

# PremAire® Cadet Escape

Combination Supplied-Air Respirator  
with Escape Cylinder



**MSA**  
The Safety Company



Economical combination supplied-air-respirator with escape cylinder in a streamlined, lightweight design. Escape cylinders rated at 5-, 10- and 15-minutes.

### Size, Simplicity, and Economy.

The PremAire Cadet Escape Respirator, a combination supplied-air respirator with escape cylinder, 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 Escape Respirator 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. PremAire Cadet Escape Respirator is NIOSH-approved as a combination supplied-air respirator and self-contained breathing apparatus.

### Applications

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

### Features and Benefits

- New one piece cylinder valve and first stage regulator:
  - ♦ small size and profile
  - ♦ regulator incorporates downstream design and dual springs for maximum reliability
  - ♦ design shares many parts with MSA FireHawk SCBA
- Pressure gauge is recessed into valve housing:
  - ♦ protects gauge
  - ♦ reduces size and profile
- 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 for carbon fiber cylinders
- Shoulder support strap incorporates hose keeper; regulator hose stays in place close to body, reduces chance of snagging
- Standby mount for second stage regulator

## Options

- Choice of either Ultra Elite Pressure Demand Facepiece or Advantage 4000 Facepiece



- ◆ Ultra Elite Facepiece
  - Hycar™ or silicone
  - Speed-ON or rubber head harness
- ◆ Advantage 4000 Facepiece
  - Hycar or silicone
  - Net or rubber head harness
  - Adapter can convert Advantage facepiece to Twin Cartridge Respirator (with Advantage Cartridges) or RD40 Facepiece
- Choice of aluminum or carbon fiber cylinders
- Choice of 5-, 10- and 15-minute cylinder durations:
  - 5-minute
    - Aluminum, 2216 psi
    - Carbon fiber, 3000 psi
  - 10-minute
    - Aluminum, 3000 psi
    - Carbon fiber, 3000 psi
  - 15-minute
    - Carbon fiber, 3000 psi
- FireHawk Regulator second-stage offers PTC or STC attachments
- Assemblies sold as complete kits or configured via MSA's Assemble-To-Order (ATO) matrix
- Nylon or Kevlar carrier and harness assemblies
- Optional shoulder pad (shown right)
- Cylinder carrier in standard and bag versions



- Facepieces available in either Hycar or silicone and in three sizes
- Rubber spider or net head harnesses

## Ordering information

The PremAire Cadet Escape Respirator is sold through MSA's Assemble-To-Order (ATO) System or as part numbered kits. These kits include a basic PremAire Cadet Escape Respirator with cylinder and Push-To-Connect Regulator. Users may choose from the facepiece styles listed below. See supplied-air system quick disconnects chart on page 5 to order male plugs (use column 3 only), and female socket assemblies (use column 6 only) for the PremAire Cadet Escape Respirator. **These quick disconnects must be ordered separately.**

*To order air supply hose, outlet connections, manifolds, regulators, audilarms, and other system components, see supplied-air chart page 8.*

## Approvals

The PremAire Cadet Escape respirator is approved by the National Institute for Occupational Safety and Health (NIOSH) as an Open-Circuit, Pressure-Demand, Escape, Self-Contained Breathing Apparatus or Combination, Open-Circuit, Pressure-Demand, Escape, Self-Contained Breathing Apparatus and Type C, Supplied-Air Respirator (TC-13F-542,543,544,545). The respirator is approved for use at temperatures above -25°F. The compressed-air container shall be fully charged with air meeting the requirements of CGA C-7.1 Grade D or higher quality. When supplied with respirable air through an air supply hose; the air supply pressure range shall be 70-90 psig, the hose length shall be 8-300 feet, and the air supply shall meet the requirements of CGA C-7.1 Grade D or higher quality.

### Ultra Elite Facepieces, with nosecup, Push-To-Connect Adapter

10037650	Small, Hycar, rubber head harness, Push-to-Connect
10043417	Small, silicone, rubber head harness, Push-To-Connect
10043419	Small, Hycar, Speed-ON Head Harness, Push-to-Connect
10043430	Small, silicone, Speed-ON Head Harness, Push-to-Connect
10037648	Medium, Hycar, rubber head harness, Push-to-Connect
10043413	Medium, silicone, rubber head harness, Push-To-Connect
10043415	Medium, Hycar, Speed-ON Head Harness, Push-to-Connect
10043416	Medium, silicone, Speed-ON Head Harness, Push-to-Connect
10037652	Large, Hycar, rubber head harness, Push-to-Connect
10043431	Large, silicone, rubber head harness, Push-To-Connect
10043433	Large, Hycar, Speed-ON Head Harness, Push-to-Connect
10043434	Large, silicone, Speed-ON Head Harness, Push-to-Connect

