The USG Ensemble™ Acoustical Drywall Ceiling is a new solution for interior ceilings that combines the seamless look of drywall with the acoustical properties of tile-and-grid systems. Breakthrough innovations across core USG product technologies come together in one ceiling system to maximize NRC, CAC and LR performance. The bright white finish and monolithic appearance eliminate distracting gridlines. Specify the USG Ensemble™ Acoustical Drywall Ceiling—you no longer need to compromise aesthetics for acoustical performance in the spaces you create.

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OVERVIEW

Although aesthetically appealing, hard finishes—such as glass, concrete, stone, wood and drywall—reflect sound and make spaces noisy and difficult to hear in. Until now, the cost-effective solution for sound control has been a traditional acoustical ceiling tile-and-grid system. The USG Ensemble™ Acoustical Drywall Ceiling is an innovative solution that integrates technologies from our ceiling tile, wallboard and finishing systems. It installs similarly to traditional drywall, and can be incorporated into spaces where acoustical ceilings and wallboard ceilings would normally be used. It can be intermixed with acoustical ceilings in locations where plenum access is needed, and all typical drywall trims and fixtures are compatible with the system.
Sound is created in the form of pressure traveling in waves through any medium, most commonly air. Noise is excessive or unwanted sound. Hard surfaces like stone, glass and wood may be aesthetically pleasing, but can make for noisy spaces because they reflect sound. Too much noise makes it hard to work, hard to learn and hard to relax.

**Noise Reduction Coefficient (NRC)**

A measure of sound absorption. Noise Reduction Coefficient can be thought of as the rate at which sound dissipates within a space, and is measured in reverberation over time. The higher the NRC value, the shorter the reverberation time. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption. Effective sound absorbers are generally porous, pliable, soft or viscous materials that can rapidly dissipate sound waves. Building materials like acoustical ceiling tiles and fiberglass insulation are effective sound absorbers.

**Ceiling Attenuation Class (CAC)**

Applies to the sound attenuation of acoustical ceilings with a shared plenum above horizontally adjacent spaces. Ceiling Attenuation Class measures how well a ceiling blocks sound transmission. Specifically, Ceiling Attenuation Class is a measure of reduction in sound transmission via plenum path above two adjacent rooms. It is a two-pass test, as sound must travel through one ceiling, into the plenum space, and back down through the ceiling into the adjacent room. The performance is expressed in decibel reduction between the two rooms.

A general rule of thumb is that NRC and CAC performance are inversely proportional. The key for balanced acoustics is to develop ceiling systems that perform well in both categories. High-performance ceiling systems with balanced acoustics achieve an NRC of 0.70, and a CAC of 30 or greater, and provide good sound control for many applications.
HOW THE SYSTEM WORKS

The USG Ensemble™ Spray-Applied Finish has been engineered to allow sound to pass through while at the same time providing a visual that is similar to painted gypsum board. Sound passes through the finish and into the perforations of the USG Sheetrock® Brand Ensemble™ panels. From there most of the sound pressure is absorbed by the Ensemble™ back scrim and the USG Ensemble™ High-NRC Backer Panels. A portion of the sound is trapped in the plenum space where it dissipates, resulting in NRC of 0.80 and higher.

The USG Ensemble™ Spray-Applied Finish is engineered to be acoustically permeable. Sound passes through the finish and perforations, where it dissipates into the acoustical backer and plenum.
## SYSTEM COMPONENTS

