

Air-Purifying Respirators: Industrial

Advantage® 200 LS Respirators

Advantage 200 LS Respirator with combination chemical cartridges



The Advantage 200 LS Respirator's lighter and softer facepiece is made from a clear blue formulation of thermoplastic rubber to give workers more comfort and stability than ever.

Extensive anthropometric research led to the Advantage Respirator's unique design. MSA's engineers examined facial form data of over 8,000 people and, with CAD technology, developed the AnthroCurve™ Sealing Surface, which instantly conforms to each wearer's unique facial characteristics.

The unmatched fit and comfort start with a soft, pliable combination of rubber and plastic that provide a virtually customized fit. These are key components in the patented MultiFlex® System that equalizes pressure on the face seal area, while delivering exceptional stability, so the respirator will not collapse during wear.

For more information, see Bulletin 1012-10.



Advantage 200LS Respirator with Flexi-Filter Pads

Note: See p. 11 for selection of low-profile Flexi-Filter® Pads.

Advantage 200 LS Facepieces*

Description	2-Piece Neckstrap	Single Neckstrap
Advantage 200 LS, small	815696	815448
Advantage 200 LS, medium	815692	815444
Advantage 200 LS, large	815700	815452

Advantage 200 LS Facepiece and Cartridge Kits

Complete with Chemical Cartridges and Filters.

Description	OV-N95 Cartridge	Multigas R95 Cartridge
Advantage 200 LS, small	816943	816701
Advantage 200 LS, medium	816939	816697
Advantage 200 LS, large	816947	816705

* See pages 11–12 for Advantage filters and cartridges.

Comfo® Cartridge† Adapter for Advantage Respirators

Advantage Adapter, pkg of 2	809999
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†See page 14 for threaded Comfo filters and cartridges.

Advantage Fit Test Adapter

Advantage Fit Test Adapter	10056424
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See page 17 for probed versions of these respirators which can be used for fit testing.

Easy to use!



Free!

Advantage Technical Support CD

Instant information about MSA's Advantage 200 LS and 3000 Respirators

- Single source for care & use information, instruction manuals, fit-testing forms, parts lists and cartridge information
- Enhances your use of MSA's lighter, softer half-mask and optically correct, comfortable full-face respirators
- Convenient, immediate, paperless retrieval
- Easy-to-use, interactive format
- Multi-lingual English/Spanish
- Call MSA Customer Service for your **FREE** copy!



Advantage® 3000 Respirators



The Advantage 3000 Full-Face Respirator incorporates MSA's global engineering expertise and is designed to meet NIOSH and EN standards.

The respirator features a wraparound lens combined with a soft, pliable silicone facepiece that provides a total solution to your air-purifying respirator needs.

Its fit technology is based on the proven face seal of the Ultra Elite Facepiece, which was based on facial measurements from more than 8,000 people.

For the utmost in convenience, the Advantage 3000 uses the same cartridges and filters as the Advantage 200 LS Respirator.

The Advantage 3000 Respirator enhances worker performance through a new design that allows even lower breathing resistance and includes a standard nose cup that reduces fogging in low temperatures or high humidity conditions.

In addition, the facepiece lens has a scratch resistant coating and has been engineered to be optically correct, giving you superior visibility and peripheral vision. The Advantage 3000 Respirator meets all performance requirements of ANSI Z87.1.2003 (protective eye and face protection).

Donning the mask is made easier with pre-adjustable rubber straps. With the Advantage 3000 Respirator, you can set the position of the upper straps to receive a consistent fit, time after time. In addition, the preset upper straps prevent uncomfortable snags during donning and doffing, and also provide a tighter, more secure seal. Wearers also can choose the new European-style Advantage harness, which dons like a catcher's mask.

For more information, see Bulletin 1012-10.

Advantage 3000 Respirator*

Advantage 3000 Facepieces

Description	Small	Medium	Large
Advantage 3200 Twin Port Respirator, w/rubber harness	10028996	10028995	10028997
Advantage 3200 Twin Port Respirator, w/Advantage European-style harness	10031340	10031309	10031341

Spectacle Kits for Full-Facepiece Respirators

For use by workers who must wear corrective lenses.

Spectacle Kit for Advantage 3000	10029298
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Cover Lens for Advantage 3000

This clear, flexible cover lens protects the facepiece lens from scratches during storage, handling & use.

Cover Lens Clear, box of 25	10031542
Cover Lens Smoke, box of 25	10031543

* See pages 11–12 for Advantage filters and cartridges.

Advantage Fit Test Adapter

Advantage Fit Test Adapter	10056424
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Easy to use!



Advantage 3000 Respirator with rubber harness



Advantage 3000 Respirator with European-style harness

Free!

Advantage Technical Support CD

Instant information about MSA's Advantage 200 LS and 3000 Respirators

- Single source for care & use information, instruction manuals, fit-testing forms, parts lists and cartridge information
- Enhances your use of MSA's lighter, softer half-mask and optically correct, comfortable full-face respirators
- Convenient, immediate, paperless retrieval
- Easy-to-use, interactive format
- Multi-lingual English/Spanish
- Call MSA Customer Service for your FREE copy!



Air-Purifying Respirators: Industrial

Advantage® 4000 Respirators



The new Advantage 4000 Twin Port Full-Face Respirator raises the performance of industrial full-facepiece respirators to a new level. Based on the Advantage 3000 Facepiece, the respirator features a wraparound lens combined with a soft, pliable Hycar or silicone facepiece that provides a total solution to your air-purifying needs.

Its fit technology is based on the proven face seal of the Ultra Elite Facepiece. For the utmost in convenience, the Advantage 4000 uses the same cartridges and filters as the Advantage 200 LS and Advantage 3000 Respirator.

In addition, the facepiece lens has scratch-resistant coating and has been engineered to be optically correct, giving you superior visibility and peripheral vision. The Advantage 4200 Respirator also meets the performance requirements of ANSI Z87.1.2003.

The Advantage 4000 Respirator enhances worker performance through a new design that allows low breathing resistance and includes a standard nose cup that reduces fogging in low temperatures or high humidity conditions.

Options include spectacle kits for corrective lenses, cover lens and welders adapter.

Donning the mask is made easier with a comfortable net-type harness with a four-point adjustable suspension. Wearers also can choose pre-adjustable rubber straps.

Advantage 4000 Respirator*			
Advantage 4000 Facepieces			
Description	Small	Medium	Large
Advantage 4200 Twin Port Respirator, w/net head harness, Hycar	10083797	10083793	10083801
Advantage 4200 Twin Port Respirator, w/rubber head harness, Hycar	10083799	10083795	10083803
Advantage 4200 Twin Port Respirator, w/net head harness, Hycar	10083796	10083792	10083800
Advantage 4200 Twin Port Respirator, w/rubber head harness, Hycar	10083798	10083794	10083802
Spectacle Kits for Full-Facepiece Respirators			
For use by workers who must wear corrective lenses.			
Spectacle Kit for Advantage 4000	10029298		
Cover Lens for Advantage 4000			
This flexible cover lens protects the facepiece lens during storage, handling and use.			
Cover Lens Clear, box of 25	10031542		
Cover Lens Smoke, box of 25	10031543		
Welders Adapter			
Clip-On Welders Adapter for Advantage 4000 Twin Port Facepiece, with cover lens, less filter plate	10065328		

* See pages 11–12 for Advantage filters and cartridges.



Advantage 4000 Respirator with Welder's Adapter, Filter Plate and Flexi-Filter Pads

Advantage® 1000 Respirators

The Advantage 1000 Full-Face Respirator features a wraparound flexible lens that offers excellent fit and comfort with increased vision. It weighs 40% less than conventional full-face respirators and uses the same cartridges as the Advantage Family Respirators†.



The Advantage 1000 Respirator is constructed of super-soft Hycar™ rubber that provides the feel and comfort of silicone but has better permeation resistance. The facepiece, which is available in three sizes, has a unique inturred lip seal that provides an exceptional seal against a wide range of facial contours. The Advantage 1000 facepiece also features a distinctive, flexible urethane lens that is integrally bonded to the facepiece, eliminating the need for rigid lens retainers that can cause unwanted pressure points.

Standard equipment includes a speaking diaphragm, for clear, short-range communications, and a noseclip, to reduce lens fogging in low temperatures or high-humidity conditions.

Advantage 1000 Facepieces

	Small	Medium	Large
Black, with speaking diaphragm and noseclip	805414	805408	805420

Advantage 1000 Respirator Accessories

Flexible Cover Lens for Advantage 1000

Protects the facepiece lens from scratches during storage, handling, and use.

