CC20 Series Respirator Hood
User Manual for use with Supplied-Air Respirators

Supplied-Air Respirator, Type C Continuous Flow – Approval No. TC-19C-0154

Bullard CC20 Series hoods for continuous flow supplied-air respirators offer users a 1,000 Assigned Protection Factor (APF) for double-bib models and 25 APF for single bib models along with an easy-to-use adjustable ratchet suspension and two levels of chemical barrier protection. CC20 Series hoods can be used with optional climate control devices. CC20 Series hoods can be used with compressed air or ambient air pumps. Refer to pressure table settings inside this manual or supplied with your air pump. For Powered Air-Purifying Respirator use, please refer to separate user manual.

NOTE

For technical assistance or questions contact Bullard Customer Service at:
Toll-Free 877-BULLARD (285-5273) or 859-234-6616
Online at www.bullard.com or e-mail info@bullard.com

Cautions and Limitations

For CC20 Series Supplied Air Respirators

A. Not for use in atmospheres containing less than 19.5% oxygen.
B. Not for use in atmospheres immediately dangerous to life or health (IDLH). IDLH is defined in 29 CFR 1910.134(b).
C. Do not exceed maximum use concentrations established by regulatory standards.
D. Airline respirators can be used only when respirators are supplied with respirable air meeting the requirements of CGA G-7.1 Grade D or higher quality.
E. Use only the pressure ranges and hose lengths specified in this User Manual.
J. Failure to properly use and maintain this product could result in injury or death.
M. All approved respirators shall be selected, fitted, used, and maintained in accordance with MSHA, OSHA, and other applicable regulations.
N. Never substitute, modify, add, or omit parts. Use only exact replacement parts in the configuration as specified by the manufacturer.
O. Refer to user's instructions, and/or maintenance manuals for information on use and maintenance of these respirators.
S. Special or Critical User's Instructions and/or specific use limitations apply. Refer to User's Instructions before donning.

⚠ WARNING

Read all instructions and warnings before using this product. Failure to use and maintain this product in strict accordance with the instructions, labels, and limitations provided throughout this document could result in death or serious injury.

- Consult and comply with all applicable respiratory regulations (OSHA, MSHA, ACGIH, EPA and others) including; written program, medical evaluation, user training, hazard identification and appropriate respirator selection for the hazard.
- DO NOT use these respirators for respiratory protection in abrasive blasting such as silica. Use an approved and appropriate Type CE respirator for the hazard and activity.
- CC20 Series respirator hoods and components are designed for protection against fumes, vapors, gases, and dusts. For direct chemical contact or splash, additional evaluation of product selection is required. Bullard CC20 hoods offer two levels of DuPont® Tychem® chemical barrier protection.
- Never connect a respirator to a non-breathable air source. Prevent accidental connection by selecting unique and incompatible fittings from other airlines.
- Leave contamination area immediately if:
  - o Breathing becomes difficult
  - o Vision becomes impaired
  - o Pressure is felt in the ears
  - o Dizziness or other distress occurs
  - o You see, taste, or smell contaminants inside the hood
  - o Any part of the respirator assembly becomes damaged
  - o Airflow into the respirator slows or stops
  - o Air pressure gauge drops below the minimum specified in the Breathing Air Pressure Table

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Approved Respirator System Components

CC20 Series

Bullard CC20 Series supplied-air respirators consist of four components (Fig. 1)

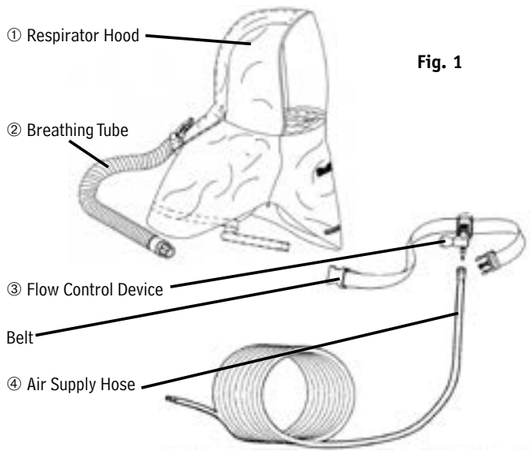

Fig. 1

**See Parts and Accessories for complete part numbers, descriptions, and specifications*

❶ Respirator Hood*

	Single Bib	Double Bib	Double Bib Taped Seams	Hard Hat Compatible Double Bib
Tychem® 2000 (QC)	20TJ	20TIC	20TICS	20TICH
Tychem® 4000 (SL)			20SIC	20SICH

❷ Breathing Tube*

	Heavy Duty	Light Duty
Clamp Connect	20BT	CC20BT
Thread Connect	SARHBT	

❸ Flow Control Devices*

Without Climate Control		With Climate Control	
Constant	Adjustable	Cool Only	Heat/Cool
F30 Series	F40 Series	AC1000 Frigitron DC5040	HC2400

❹ Air Supply Hose Series*

High Pressure Compressed Air Source		Low Pressure Ambient Air Pump
V5 3/8" ID Coiled	V10 3/8" ID	V20 1/2" ID

Respirator Operation

Protection

CC20 Series respirator hoods DO NOT provide ANSI/ISEA Z89.1 Head protection when used without an approved hard hat or ANSI/ISEA Z87.1 Face protection. Call or visit Bullard's website for respiratory protection that incorporates head and/or face protection.

CC20 Series respirator hoods DO NOT provide Eye Protection. Wear approved safety glasses or goggles as required.

CC20 Series respirator hoods DO NOT provide Hearing Protection. Use approved earmuffs or earplugs as required.

CC20 Series respirator hoods DO provide barrier protection against many chemicals. Refer to DuPont's SafeSpec™ website (http://safespec.dupont.com/safespec/selectorHome) for additional information.

Air Source

Follow all applicable regulations for supplied air quality. Supplied air must AT MINIMUM meet requirements for Type 1, gaseous air described in the ANSI/Compressed Gas Association Commodity Specification G-7.1 for Grade D or higher quality as specified by Federal regulations 42 CFR, Part 84.141(b) and 29 CFR 1910.134(i).

Locate the air source of supplied air, whether it is a breathing air compressor or ambient air pump, such as Bullard Free-Air® pump, in a clean air environment where air is contaminant free.

Follow compressor or pumps manufacturer's instructions for supplying Grade D air including the use of inlet/inline filters, air dryers, carbon monoxide monitors and alarms, and periodic testing and maintenance.

Breathing Air Supply Hoses and Hose Fittings

For OSHA compliance, only Bullard air supply hoses and fittings approved for use by NIOSH can be used between the breathing tube connection fitting on the wearer's belt and the point-of- attachment to the air supply.

Body Attachment

The flow control device connecting the breathing tube to the air supply hose MUST be secured to the user with the belt provided. Securing the breathing tube connection helps prevent the air supply hose from snagging, disconnecting, or pulling the respirator hood off the user's head.

Pressure

Air Pressure should be monitored at the point-of-attachment while operating this respirator. Pressure must be in accordance with the approved range in the CC20 Series Respirator Breathing Air Pressure Table. A reliable air pressure gauge must be present to allow monitoring pressure during actual respirator operation. Maximum allowable air pressure is 125psi.

Point of Attachment (POA)

Per 42 CFR Part 84 Subpart J 84.149; a pressure gauge, regulator, relief valve, and congruous fitting are necessary to be considered a POA.

Air Supply Hose

The maximum allowable total hose length is 300' (91.4m) from the Point of Attachment. See the CC20 Series Breathing Air Pressure Table for maximum allowable hose lengths that can be connected to attain the operating length.

Hose Connections

Only use Bullard hose-to-hose adapters for connecting hoses together.

Non-Breathable Gas Safety

If the work environment includes non-breathable gases and airlines – select a hose color and fitting connection that ensures respirator users cannot accidentally connect to unsafe air. The fitting connection or coupling for breathing air should always be unique and dedicated.

Special or Critical User's Instructions

The CC20 Series Breathing Air Pressure Table defines the air pressure ranges necessary to provide CC20 Series respirators with a volume of air that falls within the required range of 6-15 cfm or 170-425 lpm (42 CFR, Part 84, Subpart J, 84.150).

⚠ WARNING

Failure to supply the minimum required pressure at the point-of-attachment for your hose length and CC20 respirator type will reduce airflow and could result in death or serious injury.

To use the table and identify the proper air flow range; 1) select the air source (Compressed Air or Ambient/Free Air), 2) the use mode (Ambient Temp, Cooling, Heating), 3) the exact part number of the flow control device; and 4) the length of the air supply hose. Note the maximum hose segments that are approved. Only use or select a configuration that is specified and has a pressure range provided.

