

**stidd**

**NEW!**

## DPD System 2

Optionally-Manned Vehicles  
with Navigation & Control  
for EOD & Maritime SOF

CATALOG

**20**

**stidmil.com**



MADE IN U.S.A.



# Manned or Autonomous... The “All-In-One” Vehicle

**Moving easily between manned and autonomous roles, STIDD’s new generation of propulsion vehicles provide operators innovative options for an increasingly complex underwater environment.**

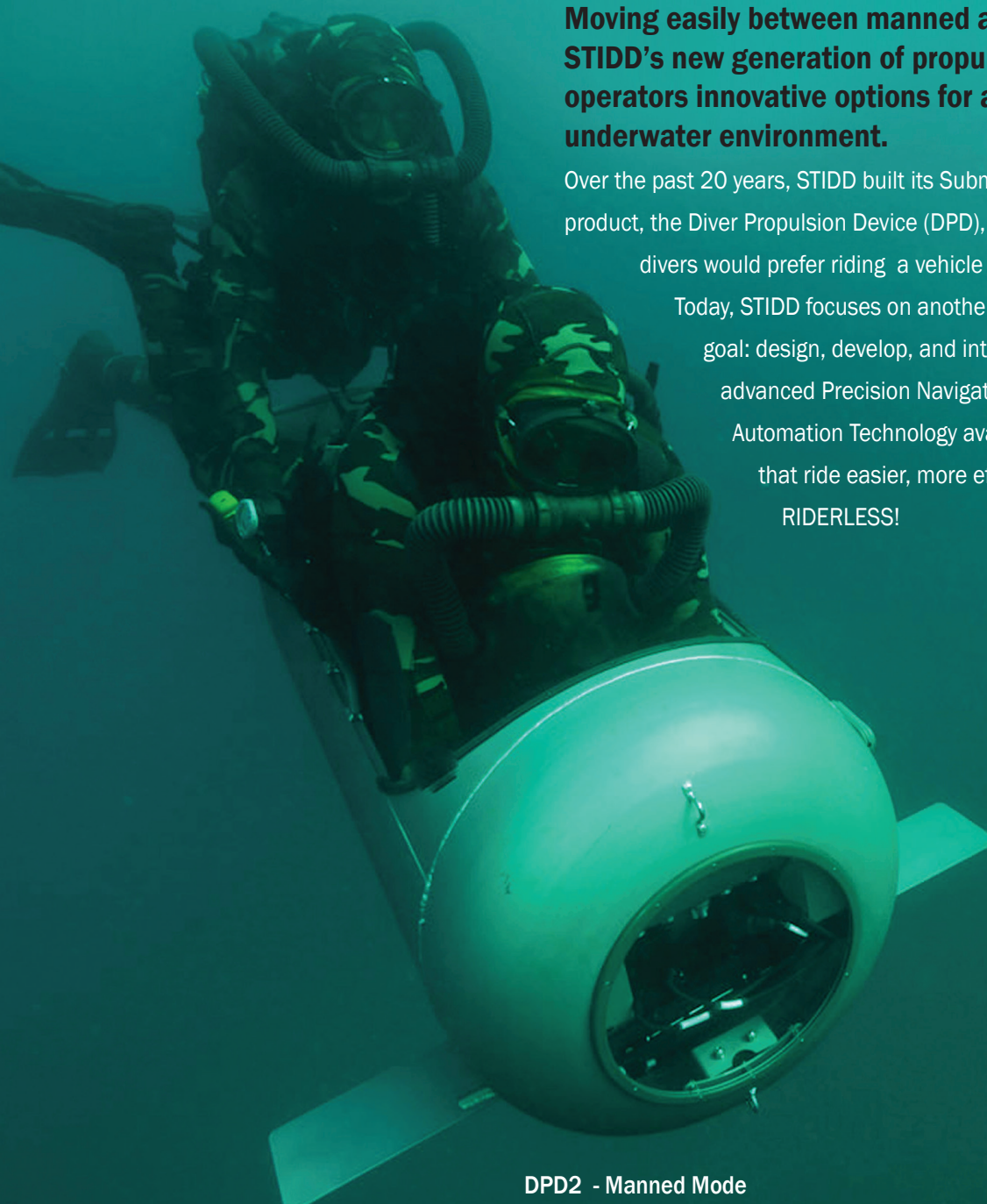
Over the past 20 years, STIDD built its Submersible line and flagship product, the Diver Propulsion Device (DPD), around the basic idea that divers would prefer riding a vehicle instead of swimming.

Today, STIDD focuses on another simple, but transformative goal: design, develop, and integrate the most

advanced Precision Navigation, Control and

Automation Technology available into the DPD to make that ride easier, more effective, and when desired . . .

RIDERLESS!



