

SOLUTION  
CATALOGUE

# HEALTHCARE ARCHITECTURAL HANDBOOK

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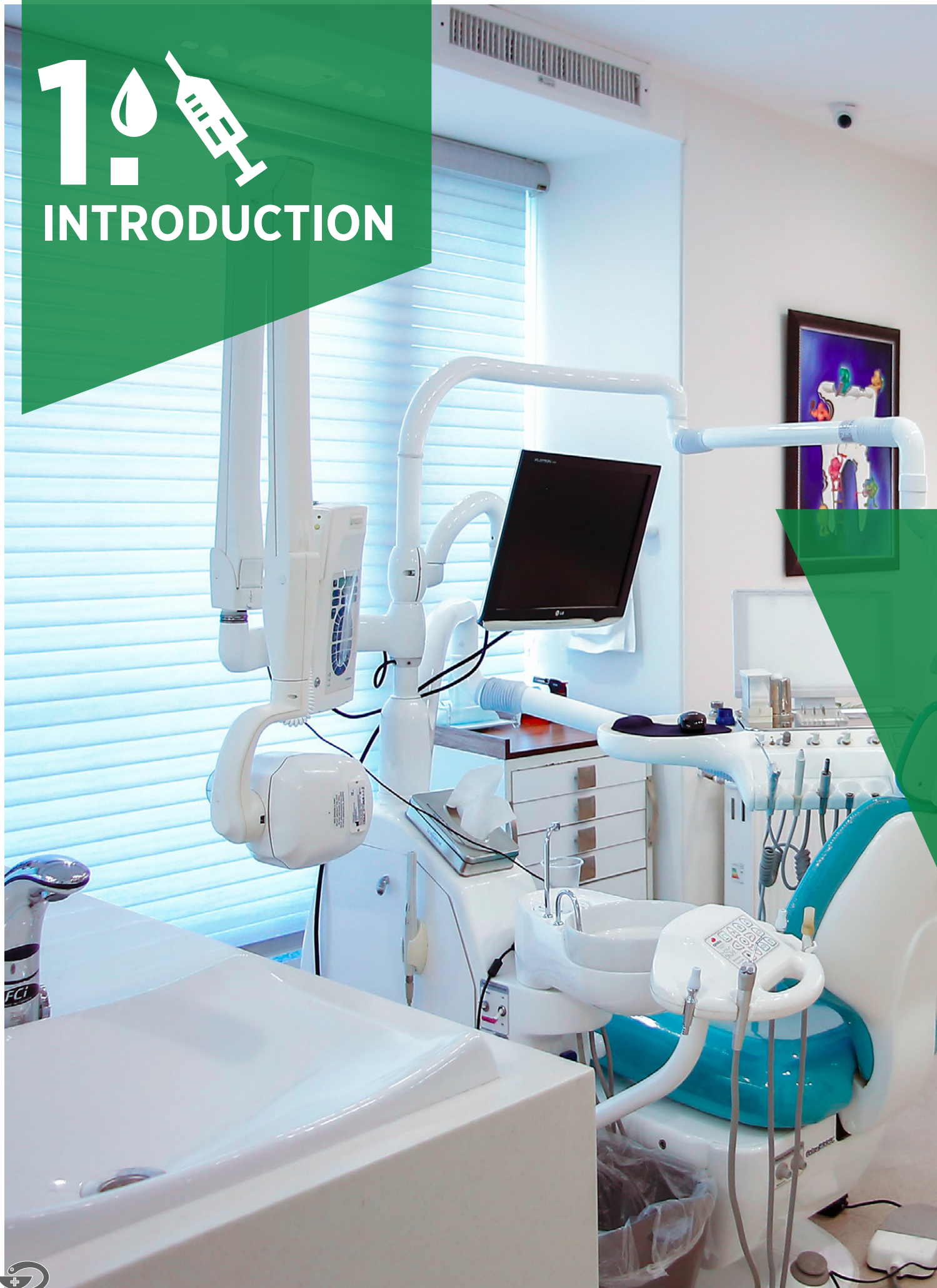
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# 1. INTRODUCTION





# INTRODUCTION

Your Healthcare Projects Architectural Finishes Supplier.

With over 334 UL assemblies for Ceilings & Drywall Partitions; USG Middle East is committed to provide innovative products and solutions to build your healthcare projects.

- Our systems are compatible with MEP and Lighting.
- Compatibility with claddings (Metal, Stone, Tile and Wood)
- Compatibility with other materials and systems (Audio-Visual Systems)
- Exterior walls and ceiling
- Curved walls

USG ME maintains a longstanding commitment with its employees, customers and communities to reduce environmental impact by using recycled materials whenever feasible to eliminate manufacturing waste.