<table>
<thead>
<tr>
<th>Image</th>
<th>Item #</th>
<th>Product Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="ISB109 USG Indexed Support Bar" /></td>
<td>ISB109</td>
<td>USG Indexed Support Bar</td>
<td>Used to support USG Drywall Suspension main tees. Install every 48” o.c.</td>
</tr>
<tr>
<td><img src="image" alt="DGLW26 USG Drywall Suspension Main Tee" /></td>
<td>DGLW26</td>
<td>USG Drywall Suspension Main Tee</td>
<td>Spaced 16” o.c. Screw attaches USG Sheetrock® Brand Perforated Panels to underside of flange.</td>
</tr>
<tr>
<td><img src="image" alt="ISBAC USG Indexed Support Bar Attachment Clip" /></td>
<td>ISBAC</td>
<td>USG Indexed Support Bar Attachment Clip</td>
<td>Prevents ISB109 from rotating and helps keep ceiling level while screw attaching perforated panels.</td>
</tr>
<tr>
<td><img src="image" alt="— 12 gauge hanger wire (by others)" /></td>
<td>—</td>
<td>12 gauge hanger wire (by others)</td>
<td>Suspend system from structure above. Attached at 48” o.c. to the ISB109.</td>
</tr>
<tr>
<td><img src="image" alt="CC15-80-16 80” Strut Stabilizer 16” OC" /></td>
<td>CC15-80-16</td>
<td>80” Strut Stabilizer 16” OC</td>
<td>80” long stabilizer bar notched 16” on center. Used most often for New York City and Port Authority projects with the NYC drop clips.</td>
</tr>
<tr>
<td><img src="image" alt="— 1” Z-Furring 20 ga (by others)" /></td>
<td>—</td>
<td>1” Z-Furring 20 ga (by others)</td>
<td>Z-Furring channel manufactured by Clark Dietrich or similar. 3/4” leg attaches to wall or ceiling framing, 1” deep leg, plus 1-1/4” leg for drywall attachment.</td>
</tr>
<tr>
<td><img src="image" alt="— 2” Z-Furring 20 ga (by others)" /></td>
<td>—</td>
<td>2” Z-Furring 20 ga (by others)</td>
<td>Z-Furring channel manufactured by Clark Dietrich or similar. 3/4” leg attaches to wall or ceiling framing, 2” deep leg, plus 1-1/4” leg for drywall attachment.</td>
</tr>
<tr>
<td><img src="image" alt="— Insulation Impaling Clips (by others)" /></td>
<td>—</td>
<td>Insulation Impaling Clips (by others)</td>
<td>Insulation Cap Impaling and Clip for use with Ensemble Direct Mount Systems. Use 1 clip for each USG Ensemble™ High-NRC Backer Panel.</td>
</tr>
</tbody>
</table>
# SYSTEM COMPONENTS

## BASE PANELS AND BACKER PANELS

<table>
<thead>
<tr>
<th>Image</th>
<th>Item #</th>
<th>Product Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td>ENSPNL96</td>
<td>USG Sheetrock® Brand Ensemble™ Panels: 5/8&quot; x 4' x 8'</td>
<td>5/8&quot; USG Sheetrock® Brand gypsum panels have been perforated for optimal acoustical performance. Factory laminated with a special white fiberglass scrim on face and back of panel.</td>
</tr>
<tr>
<td><img src="image2.png" alt="Image" /></td>
<td>ENSPNL112A</td>
<td>USG Sheetrock® Brand Ensemble™ Panels: 5/8&quot; x 4' x 9’4&quot;</td>
<td></td>
</tr>
<tr>
<td><img src="image3.png" alt="Image" /></td>
<td>ENSHINRC</td>
<td>USG Ensemble™ High-NRC Backer Panels: 1&quot; x 16&quot; x 48&quot;</td>
<td>Acoustical backer panel with an unfinished face and a white paint coating on the back side. This panel is critical to creating the High-NRC and High-CAC performance of the system.</td>
</tr>
<tr>
<td><img src="image4.png" alt="Image" /></td>
<td>ENS2HINRC</td>
<td>USG Ensemble™ High-NRC Backer Panels: 2&quot; x 16&quot; x 48&quot;</td>
<td>2&quot; backer panel for Drywall T-Bar or Z-Furring System only</td>
</tr>
<tr>
<td><img src="image5.png" alt="Image" /></td>
<td>ENSFIBEJB</td>
<td>USG Fiberock® Brand End-Joint Backer Panel 5/8&quot; x 16&quot; x 48&quot;</td>
<td>USG Fiberock® panels are used to backblock floating end joints. Forms an eased end joint for better finishing.</td>
</tr>
</tbody>
</table>

## USG TRIMS, TRANSITIONS AND ACCESSORIES

All trims, transitions and accessories designed for use with standard 5/8”-thick gypsum panels can be used with the USG Ensemble™ Acoustical Drywall Ceiling. Plastic (PVC and vinyl), metal (steel and aluminum) and paper-faced tape-on beads and trims can be specified. The USG Ensemble™ Spray-Applied Finish bonds well with these types of trims. The finish also bonds well with primed surfaces, but is not compatible with powder-coated trims unless the surface is properly treated prior to application.