Advantage 1000 Cover Lens, clear, box of 25	813832
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Lens Shield for Advantage 1000

For added impact protection, a polycarbonate lens shield snaps into place. For nuclear personnel, the lens shield provides an additional level of eye protection and increased beta-radiation protection.

Clear Lens Shield, small	806463
Clear Lens Shield, medium/large	806462
Tinted Lens Shield, small	806465
Tinted Lens Shield, medium/large	806464

ESP® II Communication System

A one-piece, self-contained electronic speech projection device that allows wearers to speak normally, yet be heard loud and clear. Also fits Millennium Gas Mask.

ESP II Communication System for Advantage 1000 and Millennium Masks	10026265
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Flexi-Filter® Pads for Advantage Respirators

These low-profile, flexible pads fit well under a welding hood and with other personal protective equipment. They offer great balance and weight distribution for maintaining a good face seal, while their swept-back design provides improved vision and comfort.

Filter Type & Efficiency
See Definitions below

MSA Filter Description	Part No.	Color Coding	Filter Type & Efficiency			See Notes below
			P100	P95	N95	
Flexi-Filter P100	818342					1,4
Flexi-Filter P100 w/Nuisance Level OV, Ozone Removal	818343					1,4
Flexi-Filter P100 w/Nuisance Level AG, HF Removal	818344					1,4
Flexi-Filter N95	818346					1
Flexi-Filter N95 w/Nuisance Level OV Removal	818347					1
Flexi-Filter P95	818354					1
Flexi-Filter P95 w/Nuisance Level OV Removal	818355					1
Flexi-Filter P95 HF Removal (NIOSH)	10063227					1

Definitions

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

P95-Particulate Filter (95% filter efficiency level) effective against all particulate aerosols.

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

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.



Flexi-Filter HF filter

NIOSH Approved P95 HF

For more information, see Bulletin 1012-08.

Air-Purifying Respirators: Industrial

Advantage® Respirator Cartridges

The Advantage line of particulate, chemical and combination cartridges is NIOSH-approved (to 42 CFR, Part 84) and provides lightweight, low-profile performance. Cartridges fit both 200 LS Half-Mask and 3000 Full-Facepiece Advantage Respirators.

MSA Cartridge Description	Re-Order Part Number	Color Coding	Acid Gases						Ammonia	Methylamine	Formaldehyde	Hydrogen Fluoride	Mercury Vapor	Filter Type & Efficiency See Definitions below			See Notes below	
			Organic Vapor	Chlorine	Sulfur Dioxide	Chlorine Dioxide	Hydrogen Chloride	Hydrogen Sulfide*						P100	R95	N95		
GMA	815355																	2,3
GMA with N95 Prefilter	815355 with 815394 or 816357																	2,3
GMA with R95 Prefilter	815355 with 815397																	2,3
GMA P100	815362																	2,3,4
GMB	815356																	2
GMB with N95 Prefilter	815356 with 815394 or 816357																	2
GMB with R95 Prefilter	815356 with 815397																	2
GMB P100	815363																	2,4
GMC	815357																	2,3
GMC with N95 Prefilter	815357 with 815394 or 816357																	2,3
GMC with R95 Prefilter	815357 with 815967																	2,3
GMC P100	815364																	2,3,4
GMD	815358																	2,3
GMD with N95 Prefilter	815358 with 815394 or 816357																	2,3
GMD with R95 Prefilter	815358 with 815397																	2,3
GMD P100	815365																	2,3,4
GME	815359																	2,3
GME with N95 Prefilter	815359 with 815394 or 816357																	2,3
GME with R95 Prefilter	815359 with 815397																	2,3
GME P100	815366																	2,3,4
GMI P100**	815641																	2,4
Mersorb	815361																	2,4
Mersorb with N95 Prefilter	815361 with 815394 or 816357																	2,4
Mersorb with R95 Prefilter	815361 with 815397																	2,4
Mersorb P100	815368																	2,4
Low-Profile P100	815369																	1,4
N95 Snap-On Prefilter and Cover	815394 Pack of 10 816357 Box of 50 815392 Reusable Snap-On Cover 2 in a Package	⚠ WARNING																
R95 Snap-On Prefilter and Cover	815397 Box of 20 815401 Reusable Snap-On Cover 2 in a Package	An appropriate cartridge change-out schedule must be developed by a qualified professional, unless the cartridge/canister utilizes an end-of-service-life indicator. The change-out schedule must take into account all factors that may influence respiratory protection including specific work practices and other conditions unique to the worker's environment. If using against substances having poor warning properties, there is no secondary means of knowing when to replace the cartridges/canister. In such cases, take appropriate additional precautions to prevent overexposure, which may include a more conservative change-out schedule or using an air-supplied respirator or SCBA. Failure to follow this warning can result in serious personal injury or death. As a reference, below is a partial list of substances having poor warning properties:																
Definitions		Acrolein				Hydrogen cyanide				Nitric acid				Phosphorus trichloride				
N95-Particulate Filter (95% filter efficiency level) effective against particulate aerosols free of oil; time use restrictions may apply.		Aniline				Hydrogen selenide				Nitro compounds				Stibine				
R95-Particulate Filter (95% filter efficiency level) effective against all particulate aerosols; time use restrictions may apply.		Arsine				Methanol				Nitrogen oxides				Sulfur chloride				
P100-Particulate Filter (99.97% filter efficiency level) effective against all particulate aerosols.		Bromine				Methyl bromide				Nitroglycerin				Urethane or other diisocyanate-containing paints				
* Escape only.		Carbon monoxide				Methyl chloride				Nitromethane								
** Effective against, but not NIOSH-approved for Iodine Vapor.		Diisocyanates				Methylene chloride				Phosgene				Vinyl chloride				
		Dimethyl sulfate				Nickel carbonyl				Phosphine								

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.

Comfo Classic® and Comfo Elite® Respirators

The **Comfo Classic Respirator** features SoftFeel® facepiece material, which is an MSA-exclusive formulation that improves pliability and softness. Like earlier Comfo respirator models, the Comfo Classic Respirator features a unique face seal design that gives wearers an exceptional fit.



The **Comfo Elite Respirator** provides protection against a variety of respiratory hazards. The Comfo Elite Respirator, available in black silicone, has a unique sealing surface designed to reduce facepiece slippage. The Comfo Elite Respirator comes in small, medium, and large sizes. NIOSH-certified.



Ultra Elite® Twin-Cartridge Respirators

The demand version of the **Ultra Elite Facepiece** from MSA can be used as a twin-cartridge air-purifying respirator for full-face respiratory protection. The unique lens design provides a high level of peripheral and downward vision. It is available in three sizes and has large adjustment tabs for easy donning and doffing. Choose one of two facepiece materials—SoftFeel® Hycar rubber or silicone—to enhance wearer comfort. A speaking diaphragm in front of the wearer's mouth improves communication so that speech is not blocked. A nose cup reduces lens fogging in low temperatures or high-humidity conditions.



†See page 14 for threaded Comfo filters and cartridges.

Ultra Elite Facepiece				
With Twin-Cartridge Adapter				
Material	Color	Small	Medium	Large
SoftFeel silicone	Black	10016755	10016756	10016757
Less Twin-Cartridge Adapter				
Material	Color	Small	Medium	Large
SoftFeel Hycar rubber	Black	493064	493020	493108
SoftFeel silicone	Black	493072	493028	493116
Note: Ultra Elite Facepieces must be fitted with a Twin-Cartridge Adapter to be used as a twin-cartridge respirator.				
Twin-Cartridge Adapter				
Converts demand Ultra Elite or Ultravue facepieces to twin-cartridge respirators.				
Twin-Cartridge Adapter for Ultra Elite/Ultravue Facepieces				803622

Comfo Classic Respirator

Material	Color	Small	Medium	Large
SoftFeel Hycar	Black	808075	808074	808076
SoftFeel silicone	Black	808072	808071	808073

Comfo Elite Respirator

Material	Color	Small	Medium	Large
Silicone	Black	490492	490491	490493

Ultra-Twin® Respirators

The **Ultra-Twin Full-Facepiece Respirator** has an inturred lip around the edge for a secure, comfortable 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.†



Standard equipment includes a speaking diaphragm for clear, short-range communications and a nose cup, to reduce lens fogging in low temperatures or high-humidity conditions.

Ultra-Twin Respirator

Material	Color	Small	Medium	Large
Hycar	Black	471298	471286	471310
Silicone	Black	480263	480259	480267

Air-Purifying Respirators: Industrial

Comfo® Respirator Cartridges

The Comfo line of particulate, chemical and combination cartridges is NIOSH-approved (to 42 CFR, Part 84). Cartridges fit Comfo Classic, Comfo Elite, Ultra-Twin, Ultra Elite Twin-Cartridge and Duo-Twin Respirators.

