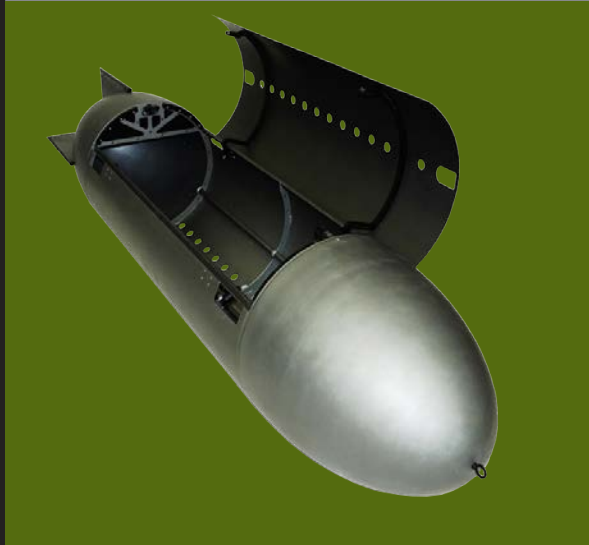
NEW! for 2015

NAVIGATION & PERFORMANCE ENHANCEMENTS



stidd

DPD

DIVER PROPULSION DEVICE

SOF USERS OF STIDD SUB BOATS

www.stiddmil.com

We Built The Best

Combat Diver Vehicle ever . . . and then

Made it Better

NEW!

Navigation and Performance Enhancements *for 2015*

stidd

Over 450 DPDs in Operation Globally

Go All In...

with the most advanced Combat Diver Vehicle available.

The STIDD Diver Propulsion Device (DPD) Designed for and Certified by the U.S. Navy is the most widely used military-grade underwater mobility platform in the world.

Specifications & Features:

Submerged:	Fully submersible Diver Propulsion Device
Surface:	Craft can operate on the surface with very low profile
Hull:	Welded marine grade aluminum, hard coat anodized
Flotation:	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 with luminous dial and depth gauge Optional: RNAV Electronic Navigation System with Doppler Optional: RNAV2 with SONAR and AUTOPILOT
Capacity:	1 or 2 divers (Can tow up to 4 additional divers)
Motor Controller:	Solid state pulse width modulator (PWM) motor controller
Propulsion:	Infinitely Variable Speed 28 VDC electric thruster

Operational Environment:

Surface:	Operational Temperature		
	(air)	20° F to 120° F	(-6° C to 48° C)
	(water)	35° F to 95° F	(2° C to 35° C)
Submerged:	Maximum Operating Depth:		115 FSW (35 m)
	Optional: Deep Submergence (DS):		270 FSW (82 m)
	Maximum Cache Time: 3 days		

Certifications:

ANU	DPD is the only export controlled "Approved for Navy Use"(ANU) certified diver propulsion device in the world
NAVSEA 9310	DPD Li-Ion Battery is 9310 certified
NAVSEA 9290	DPD is Deep Submergence certified (pending)

- PATENTED: U.S. Patent No. 6,615,761
- International Patents Pending

Dimensions:

LENGTH	Deployed:	87.8 in.	(223 cm)
	Stowed:	54.3 in.	(138 cm)
BEAM/WIDTH	Deployed*:	42.5 in.	(108 cm)
	Stowed:	24.0 in.	(61 cm)
HEIGHT	Deployed:	24.0 in.	(61 cm)
	Stowed:	24.0 in.	(61 cm)

* May be operated without bow planes which changes beam/width to 24 inches (61 cm)
* Dimensions vary depending on DPD Model selected

Navigate...

Introducing RNAV2 Precision Navigation SYSTEM for use either MOUNTED in the DPD, or DISMOUNTED for Combat Swimming.

RNAV2 PRECISION NAVIGATION SYSTEM

NEW!

RNAV2 Precision Navigation System (p/n 4600-101) is an innovative electronic navigation system for use by combat divers, mounted in the DPD, or dismounted in seconds for swimming in hand-held mode. In either role, the RNAV2 offers SOF personnel the unprecedented capability of a navigation tool for precise clandestine subsea navigation, mine countermeasures, beach reconnaissance,ship-attack, missions, object identification, etc. The RNAV2 adjustable backlit 8.4" color LCD screen constantly displays the operator's position on a high resolution moving map display for instantaneous situational awareness. Position accuracy of 0.25% over distance traveled is achieved through a suite of high-accuracy on-board sensors and an optimized Kalman filter.

