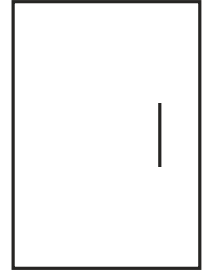


A Designing Quiet Resource



The Acoustic Terminology Reference

Plain-language definitions of the acoustic terms that matter in privacy pod specification

Carla Bostock
Founder, Designing Quiet

HOW TO USE THIS REFERENCE

The language of acoustics, without the engineering degree.

Architects and interior designers specify acoustic privacy every day. They also defer to acoustic engineers, manufacturer sales reps, and vendor sheets when the language gets technical. The vocabulary of acoustics often gets in the way of the work.

This reference is the working glossary I wish I had when I started specifying privacy pods. Each term has a plain-language definition, the unit it is measured in, what a typical good value looks like, and what specifying it actually means in practice.

It is not exhaustive. It is the working vocabulary of someone specifying privacy pods in a real project, written for someone who needs to read a spec sheet and know what they are looking at.

A note on precision.

Acoustic measurement is precise, but acoustic experience is not. A pod that measures perfectly in a lab can perform poorly in a noisy lobby. A pod with modest lab numbers can perform well in a quiet office.

Use these terms to evaluate specifications, but trust your own experience of the space when the numbers and the reality disagree.

GLOSSARY

Terms and definitions.

Absorption Coefficient

Measured 0.00 to 1.00 (no unit)

How much sound a material absorbs at a given frequency, expressed as a fraction. A material with a coefficient of 0.85 absorbs 85 percent of sound energy hitting it at that frequency.

In practice: Pod interior finishes (acoustic panels, fabric wraps) are usually rated by their absorption coefficient. Higher is better for the inside of the pod. Pay attention to which frequencies are reported — high-frequency absorption is easier to achieve than low-frequency absorption.

Ambient Noise

Measured in dB or dBA

The background sound level in a space when no specific sound source is active. The acoustic baseline of the room.

In practice: The ambient noise floor of the room surrounding a pod is more important than most specifiers realize. A pod placed in a 65 dBA open office needs different acoustic performance than the same pod in a 45 dBA library. Measure or estimate ambient noise during Phase 1 of specification.

ANSI/ASA S12.60

American National Standard

The U.S. national standard for classroom acoustics, setting maximum background noise and reverberation time targets in educational settings.

In practice: When specifying pods for educational use, this standard provides the acoustic targets you need to meet. It is also a useful reference framework for any space where speech clarity matters.

ASTM E2235 and E1374

ASTM International Standards

Test methods for measuring sound transmission and speech privacy in furniture-based enclosed spaces. E2235 covers the lab test method for sound isolation; E1374 addresses speech privacy in open-plan workspaces.

In practice: When a manufacturer claims a privacy pod has been tested for sound transmission, ask which ASTM standard the test followed and request the lab report. These are the standards privacy pods are commonly tested against.

ASTC (Apparent Sound Transmission Class)

Single number, higher is better

A field-measured version of STC. Apparent because it is measured in real installations rather than ideal lab conditions, so it accounts for flanking paths and real-world acoustic conditions.

In practice: An ASTC measurement from your actual pod installation will almost always be lower than the lab-tested STC value the manufacturer reports. Expect a 3-7 point drop. If a project requires a specific privacy class, plan accordingly.

dB (decibel)

Logarithmic unit of sound level

The standard unit for measuring sound pressure, sound power, and sound transmission. The scale is logarithmic, so a 10 dB increase represents roughly a doubling of perceived loudness.

In practice: Every 10 dB increase in sound is roughly twice as loud to the human ear. A 60 dB conversation is twice as loud as a 50 dB one. This logarithmic scaling matters when comparing acoustic specifications.

dBA (A-weighted decibels)

dB with frequency weighting

Decibel measurement adjusted to match how the human ear actually perceives sound. The A-weighting de-emphasizes very low and very high frequencies, reflecting human hearing sensitivity.

In practice: Most workplace and code-related acoustic specifications use dBA. When a spec sheet reports a value in dBA, it is reporting what humans actually hear, not a raw acoustic measurement.

GLOSSARY / CONTINUED

Flanking Path

Acoustic transmission route

Sound transmission that bypasses the primary acoustic barrier of a pod, traveling through floors, ceilings, ducts, or surrounding structure rather than through the pod walls.

