

A POCKET GUIDE TO AIR-LINE SYSTEMS



INTRODUCTION

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) and the Mine Safety and Health Administration (MSHA) 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

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 cylinders of either 244 cubic-feet or 330 cubic-feet-capacity. One or more workers can breathe from a cascade system.

Average consumption of air is usually about one cubic foot of air per person, per minute. 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.

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

MSA PRESSURE-DEMAND AIR-LINE UNITS INCLUDE:

*Pressure-Demand Air-Line Respirator

*PremAire® Pressure-Demand 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)
- with Duo-Twin Option (for a combination air-supply/air purifying respirator)

*PremAire® Cadet Pressure-Demand Respirator

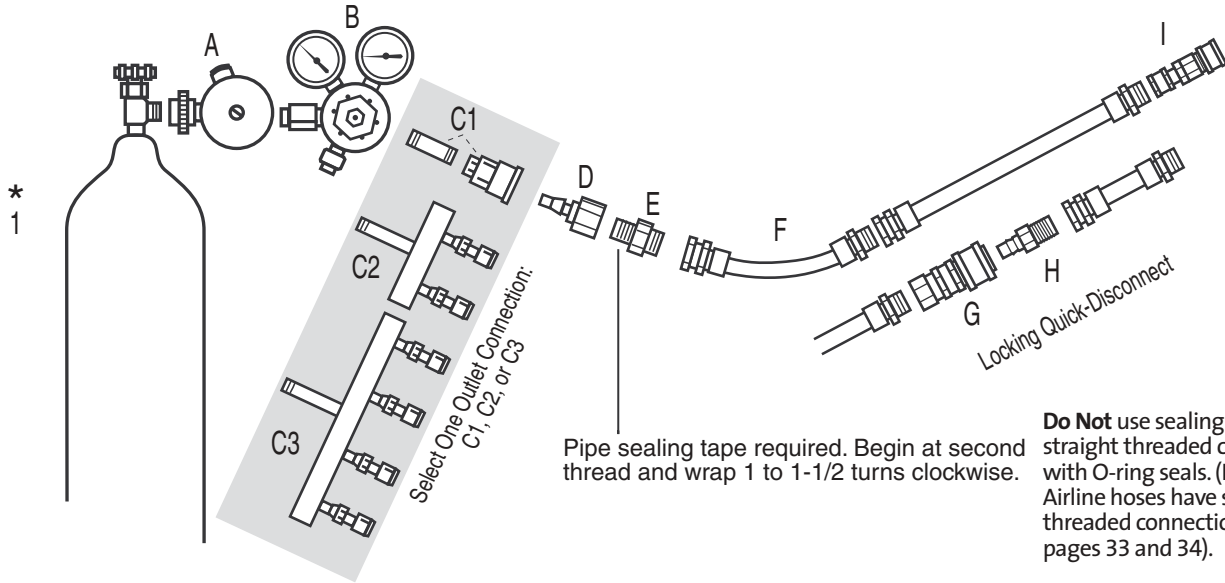
- with Duo-Twin Option (for a combination air-supply/air purifying respirator)

*Pressure-Demand Duo-Twin™ Respirator

*Pressure-Demand Duo-Flo™ Respirator

*Abrasi-Blast™ Supplied-Air Respirator

CYLINDER AIR-SUPPLY SYSTEM



Do Not use sealing tape on straight threaded connections with O-ring seals. (Example: Airline hoses have straight threaded connections. See pages 33 and 34).

1* Air Cylinder—NOT SUPPLIED BY MSA

(A) Audi-Larm Warning Device—(See pg. 30)

(B) Air-Cylinder Pressure Regulator—(See pg. 31)

OUTLET CONNECTIONS:

(C1) Female Socket—P/N varies with type (See pg. 38—Col. 1)

Nipple— $\frac{1}{4}$ " x $\frac{1}{4}$ " NPT—(needed only w/Female Socket)

P/N 459867 (See pg. 39)

(C2) 2-Outlet Manifold: (See pg. 31)

(C3) 4-Outlet Manifold: (See pg. 31)

(D) Male Plug with Female $\frac{1}{4}$ " NPT—P/N varies with type
(See pg. 38—Col. 2)

(E) Union Adapter—(See pg. 38—Col. 3)

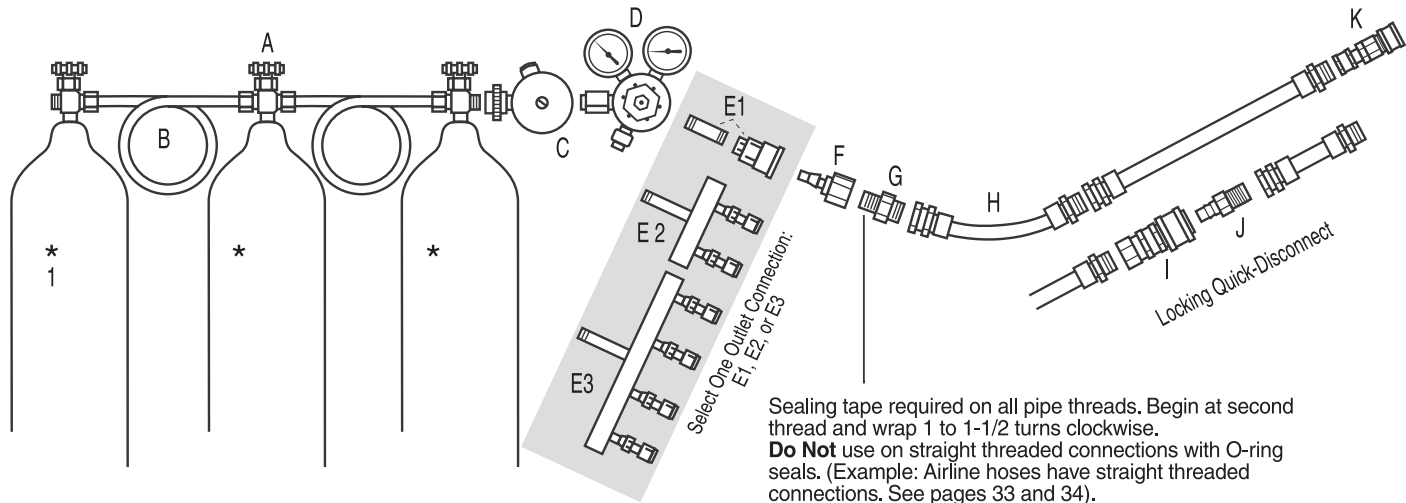
(F) MSA Air-Supply Hose—P/N varies with type (See pg. 36)

(G) Locking Quick-Disconnect Female Socket—P/N varies with type
(See pgs. 32 & 34)

(H) Locking Quick-Disconnect Male Plug—P/N varies with type
(See pgs. 32 & 34)

(I) Female Socket Assembly—P/N varies with type
(See pg. 38—Col. 5)

CYLINDER CASCADE SYSTEM



Sealing tape required on all pipe threads. Begin at second thread and wrap 1 to 1-1/2 turns clockwise.

