



Frigitron[®] 2000 Cool Climate Control Tube Instructions

INCLUDES: Frigitron 2000 and Belt.

FUNCTION: The Frigitron 2000 is NIOSH approved to supply a continuous flow of cool air to Bullard 88, CC20, MB30 or GR50 Series airline respirators. All Bullard parts must be present and properly assembled to constitute a NIOSH-approved respirator. NOTE: Frigitron 2000 can 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.

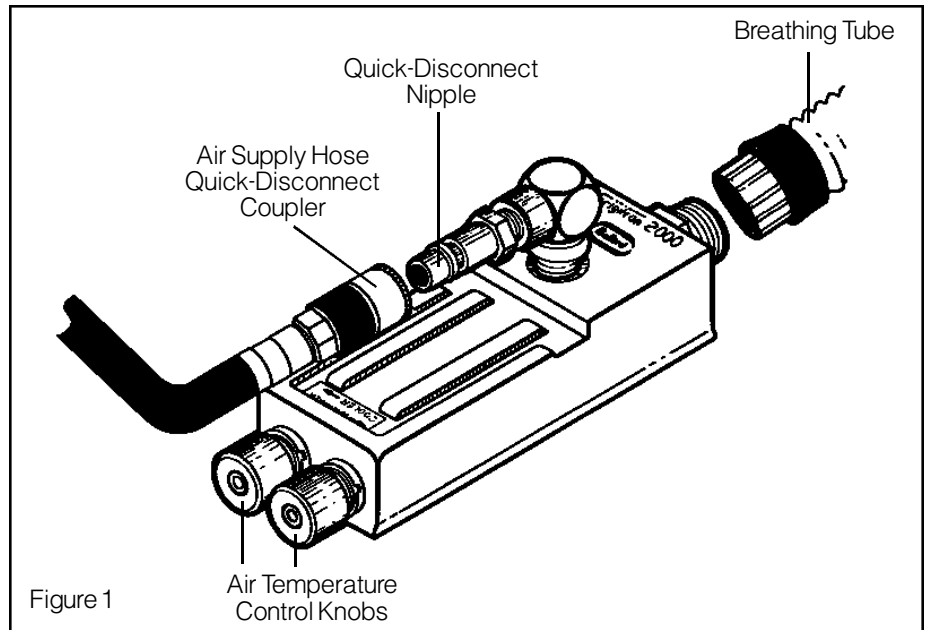


Figure 1

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-of-attachment of the MSHA/NIOSH APPROVED BULLARD air supply hose. The point-of-attachment 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:

- Oxygen19.5-23.5%
- Hydrocarbons (condensed) in mg/m³ of gas5 mg/m³ max.
- Carbon monoxide10 ppm max.
- Carbon dioxide1,000 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 (1235 Jefferson Davis Highway, Arlington, VA 22202).

Air Pressure

Continually monitor the air pressure at the point-of-attachment 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 to provide the 88, CC20, MB30 or GR50 Series respirator with a volume of air that falls within the required range of 6-15 cubic feet per minute (cfm) or 170-425 liters per minute (lpm). (See 30 CFR, Part II, Subpart J, 11.124.7).

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 climate control device from Column 2.
2. Determine the proper MSHA/ NIOSH approved Bullard air supply hose(s) (Column 3) to use with your Cool Tube.
3. Determine that your air supply hose does not exceed the maximum approved 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.

Breathing Air Pressure Table

This table defines the air pressure ranges necessary to provide the respirator with a volume of Grade D breathable air that falls within the U.S. Government required range of 6-15 cfm (or 170-425 lpm). (See CFR Title 30, Part II, Subpart J, 11.124.7).

(1)	(2)	(3)	(4)	(5)	(6)
Air Source	Climate Control Device	Air Supply Hose	Maximum Hose Length (Feet)	Maximum Number of Hose Sections	Required Pressure Range (psig air)
Bullard	Frigitron 2000 with 1/2" Industrial Interchange fitting, Steel	V20	50	1	16-22
Free-Air®	Frigitron 2000B with 1/2" Industrial Interchange fitting, Brass		100	2	18-25
Pumps	Frigitron 2000S with 1/2" Industrial Interchange fitting, Stainless Steel		200	2	22-30
			300	3	25-34

Air Supply Hose

To maintain your Bullard respirator's MSHA/NIOSH approval, use only approved Bullard V20 Series hose(s) in lengths of 50-300 feet between the Frigitron's quick-disconnect fitting and the point-of-attachment to the hose. MSHA/NIOSH approved

Bullard quick-disconnect fittings MUST be used to connect V20 hose lengths together.

Use of any other air supply hose voids the MSHA/NIOSH approval on the entire respirator assembly and could reduce the airflow to the respirator, possibly resulting in serious injury or death to the respirator wearer.

▲ WARNING ▲: Before connecting the Frigitron 2000 to the respirator, be sure the breathing air at least meets the minimum Grade D requirements. (See Air Quality section on front page.)

Preparation and Use of the Frigitron 2000

- In an uncontaminated atmosphere, screw the end of the breathing tube to the fitting on the climate control device. Tighten hose connectors firmly
- Lace the belt supplied with the Cool Tube through the belt bracket.
- With the approved Bullard V20 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 Frigitron 2000.
- Adjust the air pressure at the point-of-attachment to within the approved pressure range (Figure 2). See the Air Pressure section at the top of page.
- Put the hood on by following the directions in your respirator instruction man

ual. If you do not have instructions, contact Bullard Customer Service at the address or phone numbers given below.

- To obtain cooler air, turn either or both of the air temperature control knobs clockwise (Figure 1).

Maximum cooling is attained when either or both knobs are fully open and when there is maximum airflow out of the Frigitron exhaust ports.

To obtain air that is closer to ambient temperature, turn either or both air temperature control knob counter-clockwise. If both knobs are fully closed, your respirator will receive air at ambient temperature.

- 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 Frigitron 2000.

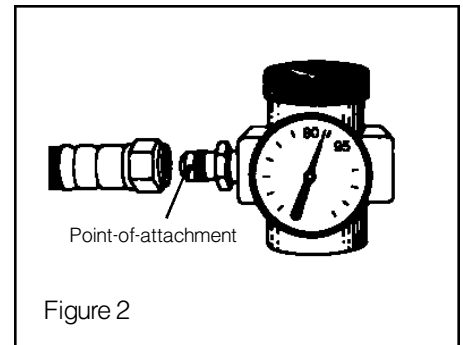


Figure 2



E.D. Bullard Company

The Human Side of Safety.® Since 1898.

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