CC20 Series Respirator Breathing Air Pressure Table

				V10 Hose								V5 Hose	
Air Source	Usage	Flow Control Device Part Number	Coupling Design	25' Max 1 Hose Length	50' Max 2 Hose Lengths	75' Max 3 Hose Lengths	100' Max 3 Hose Lengths	150' Max 3 Hose Lengths	200' Max 5 Hose Lengths	250' Max 5 Hose Lengths	300' Max 5 Hose Lengths	25' Max 1 Hose Length	50' Max 2 Hose Lengths
Compressed Air	Constant Flow	F30/F30B/F30S	Ind. Interchange	16 - 29	18 - 33	20 - 34	22 - 37	26 - 42	29 - 46	33 - 51	35 - 54	18 - 31	24 - 35
		F31	Schrader	14 - 27	16 - 31	19 - 33	21 - 35	24 - 41	28 - 45	32 - 49	34 - 53	15 - 29	21 - 33
		F32/F33/F34*	Snap-Tite	12 - 21	14 - 26	17 - 28	19 - 31	23 - 37	26 - 42	30 - 46	32 - 50	13 - 23	18 - 28
		F37	CEJN	8 - 13	11 - 20	14 - 22	16 - 25	20 - 32	24 - 37	28 - 42	30 - 47		
		F38	Bayonet	19 - 33	21 - 36	23 - 38	25 - 40	28 - 45	32 - 50	35 - 54	37 - 57		
	Adjustable Flow	F40/F40B/F40S	Ind. Interchange	23 - 32	25 - 36	27 - 37	28 - 39	31 - 44	34 - 49	37 - 53	39 - 56	25 - 34	29 - 37
		F41	Schrader	21 - 29	23 - 33	25 - 35	27 - 37	30 - 42	33 - 47	36 - 51	38 - 55	22 - 31	27 - 35
		F42/F43/F44*	Snap-Tite	21 - 27	23 - 31	25 - 33	27 - 36	30 - 41	33 - 45	36 - 50	38 - 53	22 - 29	26 - 33
		F47	CEJN	20 - 22	22 - 27	24 - 29	25 - 32	29 - 37	32 - 42	35 - 47	37 - 51		
		F48	Bayonet	27 -38	29 - 40	30 - 42	31 - 43	34 - 49	37 - 53	40 - 56	42 - 60		
	Cooling Mode	AC100030/AC100030B/AC100030S	Ind. Interchange	55 - 72	57 - 74	58 - 75	60 - 76	62 - 80	65 - 83	68 - 86	70 - 88	57 - 72	62 - 75
		AC100031	Schrader	56 - 73	58 - 76	59 - 77	61 - 78	63 - 81	66 - 84	70 - 88	72 - 90	57 - 74	61 - 77
		AC100032/AC100033/AC100034*	Snap-Tite	57 - 75	59 - 77	60 - 78	62 - 79	64 - 82	68 - 86	71 - 88	72 - 91	58 - 75	61 - 78
		AC100037	CEJN	58 - 76	60 - 79	62 - 80	63 - 81	65 - 84	68 - 87	71 - 90	73 - 92		
		AC100038	Bayonet	60 - 77	61 - 80	62 - 80	64 - 82	66 - 85	69 - 87	72 - 91	74 - 94		
		DC5040/DC5040B/DC5040S	Ind. Interchange	54 - 80	58 - 87	61 - 90	65 - 95	71 - 104	78 - 111	84 - 120	87 - 125	57 - 85	68 - 93
		DC5041	Schrader	51 - 74	56 - 82	60 - 85	63 - 88	70 - 98	77 - 105	83 - 113	87 - 120	54 - 77	65 - 85
		DC5042/DC5043/DC5044*	Snap-Tite	47 - 73	52 - 81	57 - 85	60 - 89	68 - 99	74 - 106	81 - 116	84 - 122	50 - 77	61 - 86
		DC5047	CEJN	40 - 59	46 - 68	50 - 73	54 - 77	62 - 87	70 - 96	76 - 105	82 - 111		
		DC5048	Bayonet	63 - 88	66 - 92	69 - 93	71 - 97	77 - 107	85 - 110	90 - 118	93 - 125		
		HC240030/HC240030B/HC240030S	Ind. Interchange	61 - 75	63 - 78	65 - 79	66 - 81	70 - 85	74 - 89	78 - 93	80 - 96	62 - 77	68 - 79
		HC240031	Schrader	61 - 76	63 - 79	65 - 80	67 - 82	71 - 86	74 - 91	78 - 94	80 - 98	62 - 77	68 - 80
		HC240032/HC240033/HC340034*	Snap-Tite	55 - 69	58 - 72	60 - 74	61 - 76	65 - 80	69 - 83	73 - 88	75 - 92	56 - 70	61 - 74
		HC240037	CEJN	54 - 68	57 - 71	59 - 73	62 - 75	65 - 79	69 - 83	73 - 87	76 - 91		
		HC240038	Bayonet	65 - 80	66 - 83	69 - 84	70 - 86	73 - 90	78 - 94	81 - 97	83 - 101		
	Heating Mode	HC240030/HC240030B/HC240030S	Ind. Interchange	65 - 84	68 - 87	70 - 88	72 - 90	76 - 94	79 - 98	83 - 102	86 - 105	67 - 86	74 - 89
		HC240031	Schrader	65 - 84	68 - 88	70 - 89	71 - 91	75 - 95	79 - 99	83 - 102	85 - 106	67 - 86	72 - 89
		HC240032/HC240033/HC340034*	Snap-Tite	62 - 80	64 - 83	67 - 85	69 - 86	73 - 90	76 - 94	81 - 98	81 - 102	63 - 81	68 - 84
		HC240037	CEJN	60 - 78	62 - 81	65 - 83	66 - 84	71 - 90	74 - 93	78 - 97	81 - 101		
		HC240038	Bayonet	71 - 91	74 - 93	75 - 94	77 - 96	81 - 101	84 - 104	88 - 107	90 - 112		

*34/44 fittings not available for V5 Hose.

Air Source	Usage	Part Number		25'	50' Max 1 Hose Lengths	75'	100' Max 1 Hose Lengths	150'	200' Max 2 Hose Lengths	250'	300' Max 3 Hose Lengths
Ambient Air	Constant Flow	F35/F35B/F35S	Ind. Interchange		4 - 6		7 - 10		10 - 17		13 - 21
	Cooling	FRIGITRON2000/ FRIGITRON2000B/ FRIGITRON2000S	Ind. Interchange		16 - 24		19 - 28		22 - 29		24 - 29

Fitting the CC20 Series Respirator With a Hard Hat or Headband Suspension

Hard Hat Option

1. The CC20 Series respirator hood is approved for use with Bullard 30 or 51 Series Hard Hats. Assemble and adjust the hardhat suspension per it's instructions including optional ES42 chin strap.
2. Remove the adhesive-backed Velcro® strip attached to the Velcro piece that is sewn in the hood.
3. Peel the backing off the Velcro tab and apply it to the inside center rear of the hard hat approximately 1_4" up from the edge.
4. Insert the hard hat into the hood with cap visor facing the front of the hood.
5. Tuck cap visor above the front elastic band sewn into hood
6. Loop the Velcro strip sewn inside the hood around the back of the cap and affix it to the corresponding Velcro tab previously installed

Head Suspension Option

1. Place the headband suspension on your head and adjust to fit.
2. When comfortable, insert the suspension into the hood and snap connect it to the buttons on the front lens.

Installing the Breathing Tube in CC20 Series Respirator Hoods (Clamp Style)

1. Remove nylon clamp from the breathing tube (see Figure 2). Do not remove foam from inside the breathing tube used with CC20 Series Airline Respirators. The foam helps to reduce the noise level of incoming air.

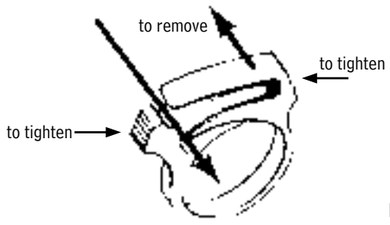

Figure 2

2. Insert the open end of the breathing tube approximately five inches into hood's air entry sleeve (see Figure 3). Install ends of nylon clamp (see Figure 4) and over air entry sleeve and breathing tube. Pinch ends together until tight.
3. Attach other end of the breathing tube to the flow control device on belt by screwing nylon hose connector onto flow control device. Feed belt through flow control device.

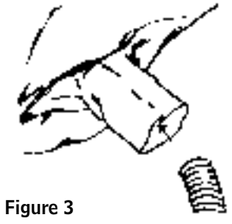

Figure 3

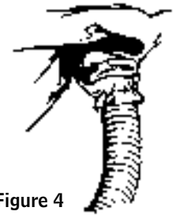

Figure 4

Installing the Breathing Tube in CC20 Series Respirator Hoods (Thread Style)

1. Align male end of breathing tube to female threaded insert on the back of the hood (see Figure 5). Do not remove foam from inside the breathing tube used with CC20 Series Airline Respirators. The foam helps to reduce the noise level of incoming air.

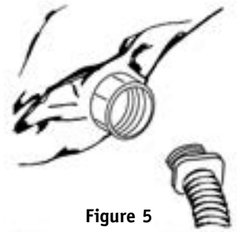

Figure 5

2. Twist the breathing tube into hood turning clockwise. Hand tighten only, until firmly seated.
3. Attach other end of the breathing tube to the flow control device on belt by screwing nylon hose connector onto flow control device.

