HMX Series Respirator Helmet
User Manual for use with Supplied-Air Respirators

Supplied-Air Respirator, Type C Continuous Flow

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 HMX 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 – HMX Series Respirator Helmets

- Check your helmet for physical damage before every use. If your helmet is damaged DO NOT USE – replace or repair immediately.
- NEVER open the outer door in a contaminated area when an inner lens is not present. Dusts, aerosols and vapors can remain in the air for hours before settling or ventilating.
- ALWAYS leave the contaminated area before reaching into the helmet or doffing the respirator.
- ONLY use genuine HMX replacement lenses and parts for health and safety, regulatory compliance and warranty coverage.
- DO NOT USE for abrasive (Type – CE) blasting.

Failure to follow these warnings could result in death or serious injury.

⚠ 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, and others) including; respirator selection for the hazard.
- HMX Series respirator helmets 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 for helmet and shroud options.
- 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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Table of Contents

Approved Respirator System Components

HMX Series

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

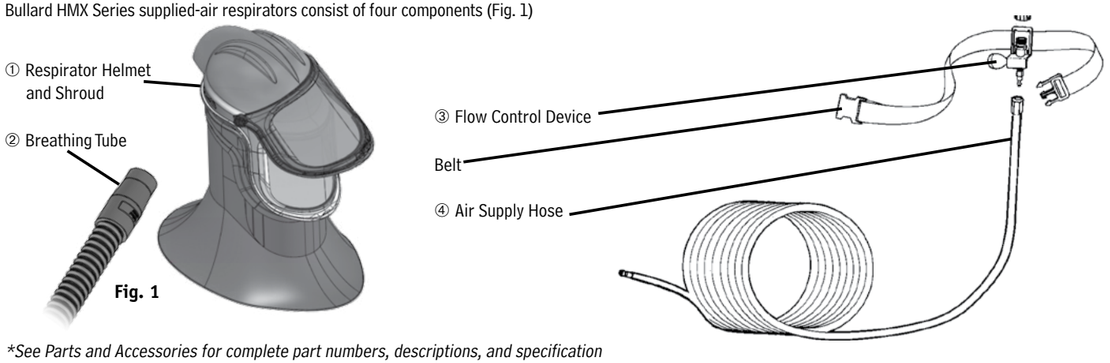


Fig. 1

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

❶ Respirator Helmet*		
	Outer Door	**Inner/Primary Lens**
HMX	Y	Y
HMX-O	Y	N
HMX-I	N	Y

❷ Breathing Tube*		
	Standard 34"	**Short 27"**
Thread Connect	HMXSARHBT	HMXSARHBTS

❶ Shroud Design*				
	DuPont® Tychem™ 2000	**DuPont® Tychem™ 4000**	**TenCate Ara-Shield® w/DuPont® Kevlar™**	**TenCate Tecasafe® - High Heat Resistant**
Shroud	HMXS2000	HMXS4000	HMXSFR	HMXSFRHH
Face piece	HMXSLF			

❸ Flow Control Devices*			
Without Climate Control		**With Climate Control**	
Constant F30 Series	**Adjustable** F40 Series	**Cool Only** AC1000 DC5040 Frigitron 2000	**Heat/Cool** 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

- HEAD: HMX Series respirators meet ANSI Standard Z89.1-2014 Type 1,class E & G for protective head wear for industrial workers. The helmet is designed to provide limited head protection by reducing the force of falling objects striking the top of the head.
- FACE: The use of the respirator's inner or outer lenses (windows) meet ANSI Z87.1-2015 (High impact Z87 + Face Protection) requirements for face protection. The use of both lenses provides limited face protection from flying particles, spray or hazardous liquids, but the lenses are not shatterproof.
- EARS: HMX Series respirators DO NOT provide hearing protection. Use properly fitted earmuffs, earplugs and/or other hearing protection when exposed to high noise levels.

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/in line 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 in this system 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 HMX Series Respirator Breathing Air Pressure Table. A reliable air pressure gauge must be present to allow monitoring pressure during actual respirator operation.

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 HMX Series Breathing Air Pressure Table for maximum allowable hose lengths that can be connected to attain the operating length.

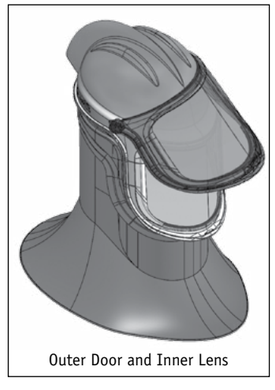
Hose Connections

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

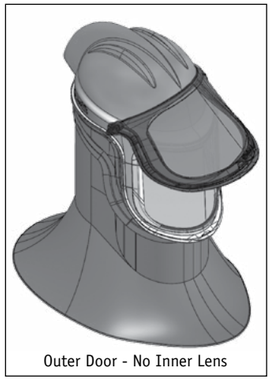
Non-Breathable Gas Safety

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.

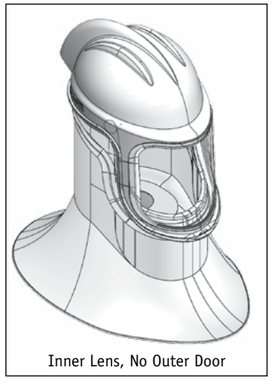
Configuration Examples:


Outer Door and Inner Lens

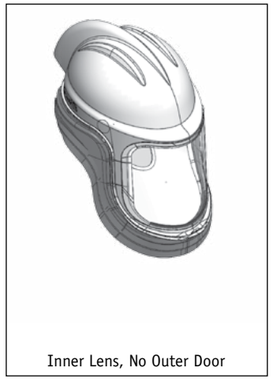
HMX Full Shroud


Outer Door - No Inner Lens

HMX-O Full Shroud


Inner Lens, No Outer Door

HMX-I full shroud


Inner Lens, No Outer Door

HMX-I face piece shroud

Special or Critical User's Instructions

The HMX Series Breathing Air Pressure Table defines the air pressure ranges necessary to provide HMX 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 HMX 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, 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.

