**NOTE:** The accuracy of the flow will not be affected by the attachment of accessories, however, the indicated flow may change.

**⚠WARNING:** Connection to the gas source must be done by using only the appropriately indexed fitting.

4. Ensure that the Float Ball is at the very bottom of the Flow Tube when turned off.

**NOTE:** If the Float Ball is not at the bottom of the Flow Tube, the Flowmeter could be leaking. Please contact your dealer.

5. Adjusting the Flow: ***To DECREASE Flow:*** Turn the knob clockwise
***To INCREASE Flow:*** Turn the knob counter clockwise

6. To set the flow, align the center of the float ball to the indicator line on the Flow Tube.

**⚠WARNING:** To avoid injury ALWAYS confirm flow requirement for patient prior to dispensing. Check flow frequently while being administered to patient.

7. An undetermined flow will arise if flow is adjusted beyond the last calibrated indicator.
8. Turn knob completely counterclockwise to achieve maximum flood/ flush flow.

**NOTE:** Any flow beyond the last calibrated line on the Flow Tube with unrestricted flow is Flood/Flush flow.

**Cleaning Instructions**

Use a clean damp cloth with a mild cleaning solution to wipe outside of product. Do NOT gas sterilize with ETO. DO NOT clean with pungent hydrocarbons.

**CAUTION:** DO NOT submerge Flowmeter in any form of liquid. This will cause damage and void any warranty on the product.

**Troubleshooting**

Contact your dealer or the technical support department for assistance if the Flowmeter does not function properly.

**Maintenance Prevention**

Inspect the product before and after use for any damage and ease of operation.

**⚠WARNING:** When changing connectors on the Flowmeter for service or replacement, never re-attach connectors of a different gas. Doing so may result in patient injury or damage to the equipment.

**CAUTION:** Disconnect Flowmeter from gas supply BEFORE SERVICING.

**WARRANTY**

AMVEX
25B EAST PEARCE STREET
RICHMOND HILL, ON
CANADA

EC REP Oxygen Care Ltd.
2 Holfeld Business Park
Kilmacanogue Co Wicklow
Ierland



# OPERATING AND MAINTENANCE MANUAL


## *Flowmeter*

| Models Included: | |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |

RX Only

BEACONMEDÆS®

## IMPORTANT: SAFETY INSTRUCTIONS

**This manual provides you with important information about the Flowmeter and should be read carefully to ensure the safe and proper use of this product.**

**Read and understand all the safety and operating instructions contained in this booklet before using this product.**

**If you do not understand these instructions, or have any questions, contact your supervisor, dealer or the manufacturer before attempting to use the apparatus.**

**⚠WARNING:** Indicates a potentially hazardous situation, which if not avoided, could result in death or serious injury.

**ATTENTION:** Indicates a potentially hazardous situation, which if not avoided, could result in minor or moderate injury.

**CAUTION:** Indicates a potentially hazardous situation, which if not avoided, could result in property damage.

⚠ Caution, consult accompanying documents

CE 0413 Symbol indicates the device complies with the requirements of Directive 93/42/EEC concerning medical devices (on CE marked devices only)

Use no oil

### Receiving Inspection

Remove product from package and inspect for damage. Verify that the model received is in working order. If product is damaged or incorrect, do not use. Contact your dealer, equipment provider or manufacturer.

**ATTENTION:** It is very important to allow product to remain in original packaging for 24 hours to acclimatize to room temperature before use.

**ATTENTION:** Store the product in a sealed package to avoid environmental damage. The operating and storage temperature for the Flowmeter should reflect typical environmental conditions of a medical facility environment.

### User Responsibility

**⚠WARNING:** Service of this device should only be performed by properly trained individuals.

The Flowmeter is used to dispense an adjustable flow of gas accurately under the direction of a healthcare professional.

