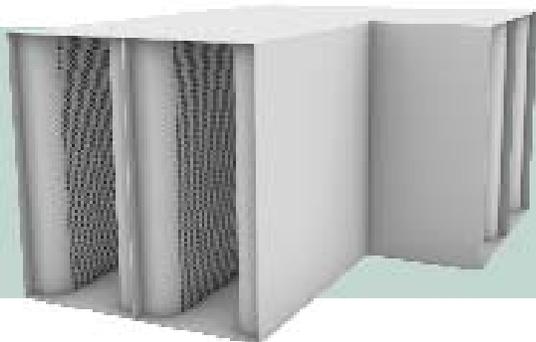


Dynasonics

Noise Control Products

Elbow Silencers



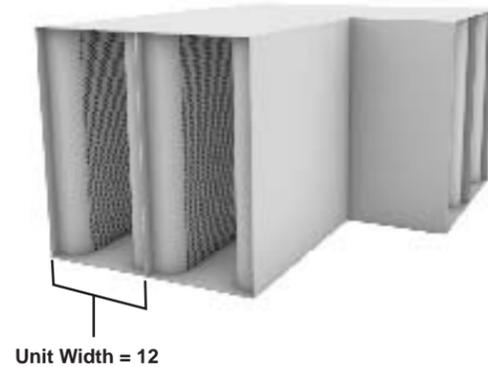
5960 West Washington Street, Phoenix, AZ 85043
(602) 233-1211 (V) * (602) 233-2033 (F) * www.DynasonicsNoiseControl.com

Elbow Silencers

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Acoustic & Aerodynamic Performance

Dynasonics elbow 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 Width, Pressure Class, Fill Materials and internal baffle geometries, Dynasonics provides a robust product offering backed by data collected in our NVLAP accredited Acoustical Testing Laboratory. Baffles are shown for illustration only and do not represent actual baffle quantity and/or size.

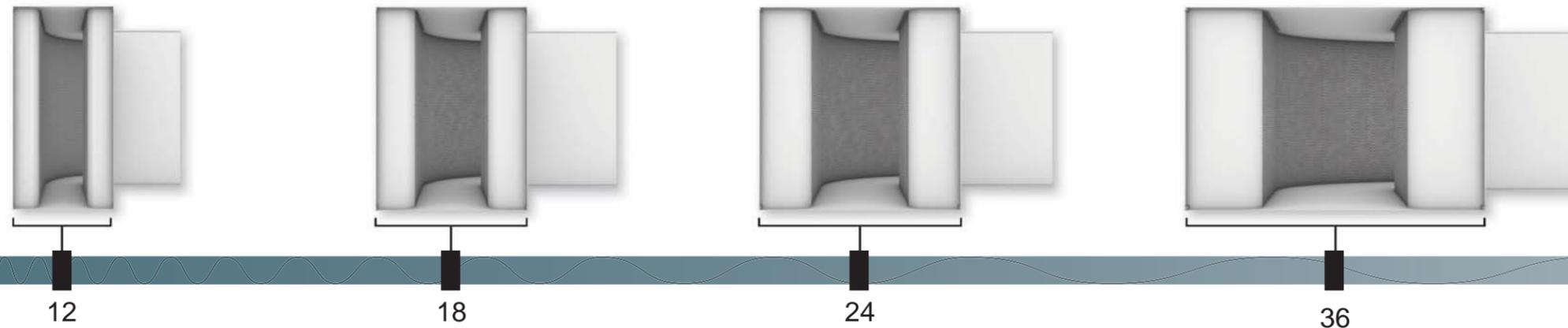


SHAPE *	FILL MATERIAL	FILL PROTECTION	UNIT WIDTH	PRESSURE CLASS
*Extended Width option denoted in the silencer shape as "X" (RX, EX, CX).			8	▲
			9	F
E ELBOW	F FIBERGLASS	N NONE	12	G
R RECTANGULAR	C RECYCLED COTTON	P POLYMER LINED	15	H
C CIRCULAR	N NO FILL	F FIBERGLASS CLOTH	18	I
			24	J
			30	K
			36	L
				M
				N
				▼

MODEL NAME
EFN 12G

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

Intermediate unit sizes available from 8" - 36" (203 - 914).



