

# ACL99 Climate Control Tube User Manual

# INCLUDES: Cold Tube, Belt Bracket, Belt and Heat Shield

The ACL99 supplies a continuous flow of cool air to Bullard LANCER<sup>®</sup> airline respirators. All Bullard parts must be present and properly assembled to constitute a complete respirator. NOTE: ACL99 cannot be used with a low pressure air source such as an ambient air pump.

#### CAUTION: BEFORE USING THIS PRODUCT READ AND FOLLOW ALL DIRECTIONS AND WARNINGS INCLUDING THOSE IN THE RESPIRATOR INSTRUCTION MANUAL.

▲ DANGER ▲: Connecting the respirator to a line supplying Nitrogen or other harmful gases could cause death or serious injury.



### Air Quality, Air Pressure and Air Supply Hose Length Requirements

#### Air Quality

# ▲ WARNING ▲: The respirator's air source must supply clean, breathable air, Grade D or better, at all times. The respirator does NOT purify air or filter out contaminants.

Respirable air must be supplied to the point-ofattachment of the Bullard air supply hose. The point-ofattachment is where the air supply hose connects to the fitting that contains a pressure gauge used to monitor the pressure of the air provided to you.

Locate the source of supplied air in a clean environment far enough from your work site to ensure the air remains contaminant-free. Always use an inlet filter on your air source and any monitors and alarms as necessary to assure clean, breathable air at all times.

Supplied breathing air MUST meet or exceed the requirements for Type 1 gaseous air described in the Compressed Gas Association Commodity Specification G-7.1 (Grade D or higher quality) as specified by Federal Law 30 CFR, Part II, Subpart J, 11.121(b).

The requirements for Grade D breathable air include:

- Oxygen......19.5-23.5%
  Hydrocarbons (condensed)
- Carbon monoxide ..... 10 ppm max.
- Carbon dioxide ......1,000 ppm max.
  Odor ......No detectable odor
- No toxic contaminants at levels that make air unsafe to breathe.

Refer to C.G.A. Commodity Specification G-7.1 for complete details, or contact the Compressed Gas Association (1725 Jefferson Davis Highway, Arlington, VA 22202).

#### **Air Pressure**

Continually monitor the air pressure at the point-ofattachment while operating the respirator. A reliable air pressure gauge must be present to monitor the pressure.

▲ DANGER ▲: Failure to supply the minimum required pressure at the point-of-attachment for your hose length will reduce airflow and may expose you to life threatening conditions, diseases or death.

The BREATHING AIR PRESSURE TABLE below defines the air pressure ranges necessary for LANCER Airline respirators.

Be sure you understand the information in the BREATHING AIR PRESSURE TABLE before using the respirator. To use the table, follow the steps identified below:

- 1. Following your air source in Column 1, select your breathing tube system from Column 2.
- 2. Determine the proper Bullard air supply hose(s) (Column 3) to use with your Cold Tube.
- 3. Determine that your air supply hose does not exceed the maximum hose length (Column 4) or number of hose sections (Column 5).
- 4. Set the air pressure at the point-of-attachment within the required pressure range (Column 6) for your air supply hose length. Accurate pressure readings can only be attained when air is flowing into respirator.

#### Breathing Air Pressure Table

Adjust breathable airflow at the point of attachment to a pressure that falls within the range required for the equipment combination of your respirator.

(1)	(2)	(3)	(4)	(5)	(6)
Air Source	Breathing Tube System	Air Supply Hose	Maximum Hose Length (Feet)	Maximum Number of Hose Sections	Required Pressure Range (psig air)
Compressor Supplying Grade D Breathing Air	ACL99 Climate Control Device	V10	100 200 300	2 2 3	29-30 35-36 40-42



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#### **Air Supply Hose**

Use only Bullard V10 Series hose(s) in lengths of 100-300 feet, between the Cold Tube's quickdisconnect fitting and the point-of-attachment to the hose. Bullard V11 hose-to-hose adaptors must be used to connect V10 hose lengths together. Secure connection(s) until wrench tight and leak free. Use of any other air supply hose could reduce the air-flow to the respirator, possibly resulting in serious injury or death to the respirator wearer.

▲ WARNING ▲: Before connecting the Cold Tube to the respirator, be sure the breathing air at least meets the minimum Grade D requirements. (See AIR QUALITY section on front page.) Compressed air must be dry enough to prevent ice buildup in the cold airstream. Ice could reduce airflow into the respirator hood.

## Preparation and Use of the ACL99

- 1. Screw the nylon hose connector on the end of the breathing tube onto the blue side of the ACL99 Tube (Figure 1). Tighten firmly.
- Lace the belt supplied with the ACL99 through the belt bracket. Slots are provided for wearing the tube either vertically or horizontally on the waist. See Heat Shield instructions below.
- 3. With the breathing tube assembly attached, slip the Air Delivery System over your head.
- 4. With your Bullard air supply hose connected to the air source and with air flowing into the hose, connect the quick-disconnect coupler on the air supply hose to the quick-disconnect nipple on the Cold Tube.
- 5. Adjust the air pressure at the point-ofattachment (Figure 2) to within the approved pressure range. See the Air Pressure section on the front page.
- 6. Finish putting on the hood following the directions on page 13 of the LANCER respirator instruction manual. If you do not have instructions, contact Bullard Customer Service at the address or phone numbers below.
- 7. When finished working, leave the work area wearing the respirator. With the air still flowing into the hood, remove the hood and then disconnect the air supply hose using the quick-disconnect coupler attached to the Cold Tube.



## **Heat Shield Instructions**

The climate control heat shield is designed to work with the Bullard AC1000, HC2400, or ACL99 climate control devices.

#### Assembly

The heat shield is designed to work with the standard nylon belt (part # 4612) supplied with the climate control devices.

- 1. Determine whether the climate control device will be worn vertically or horizontally on the waist.
- 2. If the device will be worn in the horizontal position, align the tube on the heat shield as shown in Figure 3. If the tube will be worn in the vertical position, align the tube on the heat shield as shown in Figure 4.
- Lace the belt supplied with your climate control device through both the heat shield slots and the climate control belt bracket slots.
- 4. Use plastic zip tie to secure the climate control unit to the heat shield.





Figure 4

## Americas:

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