

Noishield® Sound Barriers

Lab Rated Acoustic Performance
and Durable Construction

For further information / supply in Canada contact:

ANC

a division of Wallworks Acoustic Architectural Products Inc.
www.acousticnoisecontrol.com
acousticnoisecontrol.info@gmail.com



- Galvanized steel or aluminum
- Free-draining
- Light weight
- Easily installed
- Highly sound absorptive
- Weather-tested finishes
- Freestanding or add-on cladding panels
- Relocatable
- Horizontal or vertical installation



Noishield® Sound Barrier System

Effective and Attractive Sound Barrier Systems Using Field Proven & Durable Acoustically Rated Components

IAC Acoustics Noishield outdoor sound barrier systems protect communities and workers from noisy equipment by blocking line-of-sight sound transmission and absorbing sound energy radiating from the source. Noishield panels are performance rated for sound absorption, sound transmission loss and structural wind-loads, simplifying screen wall designs and allowing for the most cost effective and reliable sound barrier solutions available.

IAC Acoustics Noishield barrier panels combine multiple weather-resistant and aesthetic features in order to provide a highly durable and corrosion resistant all-weather outdoor barrier panel.

Pitched solid upper surfaces shed rain-water. Perforated lower surfaces allow any accumulated moisture to drain freely so the panel can dry quickly.

G-90 Galvanized steel materials of construction include a corrosion resistant zinc coating to protect the underlying steel components. A durable polyester powder coating suitable for exterior installations protects the steel from weathering and ensures an attractive finish in any of IAC Acoustics stock colors, or an industry standard RAL 4-digit color.

Roll-formed panels provide a uniform, flat profile suitable for architectural applications where an attractive appearance is a requirement. Consistent panel heights add to a crisp and neat visual aesthetic.

IAC Acoustics Noishield panels feature a deep cross section that provides greater resistance to wind-loading and a panel that can span supports up to 20 ft apart. IAC Acoustics provides a range of engineering data to assist with wall layout, including load tables for a range of support post spacing, wall heights and a variety of wind speeds.

Standard Features



Laboratory Rated Acoustic Performance
STC-30 to STC-33 / NRC 1.00 to 1.05



Excellent weather & corrosion resistance.
Galvanized steel materials with powder coated finish applied post assembly. Fully non-welded construction to avoid damage to galvanized coating.



Freestanding, able to span supports of up to 20 feet depending on local codes & wind-speed requirements.



Noishield Barrier Systems Offer:

- Steel or aluminum materials of construction for a choice of economy or light-weight
- Powder-coated or mill-finish (in-coated) finishes for a range of options
- Multiple panel configurations and a range of sound transmission loss, STC & sound absorption performances to match each project's unique requirements
- "Continuline" specialty details to conceal support posts
- "Slim-Line" face-applied panels to permit utilization of existing support structures and installation from either the front or the rear of the support wall components

Typical Applications:

- Rooftop or ground mounted mechanical equipment screens
- Chiller, generator & compressor packages
- Transformer yards & utility substations
- Light-rail systems

Acoustic Performance

Noishield barrier panels are rated with sound transmission loss values fully compatible with typical acoustic screen performance requirements. All Noishield barrier panels incorporate sound absorbing materials to prevent noise reflections that degrade barrier performances. Type C modules are used to clad new or existing non-absorbing barriers while Type FS and SFS are free-standing walls that combine excellent sound transmission loss (used for 125 Hz insertion loss up to 10 dB) with high sound absorption ratings.

* Freestanding Type FSt is used for applications requiring 125Hz insertion loss between 10 and 14 dB.

| Barrier Model | 1/3 Octave Band Center Frequency, Hz | | | | | | | STC |
|----------------------|--------------------------------------|------|------|------|------|------|------|------|
| | 125 | 250 | 500 | 1k | 2k | 4k | 8k | |
| | Sound Transmission Loss, dB | | | | | | | |
| FS/S and SFS/S | 21 | 34 | 40 | 33 | 32 | 26 | 37 | 30 |
| FSt/S | 24 | 38 | 41 | 33 | 35 | 29 | 34 | 33 |
| FS/A and SFS/A | 21 | 32 | 37 | 30 | 37 | 28 | 30 | 31 |
| | Sound Absorption Coefficients | | | | | | | NRC |
| FS/S, FS/A and FSt/S | 1.12 | 1.12 | 1.10 | 1.01 | 0.89 | 0.76 | 0.57 | 1.05 |
| SFS/S and SFS/A | 0.49 | 1.04 | 1.14 | 1.05 | 0.96 | 0.95 | 0.87 | 1.05 |
| C/S and C/A | 0.30 | 1.05 | 1.07 | 1.01 | 0.96 | 0.88 | 0.78 | 1.00 |
| C12/S and C12/A | 0.48 | 1.08 | 1.10 | 0.99 | 0.92 | 0.83 | 0.78 | 1.00 |
| C38/S and C38/A | 0.68 | 1.19 | 1.10 | 1.03 | 0.90 | 0.81 | 0.76 | 1.05 |