RNAV2 installed in DPD

The RNAV2 is powered by an internal BB-2590/U Li-Ion battery which provides system power for 7+ hours or 4.5+ hours when configured with the 2S Sonar Option forward imaging sonar.

RNAV2 includes the following cutting edge precision accuracy sensors:

- **600kHz Doppler Velocity Log (DVL)**
- **3-axis compass module with sub 1° heading accuracy**
- **Fiber Optic Gyro (FOG) Internal Measurement Unit (IMU)**
- **40 channel GPS with <2.5m position accuracy**
- **Multi-state Kalman filter**

RNAV2 in Combat Swimmer Mode

The battery life is over 1500 full discharge cycles and is recharged though an external recharging port on the unit. Recharge time is <8 hours. The simple to operate ergonomic input devices and user-friendly mission planning software allow all levels of users to create waypoints and routes and easily upload them into the RNAV2.

STANDARD RNAV

RNAV is STIDD's original innovative advanced electronic navigation system, providing enhanced situational awareness for the DPD. The RNAV offers the combat diver precise surface and submerged moving map navigation and bottom scanning sonar via dual displays ergonomically positioned to reduce fatigue and workload. Displayed information includes: position, heading, course, speed over ground, calibration quality, routing waypoints & tracking, altitude with bottom contours, depth below surface and leg and mission timers. Integrated into a proprietary STIDD pressure container with gloved hand push button interface, RNAV provides DPD operators the convenience and confidence of a proven, MOTS, electronic navigation system.

STANDARD RNAV FEATURES:

- The STIDD Recon Navigation (RNAV) system provides surface and submerged moving map navigation as well as bottom sonar capabilities to the STIDD Diver Propulsion Device (DPD).
- Pinpoint accuracy reduces navigation errors and maximizes battery endurance.
- Global map coverage allows for full spectrum of mission planning and execution.
- Self-contained system is ready for mounting into the DPD, in a neutrally buoyant configuration to maximize DPD efficiency.
- Utilizes the on-board DPD "MUSCLES" battery for reliable operation with low power draw.

All the Way to the Objective

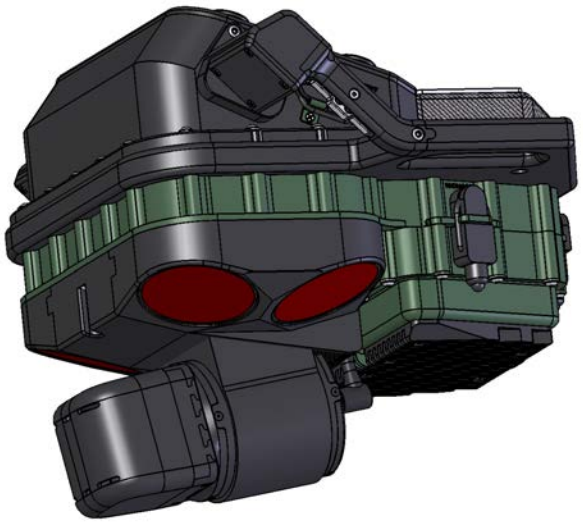
RNAV2 is available with optional Sonar and Autopilot to provide even more capability for complex missions.

S2 SONAR for RNAV2

NEW!

The 2S Sonar Option for RNAV2 (p/n 4600-120) enhances the precision navigation capabilities of the innovative RNAV2, adding high quality forward-looking sonar images to the operator in low- and zero-visibility environments for precise long or short range obstacle avoidance and/or target interrogation.

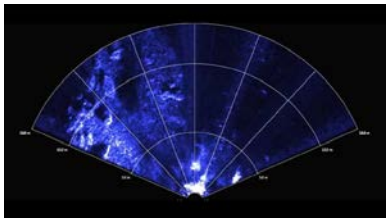
S2 SONAR Option mounted to RNAV2



The 2S Sonar Option for RNAV2 multi-beam multi-frequency sonar images are displayed on and integrated with the RNAV2 navigation software, allowing the operator to seamlessly navigate while viewing full-screen sonar imagery.

