

LIBERTY ADVANTAGES

The Liberty has been engineered to be fault-tolerant with integrated redundant systems, each component of the electronics systems has an identical backup to ensure a single point failure will not cause a complete system failure. Each component of the Liberty rebreather is also pressure tested to 600 meters depth to ensure adequate functionality in any extreme environment.



The Liberty was designed from the bottom up to optimize work-of-breathing, and can be configured with Front-mounted counter lungs or Back-mounted counter lungs. A simple conversion kit allows for the rebreather to be configured from backmount to sidemount, allowing for the best dive configuration for each dive environment.



The Liberty can be used with a variety of mouthpieces; Basic DSV, BOV, or iBOV with MAVs. Every product of Divesoft is manufactured at our own facility including the Liberty which has a specially designed backplate-wing system to allow for optimal hose routing from Apeks first-stage regulators. The unit also comes with an integrated rebreather stand to protect components and to allow for easy mounting of unit.

Divesoft, s.r.o.

Hálkova 2495. Roudnice nad Labem
413 01 Czech Republic
tel.: +420 416 857 057

www.divesoft.cz
www.divesoft.us
www.ccrliberty.com



TECHNICAL SPECIFICATION LIBERTY BACK MOUNTED UNIT



LIBERTY

Dimensions	640mm (25.2in) height, 388mm (15.3in) width, 226mm (9in) depth
Weight	Empty: BMCL 21.4kg (47.2lb), BMCL + Tanks 32.5kg (71.7lb), Titan BMCL 18.5kg (40.8lb), Titan BMCL + Tanks 29.6kg (65.3lb) Empty: FMCL 22.3kg (49.2lb), FMCL + Tanks 33.4kg (73.6lb), Titan FMCL 19.6kg (43.2lb), Titan FMCL + Tanks 30.7kg (67.7lb)
Oxygen sensors	4 in total (O ₂ block is individually sealed) 2 sensors for each control unit Sensor type: DIVESOFT R22D
Helium sensors	2 Helium sensors – redundant method to calculate PPO ₂
Pressure sensors	4 in total inside of head two for each side fine – low pressure – sea level, PPO ₂ calibration, accuracy of depth data in shallow depth coarse – hydrostatic pressure – measures to 300m
Solenoids	2 in total – Interconnected with manifold Fed from left side O ₂ inlet.
Batteries	2 Li-ion batteries 3,6V, 5,7Ah, individually sealed and tested to 600m Work time: 20hrs, Charging time: 8hrs Batteries equipped with OPV which allow to let the battery fluid flow outside the unit in case of failure.
Computers	2 individually sealed and independent control units communicating with each other.
Handsets	2 handsets – Divesoft – redundant, waterproof connectors
Buddy display	On top of the head – red, green
Heads Up Display (HUD)	Yes, red, blue, green, possibility of colorblind diver setting. Can show emergency, hypox, hyperox and PO ₂ value display, PPO ₂ coding by Smithers code
Scrubber canister	Type: Radial Size: STANDARD—2,5kg (5.58lb) – provides between 4-6 hours of runtime EN 14143:2013—stress test - 2h 48min at - 4°C, breathing 40 l/min, CO ₂ production 1.6 l/min X-LARGE—3,3kg (7.25lb) – provides between 5-8 hours of runtime
Type of Soda lime	Sofnolime 797 manufactured by Molecular Products
Oxygen cylinder	Right side (diver wearing the unit) – exhaling side 3L steel cylinder, 100mm diameter / 300 bar / 230 bar for USA USDOT approved

Oxygen cylinder valve	230 bar / M26x2 / DIN for USA / Burst Disk equipped for USA
Diluent cylinder	Left side (diver wearing the unit) – inhaling side 3 L steel cylinder, 100mm diameter / 300 bar / 230 bar for USA USDOT approved
Diluent cylinder valve	230 bar / DIN G 5/8" / Burst Disk equipped for USA
Counter lungs available + volume	FMCL 3,5L each, BMCL 3,5L each
Counter lungs work of breathing	FMCL 2.16J/L, ventilation rate 75L/min at 40m, 1.58J/L at 100m, ventilation rate 75L/min
Direction of breathing	Left to right
Backplate	Custom Liberty BP – option of adapter for proprietary BP mounting Stainless steel BP – 3,4kg (7,5lb) Titanium BP – 1,2kg (2.7lb)
Wing	BCD – Horseshoe – 22L (45 lb) – material CORDURA 2000 BCD – Doughnut – 22L (45 lb) – material CORDURA 2000 BCD – Bungee – 22L (45 lb) – material CORDURA 1000
Stand	Small stand – Stainless steel – 0,9kg (2lb) Small stand – Titanium – 0,4kg (0.9lb) Long and wide stand – Stainless steel – 1,3kg (2.9lb) Long and wide stand – Titanium – 0,6kg (1.3lb)
Regulators	Modified Apeks DST
Drop weight pouches	Yes
Depth rated	Maximum depth in tests according to EN 14143:2013: 100 m (330 feet) Maximum depth with Apeks DST4 1st stages 170 m (557 feet) Precision test: 350m (1,150 ft); Pressure test of all components: 600m (1,960 ft)
Oxygen control	3 setpoint ranges + High + Low + descent, can be switched to any range between 0.4-1.6 bar
Oxygen warnings	0.3 bar (low) – 1.6 bar (high)
BOV options	BMCL – comes with BOV + MAV FMCL – optional BOV FMCL – optional BOV + ADV FMCL – optional BOV + MAV FMCL – optional BOV + ADV + MAV
CE Certified since – entire unit	2014