



# USG ENSEMBLE™ ACOUSTICAL DRYWALL CEILINGS

SYSTEMS SELECTOR GUIDE



# USG ENSEMBLE™ ACOUSTICAL DRYWALL CEILINGS

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## OVERVIEW

USG Ensemble Acoustical Drywall Ceiling is an interior ceiling and wall solution utilizing leading edge innovations. Combining the seamless appearance of a classic drywall ceiling with superior acoustical properties found in tile-and-grid systems, the Ensemble System is a combination of USG's core product technologies designed to maximize NRC, CAC and LR performance.

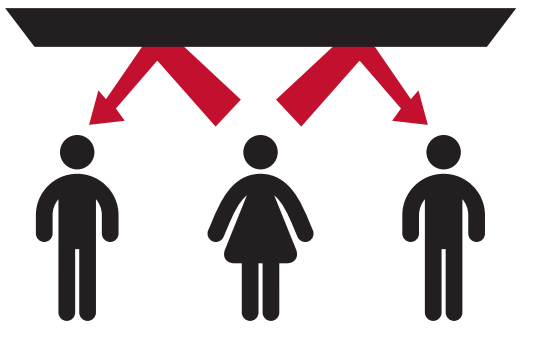
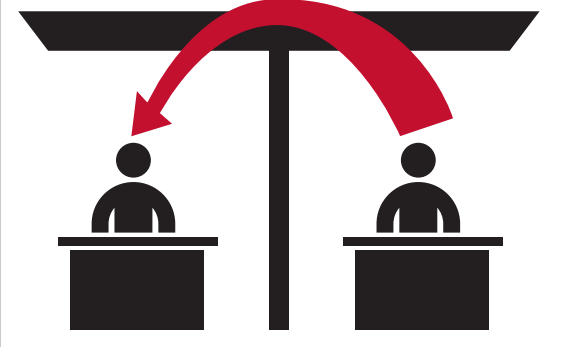
Stop compromising on aesthetics and acoustic control. Eliminate distracting gridlines with the monolithic appearance and superior performance of the USG Ensemble Acoustical Drywall Ceiling, available in white, black or any custom color finish.

Architects and designers encounter a myriad of performance criteria when designing spaces. With so many factors to consider, design challenges can arise depending on the complexity of the system and performance expectations of the space. This guide intends to inform and assist designers with selecting the appropriate system for their application needs.

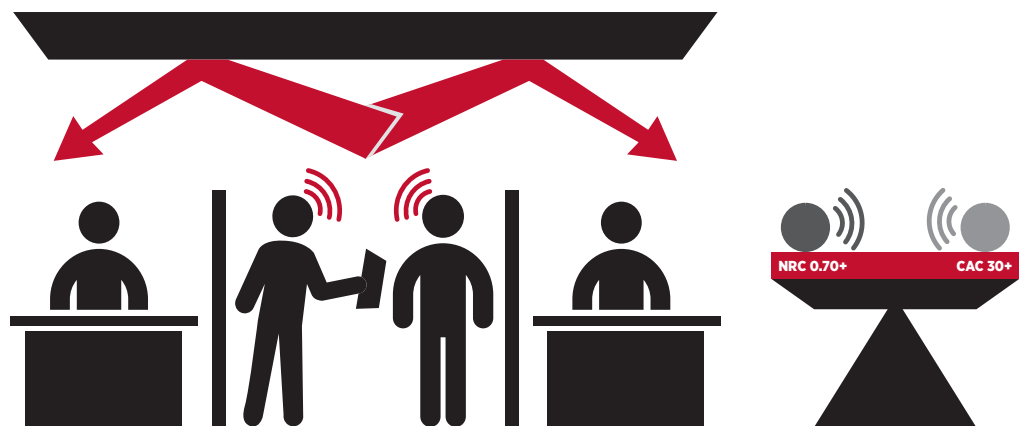
Regardless of which system you select, one factor remains constant: a classic, monolithic drywall finish; a blank canvas for your design vision—sound performance that you can hear, not see.

# BALANCED ACOUSTICS

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)	Ceiling Attenuation Class (CAC)
	
<p><b>NRC:</b> A measure of sound absorption.</p> <p>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.</p>	<p><b>CAC:</b> Applies to the sound attenuation of acoustical ceilings with a shared plenum above horizontally adjacent spaces.</p> <p>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.</p>

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.



# REVERBERATION AND ROOM ACOUSTICS

The purpose of sound absorbing materials and systems is to reduce reverberation and reverberation time.

Reverberation is the persistence of sound in an enclosed space due to ongoing reflections of sound bouncing off hard, sound-reflective finishes. Reverberation time (often abbreviated as RT, RT60, or T60) is the most common measure of reverberation and is defined as the time it takes for sound to decay by 60 dB in a space.

Some spaces, like music rehearsal rooms and concert halls, benefit from longer reverberation times as the ongoing reflections support the direct sound, adding warmth and character. However, in most space types, excessive reverberation can cause problems in the form of reduced speech intelligibility, increased build-up of noise in a space, and poor acoustic comfort—imagine a busy, loud hotel atrium, or a noisy restaurant where patrons struggle to hear and be heard.

Over the past 20 years, the design and construction community has become more aware of these room acoustic problems. This has resulted in the inclusion of acoustic requirements in many common design standards, usually in the form of reverberation time limits or ranges based on room type, room usage, and room size.

Below is a table of design standards that have incorporated room acoustic requirements:

## DESIGN STANDARDS

Design Standard	Project Type(s)
LEED	All
WELL	All
IgCC® (ASHRAE 189.1)	All
FGI (Facilities Guidelines Institute)	Hospitals & Healthcare
ANSI/ASA S12.60	Schools & Education
GSA (Government Services Administration) P100	Government / Public Buildings

Reverberation time is primarily affected by room size (volume) and the amount (surface area) of sound absorbing materials present in a room. When sound absorbing materials are added to a room, reverberation times will decrease, regardless of room size. Large volume rooms are naturally prone to longer reverberation times and require more sound absorbing materials to achieve lower reverberation times than rooms with smaller volumes.

The USG Ensemble System is notable for its high NRC, offering excellent sound absorption to effectively reduce reverberation and meet your project requirements.

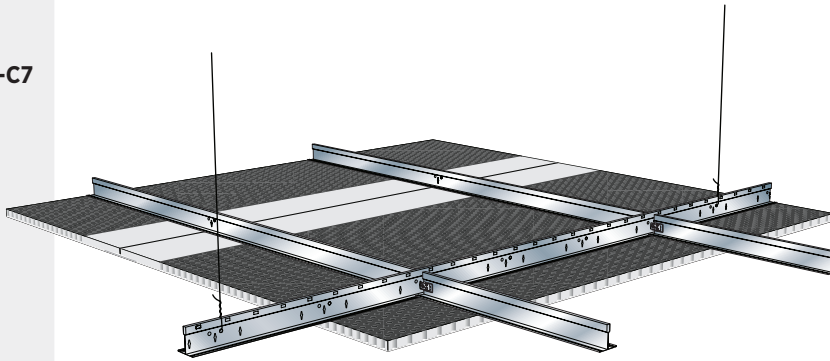
# RETURN AIR PLENUM APPLICATIONS

When a space uses the ceiling plenum as the primary method for return air (i.e. non-ducted return) special consideration must be given to seal areas prone to air leakage. Return air should only flow through dedicated return air openings rather than through other ceiling fixtures or the ceiling system itself.

This is true for any ceiling assembly. As air passes through and around the ceiling system, dust and other airborne impurities will get deposited along its path and can cause unsightly localized soiling or discoloration. Even when a space uses a fully ducted return air system, there can be other environmental factors that may cause a pressure differential between plenum above the ceiling and the occupied space below, which can lead to air flow through the ceiling system. As such, it's important to consider all mechanical, environmental, and project-specific conditions when designing a ceiling solution.

