampling events.

Competitive advantages

- Eliminates internal cavities and sample accumulation zones.
- Complete pressure-washing without disassembly.
- Reduces the risk of cross-contamination between successive sampling events.
- Compatible with standard sampling nets.
- Lightweight construction with tool-free removable retention ring.