Applications for the 2S Sonar Option for RNAV include:

- **Zero visibility Navigation**
- **Object Detection**
- **Obstacle Avoidance**
- **Situational Awareness**
- **Operations Monitoring**
- **Area Survey/Search & Recovery**
- **Diver/Swimmer Detection & Tracking**
- **DPD-mountable and diver swimmable operation for maximum mission efficiency**

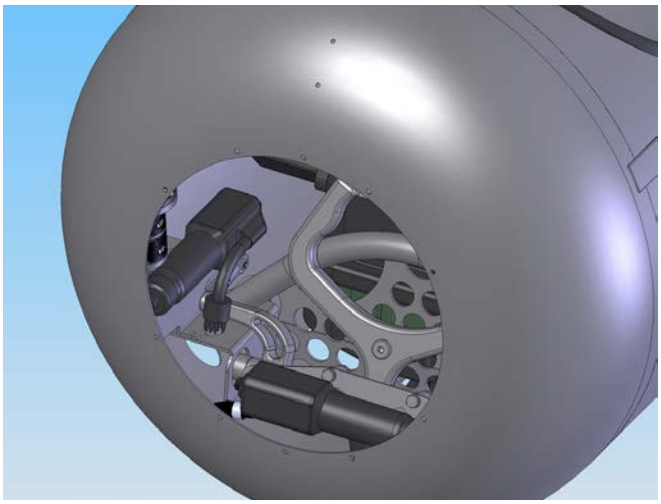


S2 Screen shot

AP2 AUTOPILOT for RNAV2

NEW!

The AP2 Autopilot Option provides exceptional RNAV2 control of the DPD by dynamically adjusting vehicle pitch and heading, automatically keeping the DPD on its programmed or manually-selected course and depth, while accurately compensating for the effects of currents, diver motions, and changes in diver buoyancy.

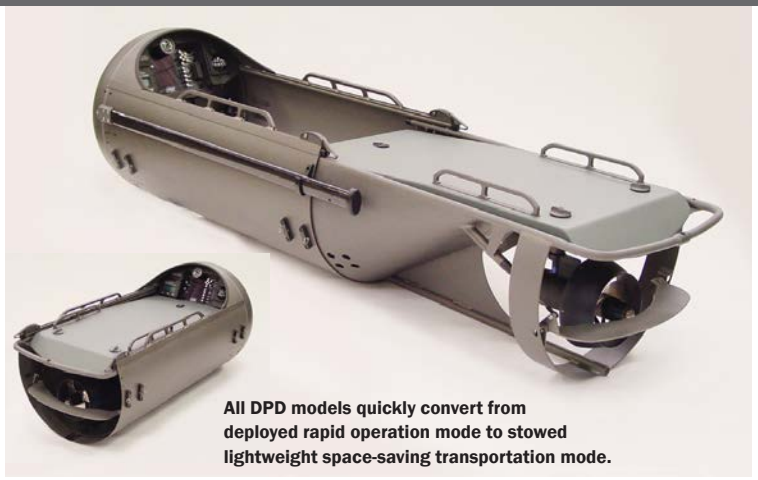


AP2 Autopilot features include:

- **AP2 Autopilot 2-axis control the of the DPD via integrated electro-mechanical actuators fitted to the pitch and rudder linkages of the DPD reduces power consumption, diver workload, and enroute time to destination by eliminating the inherent control inaccuracies of the typical operator.**
- **AP2 eliminates manual heading errors, deviations, depth excursions, and delayed diver response to changing environmental conditions, allowing the operator to focus on critical mission functions.**
- **AP2 Software control algorithms provide a smooth and safe descent/ascent rate, protecting the divers from undesired excursions.**
- **Manual override of RNAV2 commands via the control yoke, allows the operator to quickly change heading or depth when required.**
- **In NAV Mode, the AP2 follows preset routes and depths programmed into the RNAV2 during the mission planning process, transiting directly to a commanded waypoint at a commanded depth.**
- **In HDG Mode, the AP2 follows diver-selected heading commands while maintaining the present depth.**

DPD Models for all Missions . . .

STIDD now offers an expanded lineup of three different DPD Models optimized to execute any mission profile with different combinations of SPEED, RANGE, and PAYLOAD CAPACITY.