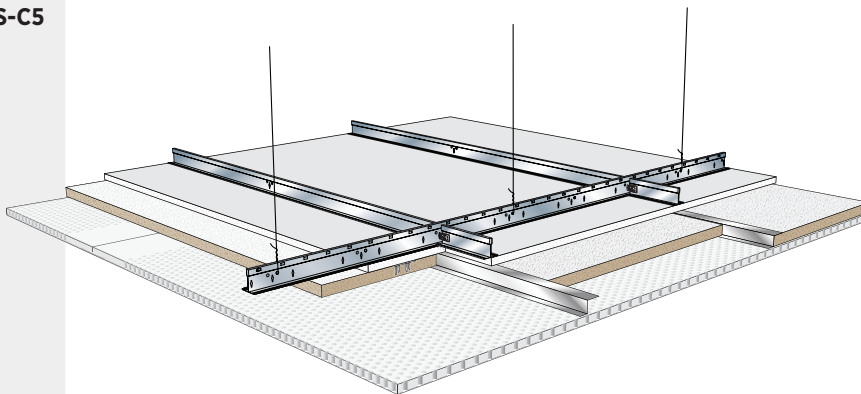
USG has developed two Ensemble Systems appropriate for use with return air plenum. Each system utilizes an air barrier to prevent air flow through the ceiling system:

## SYSTEM # ENSR-C7



- Less components = Lower installed cost
- High acoustic performance (NRC/CAC)
- New construction using drywall suspension system
- Wall to Wall ducted or non-ducted HVAC returns

## SYSTEM # ENS-C5



- High acoustic performance (NRC/CAC)
- Sound isolation requirements (STC/IIC)
- Retrofit conditions with existing gypsum board ceiling
- Fire-resistance rated locations when applied to the bottom side of a completed fire-resistance rated assembly
- Wall to Wall ducted or non-ducted HVAC returns

# USG ENSEMBLE™ SYSTEM SELECTOR GUIDE

## SELECTING THE RIGHT SYSTEM

In order to utilize the USG Ensemble System to its fullest capabilities, it is important to select the appropriate system that suits the needs of your project and the desired application.

The standard Ensemble system is suitable for a range of applications, including ceilings with ducted air returns, suspended clouds or islands, direct-mount systems, and any wall-mounted or non-wall-to-wall ceilings. It's important to note that while the Ensemble RAP system can be utilized in these same applications, it is most effective in wall-to-wall ceiling systems with non-ducted HVAC returns.

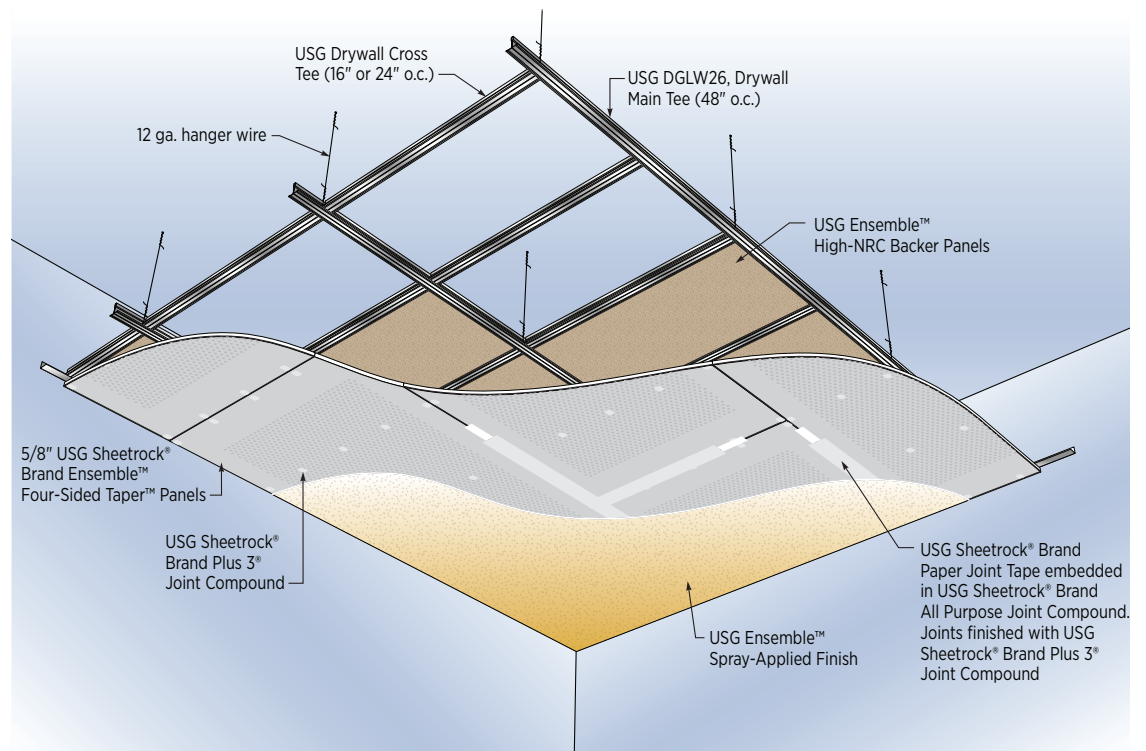
Consult the table below for additional considerations when selecting the right system for your project:

Application	NRC	CAC	Return Air Plenum	Mounting Type	System #	Data Sheet
Ceilings	0.80	40	NO	Suspended	ENS-C1	SC2791
	0.80	40	NO	Curved suspended - Vault	ENS-C2	SC3264
	0.80	40	NO	Curved suspended - Valley	ENS-C3	SC3264
	0.80	40	NO	Direct mount	ENS-C4	SC3237
	0.80	46-50	YES	Direct mount	ENS-C5	SC281069
	0.90	46-50	YES	Direct mount	ENS-C6	SC281069
	0.70	26	YES	Suspended	ENSR-C7	SC281069
	0.75	45	YES	Suspended	ENSR-C8	SC281069
	0.65	47	YES	Suspended	ENSR-C9	SC281069
Walls	0.80	N/A	N/A	Direct mount walls	ENS-W1	SC3238
	0.90	N/A	N/A	Direct mount walls	ENS-W2	SC3238
	0.80	N/A	N/A	Direct mount walls	ENS-W3	SC3238

# USG ENSEMBLE™ FINISH

The USG Ensemble Acoustical Drywall Ceiling delivers a clean, seamless appearance of drywall with the performance of an acoustical ceiling.

With installation similar to traditional drywall-and-grid system, the highly engineered USG Sheetrock® Brand Ensemble® Four-Sided Taper™ Panels are screw-attached to the bottom of the Ensemble System's framing members. Joints and screws are finished like standard drywall with USG Paper Tape and Joint Compound, and as final decoration, an acoustically transparent coating is spray-applied to the surface.

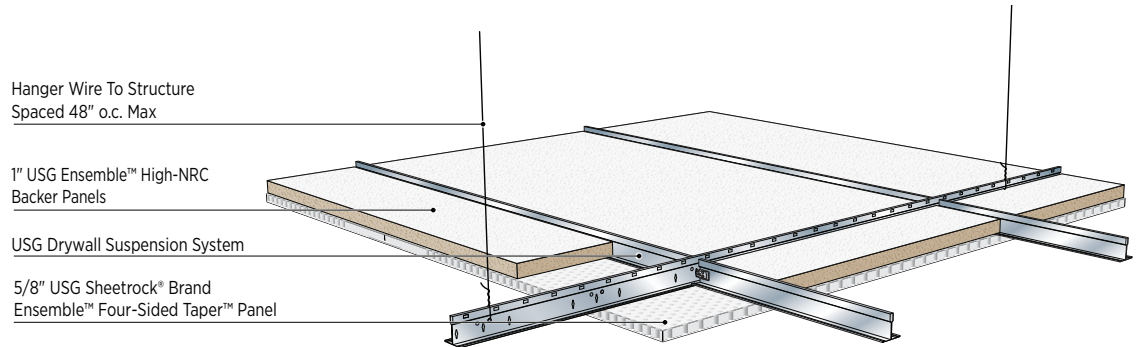


The above image is an example of a suspended Ensemble system. Although the application may vary from ceilings to walls, suspended to direct-mount, the finish remains a constant across all Ensemble systems.

