

eNoise Control



SOUND ENCLOSURES



eNoise Control

*Specializing in Acoustics,
Noise & Vibration Control*

129 Penn Street Phone 317-774-1900
Westfield, IN 46074 Fax 317-774-1911

www.enoisecontrol.com

info@enoisecontrol.com

eNoise Control Sound Enclosure Systems



Noise control in commercial, industrial, or environmental systems is an important element of the design process. eNoise Control has over 30 years of combined experience delivering noise control solutions. Regardless of the application, designing a system takes knowledge and experience.

eNoise Control designs and manufactures a complete line of modular engineered systems incorporating the modular acoustical panel. This double-walled acoustic panel can be quickly and easily assembled into a variety of configurations and are designed to provide a high level of sound absorption and transmission loss.

A partial or complete eNoise Control Modular Panel enclosure mitigates indoor and outdoor noise sources. Our complete engineered systems account for all acoustic, structural, and ventilation needs.

Industrial Applications

In recent years, worker safety in industrial and manufacturing facilities has become increasingly important. Governmental regulations and noise reduction initiatives make quieting industrial noise a top priority. eNoise Control steel sound enclosure systems provide attractive solutions to help your facility conform to OSHA standards and increase comfort and safety for your employees.

Industrial Projects

- Generators/Gensets
- Compressors
- In-Plant offices
- Manufacturing Equipment
- Positive Displacement Blowers
- Test Chambers
- Vacuum Blowers
- Fans
- Pumps
- Saws
- Punch Presses

Environmental Applications

With business and population growth, residential areas begin to encroach on industrial and commercial areas. Mechanical or process equipment can create a noisy environment. Municipalities respond to this with codes and ordinances to control noise. Outdoor sound enclosures help mitigate these noise sources. eNoise Control engineers the enclosures with special design considerations for outdoor use such as wind and snow loading, weather protection, proper roof design to avoid water pooling, waterproofing, and use of specialty materials.

Environmental Projects

- Air Cooled Chillers
- Cooling Towers
- Transformers
- Waste Water Treatment Process Blowers
- Generators
- Fans
- Pumps

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Modular Panel Types

Standard modular acoustic panels are fabricated of various thicknesses and material depending on the level of noise control required. Standard eNoise Control Modular Panels are fabricated with the following characteristics.

- Outer shell of 18 gauge steel
- Inner perforated shell of 22 gauge steel
- Stiffened with 18 gauge internal channels and edge rails
- Acoustic grade fill of 2.5-6 pcf long strand fiberglass or mineral wool
- 4" thick with available 2" and 6" thicknesses

eNoise Control also manufactures High Transmission Loss (HTL) panels for applications requiring higher transmission loss. These panels feature the same basic construction as our standard panels, but feature an outer shell of 16 gauge steel and an added high mass septum for increased acoustic performance.

The acoustic grade fill of all of our panels is inert, mildew resistant, vermin proof, and incombustible.

Materials

Outer and inner shell materials are available in standard galvanized steel, Type G90, mill phosphatized (satin) finish galvanized steel (readily paintable), stainless steel, Types 304 and 316, aluminum, and aluminized steel. Standard material gauges for the solid outer shell are 18 and 16 gauge. The inner perforated shell has 23% open area and is 22 gauge. Septum panels and panels with solid outer and inner shells are available. Factory applied powder-coat finish is available as an additional option.

All internal sound absorbing media used in eNoise Control steel panels meet the requirements of NFPA-90A and surface burning characteristics per ASTM E84. The media is available unlined, lined, or bagged using film or cloth barrier, and acoustic spacer. The insulation is under compression so as not to allow settling of acoustical media within the panel.



eNoise Control Sound Enclosure Systems

Standard Panel Dimensions

eNoise Control acoustic panels are available in standard designated widths of 21.625" and 45.625". Standard lengths are up to 144". Other widths and lengths are available for fabrication. A typical enclosure incorporates as many standard size panels as possible and then finished with a non-standard sized panel.

Silenced Ventilation Systems

eNoise Control will work with you to properly design silenced forced/passive ventilation systems. The systems can be mounted on the wall or roof. eNoise Control ensures that the enclosed equipment of process is properly ventilated to prevent overheating. We do this by choosing from our line of circular, rectangular, or elbow silencers, or a fixed blade acoustical louver. These products can be used in conjunction with forced air ventilation fans to provide the highest level of noise control without disrupting the equipment operation.