HMX 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	17 - 29	19 - 32	21 - 36	24 - 37	27 - 43	30 - 47	33 - 52	35 - 56	18 - 32	24 - 40
		F31	Schrader	14 - 27	17 - 30	19 - 33	22 - 35	25 - 41	29 - 45	32 - 50	34 - 54	17 - 31	24 - 37
		F32/F33/F34*	Snap-Tite	12 - 21	14 - 25	17 - 28	20 - 31	23 - 37	27 - 42	31 - 47	32 - 51	14 - 24	19 - 31
		F37	CEJN	8 - 14	12 - 19	14 - 24	17 - 26	21 - 33	25 - 38	29 - 44	31 - 48		
		F38	Bayonet	20 - 34	22 - 38	24 - 40	26 - 40	29 - 46	33 - 51	36 - 55	38 - 58		
	Adjustable Flow	F40/F40B/F40S	Ind. Interchange	22 - 33	25 - 36	26 - 39	28 - 40	31 - 46	34 - 50	37 - 54	38-58	24 - 35	29 - 43
		F41	Schrader	22 - 32	25 - 37	26 - 39	28 - 40	31 - 45	35 - 50	37 - 54	39-57	24 - 36	30 - 42
		F42/F43/F44*	Snap-Tite	21 - 29	23 - 33	25 - 36	27 - 37	30 - 42	33 - 47	34 - 51	38-55	23 - 32	27 - 38
		F47	CEJN	18 - 25	21 - 29	23 - 32	25 - 34	28 - 40	31 - 45	34 - 49	36-53		
		F48	Bayonet	27 - 40	26 - 43	31 - 45	33 - 46	35 - 51	38 - 56	39 - 59	43-63		
	Cooling Mode	AC100030/AC100030B/AC100030S	Ind. Interchange	59 - 76	61 - 77	62 - 80	65 - 81	68 - 84	70 - 88	73 - 91	75-94	60 - 77	64 - 82
		AC100031	Schrader	57 - 75	60 - 77	61 - 78	63 - 79	66 - 82	69 - 86	71 - 88	73-91	59 - 76	64 - 81
		AC100032/AC100033/AC100034	Snap-Tite	56 - 73	58 - 75	59 - 76	61 - 77	64 - 80	68 - 83	70 - 86	72-90	58 - 75	61 - 77
		AC100037	CEJN	54 - 70	58 - 80	57 - 73	59 - 76	61 - 78	66 - 81	68 - 84	70-88		
		AC100038	Bayonet	61 - 78	20 - 80	65 - 81	67 - 81	69 - 85	72 - 102	74 - 110	76-94		
		DC5040/DC5040B/DC5040S	Ind. Interchange	56 - 78	60 - 85	64 - 93	69 - 97	74 - 107	81 - 114	87 - 122	91-125	58 - 86	70 - 101
		DC5041	Schrader	57 - 78	60 - 85	65 - 93	68 - 89	74 - 98	81 - 107	87 - 124	91-120	60 - 90	73 - 102
		DC5042/DC5043/DC5044	Snap-Tite	58 - 78	53 - 75	66 - 93	62 - 82	69 - 92	78 - 101	84 - 109	88-116	51 - 72	62 - 83
		DC5047	CEJN	59 - 78	46 - 67	67 - 93	57 - 76	64 - 86	72 - 95	80 - 103	84-111		
		DC5048	Bayonet	60 - 78	70 - 99	68 - 93	75 - 102	81 - 111	88 - 121	93 - 125	97-125		
		HC240030/HC240030B/HC240030S	Ind. Interchange	60 - 74	62 - 76	64 - 80	67 - 80	68 - 85	73 - 89	77 - 93	79-96	61 - 76	66 - 82
		HC240031	Schrader	56 - 72	60 - 75	62 - 76	65 - 78	68 - 83	73 - 87	76 - 91	78-94	60 - 74	66 - 79
		HC240032/HC240033/HC340034	Snap-Tite	57 - 71	59 - 73	61 - 75	64 - 77	68 - 81	72 - 86	76 - 89	79-94	59 - 73	64 - 77
		HC240037	CEJN	55 - 70	58 - 72	60 - 74	63 - 76	67 - 80	72 - 85	74 - 89	77-93		
		HC240038	Bayonet	66 - 81	67 - 83	69 - 85	71 - 85	74 - 91	79 - 95	81 - 98	84-101		
	Heating Mode	HC240030/HC240030B/HC240030S	Ind. Interchange	68 - 84	69 - 85	70 - 88	73 - 89	76 - 94	80 - 96	84 - 101	86-106	67 - 83	72 - 90
		HC240031	Schrader	64 - 81	68 - 84	69 - 85	72 - 88	75 - 92	80 - 97	83 - 100	86-103	67 - 84	74 - 88
		HC240032/HC240033/HC340034	Snap-Tite	61 - 68	64 - 82	66 - 86	69 - 85	73 - 89	78 - 93	80 - 97	83-101	64 - 81	68 - 84
		HC240037	CEJN	60 - 79	62 - 80	65 - 82	68 - 85	72 - 88	76 - 92	80 - 97	82-101		
		HC240038	Bayonet	72 - 90	73 - 92	75 - 93	77 - 95	80 - 99	85 - 104	89 - 107	91-110		

* 34/44 fittings not available for V5 Hose

			V20 Hose								
	Usage	Part Number		25′	50' Max 2 Hose Lengths	75′	100' Max 3 Hose Lengths	150'	200' Max 5 Hose Lengths	250′	300' Max 5 Hose Lengths
Ambient Air	Constant Flow	F35/F35B/F35S	Ind. Interchange		7 - 12		8 - 15		10 - 19		13 - 21
	Cooling	FRIGITRON2000/ FRIGITRON2000B/FRIGITRON2000S	Ind. Interchange		17 - 27		19 - 29		23 - 27		25 - 27

HMX Series Helmet Respirator System - F30 Series Flow Control Devices
TYPE C CONTINUOUS FLOW SUPPLIED-AIR RESPIRATOR

This respirator is approved only in the following configurations:

E.D. BULLARD CO.
1898 Safety Way
CYNTHIANA, KY 41031 USA
877-BULLARD (285-5273)

11/20/17

RESPIRATOR COMPONENTS

TC-	PROTECTION[1]	MODEL	ALTERNATE HELMET ASSEMBLIES			ALTERNATE SHROUD ASSEMBLIES					ALTERNATE BREATHING TUBES		ALTERNATE FLOW CONTROL DEVICES											
		HMX Series	HMX-I	HMX	HMX-O	HMXSFRHH	HMXSFR	HMXS2000	HMXS4000	HMXSLF	HMXSARHBT	HMXSARHBTS	F30	F30B	F30S	F31	F32	F33	F34	F35	F35B	F35S	F37	F38
19C-0540	SA/CF		X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0541	SA/CF		X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0542	SA/CF			X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0543	SA/CF			X						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0544	SA/CF				X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0545	SA/CF				X					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

TC-	ALTERNATE AIR HOSES																																			
	54515	54514	54513	54512	54511	54510	5454	5457	5458	46919	46918	46917	46915	46913	4696	469650	4696100	46916	V52533XXX	V55031XXX	V55030XXX	V55033XXX	V55032XXX	V52531XXX	V52530XXX	V52532XXX	V5KF5033XXX	V5KF5032XXX	V5KF5031XXX	V5KF5030XXX	V5KF2533XXX	V5KF2532XXX	V5KF2531XXX	V5KF2530XXX	V2050ST	V20100ST
19C-0540	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0541	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0542	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0543	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0544	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0545	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

TC-	ALTERNATE OUTER DOORS			ACCESSORIES																				CAUTIONS AND LIMITATIONS[2]
	608-100-10905	608-100-11709	608-100-11710	V11	V12	V13	V14	V18	V19	V19B	V37	V38	V17	S19432	S19442	S19443	3902	S19448	GVXCS	20NC	36501	4612	HMXLC	
19C-0540				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0541				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0542	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0543	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0544	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0545	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS

1 PROTECTION

CF=CONTINUOUS FLOW
SA=SUPPLIED-AIR

2 CAUTIONS AND LIMITATIONS

A - Not for use in atmosphere containing less than 19.5 percent oxygen.