<table>
<thead>
<tr>
<th>Image</th>
<th>Item #</th>
<th>Product Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image6.png" alt="Image" /></td>
<td>CPALDWJTXX</td>
<td>USG Compásso™ Elite for Drywall</td>
<td>Used for perimeter fascias on floating island or similar installations. Accepts USG Ensemble™ Spray-Applied Finish without preparation.</td>
</tr>
<tr>
<td><img src="image7.png" alt="Image" /></td>
<td>CPDWA9120</td>
<td>USG Donn® Brand Transition Moldings: 12' length 9/16&quot; flange</td>
<td>Steel roll formed trims, painted white, used at transition interface between the USG Ensemble™ Acoustical Drywall Ceiling and acoustical tile ceilings.</td>
</tr>
<tr>
<td><img src="image8.png" alt="Image" /></td>
<td>CPDWA15120</td>
<td>USG Donn® Brand Transition Moldings: 12' length 10/16&quot; flange</td>
<td></td>
</tr>
<tr>
<td><img src="image9.png" alt="Image" /></td>
<td>USG Sheetrock® or Beadex® Brand paper-faced metal beads and trims</td>
<td>Laminated paper face for better joint treatment bond and reduced edge cracking.</td>
<td></td>
</tr>
</tbody>
</table>
# SYSTEM COMPONENTS

<table>
<thead>
<tr>
<th>Image</th>
<th>Item #</th>
<th>Product Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="ENSJC" alt="Image" /></td>
<td>ENSJC</td>
<td>USG Sheetrock® Brand Ensemble™ Ceiling Joint Compound</td>
<td>Specially formulated very low shrinkage joint compound for USG Ensemble™. Use USG Sheetrock® Brand Easy Sand™ Joint Compound for prefilling joints as needed. USG Ensemble™ Ceiling Joint Compound is then used for all finishing coats.</td>
</tr>
<tr>
<td><img src="USAPJC" alt="Image" /></td>
<td>USAPJC</td>
<td>USG Sheetrock® Brand All Purpose Joint Compound</td>
<td>Joint Compound with superior bond strength. Ideal for embedding paper joint tape for the USG Ensemble™ Acoustical Drywall Ceiling.</td>
</tr>
<tr>
<td><img src="USGSP" alt="Image" /></td>
<td>USGSPT</td>
<td>USG Sheetrock® Brand Easy Sand™ Lightweight Setting-Type Joint Compound</td>
<td>High-strength bond and very low shrinkage setting-type joint compound ideal for prefilling joints as needed. USG Ensemble™ Acoustical Drywall Ceiling.</td>
</tr>
<tr>
<td><img src="USGPT" alt="Image" /></td>
<td>250</td>
<td>USG Sheetrock® Brand Paper Joint Tape</td>
<td>High strength paper joint tape made wafer-thin for easier joint treatment. Roughened surface for superior bond. NEVER use fiberglass mesh joint tape for the USG Ensemble™ Acoustical Drywall Ceiling.</td>
</tr>
</tbody>
</table>
| ![Image](ENSSPRF) | ENSSPRAF | USG Ensemble™ Spray-Applied Finish | Highly engineered, acoustically transparent spray-applied finish. Installs with pneumatic spray texture equipment and yields a fine finish, with a monolithic appearance. Available in white (standard), black and custom colors.  
Note: Drying times may increase for black and custom colors. |
REFLECTED CEILING PLAN

A  DGLW26 main tee
B  ISB109 Indexed Support Bar
C  12-gauge hanger wire
D  USG Sheetrock® Brand Ensemble™ Panels
E  joints
F  5/8" USG Fiberock® End-Joint Backer Panels (used at floating end joints)
G  USG Ensemble™ High-NRC Backer Panel
H  USG Ensemble™ Spray-Applied Finish
I  ISBAC Attachment Clip 4’ o.c.
DESIGN CONSIDERATIONS

APPLICATIONS

The USG Ensemble™ Acoustical Drywall Ceiling is ideal for simple, flat or sloped ceilings without excessive penetrations or recessed light fixtures. This is so the perforated acoustical field area is maximized and joint finishing and accessories are minimized. Ceilings with multiple terminations, penetrations and flush-mounted fixtures all must be finished with joint compound, which reduces the perforated acoustical area and the sound performance.

