RAID-M

Handheld Chemical Agent Detector
Hand-held chemical agent detector

The RAID-M is a complete state-of-the-art instrument for the homeland security professional to detect dangerous chemical vapors. The RAID-M is an easy to use, rugged, versatile, and certified instrument. It detects and identifies a wide range of chemical vapors including CWA, TIC, riot control, and industrial gases.

Bruker’s RAID-M cutting edge handheld chemical agent detector comes out of the box ready to use, requires no maintenance and no calibration. The RAID-M has been tested at various government facilities in Europe and the United States to include the Czech Republic, Sweden, Germany, Switzerland, Canada, the US EPA ETV, US Army Edgewood, and Johns Hopkins University Applied Physics Laboratory to name a few.

The RAID-M has literally been sold all over the world to militaries and civil defense agencies as well as industry. Customer feedback and test results have indicated the RAID-M to be possibly the best chemical detector available in the market today. In fact, the RAID-M has never failed to beat the competition in any direct testing venue.

**Accurate and dependable**

The EPA ETV report that is available on line states that: “the RAID-Ms were 100% accurate in identifying the TIC being sampled under almost all conditions.” This test report was based on our first production model. A more recent report showed that the false alarm rate was only 0.6% during recent field trials with a complex mixture to include interferents.

**Significant current programs**

The RAID-M has just recently won direct competition in the Swiss Army program against many well known competitors.

The US Army Edgewood Chemical Biological Center has chosen the RAID-M for the National Guard WMD CST ALS VAN Program. The RAID-M is part of this WMD response team mission to provide support to local homeland security throughout the country.

**Portable and versatile**

The Raid-M can be handheld with a carrying sling or be installed on a vehicle and ship mounting. The equipment is capable of operation within collective protection facilities. It is typically used for real time, hazardous site monitoring, reconnaissance vehicles, and critical event monitoring at a fixed location. The Raid-M is used around the world to detect a wide variety of agents.

**SAFETY Act approval**

The RAID-M has been both certified as an Approved Product for Homeland Security and Designated as an Anti-Terrorist Technology by DHS under the SAFETY Act. This is the only chemical detector with SAFETY Act Certification.

**Hazardous Area Rating:**

The RAID-M is compliant with the applicable requirements of the following standards as Nonincendive for use in Class I, Division 2, Groups A, B, C and D indoor Hazardous (Classified) Locations.
Optional wireless capability provides:

- Ability to utilize cellular, WI-FI, or internet network to route data
- Common look and feel to RAID-M application displays
- Live RAID-M readings not obscured by fogged face mask
- Voice transmission of reading eliminated
- Ability to quickly change agent libraries

Applications

- Response instrument for chemical attacks or accidents
- Decontamination validation
- Survey of chemical hazards
- Screening of samples
- Monitoring at critical events
- Monitoring critical infrastructure
- Liquid screening with optional surface sampler
- Industrial leak testing
- Industrial hazard surveys
- XIMS Analysis Software for use as a spectrometer

Remote control unit

RAID-M with vehicle mounting

Technical Specifications

### Raid-M Detector Module

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length x Width x Height</td>
<td>16 x 4.5 x 6.5 inches</td>
</tr>
<tr>
<td>Weight</td>
<td>6 lb</td>
</tr>
<tr>
<td>Power requirement</td>
<td>12 – 32 V DC (detector module)</td>
</tr>
<tr>
<td></td>
<td>100 – 240 V AC / 47 -63 Hz (data and power cable with power supply)</td>
</tr>
<tr>
<td>Temperature range</td>
<td>-20 – 120 °F</td>
</tr>
<tr>
<td>Radiation active source</td>
<td>⁶³Ni of 100 MBq activity</td>
</tr>
<tr>
<td>Environmental Testing</td>
<td>According to MIL STD 810F (US) and DEF STAN 00-35 (UK)</td>
</tr>
<tr>
<td>Substances detectable</td>
<td>CWA’s: GA, GB, GD, GF, VX, HD, HN, L, AC</td>
</tr>
<tr>
<td></td>
<td>Test substances: DPM (GSI), MSAL (HSI)</td>
</tr>
<tr>
<td></td>
<td>Toxic Industrial Chemicals: CL2, Chloride (CLX), Cyanide (CY), SO2, Toluene diisocyanate (TDI),</td>
</tr>
<tr>
<td>Detection range</td>
<td>Low ppb up to several ppm (substance specific)</td>
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Battery

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
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</thead>
<tbody>
<tr>
<td>Length x Width x Height</td>
<td>5 x 2 x 1.5 inches</td>
</tr>
<tr>
<td>Weight</td>
<td>20 oz</td>
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</tbody>
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Spare Parts

- No requirement to change consumables when Raid-M detects a challenge, any consumables used are kept to a minimum and have maximum life, not less than 500 hours.
- Dopant, backflush and drying filters can be exchanged by the operator.

Calibration

None required

Validation in Independent Testing

EPA ETV Program, Numerous Government Laboratories in the USA and abroad, DHS Safety Act, and FM Approval
Our product line
for Ion Mobility Spectrometry (IMS)

Bruker IMS instruments in the USA and its principalities are exempt from radiological safety requirements under NRC License 20-32465-02E.

RAID-XP: Fixed Site Portable
- Consumables: 4000 operating hours
- 24/7 site monitoring
- Detects chemical vapors and gamma radiation

RAID-AFM
- Critical infrastructure protection
- 24/7 site monitoring
- Consumables: 9000 operating hours

RAID-S2
- Facility and vessel monitoring/mounted
- Consumables: 9000 operating hours
- 24/7/365 monitoring of facilities and vessels
- Single or dual sampling points

IMS Software Packages
Control and Data System XIM-NT
- IMS instrument control and data acquisition of the detector
- IMS spectra processing and analysis of two- and three-dimensional IMS spectra on the PC
- Substance identification and quantification
- Library Editor for ion mobility spectra libraries

Network Operation with NC Monitoring
Application of several RAID (Rapid Alarm Identification Device) gas trace detectors and Bruker SVG2 radiation meters in one networking system for remote monitoring of hazardous compounds and remote instrument control. The system can be integrated into other control and alarm systems.

Please contact us for more detailed information on these and other Bruker products.