

### OFEG ROV Capabilities – March 2016

ROV	Maximum dive time (hrs)	Operating depth (m)	24 hrs ops?	Sensors (General)	Tools (General)	Ships ROV has already (or can) be installed on	General comments
<b>ISIS</b>	Up to 72	6500	Yes	Sonardyne G6 USBL 100m Altimeter 1200 kHz or 300kHz Doppler, Octans Trittech Super Seaking Dual Frequency Sonar. Reson 7125 200kHz or 400kHz Multibeam Echo Sounder. 4 x Cathx Aphos 16 LED lights (28,000 lumens) 2 x Insite Mini Zeus 1080p HD zoom video camera. 1 x Insite Super Scorpio 1080i HD 12MP video & stills camera.	1 x Kraft Predator 7 Function Manipulators. 1 x Schilling Titan 4 7 Function Manipulators. Hydraulic tool tray; 2 x hyd swing arms; 5 chamber slurp gun, push cores, temp probes, fluid samplers; vibro-corer, bio boxes	RRS James Cook  RRS Discovery  RRS James Clark Ross  Portable system with deck mounted LARs; side deployment; deck mounted winch; double container width control van	Single body deployment. 6x5HP thrusters. 18kW PMax electrical power@5600m. HPU 3.7kW. Auto depth, auto altitude, auto heading. Portable LAR/HPU/2 x 20ft control van: Total shipping weight 72Te. Dims: L-2.7m, W=1.5m, H=2m Weight = 3.4T

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<b>Victor</b>	100	6000	Yes	USBL/LBL, 200m Altimeter Mesotech Depth sensor (Digiquartz), 600khz Doppler, Phins, tritech sonar300/600khz , RESON SMF7125 , 2cameraHD. Still camera 11 lights 4 Laser	1x7 Fn manipulators 100kg/2m -1*5 manipulator 100kg -Ballast reversible 70l Slurp gun, Push cores, Température probe, Fluid samplers; CTD seabird Box. Interfaces available for tools		20kW PMax electrical power@6000m. 6thrusters (5KWatts /180kg )each motors HPU = 5kw Auto depth, auto altitude, auto heading, auto parking Dims of ROV L-3.1m, W=2.2m, H=2m Weight = 4.6Te Total shipping weight 110Tons/7 containers.

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Kiel 6000	Depending on depth	6000	12h ops, Extended ops to be negotiated	<p>Posidonia USBL Motion Sensor Crossbow VG700CA DVL RDI WHN 1200 with 30m Altimeter Kongsberg MS 1071 Fan Cone Sonar 675kHz Digi quartz Depth Sensor Fast CAT CTD SBE 49 SONARDYNE ROV Homer incl. Transp.</p> <p>1 HD tilt only 1 HD pan/tilt with 2 laser, photo capability 2 SD on pan/tilt 4 b/w cameras</p> <p>2 x 400w HMI 2 x 70W HID 8 x dimmable 250W Halogen 1 x Lamp and Strobe AQUOREA LED</p> <p>NOVATECH Flasher NOVATECH Radio beacon</p>	<p>1 x 7-func Manipulator ORION, 68kg, position contr. 1 x 5-func Manipulator RIGMASTER, 180kg, rate contr.</p> <p>Hydraulic Unit max. 207bar, max. 39lpm, 4 proportional and 12 magnetic valves free</p> <p>Tool skid with two hydraulically driven boxes height 46cm, two additional space for equipment: two places 60x100x 52(h)cm</p> <p>Div. equipment upon request (slurp g etc.)</p> <p>Div . interfaces for probes (already used: mass spec, hyperspectral camera, temp. sensors, CO2, CH4 sensors)</p>	<p>RV SONNE RV POLARSTERN RV METEOR RV MERIAN RV CELTIC EXPLORER RV l'ATALANTE RRS JAMES COOK</p> <p>Uses LARS mounted in the stern A-Frame, adoption to other vessels possible, A-frame needs auxiliary winch with min. 5t SWL</p> <p>Winch mounted in a 20' container (30t), may be operated parallel or perpendicular to ship's axis</p> <p>Small winch available (10.5t) available for ops down to max 2200m</p> <p>Tether cable available for ops down to 100m</p>	<p>Total shipping weight approx. 67t, 5 container, three container used during ops,</p> <p>Power supply from ship: 2 x 400 V/ 50Hz/300A</p> <p>Vehicle Dims: L = 3.5m, W = 1.9m, H = 2.4m, weight = 3.5t</p> <p>8 pilots/technicians</p>

