

Technical specifications of Genesis ROV - RCMG - University of Ghent

Type	Cherokee ROV, Sub Atlantic, Aberdeen	
Dimensions	ROV :	
	Length	1400 mm
	Width	870 mm
	Height	1110 mm
	Weight in air	300 kg
	TMS : Tethered Management system	
	Length	1950 mm
	Width	1190mm
	Height	2372 mm
	Weight in air	700 kg
	Weight ROV + TMS + tether + equipment :	1500 kg
Depth rating	2000m, limited to 1400 m by cable length	
Thrusters	6 vectorized thrusters, powered by 440 VAC	
	Forward thrust	117 kgf
	Lateral thrust	88 kgf
	Vertical thrust	78 kgf
Cameras & lighting	Colour zoom	Kongsberg OE14-366/367, 460 TV lines, 0.02 lux sensitivity
	Black and white	Kongsberg OE15-100a, 560 TV lines, 0.0013 lux sensitivity
	Rear black and white	Kongsberg OE1358, 570 TV lines, 0.004 lux sensitivity
	Digital stills	Kongsberg OE14-208, 5MP, 0.02 lux
	flash gun	Kongsberg OE 11-242, 80W/s light output
	TMS camera	General purpose black and white
	Video format	PAL
	Video Output	Composite
	External lights	Front : 3 x Q-LED from ROS, light output > 250 Watt Rear 1 x Q-LED from ROS, light output > 250 Watt TMS : 2 x 250 Watt halogen
Hydraulical	Hydraulek HLK-EH5	5 fie manipulator; medium duty work, lift capacity : 25 kg
	Drawer in skid :	Darwer for sample stowage
Sensors	Standard on video overlay : Heading, Depth, Height, Roll, Pitch	
	Obstacle avoidance sonar	Tritech super seaKing dual freq., 325/675 kHz
	CTD	CTD 90M probe from SST
		extra sensors : Turbidity, Fluorometer, Oxygen
	Sediment temperature	THP temp probe from micrel
	SSS	Klein 3000 SSS, to be integrated
	Client sensor on request	RS 232 ,12/24 VDC available
	Laser for measuring purposes	
	Niskin bottles, operated by manipulator	
	push core device	
Umbilicals	Live boating mode	500 meter tether, dia 30 mm Weight in air : 750 kg/km Weight in H2O : 215kg/km
	TMS mode	- 1600 m steel armoured heavy lift cable, dia 25.1 mm Weight in air :1550 kg/km Weight in H2O : 1170 kg/km Breaking strength: 230 kN Min bending dia : 900 mm - 200 m tether on TMS, specs idem live boating
	conductors	copper for power, MultiMode fibre optics for telemetry

Power	Live boating	ROV system : 380-440 VAC, 32 Amps Control system : 240 VAC, 16 Amps
	TMS powered	ROV system : 380-440 VAC, 32 Amps Winch : 380-440 VAC, 64-70 Amps Control container : 240 VAC, 16 amps
Positioning	GAPS system from Ixsea	Plug and play USBL system, accuracy 0.2 % deployment on fixed pole, or hanging on slings
Winch :	Hydraulic, from Hydramec	Lenght 2.4 m height 1.7 m width 2.4 m Weight with umbilical : 7500 kg Power : 380-440 VAC, 70 Amps at full load
Other :	Max weight of ROV + TMS system to be deployed : 2000 kg in air, 600 in H2O Max cable weight : 2170 kg in air, 1650 kg in H2O Sheave wheel comes with the ROV system, ships specific shackles needed Required height of A- frame on board : 5m Total weight of transport container, incl winch ROV, TMS and controls : 14 tons	