



**SE40**  
positive  
pressure  
demand  
respirator  
for  
emergency  
response  
in CBRN  
environments

# Clever thinking. Easy breathing.



The SE40 positive-pressure demand PAPR (powered air-purifying respirator) is approved according to the NIOSH CBRN-PAPR standard.

Specially designed for first responders, SE40 provides protection against a wide variety of chemical, biological, radiological and nuclear warfare agents.

The SE40 is not like a conventional continuous-flow PAPR. It operates on the demand principle, much like a breathing apparatus. The air supply opens on inhalation, and closes on exhalation. This leads to much less air moving through the filter canisters, greatly extending the life of both filter canisters and battery.



The self-monitoring respirator alerts the user to any event that calls for attention, such as low battery power.

In addition, the fan unit can maintain positive pressure at hard work without 'dipping' into negative pressure and consequent inward leakage, as can be the case in conventional PAPRs.

SE40 is worn on a padded back-pack.

Voice communication is maintained through a powerful loudspeaker.

The NIOSH-approved SE40 respirator can be used with a variety of protective suits, and is supplied in a stackable military-grade bag, always at the ready.



The SE40 is a POSITIVE-PRESSURE DEMAND respirator: the SE40 works just like a breathing apparatus. The airflow opens when you breathe in, and closes when you breathe out. Compared with conventional PAPRs, this means significant savings on battery power, and approximately double the filter life.



The gas/particle filter canisters have been tested for a wide range of industrial chemicals and warfare agents. The 125 mm diameter means extremely low pressure drop over the filter canister compared with other filter canisters of similar capacity, and the large volume of filtering media means great adsorption capacity and longer service life.



The SE40 comes in a sturdy, military-grade, stackable bag, always ready for rapid deployment.

# Every breath counts.

**Breathe easier. Work longer. Feel more comfortable. Talk, move, act, respond. Trust your protection 100%.**



**Full technical specifications: [www.theseagroup.com/se40](http://www.theseagroup.com/se40)**



- |                    |                       |
|--------------------|-----------------------|
| 1. Fan unit        | 8. Chest harness      |
| 2. Breathing hose  | 9. Back pack          |
| 3. Head harness    | 10. Waist harness     |
| 4. Face piece      | 11. Pre-filter        |
| 5. Inner mask      | 12. Pre-filter holder |
| 6. Demand valve    | 13. Loudspeaker       |
| 7. Filter canister | 14. Battery           |



### NIOSH-approved

The SE40 and all its parts are approved according to the NIOSH CBRN PAPR standard (approval no. TC-14G-0290).

### Fan unit



The SE40 fan unit substantially exceeds NIOSH requirements for air flow. The fan unit is capable of delivering air flows over 400 l/min. It continually monitors the user's breathing pattern, measures the pressure in the mask, alerts the user to any dips in the internal pressure below the ambient pressure, monitors and warns of low battery power and canister capacity, records critical operational data, and logs a data trail that can be downloaded to a personal computer.

### Demand valve



The demand valve means that air goes through the respirator only during inhalation. This allows the respirator to supply air to the user at very high flow rates, thus maintaining positive pressure even at hard work. The demand valve also means a very significant increase in the operating time of the battery and the life of the filter canisters. Compared with conventional continuous-flow PAPRs operating at equal flows, the SE40 takes in less than half the volume of air through the filter canisters.

### Self-monitoring



The microprocessor constantly performs self-checks and provides alerts for low battery, mask pressure, air flow, and electronic circuitry. The unit performs a self-test every time it is turned on, and can be set to run a thorough test at any time. The unit adjusts itself for optimum performance, and no further recalibrations are required from the user.

### Breathing hose



The flexible breathing hose connects the fan unit with the face piece. The hose connections cannot be accidentally dislodged, and the hose can be swivelled at both ends.

### Battery



The NIMH battery is rechargeable and lasts for up to 6 hours. The battery is securely locked into position. A dual-battery system is also available.

### Voice communication



A powerful clip-on mini-loudspeaker lets you talk with the mask on your face. Apart from volume control, the single button can also be used to turn the SE40 on, and to de-mist the visor with a boost of air.

### Built for CBRN



The SE40 has many features that have been specially designed for use in CBRN environments. The exhalation valve shield is one.

### Suit integration



The SE40 can be fully integrated with a military-grade encapsulated protective suit, chemical-resistant and impervious to warfare agents. The suit can be pressurized by excess air from the fan unit.

### Alarms



A status indicator is always in your field of vision. Should the unit not function properly, visual and audible warnings alert you to low battery power, low pressure in the mask, end of canister service life, and more.

### Back pack



The SE40 fan unit is worn on an ergonomically designed backpack with padded shoulder straps and chest/waist harnesses for balance.

### Back-up



Should the fan unit cease to function properly, the SE40 turns into a negative-pressure respirator, allowing the wearer to safely leave the hazard area.

### Visor



The visor gives you a wide field of vision and is continually de-misted. Additional de-mist boosts can be done at any time. Available in various materials.

### Face piece



Halo-butyl rubber with natural rubber head harness.

### CBRN canisters



The filter canisters have been tested to NIOSH stringent standards, and have been subjected to a wide range of industrial chemicals and CBRN warfare materials such as sarin, phosgene, mustard gas, nerve gas, cyanogen and many more.

### Single button operation



The SE40 is operated through one single button, from either the fan unit or, to a limited extent, from the communication box.

### Deployment bag



The SE40 is supplied in a rugged, military-grade, stackable bag that accommodates the complete respirator, filter canisters, recharger, back pack and other items of your choice, such as suits, gloves, and more.

### Display panel



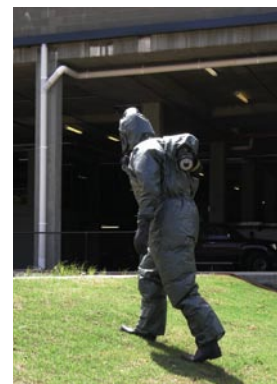
A display of 5 LED lights keep you informed of the function of the respirator. An additional LED is fitted within your field of vision in the face piece. Visual displays are complemented by audible alarms.

### Dual battery



A dual battery configuration effectively doubles the operation time of the unit.

**Full technical specifications: [www.theseagroup.com/se40](http://www.theseagroup.com/se40)**



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