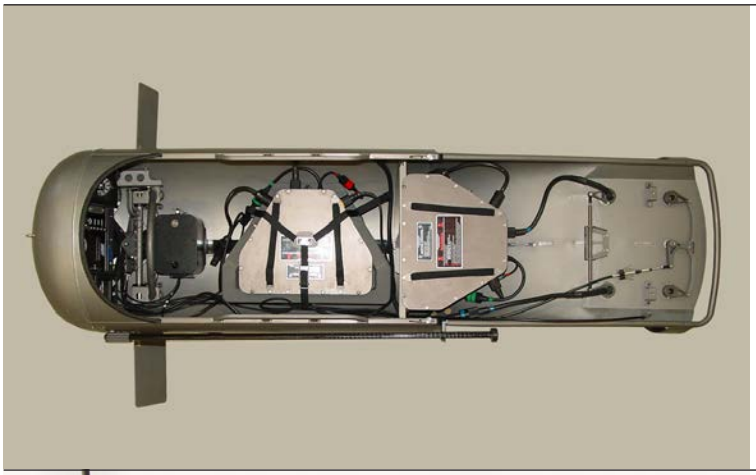


All DPD models quickly convert from deployed rapid operation mode to stowed lightweight space-saving transportation mode.

STANDARD MODEL

The STIDD Diver Propulsion Device (DPD) is the most widely used military-grade underwater mobility platform in the world. The DPD enables divers to travel farther and faster with more payload than previously possible with any other diver propulsion device.

- **NAVSEA 9310 Certified**
- **Approved for US Navy Use (ANU Listing)**
- **Under contract to USMC, US Army, USSOCOM and many International SOF Maritime Units**



EXTENDED RANGE MODEL

With the addition of a second High Capacity "MUSCLES" Lithium-Ion Battery System, the Standard DPD with Extended Range Option effectively doubles the Range.

- **200% the Range of a Standard DPD**
- **Two Batteries Required**
- **Same Dimensions & Certifications as Standard DPD**

DUAL THRUSTER XT MODEL

The DPD with Dual Thruster (DPD-XT) provides operators not only additional speed and range, but also two independently redundant propulsion systems. The DPD-XT maintains all of the Standard DPD's exterior dimensions and certifications. The DPD-XT utilizes two (2) standard DPD batteries which power two (2) standard DPD thrusters. For missions that require extended speed and range, the Dual Thruster DPD is an ideal platform.

- **33% Faster than Standard DPD**
- **Redundant propulsion improves mission safety**
- **Twin high efficiency, low noise direct drive DC thruster motors**
- **Two Batteries**
- **Additional towing capacity: Easily tows 3-4 divers with full load**

All models have the same proven and reliable standard DPD Dimensions and US Navy Certifications.

With All the Power Required

All DPD Models now available with STIDD's High Performance TEC2 Thruster providing Brute Power for Maritime SOF.

NEW!

TEC2 THRUSTER

- Proprietary Magnetically Coupled Drive
- No dynamic seals to maintain
- Innovative Nozzle and Ducted Propeller
- Increased Diver Safety
- Significantly Improved Efficiency
- Self-Regulating Motor Load Electronics for improved reliability

TEC2 High Performance Thruster (p/n 4600-1-200)

DPD-TEC2 (Single Thruster)

DPD-XT-TEC2 (Dual Thruster)

"MUSCLES" LITHIUM-ION POWER SYSTEM

Massive Unit Small Cell Lithium Energy System

Developed to give the DPD a better performing, more reliable, higher value, virtually maintenance-free power source, the DPD Lithium-Ion Battery System utilizes rigid cylinder lithium-cobalt cells - the most advanced, most mature cell technology available. Each "MUSCLES" battery consists of cells arranged in series and parallel arrays, monitored by proprietary control, balancing and safety circuits

U.S. and International Patents Issued and Pending

The DPD Lithium-Ion Advantage

- Maximum Performance with Minimal Maintenance
- NAVSEA 9310 Certified
- May be shipped via commercial cargo aircraft
- Partial cycles are cumulative. No "memory" effect
- Best overall performance and economy of any electric propulsion system

Haul all the Gear...

The DPD provides combat divers three (3) versatile options for carrying combat equipment to include; Internal, External, and Towable POD.

