PremAire® Cadet Escape

Combination Supplied-Air Respirator with Escape Cylinder





PremAire Cadet Escape Combination Supplied-Air Respirator with Escape Cylinder

Economical combination supplied-air-respirator with escape cylinder offers a streamlined, lightweight design. PremAire Cadet Escape Respirator is versatile, comfortable and affordable. First-stage regulator and cylinder valve are housed within one assembly. Small size and profile helps to avoid snagging when working within tight places. Economical systems are sold as part-numbered kits or through MSA's Assemble-To-Order (ATO) System.

- Low-profile escape cylinders can be worn on either right or left hip.
- Escape cylinders are rated at 5-, 10- and 15-minutes.
- Ultra Elite® Facepiece or Advantage® 4000 Facepiece with APR conversion capability offer choice of sizes and nose cups.
- Firehawk® MMR Regulator offers Push-To-Connect (PTC) or Slide-To- Connect (STC) attachments. All regulators provide bypass and choice of solid cover or purge.
- · NIOSH-approved as combination supplied-air respirator and self-contained breathing apparatus.

Applications

- Chemical/petrochemical
- · Hazardous materials
- Confined space entry
- Firefighting operations

Features and Benefits

- One-piece cylinder valve and first-stage regulator incorporates downstream design and dual springs for maximum reliability
- Pressure gauge recessed into valve housing protects gauge and reduces size and profile
- Choice of cylinder hip placement allows workers freedom and versatility
- Two harness materials: standard nylon for chemical resistance and Kevlar for high heat environments or those with spark potential
- Two sturdy metal cylinder support bands keep cylinder secure on belt
- · Nylon or Kevlar cylinder bags for carbon fiber cylinders
- Shoulder support strap incorporates hose keeper; regulator hose stays close to body to reduce snagging
- Standby mount for second-stage regulator

Ordering Information

PremAire Cadet Escape Respirator is sold through MSA's Assemble-To-Order (ATO) System or as part-numbered kits. Kits include basic PremAire Cadet Escape Respirator with cylinder and Push-To-Connect Regulator. Users may choose from among several facepiece styles. See supplied-air system quick-disconnects chart on page six to order male plugs (use column three only) and female socket assemblies (use column six only) for PremAire Cadet Escape Respirator. Quick-disconnects must be ordered separately.

To order air-supply hose, outlet connections, manifolds, regulators, Audi-Larm™ Audible Alarms, and other system components, see supplied-air chart, page 11.





Approvals

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). Respirator is approved for use at temperatures above -25°F. Compressed air container shall be fully charged with air meeting requirements of CGA C-7.1 Grade D or higher quality. When supplied with respirable air through air supply hose, air supply pressure range shall be 70-90 psig, hose length shall be 8-300 feet and air supply shall meet requirements of CGA C-7.1 Grade D or higher quality.

Options

Choice of Ultra Elite Pressure Demand Facepiece or Advantage 4000 Facepiece

Ultra Elite Facepiece

- Hycar™ Rubber or silicone
- SpeeD-ON® Head Harness or rubber head harness

Advantage 4000 Facepiece

- Hycar Rubber or silicone
- · Net or rubber head harness
- Adapter converts Advantage Facepiece to twincartridge respirator (with Advantage Cartridges) or RD40 Facepiece

Choice of aluminum or carbon fiber cylinders and 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 are sold as complete kits or configured via MSA's Assemble-To-Order (ATO) matrix
- Nylon or Kevlar carrier and harness assemblies
- · Optional shoulder pad
- · Cylinder carrier in standard and bag versions
- Facepieces available in either Hycar Rubber or silicone, in three sizes
- Rubber spider or net head harnesses







Advantage 4000 Facepiece





Standard carrier



PremAire System bag



Shoulder pad

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

Features:

- One-way check valve preventing exhaled air from entering the mask-mounted regulator
- Rugged polycarbonate lens with scratch-resistant coating
- Mechanical speaking diaphragm for short-range communications
- Five adjustable rubber straps for exceptional head comfort, security and safety
- Optional heat-resistant Kevlar net-style head harness



