

Galvanised ductwork for fume extract systems

Traditionally fume extract systems have been constructed from PVC due to its chemical resistance.

Its chemical resistance is one of PVC's good features, its less desirable features are:

- Expensive
- Specialist installation, including plastic welding, is required
- Large sizes are difficult to manufacture
- UV light degrades it, unless coated with another product
- No recyclable content
- Short distances required between supports

In practice most fume cupboard installations are handling very dilute contamination of contaminants, which is further diluted once you have a range of fume cupboards connected. Where this is the case using galvanised ductwork is cheaper, easier to install and allows the ducts to be recycled at the end of their life. There is experience of operating chemistry laboratory extract successfully with standard galvanised ductwork in many situations.

Each installation needs to be assessed for its suitability for use with galvanised materials. Where contamination is likely to condense in the ductwork galvanised ductwork is unlikely to be suitable, PVC should also be considered carefully in those situations.

In discussions with clients who are not confident about making the step away from PVC it is worth bearing in mind that fume cupboards are secondary containment, that the dilution rates are high, especially in multiple fume cupboard systems, and that exposure to spills and other causes of short term, high levels of contamination will not usually affect the life of the galvanised ductwork.



Large bore galvanised fume extract ducts. Achieving the same in PVC ductwork would have considerably higher cost and environmental impact.

Martin Wheeler – Contact : dbp.org.uk