Do Not use on straight threaded connections with O-ring seals. (Example: Airline hoses have straight threaded connections. See pages 33 and 34).

1* Air Cylinder—NOT SUPPLIED BY MSA

(A) Air Tee Block—(See pg. 30)

(B) Air Pigtail—(See pg. 30)

(C) Audi-Larm Warning Device—(See pg. 30)

(D) Air-Cylinder Pressure Regulator—(See pg. 31)

OUTLET CONNECTIONS:

(E1) Female Socket—P/N varies with type (See pg. 38—Col. 1)

Nipple— $\frac{1}{4}$ " x $\frac{1}{4}$ " NPT—(needed only w/Female Socket)

P/N 459867 (See pg. 39)

(E2) 2-Outlet Manifold: (See pg. 31)

(E3) 4-Outlet Manifold: (See pg. 31)

(F) Male Plug with Female $\frac{1}{4}$ " NPT—P/N varies with type
(See pg. 38—Col.2)

(G) Union Adapter—(See pg. 38—Col. 3)

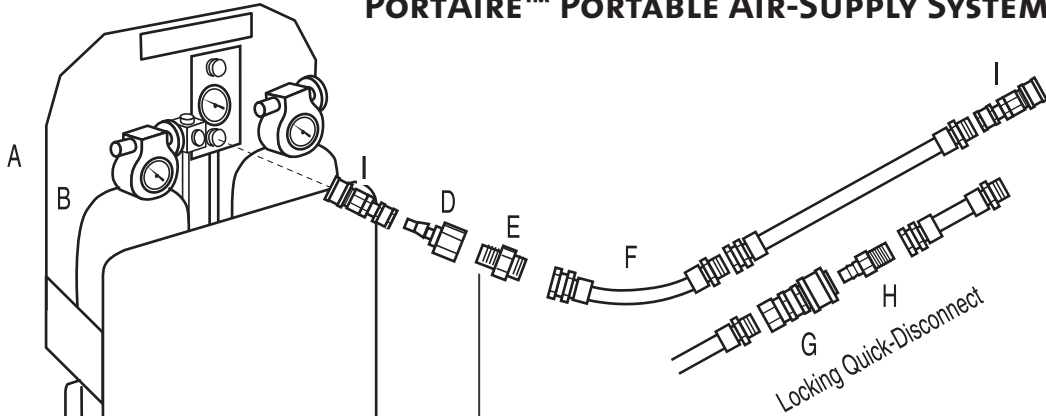
(H) MSA Air-Supply Hose—P/N varies with type (See pg. 36)

(I) Locking Quick-Disconnect Female Socket—P/N varies
with type (See pgs. 32 & 34)

(J) Locking Quick-Disconnect Male Plug—P/N varies with type
(See pgs.32 & 34)

(K) Female Socket Assembly—P/N varies with type
(See pg. 38—Col. 5)

PORTAIRE™ PORTABLE AIR-SUPPLY SYSTEM



Sealing tape required on all pipe threads. Begin at second thread and wrap 1 to 1-1/2 turns clockwise. **Do Not** use on straight threaded connections with O-ring seals. (Example: Airline hoses have straight threaded connections. See pages 33 and 34).

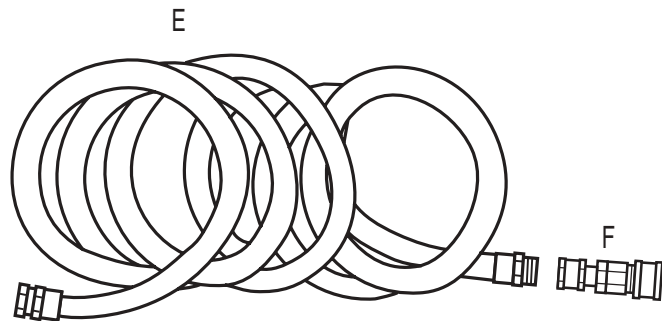
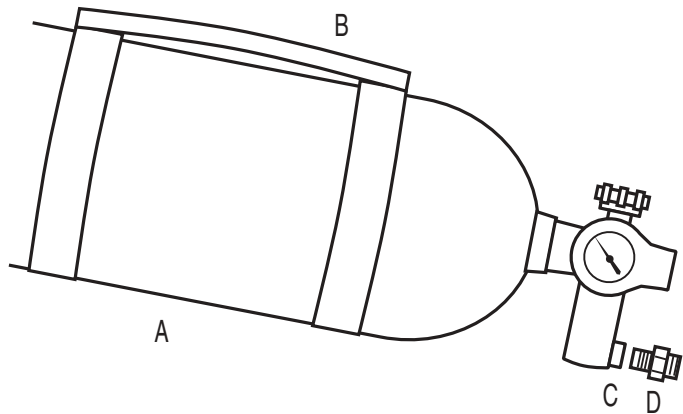
- (A) PortAire Portable Air-Supply System—**P/N 807052** (See pg. 27)
- (B) Cylinders—P/N varies with type (See pg. 27)
- (D) Male Plug with Female 1/4" NPT—P/N varies with type (See pg. 38—Col. 2)
- (E) Union Adapter—(See pg. 38—Col. 3)
- (F) MSA Air-Supply Hose—P/N varies with type (See pg. 36)
- (G) Locking Quick-Disconnect Female Socket—P/N varies with type (See pgs. 32 & 34)

- (H) Locking Quick-Disconnect Male Plug—P/N varies with type (See pgs. 32 & 34)
- (I) Female Socket Assembly—P/N varies with type (See pg. 38—Col. 5)

NOTE: The PortAire System is supplied with fittings that allow MSA Air-Supply Hose to be threaded directly to the system's outlet connections. Female quick-disconnect socket assemblies are an option and must be purchased separately.

