Pressure-Demand Air-Line Respirator with Ultravue® facepiece.

Pressure-Demand Air-Line Respirator with Comfo® facepiece.

Pressure-Demand® Air-Line Respirator with Welder's Comfo facepiece.

Pressure-Demand Air-Line Respirator with Ultra Elite® facepiece.

Pressure-Demand Air-Line Respirators

Application

MSA Pressure-Demand Air-Line Respirators are designed to be used in toxic atmospheres not immediately dangerous to life or health. They are certified by NIOSH/MHSA when used with 8–300 feet of MSA air-supply hose, selected fittings, and respirable air supplied with the approved inlet pressure range of 65–85 psig. The units require an air supply from an uncontaminated compressed-air source as stipulated in General Industry Safety and Heath Regulations, Part 1910.134 (OSHA), with the delivered air conforming to at least Grade D of ANSI Standard Z86.1.

Common applications are found in shipbuilding, utilities, chemical, petrochemical and pharmaceutical industries. These applications include welding, painting, and handling certain hazardous materials.

Air-line respirators are not NIOSH-certified for use in IDLH applications such as those commonly found in confined spaces; air-line respirators equipped with egress cylinders should be used for these work environments.

Description

MSA 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.

The respirator is available with a belt-mounted pressure-demand regulator with quick-disconnect assembly, web belt, and either a full-facepiece or half-mask facepiece connected by a flexible breathing tube.

MSA

Required Components

Facepiece and Breathing Tube Assembly

MSA Pressure-Demand Air-Line Respirator users can choose between two full- and two half-mask pressure-demand facepiece styles. Full facepieces include the state-of-the-art, wide-vision, **Ultra Elite Facepiece** and the proven **Ultravue Facepiece** with wrap-around lens.

Comfo®, Ultravue® and Ultra Elite® Facepieces

Designed to provide exceptional peripheral and downward vision, the **Ultra Elite Facepiece** is available in three sizes and in a choice of two materials: silicone or Hycar™ rubber. Hycar rubber provides a super-soft facepiece texture for a smooth and comfortable fit. It also resists chemical attack and temperature extremes, and withstands rugged day-to-day use without tearing and ripping.

The design of the Ultra Elite Facepiece is based on extensive anthropometric studies of face length, temple width and chin width of over 8,000 individuals. The result is a facepiece that provides improved seals against a wide range of facial contours. Ultra Elite Facepieces are available in small, medium and large sizes and in two materials: black Hycar rubber and black silicone with either an E-Z Don™ or rubber head harness.

To accommodate a wide range of applications, **Ultravue Facepieces** are available in black or green Hycar rubber, and black silicone. Ultravue Facepieces also come in three sizes and are color-coded to size. The small Ultravue Facepiece has a gray lens ring, the medium has a black ring, and the large size is colored gold.

Complete Assemblies

Include facepiece (medium, black Hycar), breathing tube, regulator with quick-disconnect, and web belt.

Quick-Disconnect	Ultra Elite Facepiece	Ultravue Facepiece	Comfo Facepiece	Welder's Comfo Facepiece
Snap-Tite aluminum	806764	474020	473464	473457
Snap-Tite brass	806768	475220	475212	478724
Snap-Tite stainless steel	806769	475221	475213	478725
Foster steel	806766	475218	475210	478722
Foster brass	806767	475219	475211	478723
Hansen brass	806771	475223	475215	478727
Hansen stainless steel	806770	475222	475214	478726
Duff-Norton brass	806772	475224	475216	478728

MSA also offers optional nose-cups (two sizes for Ultra Elite Facepieces and three sizes for Ultravue Facepieces) to reduce fogging when working in sub-freezing temperatures. The NIOSH/MSHA certifications of the unit require that a nosecup be used at temperatures below 32 degrees F.

