



## MSA Advantage 1000 Full-Face Respirator

The Advantage 1000 Respirator has a wrap-around flexible lens that offers a comfortable fit with increased vision, and it weighs about 40% less than conventional full-face respirators. You'll like its low maintenance, low cost, durability, and convenience. Choose plastic or metal cartridges and several accessories to maximize comfort.

## Advantage 200 Half-Mask Respirator

The Advantage 200 Respirator offers unmatched fit and comfort, thanks to a soft, pliable combination of rubber and plastic that removes the pressure points from the face seal, yet provides exceptional stability. Add cartridges, and you have the comfort of a traditional half-mask respirator with the convenience and economy of a low-maintenance respirator.

Description	Size	Cartridge	Part No.
Adv. 200 Facepiece	Small	not included	815448
Adv. 200 Facepiece	Medium	not included	815444
Adv. 200 Facepiece	Large	not included	815452
Adv. 200 Facepiece	Small	OV-N95 cartridge	816939
Adv. 200 Facepiece	Medium	OV-N95 cartridge	816943
Adv. 200 Facepiece	Large	OV-N95 cartridge	816947
Adv. 200 Facepiece	Small	GME R95 cartridge	816939
Adv. 200 Facepiece	Medium	GME R95 cartridge	816943
Adv. 200 Facepiece	Large	GME R95 cartridge	816947

Adv. 1000 Facepiece Description	Color	Size	Part No.
w/ speaking diaphragm and nose cup	Black	Small	805414
w/ speaking diaphragm and nose cup	Black	Medium	805408
w/ speaking diaphragm and nose cup	Black	Large	805420
w/ ESP System and nose cup	Black	Small	805415
w/ ESP System and nose cup	Black	Medium	805409
w/ ESP System and nose cup	Black	Large	805421
w/ speaking diaphragm and nose cup	Tan	Small	805417
w/ speaking diaphragm and nose cup	Tan	Medium	805411
w/ speaking diaphragm and nose cup	Tan	Large	805423
w/ ESP System and nose cup	Tan	Small	805418
w/ ESP System and nose cup	Tan	Medium	805412
w/ ESP System and nose cup	Tan	Large	805424

Description	Part No.
Comfo™ Cartridge* Adapter for Advantage 200/1000 Respirators, pkg of 2	809999

Chemical Hazards		
OV=Organic Vapor	HC=Hydrogen Chloride	FM=Formaldehyde
CL=Chlorine	HS=Hydrogen Sulfide	HF=Hydrogen Fluoride
SD=Sulfur Dioxide	AM=Ammonia	MV=Mercury Vapor
CD=Chlorine Dioxide	MA=Methylamine	

## Advantage® Respirator Cartridges

**P100-Particulate Filter** (99.97% filter efficiency level) effective against **all** particulate aerosols.

**N95-Particulate Filter** (95% filter efficiency level) effective against particulate aerosols *free of oil*; time use restrictions may apply.

**R95-Particulate Filter** (95% filter efficiency level) effective against **all** particulate aerosols; time use restrictions may apply.

MSA Cartridge Designation	Part No.	No. in Pkg.	Chemical Hazards	Particulate Filter Type and Efficiency	Notes Below
GMA Cartridge	815355	2	OV	R95 or N-95 (w/ R-95 or N-95 Prefilter & Cover)	2,3
GMA Cartridge-P100	815362	2	OV	P100	2,3,4
GMB Cartridge	815356	2	CL,SD, CD, HC, HS*	R95 or N-95 (w/ R-95 or N-95 Prefilter & Cover)	2
GMB Cartridge-P100	815363	2	CL,SD, CD, HC, HS*	P100	2,4
GMC Cartridge	815357	2	OV, CL,SD, CD, HC, HS*	R95 or N-95 (w/ R-95 or N-95 Prefilter & Cover)	2,3
GMC Cartridge-P100	815364	2	OV, CL,SD, CD, HC, HS*	P100	2,3,4
GMD Cartridge	815358	2	AM, MA	R95 or N-95 (w/ R-95 or N-95 Prefilter & Cover)	2,3
GMD Cartridge-P100	815365	2	AM, MA	P100	2,3,4
GME Cartridge	815359	2	OV, CL,SD, CD, HC, HS*, AM, MA, FM, HF	R95 or N-95 (w/ R-95 or N-95 Prefilter & Cover)	2,3
GME Cartridge-P100	815366	2	OV, CL,SD, CD, HC, HS*, AM, MA, FM, HF	P100	2,3,4
GMF Cartridge	815359	2	OV, CL,SD, HC, FM	R95 or N-95 (w/ R-95 or N-95 Prefilter & Cover)	2,3
GMF Cartridge-P100	815366	2	OV, CL,SD, HC, FM	P100	2,3,4
GMI Cartridge-P100**	815641	2	OV	P100	2,4
Mersorb	815361	2	MV	R95 or N-95 (w/ R-95 or N-95 Prefilter & Cover)	2,4
Mersorb-P100	815368	2	MV	P100	2,4

\* Escape only. \*\*Effective against, but not NIOSH approved for Iodine Vapor.