B - Not for use in atmospheres immediately dangerous to life or health.

C - Do not exceed maximum use concentrations established by regulatory standards.

D - Air-line respirators can be used only when the 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 the User's Instructions.

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 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 Information and/or specific use limitations apply. Refer to User's Instructions before donning.

HMX Series Helmet Respirator System - AC1000 Series Flow Control Devices

TYPE C CONTINUOUS FLOW SUPPLIED-AIR RESPIRATOR

This respirator is approved only in the following configurations:

E.D. BULLARD CO.
1898 Safety Way
CYNTHIANA, KY 41031 USA
877-BULLARD (285-5273)

2/15/18

			RESPIRATOR COMPONENTS																		
TC-	PROTECTION[1]	MODEL	ALTERNATE HELMET ASSEMBLIES			ALTERNATE SHROUD ASSEMBLIES					ALTERNATE BREATHING TUBES		ALTERNATE FLOW CONTROL DEVICES								
		HMX Series	HMX-I	HMX	HMX-O	HMXSFRHH	HMXSFR	HMXS2000	HMXS4000	HMXSLF	HMXSARHBT	HMXSARHBTS	AC100030	AC100030B	AC100030S	AC100031	AC100032	AC100033	AC100034	AC100037	AC100038
19C-0547	SA/CF		X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
19C-0548	SA/CF		X							X	X	X	X	X	X	X	X	X	X	X	X
19C-0549	SA/CF			X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
19C-0550	SA/CF			X						X	X	X	X	X	X	X	X	X	X	X	X
19C-0551	SA/CF				X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
19C-0552	SA/CF				X					X	X	X	X	X	X	X	X	X	X	X	X

TC-	ALTERNATE AIR HOSES																																	
	54515	54514	54513	54512	54511	54510	5454	5457	5458	46919	46918	46917	46915	46913	4696	469650	4696100	46916	V52533XXX	V55031XXX	V55030XXX	V55033XXX	V55032XXX	V52531XXX	V52530XXX	V52532XXX	V5KF5033XXX	V5KF5032XXX	V5KF5031XXX	V5KF5030XXX	V5KF2533XXX	V5KF2532XXX	V5KF2531XXX	V5KF2530XXX
19C-0547	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0548	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0549	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0550	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0551	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0552	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

TC-	ALTERNATE OUTER DOORS			ACCESSORIES																					CAUTIONS AND LIMITATIONS[2]
	608-100-10905	608-100-11709	608-100-11710	V11	V12	V13	V14	V18	V19	V19B	V37	V38	V17	S19432	S19442	S19443	3902	S19448	GVXCS	20NC	36501	4612	HMXLC	HS	
19C-0547				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0548				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0549	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0550	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0551	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0552	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS

1 PROTECTION

CF=CONTINUOUS FLOW
SA=SUPPLIED-AIR

2 CAUTIONS AND LIMITATIONS

A - Not for use in atmosphere containing less than 19.5 percent oxygen.

B - Not for use in atmospheres immediately dangerous to life or health.

C - Do not exceed maximum use concentrations established by regulatory standards.

D - Air-line respirators can be used only when the 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 the User's Instructions.

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 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 Information and/or specific use limitations apply. Refer to User's Instructions before donning.

HMX Series Helmet Respirator System - HC2400 Series Flow Control Devices

TYPE C CONTINUOUS FLOW SUPPLIED-AIR RESPIRATOR

THIS RESPIRATOR IS APPROVED ONLY IN THE FOLLOWING CONFIGURATIONS:

E.D. BULLARD CO.
1898 Safety Way
CYNTHIANA, KY 41031 USA
877-BULLARD (285-5273)

2/15/18

RESPIRATOR COMPONENTS

TC-	PROTECTION[1]	MODEL	ALTERNATE HELMET ASSEMBLIES			ALTERNATE SHROUD ASSEMBLIES					ALTERNATE BREATHING TUBES	
		HMX Series	HMX-I	HMX	HMX-O	HMXSFRHH	HMXSFR	HMXS2000	HMXS4000	HMXSLF	HMXSARHBT	HMXSARHBTS
19C-0553	SA/CF		X			X	X	X	X		X	X
19C-0554	SA/CF		X							X	X	X
19C-0555	SA/CF			X		X	X	X	X		X	X
19C-0556	SA/CF				X	X	X	X	X		X	X
19C-0557	SA/CF			X						X	X	X
19C-0558	SA/CF				X					X	X	X

TC-	ALTERNATE FLOW CONTROL DEVICES								
	HC240030	HC240030B	HC240030S	HC240031	HC240032	HC240033	HC240034	HC240037	HC240038
19C-0553	X	X	X	X	X	X	X	X	X
19C-0554	X	X	X	X	X	X	X	X	X
19C-0555	X	X	X	X	X	X	X	X	X
19C-0556	X	X	X	X	X	X	X	X	X
19C-0557	X	X	X	X	X	X	X	X	X
19C-0558	X	X	X	X	X	X	X	X	X

TC-	ALTERNATE AIR HOSES																	
	54515	54514	54513	54512	54511	54510	5454	5457	5458	46919	46918	46917	46915	46913	4696	469650	4696100	46916
19C-0553	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0554	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0555	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0556	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0557	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0558	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

TC-	ALTERNATE AIR HOSES (cont.)															
	V52533XXX	V55031XXX	V55030XXX	V55033XXX	V55032XXX	V52531XXX	V52530XXX	V52532XXX	V5KF5033XXX	V5KF5032XXX	V5KF5031XXX	V5KF5030XXX	V5KF2533XXX	V5KF2532XXX	V5KF2531XXX	V5KF2530XXX
19C-0553	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0554	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0555	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0556	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0557	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0558	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

TC-	ALTERNATE OUTER DOORS			ACCESSORIES																					CAUTIONS AND LIMITATIONS[2]
	608-100-10905	608-100-11709	608-100-11710	V11	V12	V13	V14	V18	V19	V19B	V37	V38	V17	S19432	S19442	S19443	3902	S19448	GVXCS	20NC	36501	4612	HMXLC	HS	
19C-0553				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0554				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0555	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0556	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0557	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0558	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS

1 PROTECTION

CF=CONTINUOUS FLOW
SA=SUPPLIED-AIR

2 CAUTIONS AND LIMITATIONS

A - Not for use in atmosphere containing less than 19.5 percent oxygen.

