

Carbon Filters

Odour control in the Water Industry

Technology
for a
Sustainable Future

ERG offers a comprehensive range of activated carbon, impregnated carbon, oxidising alumina media, and hybrid, multi-media filters. An ERG dry media filter may be used as a standalone filter or for polishing a bio-trickling filter or chemical scrubber discharge. All our dry media filters require no operator intervention and provide guaranteed odour control performance.

Designed and built to BS4994 and fully compliant with WIMES 8.05, our carbon filter systems offer assured performance, guaranteed discharge concentrations and competitive costing.

Key benefits of ERG's range of carbon filters

- High removal efficiency of H₂S and other odours
- Outlet H₂S concentrations <5-10ppb
- VOC polish to <200 ouE/m³ achieved
- Filters to treat 200 to 200,000 m³/hr
- Low pressure drop <500 Pa
- Bed life designed to suit requirements
- Low capital cost
- Supplied in PVC/GRP or coated steel

Carbon media available through our framework media suppliers Alkali impregnated carbon

- Pelletised for low pressure drop, up to 25%w/w take-up of H₂S, good mercaptans removal

Activated carbon

- Pelletised or granular, for VOC removal – virgin or reactivated

Water regenerable carbon

- Pelletised, up to 20% w/w take-up of H₂S, regenerable using water for up to 20 cycles. Operational cost savings.

Special applications

- Alternative grades available for unusual duties

Other impregnated media

Oxidising media for VOC odour polishing

Performance and system arrangement

ERG has successfully installed over 150 carbon filters in the UK. Performance exceeds 99% H₂S and VOC removal efficiency and an odour discharge of <1,000 ouE/m³ is guaranteed for most applications.

Three filter standard configurations are offered: Deep Bed, Dual Deep Bed and Annular. Bespoke designs are available for special projects.



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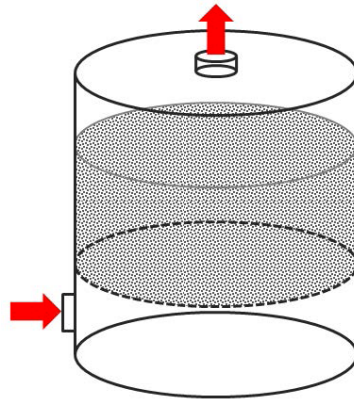
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All our systems are custom-designed for the odour control duty required, and include installation of:

- vessel and carbon media, with optional access structure (for walk-on, annular vessels)
- mist eliminator and/or in-duct air heater for moisture conditioning
- air extraction fans and ductwork
- electrical control panel
- integrated system design with upstream bio-trickling filters or chemical scrubbers

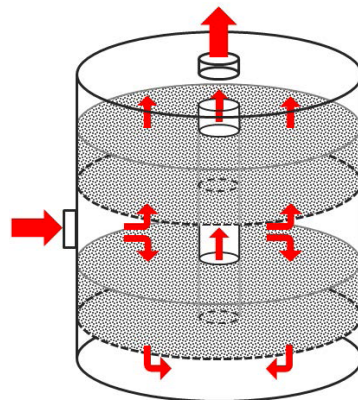
Deep bed filters

- ideal for small to medium air flows 200 to 10,000 m³/hr
- can be passive or forced ventilation
- widely used for local tank ventilation
- single or dual media
- suitable for water regenerable carbon



Dual deep bed filters

- ideal for medium air flows 2,000 to 25,000 m³/hr
- suitable for use as a polishing filter or for bulk removal of odours
- very compact design with small pressure drop
- single or dual media
- suitable for water regenerable carbon



Annular filters

- ideal for medium to large gas flows typically 5,000 to 150,000 m³/hr
- suitable for use as a polishing filter or stand-alone treatment of low odour flows, eg sludge cake storage ventilation
- very compact design with small pressure drop