MSA Cartridge Designation	Part No.	No. in Pkg.	Particulate Filter Type and Efficiency	See Notes At Rt.
Low Profile-P100	815369	2	P100	1,4
Stand-alone & cover	816662	10	N95	1
Stand-alone & cover	816661	50	N95	1
Stand-alone & cover adapter (2 req.)	809999	2	N95	1
Reusable snap-on cover for stand-alone (2 req.)	489353	1	N95	1
Prefilter & cover	815394	10	N95	1
Prefilter & cover	816357	50	N95	1
Reusable snap-on cover for N-95 prefilter (2 req.)	815392	2	N95	1
Prefilter & cover	815397	10	R95	1
Reusable snap-on cover for R-95 prefilter (2 req.)	815392	2	R95	1

### ⚠ WARNING

Below is a partial list of gaseous materials for which chemical cartridge respirators must not be used for respiratory protection (for routine use) regardless of concentration or time of exposure. Failure to follow this warning can result in serious personal injury or death. This partial list is far from complete and is offered as a guide to many of the contaminants found in industry. Contact MSA for further information on other specific materials.

Acrolein	Hydrogen cyanide	Nitric acid	Phosphorus trichloride
Aniline	Hydrogen selenide	Nitro compounds	Stibine
Arsine	Methanol	Nitrogen oxides	Sulfur chloride
Bromine	Methyl bromide	Nitroglycerin	Urethane or other
Carbon monoxide	Methyl chloride	Nitromethane	isocyanate-
Diisocyanates	Methylene chloride	Phosgene	containing paints
Dimethyl sulfate	Nickel carbonyl	Phosphine	Vinyl chloride

### Notes

- Do not use in atmospheres containing less than 19.5 percent oxygen, in atmospheres containing gases or vapors or in atmospheres immediately dangerous to life and health.
- Do not use in atmospheres containing less than 19.5 percent oxygen, or in atmospheres immediately dangerous to life and health.
- Do not wear for protection against organic vapors with poor warning properties or those which generate high heats of reaction with the sorbent material in the cartridge.
- 99.97 percent efficient against 0.3 micron DOP.



**Ultra-Twin Full-Facepiece Respirators** MSA

The Ultra-Twin Full-Facepiece Respirator has an inturred lip around the edge for a tight seal against the face. A large chin cup makes it easy to position. Five suspension headstraps and roller buckles hold the facepiece in place while minimizing hair entanglement. The wide polycarbonate lens is coated to resist scratching and chemical attack. The lens is held in place by a two-piece lens ring which is color-coded to indicate the size of the facepiece. Uses the full line of Comfo Cartridges and Filters.

**Comfo Classic Half-Mask Respirators** MSA

Comfo Classic Respirators, MSA's traditional half-mask line, live up to their name as one of the most comfortable respirators you can buy. Extensive research and new formulation of rubber and silicone materials have resulted in the pliable, soft, textured sealing surfaces of SoftFeel™ silicone and Hycar rubber facepieces. Also, Comfo Classic Respirators feature a unique face seal design that gives wearers an exceptional fit.

Material	Color	Small	Medium	Large
SoftFeel Hycar	Black	808075	808074	808076
SoftFeel Hycar	Green	808078	808077	808079
SoftFeel silicone	Black	808072	808071	808073
SoftFeel silicone	Yellow	808081	808080	808082

Material	Color	Nosecup	w/ ESP®	Small	Medium	Large
Hycar	Black	—	—	471298	471286	471310
Hycar	Black	—	yes	804170	804168	804172
Silicone	Black	—	—	480263	480259	480267
Silicone	Black	—	yes	804171	804169	804173
Hycar	Green	—	—	471300	471287	471312
Silicone	Gray	yes	—	804046	—	—
Silicone	Teal	yes	—	804044	—	—
Silicone	Tan	yes	—	—	804047	—
Silicone	Yellow	—	—	804045	—	—
Hycar	Black	—	—	806200	806199	806201
Silicone	Black	—	—	806203	806202	806204

Chemical Hazards		
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SD=Sulfur Dioxide	AM=Ammonia	MV=Mercury Vapor
CD=Chlorine Dioxide	MA=Methylamine	

**Comfo® Respirator Cartridges** MSA

**P100-Particulate Filter** (99.97% filter efficiency level) effective against **all** particulate aerosols.

**N95-Particulate Filter** (95% filter efficiency level) effective against particulate aerosols **free of oil**; time use restrictions may apply.

**R95-Particulate Filter** (95% filter efficiency level) effective against **all** particulate aerosols; time use restrictions may apply.

MSA Cartridge Designation	Part No.	No. in Pkg.	Chemical Hazards	Particulate Filter Type and Efficiency	Notes Below
GMA Cartridge	464031	2	OV	R95 or N-95 (w/ R-95 or N-95 Prefilter & Cover)	2,3
GMA Cartridge-P100	815178	2	OV	P100	2,3,4
GMB Cartridge	464032	2	CL,SD, CD, HC, HS*	R95 or N-95 (w/ R-95 or N-95 Prefilter & Cover)	2
GMB Cartridge-P100	815179	2	CL,SD, CD, HC, HS*	P100	2,4
GMC Cartridge	464046	2	OV, CL,SD, CD, HC, HS*	R95 or N-95 (w/ R-95 or N-95 Prefilter & Cover)	2,3
GMC Cartridge-P100	815180	2	OV, CL,SD, CD, HC, HS*	P100	2,3,4
GMD Cartridge	464033	2	AM, MA	R95 or N-95 (w/ R-95 or N-95 Prefilter & Cover)	2,3
GMD Cartridge-P100	815181	2	AM, MA	P100	2,3,4
GME Cartridge	492790	2	OV, CL,SD, CD, HC, HS*, AM, MA, FM, HF	R95 or N-95 (w/ R-95 or N-95 Prefilter & Cover)	2,3
GME Cartridge-P100	815182	2	OV, CL,SD, CD, HC, HS*, AM, MA, FM, HF	P100	2,3,4
GMF Cartridge	490173	2	OV, CL,SD, HC, FM	R95 or N-95 (w/ R-95 or N-95 Prefilter & Cover)	2,3
GMF Cartridge-P100	815183	2	OV, CL,SD, HC, FM	P100	2,3,4
GMI Cartridge-P100**	815184	2	OV	P100	2,4
Mersorb	466204	2	MV	R95 or N-95 (w/ R-95 or N-95 Prefilter & Cover)	2,4
Mersorb-P100	815185	2	MV	P100	2,4