MSA Cartridge Description	Re-Order Part Number	Color Coding	Acid Gases											Filter Type & Efficiency See Definitions below			See Notes below			
			Organic Vapor	Chlorine	Sulfur Dioxide	Chlorine Dioxide	Hydrogen Chloride	Hydrogen Sulfide*	Ammonia	Methylamine	Formaldehyde	Hydrogen Fluoride	Mercury Vapor	P100	R95	N95				
GMA (OV)	464031 (10 in pkg.)																			2,3
GMA P100	815178 (6 in pkg.)																			2,3,4
GMA P100 Short Stack	815186 (6 in box)																			2,3,4
GMB (AG)	464032 (10 in box)																			2
GMB P100	815179 (6 in box)																			2,4
GMC (OV/AG)	464046 (10 in pkg.)																			2,3
GMC P100	815180 (6 in box)																			2,3,4
GMC P100 Short Stack	815188 (6 in box)																			2,3,4
GMD	464033 (10 in box)																			2,3
GMD P100	815181 (6 in box)																			2,3,4
GME (Multigas)	492790 (10 in box)																			2,3
GME P100	815182 (6 in box)																			2,3,4
GMI P100	815184 (6 in box)																		2,4	
Mersorb®	466204 (10 in box)																		2,4	
Mersorb P100	815185 (6 in box)																		2,4	
P100	815175 (10 in box)																		1,4	
Sparkfoe® P100	815176 (10 in box)																		1,4	
Low-Profile P100	815177 (10 in box)																		1,4	
Stand-alone and cover N95 and covers required for Comfo Respirators	816662 N95 (10 in pkg.) 816661 N95 (50 in box) 489353 Reusable snap-on cover (1 in pkg.; 2 req.)																			1
Prefilter and Cover N95	816662 N95 (10 in pkg.) 816661 N95 (50 in pkg.) 489353 Reusable snap-on cover (1 in pkg.; 2 req.)																			1
Prefilter and Cover R95	816287 R95 (20 in box) 489219 R95 Reusable snap-on cover (1 in pkg.; 2 req.)																			1

Definitions

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.

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

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.

* Escape only.

** Effective against, but not NIOSH-approved for Iodine Vapor.

⚠ WARNING

An appropriate cartridge change-out schedule must be developed by a qualified professional, unless the cartridge/canister utilizes an end-of-service-life indicator. The change-out schedule must take into account all factors that may influence respiratory protection including specific work practices and other conditions unique to the worker's environment. If using against substances having poor warning properties, there is no secondary means of knowing when to replace the cartridges/canister. In such cases, take appropriate additional precautions to prevent overexposure, which may include a more conservative change-out schedule or using an air-supplied respirator or SCBA. Failure to follow this warning can result in serious personal injury or death. As a reference, below is a partial list of substances having poor warning properties:

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 diisocyanate-containing paints
Carbon monoxide	Methyl chloride	Nitromethane	
Diisocyanates	Methylene chloride	Phosgene	Vinyl chloride
Dimethyl sulfate	Nickel carbonyl	Phosphine	

Ultra Filter® Respirators

Ultra Filter Respirators are full-face, single-cartridge respirators designed for protection against particulate hazards, especially in the nuclear and abatement industries. The Ultra Filter Respirator uses a compact round filter cartridge that has a large effective filter area to provide low breathing resistance and high loading capacity. The Round Ultra Filter Cartridge has a P100 classification for high-efficiency protection against oil- and non-oil-containing hazards or hazard-specific standards requiring HEPA filters, such as the Lead and Asbestos Standards.



Ultra Filter Complete Assemblies		
Facepiece Size	with Hycar Rubber Facepiece	with Silicone Facepiece
Medium	10007370	10009220
Replacement Cartridge		
Round Ultra Filter Cartridge, box 6		10010420
Round Ultra Filter Cartridge, box 50		10010421

Air-Purifying Respirator Accessories

Cover Lens for Full Facepiece Respirators

Protects the facepiece lens from scratches during storage, handling and use.



Lens Shield for Advantage 1000

For added impact protection, a polycarbonate lens shield snaps into place. For nuclear personnel, the lens shield provides an additional level of eye protection and increased beta-radiation protection.

Carrying Pouches

A belt-mounted carrying pouch with Velcro closures is available for half-mask respirators; a black pouch is available for Advantage 1000 Respirators.



Respirator Carrying/Storage Case

Black plastic carrying/storage case for full-facepiece respirators or other safety equipment, such as half-mask respirators, goggles, and ear muffs. Workers who store their safety equipment in car trunks, trucks, tool lockers, etc., will find this rugged case to be ideal.



Cover Lens for Full Facepiece Respirators			
Color	No./Box	Facepiece	Part No.
Clear	25	Ultra Elite	491500
Smoke-tinted	25	Ultra Elite	805456
Clear	25	Ultravue	456975
Smoke-tinted	25	Ultravue	480326
Clear	25	Advantage 1000	813832
Clear	25	Advantage	10031542
Smoke-tinted	25	Advantage	10031543
Lens Shield for Advantage 1000			
Lens Color	Small	Medium/Large	
Clear	806463	806462	
Tinted	806465	806464	

Respirator Carrying Pouches and Carrying/Storage Case	
Carrying pouch for half-mask respirators	468730
Carrying pouch for Advantage 1000 Respirator, black	817040
Black plastic carrying/storage case	D2056734

Twin-Cartridge Adapter and Cartridge Adapter

The Twin-Cartridge Adapter (right) converts demand Ultravue or Ultra Elite Facepieces to twin-cartridge respirators. The Cartridge Adapter allows use of threaded Comfo Cartridges on Advantage Series Respirators.



Cartridge Adapters	
Twin-Cartridge Adapter	803622
Cartridge Adapter, package of 2	809999

Cradle Headband Conversion Kit

For simple, snap-on replacement of elastic headstraps with a cradle headband, for Comfo Classic and Comfo II Respirators.

Cradle Headband Conversion Kit	
Cradle conversion kit	479875

Air-Purifying Respirators: Industrial

Air-Purifying Respirator Accessories

Spectacle Kits for Full-Facepiece Respirators

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 pair of metal-frame spectacles. Desired adjustment is obtained by moving the spectacles in and out of the rubber guide and up and down the wire support. The Advantage 1000 and the Ultravue/Ultra-Twin kits (S-7 shape, 44-mm lens size) and the Ultra Elite kit (S-7 shape, 48-mm lens size) fit Universal Bridge Corrective Lenses that can be obtained from local sources. The Spectacle Kit can be used with a nosecup.

There are two kits for the Ultra Elite facepiece; one uses a side wire support to hold the lenses in the facepiece, while the other uses a center support to position the unit (spectacle adjustments are similar).



Side Support Spectacle Kit for Ultra Elite Facepiece



Center Support Spectacle Kit for Ultra Elite

Spectacle Kits

Ultra Elite Spectacle Kit (side wire support)	804638
Ultra Elite Spectacle Kit (center support)	493581
Advantage 1000 Spectacle Kit (side wire support)	816137
Ultravue/Ultra-Twin Facepiece Spectacle Kit (side wire support)	454819

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.



Personal Safety Equipment Towelettes

Provides an excellent method for wiping and refreshing respirators, hardhats, and other safety equipment between full cleaning periods.



Cleaning Accessories

Canister with 220 towelettes, 4-1/4" x 6"	697382
Box of 100 individually wrapped towelettes, 7-1/4" x 5"	697383
"The Big Ones," Box of 50 individually wrapped towelettes, 8" x 11"	10022871
MSA Confidence Plus Germicidal Cleaner, in 32 oz. bottle	10009971

Nosecup (to reduce fogging)

Molded from a soft rubber compound that is resistant to facial oils, the optional nosecup helps reduce lens fogging. The nosecup is particularly effective under conditions of high-humidity and/or low temperatures by inhibiting contact between moist exhalation and the facepiece lens. A nosecup can be easily affixed to the facepiece without tools, and any size nosecup may be installed in any size MSA facepiece, resulting in a customized facepiece for more comfortable use.



Nosecups for Ultravue/Ultra-Twin



Nosecups for Advantage 1000

Welder's Adapter for Full-Facepiece Respirators

MSA Welder's Adapters are molded of polycarbonate plastic, which has high resistance to impact, heat, and welding splatter. The clip-on adapter attaches to the facepiece by molded-in clips. The integral adapter is attached by removing the facepiece lens and replacing it with the adapter. A large vision area—4-1/2" x 5-1/4"—provides an unobstructed view of work. The Welder's Adapter is supplied with an impact-resistant cover lens; the desired filter plate is ordered separately. Rayfoe™ Filter Plates are available in four standard shades—6, 10, 12, 14.