The **Comfo** and **Comfo Elite®** are pressure-demand half-mask facepieces used where eye protection is not required. The Comfo style is formulated from SoftFeel® material, which improves the pliability and softness of both Hycar and silicone rubber. The Comfo Elite style facepiece (available only in silicone) has a unique sealing surface designed to reduce facepiece slippage.

A **Welder's Comfo Facepiece** is also available. This half-mask has an elbow that permits the breathing tube to be carried over the shoulder where it won't interfere with a welder's helmet. A web harness with a leather keeper holds the breathing tube in place.

Breathing Tube

The **Breathing Tube** used with the above pressure-demand facepieces is designed to resist crushing and pinching. It is made of a synthetic rubber polymer, which is durable and resists chemicals. There are numerous corrugations along the length of the tube to allow it to stretch for free head movement.

Facepieces

Pressure-Demand Ultra Elite Full Facepieces

Size	Black Hycar	Black Silicone	Head Harness	Nosecup
Small	491524	491526	E-Z Don	Yes
	493271	493303	Rubber	Yes
	491525	491527	E-Z Don	No
	493278	493310	Rubber	No
Medium	491520	491522	E-Z Don	Yes
	493151	493183	Rubber	Yes
	491521	491523	E-Z Don	No
	493158	493190	Rubber	No
Large	491528	491530	E-Z Don	Yes
	493391	493423	Rubber	Yes
	491529	491531	E-Z Don	No
	493398	493430	Rubber	No

Pressure-Demand Ultravue Full Facepieces
(rubber, 5-point head harness-standard, less nosecup)

Size	Black Hycar	Green Hycar	Black Silicone
Small	471371	471372	479773
Medium	471369	471370	471771
Large	471374	471373	479775

Comfo Half-Mask Pressure-Demand Facepieces

Size	Black Hycar	Green Hycar	Black Silicone	Headband
Small	473460	473461	479635	Elastic
Medium	473458	473459	479630	Elastic
Large	473462	473463	479640	Elastic
Small	479636	479637	479639	Cradle
Medium	479631	479632	479634	Cradle
Large	479641	479642	479644	Cradle

Comfo Elite Half-Mask Pressure-Demand Facepieces
(Cradle Headband is standard)

Size	Black Hycar	Green Hycar	Black Silicone
Small	490822	490823	490825
Medium	490818	490819	490821
Large	490826	490827	490829

Welder's Comfo Half-Mask Pressure-Demand Facepieces**

Size	Black Hycar	Green Hycar	Black Silicone	Headband
Small	473453	473454	479813	Elastic
Medium	473451	473452	479808	Elastic
Large	473455	473456	479818	Elastic
Small	479814	479815	479817	Cradle
Medium	479809	479810	479812	Cradle
Large	479819	479820	479822	Cradle

Welder's Comfo Elite Half-Mask Pressure-Demand Facepieces**
(Cradle Headband is standard)

Size	Black Hycar	Green Hycar	Black Silicone
Small	490801	490802	490804
Medium	490797	490798	490800
Large	490805	490806	490808

**Note: Breathing Tube Harness (P/N 78362) must also be used with the Pressure-Demand Welder's Comfo and Comfo Elite Facepieces.

Regulator with Quick-Disconnect Assembly

Belt-Mounted Pressure-Demand Regulator

The regulator of the MSA Pressure-Demand Air-Line Respirator has been redesigned to significantly improve flow capability. This was achieved by employing a new lever assembly, a redesigned housing, and the addition of a control plate. A stainless steel spring on the diaphragm of the pressure-demand regulator maintains a slight positive pressure to the facepiece.

The regulator is constructed of high-strength anodized aluminum for durability and ruggedness. It has an integral belt clip which can be easily adjusted along the support belt for comfortable positioning. Construction of the pressure-demand regulator is simple. It has no O-rings and only four moving parts. By employing the latest in engineering advances, MSA keeps the regulator simple for reliability and ease of maintenance.