DPD2 - Manned Mode



DPD2 - OM2 Mode

# Precision Navigation, Control & Automation System for the DPD



Building on the legacy of its Diver Propulsion Device (DPD), the most widely used combat vehicle of its kind, STIDD designed and developed a system of DPD Navigation, Control and Automation features which enable a seamless transition between Manned and fully Autonomous modes.

RNAV2 was developed by STIDD partnering with Greensea as the backbone of this capability. RNAV2 is powered by Greensea's patent-pending OPENSEA™ operating platform, which not only enables RNAV2's open architecture, but also seamlessly integrates STIDD's OM2/AP2 Autopilot/S2 Sonar products into an intuitive, easy to use, autonomous system. When fully configured with the Precision Navigation, Control & Automation System including RNAV2/OM2/AP2/S2, any DPD easily transitions between Manned, Semi-Autonomous, and Full-Autonomous modes.



DPD with RNAV2 Installed

## PRECISION NAVIGATION, CONTROL & AUTOMATION SYSTEM

**RNAV2**



### PRECISION NAVIGATION & CONTROL

- Ensures Precise Clandestine Navigation
- Intuitive, User-Friendly Interface
- Open Architecture System
- Diver-Portable and DPD-Mounted in single form factor

Optionally-Manned

**OM2**



### MANNED TO AUV

- Automates key DPD Functions
- Communicates between DPD and other Vehicles

**AP2**



### AUTOPILOT

- Provides accurate 2 Axis Heading Control of the DPD and 4th Axis Depth Control

**S2**



### SONAR

- Enhances Precision Navigation
- Allows Obstacle Avoidance and Target Identification



**NEW!**

## Introducing **RNAV2** **PRECISION NAVIGATION SYSTEM**

for DPD-Mounted, Diver-Portable & DPD-OM2 Missions.

RNAV2 Precision Navigation System (p/n 4600-101) is an innovative electronic navigation system that can be either mounted in the DPD to enable precision navigation by combat divers, or without divers for Optionally-Manned Vehicle (OM2) missions. Additionally, the RNAV2 can be dismantled in seconds for swimming in hand-held mode. In any 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, and AUV operations.

The RNAV2 adjustable back-lit 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 0.5% over distance traveled is achieved through a suite of high-accuracy on-board sensors and an optimized Kalman filter.

The RNAV2 is powered by an internal BB-2590/U Li-Ion battery which provides system power for 7+ hours or 5+ hours when configured with the 2S Sonar Option forward imaging sonar.

The battery life enables 1500 full discharge cycles and is recharged through an external recharging port on the RNAV2.

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.

# Navigate your way...



DPD with RNAV2 Installed

**RNAV2, AP2 Autopilot,  
and OM2 run on  
Greensea proprietary  
software**



RNAV2, OM2 and AP2 Autopilot are powered by Greensea's proprietary Balefire software, which provides easy-to-use, highly accurate navigation and control system applications for military and commercial use. Surveillance, detection, identification, and prosecution of targets can be executed efficiently and repeatedly with the exclusive proprietary RNAV2/Greensea package.

The AP2 Autopilot provides instantaneous heading and depth control for a stable platform and pinpoint navigational accuracy. Stability and control translates to accurate, reliable mission performance, while divers in hostile environments are free to focus on the mission rather than vehicle control.

### **Greensea proprietary features:**

- Station keeping
- Alarm management
- Target tracking
- Target-relative positioning
- Dynamic positioning
- Mission execution
- Single-screen, intuitive interface

Greensea's reliability, presentation, and performance make it the choice of leading military and scientific operators of manned, unmanned, subsea, and surface vessels worldwide.

**Greensea partners with STIDD Systems, Inc. to provide advanced custom solutions for the DPD, RNAV2, AP2, OM2, and other diver products.**



# to Mission Success

**NEW!**

## OM2

### Optionally-Manned Vehicle Package

OM2 is a transformative system of vehicle control features that enable full remote autonomous control of the DPD.

#### M2AV features include:

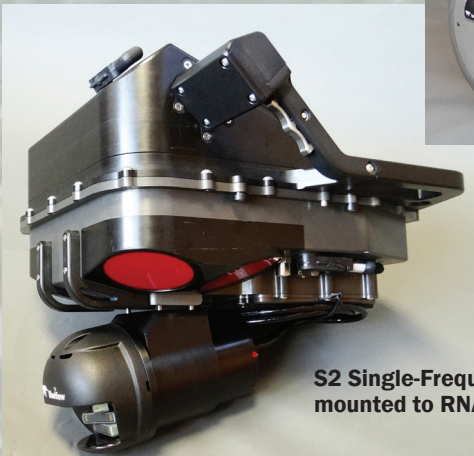
- Automated Antenna Mast
- Automated Throttle Control
- Communications Receiver
- Network Sensor Integration Hub

**NEW!**

## S2 SONAR for RNAV2

The S2 Sonar Option for RNAV2 (p/n 4600-102) 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.

