

DATA SHEET

SE40 positive pressure demand CBRN respirator



Updated: 11 Jun 2008



Description:	Positive-pressure demand CBRN (chemical, biological, radiological, nuclear) respirator. The respirator is microprocessor controlled and supplies positive pressure breathing air even at very hard work. The SE40 features in-mask communication, a comprehensive warning system, and a usage log which can be downloaded to a personal computer for further analysis.
Product name:	SE40
Use:	Used for SCBA-level protection (with full face mask) in filtrable, non-IDLH atmospheres with an oxygen content sufficient for human breathing. Intended for CBRN applications.
Approvals:	NIOSH CBRN PAPR
Face pieces :	<p>Full face mask in halo-butyl rubber with hard-coated polycarbonate visor and natural rubber head harness.</p> <p>The face piece contains no electrical parts (electronics for pressure sensor, microphone and warning LED are contained within the fan unit).</p> <p>Field of vision is 180°.</p>
Regulator:	<ul style="list-style-type: none"> • Flow capability of peak inhalation air flow in the inner ori-nasal mask of 350 l/min or higher. • Breath responsive: air supply continuously adjusts itself to user's air requirements • 7–14 mBar supply pressure • Easy service — no tools • Tested for equivalent of 3 years' harsh condition • Functions as negative pressure filter respirator if the fan is not operating

Communication:	The face piece features a built-in microphone which connects through the fan unit to an external miniature loudspeaker																																
Fan unit:	<ul style="list-style-type: none"> o Single button operation o Auto power-off when removing mask o LED light indicators o Com-port for loudspeaker or personal computer o Brush-less DC motor o Continuous monitoring of motor function o Microprocessor controlled motor o Demist mode provides the user rapid supply of extra air for 20 seconds that not only cools the user's face but also demists the visor of the full face mask 																																
Inward leakage:	NIOSH Laboratory Research Protection Level (LRPL) > 10,000																																
Chemical agent permeation and penetration resistance:	<p>SE40 with 125-CBRN1 canister tested by NIOSH on breathing machine against distilled sulfur mustard (HD) and sarin (GB) as per table below:</p> <table border="1" data-bbox="451 684 1576 940"> <thead> <tr> <th>Agent</th> <th>Chall. conc.</th> <th>Dur. of chall. (min)</th> <th>Breath. mach. air flow rate (l/min)</th> <th>Max. peak excurs. (mg/m³)</th> <th>Max b'thru (conc. integr. over min. serv. life) (mg-min/m³)</th> <th>No. of syst. tested</th> <th>Min. serv. life (h)</th> </tr> </thead> <tbody> <tr> <td>HD-vapor</td> <td>50 mg/m³</td> <td>30</td> <td>40</td> <td>0.30</td> <td>3.0</td> <td>3</td> <td>8</td> </tr> <tr> <td>HD-liquid</td> <td>0.43 to 0.86 ml</td> <td>120</td> <td>40</td> <td>0.30</td> <td>3.0</td> <td>3</td> <td>2</td> </tr> <tr> <td>GB</td> <td>210 mg/m³</td> <td>30</td> <td>40</td> <td>0.044</td> <td>1.05</td> <td>3</td> <td>8</td> </tr> </tbody> </table>	Agent	Chall. conc.	Dur. of chall. (min)	Breath. mach. air flow rate (l/min)	Max. peak excurs. (mg/m ³)	Max b'thru (conc. integr. over min. serv. life) (mg-min/m ³)	No. of syst. tested	Min. serv. life (h)	HD-vapor	50 mg/m ³	30	40	0.30	3.0	3	8	HD-liquid	0.43 to 0.86 ml	120	40	0.30	3.0	3	2	GB	210 mg/m ³	30	40	0.044	1.05	3	8
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User alarms:	<p>The user immediately receives both audible and visual alarms (through a siren and a warning light in the user's field of vision) upon a range of events, such as:</p> <ul style="list-style-type: none"> • Filter change required • Low battery power • Mask pressure dip • Various other system alerts 																																
Power supply:	<ul style="list-style-type: none"> • 2-hour battery recharge • Ni-Mh battery technology — no memory effect • Approximately 4 hours' operation at medium work load • Microprocessor controlled battery charger for long life and battery maintenance • Optional dual battery adapter for extended operation 																																
Data log:	<p>Fan unit continuously records and time-stamps all vital system information, including:</p> <ul style="list-style-type: none"> • All alarms issued • Total air volume drawn through the filters • Power on/off • Mask removed <p><i>NOTE: The use of the data log feature is optional, and is in no way necessary for the general operation of the SE40</i></p>																																

<p>Software:</p>	<p>Data log and real-time system monitoring software is included as a simple-to use Windows application.</p> <p><i>NOTE: The use of the software is optional, and is in no way necessary for the general operation of the SE40</i></p>
<p>Computer interface:</p>	<p>Standard serial port</p>
<p>Carry devices:</p>	<p>The unit is worn on a back pack with padded shoulder straps and waist harness. The unit may also be worn on a conventional waist belt.</p>
<p>Weight:</p>	<p>SE40 with back pack, single battery and canisters: 5.0 kg (11 lbs)</p>
<p>Accessories:</p> <p><i>Note: for pictures of many accessories, look up the Product Menu</i></p>	<p>A range of practical accessories include:</p> <p>Spectacle inserts:</p> <ul style="list-style-type: none"> • Spectacle insert for full face mask <p>SE-shield protective suits:</p> <ul style="list-style-type: none"> • PVC, HPS and VPS fully encapsulated suits (N.B.: not approved by NIOSH for CBRN use. Not approved by NIOSH as protective suits) • Tychem F® disposable chemical suit (N.B.: not approved by NIOSH for CBRN use. Not approved by NIOSH as protective suits) <p>Other:</p> <ul style="list-style-type: none"> • Prefilters and prefilter holders • Disposable clear visor covers • Fit test adapter for performing negative pressure facepiece fit tests • Gang battery conditioner
<p>CBRN components:</p>	<ul style="list-style-type: none"> • Exhalation valve shield • Tychem F® disposable breathing hose cover
<p>Transport case:</p>	<p>The unit is supplied with a robust canvas carry case for protection during storage and transport.</p>
<p>Storage:</p>	<p>Store at room temperature in clean, dry place</p>
<p>Warranty:</p>	<p>The SE40 is supplied with a comprehensive warranty, covering the motor and the main circuit board for three years or 6,000 operating hours, whichever comes first.</p> <p>Other parts are covered for 12 months for manufacturing faults (not including wear and tear). Some exclusions apply.</p>