LIGHTING CONDITIONS

Understanding the type of lighting source and illumination direction is crucial when selecting ceiling systems. Light sources that illuminate at oblique angles can magnify imperfections across any surface. This is especially true for ceilings because they are often adjacent to windows, where natural light enters the space obliquely in the morning and evening. Light that shines perpendicular (either up or down) is more forgiving and can be beneficial in a ceilings application. Indirect lighting that shines on the ceiling and reflects off at multiple angles minimizes surface imperfections and can create a warm glow within the space. USG Ensemble™ Acoustical Drywall Ceiling is well-suited for applications with direct and indirect lighting.

SOUND PERFORMANCE REQUIREMENTS

The USG Ensemble™ Acoustical Drywall Ceiling offers excellent acoustical performance when high NRC/CAC is needed to meet the project requirements. However, NRC system performance can be affected by the plenum space. The industry standard sound performance test, ASTM C423, is conducted with a 16" plenum depth. When framing Ensemble with USG Drywall Suspension System components, ASTM C423 “E-400” mounting test results should be used. When installing Ensemble with Z-furring or alternate framing for Direct Mount installations: ASTM C423, “A-mount” test data should be used.

Frequently the acoustical performance of ceiling systems tested per ASTM C423 are negatively affected by a shallow plenum. USG Ensemble performs excellent in both scenarios. When either framed with a drywall suspension system with a deep plenum or direct attached to a solid substrate, Ensemble achieves a 0.80 NRC with 1" backer panels and 0.85 NRC with 2" backer panels.

USG Ensemble ceiling installed on suspended drywall T-Bar System

The USG Ensemble™ Acoustical Drywall Ceiling provides the best NRC performance when used in applications with a ducted plenum space above.

USG Ensemble ceiling installed on direct mount Z-Furring system

USG Ensemble™ Spray-Applied Finish

1/4" Sheetrock® Brand Panel

Impaling Clip

5/8" USG FibreRock® End Joint Backer Panel

1" or 2" USG Ensemble™ High-NRC Backer Panel

Perforated USG Sheetrock® Brand Ensemble™ Panels

5/8" USG FibreRock® Brand Panel

Structure

Z-Furring (1" or 2")

1/4" Sheetrock® Brand Panel (used as spacer)
SYSTEM PERFORMANCE

The USG Ensemble™ Acoustical Drywall Ceiling offers excellent acoustical performance to meet project and occupant needs.

<table>
<thead>
<tr>
<th>Base Panel</th>
<th>Backer Panel</th>
<th>NRC</th>
<th>CAC</th>
<th>LR</th>
</tr>
</thead>
<tbody>
<tr>
<td>USG Sheetrock® Brand Ensemble™ Panels</td>
<td>1” USG Ensemble™ High-NRC</td>
<td>0.80</td>
<td>44</td>
<td>0.85</td>
</tr>
<tr>
<td></td>
<td>2” USG Ensemble™ High-NRC</td>
<td>0.85</td>
<td>44*</td>
<td>0.85</td>
</tr>
</tbody>
</table>


*Available on request. In Canada, compliant with CAN/ULC S102.

**Ceiling installed on suspended USG Drywall T-Bar System**

USG Sheetrock® Brand Ensemble™ Panels back loaded with 1” USG Ensemble™ High-NRC Backer Panels on USG Drywall Suspension System.

**Ceiling installed with Direct Mount Z-Furring System**

USG Sheetrock® Brand Ensemble™ Panels back loaded with 1” or 2” USG Ensemble™ High-NRC Backer Panels and attached with Z-Furring on to wood floor joists.

USG Sheetrock® Brand Ensemble™ Perforated Gypsum Panels back loaded with 1” or 2” USG Ensemble™ High-NRC Backer Panels and attached with Z-Furring on to open-web wood floor joists.
The USG Ensemble™ Acoustical Drywall Ceiling has the appearance of drywall yet performs like an acoustical ceiling. Installation is very much like a lay-in acoustical tile-and-grid system. Then the highly engineered USG Sheetrock® Brand Ensemble™ panels are screw-attached to the bottom of the suspended USG Drywall T-Bar System framing members. Joints are finished like drywall. Then acoustically transparent finish coatings are applied to the surface as the final decoration.
Floating clouds or peninsula ceilings can be created with the USG Ensemble™ Acoustical Drywall Ceiling. Specify USG Compässo™ Elite Trim for Drywall (straight and radiused available) to have a finished edge. The factory-painted trim can be left unfinished, but it is more desirable to spray-coat with the USG Ensemble™ Spray-Applied Finish.

