Abrasi-Blast™ Respirators

Features

- Constant-flow and pressure-demand models.
- Constant-flow Duo-flow option
- Pressure-demand model meets abrasive-blasting requirements of OSHA 29 CFR 1926.62 standard for lead exposure in construction.
- Choice of Hypalon†, duck cloth or neoprene hood to meet various blasting applications.
- Vulcanized thread (elastomer to hood seam) on all new assemblies.
- Silicate-coated Mylar† lens cover to reduce scratching.
- Two to four easy-to-remove flat glass cover lenses mounted in special foam material on the lens cartridge.

Description

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 the shipbuilding, construction and utility industries, among others, the Abrasi-Blast Respirator can be modified through selection of different components or models to meet specific applications.

For example, the respirator is available in pressure-demand and constant-flow models, both of which can accommodate protective headwear worn under the hood.

The pressure-demand version is a Type CE device that is approved for lead concentrations less than 100,000 µg/m^3, based on the Occupational Safety and Health Administration's (OSHA) Lead Exposure in Construction Standard. The constant-flow model is a Type CE device as well and provides protection in abrasive blasting operations with lower contaminant levels (airborne lead concentrations less than 2,500 µg/m^3).

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

† Trademarks of the DuPont Company

MSA

Components

Users can build their own Abrasi-Blast Respirators to fit specialized needs by selecting components that best suit specific applications. Components to choose from and their points of differentiation are:

1a. Pressure Demand- Users must first choose between the pressure-demand and constant-flow models. The pressure-demand version, which uses a 65-85 psig regulator, is approved by the National Institute for Occupational Safety and Health (NIOSH) for use in environments with high contaminant levels (More than 2,500 µg/m^3 of lead). Users must choose one of nine different Quick-Disconnect fittings for attaching the air hose to the pressure-demand regulator.

1b. Flow-Control Device/Fittings- The constant-flow model is approved for use in atmospheres not immediately dangerous to life or health and operates through one of three flow-control devices: adjustable, non-adjustable or a vortex tube.

These versions incorporate the Quick-disconnect fitting with the flow-control device.

Adjustable Control-Valve Connectors feature a control knob that allows the wearer to vary air flow within NIOSH-required flow rates (4 cfm minimum to 15 cfm maximum). The connectors are designed to deliver air at a fixed inlet pressure regardless of the approved hose length used. (Low-pressure adjustable valve-connectors require an inlet pressure between 10 and 15 psig with an approved hose length of 8 to 50 feet. High-pressure adjustable valve-connectors require an inlet pressure between 35 and 40 psig with an approved hose length of 8 to 300 feet.)

Non-adjustable Control-Valve Connectors are available in both low-pressure and high-pressure versions and deliver the required airflow to the facepiece at a fixed inlet pressure regardless of the approved hose length used. (Inlet pressure and hose length comparable to adjustable valve requirements shown above.)

Vortex Tube is a direct-flow high-pressure device which cools as well as regulates the flow of incoming air. The wearer can adjust the temperature of the air with a throttling valve at the end of the tube. The Vortex Tube is available as cool-only or warm-cool.

Cool-only Vortex require an inlet pressure between 60 to 80 psi with an approved hose length of 8 to 300 ft. The **Warm-Cool Vortex** has an approved hose length of 8 to 300 ft. and the inlet pressure is based on the length of hose used. See chart below.

Hose Length	Inlet Pressure
8-100 ft.	60-75 psi
100-200 ft.	75-90 psi
200-300 ft.	80-95 psi

Constant Flow Duo-Flo Option- The Abrasi-Blast Respirator is also available in a constant flow duo-flo configuration. This configuration is designed to handle both air-supplied and air-purifying modes of operation.

Air-supplied mode of operation provides a continuous flow of air into the facepiece, and enables the user to work for long periods of time in contaminated atmospheres, without depleting the cartridge or canister. Air-purifying mode of operation can be used for continuous use or when air supply is disconnected or not available. If the air supply should ever fail, the user is automatically protected by the air-purifying cartridge/canister and can conveniently escape the contaminated area.