Welder's Adapter with AutoChange Lens



Welder's Hood with AutoChange Lens

The AutoChange Electronic Welding Lens is for use with MSA Welders Adapters. The solar-powered AutoChange Welding Lens is an automatic-darkening welding filter. The welding lens is in the light state (semi-transparent) before welding and darkens within 0.4 milliseconds after an arc is struck.

The heat-resistant Welder's Hood is designed to protect the welder's head, neck, and shoulders from welding splatter and sparks. The Kevlar hood has a rubber seal which fits snugly over the Welder's Adapter. The hood also helps protect cartridges when an air-purifying respirator is used in welding operations.

Welder's Accessories

Clip-On Welder's Adapter for Ultravue and Ultra Twin Facepiece; with cover lens, less filter plate	472859
Integral Welder's Adapter for Ultravue and Ultra Twin Facepiece; with cover lens, less filter plate	470786
Clip-On Welder's Adapter for Ultra Elite Facepiece; with cover lens, less filter plate	806482
Clip-On Welder's Adapter for Advantage 4200 Twin Port Facepiece; with cover lens, less filter plate	10077063
Clip-On Welder's Adapter for Advantage 4100 Single Port Facepiece; with cover lens, less filter plate	10065326
Auto-Change Electronic Welding Lens	10068601
Polycarbonate Cover Plate (4-1/2 x 5-1/4)	696095
Polycarbonate Cover Plate (2 x 4-1/4)	4791933
Rayfoe Filter Plate, shade 6, heat-treated	38346
Rayfoe Filter Plate, shade 10, heat-treated	38347
Rayfoe Filter Plate, shade 12, heat-treated	38277
Rayfoe Filter Plate, shade 14, heat-treated	38348
Cover Lens	88379
Welder's Hood, Kevlar	486328

Nosecup (to reduce fogging)

Facepiece	Small	Medium	Large
Ultravue/Ultra-Twin, Black	813138	813139	813140
Advantage 1000, Black	806468	806466	806470

Air-Purifying Respirator Fit-Test Accessories

Facepiece Fit-Test Kits



Qualitative Test Kit



Replacement Hood & Test Solutions



Banana Oil Test Kit

The Occupational Safety and Health Administration (OSHA) requires fit tests to ensure proper fit for workers who use respirators. Quantitative testing methods rely on objective data to determine a proper fit. Qualitative fit-test methods are subjective in nature and rely on the judgment of the test subject.

Bitrex Qualitative Fit-Test Kit

Bitrex QLFT Kit	697444
Replacement Fit-Test Solution	697446
Sensitivity Solution	697445
Replacement Hood	697448
"Using the Qualitative Fit-Test Kit" videotape	697449

Saccharin Qualitative Fit-Test Kit

The Saccharin Qualitative Fit-Test Kit eliminates the need for special filters and is especially useful for dust/mist respirators.

Saccharin QLFT Kit	697287
Replacement Sensitivity Test Solution, 55 ml bottle	697285
Replacement Fit-Test Solution, 55 ml bottle	697286
Replacement Hood	697448
"Using the Qualitative Fit Test Kit" videotape	697325

Banana Oil Qualitative Fit-Test Kit

MSA's Banana Oil Fit-Test Kit relies on a test subject's ability to detect a 95% pure solution of Isoamyl Acetate (banana oil).

Qualitative Fit Test Kit	801628
Qualitative Fit Test Kit, in rugged Pelican case	801629

Probed Respirator Facepieces



Probed Advantage Respirator



Probed Comfo Classic Respirator



Probed Comfo Elite Respirator

All Models Available

To make it easy for you to perform quantitative fit tests, MSA offers a full line of specially modified facepiece assemblies. Each probed facepiece is equipped with a built-in probe assembly, sampling line, and clothing clip to hold the sampling line. The probes are made of solid brass. In all MSA half-facepiece models, the probe is attached to the body of the respirator. Full-facepiece respirators are probed through the lens and sealed with a neoprene washer and brass fittings.

MSA also offers probed lenses for use with existing Ultravue facepieces. These lenses come completely assembled with the same brass probe, sealing hardware, and sampling line as the probed full-facepieces. All respirators use standard MSA high-efficiency filters for tests.

Air-Purifying Respirators: Industrial

Air-Purifying Respirator Fit-Test Accessories

QuikChek® I Adapter

Designed especially for use with MSA respirators equipped with demand-style exhalation valves, the QuikChek I Adapter allows quantitative fit testing without the need for a special probed facepiece.



QuikChek® II Adapter

The QuikChek II Fit Test Adapter allows quantitative fit testing of any Comfo® II, Comfo Classic®, Comfo Elite®, Duo-Twin™ or Ultra-Twin® Respirator. Preassembled, the adapter attaches quickly to the facepiece by threading it into the cartridge receptacle of these twin-cartridge respirators.



QuikChek® III Adapter

The QuikChek III Adapter is specially designed for respirators equipped with Ultra Elite® Full Facepieces. The QuikChek III model threads directly into the facepiece inlet. For completion of a quantitative fit test, an OptiFilter® XL Cartridge must then be threaded into the QuikChek III Adapter.



QuikChek® IV Adapter

Adapter allows qualitative fit-testing and is specially designed for Ultra Elite and Ultravue Full-Facepieces with quarter-turn quick disconnect. Fit-test kit includes a Type H Cartridge.



QuikChek Adapters

QuikChek I Fit-Test Adapter	802710
Replacement Kit with 25 ft of sampling tubing and 25 connectors, clips, and suction cups	803196
QuikChek II Fit-Test Adapter	812022
Replacement Kit with 25 feet of sampling tubing and 25 connectors, clips and suction cups	803196
QuikChek III Fit Test Adapter	805078
Replacement Kit with 25 ft of sampling tubing, 25 connectors, clip and suction cups	803196
OptiFilter XL Cartridge (box of 6)	496081
QuikChek IV Fit-Test Kit	817446
Type H OptiFilter Cartridge (box of 6)	491010
QuikChek Adapter for Adv 1000	10006227
Advantage Fit Test Adapter (200 LS and 3200)	10056424

QuikChek® Adapter for Advantage 1000 Facepiece

QuikChek Adapter converts a standard Advantage 1000 Facepiece to a probed respirator by replacing the speaking diaphragm.



Advantage Fit Test Adapter

For Advantage 200LS and 3000 models.

Easy to use!



Online Response® Respirator Selector

Available on the internet at www.MSAnet.com/response

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



Cartridge Life Expectancy Calculator

Available on the internet at www.MSAnet.com/msanorthamerica

Drag your mouse onto Resources, then Tools, then Cartridge Life Calculator

MSA's interactive web pages help users determine the life expectancy of specific respirator cartridges in various hazardous situations. This information provides guidance for how long a cartridge should be used before it must be replaced.



OptimAir® TL PAPP



The OptimAir TL PAPP is designed for loose-fitting hoods to protect against particulates, toxic gases and vapors, or a combination. “Smart” features set flow rates automatically through built-in sensors. Unit offers audible and visual alarms for added worker safety. Audible alarms travel up the breathing tube close to the user’s ear.

MSA’s OptimAir TL PAPP incorporates a sleek, low-profile design for user comfort never before offered in a PAPP. All components including the motor blower, cartridges and battery are packaged in a single hip-hugging housing. Improved motor blower electronics allow for optimum air flow and filter resistance while the compact and ergonomic battery pack affords lightweight comfort and fit. Flow control sensors are activated by insertion of the cartridges and breathing hose to the blower housing. The unit automatically adjusts for altitude via an internal pressure switch.

Superior design features permit fast, accurate changeout of cartridges, hoods and batteries. Slim, curved PAPP housing helps to minimize fatigue and permits work in tight confined areas. Standard OptimAir TL PAPP kit includes motor blower, smart charger, standard battery, and decon belt.

NIOSH-Approved

A variety of hood materials, styles and configurations are all NIOSH-approved, including DuPont Tychem SL and QC with single and double bib. A choice of hose connection is also available. Unit has an APF of 1,000 (Assigned Protection Factor).