• Sound Transmission Loss: All data in accordance with ASTM E90 and E413

• Sound Absorption Coefficients: All data in accordance with ISO Standard 354, ASTM C423 and E413 with 120ft² (11.15m²) test sample in 10,000ft³ (262m³) reverberation room. Type A mounting. Coefficients greater than 1.0 result from edge diffraction effects. Do not use sound absorption values greater than 0.95.

Durable Noishield Barrier Finishes

Noishield Barriers are finished with a tough, thermosetting, polyester powder coating which is not damaged by the harsh cleaning chemicals used to remove spray paint graffiti. A wide variety of standard colors allow complementary decorative schemes and attractive designs to reduce apparent wall height as perceived by the community.

- Tested for accelerated weathering per ASTM G 23 for 2,400 hours with chalking not less than No. 8 rating (ASTM D 659) and color changes less than 5 NBS units (ASTM D 2244)
- Salt spray tested for checking, blistering, loss or adhesion, or evidence of corrosion per ASTM B 117 for more than 4,000 hours without coating failure

Weather Shedding Construction

Noishield Sound Barrier Modules are constructed with solid top surfaces to minimize water infusion and perforated bottom surfaces to allow any entrapped water to escape. Infill is non-hygroscopic — water does not “wick” into the modules. Hence, traditional polymer fill protection is neither required or desirable due to adverse effects on sound absorbing characteristics.



Ground Mount / Roof Mount / Structure Mount

Noishield Sound Barriers are engineered from the foundation up for structural and acoustical integrity and economic installation. Low weight modules stack between posts to achieve required wall heights. Noishield Barriers can be installed with horizontal or vertical reveals to satisfy aesthetic and architectural considerations.

Freestanding Barriers

Noishield Types: FS and SFS Barriers — sound absorptive on one and two sides respectively — optimize sound transmission loss and sound absorption properties in a durable and attractive wall system in harmony with the community.




- Excellent low frequency absorption for heavy equipment
- Laboratory-rated sound absorption on one or both sides
- Low weight, rugged construction — ideal for wall or roof mounting
- 5" thick (127 mm) modular metal module system in steel or aluminum
- Abuse resistant dual-coated, galvanized steel or aluminum construction
- Withstands wind velocities of 110 mph (177 km/hr) — designs for specific wind loads are available
- Readily relocated in the event of expansion or other projects

| Configuration | | Type FS | Type SFS |
|---|----------|--|--|
| | |  Thickness: 5" / 127 mm |  Thickness: 5" / 127 mm |
| Weight lb / ft ² (kg / m ²) | Steel | FS/S-6.5 (31.7) | SFS/S-9.9 (48.3) |
| | Aluminum | FSt/S*-8.6 (42.0) | - |
| | | FS/A-4.5 (22.0) | SFS/A-5.2 (25.4) |
| Application | | Freestanding alongside noisy equipment | Freestanding between multiple noise sources |

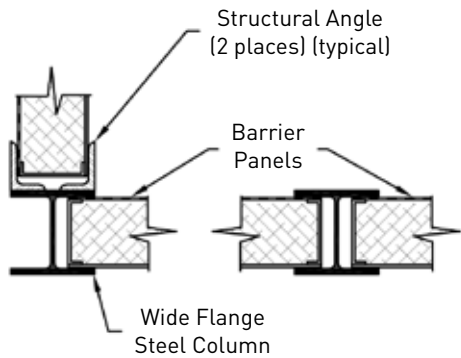
Sound Absorptive Treatment for New Construction & Retrofit Applications

Noishield Type C Cladding Modules — sound absorptive to control reflections from acoustically hard barriers

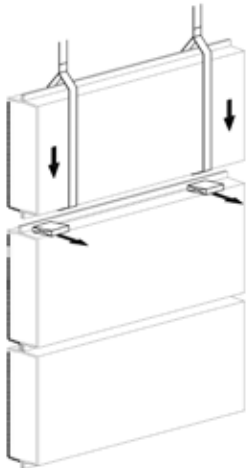
- Apply to new or existing wood, concrete or steel barriers to reduce reflected noise levels in the community
- Retrofit existing barriers to eliminate or mitigate noise complaints
- Low weight, rugged construction — ideal for retrofit applications
- Laboratory-rated sound absorption coefficients
- 2-1/2" (64 mm) thick metal module system
- Abuse resistant galvanized steel or aluminum construction
- Individual modules readily manufactured and replaced if damaged