\* Escape only. \*\*Effective against, but not NIOSH approved for Iodine Vapor.

MSA Cartridge Designation	Part No.	No. in Pkg.	Particulate Filter Type and Efficiency	See Notes At Rt.
P100	815175	2	P100	1,4
Sparkfoe® P100	815176	2	P100	1,4
Low Profile P100	815177	2	P100	1,4
Stand-alone & cover	816662	10	N95	1
Stand-alone & cover	816661	50	N95	1
Stand-alone & cover adapter (2 req.)	809999	2	N95	1
Reusable snap-on cover for stand-alone (2 req.)	489353	1	N95	1
Prefilter & cover	815394	10	N95	1
Prefilter & cover	816357	50	N95	1
Reusable snap-on cover for N-95 prefilter (2 req.)	815392	2	N95	1
Prefilter & cover	815397	10	R95	1
Reusable snap-on cover for R-95 prefilter (2 req.)	815401	2	R95	1

**⚠ WARNING**

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Acrolein	Hydrogen selenide	Nitrogen oxides	Sulfur chloride
Aniline	Methanol	Nitroglycerin	Urethane or other
Arsine	Methyl bromide	Nitromethane	isocyanate-containing
Bromine	Methyl chloride	Phosgene	paints
Carbon monoxide	Methylene chloride	Phosphine	Vinyl chloride
Diisocyanates	Nickel carbonyl	Phosphorus trichloride	
Dimethyl sulfate	Nitric acid	Stibine	
Hydrogen cyanide	Nitro compounds		

**Notes**

- Do not use in atmospheres containing less than 19.5 percent oxygen, in atmospheres containing gases or vapors or in atmospheres immediately dangerous to life and health.
- Do not use in atmospheres containing less than 19.5 percent oxygen, or in atmospheres immediately dangerous to life and health.
- Do not wear for protection against organic vapors with poor warning properties or those which generate high heats of reaction with the sorbent material in the cartridge.
- 99.97 percent efficient against 0.3 micron DOP.



## PremAire® Supplied-Air Respirator System

The PremAire Supplied-Air Respirator System is a full-facepiece pressure-demand Type C respirator with a 5-port waist mounted manifold. With amazing flexibility, you can adapt to any of 16 different respirator configurations, from air-purifying to escape SCBA. You benefit from increased applications and reduced inventories.



There are thousands of possible configurations for the PremAire Supplied-Air Respirator System. To order a finished respirator built exactly to your desired specifications, contact your authorized MSA Distributor, who will help you decide which options are best for you and show you how to order. If you require faster delivery, the most popular system combinations are listed below with a traditional MSA part number.

Description	Part No.
Complete assembly, less case	496823
Complete assembly with 5-minute composite cylinder, right hip model, with case	496896
Complete assembly with 10-minute composite cylinder, right-hip model, with case	497291

## Replacement PremAire Respirator Facepieces

### Ultra Elite™ Facepieces with EZ-Don Harness, less nosecup.

Size	Hycar Rubber		Silicone	
	Black	Gray	Black	Gray
Small	817307	817308	817309	817310
Medium	817304	814020	817305	817306
Large	815662	815664	817311	817312

### Ultravue™ Facepieces with rubber harness, less nosecup.

Size	Hycar Rubber	Silicone
	Black	Black
Small	817313	817316
Medium	817314	817317
Large	817315	817318



## PremAire XV Respirator MSA

The PremAire XV Respirator is a combination respirator that can be used as a versatile air-line respirator with emergency-escape capability or as a stand-alone SCBA. The respirator features a high-performance mask-mounted regulator and a pair of compact, waist-mounted air cylinders. The twin cylinders provide a rated service time of 15 minutes of air—or as much as three times more air than is available in conventional five-minute emergency-escape devices.

This longer duration air supply makes the respirator especially suited for confined space applications.

The PremAire XV respirator is available in two versions, the PremAire XV Cadet respirator and the PremAire XV System respirator. The PremAire XV System respirator includes the patented and ultra-versatile PremAire System manifold. The five-port manifold is designed to provide users with multiple respirator options including dual-supply capability and, whenever protective clothing is required, vortex tube body cooling and warming capability. U.S. Patent No. 5,027,807.

## The PremAire System User's Guide MSA

The PremAire System User's Guide provides a comprehensive core instruction manual, an illustrated parts list, a quick-reference chart, and a hard-cover binder with tab pages to house and organize these materials.

