

Medical oxygen.

LIV[®] IQ Digital therapy device.



Therapy device features.

Best-in-class packages

BOC Healthcare pioneers the medical gas products and services that will help deliver the future of patient care. Our unrivalled commitment to improving medical gas technology reduces costs and optimises patient treatment. All BOC Healthcare gas packages are designed to be robust, reliable, convenient to use and safe to handle. To provide the highest quality, all cylinders are tested at every fill to ensure patient safety.

Digital therapy devices

The new intelligent oxygen therapy device from BOC Healthcare - calculates the remaining time according to the gas content in the device and the selected flow rate. The result is shown on a large and clear digital display indicating content, selected flow rate and time remaining for patient treatment.

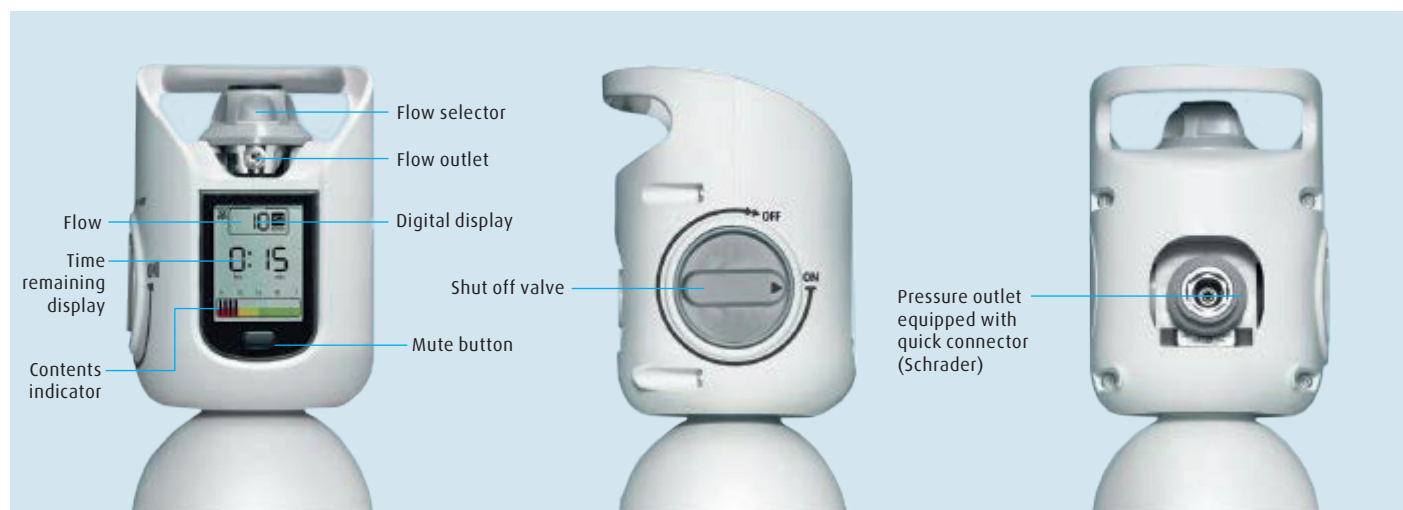
'At a glance' digital display

- live gauge indicates therapy device contents, even when the device is not turned on
- easy-to-read digital gauge indicating therapy device content
- time remaining displayed in hours and minutes
- selected flow rate shown in the digital display
- visible and audible warning signals.

Other product features

- integrated regulator which eliminates the costs of buying and maintaining separate equipment
- easy to use handwheel eliminating need for a cylinder key
- product specific Schrader pressure outlet to ensure correct gas delivered
- clear product labelling to avoid selecting the wrong gas
- 12 flow settings to cover a range of clinical settings.

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



LIV IQ – giving you safe guidance during patient treatment.

Warning signs on the LIV IQ display.



Therapy device is too hot
Do not use at this time. Store within the temperature range -20 to +45°C. The warning signs will disappear when the device is at a usable temperature.



Therapy device is too cold
Do not use at this time. Store within the temperature range -20 to +45°C. The warning signs will disappear when the device is at a usable temperature.



Low flow
The device has detected that the flow from the cylinder is lower than the selected flow. Check the tube and medical device connected to the flow outlet. If no restriction is found do not use, return to BOC Healthcare.



Low battery
If therapy has not started Use alternative therapy device. If the low battery symbol appears whilst the device is in use, it is safe to continue patient treatment, until the device is exchanged prior to it becoming empty

HI/FLO

High flow
The device has detected that the flow from the cylinder is higher than the selected flow. If 2 devices are drawing gas, mute the alert. If a single device is drawing gas do not use, return to BOC Healthcare.



