Industrial Air Technology Corp.

INDUSTRIAL SILENCERS

The IATC Industrial Silencer Series

The IATC Industrial Silencer Series is suitable for many medium to heavy-duty industrial applications where it is desirable to reduce the air turbulence noise emanating from an air handling system. Introducing only a modest pressure drop to the system, these silencers provide good sound absorption characteristics at the medium and high noise frequencies generated by a centrifugal fan. These Dissipative (Absorptive) Silencers are the classical solution for fan noise attenuation in up to 450-degree air stream conditions.

IATC Construction Features:

- 12 gauge shell construction standard for most models (up to 3/8" thick)
- Lifting Lugs
- Support Brackets
- Welded Construction
- Fiberglass Acoustic Media covered with Fiberglass Cloth or Mylar

Inlet Silencer

Outlet Silencer

Available Options:

- Custom flange bolt patterns
- Inlet and Outlet Screens
- Weather Hoods
- Access Doors
- Drains
- Adjustable Support Legs (a silencer is not to be supported by a fan)
- Stainless Steel Construction
- Paint Finishes: Enamel, Epoxy, Zinc Rich, High Temperature, Powder Coat

Typical Fan Silencer Configurations

Silencers are available for fan inlets and outlets as well as other industrial ductwork applications.

**Note. In vertical applications, silencers should be supported to prevent loading on the fan housing from stack or duct weight, and wind loading. In some instances, installing a flexible connector between the fan and the silencer is recommended.*

A properly designed silencer will meet the following criteria:

- **Acoustic:** The silencer must be able to reduce incoming sound power by the desired amount with respect to frequency band, expressed as the Dynamic Insertion Loss (DIL). The environment in which the silencer will operate must be known since the acoustical performance is significantly affected by temperature, gas characteristics, system configuration and physical layout.
- **Aerodynamic:** Airflow through a silencer will cause a pressure loss and will impact acoustic performance
- **Geometrical:** The silencer must fit in the space that is available
- **Mechanical:** Minimal maintenance should be required to keep a silencer operating near full efficiency for long periods of time. Sufficiently durable modifications to the silencer design must be available to allow it to handle elevated temperatures as well as exotic gases which may erode less durable materials.
- **Economical**

Because these criteria are often in conflict with each other, it is important to work with a silencer vendor who understands industrial fan applications. IATC can help you find a solution in which all of the criteria are fulfilled to a satisfactory degree.

Silencer Performance:

Silencers can reduce noise produced by air turbulence in a fan. However, only the airstream that passes through the silencer sees a noise reduction. Breakout noise through the fan housing and breakout noise through ductwork or flex connectors before the silencer will not see a reduction in noise. Vibration noise and mechanical noise generated by the motor and drive will also not be reduced by a silencer. Sound insulation or sound enclosures may be necessary to reduce noise levels that are outside the influence of a silencer.

Typical Models

VROS – Vertical Rectangular Outlet Silencer

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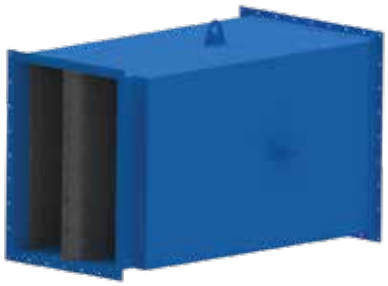
VCOS – Vertical Cylindrical Outlet Silencer

VIBS – Vertical Inlet Box Silencer



HRIS – Horizontal Rectangular Inlet Silencer

HCIS – Horizontal Cylindrical Inlet Silencer

HROS – Horizontal Rectangular Outlet Silencer

HCOS – Horizontal Cylindrical Outlet Silencer