Description	Part No.
PremAire System User's Guide, complete	802996
User's Guide binder	802997
Replacement tab pages	802998
Quick-reference Chart	802999
Illustrated Parts List	800000
Instruction Manual for PremAire Supplied-Air Respirator	496958
Instruction Manual for Escape Cylinder Option	800808
Instruction Manual for Duo-Twin Option	800809
Instruction Manual for Dual-Supply Option	497230
Instruction Manual for Vortex Tube Option	497231

## PremAire System Upgrade Kits

### Escape Cylinder Kits

Description	Part No.
Kit w/ Fully-wound Composite 5-minute Cylinder, for Right Hip	800696
Kit w/ Fully-wound Composite 5-minute Cylinder, for Left Hip	800694
Kit w/ Fully-wound Composite 10-minute Cylinder, for Right Hip	800697
Kit w/ Fully-wound Composite 10-minute Cylinder, for Left Hip	800695

### Vortex Tube Kits

Description	Part No.
Kit with 6-inch Hose, Cool-Only Version	800706
Kit with 6-inch Hose, Warm/Cool Version	800710
Kit with 12-inch Hose, Cool-Only Version	801012
Kit with 12-inch Hose, Warm/Cool Version	801014

### Duo-Twin\* Kits

Description	Part No.
Kit with Hycar Rubber Facepiece	800978
Kit with Black Silicone Facepiece	800980

### Dual-Supply Kit

Description	Part No.
Includes 8-inch extension hose, less quick-disconnect assem.	800044

### PremAire Airline Filter Kit

Description	Part No.
PremAire Airline Filter Kit	811940

\* Duo-Twin Kits are stocked with medium size facepieces. Small and large size facepieces are available as special order items.

## PremAire XV Complete Assemblies

Description	Part No.
PremAire XV Cadet Respirator complete with medium SoftFeel rubber Ultra Elite Facepiece (gray), Composite Cylinders and Coated-Nylon Carrier Assembly, less case	813729
PremAire XV System Respirator complete with PremAire System manifold and medium SoftFeel rubber Ultra Elite facepiece (gray), Composite Cylinders and Coated-Nylon Carrier Assembly, less case	813760

## PremAire XV Accessories

Description	Part No.
Carrying/Storage Case	813805
Quick-Fill Kit	813836
Coated-Nylon Cylinder Carrier Assembly	813602
Aluminized Cylinder Carrier	813603

NIOSH/MSHA approved. The self-contained air-supply is approved for entry into and escape from IDLH atmospheres.



MMR Xtreme™ Air Mask

## Self-Contained Breathing Apparatus

MSA offers Air Masks in two design variations the mask-mounted regulator (MMR) model and belt-mounted regulator model. Both are available in low-pressure (2216 or 3000 psig) and high-pressure (4500 psig) versions and can be customized with a variety of air cylinders for regular and extended-use applications. All MSA Air Masks comply with the requirements of the National Institute for Occupational Safety and Health (NIOSH), and the Mine Safety and Health Administration (MSHA). The Ultralite MMR and Custom 4500 MMR and Ultralite II and Custom 4500 II SCBAs comply with ANSI/NFPA-1981, 1992 edition. Contact your authorized MSA Distributor if more specific approval information is required.

### MMR Xtreme™ Air Mask

Sleek, rugged and lightweight, the MMR Xtreme Air Mask is the future of self-contained breathing apparatus (SCBA). It has the best of everything—from its comfortable, wide-vision Ultra Elite facepiece and clean, low-profile mask-mounted regulator with large shutoff button, to its high-strength yet remarkably lightweight cylinder options and advanced Black Rhino carrier/harness assembly. MMR Xtreme Air Masks represent the collection of choice for unparalleled performance.

### Ultralite® MMR (Low-Pressure) and Custom 4500® (High-Pressure) MMR SCBA

With MSA MMR Air Masks, performance is enhanced by a unique split-regulator

design. The regulator's first stage is located on the cylinder backplate, while the second stage attaches to the user's facepiece. The low-pressure Ultralite MMR Air Mask can be used with cylinders pressurized to either 2216 psig or 3000 psig. The Custom 4500 MMR Air Mask is used with 4500 psig cylinders. All MMR units can be easily upgraded to include the Quick-Fill® option for emergency escape breathing support system (EEBSS) plus fast, convenient refilling of cylinders. For added versatility of MMR Air Masks, dual purpose conversion kits are available, providing the capabilities of an air-line respirator and SCBA in one. Cylinder choices remain the same.

### Ultralite® II (Low-Pressure) and Custom 4500® II (High-Pressure) Belt-Mounted SCBA



Ultralite® II SCBA

Ultralite II and Custom 4500 II Air Masks are similar in versatility to their MMR counterparts, but feature a belt-mounted regulator. Available with unique Quick-Fill option for emergency escape plus fast, convenient refilling of cylinders. Ultralite II and Custom 4500 II Air Masks are also available in dual-purpose versions, which combine the capabilities of an SCBA and an air-line respirator in one unit.

### WorkMask™ II and WorkMask™ MMR SCBA (for non-firefighting applications)

The WorkMask II and WorkMask MMR Self-Contained Breathing Apparatuses (SCBA) are economical, lightweight and durable units designed for use in industrial environments that do not require compliance with NFPA-1981. The WorkMask II and WorkMask MMR SCBAs are not designed for firefighting. An optional Dual-Purpose version combines the capabilities of an SCBA and an air-line respirator for greater versatility.



Custom 4500® MMR SCBA



WorkMask™ MMR SCBA

## Cylinders

Stealth Cylinders are the lightest SCBA air cylinders ever developed by MSA. They feature a unique outerwrap made of lightweight, high-performance carbon fibers which reduce cylinder weight by two to six pounds when compared to fiberglass-wrapped cylinders as much as ten pounds when compared to aluminum cylinders. They are available in five models to accommodate a wide range of applications.



