

Dedicated support for ambulance crews

Medical gas therapies you can depend on



Service you can trust

BOC Medical has worked with the ambulance service from day one. Our unique expertise in medical gas technologies and our commitment to innovation, service and value for money have ensured our dedicated support for ambulance crews and first responders in the effective delivery of pre-hospital emergency care.

- Comprehensive logistic coverage.
- Unrivalled track record in responding pro-actively to major incidents.
- Assurance of continuous gas supplies and support.
- First-choice partner for ambulance trusts and first responders, building on experience to deliver product and service innovations that improve performance and save more lives.
- Major ongoing investment in clinical research to assure best-in-class patient care.

You can have total trust in BOC Medical for all your medical gas needs.

Valued by customers

We never take our medical gas leadership for granted. We listen to customer feedback, study advances in best practice and commission independent research to measure our performance in order to continuously improve our offering to trusts.

Don't just take our word for it, here's what customers said in our last research survey:

"Been dealing with BOC for 21 years and have always found them efficient and helpful, the drivers are great and the very few problems get dealt with quickly."

"...the drivers really know what they are doing, and we can really rely on them."

"We are very pleased with BOC - they have been helpful and always ready to advise us on any new developments within the trust."

Clinical excellence

BOC Medical works closely with practitioners and consultant advisory boards to ensure all our pharmaceutical-grade products offer maximum clinical efficacy. Our medical affairs section tracks and reviews best practice and the latest clinical evidence for optimising patient outcomes. That means best-in-class gas solutions now and into the future.

BOC also sponsors and takes part in a wide range of clinical trials and therapy research including:

- Heliox Broncholitis clinical trial (double blinded).
- Cluster headaches clinical trial.
- ENTONOX pain control therapies.
- Hyperbaric oxygen chambers.
- Whole body Cryotherapy.

Security of supply

BOC Medical supplies medical gas throughout the UK. We control our own manufacturing plants, as well as operating filling and distribution sites nationwide. You can rely on instant local reaction to all ambulance and first responder needs. What's more our proven approach to security of supply ensures continuous production and distribution even in the case of plant failure.

- Widest national medical gas coverage in the UK.
- Infrastructure disaster-proofed to maintain supplies always.



Fast, flexible response to suit your needs

Patient lives are our top priority. No matter how fast and efficient your systems and your teams, without a sure, uninterrupted gas supply, life-saving actions will be at risk. BOC Medical offer a range of delivery options to fit every level of need.