Using Climate Control Devices as Flow Controls for CC20 Series Supplied-Air Respirators

CC20 Series Supplied-Air Respirators are approved for use by NIOSH with six optional Bullard climate control devices: AC1000 Series, HC2400 Series, DC5040 Series, and the Frigitron 2000 Series. These devices are considered flow controls, have belts for point-of-body attachment, and provide cool and/or warm air to the user.

1. Follow the instructions supplied with the climate control device.
2. Screw nylon hose connector on end of breathing tube to hose thread on climate control device.
3. Firmly tighten hose connector by hand (see Figure 6).
4. Lace belt and/or heat shield through belt loop bracket on climate control device.

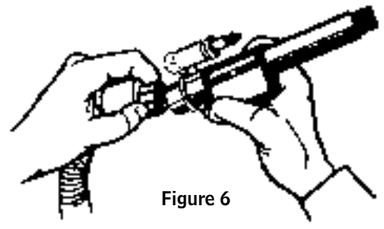

Figure 6

> **⚠ WARNING**
>
> Do not put on or remove these respirators in a hazardous atmosphere except for emergency escape purposes. Failure to heed these warnings could result in death or serious injury.

Donning the CC20 Series Respirator

Before using your CC20 Series respirator, assemble the hood, breathing tube and flow control using the instructions given on page 4.

1) Connect Bullard air supply hose to an air source supplying Grade D breathable air. Turn on breathing air source.
2) With air flowing, connect the hood assembly to the air supply hose (see Figure 7). Pull back the sleeve on the hose coupler and insert the quick-disconnect nipple on the flow control. Once the fitting is secured, release the coupling sleeve to lock the fitting together. Pull on the coupling to make sure they are attached securely.

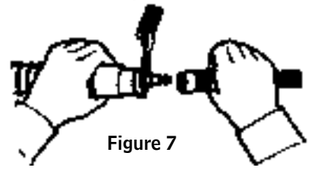

Figure 7

3) Adjust the air pressure at the point-of-attachment to the approved pressure range. See the Breathing Air Pressure Table (page 4) for approved pressure ranges.

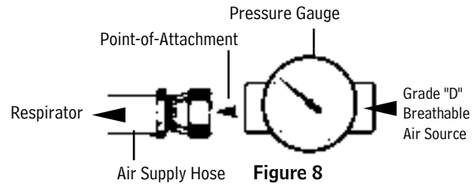

Figure 8

4) With the air still flowing, put on the CC20 Series hood. Pull the hood over your head until the neck cuff is securely around your neck. If wearing eyewear, put your face in the hood opening first and pull over your head.
5) Make sure that the breathing tube is not twisted after donning. If so, remove hood, untwist and redon.
6) Tuck inner bib of hood into shirt or protective clothing (see Figure 9).

Figure 9

7) Pull the outer bib over collar of shirt or protective clothing. Pull the long outer bib down on the outside of clothing. Use Velcro side straps to secure bib from flapping loose.
8) Fasten belt at waist or hip level and adjust for comfort.
9) Recheck air pressure and adjust if necessary.
10) With air flowing into the respirator, you are now ready to enter work area.

Doffing the CC20 Series Respirator

When finished working, leave the work area wearing the respirator with air still flowing. Once outside of the contaminated area, depending on the hazard or contaminant, a decontamination shower BEFORE removal might be necessary to prevent secondary respiratory exposure or contact with skin and eyes. When clean and safe, remove respirator by pulling over the head and then disconnecting the air supply hose, flow control, breathing tube, and headband suspension or hard hat for inspection, cleaning, and storage.

Inspection, Cleaning, and Storage

Bullard CC20 Series respirators have a limited service life. Therefore, a regular inspection and replacement program must be conducted. Bullard CC20 Series respirators and all component parts and assemblies should be inspected for damage or excessive wear before and after each use to ensure proper function. Immediately remove the respirator from service and replace parts or assemblies that show any sign of failure or excessive wear that might reduce the degree of protection originally provided.

Use only Bullard CC20 Series respirator components and replacement parts manufactured by Bullard and approved for use by NIOSH with these respirators. Since respirator use and wear varies with each job site, it is impossible to provide a specific time frame for respirator replacement. Respirators used by more than one person must be cleaned, inspected, and sanitized after each use.

⚠ WARNING

The air you breathe will not be clean unless the respirator you wear is clean. Failure to heed this warning could result in death or serious injury.

⚠ WARNING

Do not use volatile solvents for cleaning this respirator or any parts and assemblies. Strong cleaning and disinfecting agents, and many solvents, can damage the plastic parts and reduce the protective properties of the respirator. Failure to heed these instructions may result in minor or moderate injury and/or equipment damage.

⚠ WARNING

Do not store the respirator in your work area or leave it unattended in a contaminated environment. Respirable contaminants can remain suspended in the air for several hours after work activity ceases, even though you may not see them. Proper work practice requires you to wear the respirator until you are outside the contaminated area. If you place or store the respirator in a contaminated environment, contaminants, dirt, and dust could get into the respirator. When you put the respirator back on, you could breathe in contaminants upon reuse. Failure to heed these instructions could result in death or serious injury.

Hood

Inspection

Before and after every use, inspect the hood material for rips, tears, or damage from excessive wear that might reduce the degree of protection originally provided. The respirator's plastic lens should be inspected for cracks, scratches or any other signs of damage.

If damage is detected, remove the hood from service and discard immediately.

Cleaning

Bullard does not recommend laundering the hood. The hood should be hand-sponged with warm water and mild detergent, rinsed, and air-dried. Abrasive cleaning or solvents may damage the lens or leave harmful residue in the hood if improperly rinsed or aired out.

Breathing Tube

Inspection

Inspect the breathing tube for tears, cracks, holes, or excessive wear that might reduce the degree of protection originally provided. If any signs of excessive wear are present, remove the breathing tube from service and discard immediately.

Inspect the gasket seal on the flow control end, if missing or worn, remove the respirator from service until replaced – there is no gasket seal on the hood-end of threaded connections.

Cleaning

To clean the breathing tube, hand-sponge with warm water and mild detergent, being careful not to get water inside. Rinse and air-dry. Avoid solvents and harsh cleansers.

⚠ WARNING

Do not cut or remove the foam that is inside the CC20 Series Airline Respirator breathing tube. The foam helps reduce the noise level of the incoming air supply. It does not filter or purify your breathing air. NIOSH has approved this respirator with the foam in place. Failure to follow these instructions may result in minor or moderate injury and/or equipment damage.

Flow Control Device

Inspection

Inspect the flow control device including adjustable knobs and tubes for cracks, holes, or excessive wear that might reduce the degree of protection originally provided. If any signs of excessive wear are present, remove the flow control device from service. Replacement belts are available for all flow controls.

Cleaning

To clean, hand-sponge with warm water and mild detergent, being careful not to get water inside. Avoid solvents and harsh cleansers.

Air Supply Hoses

Inspection

Air supply hose(s) should be inspected closely for abrasions, corrosion, cuts, cracks, and blistering. Be sure the hose fittings are crimped tightly to the hose so that no air can escape. Make sure the hose has not been kinked or crushed by any equipment that may have rolled over it.

If any of the above signs are present or any other signs of excessive wear are detected, replace the hose(s) immediately and remove from service.

Cleaning

The air supply hose(s) should be hand-sponged with warm water and mild detergent, rinsed and air dried. Do not get water inside the air supply hose. Avoid solvents and harsh cleansers.

⚠ WARNING

Only use air supply hoses that are NIOSH approved for use with the CC20 Series respirator. Other hoses could reduce airflow and protection, and expose the wearer to life-threatening conditions. Failure to follow these instructions could result in death or serious injury.

Storage

After reusable respirator components have been cleaned and inspected, place them in a plastic bag or an airtight container. Store the respirator and parts where they will be protected from contamination, distortion and damage from elements such as dust, direct sunlight, heat, extreme cold, excessive moisture and harmful chemicals. Five-year maximum shelf life.

E.D. BULLARD CO.
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CYNTHIANA, KY 41031 USA
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MODEL CC20 SERIES
TYPE C CONTINUOUS FLOW SUPPLIED-AIR RESPIRATOR

THIS RESPIRATOR IS APPROVED ONLY IN THE FOLLOWING CONFIGURATIONS:

9/15/2017			RESPIRATOR COMPONENTS						
TC-	PROTECTION1	MODEL	ALTERNATE HOOD	ALTERNATE SUSPENSION/ HARD HAT	ALTERNATE BREATHING TUBE	ALTERNATE FLOW CONTROL DEVICE	ALTERNATE AIR HOSE	ACCESSORIES	CAUTIONS AND LIMITATIONS2
		CC20 SERIES HOODS	20TJN 20TJNT 20TICN 20TICNT 20SICN 20SICNT 20TICSN 20TICSNT 20TICH 20TICHT 20SICH 20SICHT 20TG 20RT 30XXP 30XXR 51XXP 51XXR 20BT RTBT SARHBT F30 F30B F30S F31 F32 F33 F34 F35 F35B F35S F37 F38 F40 F40B F40S F41 F42 F43 F44 F47 F48 DC5040 DC5040B DC5040S DC5041 DC5042 DC5043 DC5044 DC5047 DC5048 FRIGITRON2000 FRIGITRON2000B FRIGITRON2000S AC100030 AC100030B AC100030S AC100031 AC100032 AC100033 AC100034 AC100037 AC100038 HC240030 HC240030B HC240030S HC240031 HC240032 HC240033 HC240034 HC240037 HC240038 54515 54514 54513 54512 54511 54510 5454 5457 5458 46919 46918 46917 46915 46913 4696 469650 4696100 46916 V20105ST V20110SST V52533XXX V55031XXX V55030XXX V55033XXX V55032XXX V52531XXX V52530XXX V52532XXX V5KF5033XXX V5KF5032XXX V5KF5031XXX V5KF5060XXX V5KF2533XXX V5KF2532XXX V5KF2531XXX V5KF2530XXX 20LCL HS HSOC 36501 4612 V11 V12 V13 ES42 20NIC V14 V18 V19 V19B V37 V38 V17 S19432 S19442 S19443 3902 S19448 DC70ML DC70XLXXL DC705X	
19C-0154	SA/CF	CC20	X X X

Parts and Accessories

CC20 Series airline respirators consist of four components – respirator hood, breathing tube, flow control device, and air supply hose. All components must be present and properly assembled to constitute a complete NIOSH approved respirator.