Lighter in weight than equivalent fully-wound fiberglass cylinders, Kevlar Fully-Wound Composite Cylinders use ultrahigh-strength Kevlar fibers. As a result, the 30-minute low-pressure model, the Composite III, can be pressurized to 3000 psig, providing 15 more cubic feet of air than an ordinary 2216 psig cylinder. High-pressure models, rated for 45 and 60 minutes, complete the line.



For low-pressure applications using the Ultralite II, Ultralite MMR, WorkMask II and WorkMask MMR Air Masks, MSA offers 30-minute-rated (2216 psig) cylinders in aluminum and composite material. Also available is a 3000 psig fully-wound cylinder, the Composite III. Custom 4500 II and Custom 4500 MMR Air Masks are compatible with 60-minute, 45-minute and 30-minute-rated fully-wound composite cylinders.

Available in a 30-minute low-pressure model, the Fiberglass Hoop-Wound Composite Cylinder features fiberglass wrapping and provides a cost-saving advantage over fully-wound composites. In general, hoop-wound cylinders are 3 to 5 pounds heavier than fully-wound fiberglass or carbon-wrapped cylinders.



Fiberglass Fully-Wound Composite Cylinders feature a fiberglass outerwrap and are available in low- and high-pressure versions, including a low-profile model for confined spaces work. They are also color-coded to differentiate cylinder pressure.



Less expensive than the Hoop-Wound cylinder, the 3AL Cylinder (30-minute, low-pressure) features all-aluminum construction. Weighing approximately 18 pounds, it is designed primarily for customers who don't use an SCBA frequently. It also offers an indefinite service life, provided it passes the hydro test (done every 5 yrs).



**Regulators** 

Both MMR and belt-mounted regulator systems respond quickly to a user's breathing requirements, even under the most demanding situations. Additionally, all MSA regulators are available in dual-purpose models, which permit air-line connections for long-duration work, such as HazMat reconnaissance. For emergency breathing support, MMR and belt-mounted regulators can be customized with MSA's patented Quick-Fill System. The ExtendAire System is designed for use only with MMR Air Masks. The Quick-Fill System also gives firefighters the added capability of rapid cylinder refilling on the fire ground.

**Facepieces** 

MSA offers two facepieces: the Ultra Elite Facepiece and the Ultravue Facepiece. Each model can be used with MSA SCBA and both offer an effective combination of comfort and performance. To reduce lens fogging, users may also select an optional nosecup and either an EZ-Don Nomex facepiece harness or traditional rubber harness with a fully adjustable five-point suspension system.

**Carrier & Harness Assemblies** 

Carrying and distributing the weight of the SCBA is the job of the harness and carrier assembly. MSA's line of flame- and heat-resistant (FHR) Harnesses used on NFPA-compliant Air Masks consists of a large triangular pad, an ergonomically formed backplate and fully adjustable waist and shoulder straps. The Black Rhino™ Harness features an improved adjustment strap system, combined with extra harness padding and a redesigned backpad for increased wearer comfort and maximum weight transfer to the wearer's hips. The Wolverine™ Harness complies with all NFPA requirements in a "no-frills," lightweight and rugged design. On MMR Air Masks, the regulator and pressure gauge air hoses are concealed in the shoulder strap for a smooth, non-tangling profile.

**Ordering Information for MSA SCBAs**

There are thousands of possible configurations for each SCBA. To order a finished air mask built exactly to your desired specifications, contact your authorized MSA Distributor, who will help you decide which options are best for you and show you how to order. If you require faster delivery, the some system combinations are listed below with a traditional MSA part number.

Description	Part No.
Ultralite MMR Air Mask, with medium black Hycar Ultra Elite facepiece, 30-minute rated Composite II cylinder, less case	805856
Ultralite MMR Air Mask, with medium black Hycar Ultra Elite facepiece, 30-minute rated Composite II cylinder, with case	805902
Ultralite II Air Mask, with medium black Hycar Ultra Elite facepiece, 30-minute rated Composite II cylinder, less case	805928
Ultralite II Air Mask, with medium black Hycar Ultra Elite facepiece, 30-minute rated Composite II cylinder, with case	805933

**FireFly® IP Integrated PASS for MMR Air Masks**  
**FireFly® IP Integrated PASS for BMR Air Masks** 

The FireFly IP System is an integrated PASS alarm that's always working and virtually eliminates the possibility of false alarms. Built directly into MSA MMR Air Masks, the FireFly IP System automatically activates when the MSA Air Mask's cylinder is pressurized, so there's no chance of forgetting to turn it on. A FireFly IP System is also available for BMR Air Masks. Compliant with NFPA-1982 1993 Edition.