1. INTERNAL CARGO HOLD

Up to 3 ft^3 (85L) of cargo can be stowed in the DPD's forebody section secured by a cargo net. Internal cargo can include diver personal gear or mission equipment. With optional Cargo Bag with Neutral Buoyancy Unit (NBU) Pouches and the optional (NBU) Packs, divers are able to make their internally carried cargo neutrally buoyant.

(Above) Cargo Bag contoured to fit into the DPD cargo area. Once the bag is filled with equipment it can be made neutral with the addition of the NBU Packs.

(Left) Neutral Buoyancy Unit (NBU) Pack contains 64 NBU cells. Each cell provides 1lb (500g) of buoyancy. For use with the Contoured Cargo Bag, or other load out containers.

2. EXTERIOR CARGO TIE-DOWN POINTS

Versatile cargo points, positioned port and starboard on the DPD fore body, allow operators to attach weapons, hooks, and other cargo to the DPD while underway.

NEW!

External Tie Down Cleat

With Maximum Cargo Capacity

When all options are used together operators expand available cargo capacity to over 15 cu-ft (425L) enabling the easy transport of all required gear.

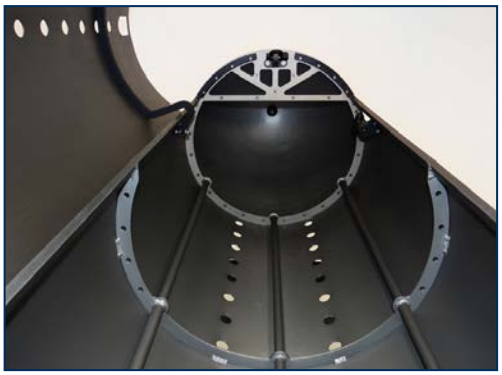
3. CP2 CARGO POD
Low-Drag Towable Capsule

The new CP2 DPD Cargo POD (p/n 4510-400), provides an additional 12 cubic feet (340L) of cargo space with minimal additional drag, when towed behind the Diver Propulsion Device (DPD). Optimized for minimal drag using advanced CFD (Computational Fluid Dynamics), and extensively dive-tested under real world conditions, the Cargo POD is fabricated from marine alloy aluminum and hardcoat anodized for prolonged corrosion resistance and rugged durability. Neutral buoyancy is provided by hard-mounted rigid foam volumes in the nose and tail sections. The 21 inch (0.53m) diameter and 92.5 inch (2.4m) length are compatible with NATO submarine torpedo tubes.

NEW!

DPD Cargo POD features:

- **Hinged Hatch, allowing full access to the interior**
- **Positive spring-loaded gloved-hand operable hatch lock**
- **Internal tie down rails to secure gear**
- **Bow tow-eye for quick link to DPD**
- **Forward and aft Lifting Eyes for fast launch and recovery**
- **Stabilizing stern planes for positive tracking without pitch or yaw**
- **Multiple vents for quick fill/drain**
- **Four (4) Hand Holds for easy manual lift/carry**



(Above) Internal tie down rails to secure gear

Bow tow-eye for quick link to DPD

(Right) Forward and aft Lifting Eyes for fast launch and recovery

CP2 Specifications:

Material:	Marine aluminum alloy
Finish:	Hardcoat anodized
Hardware & fittings:	316L Stainless steel
Cargo Volume:	12 cu-ft (340L)
Cargo Weight (air):	700 lbs (317kg) max
Cargo Access:	Hinged hatch
Cargo Hatch:	18 in x 48 in (0.5m x 1.2m)
Cargo length, max :	66 in (1.7m)
Cargo hatch lock:	Spring-loaded latch
Cargo Tie Downs:	Three (3) 48 in (1.2m) rails
Drag Load:	Minimal
Diameter:	21 in (0.53m)
Length:	93.5 in (2.4m)
Weight, empty (air):	80lbs (36.3kg)
Weight (salt water):	0lbs (0kg)
Lifting Handles:	Four (4)
Lifting Points:	Forward and aft

The POD weighs 80lbs (36kg) in air, and may be loaded with up to 700lbs (317kg) of neutrally buoyant cargo. The POD is towed from the DPD aft tow point. Horizontal and vertical Stern Planes keep the POD aligned within the shadow of the DPD, resulting in minimal additional drag. An additional Cargo POD may be added to double DPD cargo capacity from 12 cu-ft (340L) to 24cu-ft (680L).

