 Institute of Marine Research	
Request for purchases of sensors for real-time monitoring of the physical environment and sampler characteristics, to be attached on a Gulf VII high-speed plankton sampler.	Page No. 1 of 12

REQUEST

**Delivery of
sensors for real-time monitoring of the physical
environment and sampler characteristics to be
attached on a Gulf VII high-speed plankton
sampler
to the Institute of Marine Research in Norway**



Case No. 19/00762


 Institute of Marine Research	
Request for purchases of sensors for real-time monitoring of the physical environment and sampler characteristics, to be attached on a Gulf VII high-speed plankton sampler.	Page: 2 of 12

Table of contents:

1. CONTRACTING AUTHORITY	3
2. IMPLEMENTATION	3
3. SCOPE OF THE CONTRACT	3
4. TECHNICAL SPECIFICATION	4
5. TERMS OF DELIVERY	8
6. CONTRACT TERMS	8
7. INVOICING TERMS	8
8. AWARD CRITERIA	8
9. PROCUREMENT PROCESS	11
10. COMMUNICATION	11
12. SUBMITTING TENDERS	12
13. APPENDICES	12



Request for purchases of sensors for real-time monitoring of the physical environment and sampler characteristics, to be attached on a Gulf VII high-speed plankton sampler.

1. CONTRACTING AUTHORITY

The Contracting Authority for this procurement is the Norwegian Institute of Marine Research (IMR).

With over 750 employees, the IMR is the largest marine research area in Norway. IMR's main task is to conduct research in order to provide information to the public regarding aquaculture and the ecosystems in the Barents Sea, the Norwegian Sea, the North Sea and the Norwegian coastline.

More information about the IMR can be found at www.hi.no

2. IMPLEMENTATION

This request is carried out in accordance with the Norwegian Regulations on Public Procurement, section II.

The request process will be implemented using the Mercell tender management tool.

3. SCOPE OF THE CONTRACT

This request applies to the purchase of a CTD/underwater control and data store unit, along with 2 flow meters, one deck unit, cabling, software, manuals and spares for the system. The system shall be used on our vessels for research activity.

The system needs to be able to be attached to a Gulf VII high speed plankton sampler.

The attaching brackets etc will be manufactured by SPARTEL during the construction of the Gulf VII frames and the advice of the electronics suppliers will be used in the design.

In addition, as an option, we want an offer on additional equipment to the basic system that consist of 1 flow meter, a tilt and roll sensor, and an altimeter. Software, cables and manuals for additional sensors must also be provided, ref section 4.2



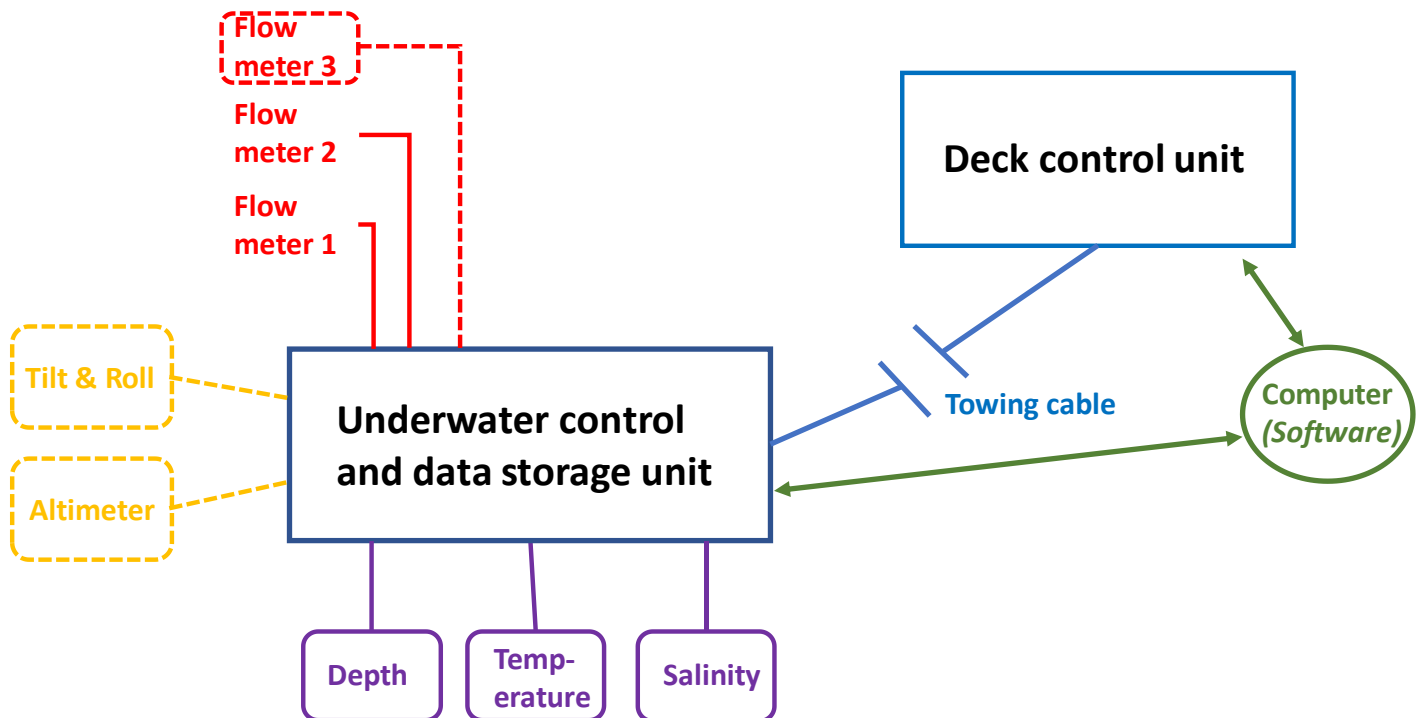
Request for purchases of sensors for real-time monitoring of the physical environment and sampler characteristics, to be attached on a Gulf VII high-speed plankton sampler.