Whether you are building airports, educational facilities, or healthcare environments, the USG Ensemble system has been designed to achieve an elegantly smooth and monolithic appearance for high-end applications that require acoustical control.

# USG ENSEMBLE™ ACOUSTICAL DRYWALL CEILING

## SUSPENDED SYSTEM — ENS-C1



### PERFORMANCE DATA

NRC	CAC	Return Air Plenum <sup>5</sup>	Mounting Type	System #	Data Sheet
0.80	40	NO	Suspended	ENS-C1	SC2791

### SYSTEM DESCRIPTION HIGHLIGHTS

#### COMPONENTS:

- 5/8" **USG Sheetrock® Brand Ensemble™ Four-Sided Taper™ Panel** – fastened to framing with 1-1/4" Type S screws, max 8" o.c. at the perimeter and max 12" o.c. in the field of the panel.
- 1" **USG Ensemble™ High-NRC Backer Panels** – laid in grid. Sizes available to accommodate either 16" or 24" o.c. framing.
- **DGLW26 (Main Tees), DGLW424 (Cross Tees)** spaced 16" or 24" o.c.
- **12-ga Hanger Wire**, by others – installed at max 48" o.c.

#### Not Shown:

- **USG Sheetrock® Brand Paper Joint Tape and Compound**
- **USG Ensemble™ Spray-Applied Finish**

#### INSTALLATION RESOURCES:

For additional installation guidelines refer to *USG Drywall Suspension System Catalog (AC3152)*.

All other guidelines for Ensemble Panels installation should follow the standard ASTM C840, *Standard Specification for Application and Finishing of Gypsum Board* or GA-216, *Application and Finishing of Gypsum Panel Products*.

See also the *Ensemble Acoustical Drywall Ceiling Installation Overview, (SC5074)*.

### NOTES

1. NRC tested in accordance with ASTM C423 in type E400 mounting, per ASTM E795. CAC tested in accordance with ASTM E1414.
2. Ensemble Acoustical Drywall Ceiling is not intended to replace any component in a fire-resistance rated assembly. Ensemble Acoustical Drywall Ceiling may be installed in addition to the fire-resistance rated assembly.
3. Indicates whether a system is design for use in return air plenums with differential pressure. For all other systems, return air ducts shall be installed according to ASHRAE standards and guidelines.
4. For interior ceilings only.
5. Not for use in areas subject to continuous high-heat and/or humid conditions.



# USG ENSEMBLE™ ACOUSTICAL DRYWALL CEILING

## SUSPENDED CURVED VAULT SYSTEM — ENS-C2

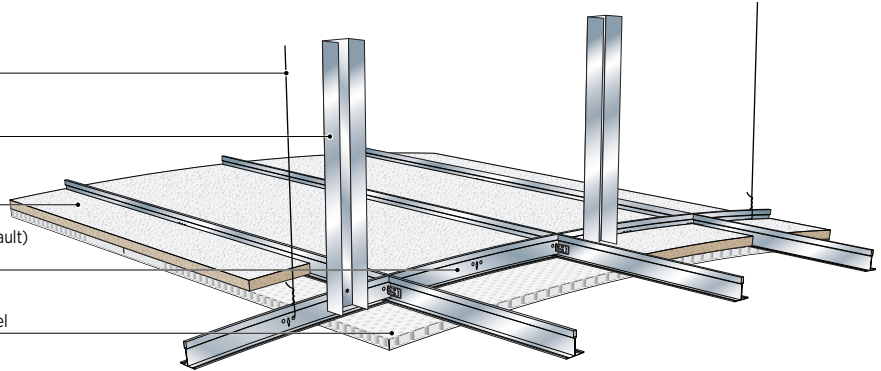
Hanger Wire To Structure  
Spaced 48" o.c. Max

Bracing to Structure Above  
Spaced 24" o.c.

1" USG Ensemble™ High-NRC  
Backer Panels

USG Curved Suspension System (Vault)  
R20'-0" Minimum Radius

5/8" USG Sheetrock® Brand  
Ensemble™ Four-Sided Taper™ Panel



### PERFORMANCE DATA

NRC	CAC	Return Air Plenum <sup>5</sup>	Mounting Type	System #	Data Sheet
0.80	40	NO	Curved Suspended	ENS-C2	SC3264

### SYSTEM DESCRIPTION HIGHLIGHTS

#### COMPONENTS:

- 5/8" **USG Sheetrock® Brand Ensemble™ Four-Sided Taper™ Panel** – fastened to framing with 1-1/4" Type S screws, max 8" o.c. at the perimeter and max 12" o.c. in the field of the panel.
- 1" **USG Ensemble™ High-NRC Backer Panels** – laid in grid. Size available to accommodate 16" o.c. framing.
- **Curved Drywall Main Tee (Vault), DGLW424 Cross Tees** spaced 16" o.c.  
**Note:** R20'-0" Minimum Radius.
- **12-ga Hanger Wire**, by others – installed at max 48" o.c.
- **Bracing to Structure**, by others – installed at max 24" o.c.

#### Not Shown:

- **USG Sheetrock® Brand Paper Joint Tape and Compound**
- **USG Ensemble™ Spray-Applied Finish**

#### INSTALLATION RESOURCES:

For additional installation guidelines refer to *USG Drywall Suspension System Catalog (AC3152)*.

All other guidelines for Ensemble Panels installation should follow the standard ASTM C840, *Standard Specification for Application and Finishing of Gypsum Board* or GA-216, *Application and Finishing of Gypsum Panel Products*.

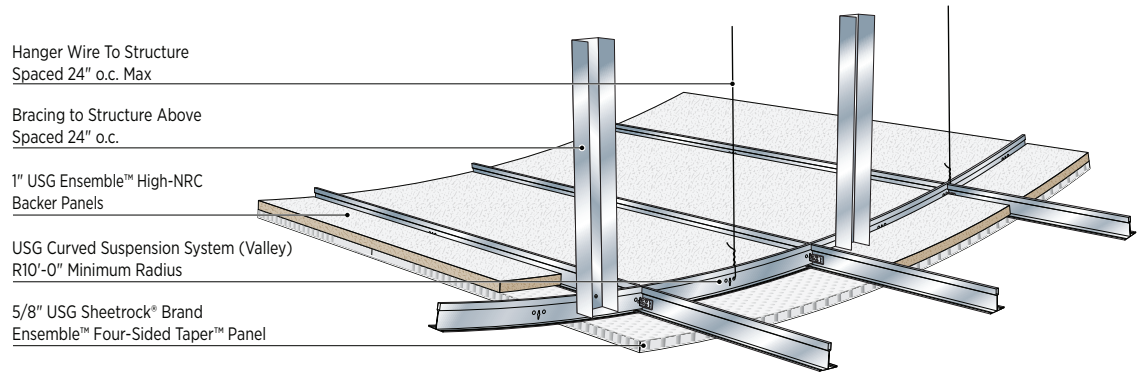
See also the *Ensemble Acoustical Drywall Ceiling Installation Overview, (SC5074)*.

### NOTES

1. NRC tested in accordance with ASTM C423 in type E400 mounting, per ASTM E795. CAC tested in accordance with ASTM E1414.
2. Ensemble Acoustical Drywall Ceiling is not intended to replace any component in a fire-resistance rated assembly.
3. Indicates whether a system is design for use in return air plenums with differential pressure. For all other systems, return air ducts shall be installed according to ASHRAE standards and guidelines.
4. For interior ceilings only.
5. Not for use in areas subject to continuous high-heat and/or humid conditions.