- Snap-in for DPD Navigation
- Snap-out for Swimming Navigation



S2 Single-Frequency Sonar mounted to RNAV2

#### Applications for the 2S Sonar Option for RNAV2 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



**NEW!**

## AP2 AUTOPILOT for RNAV2



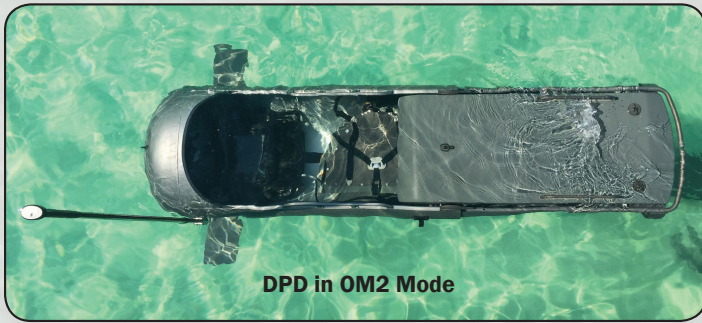
The AP2 Autopilot Option provides exceptional RNAV2 control of the DPD by dynamically adjusting vehicle pitch and heading, automatically keeping the DPD on its programmed or manually-selected course and depth, while accurately compensating for the effects of currents, diver motions, and changes in diver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

#### AP2 Autopilot features include:

- AP2 Autopilot 2-axis control 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.
- The 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.



# DPD2 Precision Navigation, Cont



DPD in OM2 Mode

## DPD2-DIVER PR

The DPD designed for and certified by the U.S. Navy as the most advanced mobility vehicle in the world.

### DPD Certifications:

- **AMU** DPD is the only export controlled "Approved" certified diver propulsion device in the world.
- **NAVSEA 9310** DPD Li-ION Battery is 9310 Certified
- **NAVSEA 9290** DPD is Deep Submergence Certified
- **NATO NSN** NATO (National) Stock Number

\*PATENTED: U.S. Patent No. 6,615,761 \* International



## OM2

OM2 is a transformative system of vehicle control features that enable full remote autonomous control of the DPD while maintaining manned capability.

### OM2 features include:

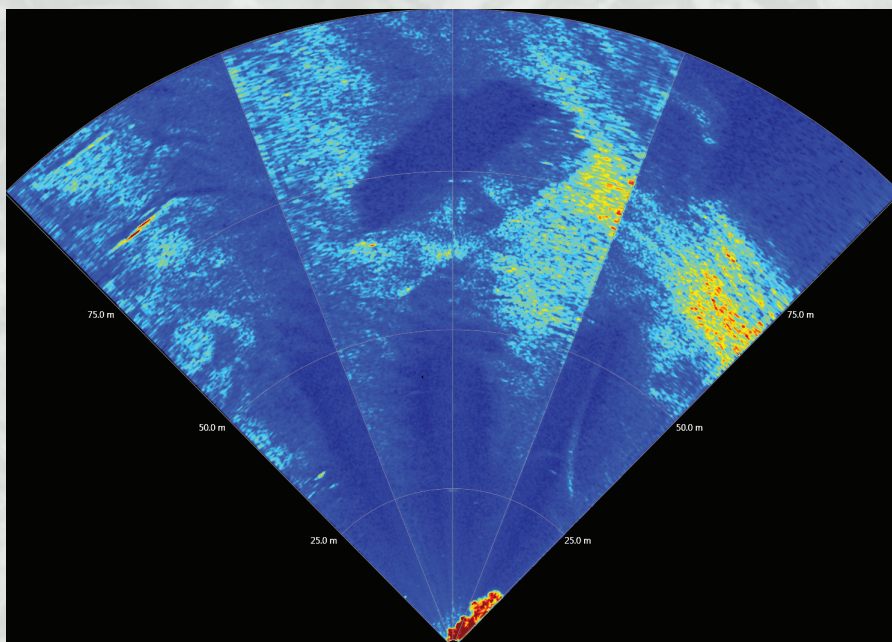
- **Automated Antenna Mast**
- **Automated Throttle Control**
- **Communications Receiver**
- **Network Sensor Integration Hub**

## S2 SONAR

The 2S Sonar Option for RNAV2 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 Applications include:

- **Object Detection / Obstacle Avoidance**
- **Situational Awareness**
- **Operations Monitoring**
- **Area Survey/Search & Recovery**



S2 Sonar 100m range 900kHz



DPD with fore/aft cutaways exposing ins



## RNAV2-PRECISION

RNAV2 is an innovative electronic navigation system for precision navigation by divers, or without divers for AUV mission. It constantly displays the operator's position on a map for situational awareness. Position accuracy of 0.25% over distance is achieved using sensors and an optimized Kalman filter. The RNAV2 is powered by an internal BB-2590/Li-Ion battery. It is simple to operate ergonomic input devices and user interface to create waypoints and routes and easily upload them to the vehicle.