	RUBBER HEAD HARNESS		SPEED-ON HEAD HARNESS	
	Hycar Rubber	Silicone	Hycar Rubber	Silicone
Small	10037650	10043417	10043419	10043430
Medium	10037648	10043413	10043415	10043416
Large	10037652	10043431	10043433	10043434

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

Features:

- Available adapter to convert Advantage Facepiece to twin-cartridge respirator (using Advantage Cartridges) or RD40 Facepiece
- One-way check valve prevents exhaled air from entering mask-mounted regulator
- Rugged polycarbonate lens with scratch-resistant coating
- Four-point silicone head harness for exceptional comfort and security
- Optional polyester net or Kevlar net head harness



	RUBBER HEAD HARNESS		SPEED-ON HEAD HARNESS		KEVLAR NET HEAD HARNESS	
	Hycar Rubber	Silicone	Hycar Rubber	Silicone	Hycar Rubber	Silicone
Small	10075911	10075910	10075915	10075914	10108547	10108545
Medium	10075905	10075904	10075909	10075908	10108561	10108549
Large	10075917	10075916	10075921	10075920	10108565	10108563

PremAire Cadet Escape Respirators

Part Number	Cylinder	Harness/Carrier	Facepiece	Fitting	Case
10087895	5-minute aluminum	Nylon strap	None	None	None
10087897	10-minute aluminum	Nylon strap	None	None	None
10092034	5-minute aluminum	Nylon strap	Advantage 4000, Hycar Rubber, net head harness	Hansen brass	None
10092036	10-minute aluminum	Nylon strap	Advantage 4000, Hycar Rubber, net head harness	Hansen brass	None
10093986	5-minute aluminum	Nylon strap	Ultra Elite, Hycar Rubber, rubber head harness	None	Hard case
10093987	10-minute aluminum	Nylon strap	Ultra Elite, Hycar Rubber, rubber head harness	None	Hard case
10093988	5-minute aluminum	Nylon strap	Advantage 4000, Hycar Rubber, rubber head harness	None	Hard case



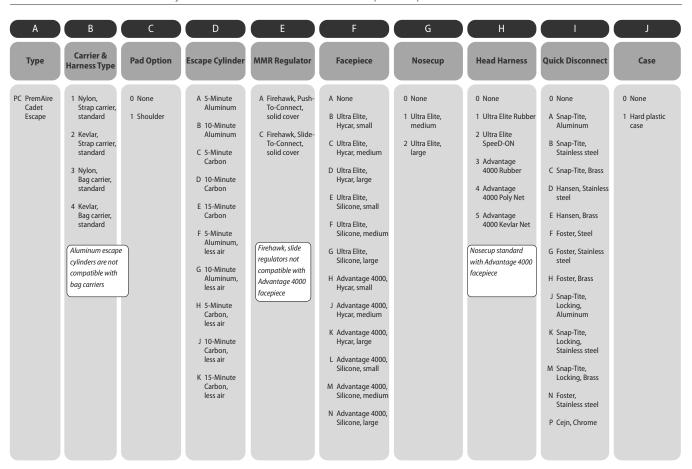
PremAire Cadet Escape Respirator Kits

PremAire Cadet Escape Respirator Kits include PremAire Cadet Escape Respirator with Advantage 4000 Facepiece (medium size, Hycar Rubber, polyester net head harness) with Push-To-Connect Firehawk MMR, nylon harness, aluminum cylinder, and listed quick-disconnect for respirator connection to air-supply hose, 50-ft neoprene air-supply hose section complete with corresponding plug for attachment of air-supply hose to air source.

Part Number	Description
10108496	PremAire Cadet Escape Air-Line Respirator, 5-minute egress cylinder with Hansen brass quick-disconnects, 50-ft neoprene air-supply hose section with Hansen brass plug
10108592	PremAire Cadet Escape Air-Line Respirator, 10-minute aluminum egress cylinder with Hansen brass quick-disconnects, 50-ft neoprene air-supply hose section with Hansen brass plug



The Assemble-To-Order System for PremAire Cadet Escape Respirator





PremAire Cadet Escape

Quick-disconnects for Air-line Respirators and Air-supplied Hoods

Quick-disconnect assemblies connect air-supply hoses to manifold and air source. To interconnect lengths of air-supply hose with quick-disconnect, use locking-type quick-disconnect, specifically locking quick-disconnects listed in gray box at bottom of this page. For more complete information, see bulletin #0114-14.