DPD OPTIONS & ACCESSORIES

4600-101
RNAV2 Precision Navigation System
Innovative electronic navigation system for use by combat divers, mounted in the DPD, or dismounted in seconds for swimming in hand-held mode. Includes GPS, DVL, KALMAN Filter, internal battery and charger.

4600-102
S2 Sonar Option for RNAV2
Enhances the precision navigation capabilities of the RNAV2, adding high quality forward-looking sonar images to the operator in low and zero visibility environments for precise long or short range obstacle avoidance and/or target interrogation.

4600-120
AP2 Autopilot Option for RNAV2
Provides exceptional RNAV2 control of the DPD by dynamically adjusting vehicle pitch and heading, automatically keeping the DPD on its programmed or manually selected course and depth, while accurately compensating for the effects of current, diver motion, and changes in diver buoyancy.

4600-121
RNAV2 Tactical Mission Planning/Debrief Terminal
The mission planning workstation allows for a computerized method of planning and optimizing mission parameters for use with the RNAV2 navigation system. Post mission debriefing capabilities allows the users to review actual tracks and transit depths, recorded sonar images, marked target positions etc.

4600-125
RNAV2 DPD Mount & Mounting Provisions
Includes all DPD modifications and hardware required to mount and operate the RNAV2 in the DPD.

4600-126
RNAV2-S2 DPD Mount & Mounting Provisions
Includes all DPD modifications and hardware required to mount the RNAVS2 in the DPD. Requires 4600-125 RNAV2 DPD Mount & Mounting Provisions.

4600-127
GPS Float
Deployable/retractable GPS antenna cable reel with a 15m deployment length. GPS antenna in a buoyant pressure-proof float easily deploys to the surface by releasing out the minimum cable necessary to reach the surface. Clandestine low-viz GPS float quickly re-acquires signal even in heavy seas. Cable retracts via the hand crank spool eliminating the requirement to manually wrap the cable around a fixed spool. Other cable lengths available upon request.

4510-256
Standard RNAV with Doppler
High accuracy flat-screen electronic moving map navigation system for DPD. Provides exceptional accuracy for surface and submerged situational awareness on dimmable dual displays using GPS, DVL and heading sensor input data.

4510-258
RNAV Mission Planner
(Only for use with Standard RNAV)
Enables full mission planning during operational preparation and transfer of information from mission planning PC to one or multiple RNAV systems. Download mission tracks recorded by the RNAV system to PC for mission debriefing. Includes: PC-Planner software, C-Map chip reader and 2MB user card.

4510-259
RNAV "C-Map" Digital Electronic Charts
(Only for use with Standard RNAV)
Universally recognized database. Provides reliable topographic, obstruction, depth, navigational aid, and bathymetric data, worldwide. Specify required area of coverage.

4510-259
RNAV "C-Map" Digital Electronic Charts
(Only for use with Standard RNAV)
Universally recognized database. Provides reliable topographic, obstruction, depth, navigational aid, and bathymetric data, worldwide. Specify required area of coverage.

4510-252
Deployable GPS Antenna
Pressure–proof GPS antenna on 49.5 inch (126 cm) locking and pivoting mast. Mounts to existing DPD. Provides signal to RNAV while submerged. Cable and connector included

4510-112
DPD "MUSCLES" Li-Ion Battery Charger
Charges one (1) DPD Li-Ion Battery from full discharge to full charge in eleven (11) hours.
(NSN 6130-01-536-0585)

4510-118
Spare DPD " MUSCLES " Li-Ion Propulsion Battery
Contained in sealed Pressure-Proof Battery Container.
(NSN 6140-01-536-0008)

4510-130
DPD Contoured Cargo Bag w/NBU Pouches
Cargo bag contoured to fit into the DPD cargo area and be made neutral with NBUs (p/n 4510-944)

4510-131
Heavy-Duty Carry Bag DPD (A)
Protective Nylon zippered bag for hand-carrying the DPD.

4510-137
Maintenance Cart (B)
Wheeled cart for use when servicing or storing the DPD.