Smart Design Features

- Crush proof breathing tube
- Automatic setting of flow rates
- Audible and visual alarms for low flow indication and low battery voltage
- Less bulk and better weight distribution improves worker efficiency
- Every cartridge has its own sealing gasket

Cartridges and Accessory Options

- P100
- Acid gas/organic vapor plus P100
- Acid gas/ammonia/formaldehyde plus 100
- Smart charger
- Decon or comfort waist belt
- Extended life battery
- Shoulder strap

OptimAir TL PAPP		
OptimAir TL PAPP Kit		
10081116	OptimAir Kit, for hoods with standard battery	
Hoods		
Tychem QC Hoods		
With suspension, 4-pack	single bib	double bib
Threaded connector	10083329	10083330
Standard	10083383	10083384
With suspension, 4-pack, yellow	single bib	double bib
Threaded connector	10086925	10086926
Tychem SL Hoods		
With suspension, 4-pack	single bib	double bib
Threaded connector	10083381	10083382
Standard	10083385	10083386
Hood Accessories		
10083843	Hose clamp for standard hood, 6-pack	
10049631	Hood hose	
10078469	Suspension only, for Tyvek hood	
10083618	Sweatband for hood suspension, 10-pack	
10085084	“O” Ring replacement, hose hood, 10-pack	

OptimAir TL PAPP Accessories	
Cartridges	
10080455	HE cartridge, 6-pack, Hi-efficiency particulate
10080454	GMC HE cartridge, 6-pack, (organic vapors, acid gases, HE)
10080456	GME HE cartridge, 6-pack, (acid gases, ammonia, formaldehyde, HE)
10081414	Cartridge receptacle cover
Battery and Charger	
10076108	Standard battery for OptimAir TL PAPP
10076110	Standard battery charger for OptimAir TL PAPP
10076109	Long-life battery for OptimAir TL PAPP
10076107	Long-life battery charger for OptimAir TL PAPP
Decon Accessories	
10075799	Decon cover for OptimAir TL PAPP, 5-pack, clear
10087152	Decon cover for OptimAir TL PAPP, 5-pack, yellow
10078201	Decon belt (backpack buckle)
10074725	Decon belt (cam lock buckle)

Powered Respirators (PAPRs): Industrial

OptimAir® 6A PAPR with OptiFilter® Cartridges

The OptimAir 6A Powered Air-Purifying Respirator (PAPR) provides respiratory protection by filtering contaminants from ambient air and providing a constant flow to either a facepiece or hood. It can be used with a family of filters and chemical cartridges for protection against particulates, toxic gases and vapors, or a combination of these hazards.

The OptimAir 6A includes a motor/blower module and rechargeable NiCad battery and is designed to operate for a full shift. It uses only two filters. The unit is available with full or half-mask facepieces, or a hood. Hooded OptimAir 6A PAPRs are only approved for use with the OptiFilter Type HE Cartridges only.

Applications include hazardous materials cleanup, asbestos and lead paint abatement, chemical processing, foundry, smelter and coke oven applications, and nuclear facilities work.

For more information, see Data Sheet 10-00-09.



Facepieces for OptimAir 6A

	Black Hycar			Black Silicone		
	Small	Medium	Large	Small	Medium	Large
Ultravue	471218	457126	471230	480251	480247	480255
Ultra Elite	493064	493020	493108	493072	493028	493116
Comfo	480127	480122	480132	480130	480125	480135
Comfo Welder's	484204	484198	484210	484206	484200	484212

OptiFilter XL/OptiFilter Cartridges for OptimAir 6A PAPR

MSA Purifying Element	Purifying Protection Code	Color Coding	Respiratory Hazards	Part No.	No. in Box	NIOSH Approval	
OptiFilter XL Type H	HE		Particulate filter (99.97% filter efficiency level) effective against all particulate aerosols.	10042346 496081	20 6	TC-21C-512 (Ultravue)	TC-21C-513 (Comfo Style) (Tyvek Hood)
OptiFilter GMA-H	OV/HE		Approved for not more than 1,000 ppm organic vapors; particulate filter (99.97% filter efficiency level) effective against all particulate aerosols. ^{1,2,3,4,5}	800376	6	TC-23C-1263 (Ultravue)	TC-23C-1257 (Comfo Style)
OptiFilter GMC-H	OV/AG/HE		Approved for not more than 1,000 ppm organic vapors; chloride, chlorine dioxide, hydrogen chloride, sulfur dioxide, and escape only from hydrogen sulfide; particulate filter (99.97% filter efficiency level) effective against all particulate aerosols. ^{1,2,3,4,5}	494217	6	TC-23C-1056 (Ultravue)	TC-23C-1252 (Comfo Style)
OptiFilter GMD-H	AM/MA/HE		Approved for ammonia and methylamine; particulate filter (99.97% filter efficiency level) effective against all particulate aerosols. ^{1,2,4,5}	494219	6	TC-23C-1058 (Ultravue)	TC-23C-1254 (Comfo Style)

Notes

- 1 Cannot be used w/ PreFilter/Cover Assembly P/N 497098.
- 2 Do not use in atmospheres containing less than 19.5 percent oxygen, or in atmospheres immediately dangerous to life or health.
- 3 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.
- 4 Cannot be used on PAPRs equipped with Tyvek Hood.
- 5 99.97 percent efficient against 0.3 micron DOP.

⚠ WARNING

An appropriate cartridge change-out schedule must be developed by a qualified professional, unless the cartridge/canister utilizes an end-of-service-life indicator. The change-out schedule must take into account all factors that may influence respiratory protection including specific work practices and other conditions unique to the workers' environment. If using against substances having poor warning properties, there is no secondary means of knowing when to replace the cartridges/canister. In such cases, take appropriate additional precautions to prevent overexposure, which may include a more conservative change-out schedule or using an air-supplied respirator or SCBA. Failure to follow this warning can result in serious personal injury or death. As a reference, at right is a partial list of substances having poor warning properties:

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

OptimAir 6A PAPR with Ultravue Facepiece

Assembly includes motor/blower module, NiCad Battery, facepiece, breathing tube, belt, and battery charger.

Facepiece	Size	Part No.
Black Hycar Ultravue	Medium	494236

OptimAir 6A PAPR, less facepiece

Assembly includes motor/blower module, NiCad Battery, breathing tube, belt, and battery charger. **Order facepiece from table at left.**

OptimAir 6A PAPR, less facepiece	10023039
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OptimAir 6A with Tyvek Hood

Assembly includes motor/blower module, NiCad battery, Tyvek Hood, breathing tube, belt and battery charger.

Facepiece	Cartridge	Part No.
Tyvek Hood	Type HE only	491301

Replacement Parts

Motor/Blower Module	491102
Battery Pack for OptimAir 6A	491120
Standard Single-Unit Battery Charger	463471
Single-Unit Dual-Rate Battery Charger	486614

Replacement Hoods for OptimAir 6A with Tyvek Hood

Tyvek Hood Shell only	488721
Tyvek Hood Assembly	486485

Support Belts for PAPRs

A polyurethane-coated nylon support belt is the standard belt with the OptimAir 6A PAPR. In addition, MSA offers a clear PVC support belt. Both belts are easy to decontaminate. If decontamination is not a factor, users may opt for an uncoated nylon web belt. Optional shoulder support strap may be used with any of these PAPR belts.

Polyurethane-coated Nylon Support Belt	492827
PVC Support Belt	473902
Web Support Belt, uncoated	9961
Shoulder Support Strap	803903

Powered Respirators (PAPRs): Industrial

OptimAir® MM 2K PAPR with Type HE OptiFilter® XL Filter

The OptimAir MM 2K Powered Air-Purifying Respirator (PAPR) is designed for abatement, nuclear, lead and other hazardous particulate environments. The PAPR filters particulates from ambient air and provides a constant flow of respirable air to the Advantage 3000, Ultravue or Ultra Elite Facepiece. The mask-mounted motor/blower with HEPA filter has a low profile design that enhances user maneuverability and simplifies decontamination.



OptimAir MM 2K PAPR with Advantage 3000 Facepiece

The PAPR includes a small, lightweight, water-resistant nickel metal hydride (NiMH) battery pack that will operate for eight hours of continuous use. Weighing only 12.5 oz., it measures only 3" x 5" x 1". The low-profile unit fits close to the wearer's body. The sealed battery pack is water-resistant for easy shower decontamination. Another advantage: NiMH batteries do not have the "memory effect" associated with NiCad batteries. The standard Dual-Rate Battery Charger will recharge a fully discharged battery in less than three hours.

OptiFilter Cartridges for OptimAir MM 2K PAPR

MSA Purifying Element	Purifying Protection Code	Color Code	No. in Box	Part No.
OptiFilter XL, Type HE	HE		20	10042346
OptiFilter XL, Type HE	HE		6	496081

For more information, see Data Sheet 10-04-09.

Complete OptimAir MM 2K PAPR Assemblies

All assemblies include: motor/blower, NiMH battery, dual-rate battery charger, cable, one Type HE OptiFilter XL Cartridge, belt, and choice of Advantage 3100, Ultravue or Ultra Elite Facepiece.

