

4500-100 - DPD Performance Specifications

Modes	SUBMERGED	Fully submersible Diver Propulsion Device
	SURFACE	Craft can operate on the surface with very low profile
Description	HULL	Welded marine grade aluminum, hard coat anodized
	FLOATATION	Closed-cell PVC foam core composite.
	VIEWPORT	12 in (30.5 cm) diameter clear polycarbonate.
	CONTROL	Steering and depth control via a single hand operated pitch/yaw control yoke.
	NAVIGATION (STANDARD)	Magnetic compass w/ luminous dial and Depth gauge (standard); RNAV Electronic Navigation System (optional)
	CAPACITY	1 or 2 divers
Dimensions	LENGTH DEPLOYED	87.8 in (223 cm)
	BEAM/WIDTH DEPLOYED*	42.5 in (108 cm)
	HEIGHT DEPLOYED	24 in (61 cm)
	LENGTH STOWED	54.3 in (103 cm)
	BEAM/WIDTH STOWED	24 in (61 cm)
	HEIGHT STOWED	24 in (61 cm)
	CARGO CAPACITY	3 ft ³ (85,000 cm ³), up to 100 lbs (46 kg) of neutrally buoyant cargo.
Weights	WEIGHT (IN AIR)*	169 lbs (76.5 kg)
	WEIGHT (IN WATER)*	0 lbs (0 kg)
Operational Environment	SURFACE	Operational Temperature (air): 20°F to 120°F (-6°C to 48°C)
		Operational Temperature (water): 35°F to 95°F (2°C to 35°C)
	SUBMERGED	Maximum Operating Depth: 115 FSW (35 m)
		Test Depth: 173 FSW (53 m)
		Crush Depth: 260 FSW (79 m)
Nominal Cache Time: 2 days		
Electrical	MOTOR CONTROLLER	Solid state pulse width modulator (PWM) motor controller.
	PROPULSION	Infinitely Variable Speed 26 VDC electric thruster.
	ELECTRIC GAUGES	Brightly lit LED Battery Status Indicator (BSI) graphically displays battery capacity remaining.
Performance Submerged	MAXIMUM SPEED (1 DIVER)	3.2 Knots
	CRUISE SPEED (1 DIVER)	2.3 Knots
	RANGE - MAX SPEED (1 DIVER)	6.5 nm
	RANGE - CRUISE SPEED (1 DIVER)	7.0 nm
	MAXIMUM SPEED (2 DIVERS)	2.7 Knots
	CRUISE SPEED (2 DIVERS)	2.0 Knots
	RANGE - MAX SPEED (2 DIVERS)	5.2 nm
	RANGE - CRUISE SPEED (2 DIVERS)	6.0 nm
Performance Surface	MAXIMUM SPEED (1 DIVER) - SURFACE	2.3 Knots
	RANGE - MAX SPEED (1 DIVER) - SURFACE	5.5 nm
	MAXIMUM SPEED (2 DIVERS) - SURFACE	2.1 Knots
	RANGE - MAX SPEED (2 DIVERS) - SURFACE	5.0 nm
Battery	CHEMISTRY	Lithium-Ion
	WEIGHT (Included in weight of DPD listed above)	66 lbs (30 kg)
	VOLTAGE	33.6 V max, 28 V nominal
	CAPACITY @ 25 c (77 F)	108 Amp Hours
	DISCHARGE	55 A max continuous
	ENERGY @ 25 c (77 F)	3.02 KW
	SHELF LIFE	5+ Years @ 70°C with negligible capacity loss
	CYCLE LIFE (100% DOD)	> 1000
	OPERATING TEMPERATURE	-4°F to 140°F (-20°C to 60°C)
	CHARGING TEMPERATURE	32°F to 140°F (0°C to 60°C)
STORAGE TEMPERATURE	-4°F to 113°F (-20°C to 45°C)	
Charger	CHEMISTRY	STIDD Lithium-Ion Battery ONLY
	WEIGHT	37 lbs (16.7 kg)
	SIZE	20" w X 16" h X 7.5" d (50 cm X 41 cm X 19 cm)
	INPUT POWER	90-230 VAC / 50-60 Hz / 10 A / 1 ph standard
	OPERATION	Fully Automatic
	CHARGE TIME (100% DOD)	< 8 Hours
	INDICATORS	3 LEDs - Charge, Done, Fault
	CHARGING TEMPERATURE	32°F to 140°F (0°C to 60°C)
	STORAGE TEMPERATURE	-4°F to 122°F (-20°C to 50°C)
Certifications	ANU	DPD is the only export controlled " Approved for Navy Use" (ANU) certified diver propulsion device in the world.
	NAVSEA 9310 Certification	DPD Li-Ion Battery is NAVSEA 9310 Certified
	NAVSEA 9290 Certification (Pending)	DPD is Deep Submergence certified (pending).
Users	US SOF Users	As of 01/2009, Over 350 DPDs are in use by Special Operations Forces both in the US and Internationally. US Special Operations Command / US Navy SEALs / US Marine Corps/ US Army Special Forces.
	International SOF Users	As of 01/2009, the DPD is operated by the SOF Maritime Units of twelve (12) sovereign nations.
* May be operated without bow planes which changes beam/width to 24 inches (61 cm)		
# Easily configured in the field to be neutrally buoyant for fresh or salt water operation		
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