Hanger wires must be placed on framing members within 12” of the floating perimeter. For more information see details #20 and #23.
The suspended USG Drywall T-Bar Grid System (used to install the USG Ensemble™ Ceiling), is fully compatible with USG Donn® Brand DX/DXL™, Centricitee™ DXT™, Identitee® DXI™, Fineline® DXF™, and other USG acoustical tile and suspension systems. This makes it easy to transition between flat USG Ensemble™ ceilings and acoustical ceilings or drywall ceilings. When transitioning to flat drywall ceiling areas or bulkheads and soffits, finishing with the USG Ensemble™ Spray-Applied Finish creates a seamless and consistent aesthetic.

For more information refer to detail #25.
DETAILS
SUSPENDED DRYWALL T-BAR SYSTEM

The USG Drywall T-bar System, used to frame the suspended USG Ensemble™ ceiling, easily accommodates conventional or recessed light fixtures, linear light fixtures, access doors or HVAC ceiling diffusers. USG Ensemble™ Spray-Applied Finish can be used to coat most primed or painted metal access doors for an improved aesthetic that matches the ceiling.

“Virtually Invisible” style access panels work great for drywall and Ensemble as they blend in with the ceiling. For areas needing a little more frequent access, key-access doors or concealed access doors (frame, latch and hinge) are a good fit. For very frequently accessed panels, do not coat with Ensemble Spray-Applied Finish.
Control joints are used to control stress caused by expansion and contraction across the control joint in large ceiling expanses in drywall systems. USG Ensemble™ ceilings have the same requirements for control joints as drywall ceilings. Control joints are needed for USG Ensemble ceilings that exceed 50 feet (2,500 sq. ft.) with perimeter relief, and 30 feet (900 sq. ft.) without perimeter relief. Use continuous main tees parallel and on either side of the control joint.

See details #17 and #17A for more information on control joint options.
See details #16 and #16A for ceiling to partition interface options.
DETAILS
SUSPENDED DRYWALL T-BAR SYSTEM

6. TYPICAL REFLECTED CEILING PLAN

Typical Reflected Ceiling Plan

19
TS

15
TS

18
TS

14
TS

22
TS

23
ALT.

23
TS

17
TS
USG Ensemble™ integrates with lights, diffusers and other ceiling utilities the same way that drywall ceilings do.

Linear lights and diffusers integrate with USG Ensemble™. A USG Logix™ Yoke can be used to assist with embedding the linear fixtures into the USG Drywall T-Bar System framing.
USG Ensemble™ is framed with USG Drywall T-Bar System using 12-gauge wires and suspended from structure. 12-gauge hanger wires should be installed per ASTM C636.

12-gauge hanger wires should be installed per ASTM C636.
USG Ensemble™ can transition easily to an acoustical ceiling system. The transition is very clean when a USG Donn® Brand Cap Transition Molding is used.

Fine details like a ceiling height change can be easily and cleanly done with a USG Compásso™ Elite DAS trim.
DETAILS
SUSPENDED DRYWALL T-BAR SYSTEM

USG ISBAC Support Bar Attachment Clips provide additional support to the framing system. They should be installed at the junction of the USG ISB109 Indexed Support Bar and the USG DGLW26 Main Tee near a hanger wire.

Sprinkler heads integrate with USG Ensemble™ ceiling system the same way as with a suspended drywall T-Bar grid system.
Access panels can be installed in USG Ensemble™ wherever plenum access is needed. Most access panels will work and can be coated directly with the USG Ensemble™ Spray-Applied Finish. The best type of access panel for USG Ensemble™ meets the following criteria:

1. Has a primed or low-sheen painted finish.
2. Is white in color or is primed or painted white on site before coating.
3. Latch and key access panels work well for reducing damage when opening/closing.