Advantage 3100 PAPR			
Harness	Small	Medium	Large
with Rubber Harness	10034152	10034150	10034151
with Advantage Harness	10034155	10034153	10034154
Ultravue PAPR			
Material	Small	Medium	Large
Black Silicone	10023881	10023859	10023880
Black Hycar	10023858	10023569	10023857
Ultra Elite PAPR			
Material	Small	Medium	Large
Black Silicone	10023886	10023887	10023885
Black Hycar	10023882	10023883	10023884

Replacement Facepieces

Advantage 3100			
Facepiece	Small	Medium	Large
with Rubber Harness	10028999	10028998	10029000
with Advantage Harness	10031343	10031342	10031344
Ultravue			
Material	Small	Medium	Large
Black Silicone	480251	480247	480255
Black Hycar	471218	457126	471230
Ultra Elite			
Material	Small	Medium	Large
Black Silicone	493072	493028	493116
Black Hycar	493064	493020	493108

Accessories

Type HE OptiFilter XL Prefilter/Cover for use with OptimAir MM 2K PAPR

Designed to reduce filter loading in asbestos abatement and other high dust applications.

OptiFilter XL prefilter/cover assembly to protect the cartridge from water-spray and gross asbestos-containing material	497098
Prefilters, box of 50	493524
Flow-Check Meter	487995
Adapter for Flow-Check Meter, for use with OptimAirMM PAPR	491046

Replacement Parts

NiMH Battery Pack for OptimAir MM 2K	10023481
Motor/Blower Assembly	10023482
Cable Assembly	10023480
Dual-Rate Battery Charger for OptimAir MM 2K	10023483

OptimAir MM 2K PAPR Upgrade Kit

Upgrade Kit includes: motor/blower module, NiMH battery, dual-rate battery charger, cable, one Type HE OptiFilter Cartridge, and belt. Use your present demand-style Ultravue or Ultra Elite Facepiece or order facepiece separately from table above.

OptimAir MM 2K Upgrade Kit	10025945
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Powered Respirators (PAPRs): Industrial

OptimAir® 6A PAPR with OptiFilter® Cartridges for Homeland Security Applications

A powered air-purifying respirator that filters contaminants from ambient air via CBA/RCA OptiFilter Cartridges. Belt-mounted motor/blower provides constant air flow via breathing tube to facepiece.

- Features Millennium Facepiece
- Used with combination cartridges for protection against particulates, toxic gases and vapors, or a combination of these hazards
- Maintenance-free lithium battery with 10-year shelf life
- Optional rechargeable NiCd battery



OptimAir 6A PAPR Kit

OptimAir 6A PAPR Kit complete with medium Millennium Facepiece, lithium battery, belt, motor/blower module. (Order OptiFilter cartridges separately.)	10046394
CBA/RCA OptiFilter Cartridges, Box of 6	10011890
Lithium Battery Pack for OptimAir 6A PAPR	816912
Motor/Blower Module	491102
Protective Covers, Package of 5	808494

Optional Battery and Charger

Rechargeable NiCd Battery	491120
Standard Single-Unit Battery Charger	463471
Single-Unit, Dual-Rate Battery Charger	486614

Other OptimAir 6A Replacement Parts and Accessories

Breathing Tube Assemblies

For Tight-Fitting Facepieces, 30"	486364
For Tight-Fitting Facepieces, 36"	492197
For Tyvek Hood	481980

Protective Cover

Protects from water (such as in asbestos decontamination showers) or particulate contamination.

Pkg of 5 for OptimAir 6A	808494
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Flow-Check Devices

MSA flow-check devices allow users of PAPRs to quickly and conveniently verify that their unit is providing the required air flow.

Flow-Check Meter	487995
Adapter for Flow-Check Meter for use with Tyvek Hood	489999
Adapter for Flow-Check Meter for use with OptimAir MM PAPR	491046

Chin-Type Gas Masks



The Chin-Type Gas Mask is a protective system consisting of a full facepiece and canister. The small, round plastic canister attaches directly to the facepiece. The system is designed to permit downward head movement.

The Chin-Type Gas Mask is designed for respiratory protection against a specific gas or group of gases as indicated by canister identification. See the canister table for specific canister approvals. From a practical standpoint, gas masks are generally suitable for ventilated areas with relatively stable contaminant concentration levels. They should never be used in confined spaces or where oxygen deficiency and high gaseous concentrations may occur. Gas masks may also be used for escape only from atmospheres in which the contaminant concentration does not exceed the maximum use condition of the gas mask.

Facepieces



Advantage Facepiece

3100 Ultravue Facepiece

Ultra Elite Facepiece

Whether you choose the Advantage 3100, Ultravue or Ultra Elite facepiece, all three are available in three sizes to accommodate a wide range of users. The Advantage 3100 facepiece has a silicone rubber facepiece, while the Ultravue and Ultra Elite facepieces are available in a choice of silicone or Hycar rubber. All have a scratch-resistant polycarbonate lens that provides a wide field of vision. Optional lens cover accessories provide even greater scratch resistance. All three facepieces feature a nose cup that helps reduce lens fogging in low temperature conditions or in high-humidity conditions.

Gas Mask Facepieces

Harness	Advantage 3100 Single-Port Respirator Facepiece					
	Small	Medium	Large			
with Rubber Harness	10028999	10028998	10029000			
with Advantage Harness	10031343	10031342	10031344			
Material	Ultravue Facepiece			Ultra Elite Facepiece		
	Small	Medium	Large	Small	Medium	Large
Black Silicone	480251	480247	480255	493072	493028	493116
Black Hycar	471218	457126	471230	493064	493020	493108

Replacement Canisters for Chin-Type Gas Masks

MSA Canister Identification	Purifying Protection Code	Color Coding	Approval	Maximum Use Conditions		Gas/Vapors	Part No.
				% Volume	PPM		
Phosphine/Ammonia/Chlorine/P100	PH/AM/CL	Green/Black	TC-14G-0274	0.50%	5000	Ammonia and Chlorine* Phosphine*	10059903
				0.15%	1500		
Organic Vapor/P100	OV	Black	TC-14G-0279	0.50%	5000	Organic Vapors, also effective against organic iodides and iodide vapors*	10067469
Hydrogen Fluoride/P100	HF	Green/Black	TC-14G-0280	0.10%	1000	Hydrogen Fluoride*	10067491
Formaldehyde Acid Gas/Chlorine Dioxide/Escapes from Hydrogen Sulfide/P100	FM/AG/CD/HS	Green/Black	TC-14G-0282	0.05%	500	Formaldehyde* Acid Gases and Hydrogen Sulfide* Chlorine Dioxide*	10067470
				0.50%	5000		
				0.10%	1000		

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

Belt-Mounted Version

The belt-mounted version of the Chin-Type Gas Mask allows the wearer to mount the chin-style canister on a support belt. This shifts the weight of the canister to the hip, providing greater comfort for some wearers. The belt-mounted version is also recommended for welding or grinding operations, as the canister can be positioned away from sparks or molten metal. An optional spark cover is available to protect canister from spark damage.

The additional parts needed are listed below. See page 16 for Welders Adapters, lenses and protective hood.

Additional Parts for Belt-Mounting

Belt Clip	10068195
Breathing Tube	10068129
PVC Belt	473902
Web Support Belt, uncoated	9961
Polyurethane-coated Nylon Support Belt	492827
Spark Cover	10068152



Storage Cases for Chin-Type Gas Mask

MSA Canister Identification	Part No.
Phosphine/Ammonia/Chlorine/P100	10075204
Organic Vapor/P100	10075207
Hydrogen Fluoride/P100	10075205
Formaldehyde Acid Gas/Chlorine Dioxide/Escapes from Hydrogen Sulfide/P100	10075206
Wall bracket	10071231

Air-Purifying Respirators: Industrial

Industrial-Size and Super-Size Gas Masks

The Super-Size and Industrial-Size Gas Masks are a protective system consisting of a facepiece, breathing tube, harness, and chemical-sorbent canister. A large, oval-shaped aluminum canister attaches to the facepiece with a corrugated breathing tube. The canister is supported on the wearer's chest with a nylon carrying harness.



Industrial-Size Gas Mask

The Industrial and Super-Size Gas Masks are designed for respiratory protection against a specific gas or group of gases as indicated by canister identification. See the table for specific canister approvals. From a practical standpoint, gas masks are generally suitable for ventilated areas with relatively stable contaminant concentration levels. They should never be used in confined spaces or where oxygen deficiency and high gaseous concentrations may occur. Gas masks may also be used for escape only from atmospheres in which the contaminant concentration does not exceed the maximum use condition of the gas mask.



