Air-Line Respirators: Industrial

A Guide to Air-Line Systems

Description

Type C Supplied-Air Respirators, more commonly referred to as air-line respirators, are designed to provide long-duration respiratory protection.

They generally consist of a full-facepiece or half-mask facepiece connected by an air-supply hose to an air source (either a compressor or bank of large air cylinders). When connected to the air source, the respirator delivers a supply of respirable air to the user.

Accessory equipment, such as pressure regulators, pressure relief valves, carbon monoxide monitors and filters for air compressors, may be necessary to ensure that the air is at the proper pressure and quality for breathing. Air quality must be Quality Verification Level Grade D or better as defined in ANSI Standard Z-86.1-1973 (Compressed Gas Association Specification G-7.1 Commodity Specification for Air).

Current air-line systems fall into two categories: ***Pressure-Demand*** and ***Constant Flow***. The difference between the two is how the air is supplied.

Pressure-demand systems deliver air only when the user necessitates it. Thus, pressure-demand devices afford greater breathing efficiency.

In contrast, with a constant flow device, air flow to the respirator is continuous. However, because the air flow is continuous, constant flow air-line systems are generally used only with a compressor for a virtually unlimited air supply.

Type C Supplied-Air Respirators are approved by the National Institute for Occupational Safety and Health (NIOSH) for use in atmospheres not immediately dangerous to life and health (IDLH) or from which the wearer can escape without wearing the respirator.

"Not immediately dangerous to life and health" means any hazardous atmosphere which may produce physical discomfort immediately, chronic poisoning after repeated exposure, or acute adverse physiological symptoms after prolonged exposure. (42 CFR, Part 84 subpart A, 84.2(x)).

This limitation is necessary because the air-line respirator depends entirely on an air supply not carried by the wearer. Therefore, if the air hose were severed or crimped, or the air compressor failed, the air supply to the wearer would be shut off. The wearer would be without respiratory protection and might not be able to safely escape from an IDLH atmosphere.

Another limitation of air-line respirators is that the air-supply hose limits the wearer to a fixed distance from the air source. As an air-line respirator user, it is your responsibility to supply the respirator with breathable air—Grade D or better. The following pages show complete hook-ups of various air-line systems, both pressure-demand and constant flow, from the air source to the respirator. The following information is a guide designed to aid you in hooking up your own air-line system.

Pressure-Demand Air-Line Respirators (PD)

Pressure-Demand Air-Line Respirators are designed to maintain a slight positive pressure of air inside the facepiece whether the wearer is inhaling or exhaling. This helps prevent contaminants from seeping in around the facepiece, even if there should be small breaks in the face-to-facepiece seal.

Pressure-Demand Air-Line Respirators are designed specifically for non-IDLH toxic atmospheres. The exception is if the respirator is equipped with an egress cylinder of air to use during escape.

Pressure-Demand Air-Line Units require an air supply from an uncontaminated compressed-air source as stipulated in General Industry Safety and Health Regulations, Part 1910.134 (OSHA) with the delivered air conforming to at least Grade D of ANSI Standard Z86.1.

A common air source for pressure-demand systems is a single cylinder of air which can be set up in remote sites that might otherwise be impossible to reach with a large stationary compressor.

Another air source option for pressure-demand respirators is a cylinder cascade system. A cascade system consists of several air cylinders joined together in a bank by means of coupler tees. Generally, the banks consist of three or more cylinders of either 244 cubic-feet or 330 cubic-feet-capacity. One or more workers can breathe from a cascade system.

If using a compressed air or a compressor system, each respirator generally requires 1.5 cfm per person and needs to maintain the inlet (working) pressure specified in the respirator instruction manual.

At a normal rate of consumption, a three-cylinder bank used with a pressure-demand unit will provide between 12 to 16.5 man-hours of air, depending on cylinder capacity.

MSA Pressure-Demand Air-Line Units Include:

PremAire® Air-Line Respirator System:
- with Escape Cylinder (for egress from IDLH atmospheres)
- with Vortex Tube (for suit-cooling applications)
- with Dual-Supply (to eliminate additional hose lengths)

PremAire® Cadet Respirator

PremAire® Cadet Escape Respirator
- with Escape Cylinder (for egress from IDLH atmospheres)

Abrasi-Blast™ Supplied-Air Respirator

Constant Flow Air-Line Respirators (CF)

Constant Flow Air-Line Respirators also maintain a slight positive pressure of air inside the facepiece whether the wearer is inhaling or exhaling. This helps prevent contaminants from seeping in around the facepiece, even if there should be small breaks in the face-to-facepiece seal.

Constant Flow Air-Line Respirators maintain air flow at all times, rather than only on demand. Because of this, constant flow units almost always use a compressor as their air source. A constant flow unit would quickly exhaust the air from a cylinder or cascade system.

There are two types of Constant Flow Air-Line Respirators: one uses a tight-fitting facepiece; the other, a loose-fitting hood or helmet. Inlet air pressure must be able to maintain at least 4 cfm for a tight-fitting facepiece and 6 cfm for a loose-fitting hood.

The inlet pressure for Constant Flow Air-Line Respirators varies between 10-15 psig for low pressure systems and 35-40 psig for high pressure systems.

For Constant Flow Air-Line Hoods, the inlet pressure usually ranges between 10-15 psig and 85-100 psig, depending on the type. Also, depending on the inlet pressure, the length of approved air-supply hose for these systems is usually between 8-50 feet for low-pressure systems and 8-300 feet for high-pressure systems. Consult the instruction manual for your respirator to determine the specific inlet pressure and hose length.

MSA Constant Flow Respirators with Loose-Fitting Hoods Include:
- Versa-Hood™ Air-Supplied Hood

MSA Constant Flow Respirators with Tight-Fitting Facepieces Include:
- Constant Flow Air-Line Respirator
- Constant Flow Direct-Connect Air-Line Respirator
- Constant Flow Duo-Twin™ Air-Line Respirator
- Constant Flow Duo-Flo™ Air-Line Respirator
- Abrasi-Blast™ Supplied-Air Respirator

PremAire® Supplied-Air Respirator System

The PremAire Supplied-Air Respirator System is one of the most advanced air-line respirators available. Designed to provide the utmost in versatility, the modular system allows users to order the respirator configured for their specific application.

A lightweight mask-mounted regulator provides high air flow and responds quickly to changing breathing requirements.

The basic PremAire Respirator includes the patented manifold and can be upgraded with any of the three following options:

1. an Escape Cylinder that permits emergency escape from Immediately Dangerous to Life and Health (IDLH) atmospheres. (Please see Note 2 below ordering information.)
2. a Dual-Supply option that lets workers connect from one pressurized continuous air source to another without losing continuity of air flow.
3. a Vortex Tube option that delivers whole-body temperature control for added worker comfort.

Fully Configured PremAire Manifold

The PremAire Respirator is a full-face, pressure-demand, Type-C supplied-air respirator with a patented waist-mounted manifold.

In addition to the flexibility offered by the manifold, the PremAire Supplied Air Respirator System is available with the Firehawk® Mask-Mounted regulator (MMR). This revolutionary 2nd-stage regulator, offered in push-to-connect (PTC) and slide-to-connect (STC) versions, combines user-friendly connections and unbeatable care and maintenance. The Firehawk MMR, originally designed for the rigorous conditions of the fire service, is a solid cover regulator for use with the Ultra Elite facepiece, considered best-in-class with over 94% field of vision with the MMR engaged. For more information, please reference Bulletin 0114-20 or call MSA Customer Service at 1-800-MSA-2222.