Complete air-line respirators come equipped with male and female quick-disconnect assemblies. The MSA pressure-demand regulator is available with selected Snap-tite, Foster, Hansen, and Duff-Norton quick-disconnect fittings.

Belt-Mounted Pressure-Demand Regulators

Quick-Disconnect	Regulator only	Regulator with Male Plug/Female Socket Assembly
Snap-Tite aluminum	470193	473741
Snap-Tite brass	470193	473505
Snap-Tite stainless steel	470193	473506
Duff-Norton brass	470193	473509
Hansen brass	470193	473508
Hansen stainless steel	470193	473507
Foster steel	470193	473503
Foster brass	470193	473504

Support Belt

A web belt is furnished with all complete assemblies. See Accesories for other belt options.

Part No.	Description
9961	Web Support Belt

Online Response® Respirator Selector

Available on the Internet at www.MSAnet.com/response/index.html

- Helps identify the proper respirator you need
- Has broadest range of respiratory protective devices available
- Recommends respirators for more than 700 chemical hazards
- Has nearly 3,000 chemical synonyms
- Lists up to 27 categories of respirators, with MUCs
- Is generic in nature

Air-Supply Hose

The MSA 3/8-inch ID Air-Supply Hose is available in smooth, reinforced, lightweight polyvinylchloride; chemical-resistant black neoprene; or smooth, coiled nylon. An MSA hose must be used to maintain NIOSH/MSHA approvals.

Hose/Breathing Tube Cover

Part No.	Description
696014	Hose/breathing tube cover

Neoprene Hose

Part No.	Length	Fitting
455022	50 ft.	Brass
481080	50 ft.	Stainless Steel
455021	25 ft.	Brass
481079	25 ft.	Stainless Steel
455020	15 ft.	Brass
481078	15 ft.	Stainless Steel
481071	8 ft.	Brass
481077	8 ft.	Stainless Steel

PVC Hose

Part No.	Length	Fitting
484225	100 ft.	Brass
471513	50 ft.	Brass
481060	50 ft.	Stainless Steel
471512	25 ft.	Brass
481059	25 ft.	Stainless Steel
471511	15 ft.	Brass
481058	15 ft.	Stainless Steel
481051	8 ft.	Brass
481057	8 ft.	Stainless Steel

Coiled Nylon Hose

Part No.	Length	Fitting
474043	50 ft.	Brass
491515	25 ft.	Brass
491514	15 ft.	Brass
491513	8 ft.	Brass

MSA Air-Line Accessories for Pressure-Demand Respirators

The following components are used to assemble a bank of respirable-air cylinders to supply a flow of air to the Pressure-Demand Air-Line Respirator. The setup consists of: cylinders (supplied by the user), which are the source of air to the air-line regulator; coupler tees and pigtails to join the bank of cylinders together; an Audi-Larm device that warns when air pressure in the cylinder bank falls below approximately 400 psig; a dual-gauge air cylinder pressure regulator that reduces the high-pressure from the cylinders to the required inlet pressure range of 65–85 psig; a manifold that allows users to quickly connect and disconnect from the bank of high-pressure cylinders (2- and 4-outlet models available with Foster or Snap-Tite quick-disconnects); approved air-supply hose and fittings.