This product performs as explained in this manual. This holds true as long as the assembly, use, repair and maintenance are properly followed according to our instructions. Periodic review of this device is recommended. If any damage or defects are present, the product should not be used. This includes parts that are worn or missing. If any of the above are noted, immediate repair/replacement is required. If this device is subject to improper maintenance, repair, use and / or abuse leading to malfunction of the device, replacement is the sole responsibility of the user.

**⚠WARNING:** Operation of this device is not to be done if flammable anesthetics are present due to the possibility of explosion caused by static charge.

**TO MINIMIZE THE RISK OF EXPLOSION OR FIRE:**

- NEVER attempt to attach a Flowmeter directly to a cylinder.
- NEVER use grease, oil, organic lubricants or flammable materials on or near the Flowmeter.
- NEVER smoke in an area where oxygen is being used.
- NEVER use any type of flame or flammable or explosive material near the Flowmeter.



- ALWAYS follow CGA and ANSI standards for Flowmeters and Medical Gas Products (E-7) and Oxygen Handling (G-4).

**ATTENTION:** Keep the Flowmeter in a clean area when not being used.

**ATTENTION:** Ensure that all connections are tightened and free of leaks prior to use. Only use an oxygen-safe leak detector when testing for leaks.

**⚠WARNING:** Each Flowmeter is for use with only one type of gas.

### Intended Use

A compensated thorpe tube flowmeter is a device intended for medical purposes that is used to control and measure gas flow rate accurately. The device includes a vertically mounted tube, with the outlet of the flowmeter calibrated to a reference pressure.

### Specifications

| Gas | Scale | Increments | Accuracy | Min. Flood/ Flush | Transport/ Storage Requirements |
|---|---|---|---|---|---|
| Oxygen | 0-8 LPM | 0.5 LPM (starts at 0.5 LPM) | +/- 0.5 LPM or +/- 10% of reading (whichever is greater) | 50 LPM | -40ºF to 140ºF (-40ºC to 60ºC) |
| Oxygen/Air | 0-15 LPM | 0.5 LPM from 1 to 5 LPM<br>1 LPM from 5 to 15 LPM | +/- 0.5 LPM or +/- 10% of reading (whichever is greater) | 50 LPM | -40ºF to 140ºF (-40ºC to 60ºC) |
| $CO_2$ / $N_2O$ | 0-12 LPM | 0.5 LPM from 1 to 6 LPM<br>1 LPM from 6 to 12 LPM | +/- 0.5 LPM or +/- 10% of reading (whichever is greater) | 50 LPM | -40ºF to 140ºF (-40ºC to 60ºC) |
| Heliox $He/O_2$ (21% $O_2$) | 0-16 LPM | 0.5 LPM from 1 to 6 LPM<br>1 LPM from 6 to 16 LPM | +/- 0.5 LPM or +/- 10% of reading (whichever is greater) | 50 LPM | -40ºF to 140ºF (-40ºC to 60ºC) |
| Oxygen/Air | 0-70 LPM | 5 LPM starts at 10 LPM | +/- 3 LPM | 75 LPM | -40ºF to 140ºF (-40ºC to 60ºC) |

Flowmeters are calibrated at the pressure indicated on the Flow Tube, 70º F (21º C), at standard atmospheric pressure. Specifications are subject to change without prior notice.

**⚠MRI WARNING:** This product contains magnetic, ferrous material that may affect the result of an MRI. MR Conditional options may be available, contact your Sales Representative at 1-803-817-5600.

### Operating Instructions

1. Turn Flowmeter off by turning knob fully clockwise.
2. Inspect the Flowmeter for damage. If any is found, do not use the Flowmeter.

**CAUTION:** Over tightening the knob when turning the Flowmeter off will cause damage. The Flowmeter must be used with the Flow Tube in an upright position.

**⚠WARNING:** The Flow Tube specifies the gas and pressure required.

3. Connect the Flowmeter to the supply pressure and gas specified on the Flow Tube.

**⚠WARNING:** The accuracy may be affected if the temperature of the gas is different than 70º F (21º C) and the supply pressure is different than that indicated on the Flow Tube.