### Advantage 4000 Facepieces, with nosecup, Push-To-Connect Adapter

10075911	Small, Hycar, rubber head harness, Push-To-Connect
10075910	Small, silicone, rubber head harness, Push-To-Connect
10075915	Small, Hycar, net head harness, Push-To-Connect
10075914	Small, silicone, net head harness, Push-To-Connect
10075905	Medium, Hycar, rubber head harness, Push-To-Connect
10075904	Medium, silicone, rubber head harness, Push-To-Connect
10075909	Medium, Hycar, net head harness, Push-To-Connect
10075908	Medium, silicone, net head harness, Push-To-Connect
10075917	Large, Hycar, rubber head harness, Push-To-Connect
10075916	Large, silicone, rubber head harness, Push-To-Connect
10075921	Large, Hycar, net head harness, Push-To-Connect
10075920	Large, silicone, net head harness, Push-To-Connect

### Kits

- 10087895 PremAire Cadet Escape Respirator, 5-minute aluminum cylinder, nylon harness, metal cylinder carrier
- 10087897 PremAire Cadet Escape Respirator, 10-minute aluminum cylinder, nylon harness, metal cylinder carrier
- 10087905 PremAire Cadet Escape Respirator, 10-minute carbon cylinder, nylon harness, bag carrier

Type	Carrier & Harness Type	Pad Option	Escape Cylinder	MMR Regulator	Faceiece	Nosecup	Head Harness	Quick Disconnect	Case	
PC	PremAire Cadet Escape	1	Nylon, strap carrier, standard	0 None	A 5-minute aluminum	A FireHawk, Push-To-Connect, solid cover	A None	0 None	0 None	0 None
			2 Kevlar, strap carrier, standard	1 Shoulder	B 10-minute aluminum	C FireHawk, Slide, solid cover	B Ultra Elite, Hycar, small	1 Ultra Elite, medium	1 Rubber	A Snap-Tite, aluminum
			3 Nylon, bag carrier, standard		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			C Snap-Tite, brass
				E 15-minute carbon		E Ultra Elite, silicone, small	Nosecup is standard with the Advantage 4000 Facepiece.		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	

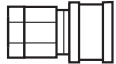
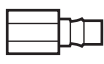
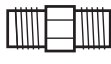
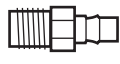
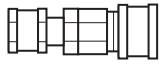
For additional accessories please see supplied air components chart, page 8.



## 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 W" NPT	Male Plug w/Female W" NPT	Union Adapter W" NPT x X" UNF	Male Plug w/Male W" NPT (used when connecting Inlet Pressure Gauge)	Female Socket Assembly (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
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	Part No.	Description
479009	CEJN Locking Quick-Disconnect Assembly, Socket and Plug (Chrome)	479015	Snap-Tite Locking Male (w/ Male 1/4" NPT) Quick-Disconnect Plug (AL)
476956	CEJN Locking Female Quick-Disconnect Socket (Chrome)	479011	Snap-Tite Locking Quick-Disconnect Assembly, Socket and Plug (SST)
476955	CEJN Locking Male (w/ Male 1/4" NPT) Quick-Disconnect Plug (Chrome)	479033	Snap-Tite Locking Female Quick-Disconnect Socket (SST)
479010	Snap-Tite Locking Quick-Disconnect Assembly, Socket and Plug (AL)	479016	Snap-Tite Locking Male (w/ Male 1/4" NPT) Quick-Disconnect Plug (SST)
479032	Snap-Tite Locking Female Quick-Disconnect Socket (AL)		

## Accessories

### 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 480 psig (high pressure alarm rings at 1000 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 (up to 2216 psig)
492307	High-pressure Audi-Larm Assembly (up to 4500 psig)



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

### 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

### 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

### 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.



### 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
481071	8 ft.	Brass

### PVC Hose

Part No.	Length	Fitting
484225	100 ft.	Brass
471513	50 ft.	Brass
471512	25 ft.	Brass
471511	15 ft.	Brass
481051	8 ft.	Brass

### Coiled Nylon Hose

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

\* Recommended usable length, 4-25ft.

### Optional Spectacle Kit



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 one pair of metal-frame spectacles.

