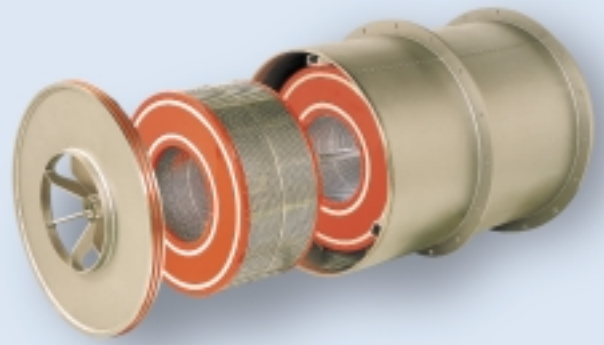


CBRN Collective Protection for Buildings

Benefits of Radial Filter Air Filtration Units

- Protection against CBRN agents
- Proven technology developed from a military specification
- Mitigates risk impacting on Business Continuity
- Customised levels of protection from Safe Haven to Fully Protected Zones
- System interfaces with the Building Management System
- Variety of solutions available to meet specific requirements
- Mail protection solutions available



Buildings - Threat Overview

- Buildings and occupants are vulnerable to Chemical, Biological, Radiological or Nuclear attacks (CBRN) which can directly impact on Business Continuity
- **CBRN attacks** can be delivered
 - From outside the building by aerosol, gas plume or explosive device
 - From inside the building by a direct release of a CBRN agent

Protection Solution

- Protection from CBRN attacks is possible using simple passive measures or more complex active systems
- There are alternative solutions available
 - **Full Collective Protection System** - provides Business Continuity by allowing occupants to continue their normal routine
 - **Shelter in place** - provides a protected 'Sanctuary' for personnel during an attack until they can be rescued

Collective Protection Zone

- High priority zones or protected shelter areas are identified for personnel
- The Business Continuity Plan determines whether the normal working environment is maintained or a 'Sanctuary' is provided for occupants during an incident
- CPZs use filtration on fresh air inlets to the existing HVAC or stand-alone units with dedicated inlets
- Critical equipment is based on proven technology

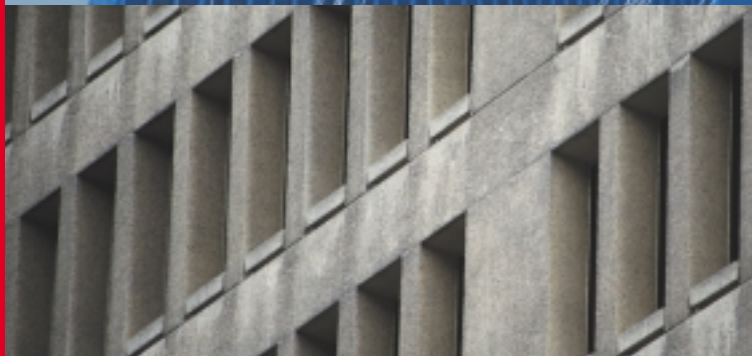
Collective Protection Filters

- A CBRN filter removes Chemical, Biological and Radiological agents from intake air introduced into the building
- High pressure fans pull air through the filter bank and over pressurise the CPZ to prevent ingress of CBRN agents
- Can be integrated with a Building Maintenance System to allow remote operation
- System can be run continuously or only during high risk alerts or known releases in order to reduce the Through Life Costs

Methodology

Portsmouth Aviation has experience in and will provide:

- Initial site survey to determine
 - Essential parameters for existing HVAC operation
 - Building vulnerability
 - Level of protection required
 - Identify protected zones
- Technical site survey to establish
 - Detailed designs
 - Unit locations
 - Operational requirements
 - Equipment specifications
- A solution is developed and final design schemes prepared including equipment recommendations



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