### RNAV2 includes the following cutting edge:

- **600kHz Doppler Velocity Log (DVL)**
- **3-axis compass module with sub .5° heading accuracy**
- **Fiber Optic Gyro (FOG) Internal Measurement**
- **40 channel GPS with <2.4m position accuracy**
- **Multi-state Kalman filter**



# Control & Automation System Layout

## PROPULSION DEVICE

is the most widely used military-grade underwater

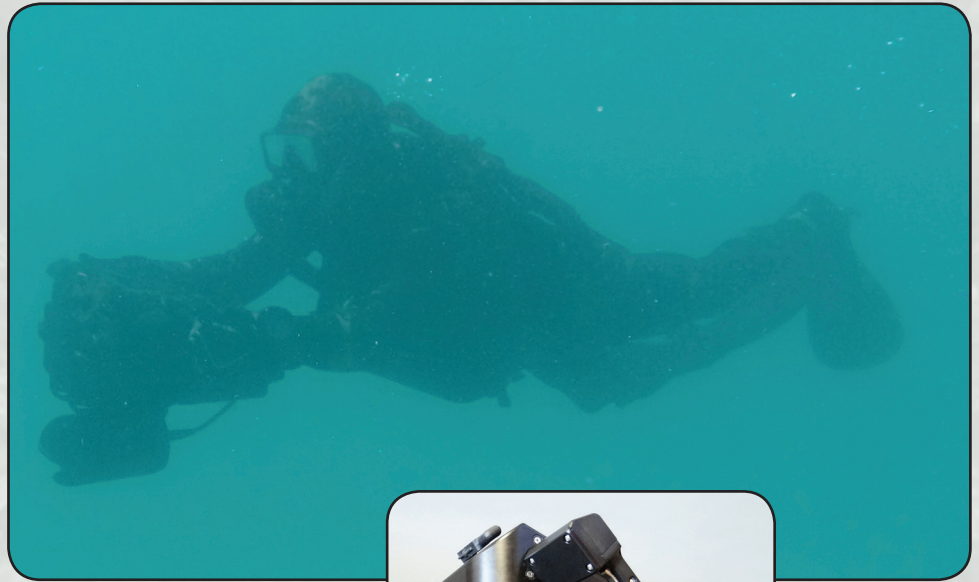
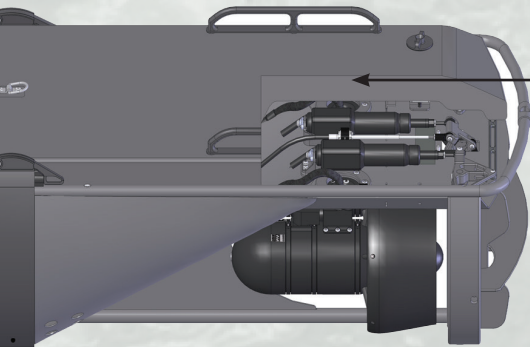
Approved for Military Use" (AMU)

Certified

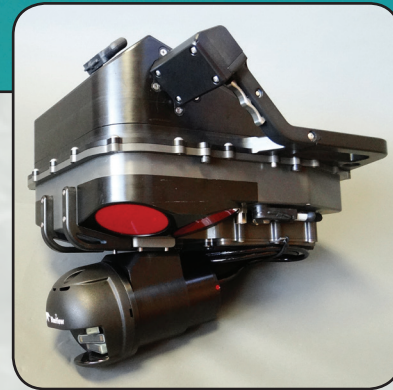
Certified (pending)

Patents Pending

Installed RNAV2 and AP2 actuators



RNAV2 with S2 SONAR mounted in Diver Portable mode



## NAVIGATION & CONTROL

System that can be either mounted in the DPD to enable precision missions. The RNAV2 adjustable back lit 8.4" color LCD screen high resolution moving map display for instantaneous situational awareness. Distance traveled is achieved through a suite of high-accuracy on-board

Li-Ion battery which provides system power for 7+ hours. The user-friendly mission planning software allow all levels of users to interface into the RNAV2.

### High precision accuracy sensors:

Heading accuracy  
Inertial Measurement Unit (IMU)  
Depth accuracy

## AP2 AUTOPILOT

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 heading control and 4th axis depth control of the DPD via integrated electro-mechanical actuators fitted to the pitch and rudder linkages of the DPD
- The AP2 eliminates manual heading errors, deviations, depth excursions, and delayed diver response to changing environmental conditions.
- AP2 Software control algorithms provide a smooth and safe descent/ascent rate, protecting the divers from undesired excursions.



