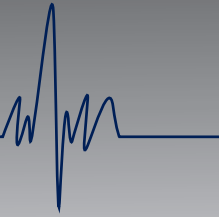




Solutions Start Here...

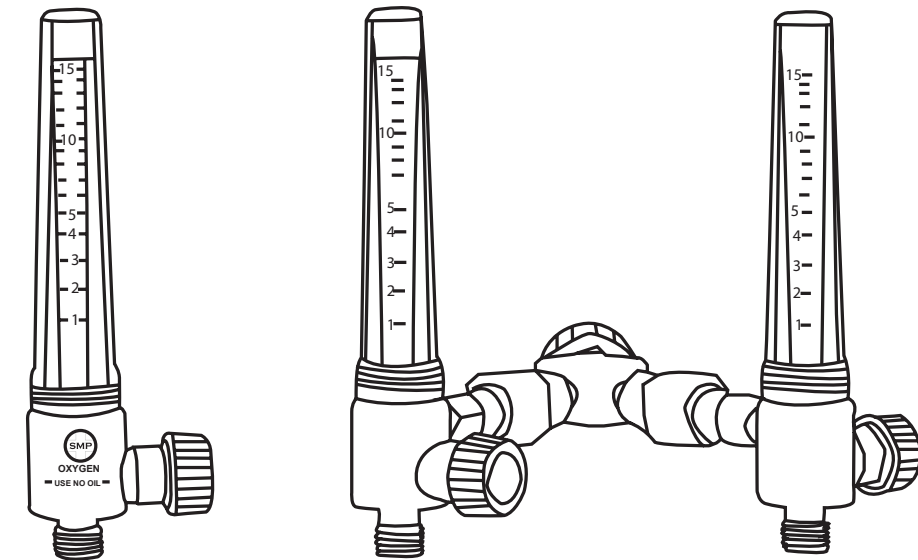


Solutions Start Here
www.smpcanada.com

SMP Canada
10 Sims Crescent, Richmond Hill
Ontario, L4B-1K9 Canada
Tel: (905) 764-7767 Fax: 1-866-627-9798
support@smpcanada.com

MEDICAL FLOWMETER

“ FM SERIES ”



USER & MAINTENANCE MANUAL



USER MANUAL

MEDICAL FLOWMETER FM SERIES

MEDICAL FLOWMETER “FM” SERIES

Operating and Maintenance Instructions



OXYGEN FM



DUAL FM



AIR FM

F M - 1 5 - x x - x x

Control Knob

Oxygen

I=White

U=Green

Air

I=Black

U=Yellow

Adapter

(XX = No Adapter)

(OH = OHMEDA)

(CH = CHEMETRON)

(JS = JAPANESE STANDARD)

(DN = GERMAN STANDARD)

(BS = BRITISH STANDARD)

(DS = DISS STANDARD)

Type of Flowmeter

(A = Air)

(O = Oxygen)

To order Dual Oxygen Flowmeter,
please put “D” in front of “FM”
Example: DFM - 15 - UO - OH
(Dual Oxygen Flowmeter, US Standard
with an OHMEDA adapter)



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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 SMP Canada before attempting to use the device.

- ⚠ 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.



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Consult operating manual



Use no oil

RECEIVING INSPECTION

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

ATTENTION:

It is crucial to allow the product to remain in the original packaging for 24 hours to adjust 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.

RESPONSIBILITY OF USER

⚠ WARNING:

Service of this device should only be performed by properly trained individuals.

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.



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To Eliminate 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, 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 leak-free before using the product. Only use an oxygen-safe leak detector when testing for leaks.

INTENDED USE

The SMP flowmeter is used to dispense an adjustable flow of gas accurately under the direction of a healthcare professional. The gas to which the flowmeter is calibrated depends on the model. Each flowmeter can be used with only one type of gas. The flowmeters are available with a wide number of gas specific adapters.

SPECIFICATIONS

Inlet

1/8-27 NPT female thread

Outlet

CGA DISS 1240, 9/16-18 UNF-2A



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Accuracy

0-15 lpm Models

From 1 to 5 lpm: ± 0.25 lpm

From > 6 to 15 lpm: ± 0.50 lpm

Operational Temperature Limits

Maximum 120°F (49°C) and Minimum 0°F (-18°C).

Transportation / Storage Temperature

Maximum 140°F (60°C) and Minimum -40°F (-40°C).

Calibrated Inlet Pressure

Flowmeters are calibrated at 50 psi inlet pressure.

NOTE:

Some flowmeter models may be supplied with an open 1/8-27 NPT female inlet port for connection to customer's piping. Always use thread sealants compatible with the gases involved. Use 15 to 20 foot-pounds torque for assembly. Always test for leaks on the connections before putting into service.