TRANSPORTAIRE™ PORTABLE AIR-SUPPLY SYSTEM - LOW PRESSURE

P/N 816693



TRANSPORTAIRE PORTABLE AIR-SUPPLY SYSTEM - LOW PRESSURE P/N 816693

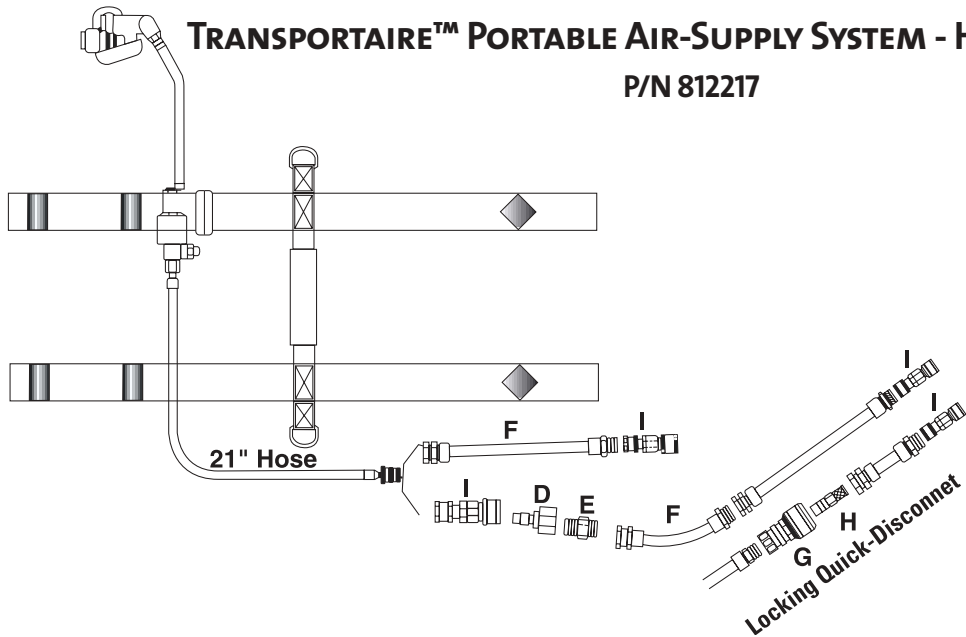
The TransportAire System consists of an impact-resistant handle with nylon straps that fit around an MSA 30-minute cylinder (purchased separately). The system is designed for exclusive use with MSA supplied-air respirators equipped with a dual-supply option.

	<i>Part No.</i>	<i>Description</i>
(A) Cylinder—P/N varies with type)		
(B) Cylinder Carrier— P/N 491076	469619	Low-Pressure (2216 psig) 30-min. Hoop-Wrapped Cylinder
(C) Regulator Assy— P/N 493660	809872	Low-Pressure (2216 psig) 30-min. 3AL (Aluminum) Cylinder
(D) Union Adapter— P/N 69542 (See pg. 38—Col. 3)	816115	Low-Pressure (3000 psig) 30-min. Stealth L30+ Carbon Cylinder
(E) MSA Coiled Air-Supply Hose (8')— P/N 491513 (See pg. 36)	807586	Low-Pressure (2216 psig) 30-min. Stealth L30 Carbon Cylinder
(F) Female Socket Assembly—P/N varies with type (See pg. 38—Col. 5)		

Option: Can add Low-Pressure Audi-Larm Assembly—**P/N 85078** — between the Cylinder and Regulator Assembly.

TRANSPORTAIRE™ PORTABLE AIR-SUPPLY SYSTEM - HIGH PRESSURE

P/N 812217



TRANSPORTAIRE PORTABLE AIR-SUPPLY SYSTEM - HIGH PRESSURE P/N 812217

The TransportAire System consists of an impact-resistant handle with nylon straps that fit around an MSA 30-, 45-, or 60-minute 4500 psi cylinder (purchased separately). The system is designed for exclusive use with MSA supplied-air respirators equipped with a dual-supply option.

- 2 Options
- Can connect the airline hose directly to fitting(P/N 628232) off of the 21" hose which comes with Transportaire or can use Quick-disconnect fittings.

High Pressure (4500 psig) Cylinders

P/N 807587	Stealth H-30	30-minutes
P/N 807570	Stealth H-45	45-minutes
P/N 807588	Stealth H-60	60-minutes

- (D) Male Plug with Female 1/4" NPT—P/N varies with type (See pg. 38—Col. 2)
- (E) Union Adapter—**P/N 69542** (See pg. 38—Col 3.)
- (F) MSA Air-Supply Hose—P/N varies with type (See pg. 36)
- (G) Locking Quick-Disconnect Female Socket—P/N varies with type (See pgs. 32 and 34)
- (H) Locking Quick-Disconnect Male Plug—P/N varies with type (See pgs. 32 and 34)
- (I) Female Socket Assembly—P/N varies with type (See pg. 38—Col. 5)

CONSTANT FLOW AIR-LINE RESPIRATORS

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.

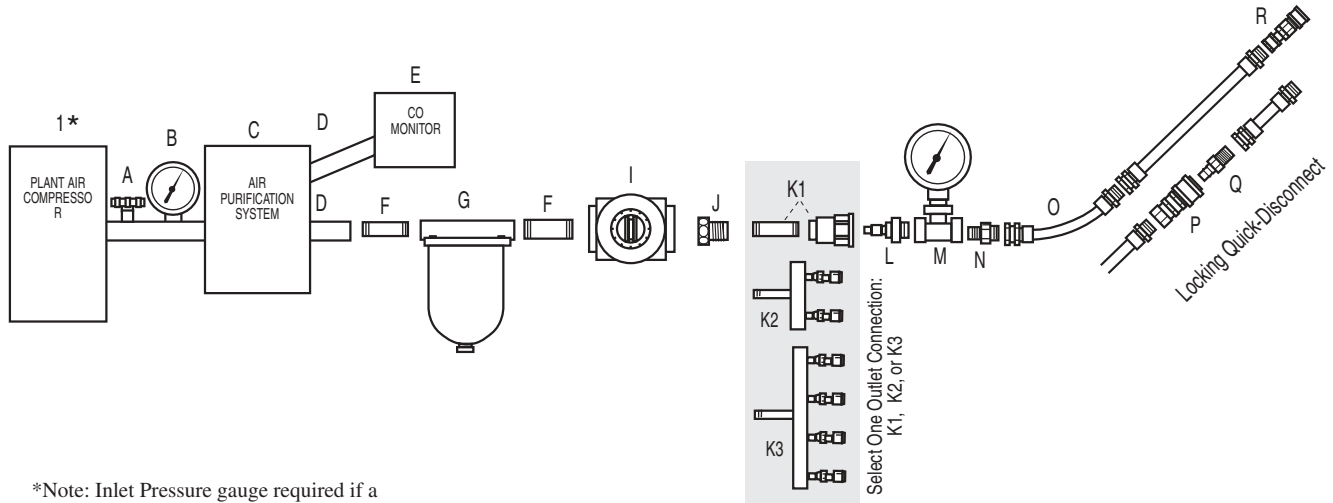
MSA CONSTANT FLOW RESPIRATORS WITH LOOSE-FITTING HOODS INCLUDE:

- *Synergy® Bubble Hood Respirator
- *Versa-Hood™ Air-Supplied Hood

MSA CONSTANT FLOW RESPIRATORS WITH TIGHT-FITTING FACEPIECES INCLUDE:

- *Constant Flow Air-Line Respirator
- *Constant Flow Duo-Twin™ Air-Line Respirator
- *Constant Flow Duo-Flo™ Air-Line Respirator
- *Direct Connect Airline Respirators
- *SuitableAire™ Respirators (with Vortex Tube)
- *Abrasi-Blast™ Supplied-Air Respirator

PLANT AIR COMPRESSOR



*Note: Inlet Pressure gauge required if a distance of 10' or greater between the regulator and manifold.

1* Plant Air Compressor—NOT SUPPLIED BY MSA

- (A) Pressure Reducer for System—Varies with system—contact MSA for more information and guidelines
- (B) Pressure Gauge for System—Varies with system—contact MSA for more information and guidelines
- (C) Air Purification System—Varies with system—contact MSA for more information and guidelines
- (D) Outlet Fitting for System—Varies with system—contact MSA for more information and guidelines
- (E) CO Air-Line Monitor—Contact MSA Permanent Instrument Division at 1-800-672-4678
- (F) Nipple (1/2 x 1/2 x 1 1/2 NPT)—**P/N 68833**
- (G) Air-Line Filter—**P/N 81857** (See pg. 28)
- (I) Pressure Regulator—**P/N 66716** (See pg. 28)
- (J) Bushing (1/2" M x 1/4" F)—**P/N 625528**

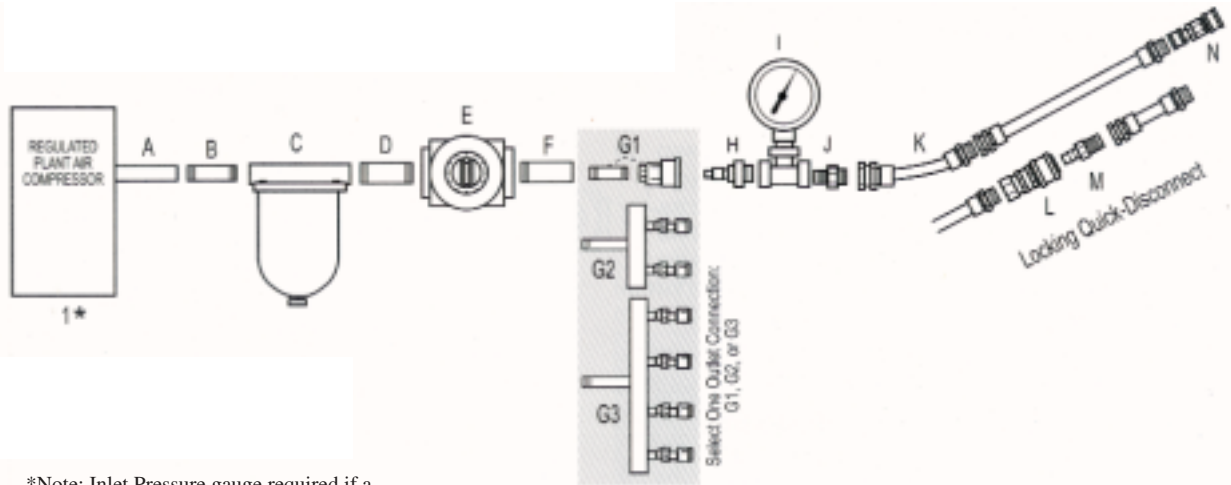
OUTLET CONNECTIONS:

- (K1) Female Socket—P/N varies with type (See pg. 38—Col. 1) Nipple—1/4" x 1/4" NPT—(needed only w/Female Socket) **P/N 459867** (See pg. 39)
- (K2) 2-Outlet Manifold: (See pg. 31)
- (K3) 4-Outlet Manifold: (See pg. 31)

MSA Inlet Pressure Gauge (See pg. 32)

- (L) Male plug with male 1/4" NPT (See pg. 38—Col. 4)
- (M) With Snap-Tite(AL)Male Plug and Union Adapter—**P/N 476734**
With Foster(S) or Schrader Male Plug and Union Adapter—**P/N 476735**
With Duff-Norton Male Plug and Union Adapter—**P/N 476736**
With Hansen(Brass) Male Plug and Union Adapter—**P/N 476737**
- (N) Union Adapter (See pg. 38—Col. 3)
- (O) MSA Air-Supply Hose—P/N varies with type (See pg. 36)
- (P) Locking Quick-Disconnect Female Socket—P/N varies with type (See pgs. 32 and 34)
- (Q) Locking Quick-Disconnect Male Plug—P/N varies with type (See pgs. 32 and 34)
- (R) Female Socket Assembly—P/N varies with type (See pg. 38—Col. 5)

REGULATED PLANT COMPRESSOR SYSTEM



*Note: Inlet Pressure gauge required if a distance of 10' or greater between the regulator and manifold.