Regular scheduled delivery - aided and unaided, day or night

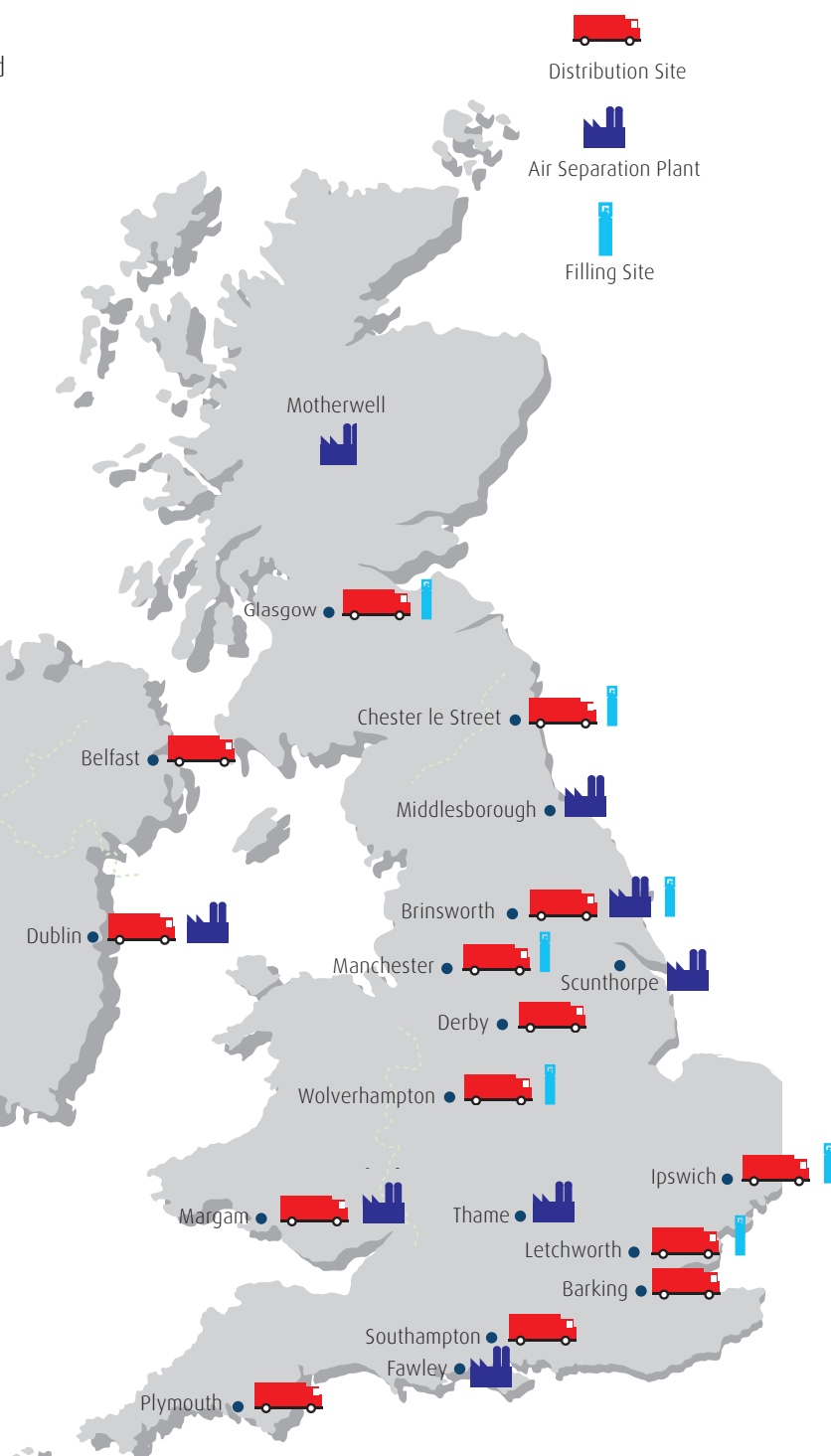
We deliver your gas on agreed days and at a frequency to suit you. The unaided service (day or night) gives you a reliable 'Milkround' delivery service. Our driver will exchange your empty cylinders with full ones on specified or agreed days. You never need worry about running out. For aided deliveries there's a next-day service for orders placed by 5pm.

Urgent call-out: 4 hour response

If stocks get unexpectedly low, you can depend on BOC Medical to provide a fast response to any urgent order, and replenish within four hours.

Major incident call-out: 'Blue Light' response

Potters Bar and Ladbroke Grove rail crashes, and July 7 bombings demonstrate our proactive strength under stress. Even before we received the emergency call, BOC despatched drivers with a full load of relevant medical gases to the sites themselves and to strategic hospitals. Our 'Blue Light' response aims to be on the scene within the hour.



"We can rely on BOC because they have the infrastructure that meets the unique needs of our organisation. They have proven their logistical capability to ensure that we always have sufficient medical gases, even during critical blue light situations such as the London bombings on 7th July 2005 when faced with difficult circumstances they made sure that additional emergency gas supplies were delivered."

*David Selwood, Corporate Logistics Manager
London Ambulance Service.*

Best-in-class cylinder packages

We never compromise on safety for patients and ambulance crews.

All BOC Medical gas cylinders are designed to be robust, reliable, convenient to use and safe to handle. Cylinders and valves meet the Transportable Pressure Equipment Directive (TPED) and are marked accordingly. What’s more, all cylinders are inspected at every fill to ensure they are safe for use.