CATALOG NUMBER | DESCRIPTION

Hoods & Cover Lenses

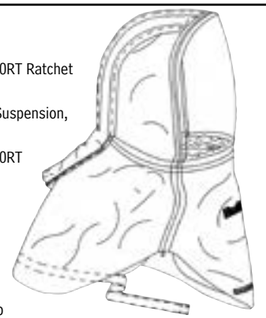
Single Bib

20TJ Tychem® 2000 (QC) .02" PETG w/20RT Ratchet Suspension, Clamp Connection

20TJN Tychem® 2000 (QC) .02" PETG No Suspension, Clamp Connection

20TJT Tychem® 2000 (QC) .02" PETG w/20RT Ratchet Suspension, Threaded Connection

20TJNT Tychem® 2000 (QC) .02" PETG No Suspension, Threaded Connection



CC20 Series Hood

Double Bib

20TIC Tychem® 2000 (QC) .02" PETG w/20RT Ratchet Suspension, Clamp Connection

20TICN Tychem® 2000 (QC) .02" PETG No Suspension, Clamp Connection

20TICT Tychem® 2000 (QC) .02" PETG w/20RT Ratchet Suspension, Threaded Connection

20TICNT Tychem® 2000 (QC) .02" PETG No Suspension, Threaded Connection

Double Bib Taped Seams

20TICS Tychem® 2000 (QC) .02" PETG Taped w/20RT Ratchet Suspension, Clamp Connection

20TICSN Tychem® 2000 (QC) .02" PETG Taped No Suspension, Clamp Connection

20TICST Tychem® 2000 (QC) .02" PETG Taped w/20RT Ratchet Suspension, Threaded Connection

20TICSNT Tychem® 2000 (QC) .02" PETG Taped No Suspension, Threaded Connection

20SIC Tychem® 4000 (SL) .02" PETG w/20RT Ratchet Suspension, Clamp Connection

20SICN Tychem® 4000 (SL) .02" PETG No Suspension, Clamp Connection

20SICT Tychem® 4000 (SL) .02" PETG w/20RT Ratchet Suspension, Threaded Connection

20SICNT Tychem® 4000 (SL) .02" PETG No Suspension, Threaded Connection

20SICV Tychem® 4000 (SL) .03" Vinyl w/20RT Ratchet Suspension, Clamp Connection

20SICVN Tychem® 4000 (SL) .03" Vinyl No Suspension, Clamp Connection

20SICVT Tychem® 4000 (SL) .03" Vinyl w/20RT Ratchet Suspension, Threaded Connection

20SICVNT Tychem® 4000 (SL) .03" Vinyl No Suspension, Threaded Connection

Hard Hat Compatible

20TICH Tychem® 2000 (QC) .04" PETG For Hard Hat Clamp Connection

20TICHT Tychem® 2000 (QC) .04" PETG For Hard Hat Threaded Connection

20SICH Tychem® 4000 (SL) .04" PETG For Hard Hat Clamp Connection

20SICHT Tychem® 4000 (SL) .04" PETG For Hard Hat Threaded Connection

20SICVH Tychem® 4000 (SL) .03" Vinyl For Hard Hat Clamp Connection

20SICVHT Tychem® 4000 (SL) .03" Vinyl For Hard Hat Threaded Connection

30WHR Hard Hat 6 pt, Ratchet Suspension,, Classic Cap Style, White

51WHR Hard Hat 4 pt, Ratchet Suspension,, Standard Cap Style White

Lens Cover

20LCL CC20/GR50 Mylar Lens Cover Clear 25 Pack

20LCLBP CC20/GR50 Mylar Lens Cover Clear 8 Packs of 25

CATALOG NUMBER | DESCRIPTION

Breathing Tube

20BT SAR CC20/GR50/RT Heavy Duty Breathing Tube, Clamp Connect

RTBT SAR CC20/CC20 Disposable Breathing Tube, Clamp Connect

SARHBT SAR CC20/GR50/RT Heavy Duty Breathing Tube, Thread Connect

Standard Flow Controls & Belts (includes QD Nipple to Air Supply Hose and 4612 Nylon Belt)

4612 Replacement 54" x 1 1/2" Nylon Belt (All Flow Controls)

36501 Replacement 54" x 1 1/2" Vinyl Decon Belt (All Flow Controls)

F30 1/4" Industrial Interchange Continuous Flow Control Fitting, Compressed Air

F30B 1/4" Industrial Interchange Brass Continuous Flow Control Fitting, Compressed Air

F30S 1/4" Industrial Interchange Stainless Steel Continuous Flow Control Fitting, Compressed Air

F31 1/4" Schrader Continuous Flow Control Fitting, Compressed Air

F32 1/4" Snap-Tite Continuous Flow Control Fitting, Compressed Air

F33 1/4" Snap-Tite Brass, Continuous Flow Control Fitting, Compressed Air

F34 1/4" Snap-Tite Stainless Steel Continuous Flow Control Fitting, Compressed Air

F35 1/2" Industrial Interchange Continuous Flow Control Fitting, Free Air Pumps

F35B 1/2" Industrial Interchange Brass Continuous Flow Control Fitting, Free Air Pumps

F35S 1/2" Industrial Interchange Stainless Steel Continuous Flow Control Fitting, Free Air Pumps

F37 1/4" CEJN Continuous Flow Control Fitting, Compressed Air

F38 1/4" Bayonet Continuous Flow Control Fitting, Compressed Air

F40 1/4" Industrial Interchange Adjustable Flow Control Fitting, Compressed Air

F40B 1/4" Industrial Interchange Brass Adjustable Flow Control Fitting, Compressed Air

F40S 1/4" Industrial Interchange Stainless Steel Adjustable Flow Control Fitting, Compressed Air

F41 1/4" Schrader Adjustable Flow Control Fitting, Compressed Air

F42 1/4" Snap-Tite Adjustable Flow Brass Control Fitting, Compressed Air

F43 1/4" Snap-Tite Brass Adjustable Flow Stainless Steel Control Fitting, Compressed Air

F44 1/4" Snap-Tite Stainless Steel Adjustable Flow Control Fitting, Compressed Air

F47 1/4" CEJN Adjustable Flow Control Fitting, Compressed Air

F48 1/4" Bayonet Adjustable Flow Control Fitting, Compressed Air

Heating/Cooling Flow Controls & Belts (includes QD Nipple to Air Supply Hose and 4612 Nylon Belt)

AC1000 Series – Cooling (Metal & Plastic), Compressed Air Only

AC100030 1/4" Industrial Interchange Continuous Flow Control Fitting

AC100030B 1/4" Industrial Interchange Brass Continuous Flow Control Fitting

AC100030S 1/4" Industrial Interchange Stainless Steel Continuous Flow Control Fitting

AC100031 1/4" Schrader Continuous Flow Control Fitting

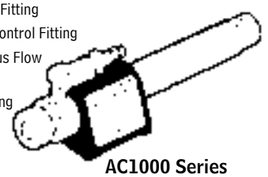
AC100032 1/4" Snap-Tite Continuous Flow Control Fitting

AC100033 1/4" Snap-Tite Brass Continuous Flow Control Fitting

AC100034 1/4" Snap-Tite Stainless Steel Continuous Flow Control Fitting

AC100037 1/4" CEJN Continuous Flow Control Fitting

AC100038 1/4" Bayonet Continuous Flow Control Fitting



AC1000 Series

Parts and Accessories

CATALOG NUMBER | DESCRIPTION

Heating/Cooling Flow Controls & Belts (includes QD Nipple to Air Supply Hose and 4612 Nylon Belt)

CT Series – Cooling (Plastic), Compressed Air Only (Includes 4612 Nylon Belt)

CT30 1/4" Industrial Interchange Continuous Flow Control Fitting

CT30SW 1/4" Industrial Interchange with Dynaswivel Continuous Flow Control Fitting

CT30B 1/4" Industrial Interchange Brass Continuous Flow Control Fitting

CT30BSW 1/4" Industrial Interchange with Dynaswivel Brass Continuous Flow Control Fitting