1* Plant Air Compressor—NOT SUPPLIED BY MSA

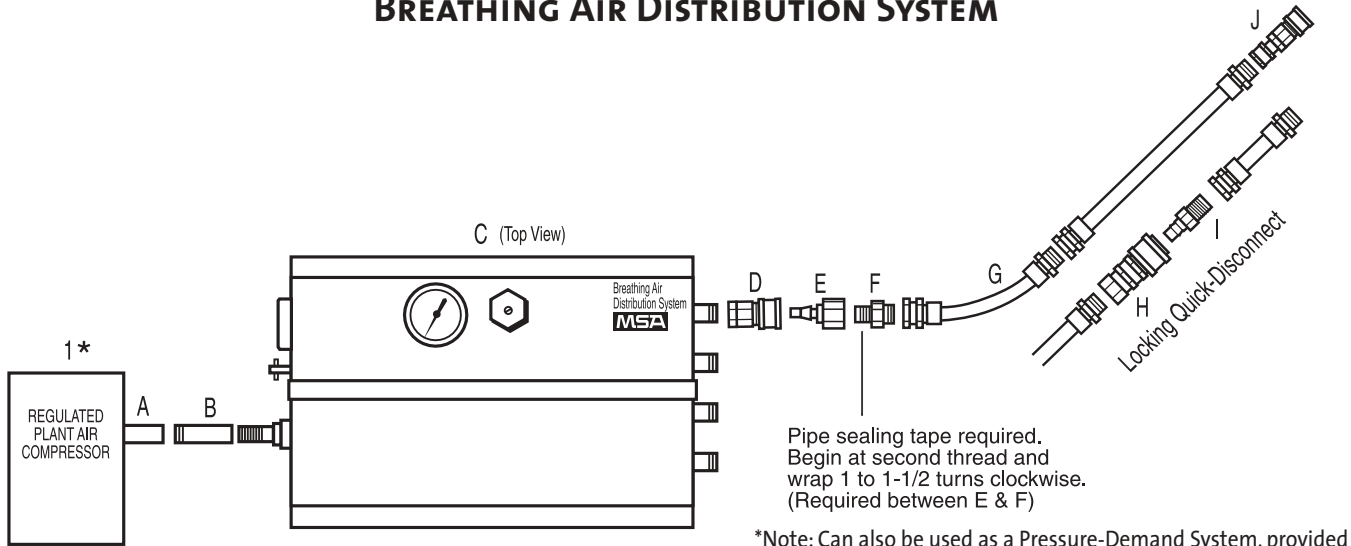
- (A) Outlet Fitting for System—Varies with system—contact MSA for more info. and guidelines
- (B) Nipple (1/2 x 1/2 x 1 1/2 NPT)—**P/N 68833**
- (C) Air-Line Filter—**P/N 81857** (See pg. 28)
- (E) Pressure Regulator—**P/N 66716** (See pg. 28)
- (F) Bushing (1/2" M x 1/4" F)—**P/N 625528**

OUTLET CONNECTIONS:

- (G1) Female Socket—P/N varies with type (See pg. 38—Col. 1)
Nipple—1/4" x 1/4" NPT—(needed only w/Female Socket)
P/N 459867 (See pg. 39)
- (G2) 2-Outlet Manifold: (See pg. 31)
- (G3) 4-Outlet manifold: (See pg. 31)

- (H) Male Plug with Male 1/4" NPT (See pg. 38—Col. 4)
- (I) MSA Inlet Pressure Gauge (See pg. 32)
- (J) Union Adapter (See pg. 38—Col. 3)
- (K) MSA Air-Supply Hose—P/N varies with type (See pg. 36)
- (L) Locking Quick-Disconnect Female Socket—P/N varies with type (See pgs. 32 and 34)
- (M) Locking Quick-Disconnect Male Plug—P/N varies with type (See pgs. 32 and 34)
- (N) Female Socket Assembly—P/N varies with type (See pg. 38—Col. 5)

BREATHING AIR DISTRIBUTION SYSTEM



*Note: Can also be used as a Pressure-Demand System, provided air flow and inlet pressure requirements are met.

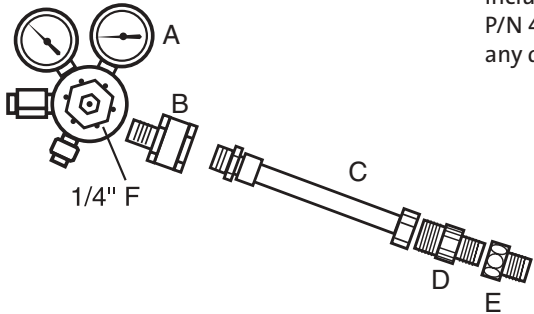
1* Plant Air Compressor—NOT SUPPLIED BY MSA

- (A) Outlet Fitting for System—Varies with system—contact MSA for more info. and guidelines
- (B) 1/2" NPT Inlet—contact MSA for guidelines
- (C) Breathing Air Distribution system—**P/N 488113** (See pg. 29)
- (D) Female Socket—P/N varies with type (See pg. 38—Col. 1)
- (E) Male Plug with Female 1/4" NPT—P/N varies with type (See pg. 38—Col.2)
- (F) Union Adapter—(See pg. 38—Col. 3)
- (G) MSA Air-Supply Hose—P/N varies with type (See pg. 36)
- (H) Locking Quick-Disconnect Female Socket—P/N varies with type (See pgs. 32 and 34)
- (I) Locking Quick-Disconnect Male Plug—P/N varies with type (See pgs. 32 and 34)
- (J) Female Socket Assembly—P/N varies with type (See pg.38—Col. 5)

HOSE REEL ASSEMBLY

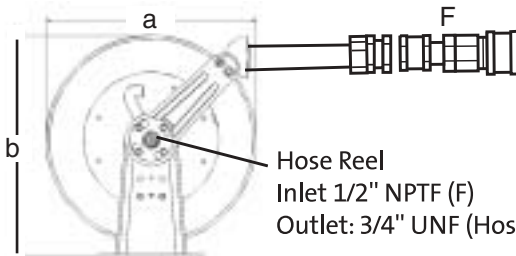
(Part Number 72444)

Includes 50 ft 3/8" Neoprene airline hose
P/N 455022*. Automatically keeps hose at
any desired length, controlling slack.