<b>Part No.</b>	<b>Description</b>
10029298	Prescription Eyeglass Kit for Advantage 4000 Facepiece (S-7 shape, 44 mm lens)
454819	Prescription Eyeglass Kit for Ultravue Facepiece (S-7 shape, 44 mm lens)
804638	Prescription Eyeglass Kit for Ultra Elite Facepiece (S-7 shape, 48 mm lens)

### 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.



<b>Part No.</b>	<b>Description</b>
10009971	Confidence Plus Germicidal Cleaner

### 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.

<b>Part No.</b>	<b>Description</b>
68850	Tee Block
68851	Pigtail

### Lens Covers



Lens covers, available in many types, provide a convenient way to add a layer of protection against scratches.

<b>Part No.</b>	<b>Description</b>
491500	Ultra Elite clear cover lens (25 per pack)
805456	Ultra Elite smoke-tinted cover lens (25 per pack)
10031542	Advantage 4000 clear cover lens (25/pkg)
10031543	Advantage 4000 smoke cover lens (25/pkg)

### Welder's Adapter

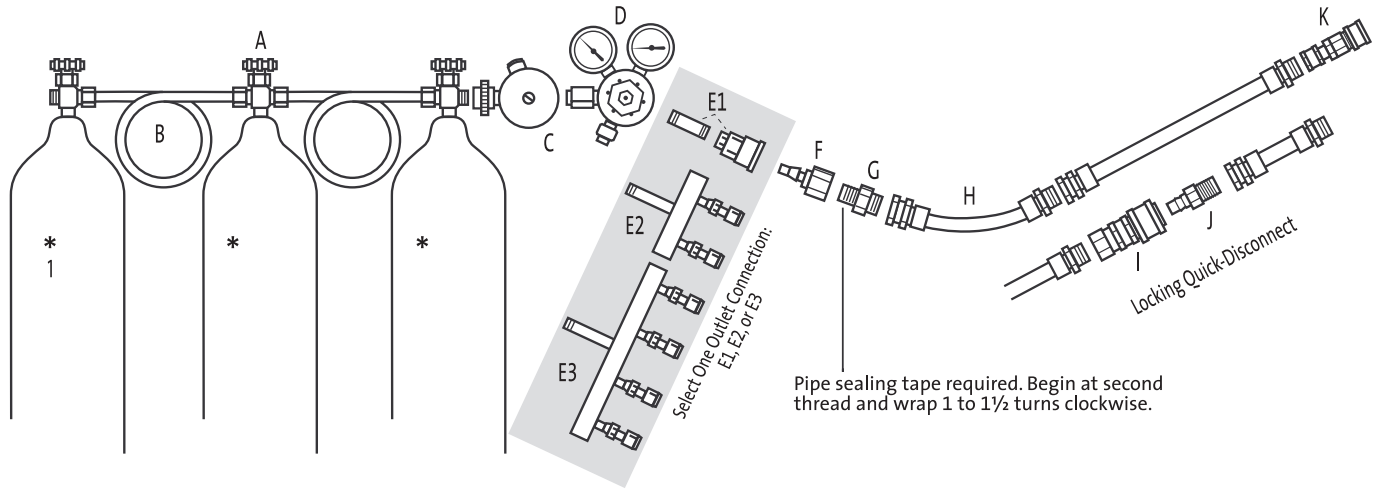


For eye protection in welding applications where respiratory protection is required, a welder's adapter can be easily installed over an Ultra Elite or Advantage 4000 Facepiece lens.

<b>Part No.</b>	<b>Description</b>
806432	Welders Adapter, Ultra Elite Facepiece
10077063	Welders Adapter, Single Port Advantage 4000 Facepiece

## MSA Air-Line Accessories for PremAire Cadet Escape Respirators

The following components are used to assemble a bank of respirable-air cylinders to supply a flow of air to the PremAire Cadet Escape 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 70–90 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.



1\* Air Cylinder—NOT SUPPLIED BY MSA

(A) Air Tee Block—**P/N 68850** (See pg. 6)

(B) Air Pigtail—**P/N 68851** (See pg. 6)

(C) Audi-Larm Warning Device—**P/N 85078** (See pg. 6)

(D) Air-Cylinder Pressure Regulator—**P/N 68858**  
(See pg. 6)

### Outlet Connections:

(E1) Female Socket—P/N varies with type (See pg. 8)  
Nipple—W" x W" 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**

(F) Male Plug with Female W" NPT—P/N varies with type  
(See pg. 8)

(G) Union Adapter—**P/N 69542** (See pg. 8)

(H) MSA Air-Supply Hose—P/N varies with type  
(See pg. 4)

(I) Locking Quick-Disconnect Female Socket—P/N varies  
with type (See pg. 8)

(J) Locking Quick-Disconnect Male Plug—P/N varies with  
type (See pg. 8)

(K) Female Socket Assembly—P/N varies with type  
(See pg. 8)

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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