Pipe sealing tape required. Begin at second thread and wrap 1 to 1½ turns clockwise.
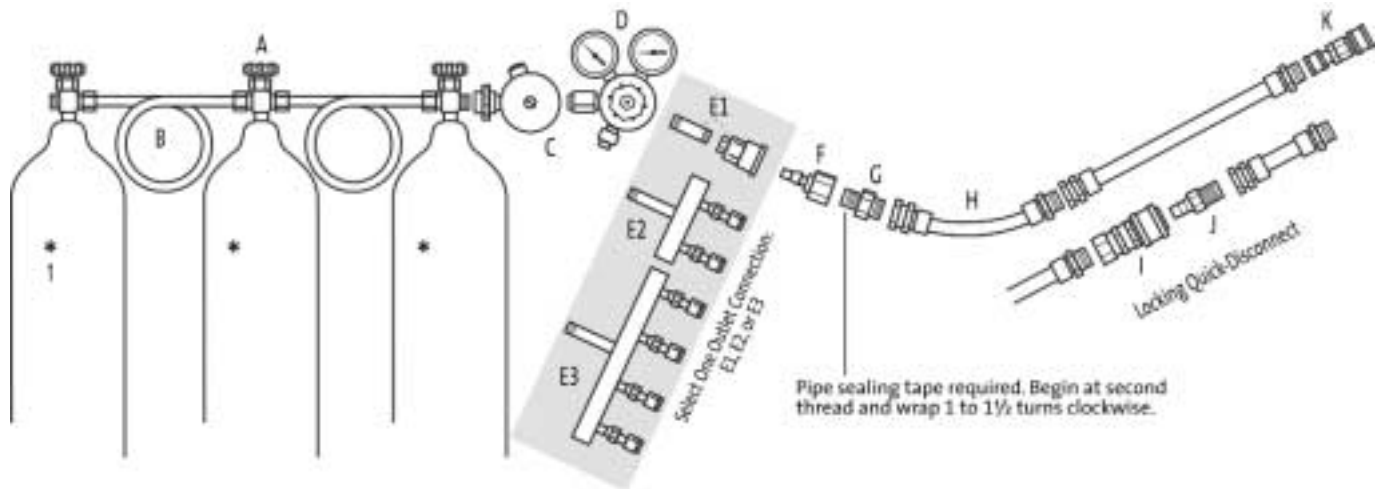
1* Air Cylinder—NOT SUPPLIED BY MSA	(F) Male Plug with Female ¼" NPT—P/N varies with type (See pg. 8)
(A) Air Tee Block—**P/N 68850** (See pg. 6)	(G) Union Adapter—**P/N 69542** (See pg. 8)
(B) Air Pigtail—**P/N 68851** (See pg. 6)	(H) MSA Air-Supply Hose—P/N varies with type (See pg. 4)
(C) Audi-Larm Warning Device—**P/N 85078** (See pg. 6)	(I) Locking Quick-Disconnect Female Socket—P/N varies with type (See pg. 8)
(D) Air-Cylinder Pressure Regulator—**P/N 68858** (See pg. 6)	(J) Locking Quick-Disconnect Male Plug-P/N varies with type (See pg. 8)
Outlet Connections:	(K) Female Socket Assembly—P/N varies with type (See pg. 8)
(E1) Female Socket—P/N varies with type (See pg. 8) Nipple—¼" x ¼" NPT—(needed only w/Female Socket) **P/N 459867** (See pg. 8)	
(E2) 2-Outlet Manifold: (See pg. 6) Foster—**P/N 84416** Snap-Tite—**P/N 486053**	
(E3) 4-Outlet Manifold: (See pg. 6) Foster—**P/N 47370** Snap-Tite—**P/N 93931**	

Approvals and Standards

The MSA Pressure-Demand Air-Line Respirator has received National Institute for Occupational Safety and Heath (NIOSH) and Mine Safety and Heath Administration (MSHA) Certification No. TC-19C-158, for use in atmospheres not immediately dangerous to life or health and from which the wearer can escape without the aid of the respirator. MSA Air-Supply Hose (8–300 ft) must be used to maintain NIOSH/MSHA certification. The 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.

Accessories

Air cylinders connected by Tee Blocks an dPigtails, equipped with the Audi-Larm Warning Device and Air-Cylinder Pressure Regulator.

Audi-Larm™ Warning Device

Air-supply cylinders can be equipped with the Audi-Larm low-pressure warning device. This warning device uses a loud, clear bell to signal the user when the air-supply in the cylinder(s) has been reduced to a limited time of service. It rings when the cylinder pressure reaches approximately 400 psig. It also rings briefly every time the cylinder is pressurized to check that the alarm is operating properly.