Mid/High Frequency

Smaller Unit Widths have narrow baffle spacing and are optimized for control of mid/high frequency noise.

Low Frequency

Larger Unit Widths have thicker baffles and wider spacing optimized for control of low frequency noise.

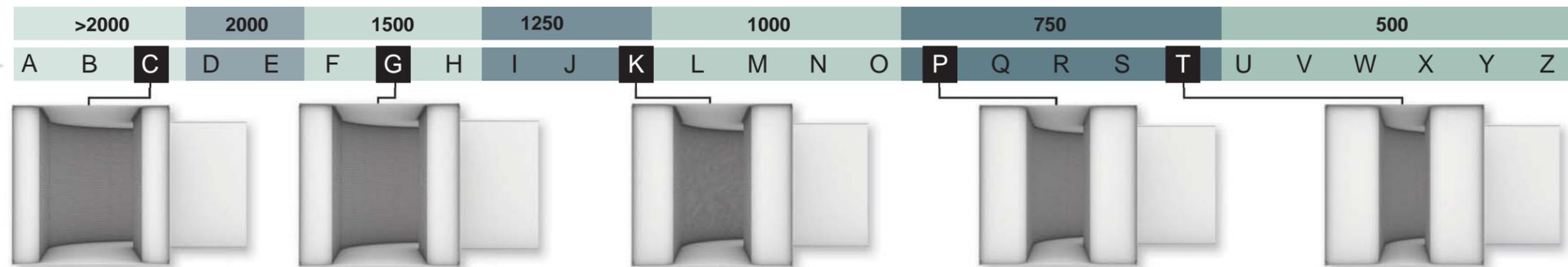
Unit Width

Dynasonics elbow silencers are designed for noise control in applications where space is limited. These silencers utilize the same parallel baffle configurations and Unit Widths as our rectangular silencers but with an elbow shape and customizable throat dimensions. Unit Width corresponds to the physical width of the baffle and is selected based on the required frequency range of noise control.

Pressure Class

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

1. Recommended Velocity Range



1. Pressure classes at nominal velocities 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.

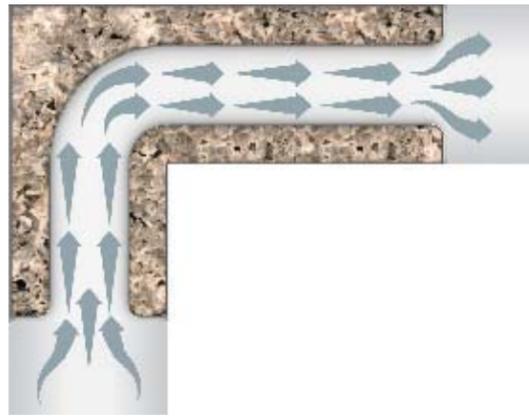
Optimal Acoustic Performance

Higher pressure classes use baffle configurations to maximize insertion loss.

NOTE: Dimensions in parentheses () are millimeters. We reserve the right to change/modify designs and/or materials, at any time, without prior notice.

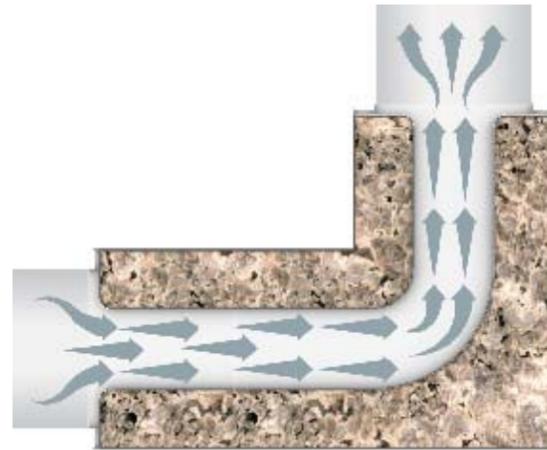
Baffle Shape

Silencer baffle shapes influence acoustic and aerodynamic performance. Dynasonic offers baffle shape options to minimize pressure loss for a range of airflow velocities.