Description	Part No.
<i>For MMR Air Mask</i>	
FireFly IP PASS Alarm, without thermal sensor	813773
FireFly IP PASS Alarm, with thermal sensor	814301
<i>For Low-Pressure BMR Air Mask with Quick-Fill</i>	
FireFly IP Kit, with thermistor	816867
FireFly IP Kit, without thermistor	816968
<i>For High-Pressure BMR Air Mask with Quick-Fill</i>	
FireFly IP Kit, with thermistor	816965
FireFly IP Kit, without thermistor	816967
<i>For High- or Low-Pressure BMR Air Mask without Quick-Fill</i>	
FireFly IP Kit, with thermistor	816968
FireFly IP Kit, without thermistor	816966



Second-Stage Mask-Mounted Regulator



Belt-Mounted, Dual-Purpose Regulator



Ultra Elite® Facepieces



Ultravue® Facepieces



Black Rhino™ harness



Wolverine™ Harness



FireFly® IP Integrated PASS



FireFly® IP for BMR Air Masks

**FireFly® II and FireFly® K**   
**Personal Alert Safety Systems (PASS)**

The FireFly II PASS is a battery-operated, compact personal alarm that automatically signals for help if the wearer becomes disabled. It provides the most reliable protection available, virtually eliminating false alarms. Compliant with NFPA-1982 1993 Edition. Using the same advanced technology as the FireFly II PASS, the FireFly K PASS offers a unique feature. The unit is activated by removing a key that can then be posted on an accountability board. Once the unit is activated, the user cannot turn it off. Compliant with NFPA-1982 1993 Edition. U.S. Patent No. 4,688,025.



FireFly® II PASS



FireFly® K PASS

Description	Part No.
FireFly K PASS Alarm, without thermal sensor	816117
FireFly K PASS Alarm, with thermal sensor	816118

## The Passport® FiveStar Personal Alarm



The Passport FiveStar Personal Alarm is the first multi-gas personal alarm that can be customized for literally thousands of tasks. Designed with MSA's innovative "smart sensor" technology, the Passport FiveStar Alarm allows the user to select the best combination of sensors to match the task at hand. There are seven sensors to choose from, and as many as five can be used at one time. The sensors can easily be changed and calibrated.

The Passport FiveStar Personal Alarm:

- automatically compensates for changes in atmospheric pressure.
- has a battery gas gauge which indicates, in tenths of hours, how much longer the instrument can run on the remaining battery charge.
- features MSA's Lockalarm™ Circuit, which ensures that the unit will remain in alarm mode whenever combustible gas levels reach 100 percent of the LEL (Lower Explosive Limit).
- is small, lightweight and convenient to carry in hand or clip to a belt.
- can also be left unattended for continuous monitoring.

### Approvals

The Passport FiveStar Alarm meets intrinsic safety testing requirements in certain hazardous atmospheres. The Passport FiveStar has been approved by MET (The first OSHA Nationally Recognized Testing Laboratory [NRT]) for use in Class I Division 1, Groups A, B, C and D; Class II Division 1, Groups E, F, G; and Class III hazardous locations. Other third-party approvals are pending. Contact MSA for approval status.



Passport® FiveStar Personal Alarm

## Ordering Information for the Passport FiveStar Personal Alarm

There are thousands of possible configurations for the Passport FiveStar Alarm. To order a finished instrument built exactly to your desired specifications, contact your authorized MSA Distributor, who will help you decide which options are best for you and show you how to order. For your convenience, Passport FiveStar Alarm Kits are listed below with a traditional MSA part number.

### Instrument Kits

### Part No.

Confined Space Kit, 4-Gas: LEL/O <sub>2</sub> /CO/H <sub>2</sub> S, pump, NiCd, AC Charger, 10-ft sample line, 1-ft probe, nylon jacket	711296
Confined Space Kit, 3-Gas: LEL/O <sub>2</sub> /CO pump, NiCd, AC Charger, 10-ft sample line, 1-ft probe, nylon jacket	711297
Confined Space Kit, 3-Gas: LEL/O <sub>2</sub> /H <sub>2</sub> S, pump, NiCd, AC Charger, 10-ft sample line, 1-ft probe, nylon jacket	711298
Fire Service Kit, 4-Gas: CH <sub>4</sub> /O <sub>2</sub> /CO/H <sub>2</sub> S, pump, NiCd, AC Charger, 10-ft sample line, 1-ft probe, nylon jacket, squirt gas, plastic carrying case	711301



Passport® Personal Alarm



## The Passport™ Personal Alarm

The Passport™ Personal Alarm is the first portable gas monitor that lets you continuously monitor up to five gases simultaneously in a single compact unit. Weighing only 30 ounces, the Passport Personal Alarm can be conveniently hand held, clipped to your belt, or positioned in a stationary area. It offers a sophisticated range of features, high accuracy and simple operation.

Each unit is equipped with your choice of sensors for monitoring combustible gas, oxygen level and a selection of toxic gases commonly encountered in workplace atmospheres. The Passport Alarm has only three buttons. Its back-lit liquid crystal display (LCD) continuously provides readings from all sensors. When a preset alarm condition is detected by any sensor, an internal horn activates and two bright red warning lights flash. When an alarm condition occurs, the alarms cannot be manually reset until the gas condition clears or the user moves to fresh air. The combustible sensor uses MSA's Lockalarm® Circuit. If the combustible gas level reaches 100% of the Lower Explosive Limit (LEL), the alarm locks and cannot be reset until the user moves to fresh air, turns the unit off and back on again.

### Approvals

The Passport Personal Alarm meets intrinsic safety testing requirements in certain hazardous atmospheres. The Passport Personal Alarm has been approved by MET (The first OSHA Nationally Recognized Testing Laboratory [NRTL]) for use in Class I Division 1, Groups A, B, C and D; Class II Division 1, Groups E, F, G; and Class III hazardous locations. Passport Personal Alarms configured for methane are approved by MSHA for use in U.S. coal mines; approval number 8C-64-0, and Pennsylvania DER Bureau of Deep Mine Safety, approval number BISC 123-94. Other third party approvals are pending. Contact MSA for approval status.



