Noise Control Products

Circular Silencers

www.pottorff.com
Circular Silencers

Pottorff circular silencers are engineered to provide a highly configurable noise control solution tuned to meet project specific acoustic and aerodynamic requirements. By tailoring construction elements including the Unit Diameter, Pressure Class, Fill Materials and internal baffle geometries, Pottorff provides a robust product offering backed by data collected in our NVLAP (Lab Code 201006-0) accredited Acoustical Testing Laboratory.

Available Unit Diameters

Intermediate Unit Diameters available from 12" – 60" (305 - 914).

Pressure Class

Silencer selection involves maximizing noise control performance while minimizing pressure loss. Pottorff offers a range of Pressure Class options, which describes the balance of acoustic and aerodynamic performance.

1. Pressure classes within nominal recommended velocity ranges yield approximate pressure drops of 0.2" to 0.35" w.g. [50 Pa to 87 Pa].

Optimal Aerodynamic Performance

Lower pressure classes use baffle configurations to minimize pressure loss.

Optimal Acoustic Performance

Higher pressure classes use baffle configurations to maximize insertion loss.

Model names define Silencer Shapes, Fill Material Options, Unit Diameters and Pressure Class to configure unique product offerings and ensure accuracy with specifications.

Note: Dimensions in parentheses ( ) are in millimeters.

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MODEL NAME: CXFN 24C
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Baffle Shape
Silencer baffle shapes and internal geometries influence acoustic and aerodynamic performance. Pottorff offers baffle shape options for a wide variety of applications.

Straight
Straight baffle shape with spiral outer casing for exposed duct applications.

Straight Extended Bullet
Straight baffle shape with spiral outer casing and Extended Bullet to improve aerodynamic performance.

Straight Extended Width
Straight baffle shape with Extended Width outer casing to improve acoustic performance.

Extended Width
Noise control performance is related to baffle width, with larger baffle widths providing greater control of low frequency energy. Extended Width silencers increase the width of the baffle outside of the airstream providing improved low frequency noise control without increasing pressure loss.

Acoustical Diffuser Cone (ADC)
Specifically designed for close coupled installation at the discharge or inlet of vane-axial fans, the Acoustical Diffuser Cone (ADC) provides noise control immediately at the noise producing equipment, and can reduce system pressure losses with its static regain design. The silencer’s center bullet is customized to match the hub diameter of the fan selection, minimizing pressure losses normally attributed to conventional silencers.

Acoustical Diffuser Cone
Tapered baffle shape with Extended Width outer casing to maximize acoustic and aerodynamic performance.

NOTE: Dimensions in parentheses ( ) are millimeters.

Extended Width Extended Bullet
Straight baffle shape with Extended Width outer casing and Extended Bullet to improve acoustic and aerodynamic performance.

Center Bullet
Center bullet customized to match hub diameter of the fan selection.

Angle Ring
End treatment options include Angle Rings with custom hole patterns to simplify installation.

Baffle Shape
Internal geometry tapered to improve aerodynamic performance.
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Materials

Materials of internal and external components are typically selected based on the installed condition of the silencer. Pottorff offers a range of material options suitable for indoor, outdoor and corrosive environments including Galvanized Steel, Paint Grip Steel, 304 Stainless Steel and 316 Stainless Steel. Weight of galvanized finishes can be provided to meet specific project requirements.

Outer Casing

The outer casing of Pottorff’s circular silencers varies based upon the selected model. Circular model silencers are fabricated with spiral ductwork for exposed ductwork applications where a continuous aesthetic is required. Circular Extended Width silencers are fabricated with a square casing that provides an additional baffle assembly outside of the airstream for improved noise control performance.

Circular 18, or 26-gauge Spiral duct outer casing varies based on standard gauges of spiral.

Extended Width 22, 18, or 16-gauge.

Fill Materials

Noise control in duct silencers is achieved using baffle assemblies filled with a sound absorptive material or specially tuned chambers. Pottorff offers fill material types for a range of applications.

Fiberglass Blanket insulation.

Recycled Cotton Post industrial natural cotton fibers treated with EPA registered fungal inhibitor to actively resist the growth of mold, fungi and bacteria.

None Void of fill materials of any kind.

Perforated Materials

The Perforated Material is an acoustically transparent screen that allows sound to pass through silencer baffles where it can be absorbed, while also providing a layer of protection against air erosion of fill materials. Alternative perforation patterns are used to maximize performance of resonant chambers for No-Fill silencers.

Perforated Materials 26, 24 (No Fill), 22, or 18-gauge.

Fill Protection

Project requirements often require fill materials to be protected from exposure to the airstream or erosion in high velocity applications. Pottorff offers a range of fill protection options for specific applications.

Polymer Film Fill material encapsulated with polymeric film membrane (mylar, tedlar) preventing exposure to the airstream in healthcare applications.

Fiberglass Cloth Fill material encased in fiberglass cloth to prevent erosion in high velocity applications.

None No fill protection.

Model Key

SHAPE | FILL | FILL PROTECTION | DIAMETER | PRESSURE CLASS
--- | --- | --- | --- | ---
CX | F | N | 24 | C
--- | --- | --- | --- | ---

AEREO-ACOUSTIC PERFORMANCE

CONSTRUCTION OPTIONS

Perforated Materials

26, 24 (No Fill), 22, or 18-gauge.
About Us

Pottorff offers a comprehensive line of noise control products used extensively in projects across the globe. For over 35 years we have been dedicated to providing the commercial and industrial acoustic markets with excellence in both products and service. Continuously improving our manufacturing techniques and equipment allows a delivery schedule second to none. Creating innovative tools that predict noise levels and simplify product selection makes Pottorff the company to choose to get the right product for every application.

Pottorff’s in-house Acoustical Laboratory, outfitted with state-of-the-art hardware and software tools, allow us to conduct testing according to the latest ASTM standards. Our laboratory is NVLAP accredited (Lab Code 201006-0) to evaluate dynamic insertion loss, self-generated noise and pressure drop in strict accordance with ASTM E477-13.