

**iac** NOISE-LOCK<sup>®</sup> **WINDOWS**  
FOR EVERY APPLICATION



**INDUSTRIAL ACOUSTICS COMPANY**

# IAC NOISE-LOCK WINDOWS – FACTORY ASSEMBLED

## TYPES

- Single Glazed
- Double Glazed
- Vertical Panes
- Sloped Panes
- Combination Sloped-Vertical

## FEATURES

- STC Ratings from 35 to 59
- Noise Reduction – NIC 30–90 dB
- Sound Absorbing Liner: prefinished
- Factory assembled including glazing
- Fasteners/Anchors
- Retrofit Fasteners
- Stackable
- Sized to fit any wall thickness
- Integrates with all types of construction
- drywall, studs, concrete, masonry

## MATERIAL OPTIONS

- Carbon Steel
- Galvanized Steel
- Stainless Steel

## GLAZING OPTIONS

- Laminated Safety Glass
- Tempered Safety Glass
- One-way Vision Mirror
- Non-Reflective, Heat Resistant
- Bullet Resistant
- Polycarbonate
- Wire-Inserted Safety Glass



**Cover – top** Noise-Lock Window in IAC Oasis™ Room at Drax Power Station, Europe's largest gas turbine generating hall in Yorkshire, England; **bottom** One of 50 Accu-Tone™ Broadcasting Studios at SKY TV London, England. All are equipped with Noise-Lock Windows 1. Noise-Lock Windows at WKHX studio, Atlanta, GA 2. At Appleton Papers, Harrisburg, PA, Moduline® Factory Offices and Noise-Lock Windows shelter employees against noise associated with carbonless paper production 3. Noise-Lock Windows, with STC 53 ratings, at Wastewater Treatment Plant, Mamaroneck, NY, are designed to conform to community architecture 4. Electronic product test and development facility with Noise-Lock Windows at Motorola, Dearborn, MI.

## Noise-Lock Window Features and

STC	Window Type	Frame Depth minimum		Glass		Weight	
		in.	mm	Thickness	Type	lb/ft <sup>2</sup>	kg/m <sup>2</sup>
35	Single Glazed	4	102	1/4 in. (6mm)	LSG	5	24
39	Single Glazed	4	102	1/2 in. (13mm)	LSG	8	39
53	Double Glazed	8	203	1/4 in. – 1/4 in. (6mm – 6mm)	LSG–LSG	12	59
57	Double Glazed	10	254	1/2 in. – 1/4 in. (13mm – 6mm)	LSG–LSG	18	88
58	Double Glazed	18	457	3/16 in. – 1/4 in. (30mm – 6mm)	BRG–LSG	27	132
59	Double Glazed	10	254	1/2 in. 3/8 in. (13mm – 9.5mm)	LSG–LSG	20	98

LSG = Laminated Safety Glass

BRG = Bullet Resistant Glazing

# FOR GUARANTEED HIGH IN-FIELD PERFORMANCE



## APPLICATIONS

- Engine Test Cells
- Roll-Test Dynamometer Facilities
- Hot-Test Engine Start Cells
- Shop Factory Offices
- Operator Pulpits
- Quality Control Product Test Cells
- Reverberation Test Rooms
- Anechoic Test Rooms
- Control Rooms
- Lunch rooms
- Recording Studios
- Translation Booths
- Convention Centers
- Counseling/Therapy
- Audiometric Testing
- Psychological Study
- Bioacoustics Research
- Observation Rooms
- Music Practice Rooms
- Band Rehearsal Rooms
- Private Offices
- Projection Rooms
- Recital/Concert Halls
- Auditoriums
- Gymnasiums
- Multipurpose/Cafeteria
- Air/Bus/Train Terminals
- Machinery Enclosures
- Industrial Pulpits
- Factory Offices
- Radio/Television
- Entrance Sidelights
- Security Offices
- ....custom designs available

## Sound Transmission Loss Data

Octave Band Center Frequency, Hz								STC	Test Report
63	125	250	500	1K	2K	4K	8K		
Transmission Loss, dB									
18	24	28	31	35	37	40	41	35	543-82-2
27	30	33	36	39	42	48	53	39	VW-549-1-83
17	31	40	53	59	62	60	58	53	AC-609-1-87
25	39	47	52	60	68	77	70	57	VW-587-1-86
29	42	47	55	64	63	63	67	58	AC-654-89
29	42	50	55	59	70	78	72	59	VW-586-1-85

Tested in accordance with ASTM E 90

1. Accu-Tone™ Broadcasting Studio With Noise-Lock Window at the Voice of America, Washington, DC 2. Noise-Lock Window as part of temporary IAC Accu-Tone Anchor Booth at a San Francisco political convention 3. Noise-Lock Windows and Doors as part of Briggs & Stratton test facility in Milwaukee, WI 4. One of 13 Noise-Lock Window assemblies for WYAY studio, Atlanta, GA 5. Stackable Noise-Lock Windows and Doors in school corridor used to form administrative offices.