Strong magnetic field
The device has detected a strong magnetic field. Gas flow continues unaffected, but the digital display and audible alerts will not work while in this field. Removal of the device from the magnetic field recovers its normal functionality.



Has the mute button been pressed?
Yes – An active alert has been muted.
No – Due to a rapid change in temperature, the low flow or high flow alert is temporarily disabled.

The mute button can be pressed to silence audible alerts.

When an active alert is muted, the icon will appear in the upper-left corner of the display.

A single short press of the button will mute the active alert for one minute.

A single long press of three seconds will mute the active alert until the alert condition disappears or until the next alert condition occurs.



Mute button



An audible signal sounds in the following cases:



Gas Contents Low (Contents Bars 4 & 3) Change to an alternative therapy device.



Gas Contents Very Low (Contents Bars 2 & 1) Change to an alternative therapy device.



Gas Contents Empty



Incorrect Use (Flow selector set with Shut-off valve closed) If the shut off valve is closed and a flow selected, open the shut off valve. If the shut off valve is open, close and return to BOC Healthcare.

SEt/FLO

Incorrect use (Flow selector is between two settings) Check the flow setting is not in between 2 flow settings.

Short Guide: Using LIV IQ in Oxygen Therapy.

This Guide is for information only. For users not trained in LIV IQ and Oxygen therapy see further information about the safe use in the LIV IQ manual and MGDS, available at www.bochealthcare.co.uk

1. Initial safety checks.

Before handling the LIV IQ therapy device ensure your hands are clean. If you have been using alcohol based gel or liquids to decontaminate your hands make sure the alcohol has totally evaporated.

When selecting the therapy device for use, check that it is clean and free from any damage. Ensure the therapy device is free from oil and grease, particularly around the pressure (Schrader) and flow (Firtree) outlets.

2. Preparing a new device for use.



2.1 Ensure you have the correct medical gas by checking the label.



2.2 Check the expiry date on the batch label.

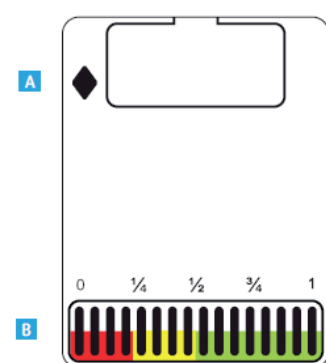


2.3 Make sure the contents indicator is showing enough gas for the intended use.



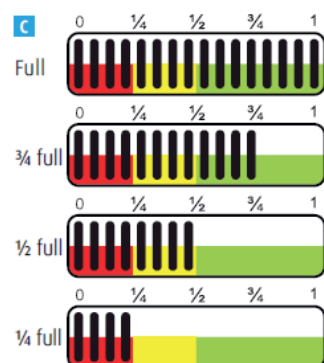
2.4 Ensure the flow selector on top of the device is set to zero and the hand wheel is turned off before connecting equipment to the LIV IQ.

3. Information on the Display.

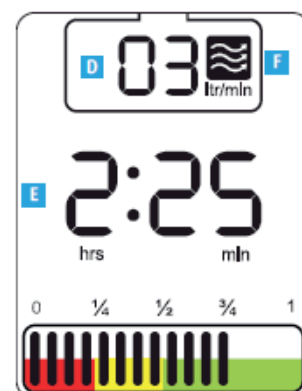


A New, full therapy device
The diamond acts as a tamper evident indicator and will disappear when the valve is first opened.

B Content indicator.



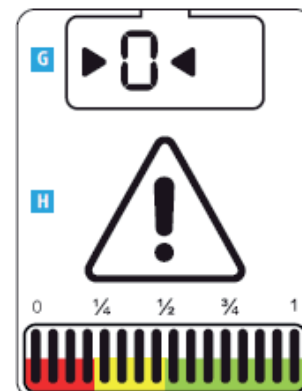
C As gas is consumed, the black vertical segments of the contents indicator will disappear. Prepare to change the device when the contents indicator shows only segments in the red area.



D Current set flow rate.

E Therapy time remaining at selected flow setting.

F Flow is active.



G Set flow selector to zero before opening shut-off valve.

H Warning triangle.

4. Using and connecting the flow outlet (Firtree).



4.1 Attach tubing from mask or nasal cannula to the flow outlet (Firtree), and fit to the patient
Ensure the tubing is pushed on securely.



4.2 Slowly turn on the device by rotating the handwheel anticlockwise until it comes to a complete stop. Do not use excessive force



4.3 Set the prescribed flow rate by rotating the dial flow selector.
An audible alert and the words 'Set FLO' will appear on the display if the dial is in between flow settings.



4.4 Ensure the device is leak tested before placing near the patient. Secure the device in a suitable cylinder trolley where possible. Do not use the device without support.