2. Lens Cartridge- The cover lens cartridge assembly is an exclusive MSA design, allowing for lens changes without stopping work. Each removable lens, except the last one, has tabs which are pulled to remove the cover lens as it becomes abraded. The last lens has no pull tabs because it protects the polycarbonate lens of the facepiece. Used lenses are stored in the pocket on the front of the hood.

Five different types of lens cartridges are available to match different blasting levels.

- For light abrasive blasting, MSA offers cartridges containing four 0.06-inch-thick glass lenses. Users can also choose regular glass or tempered lenses, which provide 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 two or three 0.12-inch-thick glass-laminated lenses are available.

3. Hood- Different hoods are available to meet different blasting needs:

- A Hypalon hood is available in both waist- and shoulder-length styles for general-purpose blasting.

- A lighter-weight duck cloth hood is available in waist- and chest-length styles to provide greater comfort during general-purpose blasting.

- Neoprene hoods in waist- and shoulder-length styles are available for close-in, heavy blasting operations.

- A fourth hood available is a Hypalon-Front, knit-back hood for use with blasting suits. This hood is only offered in shoulder-length.

4. Facepiece- The Abrasi-Blast Respirator utilizes a tight-fitting, full-face Ultravue® facepiece in concert with the cover lens housing assembly.

Constant-flow models feature a choice of dual (standard) or single exhalation valves. The pressure-demand version features a regulator-type spring-loaded exhalation valve.

Facepieces are black and available in your choice of silicone or Hycar rubber in small, medium and large sizes.

5. Breathing Tube- The blow-molded breathing tube, which can be worn inside or outside of the hood, is available in standard and reinforced models. A breathing tube with muffler is also available for use with the Vortex Tube systems.

6. Air-Supply Hose- Three types of MSA Air-Supply Hose are available in lengths of 8, 15, 25, 50 and 100 feet.

Neoprene is the most durable/chemical-resistant type of hose. 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/MSHA approvals on the Abrasi-Blast Respirator.

7. Belt- Two support belts are available: a standard web belt and a urethane belt that is easier to decontaminate.

Ordering Information

Standard Constant-Flow Abrasi-Blast Respirator Assemblies
(Includes Hypalon hood, medium facepiece with dual exhalation valve **(472666)**, lens housing, one lens cartridge (four 0.06" untempered glass cover lenses per cartridge), breathing tube **(470734)**, web belt **(9961)**, and adjustable Snap-tite* (AL) valve-connector with socket assembly).

Hypalon Hood	Flow-Control Device	Complete Assembly
Waist	10–15 35–40 60–80	†468716 †468718 474263
Shoulder	10–15 35–40 60–80	†468720 †468722 474264

Standard Pressure-Demand Abrasi-Blast Respirator Assemblies
(Includes Hypalon hood, medium pressure-demand black Hycar facepiece **(485768)**, lens housing, one lens cartridge (four 0.06" untempered glass cover lenses per cartridge), breathing tube **(470734)**, web belt **(9961)**, and Snap-tite (AL) valve-connector with socket assembly).

Hypalon Hood	Complete Assembly
Waist Shoulder	†485751 †485755

(Order Air Supply Hose separately).

Build Your Own Abrasi-Blast Respirator

To design your own respirator, you can purchase the component parts separately by selecting the part numbers from the tables that follow. Or you can contact customer service at 1-800-672-2222 and we can help put a configuration together that best suits your needs. If you want a Duo-Flo Abrasi Blast please contact Customer Service.

1a Regulator/Fittings

For pressure-demand model, choose regulator and fittings. For constant-flow version, make selection from (1b) flow-control devices.

Part No.	Description
473741	Pressure-demand regulator (65-85 psig) with Snaptite aluminum quick-disconnects

Pressure Demand Fittings	Male Plug Only	Female Socket Assy
Snap-tite Aluminum	66273	455019
Snap-tite Brass	630306	471777
Snap-tite Stainless Steel	629671	471778
Duff-Norton Brass	630309	471780
Hansen Brass	630312	471501
Hansen Stainless Steel	473502	471779
Foster/Schrader Steel	56549	467044
Foster Brass	473501	470194
CEJN Locking	479020	479001

1b Fittings/Flow-Control Devices

Constant-Flow Control Device (For Constant-Flow versions, select one flow-control device. Male fittings already incorporated. If necessary, choose air hose fitting from Female Socket Assembly. For pressure-demand, make no selection).