# One Vehicle. . . Many Missions

When equipped with the complete Navigation, Control and Automation System, the DPD's inherent speed, endurance, and payload capacity enable operators to conduct an unprecedented range of missions in Manned, Semi-Autonomous and Full Autonomous Mode . . . all with the same DPD!

DPD MODE	EQUIPMENT	FEATURES	MISSIONS
 <b>MANNED</b>	<b>RNAV2</b>	<ul style="list-style-type: none"> <li>Precision Navigation</li> </ul>	<ul style="list-style-type: none"> <li>ISR</li> <li>Infil/Exfil</li> <li>Beach Survey</li> <li>Payload Delivery</li> <li>MCM</li> <li>CT - Piracy / Narcotics</li> <li>Over-Watch of CACHE site</li> <li>Near Land / Harbor Monitoring</li> <li>Deploy - Leave Behind Sensors / Arrays</li> <li>Search &amp; Recovery Operations</li> <li>MUM-T Operations</li> <li>Rapid Environmental Assessment</li> </ul>
	<b>AP2</b>	<ul style="list-style-type: none"> <li>Increased Operator Situational Awareness</li> </ul>	
	<b>S2</b>	<ul style="list-style-type: none"> <li>Reduced Operator Workload</li> </ul>	
 <b>MANNED &amp; OM2</b>	<b>RNAV2</b>	<ul style="list-style-type: none"> <li>Low Operator Effort Transits</li> </ul>	
	<b>AP2</b>	<ul style="list-style-type: none"> <li>Low Operator Training Required</li> </ul>	
	<b>S2</b>	<ul style="list-style-type: none"> <li>Route/Mission Changes from Remote C<sup>2</sup> Nodes</li> </ul>	
 <b>OM2</b>	<b>OM2</b>	<ul style="list-style-type: none"> <li>On-Call Resupply/Extraction</li> <li>Fully Autonomous Capability - NO Operator Required</li> </ul>	



GreenSea provides navigation, control, and autonomy products for marine vehicles based on their patent-pending OPENSEA™ operating platform. Over 700 systems have been installed on manned, unmanned, surface, and subsea vehicles. [www.greenseasystems.com](http://www.greenseasystems.com)



RNAV2 with S2 Sonar is also Diver Portable for Clandestine, Short Duration Dives requiring Precision Navigation.

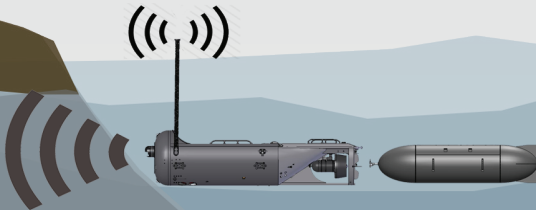


# DPD System 2 Mission Scenarios

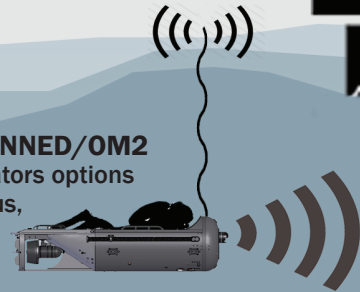
Switching easily between Manned, Semi-Autonomous, and Full Autonomous modes, the DPD configured with the complete Navigation, Control and Automation System can perform an unprecedented number of missions.



**DPD-OM2**  
OM2 transforms DPD2 into a fully autonomous vehicle.  
*(Shown with optional CP2 Cargo POD)*



**DPD-MANNED/OM2**  
OM2 provides operators options for semi-autonomous, or fully autonomous vehicle modes



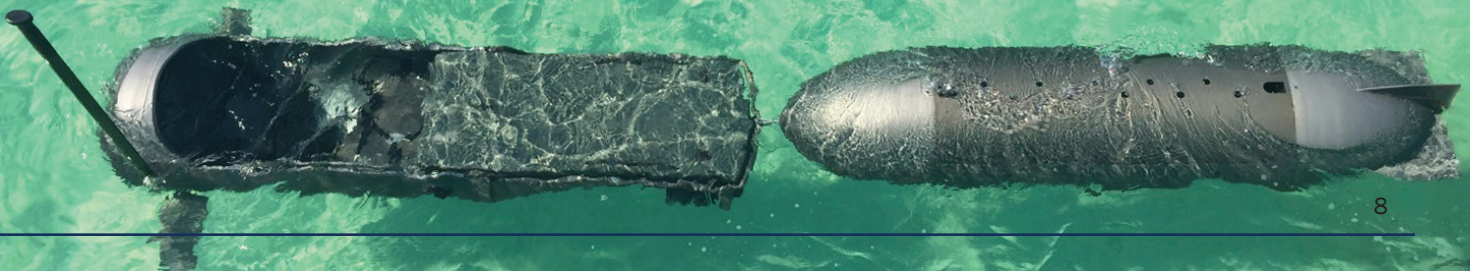
**DIVER PORTABLE**  
RNAV2 enables short duration dives requiring Precision Navigation