Part No.	Description
85078	Audi-Larm Assembly
492307	High-pressure Audi-Larm Assembly

Air-Cylinder Pressure Regulator

An air-cylinder pressure regulator is a required accessory when air-line respirators operate from a cylinder. This dual-gauge regulator receives the varying outlet pressure from the cylinder, reduces it, and regulates it to a constant pressure of approximately 80 psig, the optimum pressure for operation of the regulator.

Part No.	Description
68858	Air-Cylinder Pressure Regulator, dual-gauge, 0–3000 psig
633352	High-Pressure Air-Cylinder Regulator, dual-gauge, 0–5,500 psig

Tee Blocks and Pigtails

Tee blocks and pigtails are used to connect a bank of cylinders together, thus, extending your air supply. The coupler tees, which make a connection between the supply cylinder valve and the pigtail, and the outlet connection, are constructed of brass, while the pigtails, joining the supply cylinders, are made of tubular copper.

Part No.	Description
68850	Tee Block
68851	Pigtail

Manifolds

Manifolds are required whenever two to four respirators are connected to a single air source. MSA manifolds have quick-disconnect assemblies with automatic shut-off outlets.

Part No.	Description
47370	Four-outlet Manifold Assembly with Foster Quick-Disconnects
84416	Two-outlet Manifold Assembly with Foster Quick-Disconnects
93931	Four-outlet Manifold Assembly with Snap-Tite Quick-Disconnects
486053	Two-outlet Manifold Assembly with Snap-Tite Quick-Disconnects

Nosecups

Molded from a soft rubber compound that is resistant to facial oils, the optional 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 Ultra Elite, Ultravue or Duo-Twin Facepiece resulting in a customized facepiece for more comfortable use.

Part No.	Description
810412	Medium gray nosecup for Ultra Elite Facepiece
810413	Large gray nosecup for Ultra Elite Facepiece
813138	Small nosecup for Ultravue Facepiece
813139	Medium nosecup for Ultravue Facepiece
813140	Large nosecup for Ultravue Facepiece

MSA Confidence Plus™ Germicidal Cleaner

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

Part No.	Description
10009971	Confidence Plus Germicidal Cleaner

MSA

Optional Spectacle Kit

For use by workers who must wear corrective lenses, the spectacle kit can be easily inserted into an Ultra Elite or Ultravue Facepiece. The kit includes a wire support, rubber guide and one pair of metal frame spectacles. Desired adjustment is obtained by moving the spectacles in and out of the rubber guide and by moving the rubber guide up and down the wire support. One size of spectacle frame is used (S-7 shape, 44-mm lens size) with Universal Bridge Corrective lenses that can be obtained from local sources. The spectacle kit may be worn with a nosecup.

Part No.	Description
804638	Ultra Elite Spectacle Kit (side wire support)
493581	Ultra Elite Spectacle Kit (center support)
454819	Ultravue Facepiece Spectacle Kit

Welder's Adapter

For eye protection in welding applications where respiratory protection is required, a welder's adapter can be easily installed over an Ultravue 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 4-½" x 5-¼" (11.4 cm x 13.3 cm) vision area.

Part No.	Description
472859	Clip-on Welder's Adapter for Ultravue Facepiece, complete with cover lens, less filter plate (see below)
470786	Integral Welder's Adapter for Ultravue Facepiece, complete with cover lens, less filter plate

Heat-Treated Rayfoe™ Filter Plates with Cover Lens

Part No.	Description
38346	Shade 6
38347	Shade 10
38277	Shade 12
38348	Shade 14

ESP® Mask Communications System

Designed for use with MSA tight-fitting Ultra Elite and Ultravue Facepieces, the ESP Mask Communications System is a battery-powered, self-contained unit that provides hands-free voice amplification (VA) for local, short-range communication. Weighing only eight ounces, the ESP System consists of a microphone and speaker, housed within a waterproof, injection-molded, high-strength polymer case. The system is compatible with most popular brands of two-way radios. For more detailed information, request MSA Data Sheet 01-01-21.