# USG ENSEMBLE™ ACOUSTICAL DRYWALL CEILING

## SUSPENDED CURVED VALLEY SYSTEM — ENS-C3



### PERFORMANCE DATA

NRC	CAC	Return Air Plenum <sup>3</sup>	Mounting Type	System #	Data Sheet
0.80	40	NO	Curved Suspended	ENS-C3	SC3264

### SYSTEM DESCRIPTION HIGHLIGHTS

#### COMPONENTS:

- 5/8" **USG Sheetrock® Brand Ensemble™ Four-Sided Taper™ Panel** – fastened to framing with 1-1/4" Type S screws, max 8" o.c. at the perimeter and max 12" o.c. in the field of the panel.
- 1" **USG Ensemble™ High-NRC Backer Panels** – laid in grid. Size available to accommodate 16" o.c. framing.
- **Curved Drywall Main Tee (Valley), DGLW424 Cross Tees** spaced 16" o.c.  
**Note:** R10'-0" Minimum Radius.
- **12-ga Hanger Wire**, by others – installed at max 24" o.c.
- **Bracing to Structure**, by others – installed at max 24" o.c.

#### Not Shown:

- **USG Sheetrock® Brand Paper Joint Tape and Compound**
- **USG Ensemble™ Spray-Applied Finish**

#### INSTALLATION RESOURCES:

For additional installation guidelines refer to *USG Drywall Suspension System Catalog (AC3152)*.

All other guidelines for Ensemble Panels installation should follow the standard ASTM C840, *Standard Specification for Application and Finishing of Gypsum Board* or GA-216, *Application and Finishing of Gypsum Panel Products*.

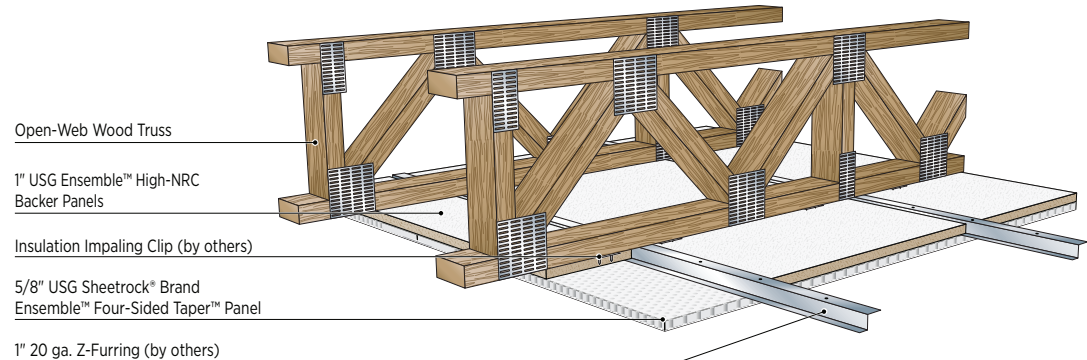
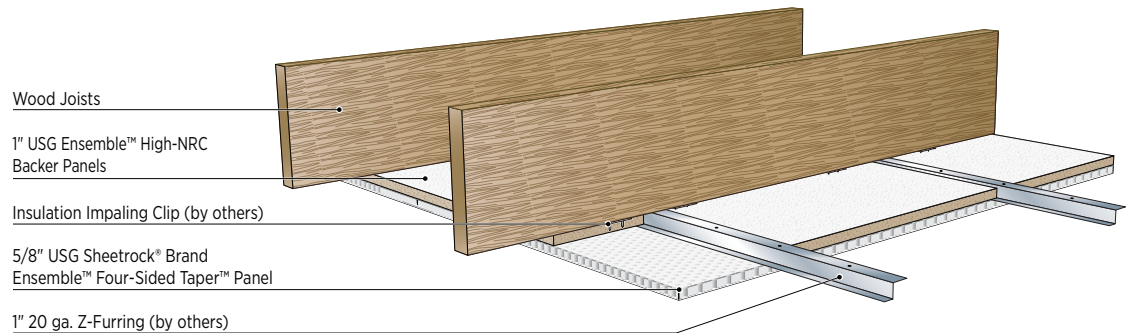
See also the *Ensemble Acoustical Drywall Ceiling Installation Overview*, (SC5074).

### NOTES

1. NRC tested in accordance with ASTM C423 in type E400 mounting, per ASTM E795. CAC tested in accordance with ASTM E1414.
2. Ensemble Acoustical Drywall Ceiling is not intended to replace any component in a fire-resistance rated assembly.
3. Indicates whether a system is design for use in return air plenums with differential pressure. For all other systems, return air ducts shall be installed according to ASHRAE standards and guidelines.
4. For interior ceilings only.
5. Not for use in areas subject to continuous high-heat and/or humid conditions.

# USG ENSEMBLE™ ACOUSTICAL DRYWALL CEILING

## DIRECT MOUNT SYSTEM — ENS-C4



### PERFORMANCE DATA

NRC	CAC	Return Air Plenum <sup>5</sup>	Mounting Type	System #	Data Sheet
0.80	40	NO	Direct Mount	ENS-C4	SC3237

### SYSTEM DESCRIPTION HIGHLIGHTS

#### COMPONENTS:

- **5/8" USG Sheetrock® Brand Ensemble™ Four-Sided Taper™ Panel** – fastened to framing with 1-1/4" Type S screws, max 8" o.c. at the perimeter and max 12" o.c. in the field of the panel.
- **1" USG Ensemble™ High-NRC Backer Panels** – inserted into Z-Furring Channel attached to impaling clip. Size available to accommodate 24" o.c. framing.
- **Wood Framing**, by others
- **Insulation Impaling Clip**, by others – installed two per panel.
- **1" Z-Furring Channel**, by others – min. 20-ga, installed 24" o.c.

#### Not Shown:

- **USG Sheetrock® Brand Paper Joint Tape and Compound**
- **USG Ensemble™ Spray-Applied Finish**

#### INSTALLATION RESOURCES:

For additional installation guidelines refer to *USG Drywall Suspension System Catalog (AC3152)*.

All other guidelines for Ensemble Panels installation should follow the standard ASTM C840, *Standard Specification for Application and Finishing of Gypsum Board* or GA-216, *Application and Finishing of Gypsum Panel Products*.

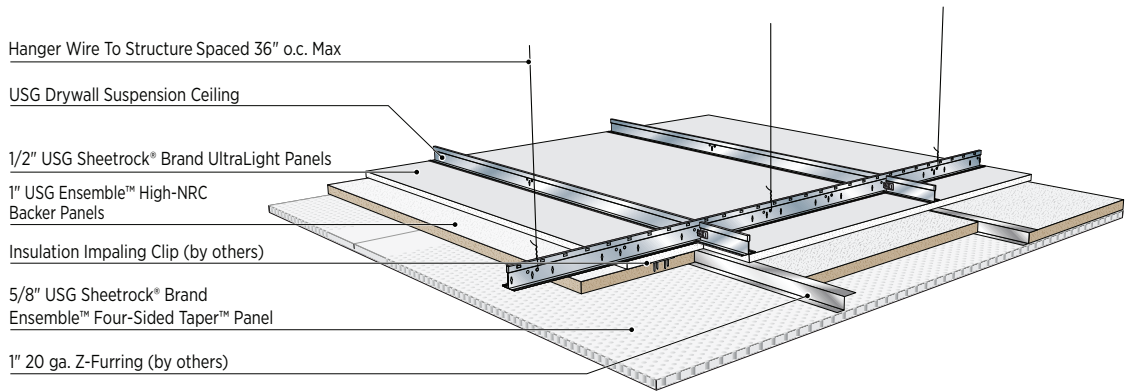
See also the *Ensemble Acoustical Drywall Ceiling Installation Overview*, (SC5074).

### NOTES

1. NRC tested in accordance with ASTM C423 in type E400 mounting, per ASTM E795. CAC tested in accordance with ASTM E1414.
2. Ensemble Acoustical Drywall Ceiling is not intended to replace any component in a fire-resistance rated assembly.
3. Indicates whether a system is design for use in return air plenums with differential pressure. For all other systems, return air ducts shall be installed according to ASHRAE standards and guidelines.
4. For interior ceilings only.
5. Not for use in areas subject to continuous high-heat and/or humid conditions.