Accessories

eNoise Control acoustic panel systems offer many accessories. Available options include forced or passive silenced ventilation systems, windows, single and double leaf access doors, removable panel wall and roof sections, structural steel components, and factory painting.

Windows

Observation windows are available as double pane, wire reinforced, or tempered safety glass. The windows are held in place with a flexible, airtight seal and separated by an airspace of the same thickness as the acoustic panel. Depending on the window size, it can be factory installed or shipped and field installed.



Doors

A complete line of single and double leaf access doors are available in various sizes. The doors can be incorporated to meet a variety of needs such as personnel and machinery access. Single and double leaf access doors are available with industrial grade strap hinges and panic passage hardware. Door thicknesses match adjacent panel thickness, construction, and acoustic performance.

Structural Steel

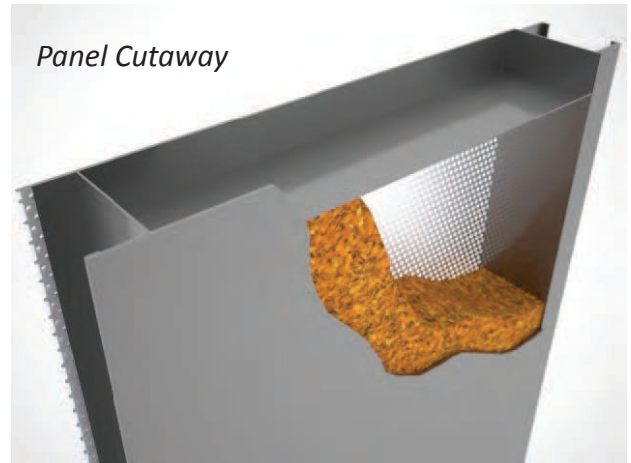
Structural steel components and welding assemblies are designed for either field welding or bolt together assembly. Standard structural items are shipped with one factory coat of primer for protection during shipping. eNoise Control can supply structural items with a hot dip galvanized coated finish or factory painted with either wet paint or powder-coat finish.

Structural Performance

eNoise Control acoustic panels are available in standard designated widths of 21.625" and 45.625". Standard lengths are up to 144". Other widths and lengths are available for fabrication. A typical enclosure incorporates as many standard size panels as possible and then finished with a non-standard sized panel.

Wall Panel Construction

eNoise Control panels are fabricated with an outer solid shell of 16/18 guage and inner perforated shell of 22 guage. Panels are stiffened with 18 guage internal channels and edge rails. The acoustic grade fill is 2.5 to 6 pcf long strand fiberglass or mineral wool depending on the application. Both fills are inert, mildew resistant, vermin proof, and incombustible and are suitable for wet/dry and freeze/thaw cycling. Mating panels are attached by inherent tongue and groove panel joints. Typical panel joints are horizontal, however vertical panel joints are used depending on the project requirements and aesthetics desired.



Sound Absorption Coefficients

The acoustic performance of eNoise Control barrier wall panels is backed by independent testing in a NVLAP accredited laboratory. When tested in accordance with *ASTM C423, Standard Method of Test for Sound Absorption of Acoustic Materials in Reverberant Rooms*, the panel assembly shall have the following minimum airborne sound absorption:

Model	Construction ²	Sound Absorption						NRC ³
		125	250	500	1000	2000	4000	
STL-4 ¹	16 ga. solid / 22 ga. perforated	0.60	1.13	1.12	1.09	1.03	0.91	1.00
STL-4 ¹	18 ga. solid / 22 ga. perforated	0.60	1.13	1.12	1.09	1.03	0.91	1.00

¹(4) = 4 inch thickness

² solid inner skin available

³ Noise Reduction Coefficient (NRC) is the average of coefficients at 250, 500, 1K, and 2K Hz, expressed in the nearest integral multiple of 0.05.

Sound Transmission Loss

When tested in accordance with ASTM E90, Standard Recommended Practice for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions, the panel assembly shall have the following minimum sound transmission loss.