PremAire System User's Guide

The PremAire System User's Guide provides a comprehensive core instruction manual covering the basic PremAire Supplied-Air Respirator, plus four sub-manuals covering each of the PremAire System options (escape cylinder, Duo-Twin, dual-supply and (vortex tube.) The User's Guide also includes an illustrated parts list, a quick-reference chart showing the various PremAire Respirator configurations available, and a hard-cover binder with tab pages to house and organize these materials.

All these manuals are available on our website: www.MSAnet.com

Traditional MSA Part Numbers

See the following page for Assemble-To-Order information. For customers who require faster delivery, the most popular PremAire system combinations can still be ordered with a traditional MSA part number. These units are always stocked in our warehouse and are ready to ship upon receipt of order. These assemblies come with a medium Hycar Ultra Elite Facepiece and nosecup with rubber harness. For these assemblies, Quick-Disconnects must be ordered separately (see p. 41; you need a male plug with female 1/4" NPT (column 2), and a female socket assembly (column 5).

Complete Assemblies with Firehawk PTC Regulator	
Complete Assembly w/ Firehawk PTC, 5-minute 3AL aluminum cylinder, right-hip model, less case	10045162
Complete Assembly w/ Firehawk PTC, 10-minute 3AL aluminum cylinder, right-hip model, less case	10045163
Complete Assemblies with Firehawk STC Regulator	
Complete Assembly w/ Firehawk STC, 5-minute 3AL aluminum cylinder, right-hip model, with case	10045164
Complete Assembly w/ Firehawk STC, 10-minute 3AL aluminum cylinder, right-hip model, with case	10045165

Air-Line Respirators: Industrial

The Assemble-To-Order System

MSA offers more PremAire System Respirator choices than ever before. Thousands of possible combinations let workers select just the right PremAire Respirator for the job.

MSA's Assemble-To-Order System (ATO) makes ordering the right unit easier and faster than ever. Instead of choosing from a handful of complete PremAire assemblies, users can order a custom-made unit with every option exactly as desired. The ATO System works by allowing users to create their own part numbers. Each digit of an ATO part number will represent a specific component, so that the entire part number represents a finished respirator built exactly to the desired specifications.

Using the ATO System below is easy. The user selects the number or letter that corresponds to the choice of components and fills in the appropriate box. A number or letter from each category must be selected. For example, to order a PremAire System respirator with nylon belt assembly; right-hip 10-minute carbon fiber escape cylinder; dual-supply option with 8-inch hose; Firehawk PTC 30" solid cover; non-NFPA Ultra Elite medium hycar Facepiece with nosecup and EZ-DON harness; Foster steel quick-disconnect; and a hard case, use this ATO part number: C-PS151G-11M13-G-1.

Advantages of the ATO System include:

- You get the exact model of PremAire you need
- No special orders, because all orders are customized
- Fresher cylinders from our continually rotated inventory
- Simplified ordering process
- Timely delivery

PremAire Supplied-Air Respirator System Assemble-To-Order Matrix

Type		Belt Assembly		Escape Cylinders		Dual-Supply		MMR Regulator		Facepiece Type		Facepiece		Facepiece Size		Nosecup		Head Harness		Quick-Disconnect *		Case	
PS	PremAire System	1	Nylon	0	None	0	None	E	Firehawk STC 30" Solid Cover	0	None	0	None	0	None	0	None (only if you have no FCPC)	0	None	A	None	0	None
		2	Urethane	1	5-Min Right Hip Carbon Fiber	1	8" Hose less QD	F	Firehawk STC 42" Solid Cover	1	Non-NFPA	1	Ultra Elite, Hycar	S	Small	1	Ultra Elite, Medium	1	Rubber	B	Snap-Tite Aluminum	1	Hard Case
		3	Nomex	2	5-Min Left Hip Carbon Fiber	2	15" Hose less QD	G	Firehawk PTC 30" Solid Cover	2	NFPA	2	Ultra Elite, Silicone	M	Medium	2	Ultra Elite, Large	5	SpeeD-ON	C	Snap-Tite SST	2	Soft Case
				3	5-Min Right Hip Aluminum			H	Firehawk PTC 42" Solid Cover					L	Large					D	Snap-Tite Brass		
				4	5-Min Left Hip Aluminum															E	Hansen SST		
				5	10-Min Right Hip Carbon Fiber															F	Hansen Brass		
				6	10-Min Left Hip Carbon Fiber															G	Foster Steel		
				7	10-Min Right Hip Aluminum															H	Foster SST		
				8	10-Min Left Hip Aluminum															I	Foster Brass		
																				J	Cejn Chrome		
																				K	Duff-Norton Brass		

C — PS [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

Part Number

Quantity

*Note: This matrix must only be used for ordering complete PremAire Systems. This matrix cannot be used for ordering individual components (i.e., facepieces, escape cylinders, etc.). Please order components separately using their standard MSA part number.

‡For applications strictly limited to non-IDLH atmospheres, NIOSH requires that the respirator system be configured without a bypass on the Fire Hawk Mask-Mounted Regulator (MMR). Please contact MSA Customer Service for more information.

* Unit requires use of a quick-disconnect for connection to air-line to maintain approval. All quick-disconnects listed are non-locking except for the Cejn chrome (J).

Note: See page 43 for air-line hoses.

PremAire System Upgrade Kits

Escape Cylinder Kits

Includes carrier assembly, 1st stage regulator, hose and cylinder

Kit with Fully-wound Carbon Fiber Five-minute Cylinder, for Right Hip	800696
Kit with Fully-wound Carbon Fiber Five-minute Cylinder, for Left Hip	800694
Kit with Fully-wound Carbon Fiber Ten-minute Cylinder, for Right Hip	800697
Kit with Fully-wound Carbon Fiber Ten-minute Cylinder, for Left Hip	800695

Vortex Tube Kits

Kit with 6" Hose, Cool-Only Version	800706
Kit with 6" Hose, Warm/Cool Version	800710
Kit with 12" Hose, Cool-Only Version	801012
Kit with 12" Hose, Warm/Cool Version	801014

Dual-Supply Kit

Includes 8-inch extension hose, less quick-disconnect assembly	800044
Includes 15-inch extension hose, less quick-disconnect assembly	800986

PremAire Air-Line Filter Kit

Filter Kit	811940
Replacement filter element and gasket	811984

Escape Cylinder Kit (for rt hip)

Vortex Tube Kit

Dual-Supply Kit

Air-Line Filter Kit

Replacement PremAire Respirator Facepieces

Ultra Elite® Facepieces with Firehawk PTC MMR

With nosecup. Non-NFPA.	Small	Medium	Large
Hycar, with rubber head harness	10037650	10037648	10037652
Hycar, with EZ-Don head harness	10037651	10037649	10037653
Hycar, with SpeeD-ON head harness	10043419	10043415	10043433
Silicone, with rubber head harness	10043417	10043413	10043431
Silicone , with EZ-Don head harness	10043418	10043414	10043432
Silicone , with SpeeD-ON head harness	10043430	10043416	10043434

Ultra Elite Facepieces with Firehawk STC MMR

With nosecup. Non-NFPA.	Small	Medium	Large
Hycar, with rubber head harness	—	10039982	—
Silicone, with rubber head harness	—	10039983	—

PremAire Replacement Cylinder and Valve Assemblies

Five-minute aluminum (2261 psi)	818159
Five-minute carbon fiber (3000 psi)	10042420
Ten-minute aluminum (3000 psi)	10042423
Ten-minute carbon fiber (3000 psi)	802191

Other Replacement Parts

Replacement carrying case	813805

PremAire® Cadet Supplied-Air Respirator

The PremAire Cadet Respirator is a pressure-demand, Type-C, supplied-air respirator with a mask-mounted regulator that responds quickly to wearer's changing breathing requirements. The respirator can serve as a basic air-supplied device, or it can be easily upgraded to the versatile, state-of-the-art PremAire System. Designed for a variety of applications, PremAire Cadet Respirators can be used in non-IDLH (Immediately Dangerous to Life or Health) environments only. Operating inlet pressure is 60-100 psig. NIOSH approved. For more complete information, see Data Sheet 01-01-04.