ESP System Conversion Kit for Ultravue Facepiece
Battery not included.

Part No.	Description
811737	Conversion Kit

ESP System Conversion Kit for Ultra Elite Facepiece
Battery not included.

Part No.	Description
817297	Ultra Elite ESP
817374	Pressure-Demand Component Housing
817373	Demand Component Housing

Lens Covers

Lens covers, available in many types, provide a convenient way to add a layer of protection against scratches. The self-adhesive covers can be easily installed and removed when necessary. The tinted versions are intended for applications in direct sunlight.
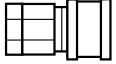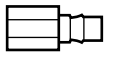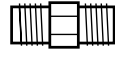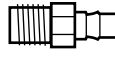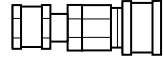
Part No.	Description
491500	Ultra Elite clear cover lens (25 per pack)
805456	Ultra Elite smoke-tinted cover lens (25 per pack)
494254	Ultravue smoke-tinted cover lens (6 per pack)
480326	Ultravue smoke-tinted cover lens (25 per pack)
494255	Ultravue mirror-reflective cover lens (6 per pack)
494256	Ultravue yellow-tinted cover lens (6 per pack)
456975	Ultravue clear cover lens (25 per pack)

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 gray box at the bottom of this page. For more complete information, see Bulletin 0114-14.

Quick-Disconnects and Adapters

	AL=Aluminum	SST=Stainless Steel	S=Steel	BR=Brass	

Quick-Disconnect Type	Female Socket ¼" NPT	Male Plug w/ Female ¼" NPT	Union Adapter ¼" NPT x ¾"UNF	Male Plug w/ Male ¼" NPT (used when connecting Inlet Pressure Gauge)	Female Socket Assem. (used to connect Air-Supply Hose to Male Plug on Respirator)
Snap-Tite (AL)	66272	66274	69542	66273	455019
Snap-Tite (SST)	629673	629672	808358	629671	471778
Snap-Tite (BR)	630305	630307	69542	630306	471777
Duff-Norton (BR)	630308	630310	69542	630309	471780
Hansen (SST)	628768	628208	808358	473502	471779
Hansen (BR)	630311	630313	69542	630312	471501
Foster (S)	628770	55716	69542	56549	467044
Foster (SST)	636459	636460	808358	636461	801016
Foster (BR)	629980	629981	69542	473501	470194
CEJN Locking (Chrome-plated BR)	631870	479026	69542	479020	479001
CEJN Locking (Chrome)	—	479026	69542	479020	476956
Snap-Tite Locking (AL)	—	479027	69542	479021	479032
Snap-Tite Locking (SST)	—	479028	808358	479022	479033
Snap-Tite Locking (BR)	—	479029	69542	479023	479034
Foster Locking (SST)	636473	637851	808358	—	800805

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.

Part No.	Description
479009	CEJN Locking Quick-Disconnect Assembly, Socket and Plug (Chrome)
476956	CEJN Locking Female Quick-Disconnect Socket (Chrome)
476955	CEJN Locking Male (w/ Male ¼" NPT) Quick-Disconnect Plug (Chrome)
479010	Snap-Tite Locking Quick-Disconnect Assembly, Socket and Plug (AL)
479032	Snap-Tite Locking Female Quick-Disconnect Socket (AL)

Part No.	Description
479015	Snap-Tite Locking Male (w/ Male ¼" NPT) Quick-Disconnect Plug (AL)
479011	Snap-Tite Locking Quick-Disconnect Assembly, Socket and Plug (SST)
479033	Snap-Tite Locking Female Quick-Disconnect Socket (SST)
479016	Snap-Tite Locking Male (w/ Male ¼" NPT) Quick-Disconnect Plug (SST)

Offices and representatives worldwide
For further information:

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MSA