Lightweight integral valve cylinders

We were the first company to introduce the integral valve cylinder, specifically designed for ambulance crews, with features developed during trials with Ambulance Trusts in Sussex and Kent. These carbon fibre wrapped cylinders are much lighter than conventional steel models, and the built-in regulator eliminates the need for costly purchase and maintenance of a separate population of regulators.

Easy to use and minimal handling risks:

- A permanently live gauge indicates gas levels, even when the cylinder is not turned on.
- The flat stable base minimises handling risks and aids storage.
- With clear product branding the risk of accidental use of the wrong gas is minimised.
- The convenient grab handle makes it easier to transport.
- Tamper-evident covers ensure the gas is uncontaminated and safe for the patient.
- Our 10-litre 300-bar cylinder is the lightest on the market at just 14kg when full, meaning less lifting effort for you.
- Simple push fit connection saves you time.

Committed to innovation

BOC Medical pioneers the medical gas products and services that will deliver tomorrow’s patient care today. We are always aligned with clinical progress, and we continue to design and redesign, engineer and re-engineer solutions which meet the unique needs of ambulance crews and first responders even more effectively.

New cylinder developments will shortly be released, further enhancing the ambulance service’s capacity to respond rapidly, cost-effectively and safely. These new generation cylinders once again demonstrate BOC Medical’s unrivalled commitment to improving ambulance crew performance, reducing costs, and optimising patient care.

With BOC as your provider, you can be sure you benefit from leading-edge gas technology.

New ultra lightweight cylinder

Coming soon is our revolutionary ultra-lightweight 1-litre 300-bar oxygen cylinder.

The development and testing of this product is almost complete. Using the very latest materials and weighing just 1.55 kg, it will be 15% lighter than any similar cylinder on the market. It will offer superior performance and portability for paramedics on bikes or in cars who are first to arrive at an incident.

- Ergonomically designed valve.
- Permanently live gauge.
- Easy-click flow control knob with full range of flow settings.
- Gel coated finish gives a robust easy-clean surface to reduce contamination risk.

Preset flow level
(l/min) at each “sure-click”

0	0.1	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0	12.0	15.0
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Oxygen

Cylinder code	ZA
Cylinder order code	101-ZA
Nominal contents (litres)	300
Nominal cylinder pressure (bar)	300
Nominal outlet pressure (bar)	4
Valve outlet flow connection	6mm firtree
Valve operation	handwheel
Flow-rate (litres/min)	0.1 - 15
Dimensions (inc valve) L x D (mm)	366 x 85
Water capacity (litres)	1.0
Nominal weight full (kg)	1.55

More gas when you're on the move

Carrying all the gas you need, while not increasing the size of the cylinder, is crucial to paramedics.

In another innovation, we are planning to increase the pressure in our popular portable cylinders. This will give teams added reassurance as you'll be less likely to run out of gas or have to change a cylinder in the middle of life-saving action. Better for you in an emergency and better for your patients.

More life-saving oxygen capacity

A new version of our most popular oxygen CD will soon be introduced and this will be a 2 litre 300-bar ZD cylinder.

- The ZD will be solely for ambulance use and any cylinders found at other sites can easily be identified and accounted for.
- Will give you 25% more gas than the current CD cylinder.
- Plus all the same convenience and efficiency features of the trusted CD.



Oxygen

Cylinder code	ZD
Cylinder order code	101-ZD
Nominal contents (litres)	600
Nominal cylinder pressure (bar)	300
Nominal outlet pressure (bar)	4
Valve outlet flow connection	6mm firtree
Valve outlet pressure connection	Oxygen Schrader (BS 5682)
Valve operation	Handwheel
Flow-rate (litres/min)	Firtree: 1-15/ Schrader: 40
Dimensions (inc valve) L x D (mm)	525 x 101
Water capacity (litres)	2.0
Nominal weight full (kg)	4.06

More pain relief when you need it

2009 will see another important introduction in the form of the new ENTONOX ED cylinder.

We are now in the final stages of developing a higher pressure 2 litre ENTONOX cylinder. It will hold 700 litres of ENTONOX, 7% more than equivalent offerings in the market so crews can carry more vital pain relief.