CT30S 1/4" Industrial Interchange Stainless Steel Continuous Flow Control Fitting

CT30SSW 1/4" Industrial Interchange with Dynaswivel Stainless Steel Continuous Flow Control Fitting

CT31 1/4" Schrader Continuous Flow Control Fitting

CT32 1/4" Snap-Tite Continuous Flow Control Fitting

CT33 1/4" Snap-Tite Brass Continuous Flow Control Fitting

CT34 1/4" Snap-Tite Stainless Steel Continuous Flow Control Fitting

CT37 1/4" CEJN Continuous Flow Control Fitting

CT38 1/4" Bayonet Continuous Flow Control Fitting

DC5040 Series – Cooling, Use with Cooling Vest, Compressed Air Only (Includes 4612 Nylon Belt)

DC5040 1/4" Industrial Interchange Continuous Flow Control Fitting

DC5040B 1/4" Industrial Interchange Brass Continuous Flow Control Fitting

DC5040S 1/4" Industrial Interchange Stainless Steel Continuous Flow Control Fitting

DC5041 1/4" Schrader Continuous Flow Control Fitting

DC5042 1/4" Snap-Tite Continuous Flow Control Fitting

DC5043 1/4" Snap-Tite Brass, Continuous Flow Control Fitting

DC5044 1/4" Snap-Tite Stainless Steel Continuous Flow Control Fitting

DC5047 1/4" CEJN Continuous Flow Control Fitting

DC5048 1/4" Bayonet Continuous Flow Control Fitting

DC70ML Cooling Vest DC70 M/L

DC70XLXXL Cooling Vest DC70 XL/XXL

DC705X Cooling Vest DC70 only 5XL

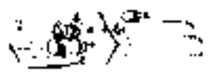
DC70M/L
DC70XL/XXL

FRIGITRON 2000 Series, Cooling, Free Air Pumps (Includes 4612 Nylon Belt)

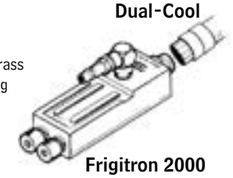
FRIGITRON2000 1/2" Industrial Interchange Continuous Flow Control Fitting

FRIGITRON2000B 1/2" Industrial Interchange Brass Continuous Flow Control Fitting

FRIGITRON2000S 1/2" Industrial Interchange Stainless Steel Continuous Flow Control Fitting



DC5040
Dual-Cool



Frigitron 2000

HC2400 Series (Metal and Plastic) - Cooling/Heating, Compressed Air (Includes 4612 Nylon Belt)

HC240030 1/4" Industrial Interchange Continuous Flow Control Fitting

HC240030B 1/4" Industrial Interchange Brass Continuous Flow Control Fitting

HC240030S 1/4" Industrial Interchange Stainless Steel Continuous Flow Control Fitting

HC240031 1/4" Schrader Continuous Flow Control Fitting

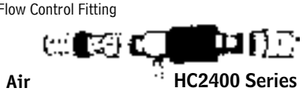
HC240032 1/4" Snap-Tite, Continuous Flow Control Fitting

HC240033 1/4" Snap-Tite Brass, Continuous Flow Control Fitting

HC240034 1/4" Snap-Tite Stainless Steel Continuous Flow Control Fitting

HC240037 1/4" CEJN Continuous Flow Control Fitting

HC240038 1/4" Bayonet Continuous Flow Control Fitting



HC2400 Series

HCT Series (Plastic) Cooling/Heating, Compressed Air (Includes 4612 Nylon Belt)

HCT30 1/4" Industrial Interchange Continuous Flow Control Fitting

HCT30SW 1/4" Industrial Interchange with Dynaswivel Continuous Flow Control Fitting

HCT30B 1/4" Industrial Interchange Brass Continuous Flow Control Fitting

HCT30BSW 1/4" Industrial Interchange with Dynaswivel Brass Continuous Flow Control Fitting

HCT30S 1/4" Industrial Interchange Stainless Steel Continuous Flow Control Fitting

HCT30SSW 1/4" Industrial Interchange with Dynaswivel Stainless Steel Continuous Flow Control Fitting

HCT31 1/4" Schrader Continuous Flow Control Fitting

HCT32 1/4" Snap-Tite Continuous Flow Control Fitting

HCT33 1/4" Snap-Tite Brass, Continuous Flow Control Fitting

HCT34 1/4" Snap-Tite Stainless Steel Continuous Flow Control Fitting

HCT37 1/4" CEJN Continuous Flow Control Fitting

HCT38 1/4" Bayonet Continuous Flow Control Fitting

SAR Air Supply Hoses

V5 Series – Self Coiling Hose, 3/8" ID for Compressed Air, Includes QD Coupler and Nipple

XXX denotes color. RED=Red, BLU=Blue, BLK=Black, YLW=Yellow

V52530XXX V5 3/8" ID Starter Industrial Interchange QD Coupling, 25'

V52531XXX V5 3/8" ID Starter Schrader QD Coupling, 25'

V52532XXX V5 3/8" ID Starter Snap-Tite QD Coupling, 25'

V52533XXX V5 3/8" ID Starter Snap-Tite Brass QD Coupling, 25'

V55030XXX V5 3/8" ID Starter Industrial Interchange QD Coupling, 50'

V55031XXX V5 3/8" ID Starter Schrader QD Coupling, 50'

V55032XXX V5 3/8" ID Starter Snap-Tite QD Coupling, 50'

V55033XXX V5 3/8" ID Starter Snap-Tite Brass QD Coupling, 50'

V5KF2530XXX V5 Kink Free 3/8" ID Starter Industrial Interchange QD Coupling, 25'

V5KF2531XXX V5 Kink Free 3/8" ID Starter Schrader QD Coupling, 25'

V5KF2532XXX V5 Kink Free 3/8" ID Starter Snap-Tite QD Coupling, 25'

V5KF2533XXX V5 Kink Free 3/8" ID Starter Snap-Tite QD Coupling, 25'

V5KF5030XXX V5 Kink Free 3/8" ID Starter Industrial Interchange QD Coupling, 50'

V5KF5031XXX V5 Kink Free 3/8" ID Starter Schrader QD Coupling, 50'

V5KF5032XXX V5 Kink Free 3/8" ID Starter Snap-Tite QD Coupling, 50'

V5KF5033XXX V5 Kink Free 3/8" ID Starter Snap-Tite Brass QD Coupling, 50'

V10 Series, 3/8" ID for Compressed Air –
Starter Kit - Includes QD Coupler

4696	V10 3/8" ID Starter Industrial Interchange 25’ Black with V13 hose to pipe adapter and V17 nipple
469650	V10 3/8" ID Starter Industrial Interchange 50’ Black with V13 hose to pipe adapter and V17 nipple
4696100	V10 3/8" ID Starter Industrial Interchange 100’ Black with V13 hose to pipe adapter and V17 nipple
46913	V10 3/8" ID Starter Schrader 25’ Black with V13 hose to pipe adapter, no nipple
46915	V10 3/8" ID Starter Snap-Tite 25’ Black with V13 hose to pipe adapter, no nipple
46916	V10 3/8" ID Starter Snap-Tite 25’ Green, with V13 hose to pipe adapter, no nipple
46917	V10 3/8" ID Starter Snap-Tite 50’ Green, with V13 hose to pipe adapter, no nipple
46918	V10 3/8" ID Starter Snap-Tite 25’ Blue with S19443 Nipple
46919	V10 3/8" ID Starter Snap-Tite 50’ Blue with S19443 Nipple

Extension/Custom Assembly – No QD Coupler, Includes V13 hose to pipe adapter and V11 hose to hose adapter

5454	V10 3/8" ID Extension 25’ Black
5457	V10 3/8" ID Extension 50’ Black
5458	V10 3/8" ID Extension 100’ Black
54514	V10 3/8" ID Extension 25’ Blue
54513	V10 3/8" ID Extension 50’ Blue
54512	V10 3/8" ID Extension 100’ Blue
54510	V10 3/8" ID Extension 25’ Green
54511	V10 3/8" ID Extension 50’ Green
54515	V10 3/8" ID Extension 100’ Green

V20 Series, ½" ID for Free Air Pumps – Includes QD Coupler and Nipple

V2050ST	V20 1/2" ID Starter Industrial Interchange 50’ Black
V20100ST	V20 1/2" ID Starter Industrial Interchange 100’ Black

V10 Air Supply Hose Couplers, Nipples and Adapters

V14	QD Coupler 1/4" Industrial Interchange, 1/4" Female NPT (V12 Adapter Separate)
V27	QD Coupler 1/4" Industrial Interchange with V12 Adapter
V17	QD Nipple 1/4" Industrial Interchange, 3/8" Female NPT (V12 Adapter Separate)
V18	QD Coupler 1/4" Schrader, 1/4" Female NPT (V12 Adapter Separate)
S19432	QD Nipple 1/4" Schrader, 1/4" Female NPT (V12 Adapter Separate)
V19	QD Coupler 1/4" Snap-Tite 1/4" Female NPT (V12 Adapter Separate)
V19B	QD Coupler 1/4" Snap-Tite 1/4" Female NPT Brass (V12 Adapter Separate)
S19442	QD Nipple 1/4" Snap-Tite, 1/4" Female NPT (V12 Adapter Separate)
S19443	QD Nipple 1/4" Snap-Tite, 1/4" Female NPT Brass (V12 Adapter Separate)
V37	QD Coupler 1/4" CEJN 1/4" Female NPT (V12 Adapter Separate)
3902	QD Nipple 1/4" CEJN 1/4" Female NPT (V12 Adapter Separate)
V38	QD Coupler 1/4" Bayonet 1/4" Female NPT (V12 Adapter Separate)
S19448	QD Nipple 1/4" Bayonet 1/4" Female NPT (V12 Adapter Separate)
V11	Hose Adapter 3/8" to 3/8" Hose Brass
V13	Hose Adapter 3/8" to 3/8" Pipe Brass
V12	Hose Adapter 3/8" to 1/4" Pipe Brass