Complete Assemblies

All listed configurations include: Ultra Elite facepiece (medium Hycar), rubber head harness and nylon belt assembly.

		Push-To-Connect Firehawk MMR		Slide-To-Connect Firehawk MMR	
Hose	Fittings	With Case	Less Case	With Case	Less Case
30" IP (intermediate pressure)	None	10054782	10054793	10054786	10054794
30" IP (intermediate pressure)	Snap-Tite AL	10054785	10054790	10054788	10054796
42" IP (intermediate pressure)	None	10054783	10054791	10054787	10054795
42" IP (intermediate pressure)	Snap-Tite AL	10054784	10054792	10054789	10054797

Note: See page 40 to order quick-disconnects for use with the PremAire and PremAire Cadet Systems (column 2 for the plug and column 5 for the socket assembly).

Air-Line Respirators: Industrial

PremAire Cadet Escape Respirator— Combination Supplied Air Respirator with Escape Cylinder

Size, Simplicity, and Economy

The PremAire Cadet Escape Respirator is designed to be versatile, comfortable, and affordable. A streamlined new design offers a first-stage regulator and cylinder valve within one assembly, creating a very small size and profile that is less likely to snag when working in tight places.

Low-profile escape cylinders can be worn on either the right or left hip. The Ultra Elite Pressure-Demand Facepiece or Advantage 4000 Facepiece with APR conversion capability offer choice of sizes and nose cups. The Firehawk® MMR Regulator let users choose from Push-To-Connect (PTC) or Slide-To-Connect (STC) attachments. All regulators feature a bypass and a choice of solid cover or purge.

The economical PremAire Cadet Supplied-Air Respirator with Escape Cylinder is a cost-effective respiratory protection solution for many industries. For ordering ease and flexibility, these systems will be sold as part-numbered kits or through MSA's Assemble-To-Order (ATO) System. The PremAire Cadet Supplied-Air Respirator with Escape Cylinder is NIOSH-approved as a combination supplied-air respirator and self-contained breathing apparatus.

Features and Benefits

- New one-piece first-stage regulator and cylinder valve;
  - *Combination cylinder valve and first stage pressure reducer*
  - *Very small size and profile*
  - *Regulator uses many of same parts as MSA FireHawk SCBA*
- Regulator body protects cylinder gauge – no need for rubber gauge guard, reduces size!
- Choice of cylinder hip placement allows workers freedom and versatility
- Two harness materials:
  - *Standard Nylon-ideal for chemical resistance*
  - *Kevlar-ideal in high heat environments or in areas with potential for sparks*
- Two attachments for keeping cylinder secure on belt
  - *Sturdy metal cylinder support bands*
  - *Nylon or Kevlar cylinder bags available for carbon fiber cylinders*
- Shoulder support strap incorporates hose keeper; regulator hose stays in place close to body, reduces chance of snagging
- Bracket/holder for second stage pressure regulator

Applications

- Chemical and petrochemical
- Hazardous materials
- Confined space entry
- Firefighting operations

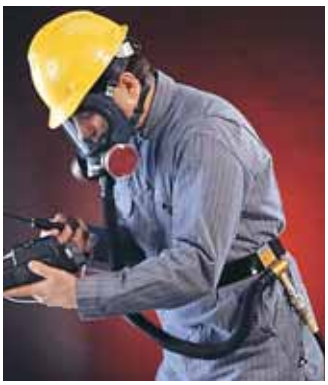
PremAire Cadet Combination Supplied-Air Respirator System with Escape Cylinder Assemble-To Order Matrix

Type		Carrier & Harness Type		Pad Option		MMR Regulator		Escape Cylinder		Faceiece		Nosecup		Head Harness		Quick Disconnect		Case	
PC	PremAire Cadet Escape	1	Nylon, strap carrier, standard	0	None	A	FireHawk, Push-To-Connect, solid cover	A	5-minute aluminum	A	None	0	None	0	None	0	None	0	None
		2	Kevlar, strap carrier, standard	1	Shoulder	C	FireHawk, Slide, solid cover	B	10-minute aluminum	B	Ultra Elite, Hycar, small	1	Ultra Elite, medium	1	Rubber	A	Snap-Tite, aluminum	1	Hard plastic case
		3	Nylon, bag carrier, standard			FireHawk regulators are not compatible with the Advantage 4000 Facepiece		C	5-minute carbon	C	Ultra Elite, Hycar, medium	2	Ultra Elite, large	2	Net	B	Snap-Tite, stainless steel		
		4	Kevlar, bag carrier, standard					D	10-minute carbon	D	Ultra Elite, Hycar, large	Nosecup is standard with the Advantage 4000 Facepiece				C	Snap-Tite, brass		
		Aluminum cylinders are not compatible with bag carriers						E	15-minute carbon	E	Ultra Elite, silicone, small					D	Hansen, stainless steel		
										F	Ultra Elite, silicone, medium					E	Hansen, brass		
										G	Ultra Elite, silicone, large					F	Foster, steel		
										H	Advantage 4000, Hycar, small					G	Foster, stainless steel		
										J	Advantage 4000, Hycar, medium					H	Foster, brass		
										K	Advantage 4000, Hycar, large					J	Snap-Tite, locking, aluminum		
										L	Advantage 4000, silicone, small					K	Snap-Tite, locking, stainless steel		
										M	Advantage 4000, silicone, medium					M	Snap-Tite, locking, brass		
										N	Advantage 4000, silicone, large					N	Foster, locking, stainless steel		

Duo-Twin™ Respirators and Duo-Flo™ Respirators

Duo-Twin Respirator

The Duo-Twin Respirator comes in a Constant-Flow version; Constant-Flow respirators are normally used where an ample air supply is available, such as that provided by an air compressor. The MSA Duo-Twin Respirator features an air-purifying cartridges, which also protect against a variety of contaminants. If the air supply should ever fail on the Constant-Flow unit, the user is automatically protected by the air-purifying cartridge.



Duo-Twin Respirator

This product is popular in the pharmaceutical, chemical, petrochemical, and nuclear industries. This MSA respirator should not be used in atmospheres containing less than 19.5% oxygen.

NIOSH approved.

Duo-Flo Respirator

The Duo-Flo Respirator comes in a Constant-Flow version; Constant-Flow Respirators are normally used where an ample air supply is available, such as that provided by an air compressor. Duo-Flo Respirators use the MSA Ultra Filter, a compact round filter cartridge that has a large effective filter area to provide low-breathing resisting. This cartridge has a P100 classification. Duo-Flo Respirators are popular in the pharmaceutical, chemical, petrochemical, and nuclear industries. This MSA respirator should not be used in atmospheres containing less than 19.5% oxygen. NIOSH approved.

