

## MRCC PERFORMANCE SPECIFICATIONS

<b>Modes</b>	Surface Mode	Craft operates in typical surface planing mode with diesel/waterjet propulsion	
	Semi-Submerged Mode	Craft operates partially submerged (bow-forward), using surface propulsion with reduced freeboard [18 inches (46 cm) dependant upon sea state]. Only visible structure is topskin	
	Submerged Mode *	Craft submerges and operates underwater using electric propulsion	
	Cache Mode **	Craft sinks to the bottom. Pax and crew egress craft, anchor to bottom, and depart area.	
<b>Specifications</b>	<b>Dimensions</b>	Length	32 ft 6 in (9.91m)
		Beam	7 ft 7 in (2.34 m)
		Draft - Surface Mode	1 ft 9 in (0.53m)
		Draft - Semi-Submerged	3 ft 0 in (.91m)
		Height	5 ft 6 in (1.68m)
		Fuel	130 U.S. Gallons (492 Liters) - Auxiliary tankage may be carried as payload
	<b>Performance</b>	Max. Speed - Surface Mode, Full Load	30 kts (55.6 km/h)
		Max. Speed - Surface Mode, No Pax or Cargo	33 kts (61.1 km/hr)
		Range - Surface Mode (10% Fuel Reserve)	180 nm (333 km) + 20 nm (37 km) reserve = 200 nm (370 km) total
		Max. Speed - Semi-submerged Mode	5.5 kts (10.2 km/h)
		Range - Semi-submerged Mode	Included in Surface Range
		Max. Speed - Submerged Mode	5.5 kts (10.2 km/h)
		Range - Submerged Mode	34 nm @ 2.5 kts / 20 nm @ 3 kts / 11 nm @ 4 kts / 9 nm @ 5.5 kts
		Transition Time	Less than 2 minutes surface-submerged/submerged-surface
<b>Weights</b>	Light Ship Weight	8,900 lbs (4037 kg)	
	Basic Weight (craft + full fuel + 2 crew)	10,350 lbs (4695 kg)	
	Gross Weight (basic weight + payload)	12,000 lbs (5443 kg)	
	Payload	1,650 lbs (748 kg)	
<b>Personnel Capacity</b>	Typical Personnel Configuration	Two (2) crew and four (4) UBA equipped passengers (6 total)	
	Maximum Personnel Configuration ***	Two (2) crew and six (6) UBA equipped passengers (8 total)	
<b>Features</b>	Propulsion - Surface/Semi-Submerged Modes	Single (1) Volvo D6-435 435 HP (320 KW) Turbodiesel with Hamilton 292 Waterjet	
	Propulsion - Submerged Mode	Brushless DC Electric Thrusters	
	Propulsion Battery - Submerged Mode	150 VDC Li-Ion Battery (Saphion - Phosphate Cathode)	
	Propulsion Battery Charging - At Sea	Diesel engine driven charger, 100% SOC in 5-6 hours, 50% SOC in 2-3 hours	
	Propulsion Battery Charging - Shore Power	Shore powered charger, 100% SOC in 5-6 hours, 50% SOC in 2-3 hours	
	Transport		8 ft wide by 40 ft long ISO Flat Rack or Top Loading Shipping Container
			Aircraft (C-130)
			Multi-axle boat trailer
	Launch/Recovery		Multi-axle boat trailer
			Airdrop (Currently not approved)
			Helo External Air Transport
	Observability - Surface	Low acoustic, magnetic, visual, and radar signatures	
	Observability - Submerged	No visual or radar signatures. Acoustic TBD.	
	Maintenance	Nominal TBO: 1000 hours. All systems are easily checked and serviced.	
	Construction	Aluminum hull and foam core fiberglass topskin built to Lloyd's SSC Rules	
	Electrical System	24 VDC ship service electrical system	
	Mechanical Systems	Complies with ABYC standards or acceptable marine practice	
	Weapons	Optional Fore and Aft hard points for 2 gun mounts	
	Seating	Removable Bolster Bars (2) in Pax areas	
	Operational Environments - Surface		Beaufort Sea State Scale 7 – Full mission profile operations
			Beaufort Sea State Scale 8 – Reduced speed mission profile operations
			Beaufort Sea State Scale 9 – Steerable/survivable
		Operational Temperature (air): 20°F to 120°F	
Operational Environments - Submerged		Operational Temperature (water): 35°F to 95°F	
		Maximum Operating Depth: 66ft (20 m)	
		Test Depth: 99ft (30 m [-45 psi])	
		Crush Depth: 150 ft (45 m [-66 psi])	
		Nominal Cache Time: 3 days	

\* Requires Submerged Propulsion Option

\*\* If not equipped with Submerged Propulsion Option Requires Cache Deployment Option

\*\*\* Passengers must remain seated during semi-submerged operation

\*\*\* 2 Passengers must remain seated during surface operation



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