We have a technical team that offers technical support for all healthcare projects at no cost whenever it is required by the clients, consultants or contractors.

## SINGLE SOURCE MANUFACTURER FOR CEILING SYSTEMS AND DRYWALL PARTITIONS ASSEMBLIES.



### CEILING SOLUTIONS

**METAL CEILING SOLUTIONS**  
**ACOUSTICAL GYPSUM CEILING**  
**SOFT FIBER CEILING**  
**MINERAL FIBER CEILING**  
**WOOD WOOL CEILING**  
**GYPSUM CEILING TILES**  
**SUSPENDED CEILING GRID**  
**SUSPENDED DRYWALL CEILING**



### DRYWALL ASSEMBLIES

**SKYROCK® BRAND GYPSUM BOARD**  
**SHEETROCK® BRAND GYPSUM BOARD**  
**SOLIDROCK® CEMENT BOARD**  
**FIBEROCK® WALLBOARD**  
**SECUROCK® BRAND GYPSUM BOARD**  
**DUROCK® WALLBOARD**  
**DRYWALL PARTITIONS METAL FRAMING**  
**JOINT COMPOUNDS**  
**PREPARATION SOLUTIONS**  
**SURFACING SOLUTIONS**





# SAFE SYSTEMS



Our ceiling panels support healthy environments in all healthcare facilities according to the most stringent international standards:

### FGI Guidelines

The Facility Guidelines Institute (FGI) is a nonprofit organization that works to develop guidelines for designing and building hospitals and other healthcare facilities. USG Middle East has developed a selected ceiling systems that follow the latest FGI requirements.

### Mold Prevention

Almost all of USG Middle East's ceiling panels are rated a 10 as per the ASTM D3273 scale for mold prevention applications.

### Antibacterial Coating

Antimicrobial coating will provide lasting protection against microbes, harmful bacteria, mold, and fungus—ultimately helping to minimize stains, bad odors, and material degradation. Antimicrobial coating is more durable and lasts longer by making your ceiling systems less susceptible to mold growth and associated odors.

### Water Absorbance

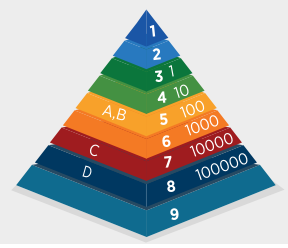
As per a project request, we provide a layer of absorbent material on our ceiling panels to resist a moderate amount of dripping water for up to 2 hours.

### Clean Room Classification\*

We provide ceiling panels Classified as Clean Room ISO 4 and ISO 5 as per ISO 14644-1

#### \* Clean Room™ Classification

FED STD 209D/209E		ISO 14644-1	Industry Application Areas		
English	Metric	ISO Class			
-	-	1			
-	-	2			
1	M1.5	3	Micro-electronics		
10	M2.5	4			
100	M3.5	5		Pharmaceutical	
1,000	M4.5	6			
10,000	M5.5	7		Electronics and Food	Automotive and Space
100,000	M6.5	8			
-	-	9			



# PRESENCE IN HEALTHCARE

## KINGDOM OF SAUDI ARABIA

- Abha Hospital
- Abha International Private Hospital
- Aflaj General Hospital
- Al Dara Hospital and Medical Center
- Al Dawadmi General Hospital
- Al Hayah Hospital, Abha
- Al Hayah Hospital, Riyadh
- Al Moosa Rehabilitation Hospital, Al Ihssa
- Al Murjan Hospital, Jeddah
- Al Qurayyat General Hospital
- Al Salam Hospital, Al Khobar
- Armed Forces Hospital, Jizan
- Beish Hospital Renovation
- Center-KFSH & RC Mega Expansion
- Dallah Hospital Extension
- Dammam General Hospital-ER Expansion
- Dr. Sulaiman Al Habib Hospital, Al Khobar
- Dr. Sulaiman Al Habib Hospital, Sahafa Riyadh
- Fajar Al Dammam Medical Complex
- Herzallah Medical Center, Al Khobar
- Jizan General Hospital
- Khamis Mushayt General Hospital
- King Abdullah bin Abdulaziz University Hospital, Riyadh
- King Abdullah Hospital, Bisha
- King Faisal Specialist Hospital & Research Center
- King Faisal Specialist Hospital and Research Kingdom Hospital, Riyadh
- Maghrabi Eye Hospital, Dammam
- Mediclinic Al Murjan Hospital
- Nairiyah General Hospital
- Prince Saud Bin Jalawi Hospital
- Royal Commission General Hospital
- Saad Specialist Hospital
- Samta General Hospital
- Saudi German Hospital, Jeddah
- Saudi German Hospital, Makkah
- Specialized Medical Center-SMC
- Tabuk Hospital
- The Behavioral Care Specialist Hospital: BCSH
- Yanbu Hospital

