

Interspiro Chemical Warfare Kit: Combination Filter and SCBA Device

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WMD Threat Profile

- Agent exposure level?
 - Acute exposure, short duration
 - Low threat exposure, long duration
- Workload Issues?
 - Standby (advanced notice of threat)
 - High Workload (Active intervention)
 - Low Workload (Rehab/De-con)
- Exposure Term? Minutes to Hours

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WMD Respirator Options

		SCBA	APR
Agent Exposure		Acute	Low
Event Duration		Low	High
Workload level		High	Low

- The WMD threat defies advanced definition:
 - What about primary/secondary targets? Decoys?
- Respiratory protection should “shift” as threat profile, and the first responder’s role, shifts

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The Responder's Dilemma:

- “What equipment do I need to manage the threat?”
- “If the threat shifts, can I still manage the threat?”

A Combination Filter/SCBA provides options for the first responder.

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Interspiro CW Kit



- SCBA accessory mask switches automatically from filtered air to positive pressure, and back
- Switch operating mode without ambient air exposure
- Uses Mil-Std C-2 canister
- Developed for USAF.
- Over 10,000 in use by Military, FBI and Secret Service

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Interspiro CW Kit (con't)



- Tested extensively in live agent.
- Available in butyl hood version (shown) or JLIST configuration
- Metal to metal Quick coupling allows for quick change
- Not approved by NIOSH for use in IDLH because of switch mode operation

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Key Features



- Allows three modes of operation:
 - Stand-By (Filter)
 - Active HI flow/ HI PF (SCBA)
 - Rehab/De-con (Filter)
- Switch mode without exposure
 - Change cylinders “live”
 - Change filters “live”
- Hydration via drink tube
- Communication via speech diaphragm and radio interface

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Tactical Operations



- Plenum/hose:
 - Balances mask load
 - Increases filter bed residence time
 - Fits AARF exposure ensemble
 - Allows for easier weapons sighting
- Secret Service HAMMER
- FBI Hostage Rescue Team
- Marine Corps CBIRF

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General Conclusions

- Combination devices (SCBA/APR, SCBA/PAPR) can provide the first responder with more options when facing the WMD threat.
- Municipal use is compromised by lack of NIOSH approval.
- NIOSH should provide (encourage) a means for approving user selectable respiratory protection devices.

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Soap Box Conclusions

- These features should be required of all combination devices:
 - Obvious means of switching mode,
 - Obvious means of knowing current mode
 - Mode switch does not allow ambient exposure
- NIOSH should approve user-selectable devices for first responders, as the WMD threat environment will be unpredictable, highly variable, and evolving by the moment.
- First responders need “flexible” WMD protection

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