Constant-Flow Duo-Flo Respirator

Ultra Filter P100 cartridge

Duo-Twin Respirator

Complete Assembly*	
Complete with facepiece, breathing tube, adapter assembly/regulator, web belt and Foster steel plug and socket assembly.	
Constant Flow Duo-Twin Respirator	484087
Duo-Twin Plug	
Allows conversion of a Duo-Twin facepiece to a Twin-Cartridge Respirator.	
Duo-Twin Plug	486637

* Cartridges must be ordered separately. See page 14 for ordering information.

Duo-Flo Respirators

Complete Assemblies (one P100 Ultra Filter is included)	
Constant Flow Duo-Flo Respirator w/full-face Ultravue Facepiece	466095
Constant Flow Duo-Flo Respirator w/half-mask Comfo Facepiece	466097

Replacement Cartridges for Duo-Flo Respirators

Round Ultra FIlter Cartridge, box of 6	10010420
Round Ultra Filter Cartridge, box of 6	10010421

Constant-Flow Air-Line Adapter Assemblies

Designed to deliver the required air flow to the facepiece at an inlet pressure range of 35-40 psig for hose lengths of 8 to 300 feet. The adapters include an integral belt clip and male and female quick-disconnect assemblies.

Quick-Disconnect	Duo-Twin	Duo-Flo
Snap-Tite (AL) assembly	483526	466077
Snap-Tite (Brass) assembly	483530	476919
Snap-Tite (SST) assembly	483531	476920
Foster (Steel) assembly	483528	469869
Foster (Brass) assembly	483532	476918
Hansen (Brass) assembly	483529	476922
Hansen (SST) assembly	483533	476921
Duff-Norton assembly	483534	476923
Cejn assembly, locking	483535	479114
Snap-Tite (AL), locking	483536	479115

Air-Line Respirators: Industrial

Abrasi-Blast™ Supplied-Air Respirator

The Abrasi-Blast Respirator provides respiratory and upper body protection for workers in shipbuilding, the construction industry, utilities, and other applications where blasting with abrasives is performed.

A complete Abrasi-Blast Respirator is made up of a hood, facepiece with lens housing, breathing tube, cover lens cartridge assembly, flow-control device, approved air-supply hose, and support belt.

During blasting operations, the lens of the Abrasi-Blast Respirator is protected by 2 to 4 flat glass cover lenses mounted in a special foam material. Each cover lens is removed by integral pull tabs when it becomes so abraded that vision is reduced. There is no need to stop to change lenses, as is necessary with most conventional blasting hoods. Approved by NIOSH.

For more complete information, see Bulletin 0112-37.

Complete Assemblies with Hypalon Hood

Includes one lens cartridge consisting of four 0.06-inch untempered glass cover lenses, flow control device, Snap-Tite aluminum quick-disconnect fitting, adjustable valve-connector body, facepiece (medium) with dual exhalation valves and lens housing, breathing tube, web belt, and air-hose connector.

	Hypalon Hood with Collar	
Inlet Pressure Range	**Waist-Length**	**Shoulder-Length**
10-15 psi	468716	468720
35-40 psi	468718	468722
Abrasi-Blast Duo-Flo	478116	478117

Lens Cartridges (contains 12 cartridges per carton)

Description	Recommended use	Part No.
0.06-in thick, untempered lens (4 lenses in each cartridge)	light blasting	473238
0.06-in thick, tempered lens (4 lenses in each cartridge)	light blasting plus added protection against glass breakage	473240
0.09-in thick, untempered lens (3 lenses in each cartridge)	medium blasting	473798
0.09-in thick, tempered lens (3 lenses in each cartridge)	medium blasting plus added protection against glass breakage	473800
0.12-in thick, untempered lens (two layers laminated) (2 lenses in each cartridge)	heavy blasting	473802
0.12-in thick, untempered lens (two layers laminated) (3 lenses in each cartridge)	heavy blasting	481742

Hood Options

	Hypalon	Duck Cloth	Neoprene	Knit Back/ Hypalon Front
Waist-length	468724	480697	486303	—
Chest-length	—	480699	—	—
Shoulder-length	468725	—	486304	486329

Note: The Abrasi-Blast Respirator is available with a duo-flow option. Please call MSA Technical Support for complete ordering information.

Note: Assemblies can be specially ordered with different options.

Constant Flow Air-Line Respirator

Constant Flow Air-Line Respirator with Ultravue Facepiece

Constant Flow Air-Line Respirator with Ultra Elite Facepiece

Constant Flow Air-Line Respirator with Comfo Facepiece

Constant Flow Air-Line Respirator with Welder's Comfo Facepiece

Constant Flow Air-Line Respirators are designed to maintain a slight positive pressure of air inside the facepiece, whether the wearer is inhaling or exhaling. This helps to prevent contaminants from seeping in around the facepiece, even if there should be small breaks in the face-to-facepiece seal. The complete respirator assembly is available with Ultravue or Ultra Elite Full Facepiece, Comfo Half-Mask Facepiece, or Comfo Welder's Facepiece; breathing tube; web support belt; and air-flow control valve with quick-disconnect assembly. The Constant Flow Respirator is used in non-IDLH environments. NIOSH approved. For more complete information, see Bulletin 0112-38.

Complete Assemblies

Choose facepiece, control valve, and quick-disconnect assembly. Comes with breathing tube and a web support belt. For optional PVC belt, see Accessories on page 44.

Quick-Disconnect	Ultra Elite Facepiece	Ultravue Facepiece	Comfo Facepiece	Welder's Comfo Facepiece
High-Pressure Control Valve (35-40 psig inlet pressure for 8-300 ft of hose)				
Snap-Tite aluminum	810829	460863	460865	460862
Foster steel	810831	461717	480466	480600
Duff-Norton brass	810834	486258	†	†
CEJN Locking chrome-plated brass	810832	480629	480631	480671
Snap-Tite Locking hard-coat anodized aluminum	810833	480633	480635	480672
Low-Pressure Control Valve (10-15 psig inlet pressure for 8-50 ft of hose)				
Snap-Tite aluminum	806775	463300	463302	463281
Foster steel	806776	480472	480474	480468
Hansen brass	806779	484836	484837	†
CEJN Locking chrome-plated brass	806777	480637	480639	480645
Snap-Tite Locking hard-coat anodized aluminum	806778	480641	480643	480646
With Cool-only Vortex				
Snap-Tite aluminum	†	494439	495462	N/A
With Warm/Cool Vortex				
Snap-Tite aluminum	†	495785	†	N/A
Direct-Connect for 3/8" Airline				
Snap-Tite aluminum	806791	488073	488077	488081
Foster Steel	806792	488074	488078	488082
Cejn Chrome Locking	806793	488075	488079	488083
Direct-Connect for 1/2" Airline				
Snap-Tite aluminum	806795	488089	488091	488093
Cejn Chrome Locking	806796	488090	488092	488094

† Available by special order only. High-pressure control valves are also available with the following special order quick-disconnects: Snap-Tite brass or stainless steel, Foster brass, and Hansen brass, or stainless steel. Low-pressure control valves also available with: Snap-Tite brass or stainless steel, Foster brass, Hansen brass, and Duff-Norton brass. Please call your nearest MSA distributor for complete ordering information.

Note: Facepieces can also be ordered in silicone instead of Hycar rubber. Three sizes of facepieces are available. For belts, MSA Air-Supply Hose and other accessories, see pages 43–44. For separate quick-disconnect plugs and sockets, see page 42. See page 41 for typical Pressure Demand Air-Line and Constant Flow Air-Line Systems setup.