## KUWAIT

- Al Amiri Hospital Expansion
- Farwaniya Hospital

## LEBANON

- American University of Beirut Medical Center-AUBMC
- French National Health Insurance Fund-CNAM Hospital
- Rafic Hariri Hospital

## TURKEY

- Acibadem Adana Hospital
- Acibadem Atasehir Hospital
- Acibadem International Hospital
- Ankara Etlik Integrated Health Campus
- Balikesir City State Hospital
- Bilkent Integrated Health Campus
- Defa Life Hospital
- Dia Bilkent Health Center
- Dr. Lutfi Kirdar City Hospital
- Kalyon Lutfi Kirdar Health Complex
- Kastamonu City State Hospital
- Medical Park Hospital
- Medicana Hospital Managerial Offices
- Turkerler Etlik Integrated Health Campus
- Umraniye Maternity Hospital

## UNITED ARAB EMIRATES

- Al Mafraq Dialysis Center
- Al Maktoum Hospital Redevelopment
- Al Mamzar Health Center
- Al Qassimi Hospital
- American Hospital
- Cleveland Clinic
- Danat Al Emarat Hospital for Women & Children
- DIC DHA Hospital
- Emirates Hospital Awali
- Fakeeh University Hospital
- Gargash Hospital
- Hatta Hospital
- International Modern Hospital
- Issaq Medical Center
- Mediclinic City in Dubai
- Mediclinic Park View
- Mubadala Hospital Dubai
- NMC Royal Hospital
- SKMC Outpatient Specialty Clinic
- Tawam Hospital
- Wagan Hospital

## BAHRAIN

- Awali Hospital
- Bahrain Defense Force Hospital
- Bilad Al Qadeem Health Center
- King Hamad American Mission Hospital
- King Hamad University Hospital
- Madinat Khalifa Health Center
- Muharraq Healthcare Complex - Long Stay Care Center
- Multiple sclerosis center