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E - Use only the pressure ranges and hose lengths specified in the User's Instructions.

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 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 Information and/or specific use limitations apply. Refer to User's Instructions before donning.

HMX Series Helmet Respirator System - F40 Series Flow Control Devices

TYPE C CONTINUOUS FLOW SUPPLIED-AIR RESPIRATOR

THIS RESPIRATOR IS APPROVED ONLY IN THE FOLLOWING CONFIGURATIONS:

E.D. BULLARD CO.
1898 Safety Way
CYNTHIANA, KY 41031 USA
877-BULLARD (285-5273)

2/15/18

RESPIRATOR COMPONENTS

TC-	PROTECTION[1]	MODEL	ALTERNATE HELMET ASSEMBLIES			ALTERNATE SHROUD ASSEMBLIES					ALTERNATE BREATHING TUBES		ALTERNATE FLOW CONTROL DEVICES								
		HMX Series	HMX-I	HMX	HMX-O	HMXSFRHH	HMXSFR	HMXS2000	HMXS4000	HMXSLF	HMXSARHBT	HMXSARHBTS	F40	F40B	F40S	F41	F42	F43	F44	F47	F48
19C-0559	SA/CF		X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
19C-0560	SA/CF		X							X	X	X	X	X	X	X	X	X	X	X	X
19C-0561	SA/CF			X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
19C-0562	SA/CF			X						X	X	X	X	X	X	X	X	X	X	X	X
19C-0563	SA/CF				X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
19C-0564	SA/CF				X					X	X	X	X	X	X	X	X	X	X	X	X

TC-	ALTERNATE AIR HOSES																																	
	54515	54514	54513	54512	54511	54510	5454	5457	5458	46919	46918	46917	46915	46913	4696	469650	4696100	46916	V52533XXX	V55031XXX	V55030XXX	V55033XXX	V55032XXX	V52531XXX	V52530XXX	V52532XXX	V5KF5033XXX	V5KF5032XXX	V5KF5031XXX	V5KF5030XXX	V5KF2533XXX	V5KF2532XXX	V5KF2531XXX	V5KF2530XXX
19C-0559	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0560	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0561	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0562	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0563	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0564	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

TC-	ALTERNATE OUTER DOORS			ACCESSORIES																				CAUTIONS AND LIMITATIONS[2]
	608-100-10905	608-100-11709	608-100-11710	V11	V12	V13	V14	V18	V19	V19B	V37	V38	V17	S19432	S19442	S19443	3902	S19448	GVXCS	20NC	36501	4612	HMXLC	
19C-0559				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0560				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0561	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0562	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0563	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0564	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS

1 PROTECTION

CF=CONTINUOUS FLOW
SA=SUPPLIED-AIR

2 CAUTIONS AND LIMITATIONS

A - Not for use in atmosphere containing less than 19.5 percent oxygen.

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D - Air-line respirators can be used only when the 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 the User's Instructions.

J - Failure to properly use and maintain this product could result in injury or death.

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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 Information and/or specific use limitations apply. Refer to User's Instructions before donning.

HMX Series Helmet Respirator System - DC5040 Series Flow Control Devices

TYPE C CONTINUOUS FLOW SUPPLIED-AIR RESPIRATOR

THIS RESPIRATOR IS APPROVED ONLY IN THE FOLLOWING CONFIGURATIONS:

E.D. BULLARD CO.
1898 Safety Way
CYNTHIANA, KY 41031 USA
877-BULLARD (285-5273)

2/15/18

RESPIRATOR COMPONENTS

TC-	PROTECTION[1]	MODEL	ALTERNATE HELMET ASSEMBLIES			ALTERNATE SHROUD ASSEMBLIES					ALTERNATE BREATHING TUBES		ALTERNATE FLOW CONTROL DEVICES								
		HMX Series	HMX-I	HMX	HMX-O	HMXSFRHH	HMXSFR	HMXS2000	HMXS4000	HMXSLF	HMXSARHBT	HMXSARHBTS	DC5040	DC5040B	DC5040S	DC5041	DC5042	DC5043	DC5044	DC5047	DC5048
19C-0565	SA/CF		X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
19C-0566	SA/CF		X							X	X	X	X	X	X	X	X	X	X	X	X
19C-0567	SA/CF			X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
19C-0568	SA/CF			X						X	X	X	X	X	X	X	X	X	X	X	X
19C-0569	SA/CF				X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
19C-0570	SA/CF				X					X	X	X	X	X	X	X	X	X	X	X	X

TC-	ALTERNATE AIR HOSES																																	
	54515	54514	54513	54512	54511	54510	5454	5457	5458	46919	46918	46917	46915	46913	4696	469650	4696100	46916	V52533XXX	V55031XXX	V55030XXX	V55033XXX	V55032XXX	V52531XXX	V52530XXX	V52532XXX	V5KF5033XXX	V5KF5032XXX	V5KF5031XXX	V5KF5030XXX	V5KF2533XXX	V5KF2532XXX	V5KF2531XXX	V5KF2530XXX
19C-0565	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0566	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0567	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0568	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0569	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19C-0570	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

TC-	ALTERNATE OUTER DOORS			ACCESSORIES																								CAUTIONS AND LIMITATIONS[2]
	608-100-10905	608-100-11709	608-100-11710	V11	V12	V13	V14	V18	V19	V19B	V37	V38	V17	S19432	S19442	S19443	3902	S19448	GVXCS	20NC	36501	4612	HMXLC	HSDC	DC70ML	DC70XLXXL	DC705X	
19C-0565				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0566				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0567	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0568	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0569	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0570	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS

1 PROTECTION

CF=CONTINUOUS FLOW
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S - Special or critical User's Information and/or specific use limitations apply. Refer to User's Instructions before donning.