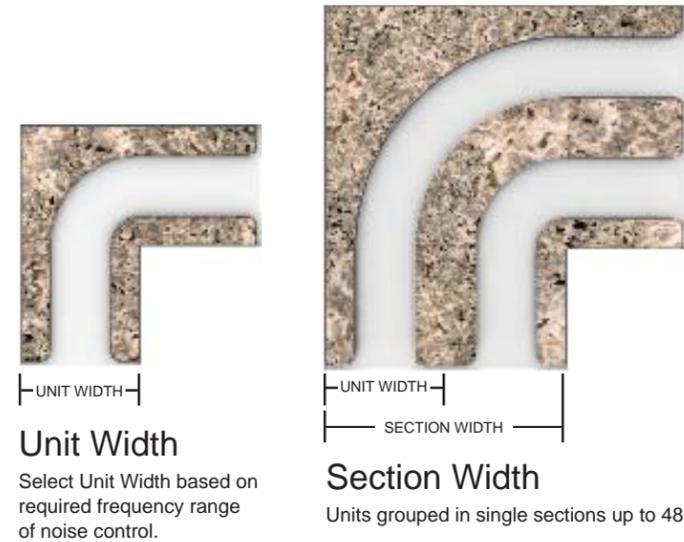
Extended Width

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.



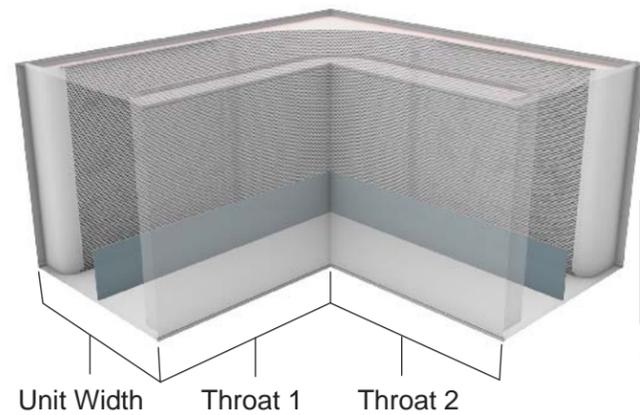
Multiple Sections

Elbow silencers are fabricated to align with project ductwork dimensions. A range of Unit Widths are available for a given duct dimension. These are grouped in single sections limited in size for shipping and handling purposes. Multiple sections are field assembled as silencer banks as needed to align with project dimensional requirements.



Centerline Length

The overall Centerline Length is used to define acoustic and aerodynamic performance of elbow silencers, which is calculated based upon the silencer's width and throat dimensions. Where elbow silencers are fabricated in multiple sections, the Centerline Length is defined based upon the width of individual section sizes.



