

PROCESS AIR/GAS SILENCERS

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



Typically utilised for fan blowers, centrifugal compressors, gas turbines and engine exhausts, Wakefield Acoustics offer a wide range of custom designed process air or gas silencers to suit most high and low pressure applications. Utilising a range of silencers from small diameter straight-through silencers, through to large diameter silencers with central absorption pods, 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.

CONSTRUCTION

Wakefield Acoustics offer several type of process air or gas silencer construction dependant on application and performance requirements:

- **LIGHTER GAUGE CARBON STEEL AND STAINLESS STEEL CONSTRUCTION IS UTILISED FOR LOWER PRESSURE APPLICATIONS.**
- **HEAVY PLATE CONSTRUCTION IS UTILISED FOR HIGHER PRESSURE APPLICATIONS.**

A process silencer 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 perforated plate. The acoustic media is typically wrapped in a scrim cloth to prevent the egress of particles into the airflow.

Higher performance silencers are fitted with a central absorptive pod. This central pod is manufactured from a perforated steel tube which is packed with an acoustically absorptive media.

The acoustic media utilised in Wakefield Acoustics silencers 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, process air/gas silencers can be designed to suit the individual application. Variations in diameter, length and central absorptive pod configuration offering a range of sound absorption and insertion loss characteristics, allow Wakefield Acoustics to cost-effectively design process silencers to meet the most demanding of customer noise specifications.

TYPICAL PROCESS AIR/GAS SILENCERS CAN BE DESIGNED TO OFFER ATTENUATION OF AIRBORNE NOISE IN EXCESS OF 45 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 carbon steel casings and central pods are suitable for most applications.
- Heavier plate carbon steel casings can be utilised when required.
- Options for stainless steel and other materials are available on request.

DESIGN FEATURES

- 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.
- Silencer cases are fully welded and gas tight.
- On extreme high pressure applications, silencer casings can comply with pressure equipment directive standards.
- The silencer construction can be designed to suit high temperature applications in excess of 250°C.

ANCILLARIES

- Weather cowls and mesh guards available on request.

FINISH

- Standard finishes are primer painted carbon steel and untreated stainless 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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