4510-138
DPD All Terrain Dolly (C)
Wheeled cart with welded aluminum frame, four (4) all-terrain tires and collapsible handle. Launches the DPD over rough terrain and over the beach to water.

4510-155
Reusable Shipping Container (D)
Molded IATA-Approved HDPE Container with foam inserts. For one (1) DPD plus Battery and Accessories. Stainless Hardware.
(NSN 8145-01-536-1002)

DPD OPTIONS & ACCESSORIES

4530-9-332
Unique Identification (UID) Tag
Provides for the coding, identification and marking of DPD and selected options in compliance with MIL STD 130

4510-920
Extended Range Option
Doubles the range of a DPD, includes: B-Link Electronic Interface, Neutral Buoyancy Cradle, Installation Hardware and O&M Manual. A second (spare) DPD "MUSCLES" Li-Ion Battery is required (p/n 4510-118).
(NSN 4220-01-536-1467)

4510-935
Operational Spare Parts & Consumables
Includes the parts and consumables to operate one (1) DPD for approximately four (4) years.
(NSN 4220-01-538-5983)

4510-940
Long Term Maintenance Spare Parts
Includes all spare parts required to perform DPD depot maintenance and non-warranty repair for one (1) DPD for approximately four (4) years.
(NSN 2590-01-536-1576)

DPD Electrical Diagnostic Bench Test Kit is included with DPD Long Term Maintenance Special Tools.

DPD Thruster Bench Test Power Supply is included with DPD Long Term Maintenance Special Tools.

4510-941
Long Term Maintenance Special Tools
Includes all special tools required to perform depot level maintenance.
(NSN 4220-01-536-1448)

4510-944
Neutral Buoyancy Unit (NBU) Pack
Contains 64 NBU cells, each cell provides 1 lb. (500g) of buoyancy. For use with Contoured Cargo Bag (p/n 4510-130) or other load out container.
(NSN 4220-01-538-5980)

DEEP SUBMERGENCE DPD OPTION
270 FSW (82m)

4500-100-DS
Deep Submergence DPD Vehicle
Includes: All required NAVSEA Approved components to extend transport/operating depth to 270 FSW (82m), including: Deep Submergence DPD "MUSCLES" Li-Ion Propulsion Battery in sealed Pressure-Proof Battery Container (p/n 4510-118-DS), Deep Submergence rated Thruster and Throttle pressure containers; and O&M Manual (p/n 4510-125). Charger (p/n 4510-112) not included.

4510-118-DS
Deep Submergence DPD BATTERY
"MUSCLES" Li-Ion Propulsion Battery Same configuration as a standard DPD battery, but housed in a NAVSEA approved Machined Billet pressure container. When combined with Deep Submergence Upgrade Kit (p/n 4510-253), extends the transport/operating depth of a DPD (p/n 4510-100) to 270FSW (82m).

4510-253
Deep Submergence Upgrade Kit
Kit includes all required NAVSEA approved components to increase transport/operating depth of a standard DPD (p/n 4510-100) to 270 FSW (82m). Deep Submergence Upgrade kit does not include DPD Deep Submergence Li-Ion Propulsion Battery (p/n 4510-118-DS), which must be purchased separately.

4510-943
Provisioning Parts List (PPL)
Listing of all recommended replaceable parts and LRUs for the DPD with current FY pricing. 4510-200 Field Service Kit All tools required to service and maintain the DPD while in operational deployment.
(NSN 4220-01-538-5984)

4510-210
Deployment Load Out Kit
All parts and consumables required to support the DPD during both operational deployment and emergency field repairs for one (1) DPD for approximately four (4) years. (NSN 4220-01-538-5985)
4510-125 DPD O&M Manual CD format, in plastic case.

4510-931
Advanced Maintenance & Repair Training Course (Level 2)
Comprehensive two (2) day Instructional course for up to ten (10) students, performed at the STIDD facility or customer facility, covering all aspects of DPD maintenance and repair including troubleshooting and repair of key DPD components. Includes instructor travel costs.
(Requires p/n 4510-940 and p/n 4510-941)

4510-932
Factory Technical Support

4510-933
ON-SITE Technical Support *

4510-934
ON-SITE Operational Training and Support *

4510-220
Load Out Training & Support
(Required with p/n 4510-210)

* For services rendered in CONUS. Consult factory for details.