Quick-disconnects and Adapters

QUICK-DISCONNECT TYPE	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 Whale 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)	66272	66274	69542	66273	455019
Snap-Tite (SST)	629673	629672	808358	629671	471778
Snap-Tite (BR)	630305	630307	69542	630306	471777
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		479032
Snap-Tite Locking (SST)		479028	808358	479022	479033
Snap-Tite Locking (BR)		479029	69542	479023	479034
Foster (SST)	636473	637851	808358		800805

AL=aluminum, SST=stainless steel, S=steel, BR=brass

Locking Quick-Disconnects

Locking quick-disconnects must be used to interconnect lengths of MSA air-supply hose. For most systems, use up to 12 hose sections to assemble maximum length.

Part Number	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 1/4" 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)	
479015	Snap-Tite locking male (w/male 1/4" 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 1/4" NPT) quick-disconnect plug (SST)	



Accessories

Audi-Larm™ Warning Device

Air-supply cylinders can be equipped with Audi-Larm Audible Alarm low pressure warning device. Device's loud, clear bell signals users when cylinder air-supply is reduced to limited service time. Device rings when cylinder pressure reaches approximately 480 psig (high pressure alarm rings at 1000 psig); rings briefly every time cylinder is pressurized to check for proper alarm operation.

Part Number	Description	
85078	Audi-Larm Assembly (up to 2216 psig)	
492307	High pressure Audi-Larm Assembly (up to 4500 psig)	



Air Cylinder Pressure Regulator

Air cylinder pressure regulator is required when air-line respirators operate from a cylinder. Dual-gauge regulator receives varying outlet cylinder pressure, then reduces and regulates to approximately 80 psig constant pressure, optimum pressure for regulator operation.

Part Number	Description
68858	Air cylinder pressure regulator, dual-gauge, 0-3000 psig
633352	High pressure air cylinder regulator, dual-gauge, 0-5, 500 psig



Air cylinders connected by tee blocks and pigtails, equipped with Audi-Larm Audible Alarm and air cylinder pressure regulator.



Manifolds

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

Part Number	Description
47370	4-outlet manifold assembly with Foster quick-disconnects
84416	2-outlet manifold assembly with Foster quick-disconnects
93931	4-outlet manifold assembly with Snap-Tite quick-disconnects
486053	2-outlet manifold assembly with Snap-Tite quick-disconnects



Air-supply Hose

MSA %"ID air-supply hose is available in smooth, reinforced, lightweight polyvinylchloride, chemical-resistant black neoprene or smooth, coiled nylon. MSA hose must be used to maintain NIOSH/MSHA approvals.

Neoprene Hose				
Part Number	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				

	PVC Hose	
Part Number	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 Number	Length	Fitting		
474043	50-ft*	Brass		
491515	25-ft*	Brass		
491514	15-ft*	Brass		
491513	8-ft*	Brass		







^{*} Recommended usable length, 4-ft to 25-ft



Optional Spectacle Kit

For workers who must wear corrective lenses, spectacle kit is easily inserted into facepiece. Kit includes wire support, rubber guide and one pair of metal frame spectacles.

Part Number	Description
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

Germicidal cleaner mixes with warm water for effectiveness against various micro-organisms including immunodeficiency virus Type 1 (HIV-1) (associated with AIDS). EPA-approved for use on safety equipment.





Tee Blocks and Pigtails

Tee blocks and pigtails connect cylinder banks to extending air supply. Coupler tees for connection are brass construction; pigtails are tubular copper.

Part Num	ıber	Description
68850)	Tee block
68851		Pigtail



PremAire Cadet Escape



Lens Covers

Lens covers provide a protective layer against scratches.



