

# CIRCULAR ATTENUATORS

Wakefield Acoustics unique design software allows custom silencer selection to suit all air movement applications.



From small diameter straight-through silencers, through to large diameter silencers with central absorption pods, Wakefield Acoustics offer a wide range of custom designed circular attenuators to suit all air movement applications. Wakefield Acoustics works closely with OEM's, end users, contractors and consultants to address complex noise problems across a wide range of industries including power generation, water and waste treatment, process industries, chemical, and general manufacturing and commercial.

## CONSTRUCTION

Wakefield Acoustics offer several type of circular attenuator construction dependant on application and structural requirements:

- **SMALL FAN AND DUCTWORK ATTENUATORS ARE CONSTRUCTED FROM PRE-GALVANISED MILD STEEL CASINGS WHICH CAN EITHER BE RIVETED, SCREWED OR WELDED DEPENDANT ON APPLICATION.**
- **LARGER DIAMETER CIRCULAR ATTENUATORS REQUIRING MORE STRUCTURAL RIGIDITY ARE MANUFACTURED FROM HEAVIER PLATE CARBON STEEL.**

A circular attenuator consists of a rolled outer-skin and can essentially be described as an acoustically lined duct. An acoustically absorptive media is held under compression by pre-galvanised mild steel perforated plate. The acoustic media is typically wrapped in a scrim cloth to prevent the egress of particles into the airflow.

Higher performance circular attenuators are fitted with a central absorptive pod. This central pod is manufactured from a pre-galvanised mild steel perforated tube which is packed with an acoustically absorptive media.

The acoustic media utilised in Wakefield Acoustics attenuators is inert, non-combustible, non-hygroscopic, vermin proof, and can be wrapped in a 'Melinex' water resistant membrane to prevent the ingress of moisture and other contaminants present in the airflow.

## ACOUSTIC PERFORMANCE

Utilising Wakefield Acoustics unique design software, and dependant on the frequency spectrum of the source noise, splitter attenuators can be designed to suit the individual application. Variations in splitter pad configuration offering a range of sound absorption and insertion loss characteristics, allow Wakefield Acoustics to cost-effectively design splitter attenuators to meet the most demanding of customer noise specifications.

**TYPICAL CIRCULAR ATTENUATORS CAN BE DESIGNED TO OFFER ATTENUATION OF AIRBORNE NOISE IN EXCESS OF 25 DB(A), DEPENDANT ON SOURCE NOISE FREQUENCY SPECTRUM.**

## SUITABLE FOR A WIDE RANGE OF INDUSTRIES:

- POWER GENERATION
- WATER & WASTE TREATMENT
- PROCESS INDUSTRIES
- CHEMICAL
- GENERAL MANUFACTURING
- COMMERCIAL

# OPTIONAL FEATURES



## MATERIALS OF CONSTRUCTION

- Standard pre-galvanised mild steel casings and splitter pads are suitable for most applications.
- Heavier plate carbon steel casings and splitter pads can be utilised when required.
- Options for stainless steel and other materials are available on request.

## VENTILATION

- Aerodynamic cones and hemi-spherical end caps are incorporated into the central absorptive pod design to reduce pressure loss through attenuators.
- Where moisture is present in the airflow, the acoustic media can be sealed in a Melinex water resistant membrane.
- On high pressure applications, the attenuator casings will be fully welded and stiffened with integral longitudinal stiffeners if required.
- The attenuator construction can be designed to suit high temperature applications over 250°C.

## ANCILLARIES

- EU4 rated panel and bag filters can be incorporated into the attenuator design either as an integral feature or as a separate unit.
- Ductwork and fan transition pieces are available when required.
- Weather cowls, louvres, inlet mesh guards, sand traps, and weather skirts are all available on request.

## FINISH

- Standard finishes are untreated pre-galvanised mild steel and stainless steel, and primer painted carbon steel.
- A range of polyester powder coated, and wet spray paint finishes are available in all standard RAL and BS4800 colours.

## INSTALLATION

In addition to the design and manufacture services offered, Wakefield Acoustics can provide a professional and skilled installation service compliant with all relevant and current health and safety standards. Our installation engineers are highly qualified, holding CSCS cards and other application specific safety standard certification.

## ABOUT WAKEFIELD ACOUSTICS

With over 30 years experience and expertise across a wide range of sectors, Wakefield Acoustics is an internationally renowned company specialising in the design, manufacture and supply of acoustic products and solutions for a wide variety of industrial, commercial and environmental applications worldwide.

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