# USG ENSEMBLE™ ACOUSTICAL DRYWALL CEILING

## DIRECT MOUNT RETURN AIR PLENUM SYSTEM — ENS-C5



### PERFORMANCE DATA

NRC	CAC	Return Air Plenum <sup>3</sup>	Mounting Type	System #	Data Sheet
0.80	46-50 <sup>2</sup>	YES	Direct Mount to Suspension System	ENS-C5	SC281069

### SYSTEM DESCRIPTION HIGHLIGHTS

#### COMPONENTS:

- 1/2" **USG Sheetrock® Brand UltraLight Panels** or preferred USG gypsum panel product.
- 5/8" **USG Sheetrock® Brand Ensemble™ Four-Sided Taper™ Panel** – fastened to framing with 1-1/4" Type S screws, max 8" o.c. at the perimeter and max 12" o.c. in the field of the panel.
- 1" **USG Ensemble™ High-NRC Backer Panels** – inserted into Z-Furring Channel attached to impaling clip. Size available to accommodate 24" o.c. framing.
- **DGLW26 (Main Tees), DGLW424 (Cross Tees)**, spaced max 24" o.c.
- **12-ga Hanger Wire**, by others – installed at max 36" o.c.
- **Insulation Impaling Clip**, by others – install two per panel.
- **1" Z-Furring Channel**, by others – min. 20-ga, installed 24" o.c.

#### Not Shown:

- **USG Sheetrock® Brand Paper Joint Tape and Compound**
- **USG Ensemble™ Spray-Applied Finish**

#### INSTALLATION RESOURCES:

For additional installation guidelines refer to *USG Drywall Suspension System Catalog (AC3152)*.

All other guidelines for Ensemble Panels installation should follow the standard ASTM C840, *Standard Specification for Application and Finishing of Gypsum Board* or GA-216, *Application and Finishing of Gypsum Panel Products*.

See also the *Ensemble Acoustical Drywall Ceiling Installation Overview*, (SC5074).

### NOTES

1. NRC tested in accordance with ASTM C423 in type A mounting, per ASTM E795.
2. CAC estimated based on testing of solid drywall ceilings.
3. Indicates whether a system is design for use in return air plenums with differential pressure. For all other systems, return air ducts shall be installed according to ASHRAE standards and guidelines.
4. Ensemble Acoustical Drywall Ceiling is not intended to replace any component in a fire-resistance rated assembly. Ensemble Acoustical Drywall Ceiling may be installed in addition to the fire-resistance rated assembly.
5. For interior ceilings only.
6. Not for use in areas subject to continuous high-heat and/or humid conditions.

# USG ENSEMBLE™ ACOUSTICAL DRYWALL CEILING

## DIRECT MOUNT RETURN AIR PLENUM SYSTEM — ENS-C6

Hanger Wire To Structure  
Spaced 36" o.c. Max

USG Drywall Suspension Ceiling

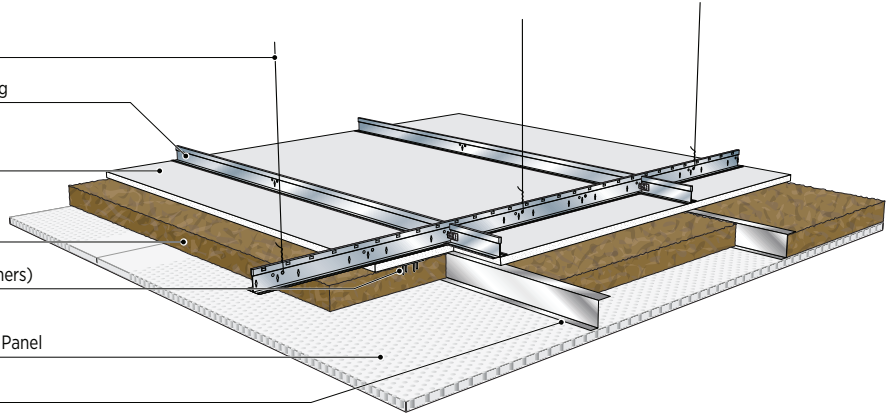
1/2" USG Sheetrock® Brand  
UltraLight Panels

2" Thick Fiberglass Board,  
6lb/ft³ (by others)

Insulation Impaling Clip (by others)

5/8" USG Sheetrock® Brand  
Ensemble™ Four-Sided Taper™ Panel

2" 20 ga. Z-Furring (by others)



### PERFORMANCE DATA

NRC	CAC	Return Air Plenum <sup>3</sup>	Mounting Type	System #	Data Sheet
0.90	46-50 <sup>2</sup>	YES	Direct Mount to Suspension System	ENS-C6	SC281069

### SYSTEM DESCRIPTION HIGHLIGHTS

#### COMPONENTS:

- 1/2" **USG Sheetrock® Brand UltraLight Panels** or preferred USG gypsum panel product.
- 5/8" **USG Sheetrock® Brand Ensemble™ Four-Sided Taper™ Panel** – fastened to framing with 1-1/4" Type S screws, max 8" o.c. at the perimeter and max 12" o.c. in the field of the panel.
- **DGLW26 (Main Tees), DGLW424 (Cross Tees)**, spaced max 24" o.c.
- **12-ga Hanger Wire**, by others – installed at max 36" o.c.
- **Insulation Impaling Clip**, by others – install two per panel.
- **2" Z-Furring Channel**, by others – min. 20-ga, installed 24" o.c.
- **2" Fiberglass Board**, min. 6lb/ft<sup>3</sup>, by others – Knauf ECOSE® or equal, inserted into Z-Furring Channel attached to impaling clip.

#### Not Shown:

- **USG Sheetrock® Brand Paper Joint Tape and Compound**
- **USG Ensemble™ Spray-Applied Finish**

#### INSTALLATION RESOURCES:

For additional installation guidelines refer to *USG Drywall Suspension System Catalog (AC3152)*.

All other guidelines for Ensemble Panels installation should follow the standard ASTM C840, *Standard Specification for Application and Finishing of Gypsum Board* or GA-216, *Application and Finishing of Gypsum Panel Products*.

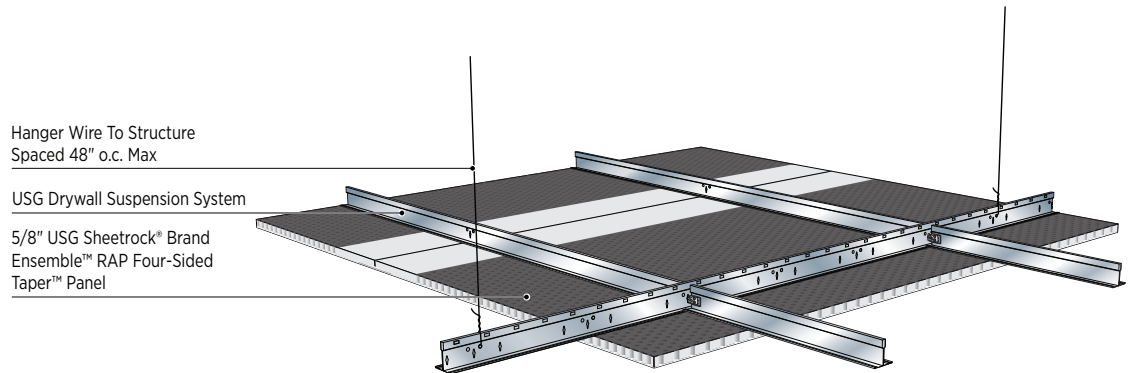
See also the *Ensemble Acoustical Drywall Ceiling Installation Overview*, (SC5074).

### NOTES

1. NRC tested in accordance with ASTM C423 in type A mounting, per ASTM E795.
2. CAC estimated based on testing of solid drywall ceilings.
3. Indicates whether a system is design for use in return air plenums with differential pressure. For all other systems, return air ducts shall be installed according to ASHRAE standards and guidelines.
4. Ensemble Acoustical Drywall Ceiling is not intended to replace any component in a fire-resistance rated assembly. Ensemble Acoustical Drywall Ceiling may be installed in addition to the fire-resistance rated assembly.
5. For interior ceilings only.
6. Not for use in areas subject to continuous high-heat and/or humid conditions.