## OMAN

- Sultan Qaboos University Hospital

## JORDAN

- Al Kindi Hospital

## EGYPT

- Dar Al Fouad Hospital

## GREECE

- Bioiatriki Medical Center

## KENYA

- Kenyatta National Hospital

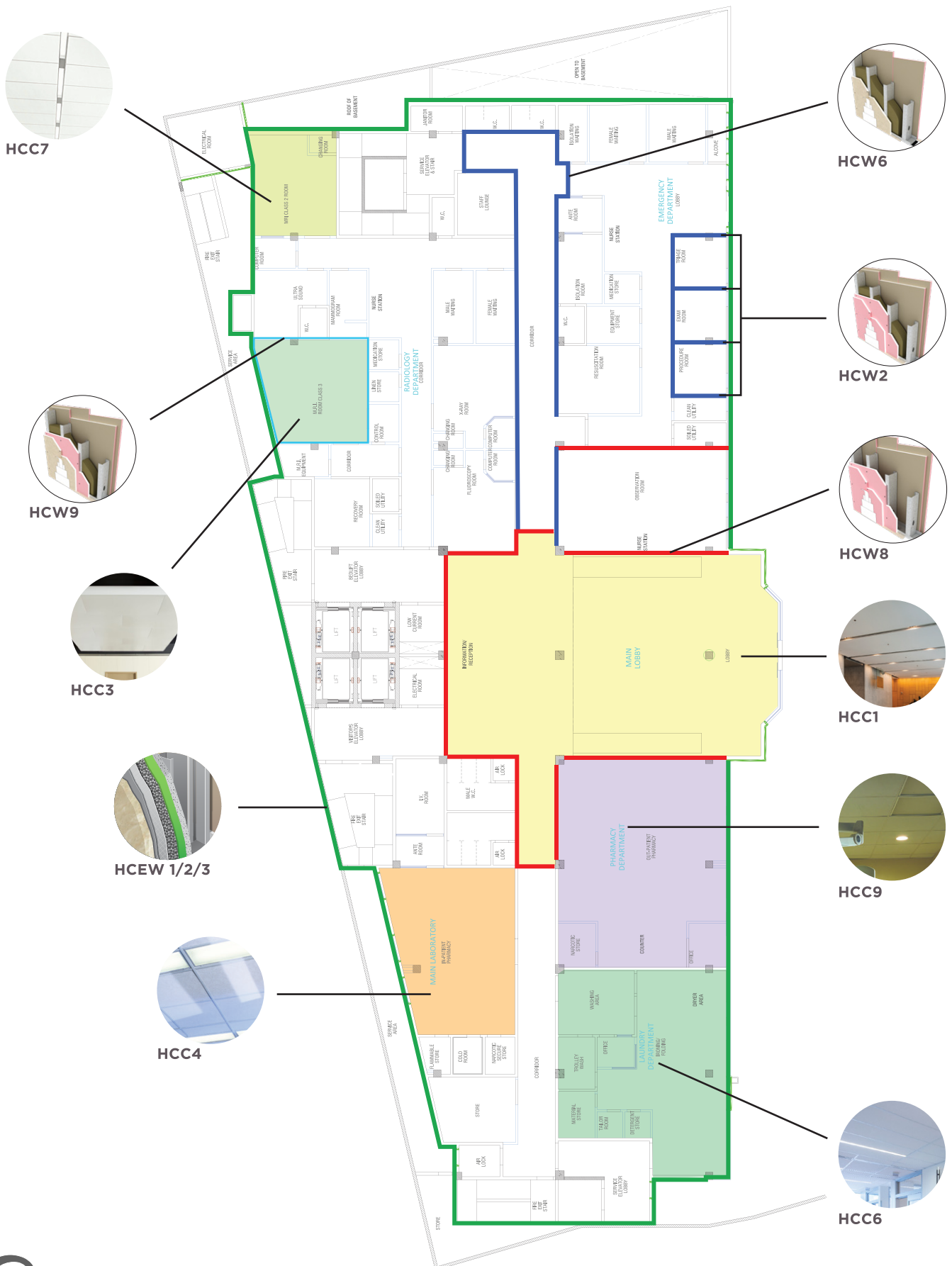








# TYPICAL HOSPITAL FLOOR PLAN







# INTERIOR SPACES NOISE DESIGN CRITERIA

TABLE 1: Maximum Design Criteria For Noise In Interior Spaces Caused By Building Systems<sup>1</sup>  
As Per 2018 FGI Guidelines For Design And Construction Of Hospitals

Room Type	NC / RC(N) / RNC <sup>2, 3</sup>	dB
<b>Patient Care Units</b>		
Patient Room	40	45
NICU Sleep Area	30	35
NICU Staff and Family Areas	35	40
<b>Diagnostic and Treatment Locations</b>		
Multiple-Occupant Patient Care Area	45	50
Examination/Treatment Room	40	45
Procedure Room	40	45
Class 2 Imaging Room	40	45
Operating Room <sup>4</sup>	50	55
Class 3 Imaging Room <sup>4</sup>	50	55
<b>Support Areas</b>		
Medication Safety Zone	40	45
Testing/Research Lab, Minimal Speech	55	60
Research Lab, Extensive Speech	50	55
Group Teaching Lab	45	50
<b>Public Areas</b>		
Corridor and Public Area	45	50
Conference Room	35	40
Teleconferencing Room	25	30
Auditorium Large Lecture Room	30	35
<b>Administrative Areas</b>		
Private Office	40	45

<sup>1</sup> Additional spaces shall be added based on the building program.

<sup>2</sup> One rating system shall be chosen to evaluate room noise levels, and noise from building mechanical systems shall be evaluated using that same rating system.

<sup>3</sup> Spaces shall be designed to fall below the maximum values shown in this table with no rattles or tonal characteristics.

<sup>4</sup> See table 8 (Room noise levels in operating rooms) for more information on operating rooms.





# INTERIOR SPACES SPEECH PRIVACY CRITERIA

TABLE 2: Design Criteria For Speech Privacy For Enclosed Rooms And Open-Plan Spaces<sup>1, 2</sup>  
As Per 2018 FGI Guidelines For Design And Construction Of Hospitals

Room Type	Metrics			
Speech Privacy-Closed Plan	PI <sup>4</sup>	AI <sup>4</sup>	SII <sup>4</sup>	SPC <sup>4</sup>
Secure	N/A	N/A	N/A	>70
Confidential	>95%	>0.05	<0.10	60-69
Normal	80-94%	0.06-0.20	0.11-0.25	52-59
Defining Standard	ASTM E1130	ASTM E1130	ANSI S3.5	ASTM E2638
Speech Privacy-Open Plan	PI <sup>4</sup>	AI <sup>4</sup>	SII <sup>4</sup>	SPC <sup>4</sup>
Confidential	Special Consideration Required <sup>3</sup>			
Normal	80-94%	0.06-0.20	0.11-0.25	52-59
Marginal	60-79%	0.21-0.40	0.26-0.45	45-51
Defining Standard	ASTM E1130	ASTM E1130	ANSI S3.5	ASTM E2638

<sup>1</sup> The indicated AI and SII values shall be considered the maximum accepted values.  
The indicated PI and SPC values shall be considered the minimum accepted values.