4. TECHNICAL SPECIFICATION

4.1 Technical specification primary purchase

Technical specifications are absolute requirements that the product must meet in order to be relevant for the procurement/contract. If the bid does not meet the specified requirements, the bid will be rejected.

Attached is a drawing of the system and its components. Solid lines denote primary purchase and dashed lines denote optional purchase.





Request for purchases of sensors for real-time monitoring of the physical environment and sampler characteristics, to be attached on a Gulf VII high-speed plankton sampler.

The relevant specifications for the primary purchase is listed in the "Requirements" tab in the Merrell portal and in the table below.

No.1	The CTD/ Underwater control and data storage unit (UU) must meet the following requirements:
a.	Must be able to be attached to Gulf VII high speed plankton sampler.
b.	Must be rated to at least 500m depth and capable of operating at 5knots plus 20%.
c.	The UU must be capable of interfacing with a conducting cable and delivering real time data to the deck unit and software.
d.	The UU must be capable of storing up to 5 hours of raw data in the event of cable failures or the absence of a suitable conducting cable (autonomous operation).
e.	The UU must interface (as a minimum) the following sensors: 1 x depth, 1x temperature, 1 x salinity, and 2 x flow.
f.	Depth: range 0-500, accuracy of <1m and precision of 0.1% full scale. Data acquisition at a minimum of 1 sec intervals. Capable of operating at 5knots plus 20%.
g.	Temperature: range 0-25 °C, accuracy of 0.02°C and precision of 0.03°C. Data acquisition at a minimum of 1 sec intervals. Capable of operating at 5knots plus 20%.
h.	Salinity: range 0-38, accuracy of 0.02 psu and precision of 0.001 psu. Data acquisition at a minimum of 1 sec intervals. Capable of operating at 5knots plus 20%.

No.2	2 x flow meters must meet the following requirements:
a.	Must be able to be attached to Gulf VII high speed plankton sampler.
b.	Flow (range 0-5 ms ⁻¹), accuracy of 0.01 ms ⁻¹ and precision of 0.01 ms ⁻¹ . Data acquisition at a minimum of 1 sec intervals. Capable of operating at 5knots plus 20%.

No.3	The deck control unit must meet the following requirements:
a.	The deck unit must be capable of interfacing with a conducting cable and delivering real time data to the deck unit and software (configuration a).
b.	The deck unit must be capable of interfacing directly with the in-water unit for downloading up to 5 hours of raw data in the event of cable failures or the absence of a suitable conducting cable.

No.4	The cables for interfacing all sensors to UU and cable for interfacing UU to the towing cable (TC) must meet the following requirements:
a.	A full set of cables for interfacing all sensors to the in-water unit and a cable for interfacing the in water unit to the towing conducting cable. The flow meter cables must be a minimum of 1 m in length.
b.	Must be rated to at least 500m depth and capable of operating at 5knots plus 20%.



Request for purchases of sensors for real-time monitoring of the physical environment and sampler characteristics, to be attached on a Gulf VII high-speed plankton sampler.

No.5	Cable for interfacing TC and deck control unit (DCU) and to a PC must meet the following requirements:
a.	Cables for interfacing the deck unit to the towing cable outlet and to a PC. In addition, a cable capable of interfacing the deck unit and/or PC with the in water unit for download of stored data.