HMX Series Helmet Respirator System - Frigitron 2000 Series Flow Control Devices

TYPE C CONTINUOUS FLOW SUPPLIED-AIR RESPIRATOR

THIS RESPIRATOR IS APPROVED ONLY IN THE FOLLOWING CONFIGURATIONS:

E.D. BULLARD CO.
1898 Safety Way
CYNTHIANA, KY 41031 USA
877-BULLARD (285-5273)

11/20/17

			RESPIRATOR COMPONENTS																							
TC-	PROTECTION[1]	MODEL	ALTERNATE HELMET ASSEMBLIES			ALTERNATE SHROUD ASSEMBLIES					ALTERNATE BREATHING TUBES		ALTERNATE FLOW CONTROL DEVICES			ALTERNATE AIR SUPPLY HOSES		ALTERNATE OUTER DOORS			ACCESSORIES					CAUTIONS AND LIMITATIONS[2]
		HMX Series	HMX-I	HMX	HMX-O	HMXSFRHH	HMXSFR	HMXS2000	HMXS4000	HMXSLF	HMXSARHBT	HMXSARHBTS	FRIGITRON2000	FRIGITRON2000B	FRIGITRON2000S	V2050ST	V20100ST	608-100-10905	608-100-11709	608-100-11710	GVXCS	20NC	36501	4612	HMXLC	
19C-0571	SA/CF		X			X	X	X	X		X	X	X	X	X	X	X				X	X	X	X	X	ABCDEJMNOS
19C-0572	SA/CF		X							X	X	X	X	X	X	X	X				X	X	X	X	X	ABCDEJMNOS
19C-0573	SA/CF			X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0574	SA/CF			X						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0575	SA/CF				X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS
19C-0576	SA/CF				X					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	ABCDEJMNOS

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J - Failure to properly use and maintain this product could result in injury or death.

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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 Information and/or specific use limitations apply. Refer to User's Instructions before donning.

Assemble the HMX Series Respirator Helmet

NOTE

For your own protection, safety and to ensure the maximum service life of your new helmet please read this manual carefully before use.

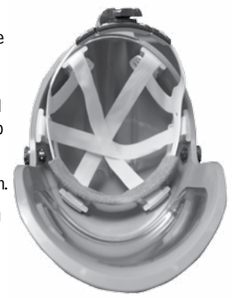
Misuse or abuse may result in injury or reduced protection and may also void your warranty.

Respirator Assembly

Before assembling this respirator, read the warning labels on the inside of the respirator shroud and the helmet shell and this manual in full.

Remove and read the warning cards packaged with the helmet.

Installing Headband into Helmet



Installing and sizing the headband suspension is made easier without the shroud in place on the helmet, or unsnap the shroud retainer at the back and carefully pull the right side of the retainer from the helmet shell stopping near the door hinge. Carefully unsnap the tab and repeat for left side.

1. Turn helmet and headband suspension upside down.
2. Place headband inside helmet with brow pad facing front of shell.
3. Insert keys into respective key slots. Push firmly until keys snap into place.

Adjusting the Suspension

To adjust the size of the Flex-Gear® Ratchet-style suspension:

Turn ratchet knob counter clockwise until headband opens to largest size. Place helmet on head and turn ratchet knob clockwise until it fits comfortably. DO NOT OVERTIGHTEN

Adjust Crown Straps for Vertical Fit

To improve suspension comfort, adjust crown straps vertically by repositioning the crown strap posts in the crown straps. Vertical adjustment makes the headband ride higher or lower on the wearer's head. To adjust, push crown strap post from slot, move to new slot, and snap in to secure. Repeat for the other crown strap points (see Figure 2).

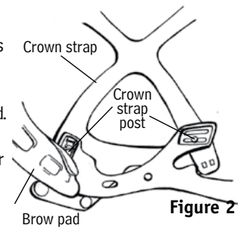


Figure 2

Using the Optional Chin Strap

1. If desired, attach chin strap to headband by sliding chin strap keyway slot over plastic head inside the helmet shell. Refer to chin strap installation instructions for more details.
2. With helmet on, adjust chin strap length with the plastic slide.

⚠ WARNING:
FAILURE TO FOLLOW THE INSTRUCTIONS BELOW AS WELL AS ALL OTHER INSTRUCTIONS CONTAINED HEREIN MIGHT RESULT IN DEATH OR SEVERE, DISABLING AND PERMANENT INJURIES.

The HMX-O (no inner lens) version of this helmet is designed with an outer door that can be raised to communicate with your supervisor or other employees BEFORE ENTERING and AFTER LEAVING the contaminated atmosphere.

The outer door MUST BE LOWERED completely and snapped shut before entering the contaminated area and MUST be KEPT in the LOWERED position until you are sure that you are no longer in an atmosphere that contains any contaminants. If there is ANY DOUBT as to whether or not you are in a contaminant free atmosphere KEEP the outer door LOWERED.

The Air Source must be turned On before entering the contaminated atmosphere and must be kept On until you leave the contaminated environment. If there is ANY DOUBT as to whether not you are in a contaminant free environment, leave the Air Source On.

Failure to heed these instructions will allow the contaminants the respirator is designed to keep out, to enter your breathing zone where they can be inhaled, which may result in DEATH or SEVERE, DISABLING and PERMANENT INJURIES.

Installing the HMX Shroud

Figure 3

Figure 4

Figure 5

Figure 6

Shroud Retainer

- Begin with top of helmet facing your body, and front of helmet facing up (Figure 3).
- Line up notched center in shroud retainer with the center of the retainer groove at the bottom of the helmet. Installation must begin with notch in the center of the helmet (Figure 4).
- Ease shroud retainer completely into the groove along the bottom of the helmet edge, starting on the left side of the helmet, working your way to the back.
- Insert retainer tab into tab hole, located near the temple of the helmet. Check that retainer is completely in place at every point along helmet's bottom edge.
- At the back of the helmet, make sure that shroud retainer end with the hole is placed behind the helmet flange, located underneath the breathing tube connection (Figure 5).
- Return to the front of the helmet and repeat the above 3 steps for the right side.
- At the rear of the helmet, place right side of shroud retainer behind helmet flange, on top of the left side of the retainer (Figure 5).
- Line up snap tab on retainer end with hole on opposite end, and press together. There will be an audible and tactile snap to ensure retainer is secured (Figure 6).

Shroud Installation on Retainer

- Orient shroud so that the neck cuff is situated facing the inside of the helmet, and black attachment strip is facing the open edge of the shroud retainer.
- Begin attaching shroud to shroud retainer by pressing attachment strip onto retainer, starting at the raised section of the retainer, approximately 2 inches from the center of the helmet (Figure 7).
- Press attachment strip onto shroud retainer, working around the entire helmet, until reaching the back of the helmet on the opposite side of where you started.
- Check that attachment strip is securely attached all the way around the shroud retainer.

NOTE

Ensure that retainer ends tabs are on the inside of the shroud.

Figure 7

Inner Lens and Outer Door

Inspection

Be sure the plastic inner lens (HMX, HMX-I) and outer door (HMX, HMX-O) fits securely in the helmet frame. Remove any grit or dust from the mating edges. Inspect the inner lens and outer door for cracks, wear or damage that could prevent a tight fit against the helmet frame.

