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

**Features**
- Lightweight, compact design
- Rechargeable Nickel Metal Hydride (NiMH) Battery for 8 hours' continuous use
- Water-resistant battery
- Standard dual-rate smart charger
- Designed for easy decontamination
- Water-resistant HEPA filter
- Choice of Advantage® 3000, Ultravue® or Ultra Elite® Facepiece
- Meets impact and penetration requirements of ANSI Z87.1 (eye and face protection standard)

**Description**
The OptimAir MM 2K Powered Air-Purifying Respirator (PAPR) is especially suited for use by workers in abatement, nuclear, lead, and other industries that have hazardous particulate environments. It has a mask-mounted motor/blower with HEPA filter for protection against particulate contaminants, such as dusts, fumes, mists, and radionuclides. Because it does not have a breathing tube, the unit is more compact than other PAPRs, thus enhancing user maneuverability and simplifying decontamination.

The PAPR filters particulates and provides a constant flow of respirable air directly to the facepiece. Air pressure inside the facepiece is higher than the air pressure in the surrounding atmosphere. Therefore, in the event of a small leak in the face-to-facepiece seal, air will flow from inside the facepiece to the outside. This constant flow of air also provides a cooling effect on the user's face.

Designed for high performance, the facepiece, motor/blower, and filter of the OptimAir MM 2K PAPR combine to produce airflows higher than comparable units with mask-mounted motor/blowers. All components are designed for long life and low maintenance.
particulates, the entire Prefilter/Cover Assembly can be discarded and replaced. Or, for maximum savings, discard and replace only the inexpensive prefILTER.

For users working with asbestos, the Type HE OptiFilter XL Cartridge may also be equipped with an optional storage plug that has a special one-way valve. The plug is used during exiting and reentering containment to help prevent gross asbestos debris from falling out of the cartridge. The plug also helps to prevent shower water from reaching the filter media.

**Waist Belts:**
OptimAir MM PAPR’s are supplied with a clear polyvinylchloride (PVC) belt with a slide-through friction buckle. The belt, designed for easy decontamination and comfort, accommodates waists up to 48 inches. Optional belts are listed on page 4.

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**Advantage 3000/Ultravue/Ultra Elite Facepieces:**
Whether you choose the Advantage 3000, Ultravue or Ultra Elite, all three are available in three sizes to accommodate a wide range of users. The Advantage 3000 has a silicone rubber facepiece, while the Ultravue and Ultra Elite Facepieces are available in a choice of silicone or Hycar™ rubber. All facepieces have a scratch-resistant polycarbonate lens that provides a wide field of vision. Optional lens cover accessories provide even greater scratch resistance (see page 4). All three facepieces feature an inhalation check valve and exhalation valve that work together to help prevent exhaled air from entering and contaminating the motor/blower assembly.

**Motor/Blower Assembly:**
The motor/blower assembly, which threads onto the facepiece inlet, is compact and lightweight so as not to obstruct vision or impair facepiece fit. The motor is designed for long life and low maintenance.

**NiMH Battery Pack:**
The sealed, lightweight NiMH battery pack weighs only 12.5 oz. (360 grams). The low-profile unit fits closely to the wearer’s body. In fact, the battery pack is small enough to fit in most pockets. Besides providing a compact and lightweight battery pack, NiMH batteries do not have the "memory effect" that is associated with NiCad batteries. The power source delivers 4.8 volts (nominal) to the motor/blower and is designed to operate over 8 hours under most operating conditions. The battery pack is water-resistant and is designed for easy shower decontamination. The battery pack is connected to the motor/blower with a heavy-gauge coated power cable. The cable includes a lockable connector to the motor/blower and battery pack.

**Dual-Rate Smart Charger**
Each OptimAir MM 2K PAPR is supplied with a dual-rate smart charger that will charge a fully discharged battery in less than 3 hours. A single, 3-color LED indicates battery condition: fast charge, fully charged, or battery fault condition. After the battery reaches full charge, the charger switches to a trickle-charge to prevent overcharging the battery. The smart charger can be connected indefinitely to the battery pack without damaging the battery. The compact battery charger has a rated service of 100-264 volts @ 50/60 Hz.

**Type HE OptiFilter Cartridge:**
The Type HE OptiFilter Cartridge is a high-efficiency particulate air (HEPA) filter. A single, high-performance OptiFilter XL Cartridge fits onto the motor/blower when the PAPR is used. The lightweight filter has an unrestricted air-inlet opening that helps prevent gross debris from clogging the filter.

The Type HE OptiFilter XL Cartridge may be equipped with the OptiFilter XL Prefilter/Cover. To extend the life of the OptiFilter XL Cartridge, the prefILTER/cover is an economical three-piece assembly that protects the cartridge from contaminants such as water spray and gross ACM. Particulate matter that does reach the prefILTER is trapped before reaching the main cartridge filter. When loaded with particulates, the entire Prefilter/Cover Assembly can be discarded and replaced. Or, for maximum savings, discard and replace only the inexpensive prefILTER.
Limitations

The OptimAir MM 2K PAPR with Type HE OptiFilter XL Cartridge is approved as a high-efficiency particulate air PAPR.

The OptimAir MM 2K PAPR does not remove vapors or gases from the air. No filter is designed for all concentrations of all substances. Therefore, it is essential to understand what the contaminant is and to know its concentration and explosive limit before selecting a respirator.

The OptimAir MM 2K PAPR does not supply oxygen. Therefore, it should not be used unless the surrounding air contains a minimum of 19.5% oxygen. The respirator may be used in temperatures between 0°F and 120°F (-17°C to 49°C); however, if used in temperatures below 40°F (4.4°C), the fully charged battery will not operate for a full eight hours.

The replaceable filter cartridge, which traps the particulate contaminant, is a minimum of 99.97% efficient against 0.3 micron DOP.
Accessories

Waist Belts
MSA offers an optional polyurethane-coated nylon belt that is easy to decontaminate. If decontamination is not a factor, users may also opt for an uncoated nylon web belt.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>473902</td>
<td>PVC Waist Belt, standard on OptimAir MM2k PAPR</td>
</tr>
<tr>
<td>492827</td>
<td>Polyurethane-coated Nylon Belt</td>
</tr>
<tr>
<td>9961</td>
<td>Uncoated-Nylon Web Waist Belt</td>
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</tbody>
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OptimAir MM 2K Carrying/Storage Case
Black plastic case suitable for carrying/storing the OptimAir MM 2K PAPR.

Approvals and Standards
The OptimAir MM 2K PAPR with either the Ultravue or Ultra Elite Facepiece and OptiFilter XL Cartridge has NIOSH approval TC-21C-0758.
The OptimAir MM 2K PAPR with the Advantage 3100 Series Facepiece and OptiFilter XL Cartridge has NIOSH approval TC-21C-0763.

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 one pair of metal-frame spectacles.

Lens Covers
MSA offers an assortment of facepiece accessories that provide added lens durability or shading for special applications.

Spectacle Kit

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<tr>
<th>Part No.</th>
<th>Description</th>
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<tr>
<td>10029298</td>
<td>Prescription Eyeglass Kit for Advantage 3000 Facepiece (5-7 shape, 44 mm lens)</td>
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<tr>
<td>454819</td>
<td>Prescription Eyeglass Kit for Ultravue Facepiece (5-7 shape, 44 mm lens)</td>
</tr>
<tr>
<td>804638</td>
<td>Prescription Eyeglass Kit for Ultra Elite Facepiece (5-7 shape, 40 mm lens)</td>
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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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