## NOISE-LOCK® WINDOW SPECIFICATIONS

Acoustic window assemblies complete with frames, stops, glazing, sound-absorbing material, and concealed fasteners shall be IAC Noise-Lock® Acoustic Windows as manufactured by Industrial Acoustics Company, Inc., 1160 Commerce Avenue, Bronx, New York 10462, Phone: (718) 931-8000.

### MATERIALS

**Window** frame shall be 1 1/4 in. thick (32mm), fabricated from not less than 12 ga (2.7mm) steel, reinforced and filled with sound-absorbing acoustic fill. Inside and outside corners shall be mitered and interlocked to hairline measurements, made square, continuously welded, and ground smooth, flush, and invisible.

**Stops** shall be 1 in. thick (25mm) and readily removable, fabricated from not less than 16 ga (1.52mm) rolled steel sections predrilled and aligned with frame to form tight square acoustical joint. Stop fasteners shall be concealed.

**Acoustic seals** for glazing shall be vibration-isolating resilient gaskets, U-shaped and continuous of santoprene UV grade 65-75 Duro black. Self-contained, sound-absorptive interior perimeter of not less than 22 ga (0.76mm) steel shall be perforated and prefinished black. Desiccant material shall be incorporated into multiple glazed units.

**Assembly** of acoustic window units including frames, stop, glazing, acoustic seals, sound-absorbing material, and concealed fasteners shall take place at the factory to insure required noise reduction is achieved. Glazing shall not need to be removed to facilitate fastening or anchoring at the job site.

**Finish** – Unless otherwise specified, steel window frame assemblies shall receive one shop coat of gray primer. Stainless steel shall not be painted.

**Lights** for single- and double-glazed units shall be minimum 1/4 in. (6.4mm) laminated safety glass consisting of multilayer clear float with clear plastic interlayer. Bullet-resistant glazing shall be certified to meet UL 752 specifications.

**Acoustical Performance** – At least 10 days prior to bidding, manufacturer shall submit laboratory test data certifying Sound Transmission Loss and Sound Transmission Class (STC) when tested in accordance with ASTM E 90 of not less than the following:

Window Type	Octave Band Center Frequency, Hz								STC
	63	125	250	500	1K	2K	4K	8K	
	Sound Transmission Loss, dB								
Single glazed	18	24	28	31	35	37	40	41	35
Double glazed	17	31	40	53	59	62	60	58	53
Bullet-resistant	29	42	47	55	64	63	63	67	58

### EXECUTION

**Quality of Work** – Cut and form all joints to hairline measurements. Exposed joints to be smooth and invisible. Grind all exposed welds smooth and flush, form all bends sharp and true. Miter all face joints.

**Delivery, Storage, and Handling** – Use all means necessary to protect the acoustic window units before, during, and after installation and to protect the installed work and materials of all other trades.

**Preparation** – Examine the areas and conditions under which the work will be performed. Do not proceed until unsatisfactory conditions are corrected.

**Installation** – Install all work in strict accordance with the manufacturer's recommendation as approved by the Architect. During installation at the job site, solidly pack acoustic insulation around acoustic window unit frames. Caulk exterior joints prior to painting.

**Field Quality Control** – Upon completion of this portion of the work, and prior to its acceptance by the Owner, secure a visit to the job site by a qualified representative of the acoustical window unit manufacturer to confirm that installation is in conformance with approved drawings and specifications.

*Industrial Acoustics Company originated in 1949 in New York City. We pioneered the development and manufacture of noise control and acoustical conditioning equipment. Many thousands of IAC acoustical structures and silencing systems are in use throughout the world. Most likely we have standard products or previously developed solutions for your requirements. If not, our engineering and R&D Departments have a proven record of solving unusual problems.*

*IAC products include sound isolation doors, operable walls, power plant silencers, HVAC silencers, music practice rooms, machinery/equipment enclosures, broadcasting studios, anechoic and reverberation rooms, test chambers, wall/ceiling sound absorptive systems, shipboard noise control systems, audiometric test facilities, traffic barriers, jet aircraft hush-houses, engine test cells, and other products; some are illustrated below.*



Noise-Lock Doors  
Bulletin 3.0501



Noise-Lock VisionWall  
Bulletin 3.0301



Vartone Sound Absorption Modules  
Bulletin 3.0701



Duct Silencers  
Bulletin 1.0301



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