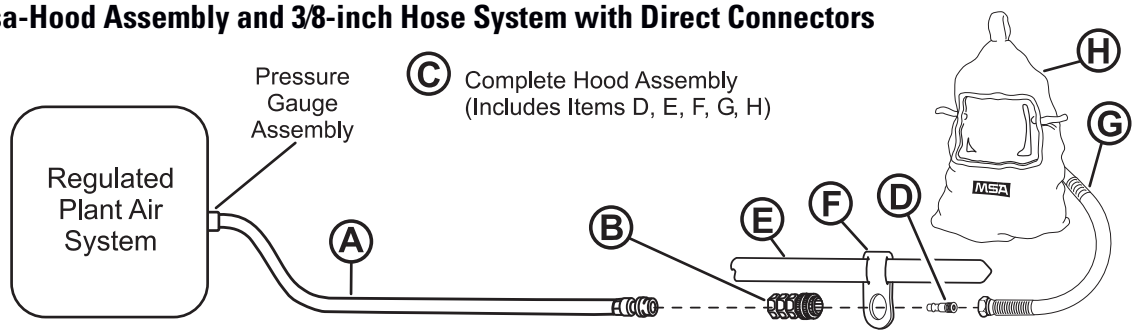
Air-Line Respirators: Industrial

Versa-Hood™ Air-Supplied Hood

The Versa-Hood Air-Supplied Hood is an inexpensive hood respirator which may be used anywhere a Type-C air-supplied hood is required. This versatile hood is available in two lengths (shoulder- and waist-length) and two materials (Tyvek and Saranex). All Versa-Hood respirators can be used with either a plant air system or personal air compressor.

When head protection is needed, a special three-point Velcro system secures the hood to an MSA V-Gard Cap. The hood suspensions (basic or ratchet versions) are easily adjustable and stable, minimizing the need for a chin strap. The hood is designed to be disposable, thus eliminating the need for cleaning, and a twin-lens system extends the life of the hood. MSA also offers a package of ten replacement lenses. An air-distribution system keeps the lens fog-free. NIOSH certified. For more complete information, see Data Sheet 01-02-01.

Versa-Hood Assembly and 3/8-inch Hose System with Direct Connectors

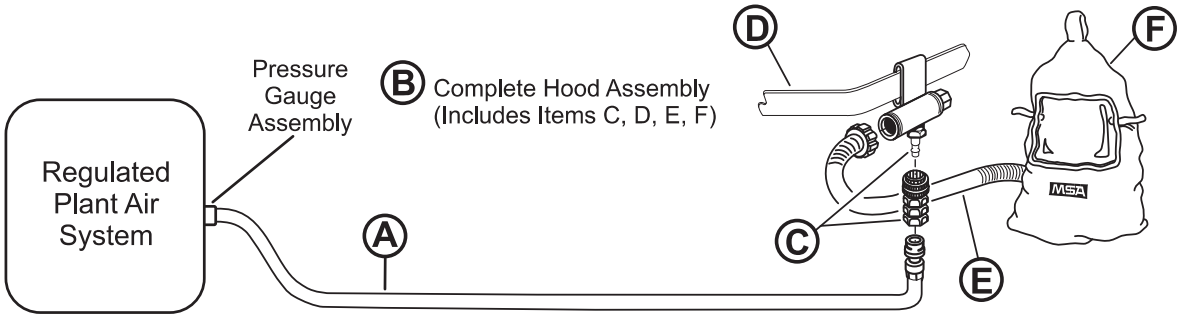


Versa-Hood Assembly and 3/8-inch Hose System w/Direct Connectors	
Air-Supply Hose– see page 43 (A)	
Socket assembly for 3/8-inch hose system (B) - Snap-Tite	455019
Socket assembly for 3/8-inch hose system (B) - Foster	467044
Complete Hood Assembly (C) (with Tyvek Hood), shoulder length, Snap-Tite aluminum plug	484689
Complete Hood Assembly (C) (with Tyvek Hood), shoulder length, Foster steel plug	484690
Complete Hood Assembly (C) (with Tyvek Hood), waist length, Snap-Tite aluminum plug	484693
Complete Hood Assembly (C) (with Tyvek Hood), waist length, Foster steel plug	484694

Hood Assembly Components	
Male plug, Snap-Tite (D)	66273
Male plug, Foster	56549
Hood hose (X-inch NPT) (G)	482702
Shoulder-length Tyvek hood (H)	482612
Waist-length Tyvek hood	482610
Belt holder (F)	482618
PVC support belt (E)	473902

Note: This Versa Hood Assembly would typically require a compressor that puts out between 10 to 12 cfm per person at 10 to 40 psi. Required inlet pressure is based on airline hose length.

Versa-Hood Assembly and 3/8-inch Hose System with Adjustable Valve Connectors



Please call your nearest MSA Distributor for complete ordering information

For airline hose, please see page 34.

Versa-Hood Assembly and 3/8-inch Hose System with Adjustable Valve Connectors (requires a compressor output of 10 to 12 cfm per person at 55 to 60 psi)		
Air-Supply Hose– see page 43 (A)		
Complete Hood Assembly (B) (with Tyvek Hood)	**Shoulder Length**	**Waist Length**
Adj. valve connector w/ Snap-Tite Quick-Disconnect	482823	482827
Adj. valve connector w/ Foster Quick-Disconnect	482824	482828
Cool-only vortex less Quick-Disconnect	494425	494427
Warm/cool vortex less Quick-Disconnect	495782	—

Hood Assembly Components	
Adj. valve connector for 3/8-in hose system, Foster (C)	471814
Adj. valve connector for 3/8-inch hose system, Snap-Tite	460814
Hood hose w/ coupling nut for adj. valve connector (E)	482703
Shoulder-length Tyvek hood (F)	482612
Waist-length Tyvek hood	482610
PVC support belt (D)	473902
Vortex Tube Assemblies - for use with plant air systems ONLY	
Warm/Cool vortex, less Quick-Disconnect (requires 25 cfm at an inlet pressure between 85 to 120 psi based on hose length)	495701
Cool only vortex, less Quick-Disconnect (requires 15 cfm at an inlet pressure between 75 to 90 psi)	494392

Portable Air-Supply Systems

The TransportAire™ System

Low-Pressure Configuration

The TransportAire System is available in two versions: one for high-pressure cylinders and one for low-pressure cylinders. Both versions consist of an impact-resistant handle with urethane-coated nylon straps that fit around a standard MSA SCBA air cylinder (purchased separately), a regulator, and a regulator-to-hose adapter. An Audi-Larm device is provided standard on the high-pressure system and is available as an option for the low-pressure system. Both systems are designed for use with MSA supplied-air respirators equipped with a dual-supply option.

A major advantage of the dual-supply option is improved mobility; workers need not remain tethered to a single air-supply hose throughout a work period.

For more complete information, see Bulletin 0114-21.

The PortAire® System

The PortAire System holds two standard SCBA air cylinders to provide firefighters, industrial personnel, confined-space workers, and others with a portable, compressed-air source any time an air-line device is required.

Designed for use with MSA pressure-demand supplied-air respirators, including dual-purpose self-contained breathing apparatus (SCBA), the PortAire System consists of a compact air-pressure regulating system housed in a lightweight, yet durable, anodized aluminum frame.

For more complete information, see Bulletin 0114-21.