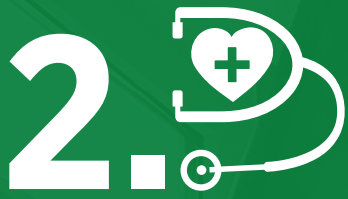
<sup>2</sup> Equivalence among these metrics, as indicated, has been demonstrated. However, some of the metrics may not be suitable for a particular space. The referenced standards indicate that PI and SI are appropriate for use in open-plan spaces and that SPC is appropriate for closed-plan spaces. The references standard for SII indicates it may be used for either type of space.

<sup>3</sup> Confidential speech privacy is not readily achievable in open-plan spaces due to the lack of barriers, low ambient sound levels, and typical voice effort.

<sup>4</sup>(PI): Privacy Index, (AI): Articulation Index, (SII): Speech Transmission Index, (SPC): Speech Intelligibility Index.







# HEALTHCARE SOLUTIONS CEILINGS





## CEILING SYSTEM



ISO **5**

CLEAN ROOM CLASSIFICATION  
ISO 3, 4 AND ISO 5 AS PER ISO 14644-1



RATED **10**

MOLD PREVENTION  
RATED A 10 AS PER THE ASTM D3273



**100%**

ANTIBACTERIAL COATING



CLASS **A**

FIRE SAFETY



**100%**

SOUND CONTROL  
AND NOISE REDUCTION





# HEALTHCARE FACILITIES CEILING DESIGN REQUIREMENTS

**TABLE 3: Healthcare Ceiling Requirements**  
As Per 2018 FGI Guidelines For Design And Construction Of Hospitals

ROOM TYPE SPACE	REQUIREMENT	ROOM
<b>General Areas</b>	<ul style="list-style-type: none"> <li>Cleanable with routine housekeeping equipment</li> <li>Acoustic &amp; Clip-in ceilings shall not have ledges or crevices</li> </ul>	All rooms except as noted below
<b>Semi-restricted Areas</b>	<ul style="list-style-type: none"> <li>Smooth and without crevices</li> <li>Scrubbable</li> <li>Water repellent</li> <li>Non-perforated</li> <li>Capable of withstanding cleaning with chemicals</li> <li>Clip-in ceilings shall be gasketed or each tile should weigh at least one pound per square foot</li> <li>Perforated, Clip-in, serrated, or highly textured tiles shall not be permitted</li> </ul>	Procedure rooms, Class 2 imaging rooms, endoscope processing rooms, decontamination rooms, clean corridors, and central sterile supply
<b>Restricted Areas</b>	<ul style="list-style-type: none"> <li>Monolithic construction</li> <li>Scrubbable</li> <li>Capable of withstanding cleaning and/or disinfecting chemicals</li> <li>All access openings shall be gasketed</li> </ul>	Operating rooms, Class 3 imaging rooms, sterile compounding and hazardous drug compounding pharmacies
<b>Food &amp; Nutrition Service &amp; Laundry Areas</b>	<ul style="list-style-type: none"> <li>Either a sealed monolithic and scrubbable gypsum board ceiling or a Clip-in ceiling</li> <li>Non-corrosive grid</li> <li>Smooth</li> <li>Scrubbable</li> <li>Water repellent</li> <li>Non-perforated</li> <li>Capable of withstanding cleaning with chemicals</li> <li>Each tile should weigh at least one pound per square foot</li> <li>NRC 0.80 or higher is recommended</li> </ul>	Food preparation, food storage, ware washing & laundry areas
<b>Mechanical, Electrical, and Communication Rooms</b>	<ul style="list-style-type: none"> <li>Omission of suspended ceilings in these areas</li> <li>shall be permitted</li> </ul>	Mechanical rooms, electrical rooms, communication rooms

**TABLE 4: Healthcare Facilities Ceilings And Partitions Format**

BUILDING	LOCATION	CEILING	PARTITION
External Pharmacy	Showroom	Sparta Taiga Sonata	Non Fire Rated Partition
	Store	Gypsum Board Metal Ceiling Clip-in	Non Fire Rated Partition
External Clinic	Lobby	Gypsum Board Specialty Ceiling	Non Fire Rated Partition
	Corridor	Metal Torsion Spring System Sonata Planks Corridor System	Fire rated Partition
	Clinics	Sonata Healthcare Sparta Taiga Hygiene	Non Fire Rated Partition
	Labs	Sonata Healthcare Halcyon Healthcare Taiga Hygiene Clean Room Non Perforated Metal Clip-In Plain	Fire Rated Partition and Mold Resistant
External Labs	Lobby	Gypsum Board Specialty Ceiling	Non Fire Rated Partition
	Reception	Gypsum Board Sonata Tiles Gypsum Tiles Metal Ceiling	Non Fire Rated Partition
	Labs	Sonata Healthcare Halcyon Healthcare Taiga Hygiene Clean Room Non Perforated Metal Clip-In Plain	Fire Rated Partition and Mold Resistant