Removing Outer Door (For HMX, HMX-O)

To remove the outer door, first remove the shroud retainer from the helmet shell.

1. Grasping threaded nut on inside of helmet, turn threaded knob on the outside of the helmet counter clockwise to loosen. Remove both parts from helmet. Repeat on opposite side.
2. Gently pull hinge connection part of outer door on both sides simultaneously away from helmet, laterally, detaching door from helmet shell.
3. Using the threaded nut already removed, remove the rubber gasket from the raised portion of the nut. Insert the tip of the threaded nut in the inside of the door hinge, and with even pressure with your thumbs, press the cam cap out of the door hinge. Repeat on opposite side.

Installing Outer Door (HMX, HMX-O)

Figure 8

To aid assembly for installing the outer door on the HMX helmet, remove the shroud retainer and suspension from the helmet shell.

1. Insert cam mechanism into the door hinge indentation on the helmet shell. The cam is installed with the embossed up arrow facing outwards and toward the top of the helmet (Figure 8).

NOTE

If this is not installed correctly, the outer door will not stay in the raised position when fully opened.

2. Place outer door onto the helmet shell and **fully secure the door closed** (Figure 9).

Figure 9

3. Insert the cam caps onto the door, pressing inwards until they click into place. Note that any orientation of this part is acceptable (Figure 10).

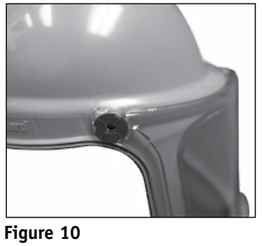


Figure 10

4. Install the rubber gasket on the raised section of the threaded nut, pressing fully against the base of the nut (Figure 11).

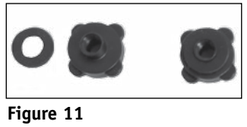


Figure 11

Figure 12

5. Turn the helmet over, so that you are looking inside of the helmet. Position the threaded nut against the hinge hole on the inside of the helmet with the embossed arrow facing forward, toward the outer door (Figure 12).

NOTE

If not positioned correctly, the nut will not sit flush against the helmet shell.

6. Insert the threaded knob through the hinge hole on the outside of the helmet and tighten to the nut, maintaining the orientation of the inner nut. Only hand tightening is required.

Optional Welding Shade Outer Doors

Fixed shade outer doors for welding are available to provide eye protection. To convert, follow the directions for removing and installing the outer door.

Removal and Installation of Inner Lens

1. To remove , hold the helmet upside-down with shroud removed (and for HMX model, outer door open or removed). From the inside of the helmet, push down and outward on the bottom edge of the lens.
2. To install, align the lens channel in the edge of the helmet opening so that the upward curved portion of the lens (top) is facing the top of the helmet (Figure 13).
3. From the outside of helmet, press down and inward on bottom edge of lens with thumbs until the edge of the lens snaps into the frame of the helmet shell (Figure 14).
4. Ensure that the lens is securely installed into the helmet frame. A properly installed inner lens will not have any play, once inserted.

Figure 13

Figure 14

NOTE

HMX-O ships without an inner lens, but can be upgraded by installing one.

Optional Lens Covers

1. If desired, apply optional lens covers designed to protect the respirator's outer door or inner lens. Apply up to 5 lens covers at a time.
2. When lens becomes soiled, remove by pulling tab at edge of lens cover to clear your vision.

Cleaning

To clean the lenses, hand-sponge with warm water and mild detergent, rinse and air-dry.

Installing the Breathing Tube in HMX Series Respirator Helmets (Thread Style)

1. Align male end of breathing tube to female threaded insert on the back of the helmet (see Figure 15). Do not remove foam from inside the breathing tube used with HMX Series Airline Respirators. The foam helps to reduce the noise level of incoming air.

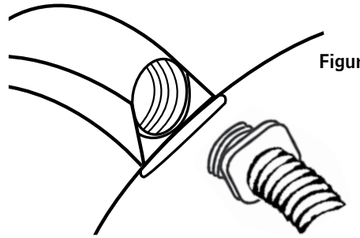


Figure 15

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

⚠ 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 HMX Series Respirator

Before using your HMX Series respirator, assemble the helmet, breathing tube and flow control using the instructions provided.

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 helmet assembly to the air supply hose (see Figure 16). 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.

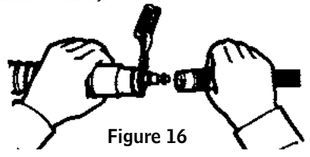


Figure 16

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.
4) With the air still flowing, put on the HMX Series helmet. 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 17)
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.

Figure 17

9) Recheck air pressure and adjust if necessary.
10) With air flowing into the respirator, you are now ready to enter work area.

Outer Door (HMX, HMX-O models)

The outer door should be kept in a fully closed and locked position for maximum protection. When fully closed and secured, user will hear and feel an audible and tactile click. Before entering a contaminated environment, user must check the condition of the outer door by gently lifting on the front door tab to ensure door is secured.

The respirator door is intended to be raised to a maximum open position for inspecting work, or other visual requirements.

To open door, lift upwards on door tab, located in the bottom center of the outer door. It may be necessary to simultaneously use the opposite hand to gently pull helmet shell towards user's chest, to facilitate the door releasing from its locked position.

User will feel a tactile set when the outer door reaches its full up-position.

⚠ WARNING

Never open the outer door in a hazardous area if an inner lens is not secured in place and in good condition. Hazards can remain airborne for hours until settled or ventilated. Failure to follow this requirement could subject user to serious injury or death.

Operating the HMX Respirator Helmet

⚠ WARNING

It is the respirator wearer's responsibility to verify all components of the respirator helmet are installed and completely secured before entering any environment requiring respiratory protection. Failure to do so could subject user to possible injury or death.

Doffing the HMX 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.

Doffing the Respirator

- Remove the helmet.
- Remove the waist belt.
- Disconnect the helmet from the breathing tube.
- Disconnect the breathing tube from the flow control.
- Clean and inspect components as necessary.
- Place components in storage.

Inspection, Cleaning, and Storage

Bullard HMX Series respirators have a limited service life. Therefore, a regular inspection and replacement program must be conducted. Bullard HMX 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 HMX 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 equipment damage, death or serious injury.

⚠ 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.

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 HMX Series Air-line 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 system with the foam in place. Failure to follow these instructions may result in , death or serious injury.

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 approved for use with the HMX 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.