1/4" F

a = 20 7/8" Deep
b = 21 7/8" Tall
10 1/2" Wide



Hose Reel
Inlet 1/2" NPTF (F)
Outlet: 3/4" UNF (Hose Thread)

- (A) Regulator, dual gauge
(See pg. 31).
- (B) Union Adapter 1/4" NPT
Male x 3/4" UNF Female
- P/N 69541
- (C) * 8' Neoprene Hose
- P/N 481071 (See pg. 36)
- (D) 3/4" UNF Male x 1/4" NPT
Male - P/N 69542
- (E) Pipe Bushing 1/4" NPT
Female x 1/2" NPT Male
- P/N 625528
- (F) Female Socket Assembly
- P/N varies with type
(See pg. 38-Col. 5)

*3/8" airline hose has 3/4" UNF threads

APPROVALS

NIOSH/MSHA approves air-line respirators under 42 CFR Part 84, Subpart J. Approval is sought by respirator manufacturers for specific hose lengths and inlet pressures.

MSA Pressure-Demand Air-Line Units include the Pressure-Demand Air-Line Respirator, PremAire System, PremAire Cadet, Pressure Demand Duo-Twin and Duo-Flo Respirators, and the Abrasi-Blast Supplied-Air Respirators. Most MSA Pressure-Demand Air-Line Units are NIOSH/MSHA certified for operation at 65-85 psig with 25 to 300 feet of approved MSA Air-Supply Hose.

However, respirators which are part of the PremAire System, including the PremAire Cadet respirator, are NIOSH/MSHA certified for operation at 60-100 psig with 8 to 300 feet of approved hose.

The MSA Constant Flow Air-line Respirator has a high-pressure NIOSH/MSHA certification of 35-40 psig with 8 to 300 feet of approved hose, and a low-pressure certification of 10-15 psig with 8 to 50 feet of approved hose.

The Constant Flow Duo-Twin and Duo-Flow Air-line Respirators have high-pressure certifications of 35-40 psig with an approved hose length of 8 to 300 feet.

SuitableAire Respirators, with vortex tubes, are certified for an inlet pressure between 85-100 psig with approved hose lengths between 8 to 300 feet.

The Constant Flow Abrasi-Blast Supplied-Air Respirator has a high-pressure certification of 60-80 psig with a vortex tube, and 35-40 psig without a vortex tube, with an approved hose length between 8 to 300 feet. It also has a low-pressure certification of 10-15 psig with an approved hose length between 8 to 50 feet.

The inlet pressure and hose lengths vary with MSA's line of constant flow units with loose-fitting hoods.

The Versa-Hood Air-Supplied Hood is NIOSH/MSHA certified for use with 1/2" ID hose with a direct-connector, 3/8" ID hose with a direct-connector, and 3/8" ID hose with valve-connector.

When 3/8" ID hose with valve- connector is used, the hose length may range between 8 to 300 feet with an inlet pressure between 55-60 psig.

When 3/8" or 1/2" ID hose with direct-connector is used, the hose length can range between 8 to 300 feet. In both instances, the specific inlet pressure ranges according to the hose lengths. Check the Versa-Hood Instruction Manual for specific hose lengths and pressures.

The Synergy Bubble Hood Respirators are certified with hose lengths ranging between 8 to 300 feet. The inlet pressure is set according to the specific hose length used. Again, check the Instruction Manual for the specific hose lengths and pressures.

PORTAIRE PORTABLE AIR-SUPPLY SYSTEM

The PortAire Portable Air-Supply System holds two standard SCBA air cylinders to provide wearers of respiratory protective equipment with a portable, compressed-air source any time an air-line device is required.



<i>Part No.</i>	<i>Description</i>
807052	PortAire Portable Air-Supply System with Audi-Larm low-pressure warning device, high-pressure regulator and carrying frame with air-supply hose retainer
807586	Low-Pressure Stealth L-30 Carbon-wrapped 2216 psig cylinder
816115	Low-Pressure Stealth L-30+ Carbon-wrapped 3000 psig cylinder
469619	Low-Pressure Fiberglass Hoop-wound 2216 psig cylinder
809872	Low-Pressure 3AL Aluminum 2216 psig cylinder
807587	High-Pressure Stealth H-30 Carbon-wrapped 4500 psig cylinder
807570	High-Pressure Stealth H-45 Carbon-wrapped 4500 psig cylinder
807588	High-Pressure Stealth H-60 Carbon-wrapped 4500 psig cylinder
10017089	Transporter Wheel Kit for adding wheels to the PortAire

For hook up to the PortAire System, see pages 10 and 11



CARBON MONOXIDE AIR-LINE MONITOR

The Toxgard II Monitor can be used to monitor CO levels in compressed air-lines. It provides audible and visual alarms when a predetermined CO concentration is reached.

Contact MSA Permanent Instrument Division at
1-800-MSA-INST (672-4678)



PRESSURE REGULATOR

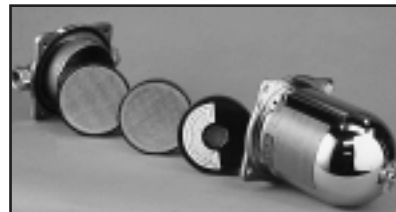
MSA's pressure regulator reduces plant air system compressor pressure to the desired operating pressure for the respirators being used. Maintains pressure on the outlet side until readjusted for use with inlet pressures of up to 125 psig.

<i>Part No.</i>	<i>Description</i>
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66716	Pressure Regulator
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AIR-LINE FILTER

MSA's Air-Line Filter provides high-efficiency filtration of the air



stream after it leaves the compressor. Minimum 99 percent removal of 0.3 micron and larger particulates including dusts, mists, fumes, smokes and petroleum vapors. A chemical cartridge removes organic vapors. MSA's Air-Line Filter does not remove carbon monoxide. It can be used at inlet pressures up to 125 psig. The pressure drop is 1 psig at maximum rated air flow of 25 cfm.

<i>Part No.</i>	<i>Description</i>
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81857	Air-Line Filter
484923	Replacement Filter Kit

BREATHING AIR DISTRIBUTION SYSTEM



This system purifies, 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. Using external con-

trols, water condensation can be drained directly from the filter bowl and manifold pressure can be adjusted without opening the system. Caution: The Breathing Air Distribution System is not effective for removing carbon monoxide.