In practice: A pod with an excellent STC rating can still leak sound if flanking paths are not addressed. Common offenders include shared raised floors, drop ceilings, and HVAC ducts. Site assessment in Phase 1 should identify potential flanking paths.

Frequency

Measured in Hz (hertz)

The pitch of a sound, expressed as cycles per second. Low frequencies are bass notes; high frequencies are treble. The human voice spans roughly 80 Hz (low) to 8000 Hz (high), with most speech content between 250 Hz and 4000 Hz.

In practice: Acoustic performance varies dramatically by frequency. A pod that handles speech well (250-4000 Hz) may perform poorly against bass-heavy sounds like HVAC rumble or music. Spec sheets that report only one number may be hiding poor performance at certain frequencies.

IIC (Impact Insulation Class)

Single number, higher is better

A measure of how well a floor or ceiling assembly blocks impact sound transmission, such as footsteps or dropped objects.

In practice: Usually relevant for pods on raised floors or upper levels. If pod placement is above an occupied space, the floor IIC matters for the people below.

ISO 23351-1

International Standard

The international standard specifically developed for measuring speech level reduction in furniture-based enclosed spaces — including privacy pods. Provides the test method behind the Speech Level Reduction class system.

In practice: This is the standard the privacy pod industry has converged on. When evaluating a vendor's acoustic claims, ask whether their pods have been tested to ISO 23351-1. The standard's Class A through D ratings give you a quick reference for how well a pod isolates speech.

NC (Noise Criterion)

Single number, lower is better

A standard for measuring background noise from building systems (HVAC, fans, equipment) across multiple frequencies. Specified as NC-25, NC-30, NC-35, and so on.

In practice: Used to specify how quiet a pod's ventilation system needs to be. NC-25 to NC-35 is typical for office privacy pods. Lower numbers (NC-20 to NC-25) are appropriate for libraries, broadcast booths, and high-end focus spaces.

NIC (Noise Isolation Class)

Single number, higher is better

A field-measured version of STC, similar to ASTC but used in different contexts. Tells you how much sound isolation exists between two real-world spaces.

In practice: If you want to know how well a pod will perform in your actual building, NIC measurements from completed installs are more reliable than the lab STC values from manufacturer sheets.

NRC (Noise Reduction Coefficient)

Single number, 0.00 to 1.00

A single-number rating of a material's average sound absorption across mid-range frequencies (250 Hz, 500 Hz, 1000 Hz, 2000 Hz). Higher is better.

In practice: NRC tells you how absorptive a surface is, not how much sound it blocks. A pod's interior fabric or acoustic panel will have an NRC value; the pod's exterior wall assembly should be evaluated by STC or NIC instead. Confusing NRC with STC is one of the most common acoustic specification errors.

GLOSSARY / CONTINUED

Reverberation Time (RT60)

Measured in seconds

The time it takes for sound to decay 60 decibels after the source stops. Long reverberation times make speech harder to understand; short reverberation times make spaces feel acoustically dead.

In practice: Inside a privacy pod, you typically want RT60 between 0.3 and 0.5 seconds. Lower than 0.3 feels claustrophobic and lifeless. Higher than 0.5 makes speech unclear and the pod feel echoey. The interior finishes drive this number.

Speech Level Reduction Class

Class A (highest) through Class D

The ISO 23351-1 classification system for privacy pod speech isolation. Class A is the highest performance; Class D is the lowest. The classification considers the pod's ability to reduce speech transmission between its interior and the surrounding space.

In practice: Class A is appropriate for confidential conversations (legal, medical, HR). Class B for normal business privacy. Class C for general office focus. Class D is marginal and should be avoided for any real privacy application. Most reputable pod manufacturers now report this class.

Speech Privacy Class

Confidential / Normal / Marginal / None

A practical classification of how private a conversation can be in a given space. Confidential means no intelligible speech transmission. Normal means speech is detected but not understood. Marginal means speech is intermittently intelligible. None means clear speech transmission.

In practice: Phase 1 specification should identify the required speech privacy class. Healthcare, legal, and HR applications typically require Confidential. General office focus work usually accepts Normal. Anything below Normal should be flagged as inadequate.