# USG ENSEMBLE™ ACOUSTICAL DRYWALL CEILING

## SUSPENDED SYSTEM — ENSR-C7



### PERFORMANCE DATA

NRC	CAC	Return Air Plenum <sup>5</sup>	Mounting Type	System #	Data Sheet
0.70	26	YES	Suspended	ENSR-C7	SC281069

### SYSTEM DESCRIPTION HIGHLIGHTS

#### COMPONENTS:

- 5/8" **USG Sheetrock® Brand Ensemble™ RAP Four-Sided Taper™ Panel** – fastened to framing with 1-1/4" Type S screws, max 8" o.c. at the perimeter and max 12" o.c. in the field of the panel.
- **DGLW26 (Main Tees), DGLW424 (Cross Tees)** spaced 16" or 24" o.c.
- **12-ga Hanger Wire**, by others – installed at max 48" o.c.

#### Not Shown:

- **USG Sheetrock® Brand Paper Joint Tape and Compound**
- **USG Ensemble™ Spray-Applied Finish**

#### INSTALLATION RESOURCES:

For additional installation guidelines refer to *USG Drywall Suspension System Catalog (AC3152)*.

All other guidelines for Ensemble Panels installation should follow the standard ASTM C840, *Standard Specification for Application and Finishing of Gypsum Board* or GA-216, *Application and Finishing of Gypsum Panel Products*.

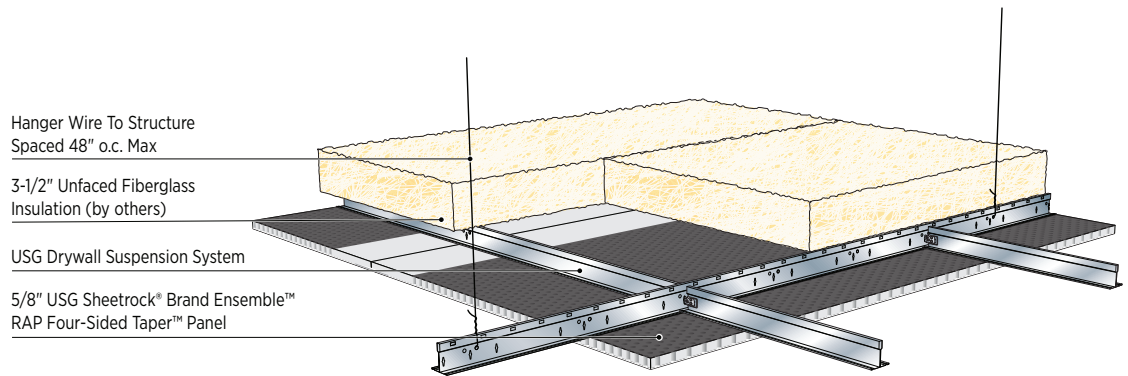
See also the *Ensemble Acoustical Drywall Ceiling Installation Overview*, (SC5074).

### NOTES

1. NRC tested in accordance with ASTM C423 in type E400 mounting, per ASTM E795. CAC tested in accordance with ASTM E1414.
2. Ensemble Acoustical Drywall Ceiling is not intended to replace any component in a fire-resistance rated assembly. Ensemble Acoustical Drywall Ceiling may be installed in addition to the fire-resistance rated assembly.
3. Indicates whether a system is design for use in return air plenums with differential pressure. For all other systems, return air ducts shall be installed according to ASHRAE standards and guidelines.
4. For interior ceilings only.
5. Not for use in areas subject to continuous high-heat and/or humid conditions.

# USG ENSEMBLE™ ACOUSTICAL DRYWALL CEILING

## SUSPENDED SYSTEM — ENSR-C8



### PERFORMANCE DATA

NRC	CAC	Return Air Plenum <sup>5</sup>	Mounting Type	System #	Data Sheet
0.75	45	YES	Suspended	ENSR-C8	SC281069

### SYSTEM DESCRIPTION HIGHLIGHTS

#### COMPONENTS:

- 5/8" **USG Sheetrock® Brand Ensemble™ RAP Four-Sided Taper™ Panel** – fastened to framing with 1-1/4" Type S screws, max 8" o.c. at the perimeter and max 12" o.c. in the field of the panel.
- Min. **3-1/2" Unfaced Fiberglass Insulation**, by others – Insulation supported and laid over the Drywall Suspension System, perpendicular to cross tees.  
**Note:** Do not rest insulation on the back of the panel.
- **DGLW26 (Main Tees), DGLW424 (Cross Tees)** spaced 16" or 24" o.c.
- **12-ga Hanger Wire**, by others – installed at max 48" o.c.

#### Not Shown:

- **USG Sheetrock® Brand Paper Joint Tape and Compound**
- **USG Ensemble™ Spray-Applied Finish**

#### INSTALLATION RESOURCES:

For additional installation guidelines refer to *USG Drywall Suspension System Catalog (AC3152)*.

All other guidelines for Ensemble Panels installation should follow the standard ASTM C840, *Standard Specification for Application and Finishing of Gypsum Board* or GA-216, *Application and Finishing of Gypsum Panel Products*.

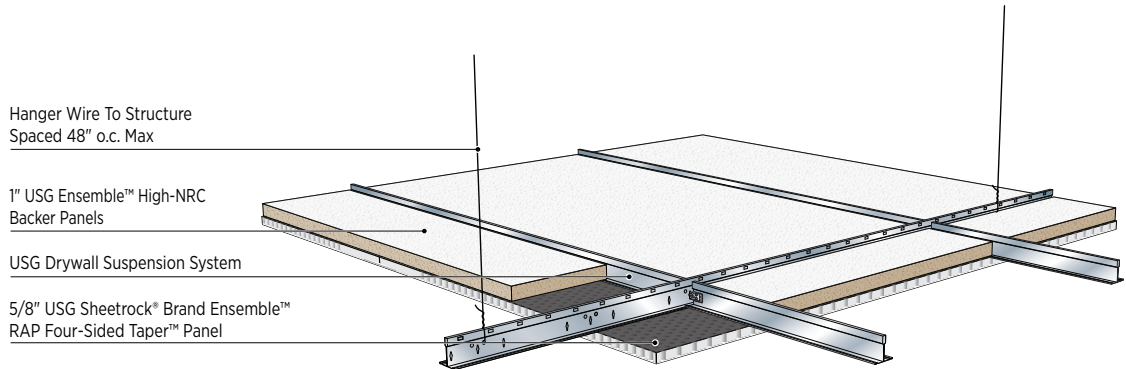
See also the *Ensemble Acoustical Drywall Ceiling Installation Overview, (SC5074)*.

### NOTES

1. NRC tested in accordance with ASTM C423 in type E400 mounting, per ASTM E795. CAC tested in accordance with ASTM E1414.
2. Ensemble Acoustical Drywall Ceiling is not intended to replace any component in a fire-resistance rated assembly. Ensemble Acoustical Drywall Ceiling may be installed in addition to the fire-resistance rated assembly.
3. Indicates whether a system is design for use in return air plenums with differential pressure. For all other systems, return air ducts shall be installed according to ASHRAE standards and guidelines.
4. For interior ceilings only.
5. Not for use in areas subject to continuous high-heat and/or humid conditions.

# USG ENSEMBLE™ ACOUSTICAL DRYWALL CEILING

## SUSPENDED SYSTEM — ENSR-C9



### PERFORMANCE DATA

NRC	CAC	Return Air Plenum <sup>5</sup>	Mounting Type	System #	Data Sheet
0.65	47	YES	Suspended	ENSR-C9	SC281069

### SYSTEM DESCRIPTION HIGHLIGHTS

#### COMPONENTS:

- 5/8" **USG Sheetrock® Brand Ensemble™ RAP Four-Sided Taper™ Panel** – fastened to framing with 1-1/4" Type S screws, max 8" o.c. at the perimeter and max 12" o.c. in the field of the panel.
- 1" **USG Ensemble™ High-NRC Backer Panels** – laid in grid. Sizes available to accommodate either 16" or 24" o.c. framing.
- **DGLW26 (Main Tees), DGLW424 (Cross Tees)** spaced 16" or 24" o.c.
- **12-ga Hanger Wire**, by others – installed at max 48" o.c.