Part No. Description

488113 Breathing Air Distribution System, less quick-disconnect sockets, which must be ordered separately. (See page 38– Col. 1)

Part No. Description

488118 “Toolbox” Carrying Handle Bar
66272 Snap-Tite Aluminum Female Socket
630305 Snap-Tite Brass Female Socket
629673 Snap-Tite Stainless Steel Female Socket
630308 Duff-Norton Brass Female Socket
630311 Hansen Brass Female Socket
628768 Hansen Stainless Steel Female Socket
628770 Foster Steel Female Socket
629980 Foster Brass Female Socket
55597 Schrader Steel Female Socket
631870 CEJN Locking Female Socket
479032 Snap-Tite Locking Female Socket Assembly
628232 Adapter (3/4" Male x 1/4" NPT Female) needed with above Snap-Tite Locking Female Socket Assembly



TEE BLOCK AND PIGTAIL

Tee blocks and pigtails are used to connect a bank of cylinders together, thus, extending your air supply. The coupler tees, which makes 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 (up to 3000 psig) Contact MSA or MSA Distributor for additional information |
| 68851 | Pigtail (up to 3000 psig) Contact MSA or MSA Distributor for additional information |



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(s) are pressurized to check that the alarm is operating properly.

Part No. Description

- | | |
|--------|--|
| 85078 | Audi-Larm Assembly (up to 3000 psig) |
| 492307 | High-pressure Audi-Larm Assembly (up to 5500 psig) |



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.

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



MANIFOLDS

Two- or four-outlet manifolds can be used to supply air to two or four respirators from a single air source. The manifolds are supplied with quick-disconnect sockets that offer automatic air flow shutoff.

<i>Part No.</i>	<i>Description</i>
47370	Four-outlet Manifold Assembly with Foster(S) Quick-Disconnect Socket
84416	Two-outlet Manifold Assembly with Foster(S) Quick-Disconnect Socket
93931	Four-outlet Manifold Assembly with Snap-Tite(AL) Quick-Disconnect Socket
486053	Two-outlet Manifold Assembly with Snap-Tite(AL) Quick-Disconnect Socket
478601	Four-outlet Manifold Assembly less Quick-Disconnects (See pg. 38–Col 1 for sockets)
84418	Two-outlet Manifold Assembly less Quick-Disconnects (See pg. 38–Col 1 for sockets)



INLET PRESSURE TEST GAUGE

MSA offers a pressure gauge that enables a user to check pressure at the inlet of the MSA Air-Supply Hose, assuring that the air pressure is within the required range. The gauge

is supplied with a male plug, for various quick-disconnect assemblies, and a union adapter for hose connection.

Part No. Description

476734	with Male Plug for Snap-Tite(AL) Quick-Disconnect Assembly
476735	with Male Plug for Foster(S) or Schrader Quick-Disconnect Assy
476736	with Male Plug for Duff-Norton Quick-Disconnect Assembly
476737	with Male Plug for Hansen(Brass) Quick-Disconnect Assembly
476738	with Male Plug for Cejn(Locking Type)
476739	with Male Plug for Foster(Brass)
476740	with Male Plug for Hansen(SST)
481377	with Male Plug for Snap-Tite (Locking Type)
492586	less Quick-Disconnect plug and less union adapter

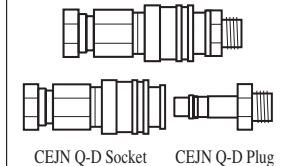
LOCKING QUICK-DISCONNECTS

Locking quick-disconnects are the only means 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.

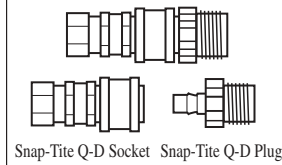
Part No. Description

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

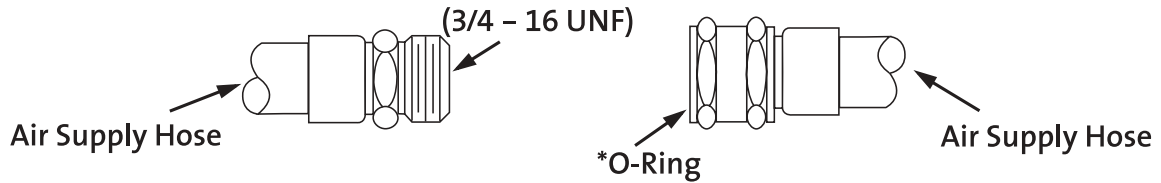
CEJN Quick-Disconnect Socket & Plug Assembly



Snap-Tite Quick-Disconnect Socket & Plug Assembly



**TO COUPLE SECTIONS OF APPROVED AIR SUPPLY HOSE...
...USING THREADED CONNECTORS ATTACHED TO HOSE**

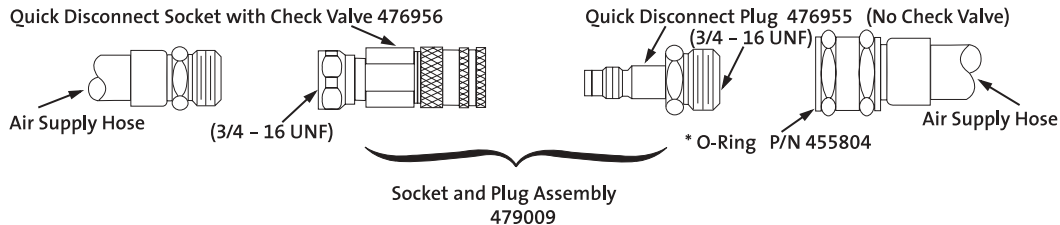


*Note: Tighten all O-Ring connections with tools. Replacement O-Rings are available in a package of 2, P/N 455804.

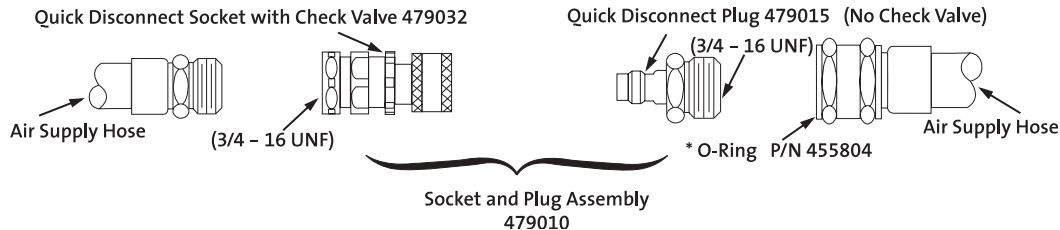
TO COUPLE SECTIONS OF APPROVED AIR SUPPLY HOSE...USING LOCKING QUICK DISCONNECTS

Locking Quick Disconnects are easily connected by pushing the Plug and Socket together. To separate, the Plug and Socket must be pushed together and the sleeve on the Socket retracted from the Plug.