One method of finishing the USG Ensemble™ ceiling is to tape the intersection of wall and ceiling with USG Sheetrock® Brand Paper Joint Tape embedded in USG All Purpose Joint Compound and finished with USG Sheetrock® Brand Ensemble™ Ceiling Compound.
Another method of detailing the USG Ensemble™ ceiling is to create a reveal at the perimeter by using a drywall L-trim or J-stop. By providing this “perimeter relief” detail, the need for control joints is reduced. Control joints would be needed every 50 linear feet or every 2,500 square feet.

Control joint requirements for USG Ensemble™ are the same as for drywall ceilings: Every 30 linear feet or every 900 square feet without perimeter relief. With perimeter relief, every 50 linear feet or every 2,500 square feet.
DETAILS

SUSPENDED DRYWALL T-BAR SYSTEM

Ideally, control joints should include a break in the framing. Here, DGLW-26 main tees run parallel with a small separation to fit the control joint. Control joint requirements for USG Ensemble™ are the same as for drywall ceilings: Every 30 linear feet or every 900 square feet without perimeter relief. With perimeter relief, every 50 linear feet or every 2,500 square feet.

Special Note: Location of control and expansion joints are the responsibility of the design professional. USG gypsum panel surfaces should be isolated with control joints, caulk or other means where:
— Ceiling or soffit abuts a structural element, column, partition or other vertical penetration.
— Construction changes within a plane of the ceiling.
— Ceiling dimensions exceed 50’ in either direction (2,500 sq. ft.) with perimeter relief or 30’ (900 sq. ft.) without relief.
— Soffit exceeds 30’ in either direction.
— Wings of "L", "U" and "T" shaped ceilings areas are joined.

Linear lights and diffusers can also be installed in a USG Ensemble™ ceiling. A USG Logix™ Yoke can be used to interrupt and support the framing and to accommodate the linear fixtures (by others).
19. RECESSED DOWN LIGHT AT INTEGRATION

Point light fixtures can integrate easily with USG Ensemble™. Either trimless or trimmed fixtures will work.

USG Compässo™ Elite drywall trim can be used for USG Ensemble™ “floating islands” and “peninsulas” for a clean, finished edge detail. The bottom flange is designed to be covered with joint compound for a seamless edge. The face of the trim can be coated at job site with the USG Ensemble™ Spray-Applied Finish or left factory-painted white.
The long, factory tapered joints of the USG Ensemble™ panels attach with drywall screws directly to USG Drywall T-Bar Grid framing members just like a drywall ceiling.

Reveal trims can easily be integrated with USG Ensemble™ to create a unique aesthetic.
USG Compasco™ Elite drywall trim attaches both parallel and perpendicular to drywall tees.

In lieu of USG Compasco™ Elite Drywall Trims, a field-fabricated gypsum panel edge can be used to finish edges of “floating” or “island” ceilings.
24. USG ENSEMBLE™ TYPICAL FRAMING DETAIL—USG DRYWALL T-BAR SYSTEM WITH INDEXED SUPPORT BAR

**USG Ensemble™ Suspended Drywall T-Bar System**

The USG Ensemble™ Suspended Drywall T-Bar framing system utilizes 12-gauge hanger wires at 48” o.c. max., USG ISB109 Index Support Bars at 48” o.c., USG DGLW-26 Drywall Main Tees at 16” o.c. and USG ISBAC clips at the intersection of hanger wires and main tees.

**USG Ensemble™ panels and USG Sheetrock® Brand panels can be installed in the same ceiling and finished with USG Ensemble™ Spray-Applied Finish for a uniform appearance. A high solids primer should be applied to the non-perforated USG Sheetrock® Brand panels. No primer should ever be applied to the USG Ensemble panels.**
For low-clearance applications, or attaching directly to an existing ceiling substrate or for overhead structure, USG Ensemble™ Acoustical Drywall Ceiling can be directly mounted using 1” or 2” deep Z-Furring. Various depth Z-Furring can also be used to allow more room for junction boxes or utilities.

USG Ensemble™ Direct Mount Z-Furring can be attached directly to the underside of wooden floor or roof joists or other wood framing or structures (not shown).
USG Ensemble™ Direct Mount Z-Furring can also be attached directly to concrete, masonry or even concrete coffers.