High-Pressure (35-40 psig) Flow-Control Device

Quick-Disconnect Male Fitting	Adjustable Control Valves w/ Plug less socket Assembly	Non-Adjustable Control Valve w/ Plug less Socket Assembly
Snap-tite, Aluminum	474022	474001
Snap-tite,Brass	474023	474005
Snap-tite, Stainless Steel	474024	474006
Foster, Steel	†474021	474002
Foster, Brass	474027	474007
Hansen, Brass	474026	474004
Hansen, Stainless Steel	474028	474008
Duff-Norton, Brass	474029	474009
CEJN Locking	479093	479079

Low-Pressure (10-15 psig) Flow-Control Device

Quick-Disconnect Male Fitting	Adjustable Control Valves with Plug less socket Assembly	Non-Adjustable Control Valve with Plug less Socket Assembly
Snap-tite,Aluminum	474031	474010
Snap-tite,Brass	474032	474014
Snap-tite, Stainless Steel	474033	474015
Foster, Brass	474036	474016
Foster, Steel	474034	474012
Hansen, Brass	474035	474013
Hansen, Stainless Steel	474037	474017
Duff-Norton, Brass	474038	474018
CEJN Locking	479100	479086

Quick-Disconnect Plugs for use with Vortex Tubes and Female Socket Assembly for use with all systems

Quick-Disconnect Fittings	Male Plug w/ 1/4" NPTF	Female Socket Assy
Snap-tite, Aluminum	66274	455019
Snap-tite, Brass	630307	471777
Snap-tite, Stainless Steel	629672	471778
Duff-Norton Brass	630310	471780
Hansen Brass	630313	471501
Hansen Stainless Steel	628208	471779
Foster/Schrader Steel	55716	467044
Foster Brass	629981	470194
CEJN Locking	479026	479001

Vortex Tube

Quick-Disconnect Male Fitting	Vortex Tube
Cool-only Vortex Tube less Quick-Disconnect	494392
Warm-Cool Vortex Tube less Quick-Disconnect	495701

† Stock item

** Snap-tite is a trademark of Snap-tite Corp.*

2 Lens Cartridge

Cartridge Carton (12 per carton)	Lens Description	Recommended Use
†473238	0.06" thick, untempered, 4 per carton	Light Blasting
†473240	0.06" thick, tempered, 4 per carton	Light Blasting
†473798	0.09" thick, untempered, 3 per carton	Medium Blasting
†473800	0.09" thick, tempered, 3 per carton	Medium Blasting
†473802	0.12" thick, untempered, laminated, 2 per carton	Heavy Blasting
481742	0.12" thick, untempered, laminated, 3 per carton	Heavy Blasting

3 Hood Options

Part No.	Description
468724	Hypalon Waist
468725	Hypalon Shoulder
480699	Duck Cloth Chest
480697	Duck Cloth Waist
486304	Neoprene Shoulder
486303	Neoprene Waist
486329	Knit Back, Hypalon Front, Shoulder

4 Facepiece

Comes with glass laminated lens; complete with lens housing.

Pressure-Demand Ultravue

Size	Material	Part No.
Small	Black Hycar Rubber	485772
Small	Black Silicone	485774
Medium	Black Hycar Rubber	485768
Medium	Black Silicone	485770
Large	Black Hycar Rubber	485776
Large	Black Silicone	485778

Constant-Flow Ultravue*

Size	Exhalation Valve*	Part No.
Small	Dual	472668
Small	Single	473314
Medium	Dual	†472666
Medium	Single	473312
Large	Dual	472670
Large	Single	473316

* DuoFlow Abrasi Blasts only approved with Single Exhalation Valve

5 Breathing Tube

Part No.	Description
470734	Standard Breathing Tube (Constant-Flow)
457158	Standard Breathing Tube (Pressure-Demand)
801758	Reinforced Breathing Tube Constant-Flow and Pressure-Demand)
497124	Breathing Tube with Muffler Required with Vortex Tube Assembly