Air Supply Hose*	
8-ft Coiled Nylon Hose	491513
Air Supply Systems	
TransportAire Portable Air-Supply System—Low-Pressure	
TransportAire Assembly complete with Cylinder Carrier, Regulator, and Regulator-to-hose Adapter	816693
Option	
Low-Pressure Audi-Larm Assembly	85078
TransportAire Portable Air-Supply System—High-Pressure	
TransportAire Assembly complete with Cylinder Carrier, Regulator and Regulator-to-hose Adapter, and High-Pressure Audi-Larm	812217
PortAire Portable Air-Supply System	
PortAire Portable Air-Supply System with Audi-Larm low-pressure warning device, high-pressure regulator, and carrying frame with air-supply hose* retainer (cylinders and air-line hose not included)	807052
Quick-Fill Kit	807053
Wheeled Cart for PortAire Portable Air-Supply System	10017089
Cylinders	
High-Pressure (4500 psig)	
Stealth H-60, 60-min	807588
Stealth H-45, 45-min	807570
Stealth H-30, 30-min	807587
Fully-wound Composite, 60-min	801285
Fully-wound Composite, 30-min	801287
Kevlar, 60-min	807002
Kevlar, 45-min	806933
Low-Pressure (2216 psig)	
Stealth L-30, 30-min	807586
Hoop-Wrapped, 30-min	469619
3AL (Aluminum), 30-min	809872
Composite II, 30-min	801279
Low-Pressure (3000 psig)	
Stealth L-30+, 30-min	816115
Composite III, 30-min	801289

*For complete listing of air-supply hose, see page 43. For quick-disconnect fittings, see page 42.

Air-Line Respirators: Industrial

TransAire® 5, TransAire® 10, and Custom Air V® Escape Respirators

Quick Escape from IDLH Atmospheres

When you need to bail out quickly, the TransAire 5 and TransAire 10 Escape Respirators deliver a consistent air supply at 40 lpm (liters per minute). This standard-flow rate makes for a smooth escape in normal aerobic escape applications. The TransAire 10 Escape Respirator is pressurized to 3000 psig, and the TransAire 5 Escape Respirator is pressurized to 2216 psig. The compact units employ aluminum cylinders that can withstand exposure to temperatures from 0° to 160°F. Despite their durability, the units are extremely lightweight.

The Custom Air V Escape Respirator is designed with a high flow rate and meets stringent air flow requirements for extremely aerobic escape applications. It provides a five-minute, constant air flow at 72 lpm and is available with either an aluminum or a carbon fiber cylinder.

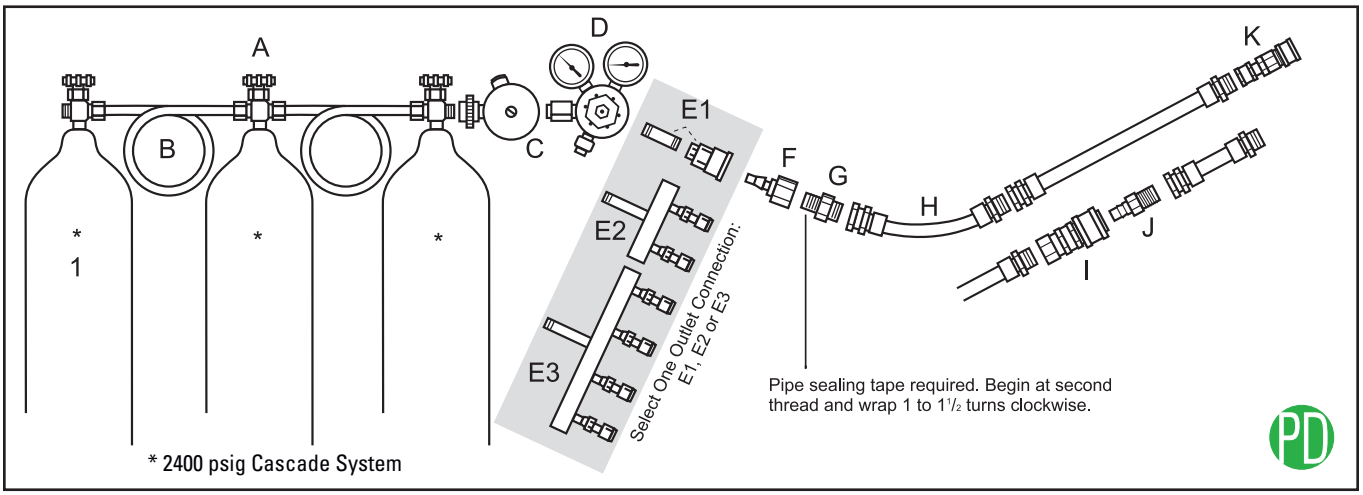
TransAire and Custom Air V Complete Assemblies	
TransAire 5 Escape Respirator complete (includes aluminum cylinder, carrier, hood tube, hood assembly)	10008292
TransAire 10 Escape Respirator complete (includes aluminum cylinder, carrier, hood tube, hood assembly)	10008293
TransAire 10 Escape Respirator complete (includes fully-wound carbon fiber cylinder, carrier, hood tube, hood assembly)	10083327
Custom Air V Escape Respirator complete (includes fully-wound carbon fiber cylinder, carrier, hood tube, hood assembly)	484353
Custom Air V Escape Respirator complete (includes aluminum cylinder, hood tube, hood assembly)	802197
Accessories	
Single-unit wall-mounting case	696192
Two-unit wall-mounting case	696193
Single unit carrying case, yellow polyethylene, with handle, for all escape respirators	10012530

Two unit and single unit wall mounting case - chemical resistant ABS plastic case resist weathering, moisture, and corrosion to ensure escape respirators stay in ready-to-use condition.

Single unit carrying case

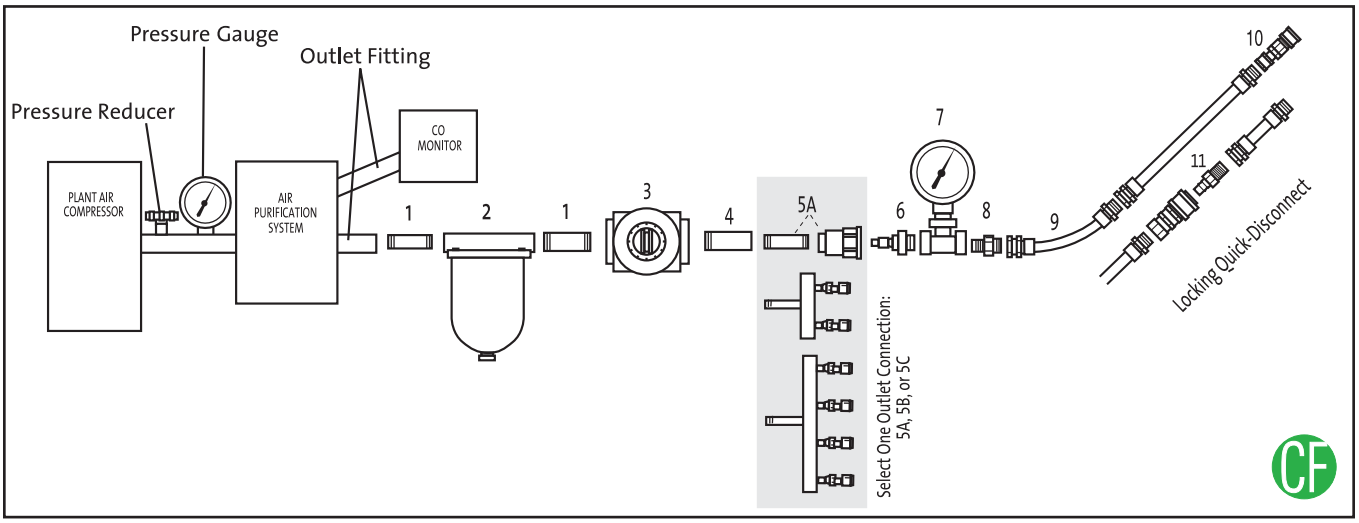
Typical Air-Line Systems

Pressure-Demand System



Note: DO NOT use teflon sealing tape on straight threaded connections with O-ring seals.
Note: Cascade cylinders are not normally used with a constant-flow system due to excessive air usage—one large (300 cu ft) cylinder would last one working person only about 15 minutes. Therefore, using cascade cylinders with a pressure-demand system is recommended.