5. Using the pressure outlet (Schrader).



5.1 Connect equipment by inserting oxygen probe into pressure outlet (Schrader).
Ensure the probe clicks securely into place.



5.2 Turn on the device by slowly rotating the handwheel anticlockwise until it comes to a stop.



5.3 Check for leaks which may be indicated by a hissing sound.⁽¹⁾
A faulty connection can result in leaks and/or the ejection of the connector, with the potential for injuries/damage.

Note:

⁽¹⁾ If you suspect that you have a leak, turn off the therapy device and check the equipment is properly connected. Turn on the device and re-check for leaks. If the leak continues, turn off and quarantine the device and contact BOC Healthcare.

6. Monitoring during use.



6.1 Place a mask or nasal cannula onto patient.
If using a mask ensure a tight seal. Check the gas is flowing and that there are no leaks indicated by a hissing sound.



6.2 Ensure the clinical condition of the patient remains satisfactory throughout the therapy.
Use pulse oximetry where appropriate.



6.3 Check the display at regular intervals, to ensure there is sufficient gas. The gas time remaining is shown in hours and minutes and an audible alarm will sound if the content becomes low.



6.4 Audible alarms or errors are indicated on the display accompanied with a Warning symbol (see fault- cause-remedy table within the LIV IQ Manual).

7. After use. Using the flow outlet (firtree)



7.1 Remove administration equipment from the patient.



7.2 Turn flow selector to zero.



7.3 Turn off device by slowly rotating the handwheel clockwise until it comes to a stop. Do not use excessive force.



7.4 Remove the tubing by firmly pulling the tube whilst holding the handle.



7.5 Vent the remaining gas by selecting a flow. Return flow selector to zero.



7.6 Check the content level. Retain therapy device if there is sufficient gas for further use. Alternatively return to cylinder stores as empty.

8. After use. Using the pressure outlet (Schrader)



8.1 Remove administration equipment from the patient.



8.2 Turn off device by slowly rotating the handwheel clockwise until it comes to a stop.
Do not use excessive force.



8.3 Where possible, allow gas to vent through the attached medical equipment.



8.4 Where its not possible to vent through medical equipment, select a flow on the flow selector and allow any trapped gas to vent.



8.5 To remove the tubing from the pressure outlet (Schrader) release the probe by twisting the capstan clockwise.



8.6 Check the content level. Retain therapy device if there is sufficient gas for further use. Alternatively return to cylinder stores as empty.

LIV IQ Oxygen therapy device data summary

| Cylinder code | IQX |
|------------------------------------|---|
| Cylinder order code | 101-IQX |
| Nominal contents (litres) | 2000 |
| Nominal cylinder pressure (bar) | 200 |
| Nominal outlet pressure (bar) | 4.5 |
| Valve outlet flow connection | 6mm Firtree |
| Valve outlet pressure connection | BS 5682 Schrader |
| Valve operation | Handwheel |
| Flow-rate (litres/min) | Flow outlet (Firtree): 0.5-15 Pressure outlet (Schrader): 40 (nominal) |
| Dimensions (inc. valve) L x D (mm) | 930 x 140 |
| Water capacity (litres) | 10 |
| Nominal full weight (kg) | 19 |

Safety information and precautions

- Oxygen is a non-flammable gas, but strongly supports combustion.
- Do not store or use medical gas cylinders near naked flames, sources of ignition or combustible materials.
- Ensure oxygen cylinders are stored in a safe and secure area where they cannot fall over and cause injury.
- Clearly identify the storage areas with appropriate signage. Ensure separation of full and empty cylinders.
- Store medical gas cylinders separately from industrial and other non medical cylinders in a well ventilated area that is clean and dry, preferably inside.
- Smoking should not be permitted in the vicinity where cylinders are used or stored.
- Ensure labels remain clearly visible at all times and are not removed or covered. Unauthorised labels/tags must not be fitted.
- Use a suitable trolley to transport large cylinders. Any stationary cylinder trolleys in a ward area should be fixed in place to prevent it falling over.
- Use Medical Oxygen only as prescribed using approved only equipment.
- Where available, always use an appropriately designed cylinder support to hold the cylinder whilst in use adjacent to the patient.
- Ensure the cylinder is set up and tested before placing near the patient.
- Do not use oil or grease (or any oil-based products which includes hand creams) in the vicinity of an oxygen cylinder.
- If you need to clean the cylinder do not use any materials which contain ammonium or chlorine compounds.
- Do not refill or tamper with the cylinder package.
- [For further information relating to the use of the LIV IQ therapy device, please refer to the LIV IQ Manual which can be found at \[www.bochealthcare.co.uk\]\(http://www.bochealthcare.co.uk\)](#)
- [Further information is also available from the oxygen Medical Gas Data Sheet \(MGDS\).](#)

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