

Fume Extraction

Unpleasant and toxic odours arise when minute particles become suspended in the air, invading the nasal passages and lungs of all who enter the contaminated atmosphere. Even when they're not especially dangerous, strong odours are often repellent and disagreeable. Thankfully, with the installation of fume extraction technology, they do not have to be endured.

Originating in military technology, fume extraction became a necessity for soldiers operating armoured fighting vehicles such as tanks. Poisonous propellant gases would seep back in to the cabin area whenever the gun breech (or barrel) was opened to load another shell, endangering the health – and the concentration - of the soldiers, unless these foul-smelling and potentially explosive vapours could be safely removed. The 'bore evacuator' was invented to carry out this vital function. A robust and gas-tight reservoir, it holds the super-heated propellant vapours, safely releasing them through the muzzle of the breech as the shell leaves the barrel.

But there are many places besides the interior of an armoured tank where obnoxious and unwanted fumes can accumulate – for example, university and pharmaceutical laboratories, the printing industry, and the chemical industry. Each of these sites can and do generate potentially harmful or malodorous airborne particles which require safe removal. And this is where modern fume extraction systems come into play. Simply keeping windows open will not be sufficient; many of the airborne particles released in these industrial processes are harmful to the environment and poisonous to individuals: they need to be safely disposed of. Modern fume extraction systems are equipped to do precisely this.

A variety of fume extraction systems are available from reputed dust and fume extraction manufacturers in the UK for different settings. For example, non-toxic gases can be conveniently removed with fan fume extraction systems. But what about poisonous or irritant airborne particulates?

Toxic or foul smelling vapours may need 'scrubbing' with a scrubber fume extraction system – contaminated fumes enter the scrubber unit and are trapped within a re-circulation tank. There, they are sent through a series of ringed sprays where they are wetted with extremely fine droplets of water, or a washing solution of caustic soda. Following this, the offensive fume particles are wetted with larger droplets, whereupon they are collected in a mist eliminator. Harmful, obnoxious and irritant particulates can also be safely trapped in fume extraction systems which incorporate a carbon filtration unit.

Moreover, fume extraction systems vary in size depending on requirements. They can be single point (suitable for settings such as laboratories) or multi-point (for large scale production lines). A variety of materials is used in the manufacture of the fume extraction pipework, which is available in galvanised steel, stainless steel or polypropylene.

Whatever the 'particulate' problem may be, no matter how small or large the area, modern fume extraction systems can provide the perfect solution.

About the Author

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