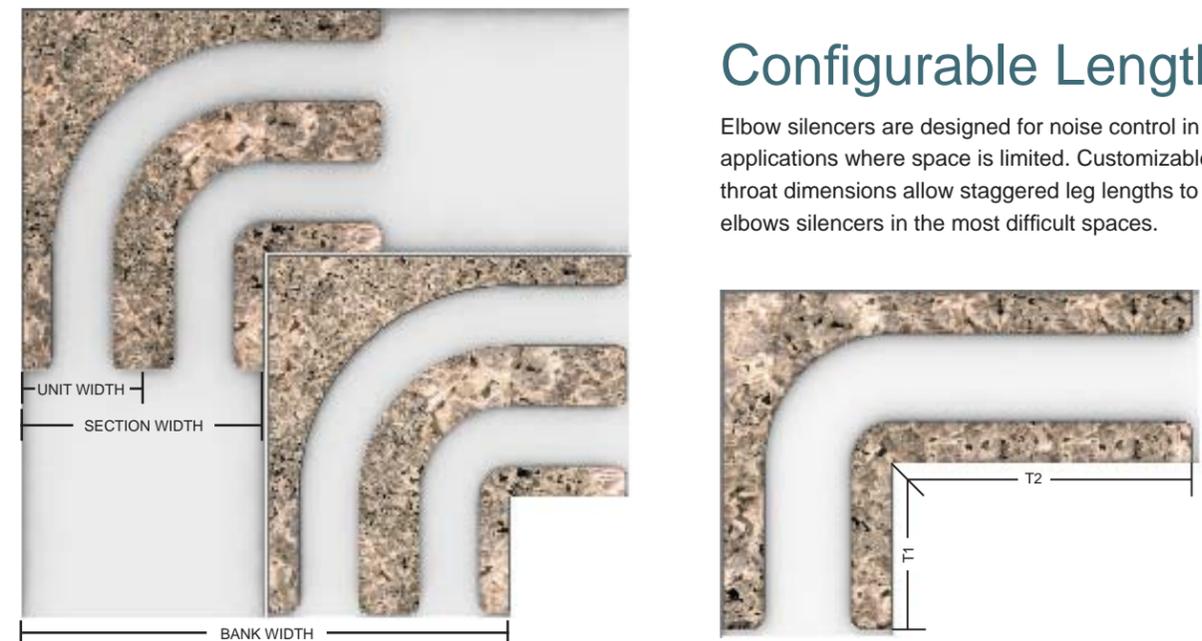
$$W + T1 + T2 = CL$$

WIDTH THROAT 1 THROAT 2 CENTERLINE LENGTH

Centerline Formula

Configurable Length

Elbow silencers are designed for noise control in applications where space is limited. Customizable throat dimensions allow staggered leg lengths to fit elbows silencers in the most difficult spaces.



We reserve the right to change/modify designs and/or materials, at any time, without prior notice.

Materials

Materials of internal and external components are typically selected based on the installed condition of the silencer. Dynasonics offers a range of material options suitable for indoor, outdoor and corrosive environments including G90 Galvanized Steel, A60 Galvannealed Steel, 304-2B Stainless Steel and 316L-2B Stainless Steel. Optional heavier galvanized coating thicknesses can be provided to meet project specific requirements.

Model Key

E	F	N	12	G
SHAPE	FILL	FILL PROTECTION	UNIT WIDTH	PRESSURE CLASS
CONSTRUCTION OPTIONS			AERO-ACOUSTIC PERFORMANCE	

Outer Casing

Ductwork in close proximity to mechanical equipment can yield elevated levels of duct breakout noise or noise that radiates through the duct walls and into occupied spaces. The Outer Casing of duct silencers can be selected with heavier gauge materials to control duct breakout noise. For the most critical applications, such as direct downblast rooftop units above noise sensitive spaces, High Transmission Loss (HTL) casings and double wall constructions offer the best control of duct breakout noise.



Single Wall

Select heavier gauges for improved control of duct breakout noise.

