

Advantage[®] 4000 Abrasi-Blast[™] Respirator

MSA
The Safety Company

Features

- › Constant Flow Air-Line Respirator and Constant Flow Duo-Flo™ Respirator options
- › Choice of shoulder length or waist length hoods to meet various blasting applications
- › Two to three easy-to-remove flat glass cover lenses mounted within special foam material on lens cartridge

Description

Advantage 4000 Abrasi-Blast Respirators are air-line devices with tight-fitting facepieces and durable hoods that provide respiratory and upper body protection for workers engaged in abrasive blasting. Because blasting operations can vary widely in shipbuilding, construction, and utility industries, among others, Advantage 4000 Abrasi-Blast Respirators can be modified through selection of different components or models to meet specific applications.

The respirator is available in Constant Flow Air-Line Respirator and Constant Flow Duo-Flo Respirator models, both of which can accommodate head protection products under the hood.

The Advantage 4000 Abrasi-Blast Respirator constant flow model is a Type CE device as well, and provides protection for abrasive blasting operations within lower contaminant levels (airborne lead concentrations less than 2,500 µg/m³).

Consisting of hood, facepiece with lens housing, breathing tube, lens cartridge, flow-control device, air-supply hose, and support belt, Abrasi-Blast Respirators are designed for diverse applications by varying individual components.

1 Flow Control Device/Fittings

Constant-flow model is approved for use in atmospheres not immediately dangerous to life or health and operates through an adjustable control valve. Control valve incorporates quick disconnect fitting with flow-control device.

Adjustable control valve connectors feature a control knob that allows users to vary air flow within NIOSH-required flow rates (4 cfm minimum to 15 cfm maximum). Connectors are designed to deliver air at fixed inlet pressure regardless of approved hose length used. Adjustable valve connectors require an inlet pressure between 35 and 40 psig with approved hose length of eight to 300 feet.

Constant Flow Duo-Flo Respirator Option - Advantage 4000 Abrasi-Blast Respirators are also available in constant flow Duo-Flo Respirator configuration, designed to handle both air-supplied and air-purifying (particulate only) modes of operation.

Air-supplied mode of operation provides continuous air flow into the facepiece and enables users to work for long periods within contaminated atmospheres without depleting the cartridge. Air-purifying (particulate only) mode of operation is designed for continuous use or when air supply is disconnected or not available. If air supply should fail, users are automatically protected by the air-purifying cartridge and can conveniently escape contaminated areas. Duo-Flo Respirator valve connectors require an inlet pressure between 35 and 40 psig with approved hose length of eight to 300 feet.

2 Lens Cartridge

The cover lens cartridge assembly, an exclusive MSA design, allows for lens changes without work stoppage. Each removable lens (except for the last) has tabs which are pulled to remove cover lenses as abrasion occurs. The last lens has no pull tabs as it protects the facepiece's polycarbonate lens.

Five lens cartridge types are available to match different blasting levels. Users can also choose regular glass or tempered lenses for extra protection against breakage.

- › For medium abrasive blasting, MSA offers cartridges containing three 0.09-inch-thick glass lenses. Users may select tempered or untempered lenses.
- › For heavy abrasive blasting, cartridges containing one, two, or three 0.12-inch-thick glass-laminated lenses are available.

3 Hood

The Abrasi-Blast Hood is available both waist- and shoulder-length styles for general-purpose blasting. The hood is made of an elastomer-coated fabric with good abrasion resistance and is also noted for resistance to chemicals and temperature extremes.

4 Facepiece

Advantage 4000 Abrasi-Blast Respirator uses tight-fitting, full-face Advantage 4000 Facepiece together with cover lens housing assembly.

5 Breathing Tube

Advantage 4000 Abrasi-Blast Respirator uses tight-fitting, full-face Advantage 4000 Facepiece together with cover lens housing assembly.

6 Air-Supply Hose

Three types of MSA air-supply hose are available in lengths of 8, 5, 25, 50, and 100 feet. Neoprene is the most durable/chemical resistant hose type; polyvinyl chloride (PVC) is the most lightweight. Coiled nylon expands or contracts according to need. MSA air-supply hoses must be used to maintain NIOSH approvals on Advantage 4000 Abrasi-Blast Respirator.

7 Belt

Two support belts are available: standard web belt and urethane belt for easier decontamination.

Ordering Information

Standard Constant Flow Advantage 4000 Abrasi-Blast Respirator Assemblies

Includes hood, medium facepiece with net head harness (10089910), lens housing, one lens cartridge (three 0.12" untempered glass cover lenses per cartridge), breathing tube (470734), web belt (9961), and adjustable Snap-Tite (AL) valve connector with socket assembly. Order air supply hose separately.

Hood Style	Flow-Control Device	Complete Assembly
Waist	35-40 psi	10089177
Shoulder	35-40 psi	10089210

Advantage 4000 Duo-Flo Abrasi-Blast Respirator Assemblies

Includes hood, medium facepiece with net head harness (10089910), lens housing, one lens cartridge (three 0.12" untempered glass cover lenses per cartridge), breathing tube (457158), web belt (9961), and Snap-Tite (AL) valve connector with socket assembly.