No.6	Software for UU must meet the following requirements:
a.	The software must be capable of controlling all the sensors requested and provide real time output of calibrated results in both a graphical and numerical format. All real time data needs to be stored in a suitable format and capable of being accessed post haul for analyses, graphical output etc.
b.	The software must be capable of setting up the sensors and in water unit for remote data recording and the down load and storage of recorded data. As above, the software will provide results in both a graphical and numerical format. All data needs to be stored in a suitable format and capable of being accessed post haul for analyses, graphical output etc.
c.	A full set of comprehensible user manuals are to be provided for the software (real-time, stored data downloads and post processing).

No.7	Software for DCU must meet the following requirements:
a.	The software must be capable of controlling all the sensors requested and provide real time output of calibrated results in both a graphical and numerical format. All real time data needs to be stored in a suitable format and capable of being accessed post haul for analyses, graphical output etc.
b.	The software must be capable of setting up the sensors and in water unit for remote data recording and the down load and storage of recorded data. As above, the software will provide results in both a graphical and numerical format. All data needs to be stored in a suitable format and capable of being accessed post haul for analyses, graphical output etc.
c.	A full set of comprehensible user manuals are to be provided for the software (real-time, stored data downloads and post processing).



Request for purchases of sensors for real-time monitoring of the physical environment and sampler characteristics, to be attached on a Gulf VII high-speed plankton sampler.

No.8	Operating manuals must meet the following requirements:
a.	Comprehensive operating manuals for sensors.
b.	Must be rated to at least 500m depth and capable of operating at 5knots plus 20%. 2x flow meter cables, 1 x in water unit to towing cable connector, 1 x in water to deck unit/PC for data download, relevant O-rings etc.

4.2 Technical specification optional purchase

The relevant technical specification for the optional items is listed in the table below.

If the option is used, the supplier needs to be able to deliver all the optional equipment, and fulfil all the technical specifications below.

No.1	Tilt and roll sensor must meet the following requirements:
a.	Must be able to be attached to Gulf VII high speed plankton sampler.
b.	Must be rated to at least 500m depth and capable of operating at 5knots plus 20%.
c.	Data acquisition at a minimum of 1 second intervals.
d.	Range – 50-+50° with an accuracy of 0.1° and precision of 0.01°.

No.2	Altimeter must meet the following requirements:
a.	Must be rated to at least 500m depth and capable of operating at 5knots plus 20%.
b.	Must be able to be attached to Gulf VII high speed plankton sampler.
c.	For use in range 0-25 meter depth.
d.	Data acquisition at a minimum of 1 second intervals.
e.	Accuracy of 0.1m with precision of 0.05 metre.

No.3	One additional flow meter
a.	Same specification as flow meters in primary purchase.

No.4	Cables for interfacing additional sensors to UU
a.	Same specification as flow meters in primary purchase.

No.5	Software for additional sensors for connection to UU
a.	Same specification as flow meters in primary purchase.



Request for purchases of sensors for real-time monitoring of the physical environment and sampler characteristics, to be attached on a Gulf VII high-speed plankton sampler.

The equipment will be attached to a Gulf VII high-speed plankton sampler (see Nash et al. (1998) for a description of the towing frame and sampler).

Cited literature

Nash, R.D.M., Dickey-Collas, M. & Milligan, S.P. 1998. Descriptions of the Gulf VII/PRO-NET and MAFF/Guildline unencased high-speed plankton samplers. Journal of Plankton Research 20: 1915-1926.

5. TERMS OF DELIVERY

A complete system must be delivered in Bergen, Norway at latest within 01.06.2019 at: 12:00 p.m.

Delivery shall be performed in accordance with Incoterms 2010. DAP (Delivered at place).

Delivery location:

Institute of Marine Research,
Nordnesgaten 50
5817 Bergen
Att/Richard Nash.

6. CONTRACT TERMS

The standard contract draft will apply to the procurement, see appendix 1.

7. INVOICING TERMS

Payment shall be made in accordance with the contract terms in appendix 1.


Invoices must include the purchase order number (revealed later) and case number 19/00762

Invoices should preferably be delivered in Electronic Commerce Format (EHF) and linked to the customer's organization number 971 249 077. Invoices (as PDF-files) can also be sent as emails to fakturamottak@imr.no.

8. AWARD CRITERIA

The procurement order will be awarded to the supplier that offers the most economically advantageous bid.

The supplier is responsible for documenting fulfilment of the award criteria on their own. Missing or insufficient documentation of fulfilment of the award criteria may result in the tender being rejected.

 Institute of Marine Research	Page: 9 of 12
Request for purchases of sensors for real-time monitoring of the physical environment and sampler characteristics, to be attached on a Gulf VII high-speed plankton sampler.	

The award criteria for this procurement are displayed in the table below, and must be answered in appendix 3.