Model	Construction ²	Transmission Loss, dB						STC ³
		125	250	500	1000	2000	4000	
STL-4 ¹	16 ga. solid / 22 ga. perforated	24	32	41	51	60	66	43
STL-4 ¹	18 ga. solid / 22 ga. perforated	21	28	39	48	56	58	40

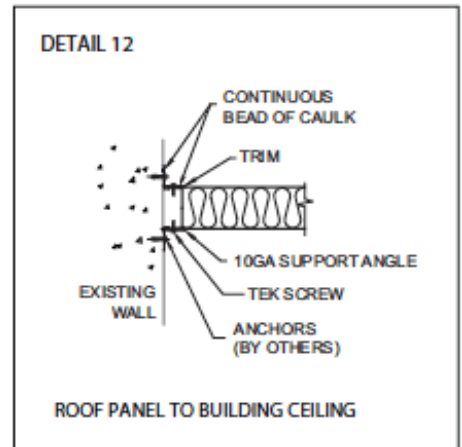
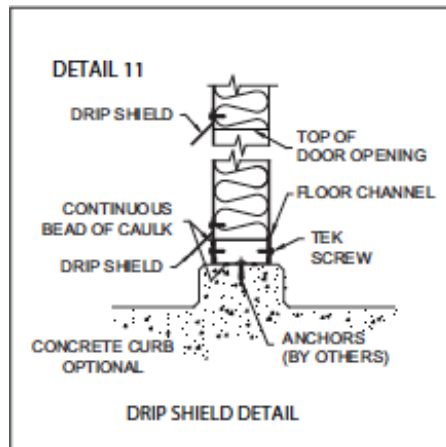
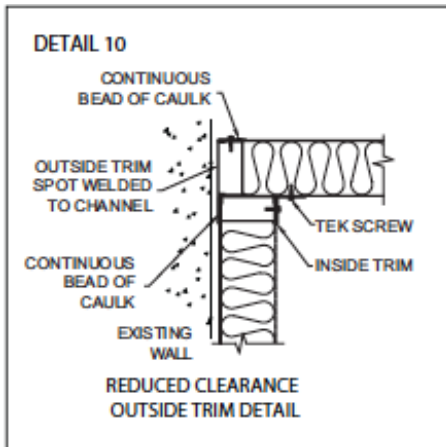
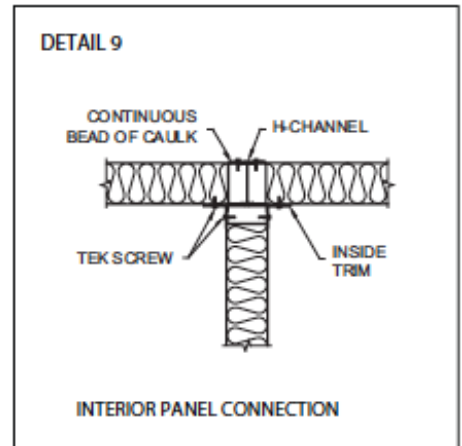
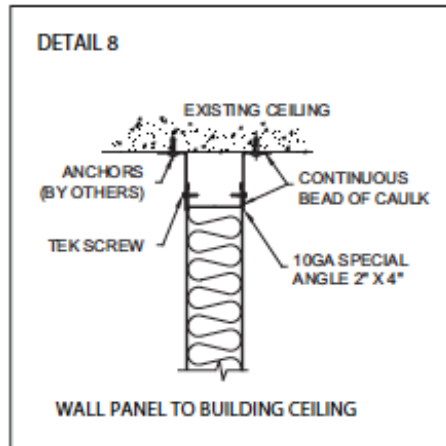
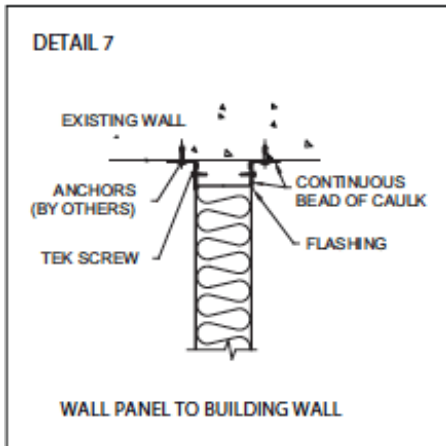
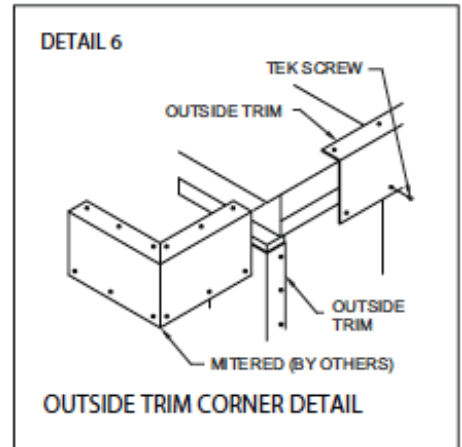
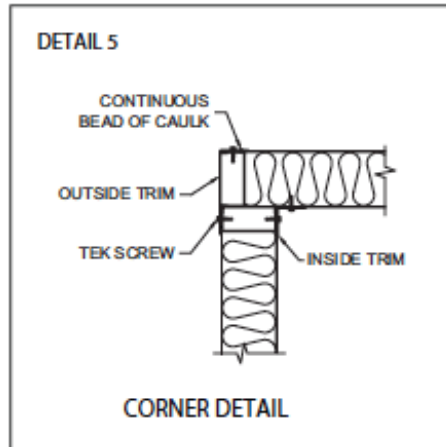
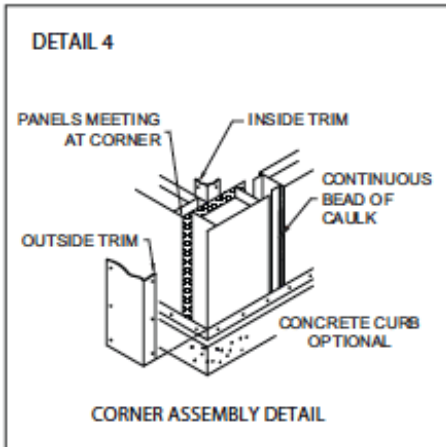
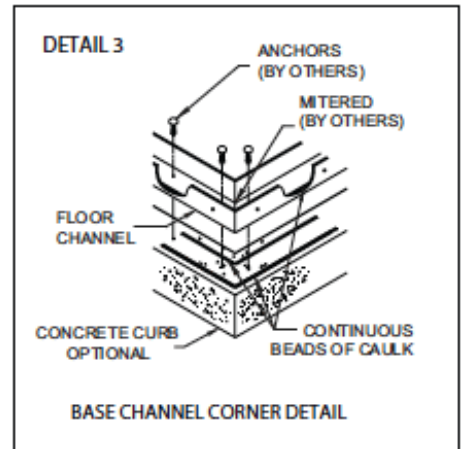