Replacement Parts & Accessories

HS	Heat Shield Assembly for Single Tube Assemblies, Leather
HSDS	Heat Shield Assembly for Dual Cool Assemblies, Leather

Return Authorization

The following steps must be completed before Bullard will accept any returned goods. Please read carefully.
Follow the steps outlined below to return goods to Bullard for repair or replacement under warranty or for paid repairs:

1. Contact Bullard Customer Service by telephone or in writing at:
   Bullard
   1898 Safety Way
   Cynthiana, KY 41031-9303
   Toll-free: 877-BULLARD (285-5273)
   Phone: 859-234-6616

In your correspondence or conversation with Customer Service, describe the problem as completely as possible. For your convenience, your Customer Service specialist will try to help you correct the problem over the phone.
2. Verify with your Customer Service specialist that the product should be returned to Bullard. Customer Service will provide you with written permission and a return authorization number as well as the labels you will need to return the product.
3. Before returning the product, decontaminate and clean it to remove any hazardous materials which may have settled on the product during use. Laws and/or regulations prohibit the shipment of hazardous or contaminated materials. Products suspected to be contaminated will be professionally discarded at the customer’s expense.
4. Ship returned products, including those under warranty, with all transportation charges pre-paid. Bullard cannot accept returned goods on a freight collect basis.
5. Returned products will be inspected upon return to the Bullard facility. Bullard Customer Service will telephone you with a quote for required repair work which is not covered by warranty. If the cost of repairs exceeds stated quote by more than 20%, your Customer Service specialist will call you for authorization to complete repairs. After repairs are completed and the goods have been returned to you, Bullard will invoice you for actual work performed.

For optional use with Bullard Airline Respirators

Includes: AC1000 Cool Tube, belt bracket, nylon belt and heat shield.

Function: The AC1000 is designed to supply a continuous flow of cool air to certain Bullard supplied air respirators.

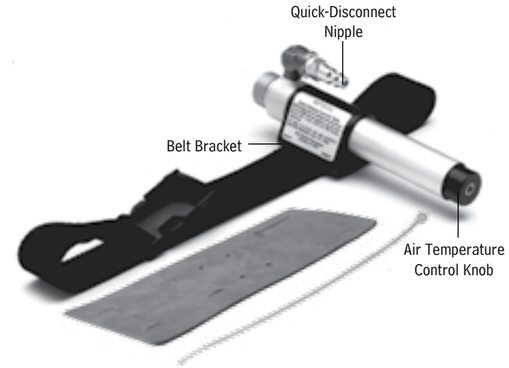
> **⚠ WARNING**
> This climate control system is not recommended for cooling the air supply when the air temperature is less than 70°F (21°C). Since the system may cool the incoming air by more than 30°F (17°C), it is possible for ice to form in the breathing tube and reduce the airflow. Failure to observe this warning could result in death or serious injury.

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.

> **⚠ WARNING**
> Failure to supply the minimum required pressure at the point-of-attachment for your hose length will reduce airflow and could result in death or serious injury.

It is important to operate the Bullard climate control device in the prescribed pressure range for the particular Bullard respirator you are using. Refer to the user manuals’ Breathing Air Pressure Table to determine the correct pressure that should be used with the climate control device.



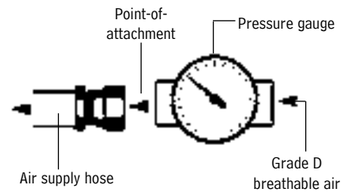


Figure 2

Preparation and Use of the AC1000

1. In an uncontaminated atmosphere screw the hose connector fitting on the end of the breathing tube to the fitting on the AC1000. Tighten hose connectors firmly **(Figure 1)**.
2. Lace the belt supplied with the Cool Tube through the belt bracket. Slots are provided for wearing the tube either vertically or horizontally on the waist. See Heat Shield instructions.
3. With the approved 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 AC1000 Cool Tube.

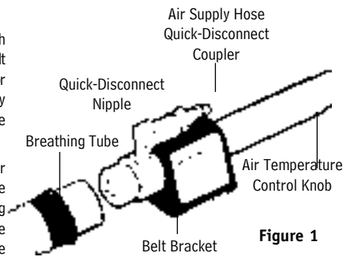


Figure 1

4. Adjust the air pressure at the point-of-attachment to within the approved pressure range **(Figure 2)**. See the Air Pressure Table on page 3.
5. Don the respirator by following the directions in your respirator instruction manual.
6. To obtain cooler air, turn the air temperature control knob counterclockwise **(Figure 1)**.

   Maximum cooling is attained when knob is fully open and when there is maximum airflow out of the AC1000 exhaust port.

   To obtain air that is closer to ambient temperature, turn air temperature control knob clockwise. If knob is fully closed, your respirator will receive air at ambient temperature.
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 AC1000 Cool Tube.

Heat Shield Instructions

Assembly

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**.
3. 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 3

Figure 4

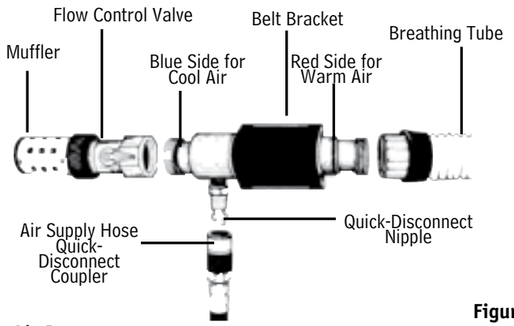


Figure 1

For optional use with Bullard Airline Respirators

Includes: Hot/Cold Tube, Flow Control Valve, Belt Bracket, Belt and Heat Shield

Function

The HC2400 is designed to supply a continuous flow of warm or cool air to certain Bullard Supplied-Air Respirators.

NOTE

HC2400 cannot be used with a low pressure air source such as an ambient air pump.

⚠ WARNING

This climate control system is not recommended for cooling the air supply when the air temperature is less than 70°F (21°C). Since the system may cool the incoming air by more than 30°F (17°C), it is possible for ice to form in the breathing tube and reduce the airflow.
Failure to follow these instructions could result in death or serious injury.

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.

⚠ WARNING

Failure to supply the minimum required pressure at the point-of-attachment for your hose length will reduce airflow and could result in death or serious injury.

It is important to operate the Bullard climate control device in the prescribed pressure range for the particular Bullard respirator you are using. Operating the correct pressure range will insure that the correct air flow is delivered to the respirator and will maintain the NIOSH approval. Refer to the user manuals' Breathing Air Pressure Table to determine the correct pressure that should be used with the climate control device.

HC2400 Hot/Cold Climate Control Tube
Instruction Sheet

Preparation and Use of the HC2400

1. For Warm Air:

(a) In an uncontaminated atmosphere screw the nylon hose connector on the end of the breathing tube onto the RED side of the HC2400 Tube.

(b) Screw the flow control valve and muffler onto the blue side of the HC2400 Tube **(Figure 1)**. Tighten both connections firmly.

For Cool Air:

(a) In an uncontaminated atmosphere screw the nylon hose connector on the end of the breathing tube on to the BLUE side of the HC2400 Tube.

(b) Screw the flow control valve and muffler to the RED side. Tighten firmly.

⚠ WARNING

For adequate air flow, attach the muffler and flow control valve to the end of the hot/cold tube that is opposite the breathing tube end.

Failure to observe this warning could result in death or serious injury.

DO NOT USE THE HC2400 WITHOUT THE MUFFLER AND FLOW CONTROL VALVE.

2. Lace the belt supplied with the HC2400 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 approved 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 Hot/Cold Tube.
4. Adjust the air pressure at the point-of-attachment **(Figure 2)** to within the approved pressure range. See the Respirator Breathing Air Pressure table in the respirator user manual.
5. Put the hood on by following the directions in your respirator instruction manual. If you do not have instructions, contact Bullard Customer Service at the address or phone numbers below.

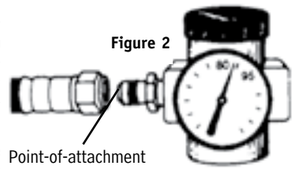


Figure 2

6. Turn flow control valve to adjust the flow and temperature of incoming air **(Figure 1)**.

   Maximum cooling or warming is attained when knob is fully open and when there is maximum airflow out of the HC2400 exhaust port.To obtain air that is closer to ambient temperature, turn air temperature control knob counterclockwise. If knob is fully closed, your respirator will receive air at ambient temperature.
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 Hot/Cold Tube.