No.	Award criteria	Documentation	Priority/weight
a	Price	Complete pricing table in appendix 3, award criteria form and price sheet.	70 %
b	Quality standard equipment	Exceeding the levels of precision required. Include a description of this in appendix 3- award criteria form and price sheet.	20 %
c	Price on optional items	Complete pricing table in appendix 3, award criteria form and price sheet.	10 %

8a. Award criteria 1 – Price

Please provide prices for the products in the award criteria form and price sheet in appendix 3.

Prices must be provided in Norwegian Kroner (NOK) excluding VAT.


No. 8a.	Product	Description
a	Total price for the primary purchase	<p>Price according to the specification (ref. item 4).</p> <p>We ask for the total price for the whole primary purchase. The price must include all cost, including delivery in Bergen, Norway.</p> <p>The supplier that offers the lowest total price for the whole system, will get the highest score.</p> <p>The price must be quoted in NOK excl VAT. Price must be stated in the award criteria form and price sheet in appendix 3.</p>



Request for purchases of sensors for real-time monitoring of the physical environment and sampler characteristics, to be attached on a Gulf VII high-speed plankton sampler.

8b. Award criteria 2 –Quality on standard equipment:

No. 8b.	Product	Description	Documentation
a.	Sensors for depth, temperature, salinity and flow	If the supplier can deliver depth, temperature, salinity and flow meters' sensors with more precise levels than what we asked for, ref section 4.1, they will get a combined additional score of 10%.	Please include a description of the precision levels for all the sensors in appendix 3 - award criteria form and price sheet.
b.	CTD/underwater control and data storage unit(UU)	<p>It is advantageous that the CTD/underwater control and data storage unit(UU) has the capability for concurrent use of all required sensors i.e. 1 x depth, 1x temperature, 1 x salinity, 1 x tilt and roll, altimeter and 3 x flowmeters.</p> <p>If the supplier can deliver an UU with these capabilities, they will get an additional score of 10%.</p>	Please include a description of capability of the use the following sensors with CTD/underwater control and data storage unit(UU) in appendix 3- award criteria form and price sheet.

 Institute of Marine Research	Page: 11 of 12
Request for purchases of sensors for real-time monitoring of the physical environment and sampler characteristics, to be attached on a Gulf VII high-speed plankton sampler.	

8c. Award criteria 3 – Price on optional items, ref point 4.2:

No. 8c.	Product	Description	Documentation
c.	Price on the optional items	<p>Price for the optional items according to the specification (ref.item 4.2)</p> <p>We ask for the total price for the whole optional purchase. The price must include all cost, including delivery in Bergen, Norway.</p> <p>The supplier that offers the lowest total price for the whole optional purchase, will get the highest score.</p> <p>The price must be quoted in NOK excl VAT. Price must be stated in award criteria form and price sheet in appendix 3.</p>	Please include a description for the price for the optional items in appendix 3, award criteria form and price sheet.

9. PROCUREMENT PROCESS

- This request will be managed by Merccell, where relevant suppliers can submit bid.
- Interested suppliers submit bid through Merccell within the set deadline.
- After the deadline for bid has expired, the bids received will be evaluated.
- The supplier who has provided the best bid in accordance with the specified award criteria will be selected to fulfil the relevant procurement.
- All suppliers who have submitted bids will be informed of the evaluation results/supplier selected.
- The selected supplier will receive a contract and a purchase order from IMR.

10. COMMUNICATION

All communication in this process must take place via the Merccell portal. Select the "Communication" tab in the tender section of Merccell. If you have a question that applies to all of the persons submitting a tender, the customer will answer this anonymously by providing the answer as additional information that is sent to all suppliers. Additional information is available under the "Communication" tab and then in the "Additional information" sub-tab. The relevant suppliers will receive an email with a link to the additional information.



Request for purchases of sensors for real-time monitoring of the physical environment and sampler characteristics, to be attached on a Gulf VII high-speed plankton sampler.

11. LANGUAGE

All communication during the tender process and agreement period shall be in English or Norwegian.

12. SUBMITTING TENDERS

12a. Tender deadline

The deadline for submitting bids is displayed in the Mercell portal.

12b. Additional documents

The following must be submitted and confirmed that they are completed.

1. Specification – confirmation that all requirements in the specification (cf. Item 4) are met, add any comments on the relevant items in the "Requirements" tab in the Mercell portal.
2. Award criteria form and price sheet (appendix 3) must be filled out and submitted with the bid, cf. item 8.

12 f. Submitting bids

The supplier has an independent responsibility to ensure that the bid is complete and submitted prior to the deadline.

13. APPENDICES

Appendix 1: Contract draft.

Appendix 2: Changes to the delivery after entering the contract.

Appendix 3: Award criteria form and price sheet.