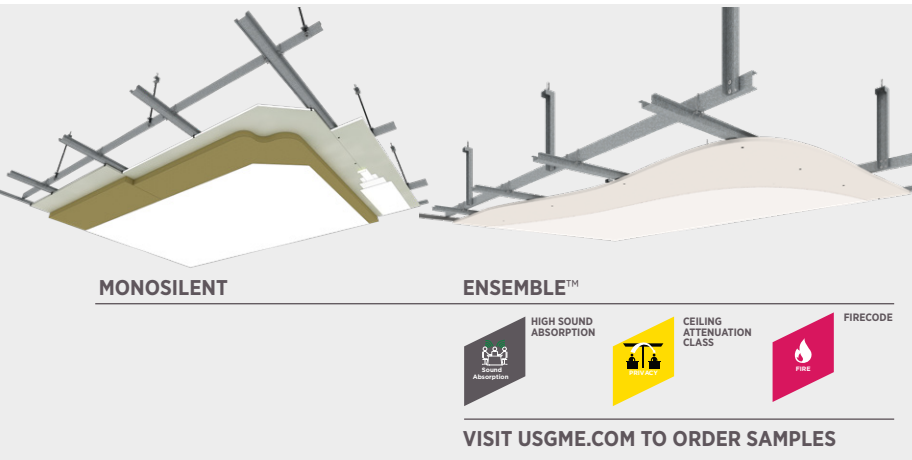


**TABLE 5: USG ME Recommended Ceilings Products  
As Per 2018 FGI Guidelines For Design And Construction Of Hospitals**

ROOM TYPE SPACE	REQUIREMENT	USG ME CEILING RECOMMENDATION
Lobbies	General Areas	Sonata Healthcare Halcyon™ Healthcare Louna™ Hygiene Monolithic Acoustical Ceiling
Waiting Areas	General Areas	
Corridors	General Areas	Corridor System - Hook On Torsion Spring Sonata Healthcare
Patient Rooms	General Areas	Sonata Healthcare Louna™ Hygiene Taiga Hygiene
Nurse's Stations	General Areas	
Laboratories	General Areas	Sonata Healthcare Halcyon™ Healthcare Taiga Hygiene Clean Room™ Non Perforated Clip-In Metal Ceiling
Class 1 MRI & Imaging Rooms	General Areas	
Pharmacies	General Areas	
Hydro-therapy Rooms	General Areas	Sparta Clean Room™ Non Perforated
ICU / NICU	General Areas	Halcyon™ Healthcare with AXCE Gasketed Grid
Treatment / Procedure Rooms	General Areas	Sonata Healthcare with AXCE Gasketed Grid Torsion Spring Clip-In Metal Ceiling Monolithic Acoustical Ceiling
Class 2 MRI & Imaging Rooms	Semi-restricted Areas	
Endoscope Processing Rooms	Semi-restricted Areas	
Decontamination Rooms	Semi-restricted Areas	
Clean Corridors	Semi-restricted Areas	
Central Sterile Supply	Semi-restricted Areas	Torsion Spring Clip-In Metal Ceiling Monolithic Acoustical Ceiling
Operation Theaters	Restricted Areas	
Class 3 MRI & Imaging Rooms	Restricted Areas	
Sterile Compounding Pharmacies Hazardous Drug	Restricted Areas	
Compounding Pharmacies	Restricted Areas	
Food Preparation	Food & Nutrition Service & Laundry Areas	Sonata Healthcare with AX Corrosive Resistant Grid Halcyon™ Healthcare with AXCE Gasketed Corrosive Resistant Grid Clean Room™ Non Perforated Torsion Spring Clip-In Metal Ceiling
Food Storage	Food & Nutrition Service & Laundry Areas	
Ware Washing	Food & Nutrition Service & Laundry Areas	
Laundry Areas	Food & Nutrition Service & Laundry Areas	

# MONOLITHIC ACOUSTICAL CEILING

## MONOSILENT ENSEMBLE™



USG ME produces and offers a specific ceiling range for the healthcare applications that cover all areas. The Monolithic Acoustical Ceiling by USG ME include two systems the Monosilent Ceiling System and the Ensemble™ Ceiling System. Both systems are eligible for General Areas, Semi-restricted Areas and Restricted Areas as per FGI 2018 requirements.

### FEATURES & BENEFITS

- Seamless plasterboard look with acoustic performance of up to 0.95 NRC and 43 CAC.
- Class A fire rating.
- Class 1 surface burning as per BS 476, Part 7.
- High light-reflective finish (LR-0.85 for white finish) reduces fixture & energy use.
- Acoustically transparent spray-applied finish.
- Ideal for hospital reception area when high acoustic performance is required and when low reverberation time is desired.
- Available in white as standard finish and other colors are available upon request.