Heat Shield Instructions

Assembly

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**.
3. Lace the belt supplied with your climate control device through both the heat shield slots and the climate control belt bracket slots.

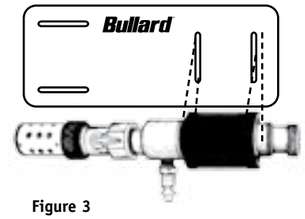


Figure 3

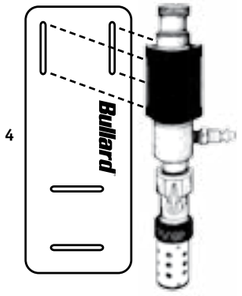


Figure 4

For optional use with Bullard Airline Respirators

The DC50 Dual-Cool tube is designed to supply a continuous flow of cool air to certain Bullard supplied air respirators and body vests. The DC50 Dual-Cool tube cannot be used with a low pressure air source such as an ambient air pump.

Air Pressure

Breathing air pressure must be continually monitored at the point-of-attachment while operating the respirator. A reliable air pressure gauge must be present to monitor the pressure during respirator operation.

⚠ WARNING

Failure to supply the minimum required pressure at the point-of-attachment for your hose length and type will reduce airflow and could result in death or serious injury.

The Breathing Air Pressure Table in the user manual defines the air pressure ranges necessary to provide the 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 42 CFR, Part 84, Subpart J, 84.150)

⚠ WARNING

The DC50 Dual-Cool climate control system is not recommended for cooling the air supply when the air temperature is less than 70ºF (21ºC). Because the DC50 Dual-Cool may cool the incoming air by more than 30°F (17ºC), it is possible for ice to form in the breathing tube and reduce the airflow. Failure to observe these warnings could result in death or serious injury.

Assembly and Use

Assembly must be conducted in an uncontaminated atmosphere.

Assembling the Cooling Vest

1. Insert the muffler end of the cooling vest connector hose well into the air entry sleeve of the vest **(Figure 1)**.

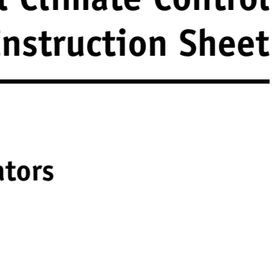


Figure 1

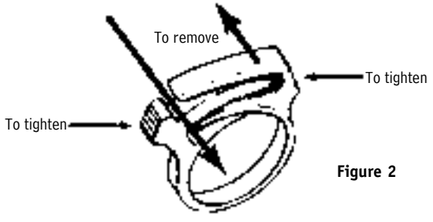


Figure 2

DC50 Series Dual-Cool Climate Control Tube and DC70 Vest Instruction Sheet

Head Shield Assembly Instructions

The HSDC climate control heat shield is designed to work with the Bullard DC50 Dual-Cool climate control device.

Assembly

1. Lace the belt supplied with your climate control device through both the heat shield slots and the climate control belt bracket slots.
2. Use plastic zip ties (2 inlcuded) to secure the climate control to the heat shield. **(Figure 3)**

Donning the Dual-Cool Tube and Cooling Vest

1. Screw the hose connector that is on the end of the breathing tube to threaded connector on Dual-Cool. Lace the belt through the slots in the belt bracket **(Figure 3)**.

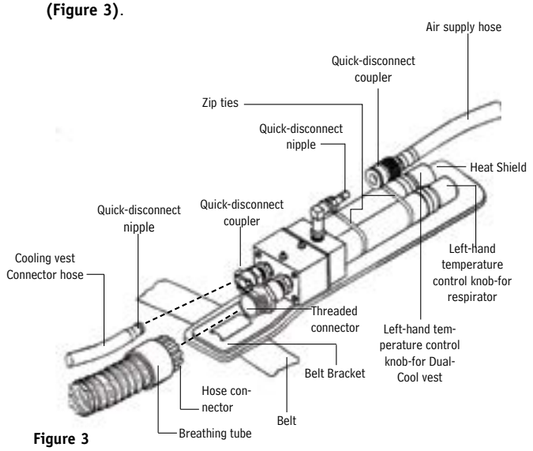


Figure 3

2. Don the belt, belt bracket, and Dual-Cool. Adjust belt comfortably, but loosely, around your waist, insuring that the Dual-Cool assembly is on your right-hand side.
3. Don the vest. Use the Velcro® closure strips to adjust loosely for size.

NOTE

The vest should mount over the belt with the Dual-Cool unit positioned in the "V" of the vest found on the right-hand side **(Figure 1)**.

4. Snap the quick-disconnect nipple found on the end of the cooling vest connector hose into the quick-disconnect coupler on the Dual-Cool **(Figure 3)**.
5. Don the respirator by following the directions in your respirator instruction manual. If you do not have instructions, contact Bullard Customer Service at the address or phone number given below.
6. With the approved Bullard air supply hose connected to the breathing 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 Dual-Cool **(Figure 3)**.
7. Adjust the air pressure at the point-of-attachment to within the approved pressure range found in the respirator user manual **(Figure 4)**.

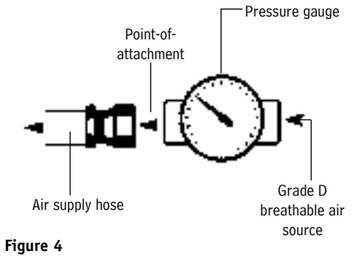


Figure 4

Operating the Dual-Cool Tube

1. To obtain cooler air, turn the air temperature control knobs counterclockwise **(Figure 3)**. Maximum cooling is obtained when knobs are open completely and when there is maximum airflow out of the Dual-Cool tube's exhaust ports. To obtain air that is closer to ambient temperature, turn air temperature control knobs clockwise. If knobs are closed completely, your respirator will receive air that is essentially at ambient temperature.

NOTE

There are separate controls to adjust the temperature of the air that is distributed to the vest and the breathing zone. The right-hand knob controls the air temperature to the respirator; the left-hand knob controls the air temperature to the cooling vest **(Figure 3)**.

2. When finished working, leave the work area wearing the respirator. With the air still flowing, remove the hood, and then disconnect the air supply hose using the quick-disconnect coupler attached to the Dual-Cool.

Cleaning

Machine wash the vest in warm water using a gentle cycle. Use a mild laundry detergent. Air-dry only. After cleaning, carefully inspect the vest for any signs of damage. If any damage is detected, remove the vest from service.

Frigitron 2000 Cool Climate Control Tube Instruction Sheet

For optional use with Bullard Airline Respirators

INCLUDES: Frigitron 2000 and Belt

FUNCTION: The Frigitron 2000 is designed to supply a continuous flow of cool air as part of certain Bullard supplied air respirator systems.

NOTE:
Frigitron 2000 CAN be used with a low pressure air source such as Bullard ambient air pump Models ADP20, EDP30, and ICEPUMP11.

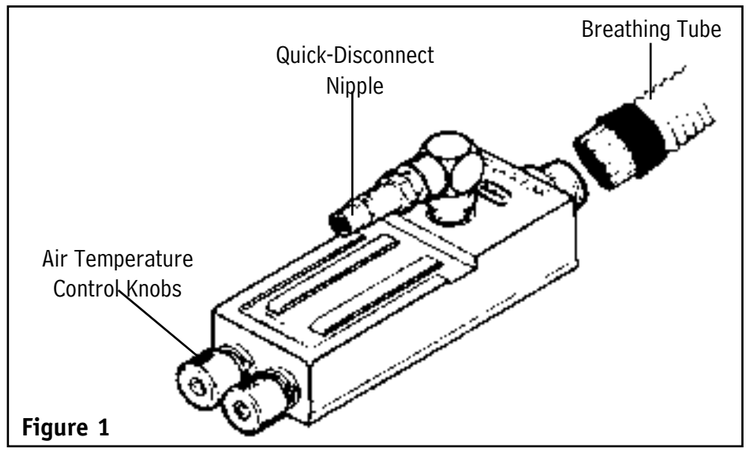


Figure 1

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.

⚠ WARNING

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 in the user manual defines the air pressure ranges necessary to provide the 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).

Preparation and Use of the Frigitron 2000

1. In an uncontaminated atmosphere, screw the end of the breathing tube to the fitting on the climate control device. Tighten hose connectors firmly.
2. Lace the belt supplied with the Cool Tube through the belt bracket.
3. 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.
4. Adjust the air pressure at the point-of-attachment to within the approved pressure range (Figure 2).
5. Put the hood on by following the directions in your respirator instruction manual. If you do not have instructions, contact Bullard Customer Service at the address or phone numbers given below.
6. 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 counterclockwise. If both knobs are fully closed, your respirator will receive air at ambient temperature.
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 Frigitron 2000.

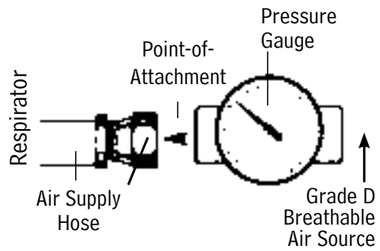


Figure 2

V5 (3/8") & V10 (3/8") Breathing Air Supply Hose Installation Instructions

Bullard V5 Hose Kits

include one V5 Coiled Nylon starter hose with female quick-disconnect coupler on one end and quick-disconnect nipple on the other.