Parts and Accessories

HMX Series airline respirators consist of four components – respirator helmet and shroud, 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

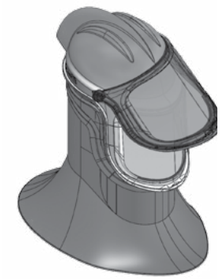
Helmets

HMX –Helmet with Outer Door and Inner Lens

HMX-I–Helmet No Outer Door

HMX-O–Helmet with Outer Door, No Inner Lens*

* Upgrade to HMX by installation of Inner Lens.



HMX Series Helmet

Shrouds

HMXSLF –Loose Fitting Facepiece, HEPA material

HMXS2000 –Full Shroud, DuPont™Tychem® 2000 material

HMXS4000 –Full Shroud, DuPont™ Tychem® 4000 material

HMXSFRHH – Full Shroud, Fire Resistant Material, High Heat Environments

HMXSFR – Full Shroud, Fire Resistant Material

HMXSR – HMX Replacement Shroud Retainer

Breathing Tube

HMXSARHBT– HMX Breathing Tube Standard 34”

HMXSARHBTS– HMX Breathing Tube Short 27”

Outer Doors & Inner Lens

HMXOD – HMX, HMX-O Outer Door Replacement

HMXWOD5 – HXM, HMX-O Outer Door, Welding Shade 5

HMXWOD10 - HXM, HMX-O Outer Door, Welding Shade 10

HMXIL – HMX, HMX-I Inner Lens Replacement

HMXTHK – HMX Replacement Hinge Kit, Threaded Knob Connection

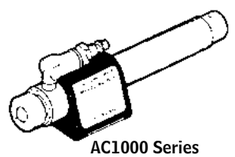
HMXTDMK – HMX Door Maintenance Kit, Includes Outer Door, Inner Lens, and Threaded Hinge Kit

Accessories

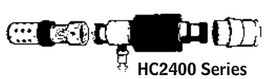
HMXLC - HMX Outer Lens Covers

20NC – Chin Stap

GVXRT – Replacement Suspension



AC1000 Series



HC2400 Series

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

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

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

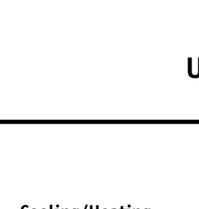
AC100030	1/4” Industrial Interchange Continuous Flow Control Fitting
AC100030B	1/4” Industrial Interchange Brass Continuous Flow Control Fitting
AC100030S	1/4” Industrial Interchange Stainless Steel Continuous Flow Control Fitting
AC100031	1/4” Schrader Continuous Flow Control Fitting
AC100032	1/4” Snap-Tite 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
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

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

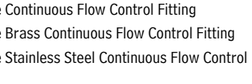
HC240030	1/4” Industrial Interchange Continuous Flow Control Fitting
HC240030B	1/4” Industrial Interchange Brass Continuous Flow Control Fitting
HC240030S	1/4” Industrial Interchange Stainless Steel Continuous Flow Control Fitting
HC240031	1/4” Schrader Continuous Flow Control Fitting
HC240032	1/4” Snap-Tite, 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

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



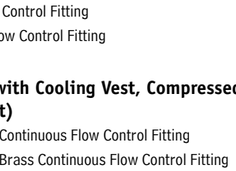
DC70M/L
DC70XL/XXL



DC5040
Dual-Cool

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



Frigitron 2000

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

SAR Air Supply Hoses continued

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

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).

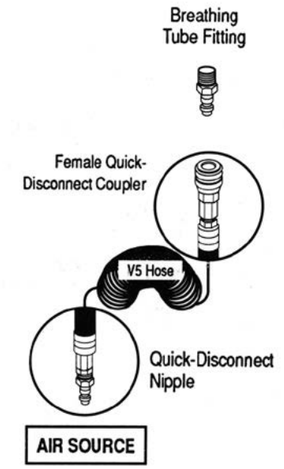
Point-of-Attachment

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.

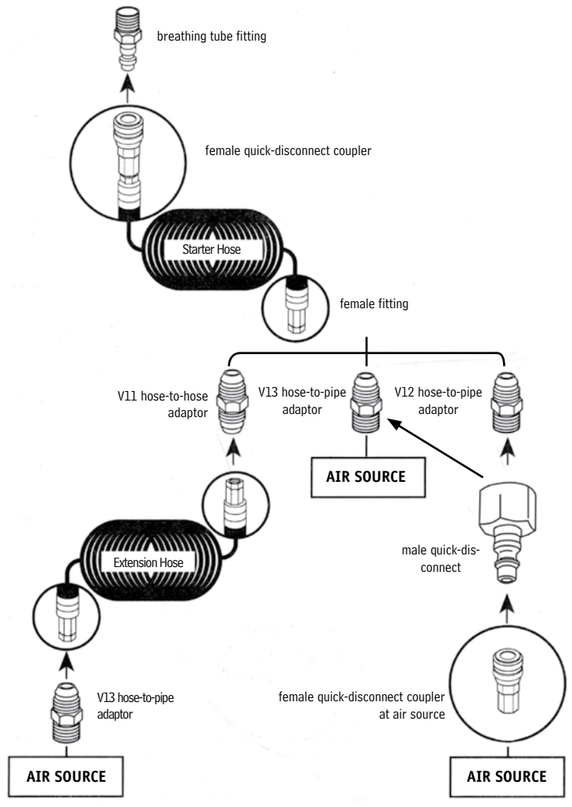
Point-of-attachment

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.

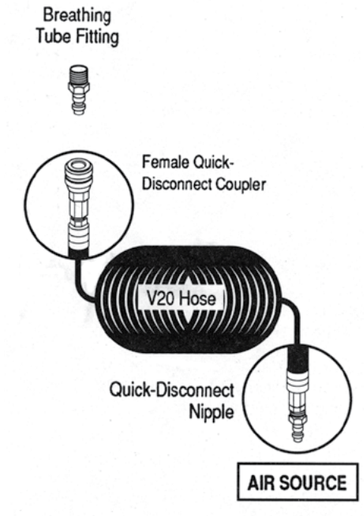
Respirable Breathing Air

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.

AC1000 Cool Climate Control Tube User Manual

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.

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.

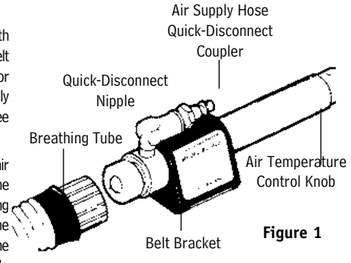
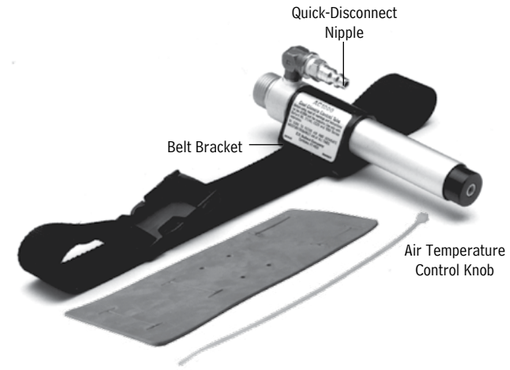


Figure 1

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.