### SPECIFICATION DETAILS

**Application:** General Areas, Semi-restricted Areas and Restricted Areas

**Acoustic Performance:** up to NRC 0.95 and CAC 43

**Insulation:** Mineral wool insulation

**Light Reflectance:** 0.85 for white finish

**Fire Rated:** Class A

**Finish:** Available in white as standard finish and all other colors are available upon request, seamless, spray-applied fine texture with low VOC-emitting material

**Framing:** USG Middle East Ceiling Suspension System

**Joint Tape:** Fiberglass mesh tape 50mm width

**Joint Compound:** Monosilent Jointing Compound for monolithic acoustical ceiling

**Final Finish:** Special Acoustical Spray-Applied Finish



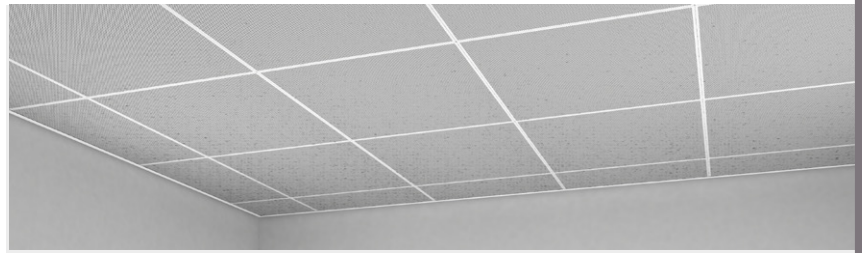
Monosilent Monolithic  
Acoustical ceiling





## SPECIALTY CEILING

# CELEBRETTO® CLIP-IN METAL CEILING



VISIT [USGME.COM](http://USGME.COM) TO ORDER SAMPLES

### FEATURES & BENEFITS

- Concealed ceiling design.
- Wide range of standard perforation patterns.
- Wide range of optional wooden patterns.
- Durable and washable polyester powder finish.
- Robust and easy to clean.
- High sound absorption and sound attenuation.
- Environmentally friendly and recyclable.

### SPECIFICATION DETAILS

**Application:** Pharmacy, Outpatient, Labs, Store

**Material Classification:** Galvanized Steel: Type V, Aluminium: Type VII, Stainless Steel: Type VI, Pattern: A, C, G

**Panel Size:** 300 x 300mm, 300 x 1200mm, 300 x 1500mm, 600 x 600mm, 600 x 1200mm, 1200 x 1200mm

**Panel Thickness:** 0.6 to 1.4mm

**Panel Height:** 10mm, 20mm

**Edge Detail Trim:** Concealed [Beveled]

**Acoustical Performance\*:** Up to 1.0 NRC and 34dB CAC

**Light Reflectance Coefficient [LR]:** Based on the finish color, Up to 0.82

**Color:** Standard colors are RAL 9016, RAL9006 and RAL9010.

Other RAL colors are available upon request.

Wooden patterns are available upon request

**Surface Burning Characteristics per ASTM E 84:** Class A

**Infill Options:** Plain, Acoustical Fleece, Acoustical Fleece and Glass Wool, Acoustical Fleece and Mineral Fiber

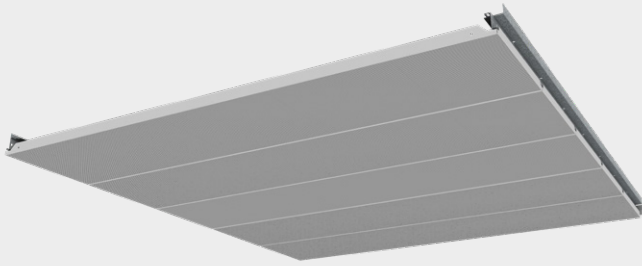
**Washability / Scrubbability as per ASTM D4828 & D2486:** Exceeds 1000 Wash/Scrub Cycles without surface break or the extent of abrasion

**Relevant LEED® Credit:** EA Credit 1 | MR Credit 4 | MR Credit 5 | MR Credit 6 | IEQ Credit 3 | IEQ Credit 3.2 | IEQ Credit 4.6 | IEQ Credit 8.1 | IEQ Credit 9

\* Acoustical performance varies according to the panel configurations and the infill options

## SPECIALTY CEILING

# CELEBRETTO® CORRIDOR SYSTEM - HOOK ON



VISIT [USGME.COM](http://USGME.COM) TO ORDER SAMPLES

### FEATURES & BENEFITS

- Free span solution - eliminates the need for threaded rods and vertical hangers.
- Quick installation.
- Ideal for corridors that have condensed MEP fixtures.
- Total access to ceiling void allowing easy maintenance.