MILITARY EXHIBIT SCHEDULE & IN-WATER DEMOS

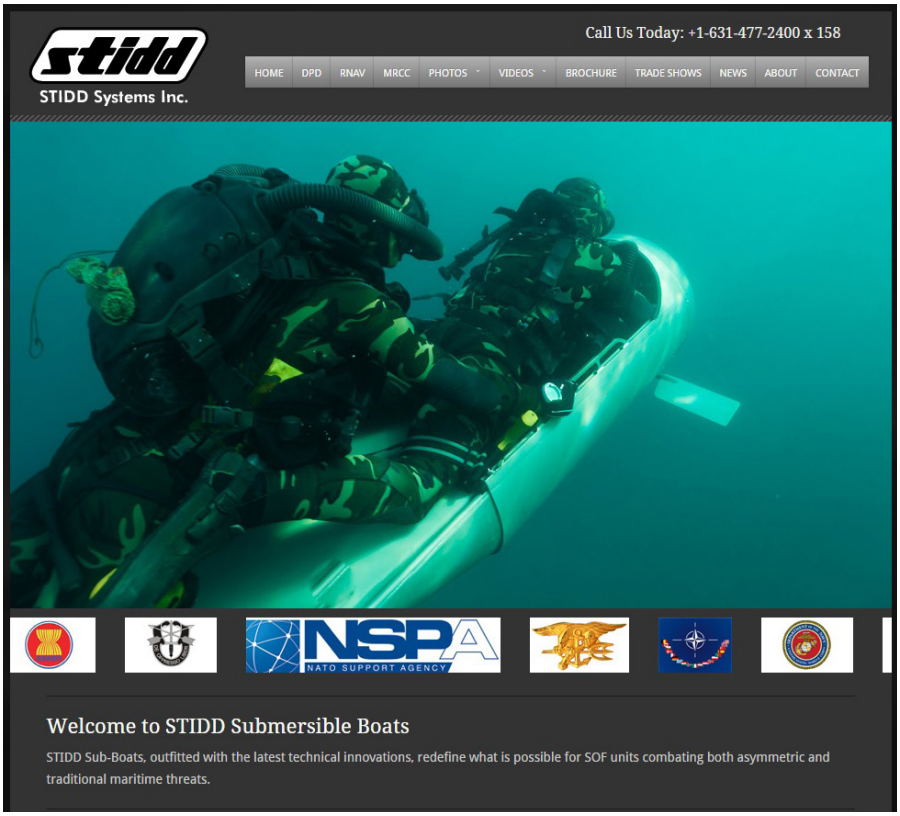
Our military exhibit booth is an ideal place to see STIDD Sub Boats and discuss your requirements with STIDD's team of expert acquisition specialists. Please check our website for exact show dates.

STIDD also invites approved users to visit our Sub Boat Test Facility in South Florida for in-water demonstrations.
On-site demonstrations at customer's facility are also possible.
Contact STIDD for more details

With over 450 units in operation by US and International Special Operations Forces (SOF), the STIDD DPD is the most widely used Combat Diver Propulsion Vehicle (DPV) in the world.

STIDD Systems, Inc. is proud to support these Military Units and International Organizations, including:

- U.S. Special Operations Command
- United States Marine Corps
- Navy Special Warfare Command
- Army Special Forces Command
- North Atlantic Treaty Organization (NATO) Members and Major Non-NATO Allies (MNNA)
- Association of South East Asian Nation Members (ASEAN)



stiddmil.com

The STIDD Military Products website includes the latest, most up to date unclassified information on STIDD Military Submersibles
To become an authorized STIDD Military Website User Contact: 631-477-2400 ext 158 or e-mail sales@stiddmil.com

GSA Advantage!® www.gsaAdvantage.gov

- **DPD (Diver Propulsion Device) Items**
  Items are on GSA Contract No. GS-07F-0101K
  www.gsaadvantage.gov
- **STIDD Systems is a Small Business Entity.**
- **STIDD Submersible Boats are subject to ITAR controls.**
  US Department of State DTC license required for export.

www.stiddmil.com

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email: sales@stidd.com

CAGE CODE 0W5E3

U.S. and International Patents Issued and Pending.