#### Not Shown:

- **USG Sheetrock® Brand Paper Joint Tape and Compound**
- **USG Ensemble™ Spray-Applied Finish**

#### INSTALLATION RESOURCES:

For additional installation guidelines refer to *USG Drywall Suspension System Catalog (AC3152)*.

All other guidelines for Ensemble Panels installation should follow the standard ASTM C840, *Standard Specification for Application and Finishing of Gypsum Board* or GA-216, *Application and Finishing of Gypsum Panel Products*.

See also the *Ensemble Acoustical Drywall Ceiling Installation Overview*, (SC5074).

### NOTES

1. NRC tested in accordance with ASTM C423 in type E400 mounting, per ASTM E795. CAC tested in accordance with ASTM E1414.
2. Ensemble Acoustical Drywall Ceiling is not intended to replace any component in a fire-resistance rated assembly. Ensemble Acoustical Drywall Ceiling may be installed in addition to the fire-resistance rated assembly.
3. Indicates whether a system is design for use in return air plenums with differential pressure. For all other systems, return air ducts shall be installed according to ASHRAE standards and guidelines.
4. For interior ceilings only.
5. Not for use in areas subject to continuous high-heat and/or humid conditions.



# USG ENSEMBLE™ ACOUSTICAL DRYWALL SYSTEM

## DIRECT MOUNT WALL SYSTEM – ENS-W1

5/8" USG Sheetrock® Brand Ensemble™ Four-Sided Taper™ Panels (For interior partitions only. Install 7 feet AFF to minimize contact or damage.)

USG Sheetrock® Brand Paper Joint Tape embedded in USG Sheetrock® Brand All Purpose Joint Compound Joints finished with USG Sheetrock® Brand Plus 3® Joint Compound

Steel studs (or wood) studs

USG Sheetrock® Brand Paper Joint Tape and Compound

USG Ensemble™ Spray-Applied Finish

Insulation Impaling Clip (by others)

1" 20 ga. Z-Furring (by others)

1" USG Ensemble™ High-NRC Backer Panels

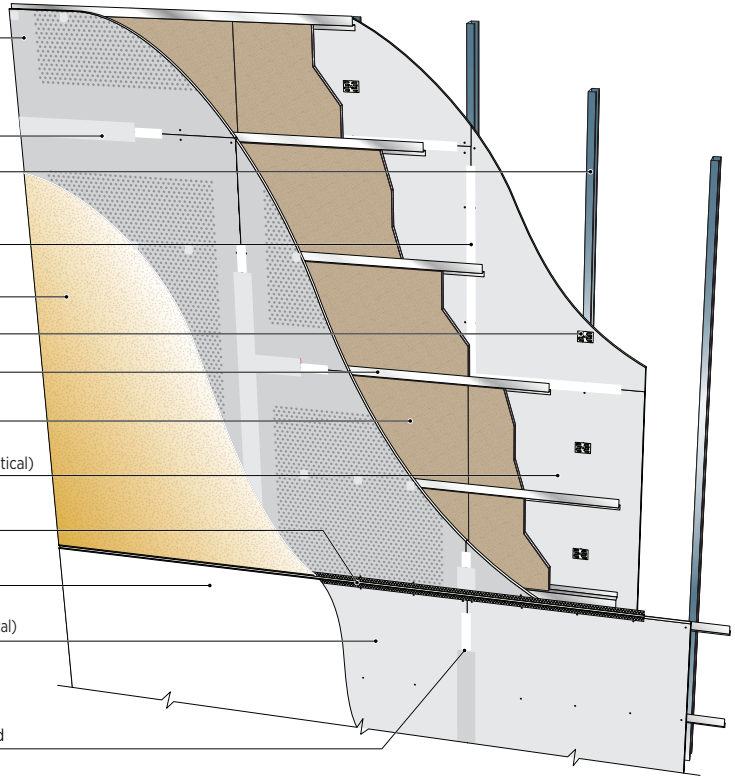
5/8" USG Sheetrock® Brand Gypsum Panels (non-acoustical)

#093 Zinc Control Joint or transition bead

Non-acoustical wall finish per designer's specification

5/8" USG Sheetrock® Brand Gypsum Panels (non-acoustical)

USG Sheetrock® Brand Paper Joint Tape and Compound



### PERFORMANCE DATA

NRC	CAC	Return Air Plenum	Mounting Type	System #	Data Sheet
0.80	N/A	N/A	Direct Mount Walls	ENS-W1	SC3238

### SYSTEM DESCRIPTION HIGHLIGHTS

#### COMPONENTS:

- 5/8" **USG Sheetrock® Brand Ensemble™ RAP Four-Sided Taper™ Panel** – fastened to framing with 1-1/4" Type S screws, max 8" o.c. at the perimeter and max 12" o.c. in the field of the panel.
- 1" **USG Ensemble™ High-NRC Backer Panels** – inserted into Z-Furring Channel attached to impaling clip. Size available to accommodate 24" o.c. framing.
- **Insulation Impaling Clip**, by others – install one per panel
- **Z-Furring Channel**, by others – min. 20-ga, installed 24" o.c.
- **USG Sheetrock® Brand Paper Joint Tape and Compound**
- **USG Ensemble™ Spray-Applied Finish**

#### INSTALLATION RESOURCES:

For additional installation guidelines refer to the standard ASTM C754, *Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products*.

All other guidelines for Ensemble Panels installation should follow the standard ASTM C840, *Standard Specification for Application and Finishing of Gypsum Board or GA-216, Application and Finishing of Gypsum Panel Products*.

See also the *Ensemble Acoustical Drywall Ceiling Installation Overview*, (SC5074).

### NOTES

1. NRC tested in accordance with ASTM C423 in type A mounting, per ASTM E795.
2. Ensemble Acoustical Drywall is not intended to replace any component in a fire-resistance rated assembly. Ensemble Acoustical Drywall may be installed in addition to the fire-resistance rated assembly.
3. For interior walls only.
4. Not for use in areas subject to continuous high-heat and/or humid conditions.

# USG ENSEMBLE™ ACOUSTICAL DRYWALL SYSTEM

## DIRECT MOUNT WALL SYSTEM – ENS-W2

5/8" USG Sheetrock® Brand Ensemble™ Four-Sided Taper™ Panels (For interior partitions only. Install 7 AFF feet to minimize contact or damage.)

USG Sheetrock® Brand Paper Joint Tape embedded in USG Sheetrock® Brand All Purpose Joint Compound Joints finished with USG Sheetrock® Brand Plus 3\* Joint Compound

Steel studs (or wood) studs

USG Sheetrock® Brand Paper Joint Tape and Compound

USG Ensemble™ Spray-Applied Finish

Insulation Impaling Clip (by others)

2" 20 ga. Z-Furring (by others)

2" Thick Fiberglass Board, 6lb/ft<sup>3</sup> (by others)

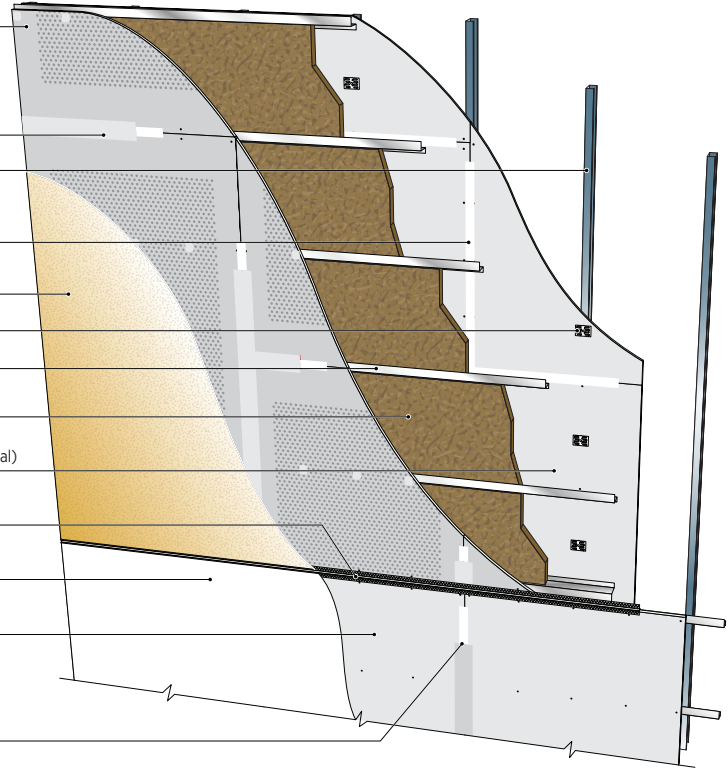
5/8" USG Sheetrock® Brand Gypsum Panels (non-acoustical)