| Configuration | | Type C | Type C12 | Type C38 |
|---|----------|---|--|---|
| | |  Thickness 2.5" / 64 mm |  Thickness 3" / 76 mm |  Thickness 4" / 102 mm |
| Weight lb / ft ² (kg / m ²) | Steel | C/S-3.25 (15.9) | C12/S-3.55 (17.3) | C38/S-4.05 (19.8) |
| | Aluminum | C/A-1.1 (5.4) | C12/A-1.4 (6.8) | C38/A-1.9 (9.3) |
| Application | | Apply to new or retrofit existing metal, wood, brick, concrete, stone or other noise-reflecting walls. Select Types C12 & C38 for enhanced 125 Hz sound absorption. | | |

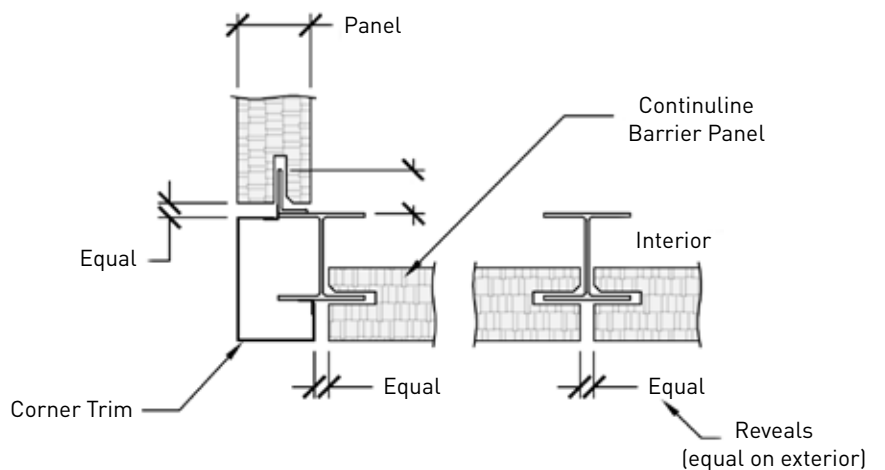
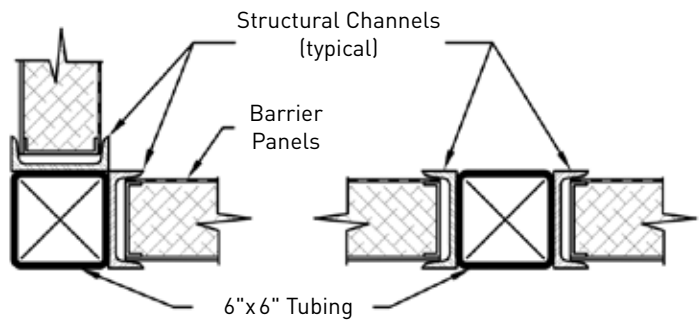
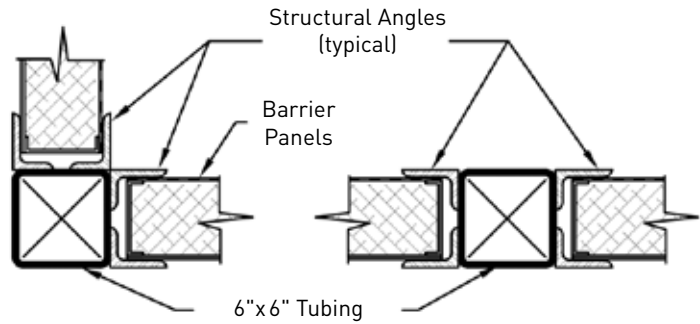
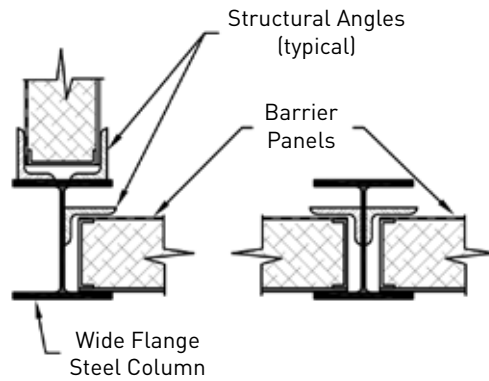
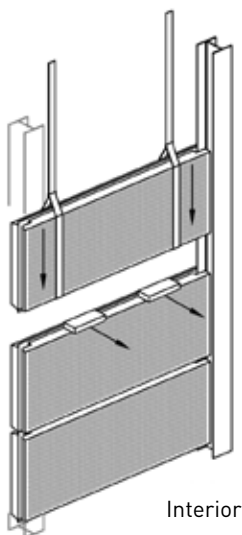
Barrier Supports & Installation