Data Docking Module for Passport Alarm

## Ordering Information for the Passport Personal Alarm

There are thousands of possible configurations for the Passport FiveStar Alarm. To order a finished instrument built exactly to your desired specifications, contact your authorized MSA Distributor, who will help you decide which options are best for you and show you how to order.

### Data Docking Module

The Passport Personal Alarm is capable of storing data and downloading it to a PC through the Data Docking Module. The data can be presented in ASCII text or in a Lotus 1-2-3 format.

Description	Part No.
Data Docking Module Kit, with Module, MSA Link Software and Instruction Manual	804679



### Cricket® Personal Alarms

The Cricket series of personal alarms are miniature, practically maintenance-free instruments designed to provide users with an inexpensive yet dependable way to monitor for oxygen, CO or H<sub>2</sub>S. Cricket devices feature a three-volt lithium battery and a high-performance sensor. Both of which provide one year of continuous operation with three minutes of continuous alarm per day.

Offering a multitude of applications, Cricket Personal Alarms are well-suited for use in such potentially hazardous environments as confined spaces, oil refineries, pulp and paper mills, water and waste treatment facilities, steel mills and other industries where personal monitoring is necessary.

#### Approvals

MET (an OSHA-NRTL); Class I; Division 1; Groups A, B, C and D; Class II, Division 1, Groups E, F and G; Class III.



Cricket® Personal Alarm for CO

Instrument					Test Gas Cylinder	
Part No.	with Test Station	Gas	Lo Alarm	Hi Alarm	Part No.	Conc. (ppm)
804746	no	CO	35 ppm	400 ppm	806255	400
805639	yes	CO	35	400	806255	400
809956	no	CO	150 ppm	200 ppm	809243	200
812501	yes	CO	150	200	809243	200
812714	no	CO	50 ppm	200 ppm	809243	200
804745	no	H <sub>2</sub> S	5 ppm	15 ppm	806253	15
805638	yes	H <sub>2</sub> S	5	15	806253	15
809186	no	H <sub>2</sub> S	10 ppm	15 ppm	806253	15
812500	yes	H <sub>2</sub> S	10	15	806253	15
804625	no	O <sub>2</sub>	19.5%	18.9%	—	—

### Test Gas Check Kit

Description	Part No.
Test Gas Station only	804626



Escort ELF® Sampling Pump

### Escort ELF® and Escort® LC Sampling Pumps

The patented Escort ELF Sampling Pump can be used for personal and area sampling. (U.S. Patent No. 5,295,790.) The state-of-the-art electronic laminar flow sensor, consisting of a laminar flow element and pressure sensor, provides constant flow (volume) control, with ± 2.5% regulation of flow rate (from 1 to 3 lpm) and automatic compensation for changes in battery voltage, temperature, altitude and sample load. An internal secondary standard calibrates the pump continuously and only needs to be checked against a primary standard once a month (or every 200 hours for coal mine dust sampling).

The Escort LC Sampling Pump can be used with a variety of personal and area sampling devices to collect such airborne contaminants as asbestos fibers, toxic gases, vapors, particulates, fumes and mists. It can also be used to sample silica dust, coal dust and organic vapors. The Escort pump is exceptionally compact, lightweight and quiet in operation. Engineered for use in “hostile” environments, the unit can be sprayed with water while operating without being damaged.

#### Approvals

Escort ELF and Escort LC Sampling Pumps are UL approved as intrinsically safe for use in hazardous locations—Class 1, Groups A, B, C, D; Class II, Groups E, F, and G; and Class III, Division I locations. In addition, the Escort ELF is NIOSH certified for coal mine dust sampling (TC-74-030) and MSHA certified as intrinsically safe for underground use (Approval No. 2G-3924-1).

### Ordering Information for the Escort ELF and Escort LC Sampling Pumps

There are many possible configurations for the Escort ELF and Escort LC Sampling Pumps. To order a finished instrument built exactly to your desired specifications, contact your authorized MSA Distributor, who will help you decide which options are best for you and show you how to order.

### Replacement Parts

Description	Part No.
Battery Pack with O-ring	497702
One Replacement Inlet Water Stop Filter	802897
Escort Pump Overhaul Kit	802922
Inlet Dust Filter (pkg of 5)	808935



Escort® LC Sampling Pump





## V-Gard® Protective Caps and Hats

V-Gard Protective Caps and Hats from MSA consist of a polyethylene shell and suspension system working together as a protection system. V-Gard headwear features advanced styling in either cap or hat styles, with the cap available in three sizes: small (6-7 1/8), standard (6 1/2-8) and large (7 1/2-8 3/4).



**Approvals**  
V-Gard Caps and Hats meet or exceed the applicable requirements for a Type I helmet (top impact) as outlined in ANSI Z89.1 1997, Class E and G (formerly Class B and A). V-Gard Caps and Hats are not specifically designed to protect against lateral blows from the front, side or rear. MSA's lateral protective helmets are so designed and must be used if lateral protection is desired. For more information, contact your Authorized MSA Distributor.

## Chemgard® EC Faceshield Frames for Slotted V-Gard Caps

The Chemgard EC Faceshield Frames have the Easy-Lock™ visor attachment and are designed to be used with a universal visor (see below). Note: Large size V-Gard Slotted Caps require use of the Tempgard® Faceshield Frame (Part No. 488105).