**DPD-MANNED**  
AP2 Autopilot reduces operator workload / increases situational awareness



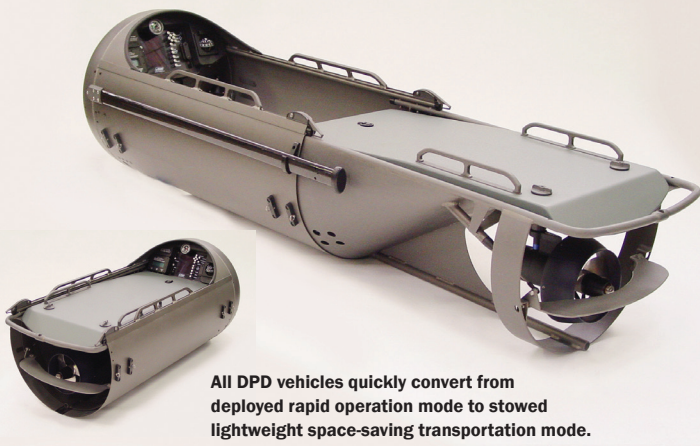
STIDD's DPD2, when configured with the complete RNAV2 controlled Precision Navigation and Automation System, provides the benefits of Manned-Unmanned Teaming (MUM-T) operations, where the combined strengths of each capability can be optimized to increase overall situational awareness and navigational accuracy. Using the unmanned element of MUM keeps the manned assets safe and improves overall mission effectiveness.



STIDD now offers an expanded lineup of three different DPD2 Vehicles optimized to execute any mission profile with different combinations of **SPEED, RANGE, and PAYLOAD CAPACITY.**

# DPD2

## Vehicles for All Missions .



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

### SINGLE THRUSTER (TEC2)

p/n 4500-100-TEC

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 Military Use (AMU Listing)
- Under contract to USMC, US Army, USSOCOM and many International SOF Maritime Units

### SINGLE THRUSTER (TEC2) EXTENDED RANGE

p/n 4500-100-TEC-ER

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

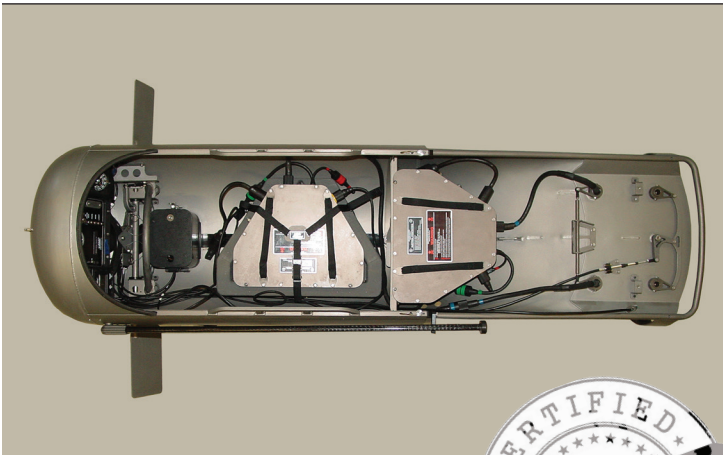
- 200% the Range of a Single Thruster DPD
- Two Batteries Required
- Same Dimensions & Certifications as Standard DPD

### DUAL THRUSTER (XT)

p/n 4500-100-XT-TEC

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 DPD exterior dimensions and certifications. The DPD-XT utilizes two (2) standard DPD batteries which power two (2) TEC2 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 DPD VEHICLES ARE CERTIFIED APPROVED FOR MILITARY USE (AMU)**





All DPD Vehicles are now available with STIDD's High-Performance TEC2 Thruster providing Brute Power for Maritime SOF

... with all the Power Required.

