



**MEDICAL
FLOWMETER**
(Back Pressure Compensated Thorpe Tube)

INSTALLATION AND OPERATION INSTRUCTIONS

Before Installing or Operating, Read and Comply with These Instructions

Controls Corporation of America
1501 Harpers Road • Virginia Beach, VA 23454
To Order Call 1-800-225-0473 or 757-422-8330 • Fax 757-422-3125

www.concoa.com

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USER RESPONSIBILITY

This equipment will perform in conformity with the description contained in this manual and accompanying labels and/or inserts when installed, operated, maintained, and repaired in accordance with the instructions provided. This equipment must be checked periodically. Improperly working equipment should not be used. Parts that are broken, missing, worn, distorted or contaminated, should be replaced immediately. CONCOA recommends that a telephone or written request for service advice be made to CONCOA Customer Service in Virginia Beach, Virginia, PHONE: 1-800-225-0473, FAX: 1-757-422-3125, or E-MAIL: e-mail@concoa.com.

This equipment or any of its parts should not be altered without prior written approval by CONCOA. The user of this equipment shall have the sole responsibility for any malfunction that results from improper use, faulty maintenance, damage, improper repair, or alteration by anyone other than CONCOA or a service facility designated by CONCOA.

CUSTOMER SERVICE

In the event of equipment failure, call CONCOA Customer Service. Please be prepared to provide the model number and serial number of the equipment involved, in addition to some details regarding its application.

GENERAL SAFETY PRACTICES

Specific procedures for the safe use of flowmeters are listed below. The user can form habits thereby that will prevent an accident due to confusion over changing service needs.

- a. Never subject the flowmeter to inlet pressure greater than its rated inlet pressure, as shown on the flowmeter.
- b. Never use the flowmeter for gases other than those for which it is intended.
- c. All connections to the flowmeter must be clean, and free of oil, grease, and dirt.

The flowmeter may be externally cleaned using a solution of water and mild detergent.

**DO NOT STEAM AUTOCLAVE OR LIQUID STERILIZE THE
FLOWMETER.
(SEE CAUTION ITEM-4)**

CAUTION

1. This equipment must be used in accordance with the following safety precautions, and in accordance with the safety precautions on the cylinder label, and in accordance with the safety precautions provided with the equipment connected to the flowmeter outlet.
2. No repair should ever be undertaken or attempted by anyone other than CONCOA as given in the Repair Policy and Procedure.
3. After patient use, respiratory equipment may be contaminated. Handle in accordance with your hospital's infection control policy.
4. The only acceptable method of sterilization is with gas (ethylene oxide). Following sterilization with ethylene oxide, parts should be quarantined in a well-ventilated area to allow dissipation of residual ethylene oxide gas absorbed by the material. In some cases, aeration periods of seven days or more may be required. Follow sterilizer manufacturer's recommendations for specific aeration periods required.
5. OXYGEN IS AN OXIDIZER, WHICH VIGOROUSLY ACCELERATES COMBUSTION. DO NOT SMOKE IN THE AREA WHERE OXYGEN IS IN USE.
Do not allow oil, oil-bearing materials, or other combustibles that can ignite readily in the presence of oxygen, to contaminate the inside or outside of oxygen equipment. Contaminated equipment must be removed from service and sent out for cleaning and reconditioning.

DESCRIPTION

The CONCOA Pressure Compensated Flowmeter is suited for all types of inhalation therapy. Models are available for oxygen or medical air service, providing gas flow measurement and control. Various inlet and outlet connections can be provided to satisfy particular requirements. The flowmeter is designed to operate with a supply pressure of 50 psig, provided by either a cylinder with regulator or a pipeline outlet.

The flowmeter uses a ball float, riding on the gas stream in a calibrated flow tube, to accurately indicate the flow. Flow measurement is most accurate when the pressure within the flow tube remains a constant (supply) pressure, 50 psig. To achieve this, the needle valve on the pressure compensated flowmeter regulates flow at the outlet of the flowmeter (after gas has passed through the flow tube at supply pressure). Consequently, backpressure caused by downstream restrictions will not affect the accuracy of flow measurement, even though such restrictions may cause a flow rate change. A knob on the needle valve stem allows easy flow adjustment.

The pressure compensated oxygen and air flowmeters are also available with DISS power outlet that can provide flow in excess of 150 LPM. When not in use the power outlet is sealed by a check unit.