Super-Size Gas Mask



Window-Cator®
Type N Gas
Mask Canister

The Super-Size Gas Masks have a Window-Cator Canister, which contains an indicator to show the effectiveness of the canister against certain contaminants. The small round window in the front of the canister is an end-of-service-life indicator (ESLI). When the shade of the ESLI changes from its "Starting" color to the "Time-To-Change" color, the canister is beginning to lose its effectiveness and must be replaced.

For more complete information, see Data Sheet 05-00-01.

Industrial-Size Gas Mask, Complete Assemblies

Each assembly includes medium black Hycar Ultravue Facepiece, breathing tube assembly, and harness assembly, and **one** indicated canister packaged in a plastic carrying case.

Gas	Canister	Part No.
Organic vapor	816001 GMA-N95; front-mounted	817071
Ammonia	816002 GMD-N95; front-mounted	817072
Chlorine	816003 GML-N95; front-mounted	817073

Super-Size Gas Mask, Complete Assemblies

Each assembly includes medium black Hycar Ultravue Facepiece, breathing tube assembly, and harness assembly, and two indicated canister packaged in a plastic carrying case.

Gas	Canister	Part No.
Organic vapor, phosphine, chlorine dioxide, chlorine, hydrogen sulfide	816009 GMHS-SSW-N95; front-mounted	817077
Ethylene oxide	816010 GME0-SSW-N95; front-mounted	817078
Acid gas, organic vapor, carbon monoxide, ammonia	816012 Type N-P100; front-mounted	817080

Replacement Canisters for Industrial and Super-Size Gas Masks

MSA Canister Identification	Purifying Protection Code	Color Coding	Approval	Maximum Use Conditions	Part No.
GMA-N95	OV	Black	TC-14G-0197	2% organic vapors*	816001
GMD-N95	AM	Green	TC-14G-0196	3% ammonia*	816002
GML-N95	CL	White	TC-14G-0207	2% chlorine *	816003
GMHS-SSW-N95	OV/PH/CD/CL/HS	Yellow	TC-14G-0198	0.05% chlorine dioxide; 0.15% phosphine; 2% organic vapors or chlorine; 1% hydrogen sulfide* Window-Cator® canister has end-of-service indicator for hydrogen sulfide	816009
GME0-SSW-N95	EO	Light Green	TC-14G-0199	0.5% ethylene oxide* Window-Cator® canister has end-of-service indicator for ethylene oxide	816010
Type N	AG/OV/CO/AM	Red	TC-14G-0233	2% acid gases, organic vapors, or carbon monoxide; 3% ammonia, or 2% total when more than one class is present; also effective against hydrogen fluoride gas** Window-Cator® canister has end-of-service indicator for carbon monoxide	816012

*Canister contains an N95-Particulate Filter (95% filter efficiency level) effective against particulate aerosols free of oil.

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

Air-Purifying Respirators: First Responder/First Receiver

Respirators for Riot Control

The Millennium Riot Control Mask and the Advantage 10000 Riot Control Masks are NIOSH-approved for protection against CN and CS Riot Control Agents, and P100 particulate efficiency level.

Millennium® Riot Control Gas Mask

A Hycar version of the reliable military-style gas mask (MCU-2/P Mask, used by the U.S. Air Force in Desert Storm) that combines high performance, customized fit, comfort, and cost efficiency.

- Flexible, 1-piece polyurethane lens with wide field of vision is bonded to durable Hycar rubber facepiece
- Dual-canister mount (NATO 40mm thread) allows weapon sighting from either shoulder
- Drinking tube provides connection for fluid ingestion in contaminated atmospheres
- Fully elastic, 6-point head harness promotes easy on/off, easy adjustment, no hair pulling
- Internal nosecup with 2 check valves deflects air from the lens, reduces fogging
- Standard mechanical speaking diaphragm included, or add MSA's optional ESP® II Communications System
- NIOSH -approved (No. TC-14G-0254) for protection against chloroacetophenone (CN), chlorobenzylidene (CS), P100 particulate efficiency level, and particulates



Advantage® 1000 Riot Control Gas Mask

A clean, simplified respirator with Hycar facepiece (based on a proven facepiece design developed for the U.S. Armed Forces) that's up to 40% lighter than conventional full-face respirators and gives high performance, customized fit, comfort, economy, and user acceptance.

- Flexible, 1-piece polyurethane lens with wide field of vision is bonded to durable Hycar rubber facepiece
- Dual-canister mount (bayonet mount) allows weapon sighting from either shoulder
- Fully elastic, 6-point head harness promotes easy on/off, easy adjustment, no hair pulling
- Standard nosecup helps eliminate lens fogging
- Standard mechanical speaking diaphragm included, or add MSA's optional ESP II Communications System
- NIOSH-approved (No. TC-14G-0235) for protection against chloroacetophenone (CN), chlorobenzylidene (CS), P100 particulate efficiency level, and particulates



Millennium Riot Control Mask

With nosecup, drinking tube, and clear polycarbonate outsert. Order canisters separately.

Small	10051286
Medium	10051287
Large	10051288

Millennium Riot Control Canisters

Millennium RC Canisters, box of 6	818264
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Advantage 1000 Riot Control Gas Mask

Complete with canister, nosecup, and identification tag.

Small	813860
Medium	813859
Large	813861

Advantage 1000 Riot Control Canisters

Advantage 1000 RC Canisters, box of 6	817590
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Millennium and Advantage Accessories

ESP® II Communications System

The ESP II Communications System, a 1-piece, self-contained, electronic speech projection device, allows wearers to speak normally, yet be heard loud and clear.

ESP Communications System for Millennium and Advantage 1000 Facepieces (less battery)	10026265
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Lens Outsert

Polycarbonate lens outsert snaps into place over Millennium or Advantage 1000 facepiece lens, providing additional impact protection. Tinted outsert helps conceal identity (suitable only when sufficient light exists).

For Millennium Facepiece	Small	Medium/Large
Clear lens outsert	10008907	10008906
Tinted lens outsert	10008909	10008908
For Advantage 1000 Facepiece	Small	Medium/Large
Clear	806463	806462
Tinted	806465	806464

Other Accessories

Gas Mask Pouch, Military Style	10034184
Black Nylon Bag	817040
Advantage 1000/Millennium Spectacle Kit	816137
Butyl-Coated Nylon Hood	305022

See pp. 135-144 for MSA's Police Line: Body & Tactical Armor and Combat Helmets

Respirators for Homeland Security

Millennium® CBRN Gas Mask

The new NIOSH government CBRN standard for full-facepiece gas masks was issued on March 7, 2003. After extensive testing to that standard, MSA's Millennium CBRN Gas Mask was first to receive NIOSH certification as "compliant against CBRN".

A Hycar version of the reliable military-style gas mask (MCU-2/P Mask, used by U.S. Air Force in Desert Storm) that combines high performance, customized fit, comfort and cost efficiency.



- Flexible, 1-piece polyurethane lens with wide field of vision is bonded to durable Hycar rubber facepiece.
- Dual-canister mount allows weapon sighting from either shoulder
- Drinking tube provides connection for fluid ingestion in contaminated atmospheres
- Fully elastic, 6-point head harness promotes easy on/off and adjustment, with no hair pulling
- Internal nose cup with 2 check valves, deflects air from the lens, reduces fogging
- CBRN canister containing chemical sorbents and a P100 filter to attract, retain and neutralize contaminants
- Standard mechanical speaking diaphragm included, or add MSA's optional ESP® II Communications System
- Optional butyl-coated nylon hood for total head protection
- NIOSH-approved (No. TC-14G-0270) for protection at a CBRN Cap 1 rating

Millennium CBRN Gas Mask

With nose cup, drinking tube, and clear polycarbonate outsert. Order canister separately.

Small	10051286
Medium	10051287
Large	10051288

Millennium CBRN Canister

MSA CBRN Canister	10046570
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For Millennium Gas Mask accessories, see p. 14.

Ultra Elite® CBRN Gas Mask

Safety

- Super-soft black Hycar rubber exceeds the CBRN permeation requirements
- Large lens with 83% unimpeded vision
- Centrally located inlet port for secure, comfortable fit and feel
- Centrally located mechanical speaking diaphragm for clear communications
- Optional ClearCommand® Amplifier for increased communication capabilities



Simplicity

- Available with a 5-point rubber or Speed-ON® head harness
- Identical sealing surfaces for both SCBA and Gas Mask facepieces—eliminating the need for redundant fit testing
- Simplified respiratory protection training program

Reliability

- The Ultra Elite facepiece is fire-service proven, with over a decade of trusted use
- MSA has been making gas masks since World War I
- Largest supplier of gas masks to the law enforcement market

Ultra Elite CBRN Gas Mask

Size	with rubber Head Harness	with Speed-On Head Harness
Small	10052776	10052780
Medium	10052781	10052779
Large	10052778	10052777

Canisters & Cartridges

MSA CBRN Canister	10046570
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Air-Purifying Respirators: First Responder/First Receiver

Responder™ CBRN PAPR (Powered Air-Purifying Respirator)

A belt-mounted powered air-purifying respirator with choice of 2 proven tight-fitting facepieces in 3 sizes. The motor/blower provides constant air flow of a minimum 115 lpm to the facepiece via the breathing tube. Can be used with CBRN cartridge or with the OptiFilter XL or PAPR GME Multigas HE cartridge for tactical operations.

