

TECHNICAL SPECIFICATION

# *LIBERTY* BACKMOUNT



DIVESOFT

<b>Dimensions</b>	640 mm (25,2 in) height, 388 mm (15,3 in) width, 226 mm (9 in) depth
<b>Weight</b>	Empty: BMCL 21.4 kg (47.2 lb), BMCL + Tanks 31.8 kg (70 lb), Titanium BMCL 18.5kg (40.8 lb), Titanium BMCL + Tanks 27.8 kg (61.3 lb)  Empty: FMCL 22.3 kg (49.2 lb), FMCL + Tanks 32.6 kg (71.9 lb), Titanium FMCL 19.6 kg (43.2 lb), Titanium FMCL + Tanks 29.9 kg (65.9 lb)
<b>Oxygen sensors</b>	4 in total in O <sub>2</sub> block (individually sealed) 2 sensors for each control unit, Sensor type: DIVESOFT R22D Smart voting logic for four sensors
<b>Helium sensors</b>	2 Helium sensors – redundant method to calculate PPO <sub>2</sub>
<b>Pressure sensors</b>	4 in total inside of head, two for each side Calibrated to 300 m
<b>Solenoids</b>	2 in total – Interconnected with manifold fed from left side O <sub>2</sub> inlet.
<b>Batteries</b>	2 Li-ion batteries 3,6 V, 5,85 Ah, individually sealed and tested to 300 m  Work time: 20 hrs, Charging time: 8 hrs  Batteries are equipped with OPV, so in case of a failure, any excess gas is vented outside the rebreather
<b>Computers</b>	2 individually sealed and independent control units communicating with each other located in the head
<b>Handsets</b>	2 handsets – Divesoft – redundant, waterproof connectors
<b>Buddy display</b>	On top of the head – red, green
<b>Heads Up Display (HUD)</b>	Yes, red, blue, green, possibility of colorblind diver setting. Can show emergency, hypoxia, hyperoxia and PO <sub>2</sub> value display, PPO <sub>2</sub> coding by Smithers code
<b>Scrubber canister</b>	Type: Radial Size: STANDARD — 2,5 kg (5,58 lb) – provides between 4-6 hours of runtime  EN 14143:2013 — stress test - 2h 48min at 4°C, breathing 40 l/min, CO <sub>2</sub> production 1.6 l/min  X-LARGE — 3,3 kg (7,25 lb) – provides between 5-8 hours of runtime
<b>Type of Soda Lime</b>	Sofnolime 797 manufactured by Molecular Products
<b>Oxygen cylinder</b>	Right side (diver wearing the unit) – exhalation side 3 L steel cylinder, 100 mm diameter / 300 bar / 230 bar for USA USDOT approved
<b>Oxygen cylinder valve</b>	230 bar / M26x2 / DIN for USA / Burst Disk equipped for USA

<b>Diluent cylinder</b>	Left side (diver wearing the unit) – inhalation side 3 L steel cylinder, 100 mm diameter / 300 bar / 230 bar for USA USDOT approved
<b>Diluent cylinder valve</b>	230 bar / DIN G 5/8" / Burst Disk equipped for USA
<b>Counter lungs available + volume</b>	FMCL 3,5 L each, BMCL 3,5 L each
<b>Counter lungs work of breathing</b>	FMCL 2,16 J/L at 40 m, air, ventilation rate 75 L/min 1,58 J/L at 100 m, heliox 10/90, ventilation rate 75 L/min
<b>Direction of breathing</b>	Left to right
<b>Backplate</b>	Custom CCR Liberty BP – option of adapter for proprietary BP mounting  Stainless steel BP – 3,4 kg (7,5 lb)  Titanium BP – 1,2 kg (2,7 lb)
<b>Wing</b>	BCD – Horseshoe – 22 L (45 lb) – material CORDURA 1000 BCD – Doughnut – 22 L (45 lb) – material Twill BCD – Bungee – 22 L (45 lb) – material CORDURA 1000
<b>Stand</b>	Small stand – Stainless steel – 0,9 kg (2 lb) Small stand – Titanium – 0,4 kg (0,9 lb) Long and wide stand – Stainless steel – 1,3 kg (2,9 lb) Long and wide stand – Titanium – 0,6 kg (1,3 lb)
<b>Regulators</b>	Modified Apeks DST
<b>Drop weight pouches</b>	Yes
<b>Depth rated</b>	EN 14143:2013: 100 m (330 ft), precision test: 350 m (1,150 ft) Pressure test of all components: 300 m (984 ft)
<b>Oxygen control</b>	3 setpoint ranges: High + Low + descent, can be switched to any range between 0,4 – 1,6 bar
<b>Oxygen warnings</b>	0,3 bar (low) – 1,6 bar (high)
<b>BOV options</b>	BMCL – comes with BOV + MAV FMCL – optional BOV FMCL – optional BOV + ADV FMCL – optional BOV + MAV FMCL – optional BOV + ADV + MAV
<b>CE Certified since</b>	2014

# 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 300 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 donning of unit.