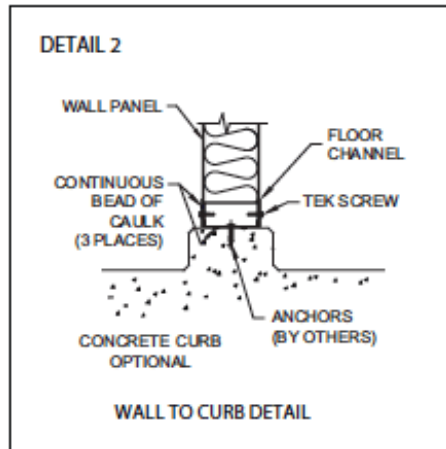
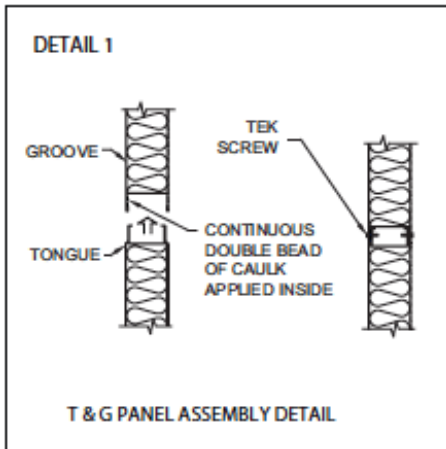
¹(4) = 4 inch thickness

² solid inner skin available

³ Sound Transmission Class (STC) is determined by comparing test data with a set of standard STC contours as described in *ASTM E413, Standard Classification for Determination of Sound Transmission Class*.

The acoustic performance of eNoise Control steel panels is not degraded through prolonged exposure to noise, vibration, pressure differential, rain, wind, or snow.

Standard Construction and Connection Details



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