- Protects wearers for up to 8 hours under many hazardous conditions
- First CBRN-approved PAPR with a tight-fitting facepiece
- Choice of 2 proven positive-pressure facepieces, the MSA Millennium and the MSA Ultra Elite
- Choice of CBRN cartridge or multi-gas / particulate chemical cartridges for non-CBRN use

MSA's Responder CBRN PAPR system is ideal for military and special operations personnel who need non-IDLH respiratory protection for an extended period of time.

Industry trusted, with over 50,000 C420's fielded in various U.S. military programs, the C420 Motor-Blower is ideal for filtering contaminants from ambient air and providing a constant airflow of at least 115 lpm to the user's facepiece, providing a twenty times greater OSHA assigned protection factor than APR, due to positive pressure in the mask.

The C420 is available with 2 batteries that have the ability to be "hot-swapped" during warm environment use. The Lithium-Sulfur Dioxide mission battery has an 8 hour run-time. The Nickel Metal Hydride rechargeable battery has a 4 hour run-time. The motor / blower will not interfere with radio communications as it is EMI shielded to MIL-STD-461C.

The C420 comes complete with the motor-blower, belt, airflow indicator and breathing tube.



Responder CBRN PAPR Complete Systems					
You must choose C420 PAPR Kit, facepiece, and cartridge for complete system.					
C420 PAPR Kits (less facepiece and cartridge)					
Part No.	Description				
B-60141-030	C420 PAPR Kit with 30" Breathing Tube				
B-60141-036	C420 PAPR Kit with 36" Breathing Tube				
Gas Mask Facepieces with Head Harness (less cartridge)					
Facepiece	Material	Head Harness	Size		
			Small	Medium	Large
Millennium	Hycar	6-point elastic	10051286	10051287	10051288
Ultra Elite	Hycar	rubber	10052776	10052781	10052778
Ultra Elite	Hycar	Speed-ON	10052780	10052779	10052777
Cartridges					
Part No.	Description				
10046570	PAPR Responder* cartridge, each				
496081	OptiFilter XL cartridge, 6 pack				
10072237	PAPR GME Multigas HE cartridge, each				

*Designed to meet new NIOSH CBRN PAPR Requirements.

Accessories for Responder PAPR	
Part No.	Description
B-20040-001	NiMH Rechargeable Kit (2 NiMH Batteries, Charger & Cap)
S-20036	NiMH Rechargeable Battery Pack
B-20090-001	NiMH Rapid Battery Charger
M-20020	LiSO2 Mission Battery
B-30060-001	NiMH Rechargeable Battery Cap Assembly
S-30019	Web Belt Assembly
B-10079-001	PAPR Carrying Case

About the new CBRN PAPR Standard

NIOSH released a CBRN standard for powered air-purifying respirators (PAPRs) in October 2006. NIOSH conducted product testing and issued approvals to MSA's Responder PAPR, which was the first PAPR with a tight-fitting facepiece to pass the NIOSH requirements.

Air-Purifying Respirators: First Responder/First Receiver

OptimAir® 6HC PAPR

The OptimAir 6HC PAPR (Health Care Powered Air-Purifying Respirator) from MSA is specifically designed to protect health care professionals from residual Chemical/Biological/Radiological Agents, when they are performing First Responder duties during Homeland Security or terrorist situations.

The system features a lightweight, chemical-resistant Tychem SL Hood and belt-mounted blower with two HC Cartridges. The canisters contain a pleated high-efficiency (P100) filter to remove aerosols, radionuclides, and solid particulates; and an impregnated activated carbon bed to adsorb (filter out) gases and vapors. The carbon bed is the same as used in military canisters and is effective against mustard (HD), Sarin (GB), DMMP (a Sarin simulant), HCN, and CK.

For more information, see Bulletin 1010-13-MC.

- Designed specifically for use by ER and other health care providers during Homeland Security situations.
- Continuous air flow meets or exceeds NIOSH standard
- Entire lightweight PAPR weighs under 6 pounds
- Available with Tychem SL Hood or Advantage 3100 Facepiece.
- Tychem SL hood weighs only 8 ounces.
- Hood is compatibly worn with facial hair and glasses
- No fit testing necessary when using hood
- Design allows freedom of movement plus optimum protection
- Tychem SL hood and Advantage 3100 facepiece are comfortable, easy to don and use
- Lithium battery provides 10-year shelf life, 4 hours of wear time
- Approved for High Efficiency, Chlorine, Sulfur Dioxide, Hydrogen Chloride, Hydrogen Fluoride, Hydrogen Sulfide (escape only)
- NIOSH approval TC-23C-2201 with Tychem Hood
- NIOSH approval TC-23C-2209 with Advantage 3100 Facepiece



OptimAir 6HC PAPR with Tychem Hood

OptimAir 6HC PAPR

OptimAir 6HC PAPR with Tychem Hood

OptimAir 6HC PAPR with Tychem Hood Includes motor/blower module, lithium battery, breathing tube, belt and 2 HC Cartridges	10041550
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OptimAir 6HC PAPR with Advantage 3100 Facepiece

OptimAir 6HC PAPR with Advantage 3100 Facepiece Includes motor/blower module, lithium battery, breathing tube, belt and 2 HC Cartridges	10045100
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Accessories and Replacement Parts

HC Cartridges, Pkg. of 6	10042448
Tychem SL Hood	10048179
Breathing Tube for Hood	481980
Single-use lithium battery	10048180
NiCd Battery for training use	491120
Single-Unit Single-Rate Battery Charger for NiCd Battery	463471
Motor/Blower module	10048178
Polyurethane-coated nylon belt	492827
Flow Check Meter	487995
Adapter for Flow Check Meter for use with Hood	489999
Butyl Hood	305022

Safe Escape™ CBRN 15-minute Escape Respirator



When escaping from CBRN agents, every second counts. Depend on the Safe Escape Hood from MSA. The hood gives your employees the protection they need to escape from a terrorist situation safely, quickly and easily — whether they work in high-profile office environments, for government agencies or embassies, or as law enforcement or first responders. The MSA Safe Escape Hood is the equipment of choice for today's diverse workforce.

Engineered for Maximum Performance

Manufactured with a high-performance laminate material, the hood is designed to provide you with the latest in head and neck coverage with respiratory protection against CBRN agents. The soft, high-stretch rubber neck seal conforms to irregular neck contours, allowing a secure fit on a wide variety of users. Its unique sized nosecup helps reduce lens fogging and carbon dioxide buildup by directing airflow inside the hood.

The Safe Escape Hood canister features a high-efficiency particulate filter and activated carbon to combat aerosols, gasses and vapors. In fact, the canister used in the hood contains 50% more carbon than similar canisters used by the U.S. military. Furthermore, MSA has performed extensive testing on the Safe Escape Hood against both simulated and live chemical agents beyond what is tested by NIOSH.

Designed for Comfort

In addition to designing the hood for maximum protection, MSA also took into account the comfort factor. A user who is potentially under stress requires ease of donning and use. The large lens and translucent hood allow better visibility, face recognition and help reduce claustrophobia. The nose cup allows communication superior to that of conventional devices, which require wearers to breathe through a mouth bit. With the integrated nose cup, wearers can breathe and speak normally to provide potentially life-saving communications. The hood also features cradle-type self-adjusting head straps that allow for quick, no assistance donning in the event of an emergency.

For more information, see Bulletin 0514-02.

Safe Escape Respirator	
Safe Escape Respirator in Hextreme Case, Standard	
Universal Size	10073702
Safe Escape Respirator in Hextreme Case, Tactical Version	
Universal Size	10073923
Trainer Version of Safe Escape Respirator	
Universal Size	10073703
Accessories	
Safe Escape Respirator Sizing Kit	10066681
Optional carrying straps and harness kit	10068310
DVD Training video for Safe Escape Respirator	10068013

Note: The only difference between the standard and tactical versions is the outside labeling on Hextreme Case.



Carrying the Safe Escape Respirator



Safe Escape Respirator in Hextreme Case