Hood Style	Flow-Control Device	Complete Assembly
Waist	35-40 psi	10116961
Shoulder	35-40 psi	10116962



Build Your Own Advantage 4000 Abrasi-Blast Respirator

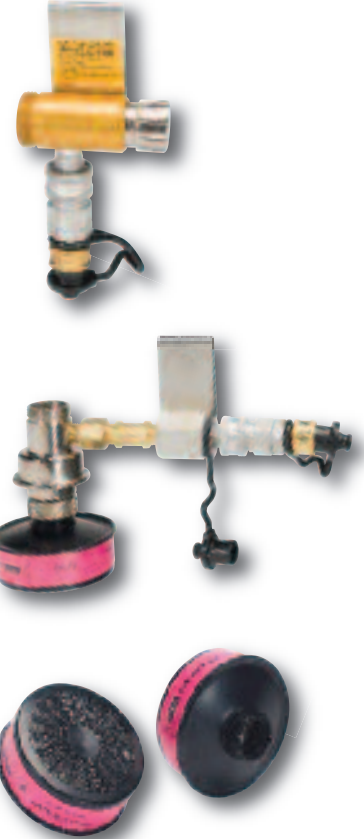
To design your own respirator, purchase component parts separately by selecting part numbers from the following tables. You may also contact MSA Customer Service at 1-800-672-2222 for assistance with building a configuration that best suits your needs. For all Duo-Flo Abrasi-Blast Respirator inquiries, call MSA Customer Service.

1 Fittings/Flow-Control Devices

Adjustable Control Valve (35-40 psig)	
Quick-Disconnect	Adjustable Flow-Control Valve
Snap-Tite, aluminum	460814
Foster, steel	471814
Hansen, brass	471815
CEJN locking	479065

Duo-Flo Valve	
Quick-Disconnect	Flow-Control Valve (35-40 psig)
Snap-Tite, aluminum	466076
Foster, steel	469868
Hansen, brass	476913
CEJN locking	479114

P100 Ultra Filter® for Duo-Flo Valve	
P/N	Description
10010420	Filters, box of 6
10010421	Filters, box of 50



2 Lens Cartridges



Lens Cartridge (12 cartridges per carton)	Lens Description	Recommended Use
473798	0.09" thick, untempered, 3 per cartridge	Medium blasting
473800	0.09" thick, tempered, 3 per cartridge	Medium blasting
10013407	0.12" thick, untempered, laminated, 1 per cartridge	Heavy blasting
473802	0.12" thick, untempered, laminated, 2 per cartridge	Heavy blasting
481742	0.12" thick, untempered, laminated, 3 per cartridge	Heavy blasting

3 Hood Options.

468724	Waist length hood
468725	Shoulder length hood
468705	Replacement zip-in collar assembly for Hypalon Hoods

4 Facepiece

Comes with glass laminated lens; complete with lens housing.

Facepiece	Small	Medium	Large
Advantage Abrasi-Blast Facepiece, w/net head harness, Hycar Rubber	10089160	10089110	10089152
Advantage Abrasi-Blast Facepiece, w/rubber head harness, Hycar Rubber	10089150	10089112	10089154
Advantage Abrasi-Blast Facepiece, w/net head harness, silicone	10089148	10089109	10089151
Advantage Abrasi-Blast Facepiece, w/rubber head harness, silicone	10089149	10089111	10089153



5 Breathing Tube

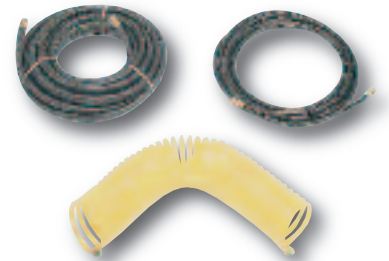
Breathing Tube	Small
470734	Breathing tube, constant flow
457158	Breathing Tube, Duo-Flo Respirator

6 Air-Supply Hose

Air-Supply Hose Temperature Ranges

Neoprene	PVC	Nylon
-25° to 212°F	32° to 120°F	0° to 160°F

MSA 3/8" ID air-supply hose is available in smooth, reinforced, lightweight polyvinylchloride (PVC), chemical-resistant black neoprene, or smooth, coiled nylon. Must be used with respirators in this section to maintain NIOSH certifications. Quick-disconnects are sold separately.



Air-Supply Hose						
Material	Hose Coupling	100 ft.	50 ft.	25 ft.	15 ft.	8 ft.
Neoprene	Brass	—	455022	455021	455020	481071
Neoprene	Stainless steel	—	481080	481079	481078	481077
PVC	Brass	484225	471513	471512	471511	481051
PVC	Stainless steel	—	481060	481059	481058	481057
Coiled nylon	Brass	—	474043*	491515*	491514*	491513*

* Recommended usable length, 4-25 ft.