#093 Zinc Control Joint or transition bead

Non-acoustical wall finish per designer's specification

5/8" USG Sheetrock® Brand Gypsum Panels (non-acoustical)

USG Sheetrock® Brand Paper Joint Tape and Compound



### PERFORMANCE DATA

NRC	CAC	Return Air Plenum	Mounting Type	System #	Data Sheet
0.90	N/A	N/A	Direct Mount Walls	ENS-W2	SC3238

### SYSTEM DESCRIPTION HIGHLIGHTS

#### COMPONENTS:

- 5/8" **USG Sheetrock® Brand Ensemble™ RAP Four-Sided Taper™ Panel** – fastened to framing with 1-1/4" Type S screws, max 8" o.c. at the perimeter and max 12" o.c. in the field of the panel.
- 2" **Fiberglass Board**, min. 6lb/ft<sup>3</sup>, by others – Knauf ECOSE® or equal, inserted into Z-Furring Channel attached to impaling clip.
- **Insulation Impaling Clip**, by others – install one per panel
- 2" **Z-Furring Channel**, by others – min. 20-ga, installed 24" o.c.
- **USG Sheetrock® Brand Paper Joint Tape and Compound**
- **USG Ensemble™ Spray-Applied Finish**

#### INSTALLATION RESOURCES:

For additional installation guidelines refer to the standard ASTM C754, *Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products*.

All other guidelines for Ensemble Panels installation should follow the standard ASTM C840, *Standard Specification for Application and Finishing of Gypsum Board* or GA-216, *Application and Finishing of Gypsum Panel Products*.

See also the *Ensemble Acoustical Drywall Ceiling Installation Overview*, (SC5074).

### NOTES

1. NRC tested in accordance with ASTM C423 in type A mounting, per ASTM E795.
2. Ensemble Acoustical Drywall is not intended to replace any component in a fire-resistance rated assembly. Ensemble Acoustical Drywall may be installed in addition to the fire-resistance rated assembly.
3. For interior walls only.
4. Not for use in areas subject to continuous high-heat and/or humid conditions.

# USG ENSEMBLE™ ACOUSTICAL DRYWALL SYSTEM

## DIRECT MOUNT WALL SYSTEM – ENS-W3

5/8" USG Sheetrock® Brand Ensemble™ Four-Sided Taper™ Panels (For interior partitions only. Install 7 feet AFF to minimize contact or damage.)

USG Sheetrock® Brand Paper Joint Tape embedded in USG Sheetrock® Brand All Purpose Joint Compound Joints finished with USG Sheetrock® Brand Plus 3® Joint Compound

Masonry Wall

USG Ensemble™ Spray-Applied Finish

Insulation Impaling Clip (by others)

1" 20 ga. Z-Furring (by others)

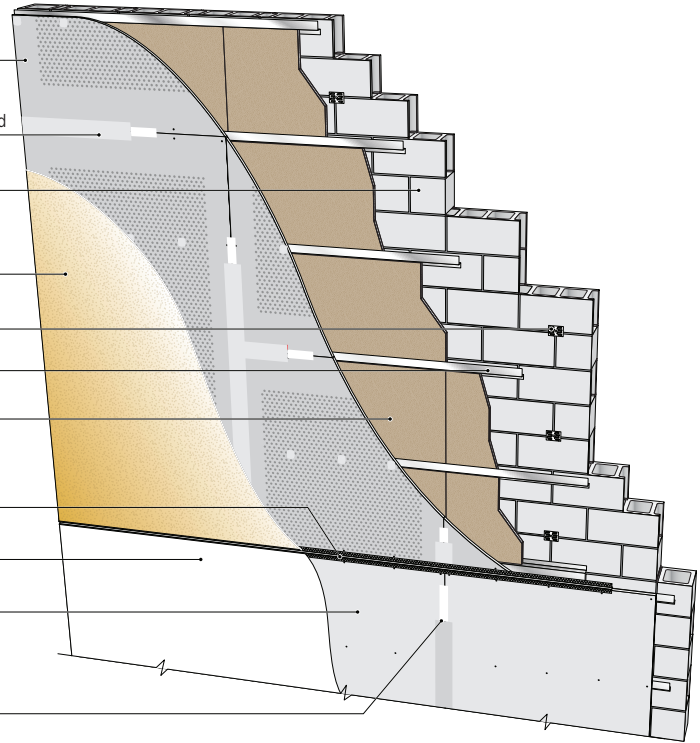
1" USG Ensemble™ High-NRC Backer Panels

#093 Zinc Control Joint or transition bead

Non-acoustical wall finish per designer's specification

5/8" USG Sheetrock® Brand Gypsum Panels (non-acoustical)

USG Sheetrock® Brand Paper Joint Tape and Compound



### PERFORMANCE DATA

NRC	CAC	Return Air Plenum	Mounting Type	System #	Data Sheet
0.80	N/A	N/A	Direct Mount Walls	ENS-W3	SC3238

### SYSTEM DESCRIPTION HIGHLIGHTS

#### COMPONENTS:

- 5/8" **USG Sheetrock® Brand Ensemble™ RAP Four-Sided Taper™ Panel** – fastened to framing with 1-1/4" Type S screws, max 8" o.c. at the perimeter and max 12" o.c. in the field of the panel.
- 1" **USG Ensemble™ High-NRC Backer Panels** – inserted into Z-Furring Channel attached to impaling clip. Size available to accommodate 24" o.c. framing.
- **Insulation Impaling Clip**, by others – install one per panel
- 1" **Z-Furring Channel**, by others – min. 20-ga, installed 24" o.c.
- **USG Sheetrock® Brand Paper Joint Tape and Compound**
- **USG Ensemble™ Spray-Applied Finish**

#### INSTALLATION RESOURCES:

For additional installation guidelines refer to the standard ASTM C754, *Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products*.

All other guidelines for Ensemble Panels installation should follow the standard ASTM C840, *Standard Specification for Application and Finishing of Gypsum Board* or GA-216, *Application and Finishing of Gypsum Panel Products*.

See also the *Ensemble Acoustical Drywall Ceiling Installation Overview*, (SC5074).

### NOTES

1. NRC tested in accordance with ASTM C423 in type A mounting, per ASTM E795.
2. Ensemble Acoustical Drywall is not intended to replace any component in a fire-resistance rated assembly. Ensemble Acoustical Drywall may be installed in addition to the fire-resistance rated assembly.
3. For interior walls only.
4. Not for use in areas subject to continuous high-heat and/or humid conditions.

## PRODUCT INFORMATION

For the most up-to-date technical information, visit [usgdesignstudio.com](http://usgdesignstudio.com) or [cgcdesignstudio.com](http://cgcdesignstudio.com)

## CUSTOMER SERVICE

USG: 800 950-3839

CGC: 800 387-2690

## TECHNICAL SERVICE

800 USG.4YOU (874-4968)

## WEBSITES

[usg.com](http://usg.com)

[cgcinc.com](http://cgcinc.com)

[usgdesignstudio.com](http://usgdesignstudio.com)

[cgcdesignstudio.com](http://cgcdesignstudio.com)

## SAMPLES/LITERATURE/FAX

USG: 866 528-7089

CGC: Contact Local Sales Rep

## NOTE

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Arkansas Museum of Fine Arts

Architect: Studio Gang

Photo: © Iwan Baan

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