USG Ensemble™ Direct Mount Z-Furring can also be attached to an existing suspended drywall ceiling system. The extra layer of solid drywall can help improve STC and reduce sound flanking paths or can be used to create a sealed plenum for return air with differential pressure.
USG Ensemble™ Direct Mount Z-Furring System can also be used to build a sloped ceiling. In the image below, 1" Z-furring is attached directly to sloped wooden structural framing. Insulation Impaling clips (one per backer panel) help hold the High NRC backer panels in place until the USG Sheetrock® Brand Ensemble™ panels are mechanically attached to the Z-Furring.

Note: The framing system may limit how steep the slope can be. Contact your sales representative for more information.
USG Ensemble™ Direct Mount Z-Furring can also be used for a sloped ceiling. It can be attached directly to a suspended drywall ceiling system or to sloped light-gauge metal framing (not shown). An extra layer of 1/2” or 5/8” drywall can help improve STC and reduce sound flanking paths (not shown).

**Note:** The framing system may limit how steep the slope can be. Contact your sales representative for more information.
33. **USG ENSEMBLE™ LOW-CLEARANCE FRAMING DIRECT MOUNT TO STRUCTURE**

Another option for low-clearance conditions is to substitute a minimum 20-gauge steel angle for the 12-gauge hanger wires. This will allow the USG Ensemble™ finished ceiling height to be as little as 5-3/16” from the “deck” or ceiling structure. The USG ISB109 Support Bar is attached directly to the 20-gauge steel Angle Support Bracket and then directly to the deck structure.

![Diagram](image)

34. **USG ENSEMBLE™ LOW-CLEARANCE FRAMING DIRECT MOUNT TO STRUCTURE**

Instead of using Z-furring, another option for low-clearance conditions is to substitute a minimum 20-gauge steel Support Bracket for the 12-gauge hanger wires and omit the USG ISB109 Indexed Support Bar. This will allow the USG Ensemble™ finished ceiling height to be as little as 4-3/16” from the “deck” or ceiling structure. The USG DGLW-26 Main Tee is attached directly to the 20-gauge steel angle and then directly to the deck or structure.

![Diagram](image)
Instead of using Z-furring, another option for low-clearance conditions is to substitute a minimum 20-gauge steel support bracket for the 12-gauge hanger wires and omit the USG Indexed Support Bar ISB109. This will allow the USG Ensemble™ finished ceiling height to be as little as 2-3/8” from the “deck” or ceiling structure. The USG DGLW-26 Drywall Main Tee is attached directly to the 20-gauge steel support bracket and then directly to the structure.

USG Ensemble™ has framing solutions to build a sloped ceiling with low-clearance conditions. USG DGLW-26 drywall Main Tees are attached to sloped wooden structural framing by using a minimum 20-gauge steel support bracket (in lieu of 12-gauge hanger wires).
USG Ensemble™ Z-Furring System can also be direct mounted to a vertical surface and used as an acoustical treatment on interior partitions above seven feet. It can be attached directly to a new or existing wood stud drywall partition to reduce reverberation.

**USG Ensemble™ Direct Mount to Wood or Steel Frame Partition**

![Diagram of USG Ensemble™ Direct Mount to Wood or Steel Frame Partition]

**Note:** Install above 7’ to avoid contact or damage.

USG Ensemble™ can also be directly mounted to a vertical surface and used as an acoustical treatment on interior partitions above seven feet. It can be attached directly to a new or existing masonry partition to reduce reverberation.

**USG Ensemble™ Direct Mount to Interior Masonry Partition**

![Diagram of USG Ensemble™ Direct Mount to Interior Masonry Partition]

**Note:** Install above 7’ to avoid contact or damage.
PRODUCT INFORMATION
For the most up-to-date technical information, visit usgdesignstudio.com or cgcdesignstudio.com

CUSTOMER SERVICE
USG: 800 950-3839
CGC: 800 387-2690

TECHNICAL SERVICE
800 USG.4YOU (874-4968)

WEBSITES
usg.com
cgcinc.com
usgdesignstudio.com
cgcdesignstudio.com

SAMPLES/LITERATURE/FAX
USG: 866 528-7089
CGC: Contact Local Sales Rep

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SAFETY FIRST!
Follow good safety and industrial hygiene practices during handling and installation of all products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read Safety Data Sheets and related literature on products before specification and/or installation.