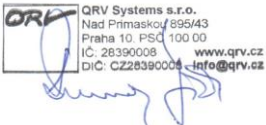



Technical specification			
Equipment identification:			
Multifrequency broadband echolocation system II			
Equipment description :			
Three scientific echosounder systems for modern multi-frequency measurements of fish and zooplankton abundance estimation in rivers and open lake conditions with the vessel moving at standard surveying speed or in stationary situations. The systems should be able to measure the acoustic target strength through the split beam principle. The transducers should be fully waterproof till the depth of 10 m and equipped with the cables at least 20 m long. The system must be able to emit and receive acoustic signals in the form of (1) narrow band continuous wave and (2) in the form of wide band chirp. It should be powered at least by the 12 V DC power supply. The system should include a postprocessing software capable of 3D visualisation data and calculation targets size structure, abundance and biomass.			
Required technical and functional properties	Bidder's offer		
The bids submitted by the bidders shall meet all the parameters indicated below. For the evaluated parameters the bid shall meet at least the required specified value.	The bid meets the required value	The bidder shall confirm or indicate the value of the offered parameter and for measurable parameters the value shall be supported with a technical data sheet, drawing or another official document which shall be attached to the bid.	Price excl. VAT [CZK]
Technical parameters of the equipment			2000000
The systems should emit and measure simultaneously at the frequencies between 30 and 400 kHz.	yes	EK80 WBT-mini echoloty pracují s frekvencemi od 30 až do 500 kHz	
We require three frequencies far enough from each other within the frequency span of 30-400 kHz.	yes	Vysílače/přijímače: Combi-Split ES38-18/200-18C, ES120-7C, ES333-7C mají celkem čtyři frekvence: 38, 120, 200, 333 kHz	
Each frequency should have at least one transducer with the nominal beam angle of at least 5 to maximum 20 degrees (waterproof at least to the depth of 10 m, cable at least 20 m).	yes	Vysílače/přijímače ES120-7C and ES333-7C mají sedmistupňový kužel, Combi-Split má 18stupňový u obou frekvencí (vodotěsné s 20 m	
At least one frequency and at least two transducers should have the nominal beam angle larger than 15 degrees.	yes	Vysílač/přijímač Combi-split má 18-stupňový nominální úhel kužele u obou frekvencí, 38 a	
The systems should be operated in either CW or FM modes.	yes	Všechny EK80 echoloty umí pracovat s úzkopásmovými i širokopásmovými pulzy	
The system's software should include a calibration menu with the possibility to adjust the transducer gain and dimensions of the beam pattern.	yes	EK80 software obsahuje kalibrační menu s možností nastavení zesílení zvuku i rozměrů akustického kužele	
Output data of the echosounder should be compatible with our long-term data series recorded with SIMRAD EK60 echosounders. This does not mean that this call is limited on the brand or product; however, the offered equipment should provide the same data output and meet the same or higher standards in terms of data accuracy.	yes	Všechny EK80 echoloty splňují tento požadavek	
For simultaneous measurements of strong and weak signals at the same setting, a documented high dynamic range is required in amplitude, at least better than 120 dB at each center frequency in CW mode.	yes	Všechny EK80 echoloty, včetně WBT-mini, mají dynamický rozsah nejméně 120 dB u úzkopásmového kontinuálního pulzu	
For automatic recording and displaying of survey vessel position movement: input and storage of data from scientific high precision motion reference units and GPS should be possible.	yes	EK80 WBT-mini mohou připojit a ukládat data pohybových senzorů a GPS	
Data processing and technical support			510000
Post-processing software	yes	Echoview post processing software	
The software should support single-, split-, multibeam and wideband/broadband sonars data formats.	yes	Echoview plně podporuje datový formát echolotů EK80	
Signal filtering, estimation of fish biomass/density based on distance/time/ping-based cells, fish tracking should be included.	yes	Echoview splňuje tento požadavek	
Automatic data processing using optional programming language, dataflow and scripting should be included.	yes	EK80 and Echoview software umožňují automatické zpracování akustických dat	
Technical support services should be available.	yes	Kongsberg Maritime a Echoview poskytují technickou podporu 24/7	
Other requirements			317000
Provision of transport to the place of the use	yes		
Delivery time within 2 months after signing of the agreement	yes		
Warranty period 24 months	yes		
TOTAL excl. VAT			2827000

The Seller (the bidder) hereby represents that the supply will meet all the above indicated requirements of the Buyer (Contracting Authority). If it turns out in the course of preparation and implementation of the supply that additional equipment, parts or accessories must be supplied or services or works must be performed to meet the Buyer's requirements under this Annex then the Seller agrees to supply such equipment and perform such works or services as a part of performance under the Agreement without increasing the Purchase Price (the mentioned supplies, works or services shall not be considered extra supplies or extra works).

Name, surname and signature of a person authorized to act on behalf or in the name of the bidder:

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