Part Number	Description
491500	Ultra Elite Facepiece clear cover lens (25/pkg)
805456	Ultra Elite Facepiece smoke-tinted cover lens (25/pkg)
10031542	Advantage 4000 Facepiece clear cover lens (25/pkg)
10031543	Advantage 4000 Facepiece smoke cover lens (25/pkg)

Welder's Adapter

For eye protection in welding applications where respiratory protection is required, welder's adapter installs easily over Ultra Elite or Advantage 4000 Facepiece lenses.

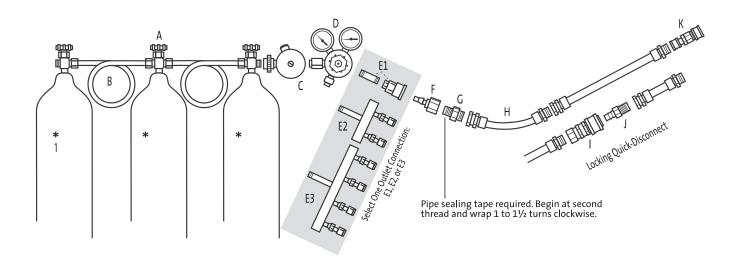


Part Number	Description
806432	Welder's Adapter, Ultra Elite Facepiece
10077063	Welder's Adapter, single-port Advantage 4000 Facepiece



MSA Air-Line Accessories for PremAire Cadet Escape Respirators

The following components are used to assemble a bank of respirable air cylinders to supply air flow to PremAire Cadet Escape Respirator. Setup consists of cylinders (user-supplied), air source to air-line regulator, coupler tees and pigtails to join cylinder banks, Audi-Larm Audible Alarm for warning when cylinder bank air pressure falls below approximately 400 psig, dual-gauge air cylinder pressure regulator to reduce high-pressure from cylinders to required inlet 70–90 psig pressure range, manifold for quick connect and disconnect from high-pressure cylinder bank. (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 page 9)
В	Air pigtail - P/N 68851 (see page 9)
С	Audi-Larm™ Audible Alarm warning device - P/N 85078 (see page 7)
D	Air cylinder pressure regulator - P/N 68858 (see page 7)
OUTLET CONNECTIONS: E1 E2	Female socket - P/N varies with type Nipple - W" x W" NPT - (needed only w/female socket) P/N 459867 2-outlet manifold: Foster steel P/N 84416
F	Male plug with female W" NPT - P/N varies with type
G	Union adapter - P/N 69542 (see page 6)
н	MSA air-supply hose - P/N varies with type (see page 8)
	Locking quick-disconnect female socket - P/N varies with type
J	Locking quick-disconnect male plug - P/N varies with type
К	Female socket assembly - P/N varies with type

Industrial Air Cart

Industrial Air Cart provides air for up to four air-line respirators

Industrial Air Cart permits up to four NIOSH-approved air-line respirators to be connected to two one-hour 4,500 psig breathing apparatus cylinders (not included). See table on page 13 for cylinder ordering information. A 60-minute cylinder will provide maximum air supply.

Features

- Two-wheel poly powder-coated cart, two sets of double-cylinder straps, air-line hose rack, and adjustable pull handle
- 5,500 psig pressure regulator reduces 4,500 psig cylinder air to proper air-line respirator inlet pressure
- · Low pressure cylinder alarm whistle
- Outlet pressure gauge operates in 0-125 psig range
- Four-outlet manifold is available with four outlet fitting options





Industrial Air Cart Components

- Pull pin for handle
- 2 Low pressure alarm whistle
- 3 Cylinder manifold pressure gauge
- Pressure regulator
- **5** CGA-347 nut, hand-tightening
- 6 Regulator outlet pressure gauge
- Outlet connections
- Nylon cylinder strap
- 125 psig relief valve
- Pull pin for hose bracket

Cart Weight and Dimensions

Size: 35" H x 21" W x 15.25" D

Unit weight: 38.5 pounds w/o cylinders



Ordering Information

Part Number	Description
10107537	Industrial Air Cart equipped with union adapters
10107779	Industrial Air Cart equipped with Snap-Tite aluminum quick-disconnects
10107780	Industrial Air Cart equipped with Foster steel quick-disconnects
10107811	Industrial Air Cart equipped with Hansen brass quick-disconnects

Industrial Air Cart is sold without air cylinders. MSA cylinders shown below can be used with cart. 60-minute cylinder provides maximum air supply.