Constant-Flow or Pressure-Demand System



Pressure-Demand System

	Description	Page	Page 42 Column No.
A	Tee Block	43	—
B	Air Pigtail	43	—
C	Audi-Larm	43	—
D	Press. Regul.	43	—
E1	Female Socket	42	1
E1	Nipple - part no. 459867	—	—
E2–3	Manifolds	43	—
F	Male Plug	42	2
G	3/4" NPT Male x 1/4" NPT Male	42	3
H	MSA Air Hose	43	—
I	Quick Disconnect (Female)	42	Yellow Chart
J	Quick Disconnect (Male)	42	Yellow Chart
K	Female Socket	42	5

Constant-Flow System

	Description	Page	Pg. 42 Column No.
1	Nipple-DBL male 1/2" NPT - part no. 68833	—	—
2	Filter	43	—
3	Regulator	44	—
4	Bushing-1/2" male NPT x 1/4" female NPT - part no. 625528	—	—
5A	Nipple-DBL male 1/4" NPT - part no. 459867	—	—
5A	Female Socket	42	1
5B/C	Manifolds	43	—
6	Male Plug	42	4
7	Inlet Gauge	43	—
8	3/4" NPT Male x 1/4" NPT Male Union Adapter	42	3
9	MSA Air Hose	43	—
10	Female Socket	42	5
11	Quick Disconnect	42	Yellow Chart

Air-Line Respirators: Industrial

Quick-Disconnects for Air-Line Respirators and Air-Supplied Hoods

Quick-disconnect assemblies connect air-supply hoses to the manifold and to the air source. If you want to use a quick-disconnect to interconnect lengths of air supply hose, you must use a locking-type quick disconnect—specifically, the locking quick disconnects listed in the yellow box at the bottom of this page. For more complete information, see the Pocket Guide to Air-Line Systems (Bulletin 0114-14-MC).

Quick-Disconnects and Adapters AL-Aluminum; S-Steel; SST-Stainless Steel; BR-Brass

QUICK-DISCONNECT TYPE	Interchangeability	1 Female Socket 1/4" NPT	2 Male Plug w/Female 1/4" NPT	3 Union Adapter 1/4" NPT x 3/4" UNF	4 Male Plug w/Male 1/4" NPT (used when connecting Inlet Pressure Gauge)	5* Female Socket Assy. (used to connect Air-Supply Hose to Male Plug on Respirator)
Snap-Tite (AL)	C	66272	66274	69542	66273	455019
Snap-Tite (SST)	C	629673	629672	808358	629671	471778
Snap-Tite (BR)	C	630305	630307	69542	630306	471777
Duff-Norton (BR)	—	630308	630310	69542	630309	471780
Hansen (SST)	A	628768	628208	808358	473502	471779
Hansen (BR)	D	630311	630313	69542	630312	471501
Foster (S)	B	628770	55716	69542	56549	467044
Foster (SST)	B	636459	636460	808358	———	801016
Foster (BR)	A	629980	629981	69542	473501	470194
Schrader (S)	B	See Foster(S)	See Foster(S)	See Foster(S)	See Foster(S)	See Foster(S)
CEJN Locking (Chrome-Plated—BR)	E	631870	479026	69542	479020	479001
CEJN Locking (Chrome)	E	———	479026	69542	479020	476956
Snap-Tite Locking (AL)	F	———	479027	69542	———	479032
Snap-Tite Locking (SST)	F	———	479028	808358	479022	479033
Snap-Tite Locking (BR)	F	———	479029	69542	479023	479034
Foster Locking (SST)	D	636473	637851	808358	———	800805

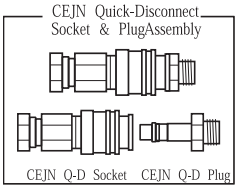
† Fittings with the same letter code are interchangeable.

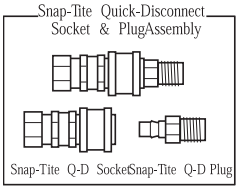
* Socket assy consists of socket from column 1 and brass union adapter P/N 69541 (¾'' female x ¼'' npt male). Exception: All SST fittings have SST Union P/N 808360.

Locking Quick-Disconnects

Locking quick-disconnects must be used to interconnect lengths of MSA Air-Supply Hose. For most systems, you can use up to 12 sections of hose to make up the maximum length.

CEJN Locking Quick-Disconnect Assembly, Socket and Plug (Chrome)	479009
CEJN Locking Female Quick-Disconnect Socket (Chrome)	476956
CEJN Locking Male (w/ Male 3/4" NPT) Quick-Disconnect Plug (Chrome)	476955
Snap-Tite Locking Quick-Disconnect Assembly, Socket and Plug (AL)	479010
Snap-Tite Locking Female Quick-Disconnect Socket (AL)	479032
Snap-Tite Locking Male (w/ Male 3/4" NPT) Quick-Disconnect Plug (AL)	479015
Snap-Tite Locking Quick-Disconnect Assembly, Socket and Plug (SST)	479011
Snap-Tite Locking Female Quick-Disconnect Socket (SST)	479033
Snap-Tite Locking Male (w/ Male 3/4" NPT) Quick-Disconnect Plug (SST)	479016





Air-Line Respirator Accessories

Approved Air-Supply Hose

Air-Supply Hose Temperature Ranges

Neoprene	*PVC*	*Nylon*
-25° to 212°F	32° to 120°F	0° to 160°F

MSA 3/8-inch ID Air-Supply Hose is available in smooth, reinforced, lightweight polyvinylchloride (PVC); chemical-resistant black neoprene; or smooth, coiled nylon. Must be used with respirators in this section to maintain NIOSH certifications. Quick-Disconnects are sold separately (see p. 42).

Air-Supply Hose

Material	Hose Coupling	100ft	50ft	25ft	15ft	8ft
Neoprene	Brass	—	455022	455021	455020	481071
Neoprene	Stainless Steel	—	481080	481079	481078	481077
PVC	Brass	484225	471513	471512	471511	481051
PVC	Stainless Steel	—	481060	481059	481058	481057
Coiled Nylon	Brass	—	474043*	491515*	491514*	491513*
Hose Reel - 50 feet (includes 50 ft of 3/8" neoprene hose P/N 455022)						72444

* Recommended usable length, 4-25 ft.

Cascade System Accessories

The following components are used to assemble a 2400 psi cascade system, which consists of a bank of respirable-air cylinders (user-supplied) that supply a flow of air to dual-purpose air masks, or other pressure-demand air-supplied respirators. Air-supply hoses are listed separately at right.