- Almost 40% more pain relieving gas in the same size container.



ENTONOX

Cylinder code	ED
Cylinder order code	211-ED
Nominal contents (litres)	700
Nominal cylinder pressure (bar)	217
Nominal outlet pressure (bar)	4
Valve outlet pressure connection	Entonox Schrader (BS 5682)
Valve operation	Handwheel
Flow-rate (litres/min) Schrader:	40
Dimensions (inc valve) L x D (mm)	520 x 100
Water capacity (litres)	2.0
Nominal weight full (kg)	4.0

Effective stock management

BOC Medical's best-in-class delivery service ensures that your stocks are always at the right level. Regular unaided or scheduled deliveries ensure the right balance of cylinder stocks to meet your needs, without excessive storage and rental costs.

Developed in conjunction with the London Ambulance Service, BOC's ReconCYL stock management tool can provide everything you need for reliable tracking of cylinder movements.

"BOC listened to our needs for more efficient cylinder control and management and together we have developed a simple but effective cylinder tracking and reporting solution. Called ReconCYL, this product allows us to monitor and control cylinder stocks and highlight unusual usage patterns for more effective cylinder cost management and budget forecasting."

*David Selwood, Corporate Logistics Manager
London Ambulance Service.*

ReconCYL provides comprehensive reports every month showing:

Accumulative cylinder holdings (by ambulance station)

A complete overview of holdings by gas type, by station, enabling the Trust to see at a glance:

- which stations are holding/using more gas than anticipated – to identify and redress any overstocking to minimise rental charges
- an overview that pinpoints where gas stocks are available – which could prove to be a lifesaver in the unfortunate event of a blue light emergency.

Individual ambulance station reports

Detailed individual ambulance station data reports and graphical trends displaying:

- Month by month gas spend.
- Current product holdings.
- Monthly rental spend.

Through quarterly consultation meetings, BOC can report, analyse and discuss the usage patterns and holdings and work with you to ensure optimal stock management.

Quality assured

All of BOC's medical gases are licensed by the MHRA as pharmaceutical products with the relevant European Pharmacopoeia standards. This gives you reassurance of their safety, quality and effectiveness at the point of use. BOC's manufacturing sites are also audited by the MHRA Medicines Inspectorate who have recently inspected and provided a positive report on systems we operate in all of our facilities.

- High quality pharmaceutical grade products regularly tested and fully licensed for medicinal use.
- The first UK gases company to successfully undergo a full MHRA Pharmacovigilance inspection.
- ISO 9001:2000 Quality Management compliance (audited by Lloyds).

Marketing authorisation	Medical gas
0735/5000	Medical oxygen (compressed)
0735/5002	Medical air
0735/5017	ENTONOX (50% oxygen/50% nitrous oxide)

Superior quality control

The quality control processes we have in place for your protection are second to none and include:

- Fully auditable systems to investigate and resolve reported faulty cylinders and other incidents.
- Pro-active contingency planning for potential disaster/epidemic scenarios such as SARS or Avian Flu.
- We participate in a multi-functional steering committee, to ensure BOC operations remain 'business as usual' at the time of a disaster.



More than just a gas supplier

BOC has an enviable reputation for the provision of medical gas products and services. But that is not the whole story. We can supply you with a wide range of medical gas associated equipment and services for complete patient care.

So BOC is about far more than just delivering your gas:

- New resuscitation equipment is available including a superior automated external defibrillator (AED).
- A new range of medical gas associated equipment has been introduced including demand valves, pressure regulators, and oxygen and suction equipment.
- We also offer training and gas facilities management services to help Trusts achieve full compliance with HTM standards.



Meeting your cost priorities

Today more than ever cost is a key driver. BOC Medical always works closely with you to make savings. We design our products and services to maximise value for you and your patients.