Part Number	Description
10127946-SP	60-minute, H-60SL carbon-wrapped cylinder
10127945-SP	45-minute, H-45SL carbon-wrapped cylinder
10127944-SP	30-minute, H-30SL carbon-wrapped cylinder

Technical Rescue Cart

Technical Rescue Cart provides air for air-line respirators and unique rescue tools used by the fire service and HazMat teams

The Technical Rescue Cart is a steel cart with a color-designated control panel that allows one panel side to be used for primary respirator breathing air and one side for tool/secondary air requirements. Two one-hour cylinders are used to provide air for respirators. High-pressure cascade (fire truck) cylinder air is used to operate pneumatic tools. Technical Rescue Cart standard features provide a unique and very versatile air cart for the fire service and HazMat industries. See table on page 15 for cylinder ordering information. A 60-minute cylinder will provide maximum air supply.

Features

Breathing air segment includes:

- Two-wheeled, poly-coated steel cart, two sets of double-cylinder straps, air-line hose rack and adjustable pull handle
- · Low pressure cylinder bell alarm
- Four-outlet manifold available with four outlet fitting options

Tooling air segment includes:

- CGA-347 fitting to attach to auxiliary remote high pressure air source
- Low pressure pneumatic alarm whistle
- Four-outlet manifold with quick-disconnects

Online interactive training with testing for the Technical Rescue Cart as well as for other MSA products and applications can be found at www.MSAnet.com/MSA-U.





Technical Rescue Cart Components

- Pull pin for handle
- 2 CGA 347 nut, hand-tightening
- 3 Breathing air low pressure alarm bell
- 4 Auxiliary low pressure whistle
- **5** Breathing air cylinder pressure gauge
- **6** Tool air pressure gauge
- **1** Breathing air pressure regulator
- Tool air high pressure regulator
- Nylon cylinder strap
- Tool fittings
- Respirator fittings
- Pull pin for hose bracket
- Tool air low pressure regulator
- 4 Low pressure accessory air tool



Size: 35" H x 21" W x 15" D

Unit weight: 54.5 pounds w/o cylinders



Ordering Information

Part Number	Description
10107535	Technical Rescue Cart equipped with union adapters
10107818	Technical Rescue Cart equipped with Snap-Tite aluminum quick-disconnects
10107820	Technical Rescue Cart equipped with Foster steel quick-disconnects
10107819	Technical Rescue Cart equipped with Hansen brass quick-disconnects

The Technical Rescue Cart is sold without air cylinders. MSA cylinders listed below can be used with cart. 60-minute cylinder provides maximum air supply.

Part Number	Description
10127946-SP	60-minute, H-60SL carbon-wrapped cylinder
10127945-SP	45-minute, H-45SL carbon-wrapped cylinder
10127944-SP	30-minute, H-30SL carbon-wrapped cylinder



MSA—The Safety Company

Our business is safety. We've been the world's leading manufacturer of high-quality safety products since 1914. MSA products may be simple to use and maintain, but they're also highly-sophisticated devices and protective gear — the result of countless R&D hours, relentless testing and an unwavering commitment to quality that saves lives and protects thousands of men and women each and every day. Many of our most popular products integrate multiple combinations of electronics, mechanical systems and advanced materials to ensure that users around the world remain protected in even the most hazardous of situations.

Our dedication to safety has been the key to our impressive year-overyear growth. In eight of the past 10 years we've achieved record growth numbers, with annual revenues of more than \$1 billion.

Our Mission

MSA's mission is to see to it that men and women may work in safety and that they, their families and their communities may live in health throughout the world.

MSA: Because every life has a purpose.

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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