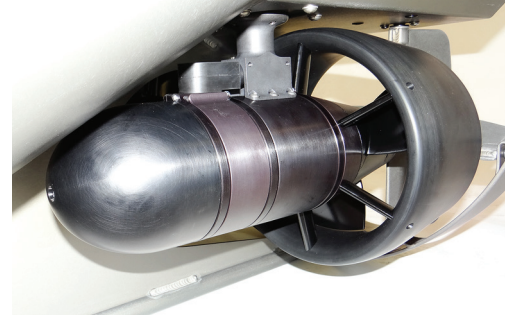
## High Performance TEC2 THRUSTER

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

### Brute Power for Maritime SOF

All DPD vehicles are available with STIDD's NEW high-efficiency TEC2 Thruster, which provides a 25% increase in speed over our standard MIK 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

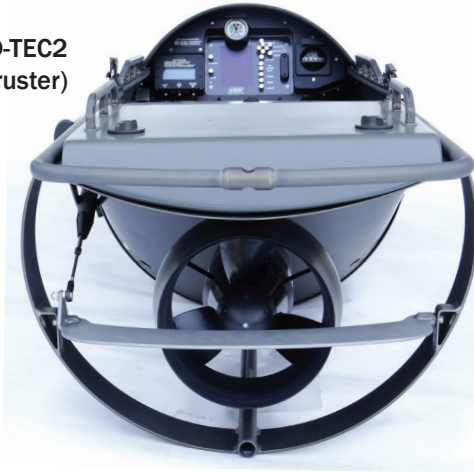


### MAXIMUM DPD SPEEDS\*

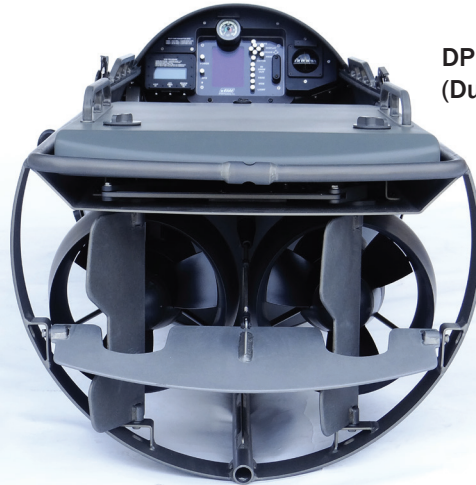
DPD (Single MIK Thruster)	2.7kt
DPD-XT (Dual MIK Thruster)	3.5kt
DPD-TEC2 (Single TEC2 Thruster)	3.5kt
DPD-XT-TEC2 (Dual TEC2 Thruster)	4.2kt

\*All DPD speed & range values are based upon (1) diver. Actual performance may vary with diver, training, environmental conditions and equipment.

DPD-TEC2  
(Single TEC2 Thruster)



DPD-XT  
(Dual TEC2 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



### 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

p/n 4510-120

U.S. and International Patents Issued and Pending



The DPD provides combat divers versatile options for carrying combat equipment including Internal, External, and Towable Cargo POD.

## 1. INTERNAL CARGO HOLD

Up to 3 ft<sup>3</sup> (85L) of cargo can be stowed in the DPD's fore body 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.



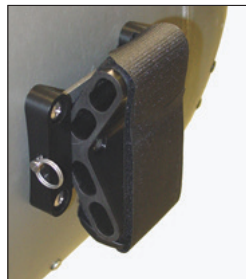
(Above) Cargo Bag contoured fits into the DPD cargo area. Once the bag is filled with equipment it can be made neutral with the addition of the NBU Packs.



(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.

# Haul all the Gear. . .

*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.*



External Tie Down Cleat

## 2. EXTERIOR CARGO TIE-DOWN POINTS

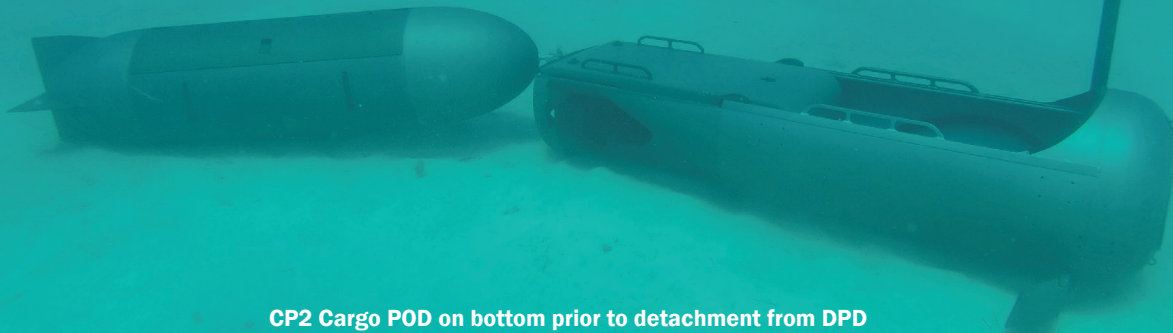
Versatile cargo points, positioned port and starboard on the DPD fore body, allow operators to attach weapons, hooks, and other cargo to the DPD while underway.