- Best-in-class service means you have adequate but not excessive cylinder stocks for normal needs - trimming your cylinder rental costs.
- Our flexible payment options include Single Monthly Charge, to cut administration and invoice processing. For example, a small Ambulance Trust could reduce 700 invoices per year down to just 12 and save £24,000.
- Our innovative integral valve cylinders bring Trusts significant savings on regulator purchase and maintenance.
- PLUS we continue to introduce higher-capacity, higher-pressure cylinders to cut cylinder holdings and changeovers.

Dedicated customer support

Above all, we know ambulance crews need to be available at any time of the day or night, so we're always available too. Our customer service centre is open 24/7 to deal with queries and emergency requirements that arise, while our customer website dispenses a wide range of fully updated help and information.

BOC has also just launched the first dedicated site of its kind for ENTONOX (www.entonox.co.uk). This offers added-value online clinical and educational resources for professionals who want to enhance their pain management knowledge and skills.

But personal support is sometimes absolutely crucial. Every Ambulance Trust that chooses BOC also gets a dedicated account manager who will give advice on medical gas issues, and work closely with you and your team to ensure a best-value outcome.



To find out more about BOC Medical's comprehensive, cost-effective products and services contact:

0800 111 333 or for 24 hour

support visit: www.bocmedical.co.uk

BOC Medical oxygen and ENTONOX cylinder data chart

Oxygen

Cylinder code	ZB	CD	HX	ZX
Cylinder order code	101-ZB	101-CD	101-HX	101-ZX
Nominal contents (litres)	300	460	2300	3040
Nominal cylinder pressure (bar)	300	230	230	300
Nominal outlet pressure (bar)	4	4	4	4
Valve outlet flow connection	6mm firtree	6mm firtree	6mm firtree	6mm firtree
Valve outlet pressure connection		Oxygen Schrader (BS 5682)	Oxygen Schrader (BS 5682)	Oxygen Schrader (BS 5682)
Valve operation	handwheel	handwheel	handwheel	handwheel
Flow-rate(litres/min)	1 - 15	Firtree: 1-15/ Schrader: 40	Firtree: 1-15/ Schrader: 40	Firtree: 1-15/ Schrader: 40
Dimensions (inc valve) L x D (mm)	390 x 85	520 x 100	930 x 140	930 x 143
Water capacity (litres)	1.0	2.0	10.0	10.0
Nominal weight full (kg)	2.7	3.50	19.0	14.0

	D*	E*	F*
Cylinder order code	101-D	101-E	101-F
Nominal contents (litres)	340	680	1360
Nominal cylinder pressure (bar)	137	137	137
Valve outlet connection	Pin-index	Pin-index	5/8" BSP (F)
Valve outlet specification	ISO 407	ISO 407	BS 341 No. 3 (Bullnose)
Valve operation	key	key	key
Dimensions (inc valve) L x D (mm)	535 x 102	865 x 102	930 x 140
Water capacity (litres)	2.3	4.7	9.4
Nominal weight full (kg)	3.9	6.4	17.0

* standard cylinders (require separate regulator)

ENTONOX (50% oxygen/50% nitrous oxide)

Cylinder code	D*	CD	HX	F*
Cylinder order code	211-D	211-CD	211-HX	211-F
Nominal contents (litres)	500	440	2200	2000
Nominal cylinder pressure (bar)	137	137	137	137
Nominal outlet pressure (bar)	Pin-index	4	4	Pin-index
Valve outlet pressure connection	ISO 407	Entonox Schrader (BS 5682)	Entonox Schrader (BS 5682)	ISO 407 (side spindle)
Valve operation	key	handwheel	handwheel	key
Flow-rate (litres/min)		Schrader: 40	Schrader: 40	
Dimensions (inc valve) L x D (mm)	535 x 102	520 x 100	940 x 140	930 x 140
Water capacity (litres)	2.32	2.0	10.0	9.43
Nominal weight full (kg)	4.0	3.5	19.0	18.0

* standard cylinders (require separate regulator)

These are the key cylinder sizes used by the ambulance service - for details of extra cylinder sizes and medical gases, please request a copy our full cylinder data chart.

To find out more contact:
0800 111 333 or for 24 hour support
 visit: www.bocmedical.co.uk

BOC Medical

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