OPERATING INSTRUCTION

The inlet adapter should be connected to the 50 psig gas supply in such a manner that the flowmeter is positioned vertically. This will insure maximum accuracy of the instrument.

Flow rate in liters per minute is indicated by the position of the center of the ball in the flow tube.

Flow rate may change with a change in downstream resistance. This may be compensated, without accuracy loss, by adjusting the needle valve with the knob.

On flowmeters with power outlets, the outlet check unit is opened when a DISS nut and gland connection is made, permitting flow from the power outlet. If a flowmeter with a power outlet is used, the accuracy of the flowmeter will decrease during periods of high flow from the power outlet; the flow at the outlet of the flowmeter will be lower than that indicated on the scale.

MAINTENANCE

Repair Policy and Procedure

A unit that is not functioning properly should not be used until all required repairs have been completed and the unit has been tested to ascertain that it is in proper operating condition.

Repair of this equipment should not be undertaken by anyone other than CONCOA.

All equipment to be returned to CONCOA for repair must be accompanied by a Return Material Authorization (RMA). The RMA is available by contacting CONCOA, Customer Servicing at 1-800-225-0473 or by Fax 757-422-3125. No equipment for warranty or repair service will be accepted without proper authorization.

If authorized, the unit should be sent to CONCOA adequately packaged in the original shipping container, if possible. Ship the unit pre-paid. Include a copy of the RMA in the shipment.

CUSTOMER SERVICE

In the event of equipment failure, please call the CONCOA Customer Assistance Line at 1-800-225-0473. Please be prepared to provide the model number, serial number, and some application details of the equipment involved. Also mark the RMA Number on the outside of the shipping container and have the observed deficiency noted on the RMA. Return transportation charges for warranty repair will be paid by CONCOA. In all cases, other than where warranty is applicable, repair shall be made at current list prices for the required replacement part(s) plus a reasonable labor charge.

IMPORTANT

Clean and sterilize all respiratory therapy equipment before shipment to insure that service and transportation personnel not be exposed to contaminated equipment.

Test flowmeter for leaks and proper operation on regular basis.

Warranty Information

This equipment is sold by CONTROLS CORPORATION OF AMERICA under the warranties set forth in the following paragraphs. Such warranties are extended only with respect to the purchase of this equipment directly from CONTROLS CORPORATION OF AMERICA or its Authorized Distributors as new merchandise and are extended to the first Buyer thereof other than for the purpose of resale.

For a period of one (1) year from the date of original delivery (90 days in corrosive service) to Buyer or to Buyer's order, this equipment is warranted to be free from functional defects in materials and workmanship and to conform to the description of this equipment contained in this manual and any accompanying labels and/or inserts, provided that the same is properly operated under conditions of normal use and that regular periodic maintenance and service is performed or replacements made in accordance with the instructions provided. The foregoing warranties shall not apply if the equipment has been repaired: other than by CONTROLS CORPORATION OF AMERICA or a designated service facility or in accordance with written instructions provided by CONTROLS CORPORATION OF AMERICA, or altered by anyone other than CONTROLS CORPORATION OF AMERICA, or if the equipment has been subject to abuse, misuse, negligence or accident.

CONTROLS CORPORATION OF AMERICA's sole and exclusive obligation and Buyer's sole and exclusive remedy under the above warranties is limited to repairing or replacing, free of charge, at CONTROLS CORPORATION OF AMERICA's option, the equipment or part, which is reported to its Authorized Distributor from whom purchased, and which if so advised, is returned with a statement of the observed deficiency, and proof of purchase of equipment or part not later than seven (7) days after the expiration date of the applicable warranty, to the nearest designated service facility during normal business hours, transportation charges prepaid, and which upon examination, is found not to comply with the above warranties. Return trip transportation charges for the equipment or part shall be paid by Buyer.

CONTROLS CORPORATION OF AMERICA SHALL NOT BE OTHERWISE LIABLE FOR ANY DAMAGES INCLUDING BUT NOT LIMITED TO: INCIDENTAL DAMAGES, CONSEQUENTIAL DAMAGES, OR SPECIAL DAMAGES, WHETHER SUCH DAMAGES RESULT FROM NEGLIGENCE, BREACH OF WARRANTY OR OTHERWISE.

THERE ARE NO EXPRESS OR IMPLIED WARRANTIES WHICH EXTEND BEYOND THE WARRANTIES HEREINABOVE SET FORTH. CONTROLS CORPORATION OF AMERICA MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE EQUIPMENT OR PARTS THEREOF.



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