7 Belts

P/N	Description
9961	Standard nylon belt
492827	Urethane Belt

Parts and Accessories

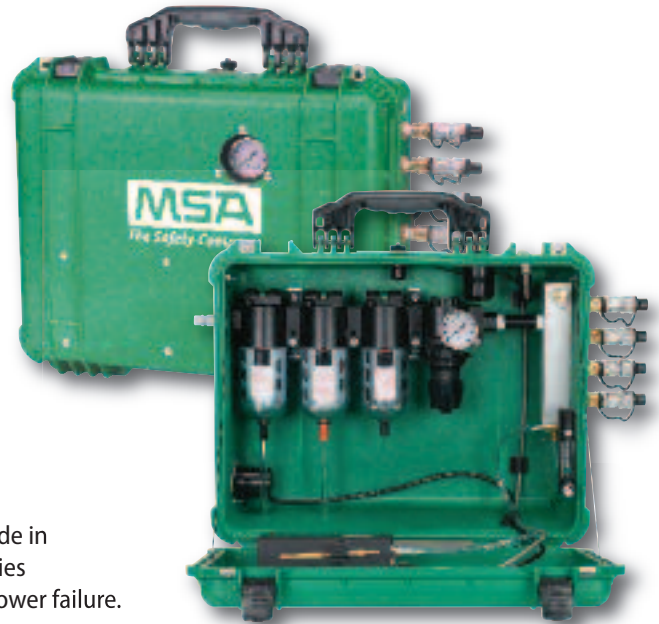
Breathing Air Distribution System

Portable Grade-D filtration system provides breathing air for up to four air-line respirators. Filtration box housed in a rugged polymer case is equipped with three-stage filtration, pressure regulator, four-outlet manifold, and continuous flow 115 VAC carbon monoxide monitor. Filtration box may be used in portable or stationary positions. Two models of filtration boxes are available; one box provides 50 cubic feet of air per minute; second box provides 100 cubic feet of air per minute.

Features:

Three-stage filter:

- ▶ First-stage particulate/ bulk liquid separation filter element
 - Filter Change Indicator changes from green to red
 - Removes 95% of bulk particulates and liquids at 5 microns
 - Auto drain removes liquids from bowl
- ▶ Second-stage oil-coalescing and ultra-fine particulate filter element
 - Filter Change Indicator changes from green to red
 - Removes oil and particulates to 99.99% at 0.01 micron
 - Auto drain removes liquids from bowl
- ▶ Third-stage activated charcoal filter element
 - Filter Change Indicator changes from green to red
 - Removes organic vapors, odors, and tastes
- ▶ Pressure regulator and gauge operate in 1-125 psi range.
- ▶ Four-outlet manifold is available with four outlet fitting options.
- ▶ Carbon monoxide monitor continuously monitors for carbon monoxide in breathing air. Monitor operates on 115 VAC and has two 9 VDC batteries for carbon monoxide sensor. Also acts as backup in the event of AC power failure.
- ▶ Protective case is constructed of corrosion-resistant polymer.



Filtration Boxes

For use in the United States (carbon monoxide monitor set at 10 ppm).

P/N	Description
10107538	50 CFM Filtration Box 4-outlet, carbon monoxide monitor, with union adapters
10107814	50 CFM Filtration Box 4-outlet, carbon monoxide monitor, with Snap-Tite aluminum quick disconnects
10107812	50 CFM Filtration Box 4-outlet, carbon monoxide monitor, with Foster steel quick-disconnects
10107813	50 CFM Filtration Box 4-outlet, carbon monoxide monitor, with Hansen brass quick-disconnects
10107539	100 CFM Filtration Box 4-outlet, carbon monoxide monitor, with union adapters
10107816	100 CFM Filtration Box 4-outlet, carbon monoxide monitor, with Snap-Tite aluminum quick-disconnects
10107817	100 CFM Filtration Box 4-outlet, carbon monoxide monitor, with Foster steel quick-disconnects
10107815	100 CFM Filtration Box 4-outlet, carbon monoxide monitor, with Hansen brass quick-disconnects

Parts and Accessories

Breathing Air Distribution System – Point of Attachment Box

Portable Grade-D filtration system provides breathing air for up to four air-line respirators. The Breathing Air Distribution System Point of Attachment Box housed in a rugged polymer case is equipped with one-stage filtration, pressure regulator, and four-outlet manifold. Point of attachment box may be used in portable or stationary positions.

Features:

One-stage filter:

- ▶ First-stage particulate/bulk liquid separation filter element
 - Filter Change Indicator changes from green to red
 - Removes 95% of bulk particulate and liquids @ 5 microns
- ▶ Pressure regulator and gauge operate in 1-125 psi range.
- ▶ Four-outlet manifold is available with four outlet fitting options.
- ▶ Protective case is constructed of corrosion-resistant polymer.

P/N	Description
10107536	Point of Attachment Box, 4-outlet, with union adapters
10107822	Point of Attachment Box, 4-outlet, with Snap-Tite aluminum quick-disconnects
10107823	Point of Attachment Box, 4-outlet, with Foster steel quick-disconnects
10107821	Point of Attachment Box, 4-outlet, with Hansen brass quick-disconnects



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



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