Cascade System Accessories

Audi-Larm™ Warning Device, low-pressure (CGA 346), 0–3000 psig	85078
Audi-Larm™ Warning Device, high-pressure (CGA 347), 0–5500 psig	492307
Air Coupler Tee – low-pressure CGA 346, 0–3000 psig	68850
Air Pigtail – low-pressure CGA 346, 0–3000 psig	68851
Air Cylinder Pressure Regulator, dual-gauge, 0-3000 psig	68858
High-Pressure Air Cylinder Regulator, dual-gauge, 0-5500 psig	633352
Male Air-supply Hose Adapter for Foster Quick-Disconnects (for PVC hose)	55716
Union Adapter (required to attach male plug)	69542

Breathing Air Distribution System

This system filters, regulates and distributes plant air to as many as four air-line respirator users. A sealed, rugged, stainless steel case prevents contamination of interior components. External controls allow water condensation to be drained from the filter bowl and the manifold pressure to be adjusted. Caution: The system does not remove carbon monoxide. Only Grade D quality air should be used as input.

Breathing Air Distribution System

Breathing Air Distribution System, less quick-disconnects (must be ordered separately)	488113
"Toolbox" Carrying Handle Bar	488118

Portable Air Filter and Regulator ("Black Box")

This system contains an airline filter, pressure regulator and a 4-outlet manifold in a lightweight aluminum case. For use with inlet pressures up to 125 psig. The outlet pressure is adjustable from 10 to 125 psig. The manifold comes with Snap-Tite (AL) quick-disconnects.

Portable Air Filter and Regulator

Portable Air Filter and Regulator	92760

Manifolds

Required when using multiple (2–4) respirators from a single air source; some of these manifolds have quick-disconnect assemblies with automatic shut-off outlets. Note: Gauge required when greater than 10' between airline point of connection and the regulator.

Manifolds

No. of Outlets	Foster Quick-Disconnect	less Quick Disconnect
4	47370	488914
2	84416	84418

Inlet Pressure Gauge

MSA offers an inlet pressure gauge that enables a user to check pressure at the inlet of the MSA Air-Supply Hose, thereby assuring that air pressure is within the certified range. The gauge is supplied with Quick-Disconnect fittings.

Inlet Pressure Gauge

Inlet Pressure Gauge w/ Snap-Tite fitting	476734
Inlet Pressure Gauge w/ Foster or Schrader fitting	476735
Inlet Pressure Gauge w/ Duff-Norton fitting	476736
Inlet Pressure Gauge w/ Hansen fitting	476737
Inlet Pressure Gauge less Quick-Disconnect**	492586

**See Column 4 plug and Column 3 union on page 40.

Air-line Filter

The MSA air-line filter removes a minimum of 99% of 0.3 micron and larger particulates, including dusts, mists, fumes, smoke, and petroleum vapors. Caution: It does not remove carbon monoxide. The air-line filter can be used at inlet pressures up to 125 psig. The pressure drop is one psig at a maximum rated air flow of 25 cfm.

Air-Line FIlter

Air-line Filter - with 1/2" NPT female inlet and outlet	81857
Air-line Filter - with 3/4"-16 straight threads	488041
Replacement Filter Kit	484923

Air-Line Respirators: Industrial

Pressure Regulator

MSA's pressure regulator is used with a plant air compressor system to reduce compressor pressure to the desired operating pressure. The regulator maintains pressure on the outlet side until readjusted for use with inlet pressure of up to 125 psig.

Pressure Regulator	
Pressure Regulator	66716

Nosecups

Nosecups for Ultra Elite Facepieces

Molded from a soft rubber compound resistant to facial oils, the nosecup helps reduce the possibility of lens fogging. The nosecup is particularly effective under conditions of high humidity and/or low temperatures by inhibiting contact of the moist exhalation with the facepiece lens. A nosecup can be easily affixed to the facepiece without tools, and any size nosecup may be installed in any size Ultravue or Ultra Elite Facepiece resulting in a customized facepiece for more comfortable use.

Nosecups			
	Small	Medium	Large
Ultra Elite	—	810412	810413
Ultravue	813138	813139	813140

Spectacle Kits for Full-Facepiece Respirators

Side Support Spectacle Kit for Ultra Elite Facepiece

Center Support Spectacle Kit for Ultra Elite

For use by workers who must wear corrective lenses, the Spectacle Kit can be easily inserted into the facepiece. The kit includes a wire support, rubber guide, and pair of metal-frame spectacles. Desired adjustment is obtained by moving the spectacles in and out of the rubber guide and up and down the wire support. The Ultra Elite spectacle frame has an S-7 shape and a 48-mm lens size. The Ultravue spectacle also has an S-7 shape, but has a 44-mm lens size. Universal Bridge Corrective Lenses can be obtained from local sources. The Spectacle Kit can be used in conjunction with a nosecup. There are two kits for the Ultra Elite facepiece; one uses a side wire support, while the other uses a center support to position the unit (spectacle adjustments are similar).

Spectacle Kits	
Ultra Elite Spectacle Kit (side wire support)	804638
Ultra Elite Spectacle Kit (center support)	493581
Ultravue Facepiece Spectacle Kit	454819

Cover Lens

Protects the facepiece lens from scratches during storage, handling, and use.

Cover Lens		
	Ultra Elite	Ultravue
Clear cover lens, pkg of 25	491500	456975
Smoke-tinted cover lens, pkg of 25	805456	480326

Welder's Adapter and Welder's Hood

For eye protection in welding applications where respiratory protection is required, a welder's adapter can be easily installed over a facepiece lens. The clip-on style adapter can be easily removed if needed, whereas the integral adapter model is used in place of the facepiece lens. Both models are made of polycarbonate and feature a flip-up lens with large 4½-inch x 5¼-inch (11.4 cm x 13.3 cm) vision area.

The Kevlar Welder's Hood fits over the Welder's Adapter to protect the head, neck, and shoulders from sparks.

Welder's Accessories	
Welder's Adapters come complete with cover lens, less filter plate	
Clip-On Welder's Adapter for Ultra Elite Facepiece	472859
Clip-On Welder's Adapter for Ultravue Facepiece	470786
Integral Welder's Adapter for Ultra Elite Facepiece	806482
Rayfoe Filter Plate, shade 6, heat-treated	38346
Rayfoe Filter Plate, shade 10, heat-treated	38347
Rayfoe Filter Plate, shade 12, heat-treated	38277
Rayfoe Filter Plate, shade 14, heat-treated	38348
Welder's Hood	486328

Support Belts

MSA PVC belts are easy to decontaminate. If decontamination is not a factor, users may opt for an uncoated nylon web belt.

Support Belts	
Polyurethane-coated Nylon Support Belt, black	492827
PVC Support Belt, clear	473902
Web Support Belt (uncoated)	9961

MSA Confidence Plus® Germicidal Cleaner

Mix with warm water for a germicidal cleaner that is effective against various micro-organisms including immunodeficiency virus Type 1 (HIV-1, associated with AIDS). EPA-approved for use on safety equipment.

Cleaner	
MSA Confidence Plus Germicidal Cleaner, in 32 oz. bottle	10009971

A Pocket Guide to Air-Line Systems

This pocket-size booklet shows complete hook-ups of the various MSA air-line systems, both constant flow and pressure demand, from the air source to the respirator connection. Below each illustration, the individual parts of the system are identified by title and part number. The reader is then referred to other pages in the guide for more information about the specific MSA components. To order your copy, request Bulletin 0114-14-MC.