Southern Welding Systems International LLC

Welding | Industrial | Safety

International Wholesale Distribution

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RESPIRATORY PROGRAM
Why Respiratory Protection is IMPORTANT

ArcOne® has been protecting welders from harmful fumes for over 15 years. As a pioneer in Respiratory Protection for welders, ArcOne® has continued to champion the use of powered and supplied air systems.

Welding creates fumes. Depending on the ventilation, in the work setting a Powered or Supplied air system may be the prudent approach to worker safety.

**From OSHA2: Exposure to welding fumes from mild steel is associated with the development of a benign pneumoconiosis, “arc welder's siderosis”. This condition is a reversible pneumoconiosis and no associated respiratory signs may be present at the time the pneumoconiosis is discovered [Rom 1992]. Respiratory impairment has been observed in workers exposed to mild steel welding fumes, but these impairments may be the result of exposure to other toxicants in the working environment, such as crystalline silica [Rom 1992]. Exposure to welding fumes can result in metal fume fever; this condition resembles influenza and is characterized by fever, chills, headache, nausea, shortness of breath, muscle pain, and a metallic taste in the mouth [Rom 1992].

For a correct analysis of the work environment air sampling should be completed by an industrial hygienist and/or a safety expert. This sampling may be required every 3-6 months. An alternative approach may be to use a combination of historical monitoring data, sampling, and/or objective data where all information closely resembles the current manufacturing condition.

When respirators are in use, a respiratory protection program should be formalized covering the basic requirements. OSHA Respiratory Protection Standard (29 CFR 1910.134) covers these requirements.

**Please refer to OSHA for additional welding fume information
**Which type of Respiratory Protection is good for you?**

The choice of which type of protection is best for you really depends on the environment and the protection factor dictated by that environment.

Both Supplied and Powered Air provide identical protection which is an **Assigned Protection Factor (APF)** of 25. Manual respirators like our N95 models provide an APF of 10.

Assigned protection factor (APF) means the workplace level of respiratory protection that a respirator or class of respirators is expected to provide to employees when the employer implements a continuing, effective respiratory protection program.

As with all Respiratory protection always consult a professional Hygienist to determine which product will best suit your needs and work environments.

Powered Air systems provide maximum flexibility for the worker enabling a greater degree of movement. Use this type of protection when the worker must move around on a regular basis in the production process.

Supplied Air systems may be more effective and less overall cost when the worker must remain at a work station and little movement is required of them. An additional benefit of supplied Air is the ability to cool the air in hot summer conditions.

Please see the chart below to determine which product can best suit your needs:

<table>
<thead>
<tr>
<th>WELDING RESPIRATORY PROTECTION OPTION</th>
<th>N95</th>
<th>POWERED AIR</th>
<th>SUPPLIED AIR</th>
</tr>
</thead>
<tbody>
<tr>
<td>APF Level</td>
<td>10</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>General Dust</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Steel</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Manganese</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Chromium</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Galvanized Steel</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Cadmium</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Lead</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Carbon Dioxide</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Nitrogen Oxide</td>
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<td></td>
<td>X</td>
</tr>
<tr>
<td>Ozone</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

*Always consult Industrial Hygienist or Safety Expert to determine if APF will be acceptable for the measured concentration level of your application.
ArcOne's CleanAir Flow® Air Purifying Respirator System is a motorized, battery operated system that blows a constant supply of fresh, filtered air over the face creating a protective pressure inside the respirator head top keeping away harmful gases, vapors and particulates.

### BASIC SYSTEM

**Blower Unit**
- Type: Flow Control
- Rotor Speed: 6,000-10,000 rpm
- Rotor: Brushless
- Air Supply (min.): 6 cubic feet (170 liters) per /min
- Case: Impact-proof ABS
- Belt Plate: Fiber Glass reinforced polyamide
- Filter Cartridge: Single plug in type
- Hose Length: 29.5 in/750mm
- Hose Diameter (int): .87 in/22mm
- Hose Connection: Bayonet Connection
- Weight: 1.0 lbs. (.48 kg.) L- 6.9” x W-4.2” x H-7.5”
- Dimensions: L- 174mm x W-107mm x 191mm
- Color: Black/Silver