Installation Instructions

1. Connect the respirator's breathing tube fitting to the female quick-disconnect coupler on the V5 hose.
2. Connect the quick-disconnect nipple on the hose to the point-of-attachment on your breathing air source.

Respirable Breathing Air

Respirable breathing air must be supplied to the point-of-attachment of the approved breathing air supply hose. Government regulations require that all breathing air meet the specifications for Grade D breathing air as described in Compressed Gas Association Commodity Specification G-7.1-1989 and specified by Federal Law 30 CFR, Part II Subpart J, 11.121(b).

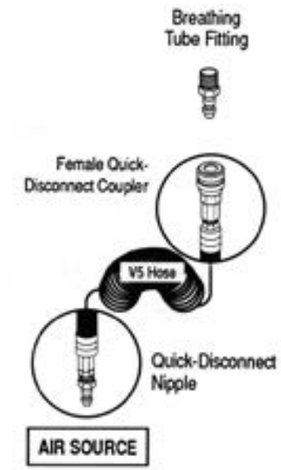
Point-of-Attachment

Air pressure at the point-of-attachment must be regulated within the ranges specified in the respirator users manual Breathing Air Pressure Table.

⚠ WARNING

Do not connect your Bullard breathing air supply hose to nitrogen, toxic gases, inert gases, or other non-breathable, non-grade D air sources. Breathing air hose connection fittings must be incompatible with fittings for other industrial gases as described by the Compressed Gas Association. Failure to observe this warning may result in death or serious injury.

V5 Breathing Air Supply Hose Assembly



V10 Starter Hose Instructions

Starter hoses include female quick-disconnect coupler crimped on one end and V13 hose-to-pipe (3/8" NPT) adapter.

1. If the air source has a threaded attachment, use the supplied V13 hose-to-pipe (3/8" NPT) adapter to connect the threaded female fitting on the hose to the air source.
2. If the air source has a coupling attachment, refer to matching QD nipple specification and use either a V12 (1/4") or V13 (3/8") to connect the nipple to the hose (nipple and adapter may be included with certain part numbers). Attach QD nipple to QD coupling on the air source.
3. Connect the respirator's breathing tube fitting to the female quick-disconnect coupler on the V10 hose.

NOTE:
Threaded seal tape should be used on all threaded attachments. Beveled end of adapters are for hose side of connections.

V10 Extension Hose Instructions

Extension hoses allow you to add Bullard breathing air supply hose to your Bullard respirator's starter hose or another length of extension hose. For more information on maximum permissible hose lengths, configurations and necessary air pressure operating ranges, please refer to the User Manual Breathing Air Pressure Table. Extension hoses include V11 hose-to-hose adapter and V13 hose-to-pipe (3/8" NPT) adapter.

1. Remove any quick-disconnect nipple or adapter from the air source end of the starter hose and replace it with the V11 hose-to-hose adapter.
2. Connect one end of extension hose to the open end of the V11 adapter just inserted in the starter hose.
3. If the air source has a threaded attachment, use the supplied V13 hose-to-pipe (3/8" NPT) adapter to connect the threaded female fitting on the hose to the air source.
4. If the air source has a coupling attachment, refer to matching QD nipple specification and use either a V12 (1/4") or V13 (3/8") to connect the nipple to the hose. Attach QD nipple to QD coupling on the air source.

NOTE:
Threaded seal tape should be used on all threaded attachments. Beveled end of adapters are for hose side of connections.

Respirable Breathing Air

Respirable breathing air must be supplied to the point-of-attachment of the approved breathing air supply hose. Government regulations require that all breathing air meet the specifications for Grade D breathing air as described in Compressed Gas Association Commodity Specification G-7.1-1989 and specified by federal Law 30 CFR, Part II, Subpart J, 11.121(b).

⚠ WARNING

DO NOT connect your Bullard breathing air supply hose to nitrogen, toxic gases, inert gases, or other non-breathable, non-grade D air sources. Breathing air hose connection fittings must be incompatible with fittings for other industrial gases as described by the Compressed Gas Association.

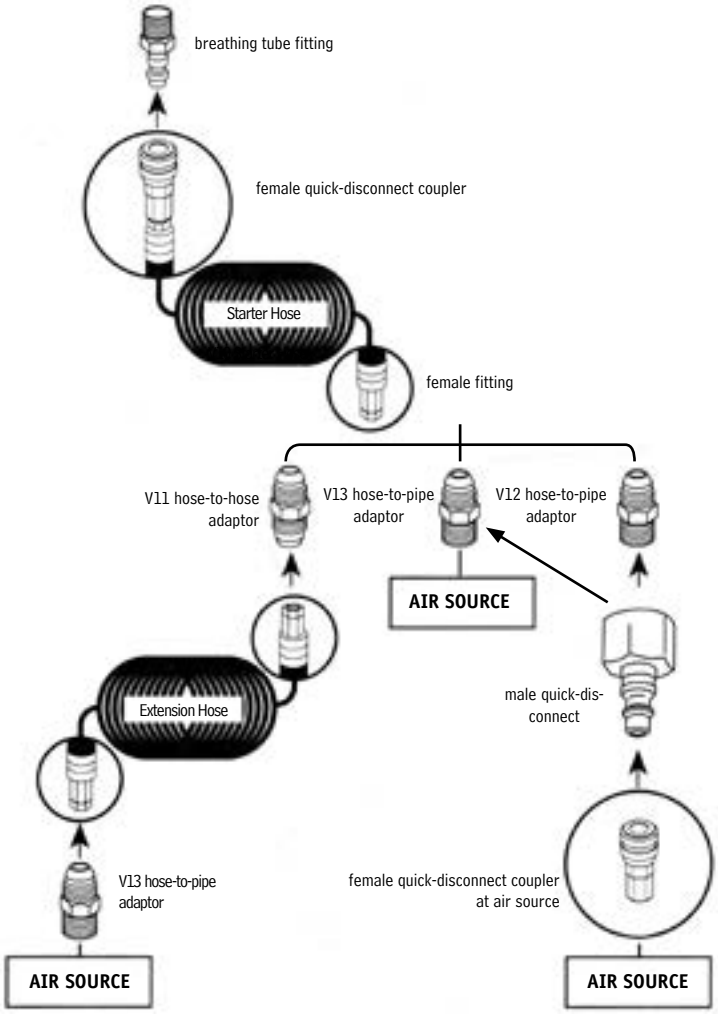
Point-of-attachment

Air pressure at the point-of-attachment must be regulated with the ranges specified on your respirator's MSHA/NIOSH approval label.

NOTE:
You can repeat the extension hose connection steps using Bullard V10 hoses. However, do not exceed the lengths specified on the approval label or in the instruction manual for your specific respirator.

V10 (3/8") & V20 (3/8") Breathing Air Supply Hose Installation Instructions

V10 Breathing Air Supply Hose and V10 Extension Hose Kit Assembly



Bullard V20 Hose Kits

include one V20 rubber starter hose with female quick-disconnect coupler on one end and quick-disconnect nipple on the other.

Installation Instructions

1. Connect the respirator's breathing tube fitting to the female quick-disconnect coupler on the V20 hose.
2. Connect the quick-disconnect nipple on the hose to the point-of-attachment on your breathing air source.

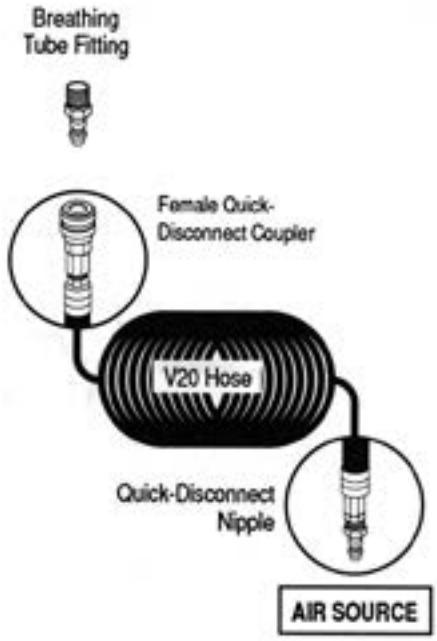
Respirable Breathing Air

Respirable breathing air must be supplied to the point-of-attachment of the approved breathing air supply hose. Government regulations require that all breathing air meet the specifications for Grade D breathing air as described in Compressed Gas Association Commodity Specification G-7.1-1989 and specified by Federal Law 30 CFR, Part II Subpart J, 11.121(b).

Point-of-Attachment

Air pressure at the point-of-attachment must be regulated within the ranges specified on your respirator's NIOSH approval label.

V20 Breathing Air Supply Hose Assembly



⚠ WARNING

Do not connect your Bullard breathing air supply hose to nitrogen, toxic gases, inert gases, or other non-breathable, non-grade D air sources. Breathing air hose connection fittings must be incompatible with fittings for other industrial gases as described by the Compressed Gas Association. Failure to observe this warning may result in death or serious injury.

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