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<b>Aegir 6000</b>	48	6000 (Currently 4000m)	Yes	<p>Sonar Kongsberg Mesotech 1071.            2 HD Cameras.(4HD channels).            1 Low light Camera.            3 Tool Camera.            Still camera.            Flasher.            18 led Lights.            Trittech PA500 altimeter.            SAIV TD 303A Depth sensor.            IXBLU Phins 6000.            Link Quest Doppler.            Ethernet 4 ports.</p>	<p>Suction sampler            Temp probe.            Fluid Samplers            Isobaric gas sampler            Bio syringe            5 chambers ROV            Sampler            Push cores            Chain saw            Rock drill            Co2 sensor.            Ch4 sensor            Water sampler.            Schilling T4 7F            Manipulator with camera.            Atlas 7F Manipulator.            Flash light for T4 with 3 sealite Sphere 6100.</p>		<p>ROV Dimensions: L=2.75m, W=1.7m, H=2.2m Incl. skid.            Weight = 3500kg</p> <p>7 x 125 Hp Thruster SA300</p> <p>Auto Depth, Auto altitude, Auto heading, Auto pos (DP), Heading Park, Auto track. Auto lateral, Auto roll, Auto Long, Auto pitch, Auto trim.</p> <p>TMS KD 1000. 6000m-depth rating. 1000m tether. Camera boom for HD filming.</p> <p>Portable Winch with 4400 umbilical, A-frame. HPU. 20ft Control van, 10ft PDU. 4X5m Workshop            10ft winch with 6200m tether.</p> <p>Skid with hydraulic Front draw and manual aft draw for tooling.</p>

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PHOCA	depending on depth	3000	12h ops, Extended ops to be negotiated	<p>ORE TrackPoint USBL CDL TOGS Gyro DVL RDI WHN 1200 with 30m Altimeter Kongsberg MS 1071 Domed Head Sonar 675kHz Depth Sensor Sub Atlantic SONARDYNE ROV Homer incl. Transp.</p> <p>1 HD tilt only 2 SD on pan/tilt 1 photo camera on p/t 2 b/w</p> <p>4 x dimmable LED 4 x dimmable 250W Halogen Underwater Flash Light</p> <p>NOVATECH Flasher NOVATECH Radio beacon</p>	<p>1 x 7-func Manipulator ORION, 68kg, position contr. 1 x 7-func Manipulator ORION, 68kg, rate contr.</p> <p>Hydraulic Unit max. 207bar, max. 39lpm, 4 magnetic valves free</p> <p>Tool skid with two hydraulically driven boxes height 28cm</p> <p>1 x RS 232 1 x either Ethernet or RS 485 interface 1 x USB</p>	<p>RV ALKOR RV POSEIDON</p> <p>Uses LARS mounted in the stern A-Frame, adoption to other vessels possible, A-frame needs auxiliary winch with min. 3t SWL</p> <p>Winch for full depth in 20' container (30t), may be operated parallel or perpendicular to ship's axis</p> <p>Small winch available (10.5t) available for ops down to max 2200m</p> <p>Tether cable available for ops down to 100m</p>	<p>Total shipping weight approx. 35t, (with 2200m cable)</p> <p>Power supply from ship: 3 x 400V/ 50Hz/ 2 x 63A, 1 x 32 A</p> <p>Vehicle Dims: L = 2.1m, W = 1.3m, H = 1.35m, weight = 1.5t</p> <p>5 pilots/technicians</p>

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Genesis (VLIZ, operated with NIOZ)	16	1500	yes	GAPS USBL/LBL system, Camera/video/lights	5 function manipulator +drawer Push cores, Gas-sampler		TMS-system- 2 x 20ft containers Dim ROV: L=1.4m, W=0.9m, H=1.1m ROV:380-440VAC, 32Amps Winch: 380-440VAC. 64-70Amps Container: 38—440VAC.16Amps

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Quest		4000					