

Carbon Fiber Oxygen Vessels



1,377 Liters Oxygen
7.3 lbs.
Service pressure 2216 psig
Capacity 516 in³

20.4 in. Length

6.6 in. Diameter

'EE'-Lite



752 Liters Oxygen
3.7 lbs.
Service pressure 3000 psig *
Capacity 200 in³

13.5 in. Length

5.3 in. Diameter

'DD'-Lite



430 Liters Oxygen
2.9 lbs.
Service pressure 3000 psig *
Capacity 122 in³

14.7 in. Length

4.0 in. Diameter

'D3K'-Lite
(FC-Lite)

Spiracle Carbon Fiber Oxygen Vessels

The Spiracle Technology Carbon Fiber Oxygen Vessels are ideal for search and rescue, aeromedical transports, transport incubators and ventilators. The 'DD'-Lite can be mounted to a Ferno 35-A+ or 93EX Squadmate cot and can even be mounted to the back of an EMS bicycle. Two custom designed kits, the ERC BackPack and the SAR BackPack, allow you to go further, and carry more oxygen with the lightest oxygen vessels available. The significant reduction in weight and greater capacity of these carbon fiber vessels means you can carry more oxygen to remote locations, on-board helicopters, up flights of stairs and in your ambulance.

The 'EE'-lite, 'DD'-lite and 'D3K-lite' are fully wrapped, carbon fiber reinforced, aluminum lined vessels. These vessels are manufactured using the highest grade aerospace materials. The construction consists of a seamless 6061-T6 alloy aluminum liner fully overwrapped with epoxy impregnated polyacrylonitrile, PAN-based carbon fibers. The vessels carry the Department of Transportation (DOT) regulatory approvals, including design and qualification certifications. The EE-lite and the D3K-lite also carry Transport Canada clearance.

The 'EE'-Lite contains two times the amount of oxygen found in a standard 'E' cylinder. The 'DD'-Lite holds approximately *twice the amount of oxygen contained in a steel 'D' cylinder, while the D3K-lite is similar in size to a common D-size cylinder, but lighter weight and holds more oxygen when filled to 3,000 psi.

*A limited number of oxygen service providers can fill vessels to a service pressure of 3000 psi. Check with your local gas supplier.
At a service pressure of 2216 psig the 'DD' vessel contains 533 liters of oxygen.

10 Good Reasons To Use Spiracle Technology Carbon Fiber Oxygen Vessels

Value Priced- The 'EE'-Lite, 'DD'-lite and 'D3K'-lite' vessels provide the best value for reducing the weight while carrying more oxygen than standard cylinders. The EE-lite and DD-lite carry two and three times the amount of oxygen to a rescue.

More Oxygen- The 'EE'-Lite contains 1,377 liters of oxygen, two times the amount of oxygen in an aluminum 'E' cylinder and the 'DD'-Lite holds 717 liters of oxygen, approximately twice the amount of oxygen contained in a steel 'D' cylinder. (see chart below for comparisons of other cylinder sizes, weight and oxygen contents).

Less Weight- A significant reduction in the weight of these carbon fiber vessels means you can carry more oxygen to remote locations, on board helicopters, up flights of stairs and in your ambulance.

(see chart below for comparisons of other cylinder sizes, weight and oxygen contents).

Extend O₂ Administration- Reduce the chances of running out of life saving oxygen when administering oxygen during extended transport times and high flow use during resuscitation.

Custom Carrying Cases- The Spiracle ERC BackPack is especially designed to give you the optimum system, protection and means to carry the 'EE'-Lite vessel. The 'DD'-Lite vessel is rescue ready in the SAR BackPack weighing less than five (5) lbs. with O₂ vessel, ORO₂ Oxygen Regulator, OX-series Inhalator, masks, airways and hoses.

Multiple Applications- Ideal for search and rescue operations, mounting on a Ferno 35A+ and 93EX Squadmate, aeromedical transport, transport incubators, ventilators and even EMS bicycle fleets.

Easy to Use- Both vessels can be ordered with either CGA 540 or CGA 870 post valves with a built-in on/off toggle lever. There are no changes in the way you currently care for and/or handle an oxygen vessel. Care for the fiber oxygen vessel just as you do your existing cylinders.

Conformance to Standards- These vessels carry the Department of Transportation (DOT) regulatory approvals DOT-E11194-CFFC. The EE-lite and D3K-lite also carry Transport Canada (TC) approval.

Safety- Structural analysis design/qualification certifications. Vessels underwent hydrostatic burst tests, ambient/environmental/thermal cycling test, drop test, gunfire (ballistic) and bonfire tests. Technical data files are available upon request.

CAUTION: Federal law restricts this device to sale by or on the order of a physician.

How To Specify And Order Spiracle Technology Carbon Fiber Oxygen Vessels



'DD'-Lite
Model No.

205
w/ CGA 870 post valve
and On/Off toggle.

'DD'-Lite
Model No.

206
w/ CGA 540 valve outlet.

'D3K'-Lite
Model No.

225
w/ CGA 870 post valve
and On/Off toggle.

'D3K'-Lite
Model No.

226
w/ CGA 540 valve outlet.

'EE'-Lite
Model No.

210
w/ CGA 870 post valve
and On/Off toggle.

'EE'-Lite
Model No.

211
w/ CGA 540 valve outlet



SPECIFICATIONS

| | 'DD'-Lite | 'D3K'-Lite | 'EE'-Lite |
|-----------------------------|--|-----------------------------------|------------------------------------|
| Service Pressure: | 3000 psi (207 bar) max | 3000 psi (207 bar) max | 2216 psi (153 bar) max |
| Volumetric Capacity: | 210 in. ³ (3.44 liters) | 122 in. ³ (2.0 liters) | 523 in. ³ (8.57 liters) |
| Outer Diameter: | 5.38 in (137 mm) | 4.0 in (101.6 mm) | 6.63 in. (168 mm) |
| Length: | 13.70 in (347 mm) | 14.7 in (373 mm) | 20.42 in. (515 mm) |
| Weight: | 3.7 lbs. (1.68 Kg.) | 2.9 lbs. (1.31 Kg.) | 7.3 lbs. (3.31 Kg.) |
| Oxygen Content: | @ 3000 psi: 752 liters @ 2216 psi: 559 liters | @ 3000 psi: 430 liters | @ 2216 psi: 1,377 liters |

| | |
|---------------------------------|--|
| Materials: | Seamless 6061-T6 alloy aluminum liner. Epoxy impregnated polyacrylonitrile, PAN-based carbon fiber overwrap. |
| Valve Port Thread (USA): | .750 - 16 UNF |
| Regulatory Approvals: | U.S. Department of Transportation-CFFC : DOT E11194 Transport Canada (TC) on EE-lite and D3K-lite |

Oxygen Vessel Comparisons Chart

| | Steel 'D' | Alum. 'D' | Alum. Jumbo 'D' | Alum. 'E' | 'DD'-Lite | 'EE'-Lite |
|--------------------------------------|-----------|-----------|-----------------|-----------|-----------|-----------|
| Oxygen Contents (l.) | 396 | 414 | 646 | 682 | 752 | 1,387 |
| Weight (lbs.) (wo/post valve) | 10.3 | 7.9 | 8.6 | 8.0 | 3.7 | 7.3 |
| Diameter (in.) | 4.50 | 4.37 | 5.25 | 4.37 | 5.30 | 6.60 |
| Length (in.) (wo/post valve) | 20.0 | 16.5 | 17.1 | 25.6 | 13.7 | 20.3 |
| Service Pressure (psi) | 2015 | 2015 | 2216 | 2015 | 3000 | 2216 |

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