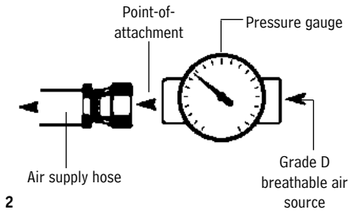


Figure 2

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

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

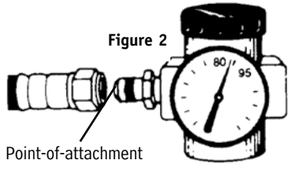
For adequate air flow, attach the muffler and flow control valve to the end of the hot/cold tube that is opposite the breathing tube end.

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.

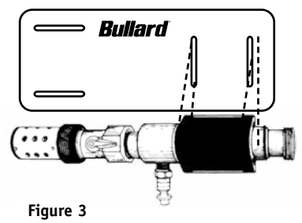
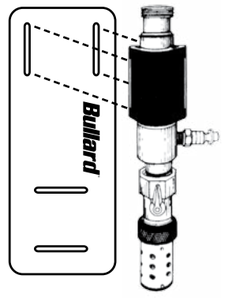


Figure 3

Figure 4



For optional use with Bullard Airline Respirators

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.

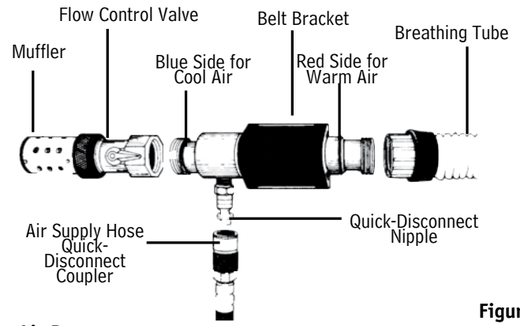


Figure 1

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 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.

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)**.

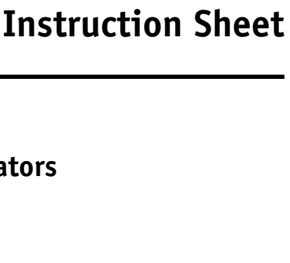


Figure 1

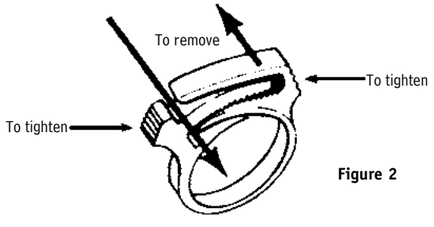


Figure 2

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)**.

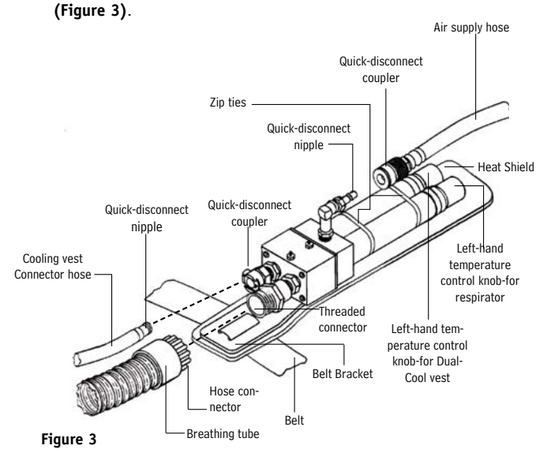


Figure 3

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)**.

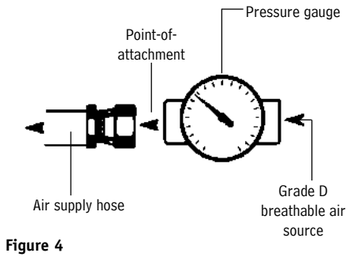


Figure 4

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.

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.

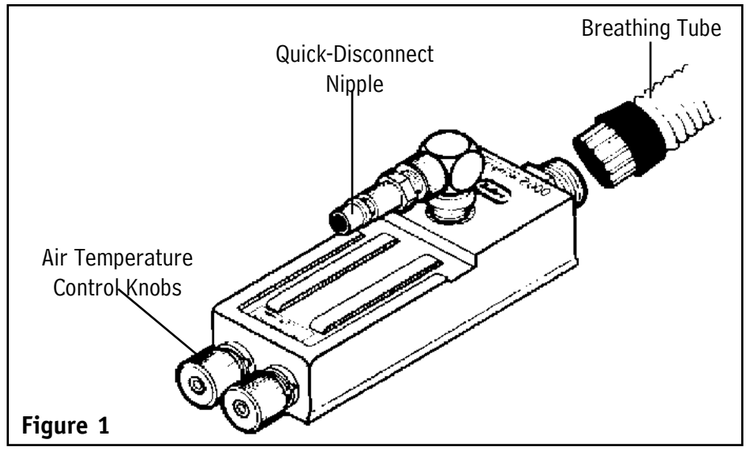


Figure 1

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.

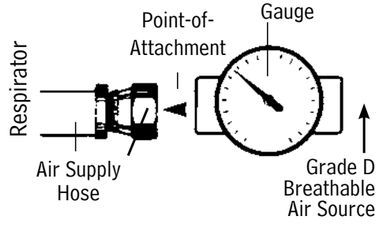


Figure 2

HMX Series Respirator Helmet
User Manual for use with Supplied-Air Respirators

One Year Limited Warranty

Bullard warrants to the original purchaser that the HMX Series Respirator Helmet will be free of defects in material and workmanship under normal use and service for a period of one (1) year from the date of purchase. Bullard's obligation under this warranty is limited to repairing or replacing, at its option, articles that are returned within the warranty period and that are, after examination, shown to Bullard's satisfaction to be defective, subject to the following limitations;

a) The HMX Series Respirator Helmet must be returned to the Bullard factory with shipping charges prepaid.

b) The HMX Series Respirator Helmet must not be altered from its original factory configuration.

c) The HMX Series Respirator Helmet must not have been misused, subjected to negligent use, or damaged in transport.

d) The date of purchase is within the one year warranty period. (A copy of the pur chaser's original invoice showing the date of purchase is required to validate warranty coverage.)

In no event shall Bullard be responsible for damages for loss of use or other indirect, incidental, consequential or special costs, expenses or damages incurred by the purchaser, notwithstanding that Bullard has been advised of the possibility of such damages.

ANY IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO ONE (1) YEAR FROM THE DATE OF PURCHASE OF THIS PRODUCT.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusion may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

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.

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