**Battery**
- Type: Lithium Ion
- Voltage: 14.4 Volt
- Operating Time: 8 hour shift from fully charged battery
- Charging Time: 6 hr. (max.)
- Charging Cycles: 500 Times (under ideal conditions)
- Housing: Impact-proof ABS
- Weight: .6 lbs. (.27kg.)
- Dimensions: L- 5.9” x W- 2.9” x H - 1.65”
- L- 150mm x W - 74mm x H-42mm
- Color: Black

**Charger**
- Type: DC Rectifier
- Primary Voltage: 120 V/60Hz
- Secondary Voltage: 7.4 VDC
- Output Current: 570mA
- Weight: 57 lb (.26 kg.)
- Dimensions: L- 4.65” x W- 2.4” x H- 2.75”
- L- 118mm x W- 62mm x 70mm
- Color: Black
- Approvals: UL/CSA/CE
The Complete CleanAir Flow PAPR System Includes:

- **Choice of 100+ NIOSH Approved Unit Combinations**
- **Reusable/Washable Comfa-Seal Face Seal**
- **Flexible 30” Breathing Tube with Quick Disconnect**
- **Adjustable Lightweight Belt**
- **8 Hour Lithium Ion Rechargeable Battery**
- **Smart Battery Charger**
- **Blower Unit with Integrated Air Flow Indicator, Dual Fan Speed, Filter and Battery Indicator Lights**
- **Audible Low Battery/ Clogged Filter Alarms**
- **Convenient Single HEPA Filter**
- **Airduct Headgear Assembly**
- **Handy Storage Duffle Bag**
- **Optional Back Support Belt**
- **Approved to NIOSH 42 CFR Part 84**

See headtops on pg. 34
The lightweight, state-of-the-art, integrate Supplied Air System protects the worker in a variety of harsh environments with eye, face and respiratory protection. Choose from 2, 5 or 8 unit filtration panels.

The complete SAR System Includes:

- Choice of 48 NIOSH Approved Units
- Reusable Comfa-Seal Face Seal
- Flexible 30” Breathing Tube with Adjustable In-line Regulator System
- Air Supply Hose with Quick Disconnect Fitting
- Airduct Headgear Assembly
- Approval to NIOSH 42 CFR Part 84
- 2, 5 or 8 Unit Filtration Panels
ArcOne's Air Filtration Panels convert shop air used for pneumatic tools and equipment to clean breathable air. They provide from 1 to 8 airline respirators a portable source of up to 15, 30, 60 or 100 CFM of breathable air from 5-125 psig. The 3-stage filtration system purifies compressed air removing water, oil and particulate contaminants. An optional carbon monoxide monitor, which can be operated in AC or DC mode, activates an audible alarm when the concentration of CO exceeds 10 ppm (set for 5 ppm in Canada). The pressure regulator includes a pressure gauge and adjustment knob with locking ring. An adjustable pressure relief valve protects the CO monitor and respirators in the event of regulator failure. The ArcOne AC/DC - powered unit is housed in a rugged Pelican case for portability and protection. It includes a support stand for stability and up-right operation. An AC/DC powered wall-mount unit is also available. Available with and without CO monitors. All models meet NIOSH requirements for point-of-attachment.
Multiple head tops to choose from with or without hard hat. Welding helmets available with four auto darkening filter types. Choose from Vision or Viper helmets in black or multiple decal configurations.

**Welding**

- Reverse Bill Hard Hat with Vision Dragon Fire Combination (shown)
  - CF-HR-0000 with Vision® Dragon Fire

- Vision Easy Rider Helmet with Industrial Filter (shown)
  - CF-X54Vi-1568

- Viper Top Gun Helmet with Industrial Xtreme Filter (shown)
  - CF-X540V-0966

**Industrial Use**

- Forward Bill Hard Hat with Flip Front Visor (shown)
  - CF-HV-FRR5

- Forward Bill with Brow Guard Visor Combination (shown)
  - CF-HV-1013

- Forward Bill Hard Hat with Visor Combination (shown)
  - CF-HR-0000