6 Air-Supply Hose*

Hose Material	Hose Length	Part No.
Neoprene	8 feet	481071
	15 feet	455020
	25 feet	455021
	50 feet	455022
PVC	8 feet	481051
	15 feet	471511
	25 feet	471512
	50 feet	471513
	100 feet	484225
Coiled Nylon	8 feet	491513
	15 feet	491514
	25 feet	491515
	50 feet	474043

* Hoses also available with stainless steel (SST) crimped couplers

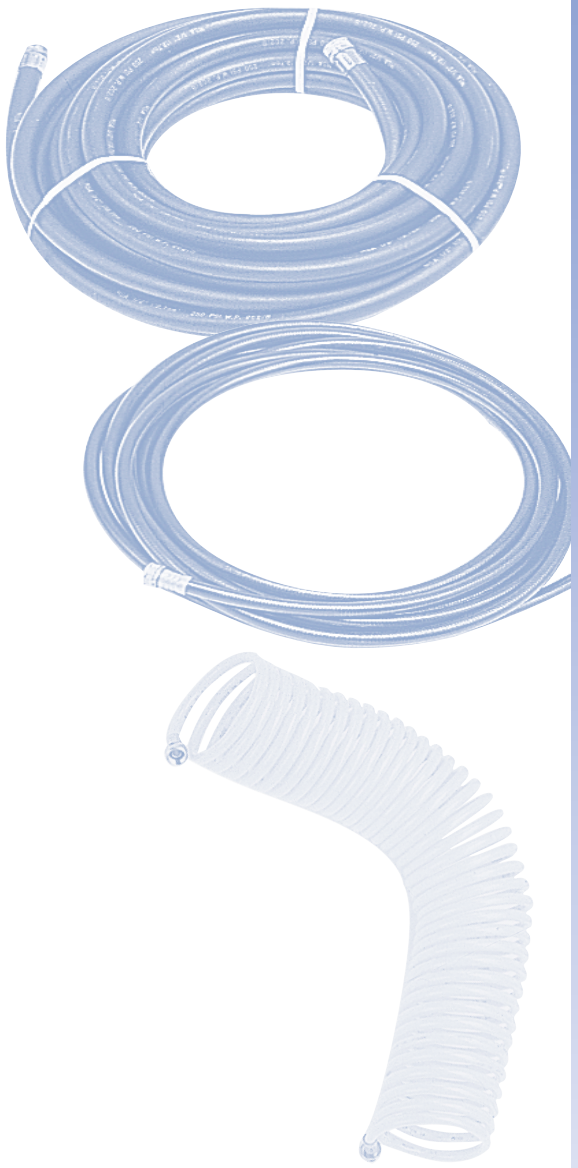
7 Belt

Part No.	Description
†9961	Standard Web Belt
492827	Urethane Belt

Parts & Accessories

Part No.	Description
†480020	Lens Housing Adapter, less lens cartridge
†476089	Air-Line Filter-Cartridge Holder for use with GMA cartridge (464031, box of 10 each)
†468705	Replacement Zip-in Collar Assembly
†454819	Spectacle Kit, for prescription lenses
	Silicone Nosecups
†813138	Small facepieces
†813139	Medium facepieces
†813140	Large facepieces

†Stock items



Approvals & Standards

The Abrasi-Blast Respirator has the following NIOSH/MSHA approvals:

- *Approval TC-19C-161 for Abrasi-Blast Respirator when used with 8 to 50 ft. of MSA Air-Supply Hose at an inlet pressure of 10 to 15 psig.*
- *Approval TC-19C-162 for Abrasi-Blast Respirator when used with 8 to 300 ft. of MSA Air-Supply Hose at an inlet pressure of 35 to 40 psig.*
- *Approval TC-19C-178 (cool only) for Abrasi-Blast Respirator with vortex tubes.*
- *Approval TC-19C-236 for Abrasi-Blast Pressure-Demand Respirator.*
- *Duo Flow Abrasi Blast - see NIOSH Approved Matrix, PN 818148*

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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