CP2 Cargo POD towed by DPD in OM2 mode



# ... with Maximum Cargo Capacity



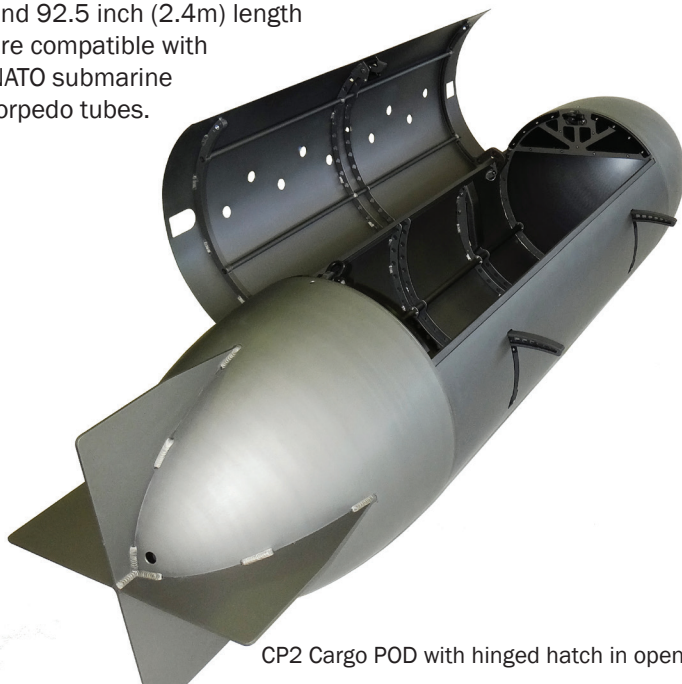
CP2 Cargo POD on bottom prior to detachment from DPD

• The Cargo POD weighs 80lbs (36kg) in air, and may be loaded with up to 700lbs (317kg) of neutrally buoyant cargo. • The Cargo POD is towed from the DPD aft tow point. • Horizontal and vertical Stern Planes keep the Cargo 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).

## 3. CP2 CARGO POD Low-Drag Towable Capsule

p/n 4580-100

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.



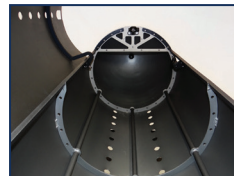
CP2 Cargo POD with hinged hatch in open position

### CP2 Cargo POD features include:

- 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

### 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



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



# DPD2 OPTIONS & ACCESSORIES

## **4600-101 RNAV2 Precision Navigation & Control 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**

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**

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.

## **4600-200 OM2 Optionally-Manned Vehicle Package**

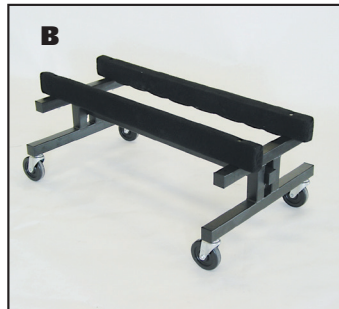
Provides a series of vehicle control features that enable full remote, autonomous control of the DPD

## **4600-111 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.

## **4600-127 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.



## **4510-131 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.

## **4510-112 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)

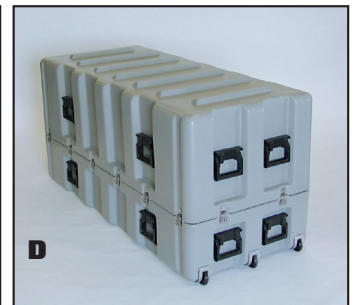
## **4510-120 Spare DPD "MUSCLES" Li-Ion Propulsion Battery for TEC2**

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)



## **4510-138 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)



# DPD2 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

(Left) Doubles the range of a DPD, includes: B-Link Electronic Interface, (shown left) 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)

## 4510-940 TEC2

### 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 TEC2

### 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)

## 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)

## 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.

## 4510-210 TEC2

### 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.

## 4510-930

### Basic Maintenance & Operator Training Course (Level 1)

Comprehensive five (5) day Instructional course for up to ten (10) students, performed by a STIDD senior technician/operator at customer facility, covering all aspects of DPD maintenance and operation. Includes all consumables and travel costs for the instructor.

## 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)



### STIDD Systems Inc.

P.O. Box 87 • 220 Carpenter Street  
Greenport, New York 11944  
Phone: 631-477-2400 Ext. 158  
Fax 631-477-1095  
email: sales@stidd.com

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REV - 08/31/2017 CAT20 DPD System 2 831.2

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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



- **DPD (Diver Propulsion Device) Items**  
Items are on GSA Contract No. GS-07F-0101K  
[www.gsaadvantage.gov](http://www.gsaadvantage.gov)
- **STIDD Systems is a Small Business Entity.**
- **STIDD Submersible Boats are subject to ITAR controls.**  
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