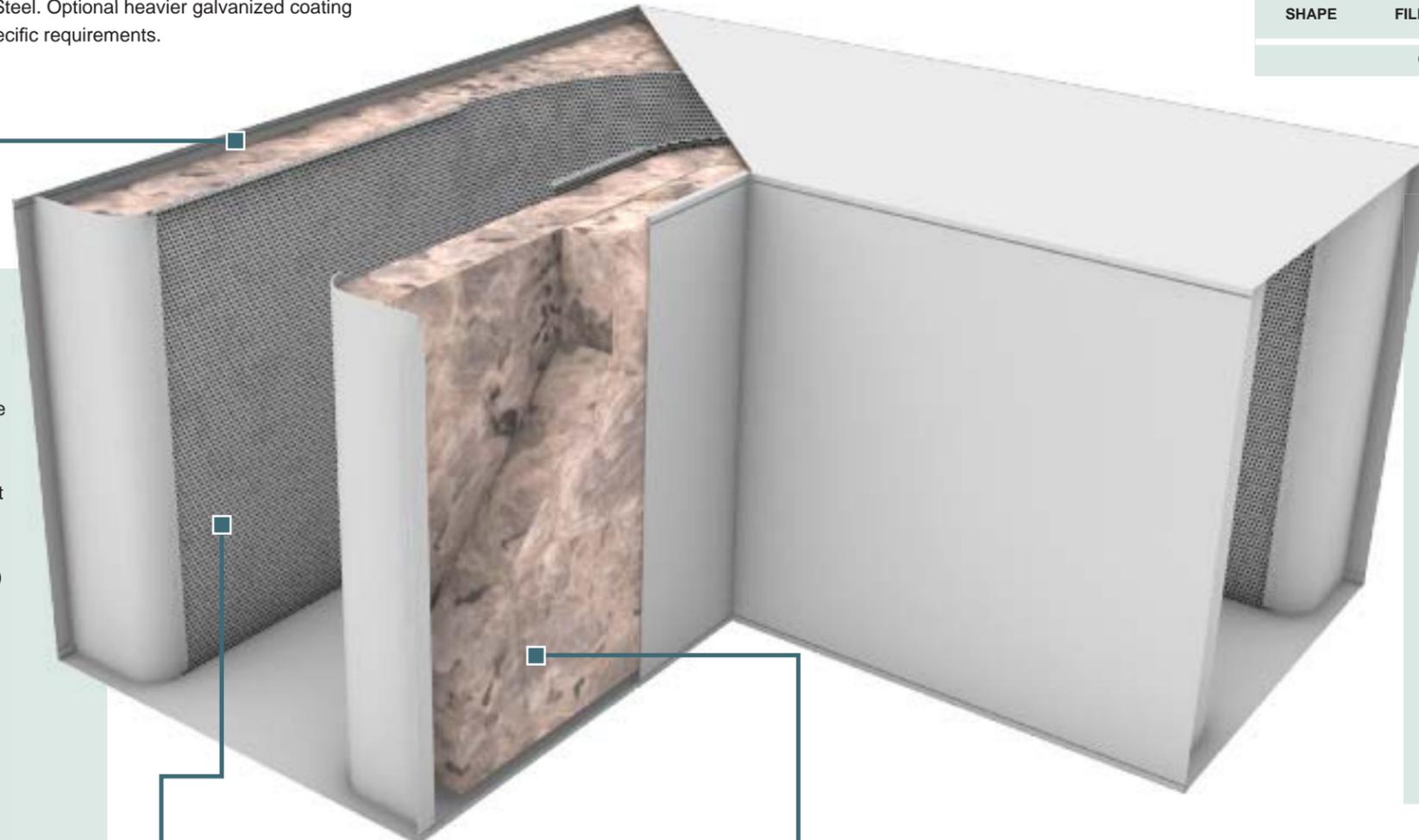
22 Standard, 20, 18 or 16 gauge optional.



High Transmission Loss (HTL)

Select double wall HTL casings for best control duct of breakout noise.

HTL Outer Casings equivalent to 7, 10, 12 or 14 gauge 18/18 gauge 2-1/4" double wall.



Fill Protection

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

P



Polymer Film

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

F



Fiberglass Cloth

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

N

None

No fill protection.

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.



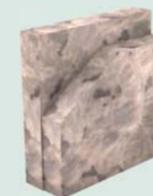
Perforated Material

26, 24 (No Fill), 22, 20, 18 or 16 gauge.

Fill Material

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

F



Fiberglass

Fiberglass blanket insulation.

C



Recycled Cotton

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

N

No Fill

Void of fill materials of any kind.

Dynasonics

About Us

Dynasonics 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 Dynasonics the company to choose to get the right product for every application.

Dynasonics silencers have been acoustically and aerodynamically tested, at our in-house, NVLAP accredited Acoustical Laboratory, outfitted with state-of-the-art hardware and software tools, allowing us to conduct the testing and to determine dynamic insertion losses, self-generated sound power levels and static pressure losses in strict accordance with ASTM E477-13.