CEJN-chrome



Snap-Tite-aluminum



To CONNECT THE HOSE TO THE FLOW CONTROL DEVICES

Refer to the instructions and illustrated parts list for the particular respirator you are using.

CAUTIONS:

Hoses must only be interconnected with the **(A)** 3/4 – 16 UNF threaded connectors attached to the hose or with **(B)** the locking type quick disconnects listed above.

Do Not use Non-Locking Quick disconnects to interconnect air supply hoses.

Do Not use Polyvinyl Chloride hose where air temperatures exceed 120° F.

***Note:** Tighten all O-Ring connections with tools. Replacement O-Rings are available in a package of two, Part Number 455804.

MSA AIR-SUPPLY HOSE



Air-Supply Hose Temperature Ranges

Neoprene

-25° to 212° Fahrenheit

PVC

32° to 120° Fahrenheit

Nylon

0° to 160° Fahrenheit

MSA 3/8-inch ID Air-Supply Hose is available in smooth, reinforced, lightweight polyvinylchloride; chemical-resistant black neoprene; or smooth, coiled nylon. Must be used with respirators in this section to maintain NIOSH certifications.

Ordering Information

Length	Material	Coupling	Part No.
50 ft.	Neoprene	Brass	455022
25 ft.	Neoprene	Brass	455021
15 ft.	Neoprene	Brass	455020
8 ft.	Neoprene	Brass	481071

Length	Material	Hose Coupling	Part No.
50 ft.	Neoprene	Stainless Steel	481080
25 ft.	Neoprene	Stainless Steel	481079
15 ft.	Neoprene	Stainless Steel	481078
8 ft.	Neoprene	Stainless Steel	481077
100 ft.	PVC	Brass	484225
50 ft.	PVC	Brass	471513
25 ft.	PVC	Brass	471512
15 ft.	PVC	Brass	471511
8 ft.	PVC	Brass	481051
50 ft.	PVC	Stainless Steel	481060
25 ft.	PVC	Stainless Steel	481059
15 ft.	PVC	Stainless Steel	481058
8 ft.	PVC	Stainless Steel	481057
50 ft.*	Coiled Nylon	Brass	474043
25 ft.*	Coiled Nylon	Brass	491515
15 ft.*	Coiled Nylon	Brass	491514
8 ft.*	Coiled Nylon	Brass	491513

*Recommended usable length, 4-25 ft.

MSA 1/2" AIR-SUPPLY HOSE

MSA Air-Supply Hose must be used to maintain NIOSH/MSHA approvals of MSA Respirators. The 1/2" ID Neoprene Air-Supply Hose is for use with low flow compressors for the Versa Hood with 1/2" hose or Constant Flow Direct-Connect Respirators with 1/2" ID Hose.

<i>Part No.</i>	<i>Description</i>
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483809	25' Neoprene 1/2" ID Air-Supply Hose
483810	50' Neoprene 1/2" ID Air-Supply Hose
483811	100' Neoprene 1/2" ID Air-Supply Hose
484236	Snap-Tite Female Socket for 1/2" ID hose

QUICK-DISCONNECTS AND ADAPTERS

AL-Aluminum; S-Steel; SST-Stainless Steel; BR-Brass

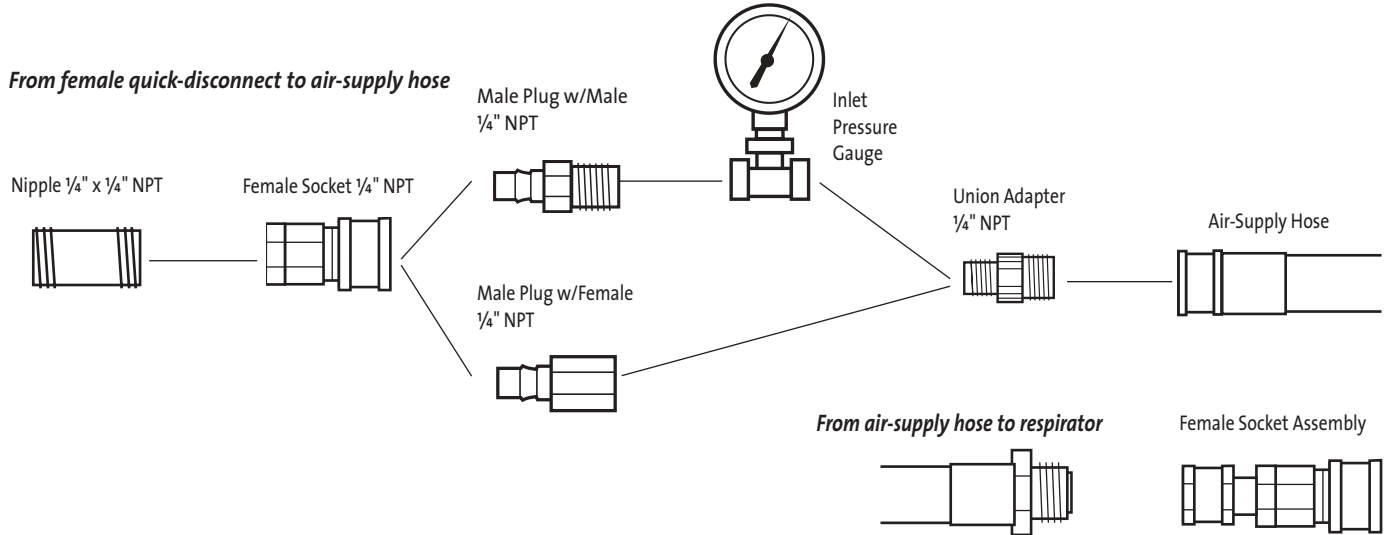
QUICK-DISCONNECT TYPE	Interchangeability†					
		1 Female Socket 1/4" NPT	2 Male Plug w/Female 1/4" NPT	3 Union Adapter 1/4" NPT x 3/4" UNF	4 Male Plug w/Male 1/4" NPT (used when connecting Inlet Pressure Gauge	5* Female Socket Ass. (used to connect Air-Supply Hose to Male Plug on Respirator)+
Snap-Tite (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 (3/4" female x 1/4" npt male). Exception: All SST fittings have SST Union P/N 808360.

QUICK-DISCONNECT CONNECTIONS

From female quick-disconnect to air-supply hose



Note: This Bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.



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