

Air Scrubbers Explained

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Portable Air Scrubbers carry air filtration to an even higher level than negative air machines by utilising 3-stage Filtration. This includes two particulate Filters, a carbon adsorption Filter and a HEPA filter making them ideal for mould abatement applications. They also utilise more powerful blowers that can pull high volumes of air through dirty Filters to maintain sufficient airflow and negative pressure. Air scrubbers are also more portable than negative air machines and are designed so one person can transport them. Some models also include built-in stair climber and dollies to enhance portability in addition, portable air scrubber can be operated using three different methods: recirculation, negative pressure, and air cleaning in remote areas, making them extremely versatile machines for a wide range of applications.

Q) How does a Portable Air Scrubber clean the air?

A) Portable air scrubber utilise four stages of progressively efficient filters to remove particulate and gaseous contaminants and odours from the air:

Stages 1 & 2: Particulate Pre-filters

Two particulate pre-filters remove visible particles and protect the carbon and HEPA filters from premature loading. The first stage is a 1" deep disposable filter for capturing larger particles. The second stage is a 2" deep pleated filter that captures most remaining visible (10+ micron) particles.

Stage 3: Carbon Adsorption

The third stage is an activated carbon filter that removes odours and captures gases and volatile organic compounds (VOCs) from smoke, moulds, coatings, paints and adhesives by absorption.

Stage 4: HEPA Filtration

The final stage is a HEPA filter with a minimum particulate efficiency of 99.97% at 0.3 microns. These filters are designed to capture microscopic particulates and bio aerosols (including metal fumes, asbestos fibres, lead dust, smoke particles, bacteria, and mould and fungal spores) that pass right through other filters. This level of filtration often eliminates the need for final cleaning and dust removal after construction and renovation jobs.

Q) How are Portable Air Scrubber utilised?

A) Portable air scrubber can be utilised using three different methods of operation: recirculation, negative pressure, and remote location cleaning:



Recirculation

Portable air scrubber can be utilised to continuously filter and re-circulate air within a local area to provide general air cleaning. Recirculation is used to capture airborne contaminants generated by manufacturing processes and during disaster restoration, construction, and renovation projects in unoccupied buildings. This method is also effective for protecting parts or products from contaminants that settle out of the air and for reducing exposure to unpleasant odours from paintings and coatings.

Negative/Positive Pressure

This utilizes the movement of filtered air into or out of a work area (negative pressure) or into a work area (positive pressure) each way stops the movement of particulate to clean areas. This will require the use of a plastic barrier.

Remote Location Cleaning:

The air scrubbers have roving heads and ducting to can be used to clean the dust from air in remote locations.