Description	Part No.
Chemgard EC Faceshield Frame w/ brackets, less visor, non-friction joints	804639
Chemgard EC Faceshield Frame w/ brackets, less visor, not equipped with lockdown device on frame	804579
Special hardware for attaching Mark V Ear Cup arm and muff assembly (P/N 477160) when using Chemgard EC Faceshield Frame only	804612
<b>Nitrometer Additions</b>	
Standard Chemgard Nitrometer Mask, complete with frame and black chinguard (less visor) for slotted cap	488150
Chinguard for Nitrometer Mask, black polypropylene	490770
Chinguard for Nitrometer Mask, clear polycarbonate	800592

## Universal Visors

Visor Type	Color	Size (inches)	Part No.
Acetate visor	clear	8 x 16 x .040	488133
Acetate visor	clear	6 x 16 x .040	491909
Acetate visor	clear	8 x 16 x .060	488134
Acetate visor	clear	8 x 19 x .040	488139
Acetate visor	med. green tint	8 x 16 x .040	488135
Acetate visor	med. green tint	8 x 16 x .060	488136
Acetate visor	dark green tint	8 x 16 x .040	488137
Acetate visor	Shade 5 (green)	8 x 16 x .060	805569
Polycarbonate visor	clear	8 x 16 x .040	488131
Polycarbonate visor	clear	8 x 16 x .060	488132
Polycarbonate visor	clear	8 x 19 x .060	488138
Polycarbonate visor	clear	6 x 16 x .060	491908
Fog free polycarbonate visor	clear	8 x 16 x .040	802337
Fog free polycarbonate visor with holes for a Chin Guard	clear	8 x 19 x .060	494916
Fog free polycarbonate visor	clear	6 x 16 x .040	803844
Nitrometer mask visor	clear acetate	6 x 16 x .040	488127
Nitrometer mask visor	clear polycarbonate	6 x 16 x .040	488126
Nitrometer mask visor	med. green acetate	6 x 16 x .040	492220
Nitrometer mask visor, fog free	clear polycarbonate	8 x 19 x .060	494916
Nitrometer mask visor	Shade 5 (green) acetate	6 x 16 x .060	817129
Wire screen visor, plastic edge, 20 mesh (not for use in elevated temperatures)		6 1/2 x 14	476356
Wire screen visor, aluminum edge, 20 mesh		8 x 17 1/2	457409

Other accessories are available, such as chinstraps, goggle retainers, welding shields, helmet lights and more! We also offer *Logo Express* custom logo imprinting. Contact your Authorized MSA Distributor.

## V-Gard Headwear Ordering Information

### V-Gard Slotted Caps

Color	Size	Suspension	Part No.
White	Small	Staz-On	466354
White	Small	Fas-Trac	477477
White	Standard	Staz-On	463942
White	Standard	Fas-Trac	475358
White	Large	Staz-On	473284
White	Large	Fas-Trac	477482
Blue	Small	Staz-On	466355
Blue	Small	Fas-Trac	477478
Blue	Standard	Staz-On	463943
Blue	Standard	Fas-Trac	475359
Blue	Large	Staz-On	476928
Yellow	Small	Staz-On	466356
Yellow	Small	Fas-Trac	477479
Yellow	Standard	Staz-On	463944
Yellow	Standard	Fas-Trac	475360
Yellow	Large	Staz-On	473285
Orange	Standard	Staz-On	463945
Orange	Standard	Fas-Trac	475361
Red	Standard	Staz-On	463947
Red	Standard	Fas-Trac	475363
Green	Standard	Staz-On	463946
Green	Standard	Fas-Trac	475362
Gray (Navy)	Standard	Staz-On	463948
Gray (Navy)	Standard	Fas-Trac	475364
Gold	Standard	Staz-On	464852
Gold	Standard	Fas-Trac	475365
Robin's Egg Blue	Standard	Staz-On	463111
Brown	Standard	Staz-On	464658
Hi-Viz Orange	Standard	Staz-On	488148
Hi-Viz Orange	Standard	Fas-Trac	488146
Silver	Standard	Staz-On	484340
Tan	Standard	Staz-On	461180
Black	Standard	Staz-On	475235
Light Buff	Standard	Staz-On	478237
Purple	Standard	Staz-On	488398
Hi-Viz Lime Green	Standard	Staz-On	815558

### Special V-Gard Slotted Cap

Color	Size	Suspension	Part No.
White, w/ American Flag	Standard	Staz-On	474159

### V-Gard Non-Slotted Hats

Color	Suspension	Part No.
White	Staz-On	454733
White	Fas-Trac	475369
Blue	Staz-On	454732
Blue	Fas-Trac	475368
Yellow	Staz-On	454730
Yellow	Fas-Trac	475366
Orange	Staz-On	454734
Red	Staz-On	454736
Red	Fas-Trac	475371
Green	Staz-On	454735
Green	Fas-Trac	475370
Gray (Navy)	Staz-On	454731
Gray (Navy)	Fas-Trac	475367

## Noisefoe® Mark V Ear Cup Kit (NRR 23)

Mark V™ Ear Cup Kits are designed for easy attachment to slotted MSA Caps and help to reduce the effects of excessive noise.

Description	Part No.
<b>For use with Slotted Caps Only</b>	
Noisefoe Mark V muff complete with brackets	469006
Noisefoe Mark V arm and muff assembly, less brackets	477160
Noisefoe Mark V bracket assembly only	486921
Special hardware for attaching Mark V arm and muff assembly (P/N 477160) when using Chemgard EC Faceshield Frame only	804612