Standard Panel Installation

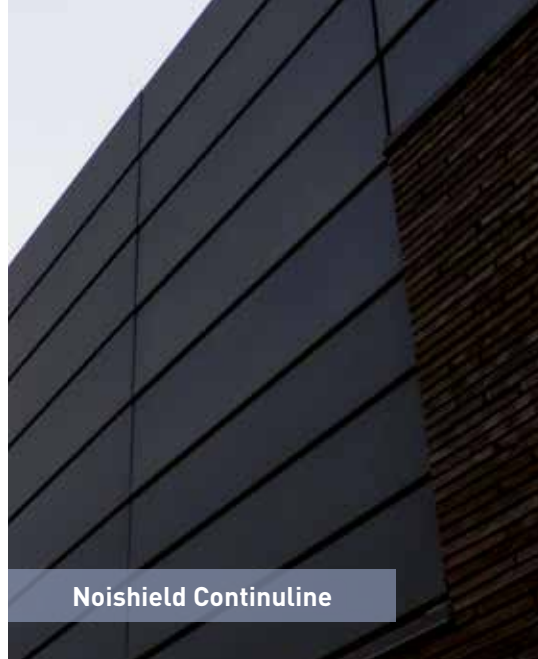


Contineline Panel Installation





Noishield Continuline



Noishield Continuline



Noishield Slimline

Noishield Continuline Detail for Concealed Columns

IAC's Continuline is more aesthetically pleasing than a traditional barrier wall — it allows architects and customers to conceal their structural members. The Continuline panels are the same construction as the standard FS panels. The key difference is the endcap — the endcap wraps the column; leaving an architecturally pleasing reveal that mimics the horizontal reveal already prevalent in the system. Continuline's primary applications include rooftop systems, train/rail and ground mounted.

- Superior aesthetic
- Special slotted end-caps
- Solid front face of panel conceals the column
- Acoustic & architectural screen in a single assembly & installation

Noishield Slimline Detail for Surface Mounting

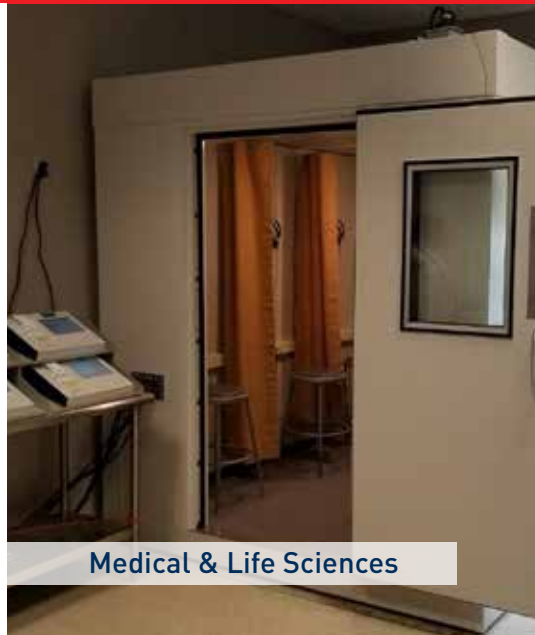
- Face or rear applied
- Reduced thickness of 2.5"
- Secured with Z & Hat channel
- Hat channel edge trim between adjacent panel stacks
- Z channel edge trim at end of panel stack

Making the World a Quieter Place

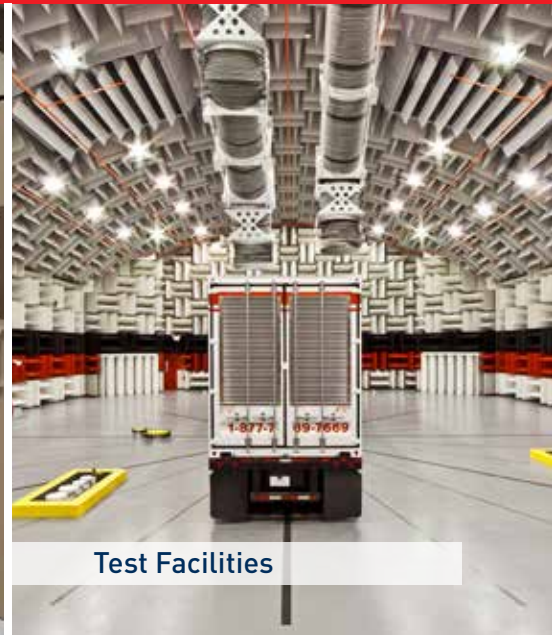
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ANC

a division of Wallworks Acoustic Architectural Products Inc.
www.acousticnoisecontrol.com
acousticnoisecontrol.info@gmail.com