WARNING: USE NO OIL!

Oxygen in itself is a non-flammable gas; it will however, substantially increase the rate at which materials burn. Oil, grease and other hydrocarbons, when combined with oxygen, will become highly combustible and should never be used on any part of an oxygen flowmeter or other equipment used with oxygen.

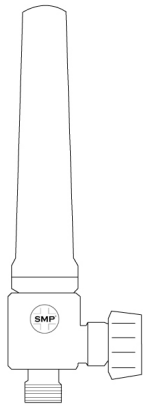
Smoking is **HIGHLY PROHIBITED** in any area where oxygen is in use or stored.



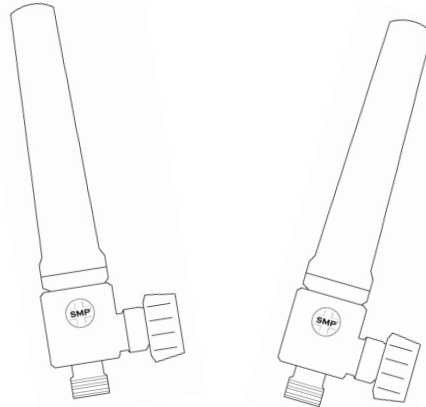
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OPERATION



CORRECT



INCORRECT

1. Attach flowmeter to a 345 kPa (50 psi) gas source.
Ensure flowmeter is in a vertical position (see above figures)
2. Turn control knob counterclockwise to start/increase flow.
3. Adjust to desired flow setting. Take reading at centre of ball.

WARNING:

Always verify flow at patient's end of tubing before applying.
Ensure that the tubing is never folded, kinked, or crushed.

4. Turn control knob clockwise to decrease/stop flow. Do not over tighten control knob.

CAUTION:

For medicinal use only. Federal law restricts this device to be used by or on order of a physician.



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WARNING:

DO NOT permit untrained personnel to install, operate or maintain this device. **DO NOT** attempt to install or operate this device until you have read and fully understand these instructions. If you do not fully understand these instructions, Contact your dealer, equipment provider or SMP Canada for more information.

MAINTENANCE AND REPAIR

Cleaning Instructions:

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

Maintenance

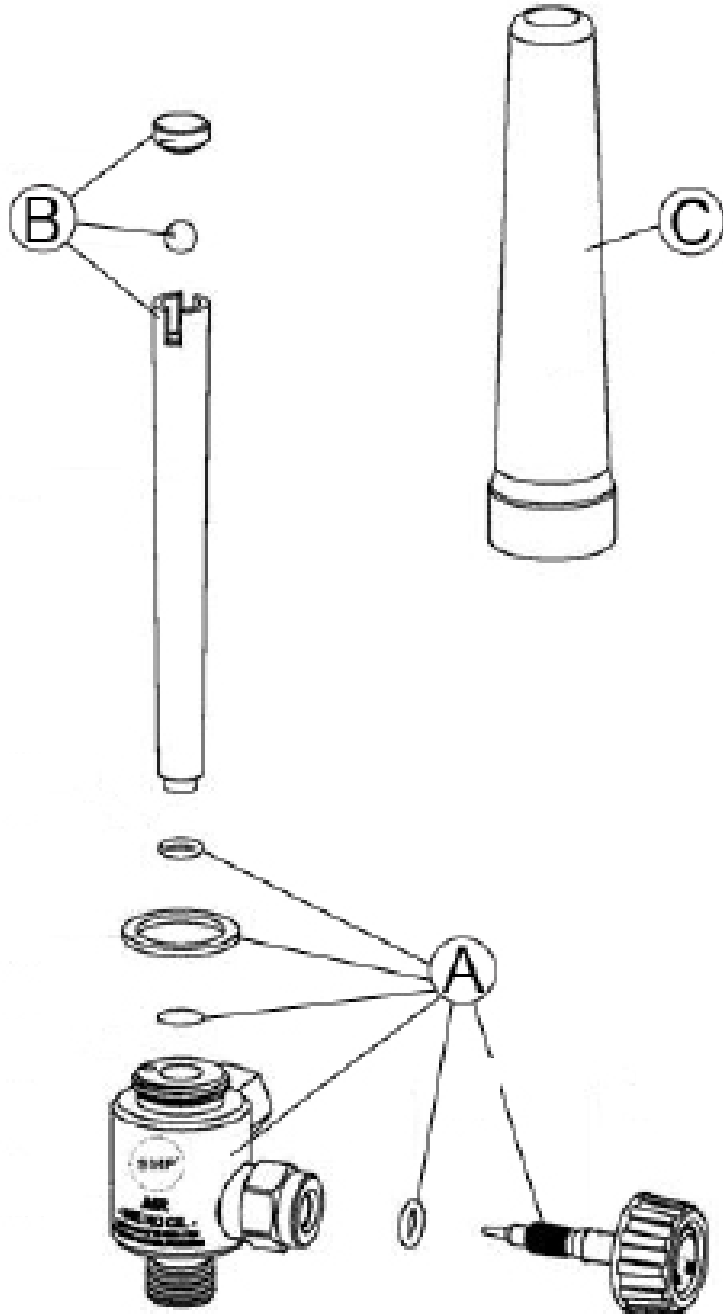
This device should be periodically checked and repaired if necessary, or when a malfunction is suspected or occurs.