STC (Sound Transmission Class)

Single number, higher is better

A lab-measured rating of how well a wall assembly, door, or pod blocks airborne sound transmission. STC 25-30 blocks normal conversation; STC 40-45 blocks loud speech; STC 50+ blocks most sound.

In practice: STC is the most commonly reported acoustic value for privacy pods. Treat it as a directional indicator, not a guarantee. Lab STC will exceed real-world performance. Verify with field measurements where the application is critical.

Sound Transmission Loss (STL)

Measured in dB at specific frequencies

The amount of sound energy a material or assembly blocks at each frequency. Reported as a frequency curve or as the STC single number derived from that curve.

In practice: STL curves tell you whether a pod is good at blocking high frequencies but poor at low frequencies, or vice versa. Useful when the application has a known sound source (HVAC rumble, traffic noise) at a specific frequency range.

Structure-Borne Noise

Sound transmitted through solid materials

Sound that travels through the floor, walls, or ceiling structure rather than through air. Footsteps, equipment vibration, and HVAC system rumble are common sources.

In practice: Even an acoustically isolated pod can transmit structure-borne noise from surrounding equipment, raised floor systems, or adjacent occupants. Floor isolation, vibration mounts, and proper site selection reduce these issues.

QUICK REFERENCE

Which value, for which use case.

The most common acoustic specification questions come down to: what level of performance do I need for this application? These are working starting points, not absolutes. The right specification depends on the surrounding environment, the speech content, and the user expectations.

SPEECH PRIVACY TARGETS

Application	Speech Privacy	Speech Level Reduction
Legal / medical / HR conversations	Confidential	Class A
Executive meetings, confidential calls	Confidential	Class A or B
Normal business calls	Normal	Class B
Focus work in shared workplace	Normal	Class B or C
Brief phone calls in open plan	Marginal acceptable	Class C
Casual conversation, video calls	Marginal acceptable	Class C

BACKGROUND NOISE TARGETS

Pod application	NC Range	dBA Equivalent
Broadcast booth, recording	NC-15 to NC-20	25-30 dBA
Library focus pod	NC-20 to NC-25	30-35 dBA
Standard office focus pod	NC-25 to NC-30	35-40 dBA
Meeting pod in active workplace	NC-30 to NC-35	40-45 dBA
Pod in industrial or transit setting	NC-35 to NC-40	45-50 dBA

CRITICAL QUESTIONS

What to ask when reading an acoustic spec sheet.

Vendor spec sheets vary widely in what they report and how they report it. These are the questions worth asking before accepting any acoustic claim at face value.

ON THE TEST DATA

Was the test conducted in an accredited third-party laboratory? Which lab? What date? Internal manufacturer testing is not the same as third-party certification.

Which standard was used? ISO 23351-1, ASTM E2235, or another? The standard determines what was measured and how.

Was the pod tested in its standard configuration or in a special-order configuration? Custom finishes, larger sizes, or modified door assemblies may not have the same acoustic performance as the tested unit.

ON THE NUMBERS

If only one number is reported, what frequencies does it cover? Single-number ratings can hide poor performance at specific frequencies.

Is the reported value STC (lab) or ASTC / NIC (field)? Expect a 3-7 point drop between lab and field. If the spec is critical, get field measurements from an existing install.

What is the background noise of the pod's own ventilation system? A pod with great wall isolation but a loud fan is acoustically compromised in use.

Numbers without provenance are marketing claims.

An acoustic value with no test standard, no laboratory, and no date is not a specification. It is a promise. Always ask for the underlying report. Reputable manufacturers provide it without hesitation; those who deflect are telling you something.

A NOTE FROM CARLA

Why this exists.

For years I watched architects and interior designers defer to acoustic engineers, manufacturer reps, or vendor sheets because the terminology felt like a language they did not speak. It is a language. It is also not actually that complicated, once someone translates it.

This reference is the translation I wish I could have handed designers eight years ago. The terms are not theoretical. They are the working vocabulary of specifying acoustic privacy in real projects.

If you read a spec sheet and find a term not covered here, send a note. The reference will grow as the practice does.

Carla Bostock
Founder, *Designing Quiet*

For more practitioner-led resources on acoustic privacy and workplace design, including the forthcoming book *Rooms Within Rooms: The Practitioner's Guide to Privacy Pods*, visit carlabostock.com.

carlabostock.com

Practitioner-led guidance for architects, interior designers, and workplace planners.