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Parts Description





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Item	Part No.	Description	Quantity
A	Included with each option below		1
		PL-Washer	1
		Filter net	1
		O-Ring-P6	1
		Meter base - O2 Meter base - Air	1
	Option 1: FM-BOI	Control Knob Oxy - White (ISO)	1
	Option 2: FM-BAI	Control Knob Air - Black (ISO)	1
	Option 3: FM-BOU	Control Knob Oxy - Green (US)	1
	Option 4: FM-BAU	Control Knob Air - Yellow (US)	1
B	FM-FWT	Tube Top	1
		Metal Ball	1
		Inner Tube	1
		O-Ring 1.5 x 6	1
C	FM-OUT	Outer Tube	1



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Troubleshooting

Problem	Probable Cause	Suggested Solution
Flow will not shut off	<ol style="list-style-type: none">1. Leakage2. Defective Valve	<ol style="list-style-type: none">1. Replace seal or replace housing2. Replace body assembly
Sticking indicating ball	<ol style="list-style-type: none">1. Debris in flow tube	<ol style="list-style-type: none">1. Clean flow tube & float ball with dry cloth and swab
Knob will not turn	<ol style="list-style-type: none">1. Valve seized	<ol style="list-style-type: none">1. Replace body assembly

Repairs

Contact your dealer or the technical support department at SMP Canada for assistance if this device malfunctions.

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 product.

CAUTION:

Disconnect the device from gas supply before servicing.



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REUSABLE HUMIDIFIER (Optional)



Purpose

The SMP reusable humidifier utilizes a diffuser type humidification process to provide stable moisture content for maximum patient comfort during the administering of oxygen.

Specification

135ml max. line 2psi release

⚠ WARNING & CAUTIONS FOR OPERATION

1. Remove product from package and inspect for damage. If there is any damage, do not use.
2. Only personnel instructed and trained in its intended use should operate this product.
3. Be sure all connections are tight and leak free.



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4. Do not use oil, grease, organic lubricant or any combustible materials on or near this product.
5. Never use in a place near any type of flame or flammable/explosive substances, vapors or atmosphere.
6. Always confirm prescribed flow before administering to the patient and monitor flow on a frequent basis.
7. Be sure all connects are tight and leak free.
8. Only use oxygen safe leak detector to test for leaks.

Operation Instructions

1. Inspect product for visible damage. Do not use if any damage is found.
2. Add water into the bottle below the maximum line.
3. Connect the inlet of humidifier to a flowmeter, along with attaching a suitable oxygen connecting tube to its outlet port.
4. Adjust the flowmeter and observe the generation of bubbles to assure it functions.
5. Alarm shall sound if oxygen tube is blocked.



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Maintenance

1. Only qualified personnel should repair this product. Unauthorized disassembly or attempt to repair it will cause damage to the product and void warranty.
2. The product can be sterilized with E.O Gas.
3. The bottle assemblies can be autoclavable at high pressure and temperature of 121°C for 10 mins.
4. Do not clean with aromatic hydrocarbons.
5. Do not immerse product in any kind of liquid.
6. Clean exterior portion of the product by a cloth dampened with soft detergent.
7. Store the product in a clean area when not in use.
8. Use suitable gas indexed fittings to connect product to corresponding medical gas source.

Expiration

8 years from date of manufacture, 5 years warranty.



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WARRANTY

Components of this system are warranted under use against any and all manufacturing defects from the date of purchase for 5 years. Other components are covered by their manufacturer's warranties. Any failure resulting from defective parts of faulty workmanship, as determined during evaluation by SMP Canada, will be repaired under warranty. This warranty will be voided for any unit that has been subjected to misuse, negligence, accident or repairs performed by those other than SMP Canada.

WARRANTY CARD

To validate your 5 year warranty, please fill out and mail this card to SMP Canada
within 10 days from the purchase date

MODEL _____ LOT NO. _____

YOUR NAME _____

COMPANY NAME _____

ADDRESS _____

CITY _____ STATE / PROVINCE _____

ZIP / POSTAL CODE _____ PHONE _____

PURCHASED FROM _____

DATE RECEIVED _____