### SPECIFICATION DETAILS

**Material Classification:** Galvanized Steel: Type V, Aluminium: Type VII, Stainless Steel: Type VI, Pattern: A, C, G

**Thickness:** Powder coat finish: 0.6mm – 1.4mm, Wooden finish: 0.6mm

**Panel Height:** 40mm up to 200mm

**Panel Width:** 200 to 600mm

**Panel Length:** Up to 2400mm

**Edge (optional):** 3mm black gasket

**Acoustical Performance\*:** Up to 1.0 NRC and 34dB CAC

**Light Reflectance Coefficient [LR]:** Based on the finish color and perforation pattern, LR up to 0.82

**Surface Burning Characteristics per ASTM E 84:** Class A

**Additional Information:** Thickness depends on panel sizes and project requirements. Consult USG ME for other panel widths

*\*Acoustical performance varies according to the panel configurations and the infill options*

Corridor System -  
Hook On

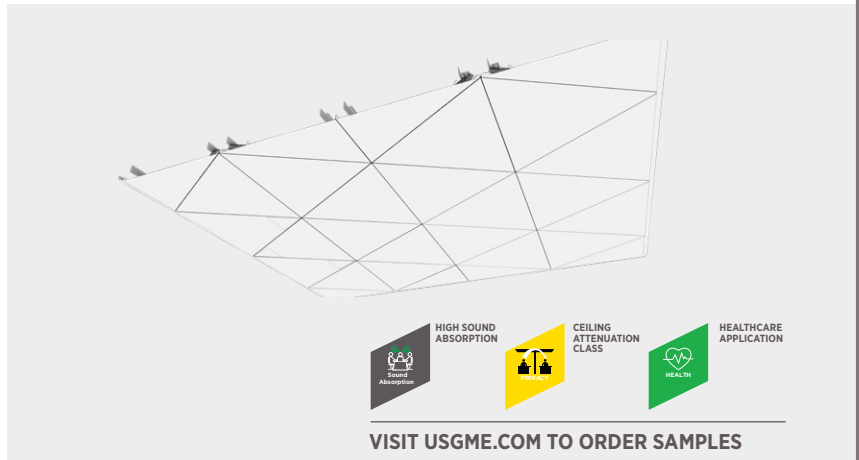






## SPECIALTY CEILING

# CELEBRETTO® TORSION SPRING



### FEATURES & BENEFITS

- Featuring a concealed suspension ceiling system with a variety of configurations that can fit any contemporary interior design.
- All panels are demountable allowing easy access to plenum for easy maintenance.
- Configurable panel sizes and layouts, allowing the designers flexibility in their design.
- Available in two standard designs: triangular and rectangular.

### SPECIFICATION DETAILS

**Material Classification:** Galvanized Steel: Type V, Aluminium: Type VII, Stainless Steel: Type VI, Pattern: A, C, G

**Thickness:** Powder coat finish: 0.6mm – 1.4mm

**Wooden finish:** 0.6mm

**Panel Height:** 40mm to 70mm

**Rectangular Panel Width:** 200mm to 600mm

**Rectangular Panel Length:** Up to 2400mm

**Triangular Panel:** Up to 1200mm

**Acoustical Performance\*:** Up to 1.0 NRC and 34dB CAC

**Light Reflectance Coefficient [LR]:** Based on the finish color and perforation pattern, LR up to 0.82

**Surface Burning Characteristics per ASTM E 84:** Class A

**Additional Information:** Thickness depends on panel sizes and project requirements. Consult factory for other panel widths

\* Acoustical performance varies according to the panel configurations and the infill options

# MODULAR CEILING: MINERAL FIBER

## SONATA HEALTHCARE



VISIT [USGME.COM](http://USGME.COM) TO ORDER SAMPLES

### FEATURES & BENEFITS

- Sonata Healthcare in normal condition face and back is ISO 4 according to the norm ISO 14644-1 : 2015.
- Sonata Healthcare microbiological class according to the norm NF S 90-351 : 2013 is as follows: M100 / area 2 (Acinetobacter baumannii), M1 / area 4 (Staphylococcus aureus MRSA, Bacillus cereus, Streptococcus pneumoniae, Escherichia coli, Candida albicans), <1 / area 2,3,4 (Aspergillus brasiliensis).
- Recommended to be used with AXCE grid (gasketed tee flanges) for restricted and semi-restricted areas in hospitals.
- Excellent combination of noise reduction (up to NRC-0.80) and sound attenuation (up to CAC-40).
- Sonata Healthcare fulfills the formaldehyde emissions in accordance with EN 717-1 and achieve Class E1.
- Rated as Class 10 for mold prevention application as per ASTM D3273.

### SPECIFICATION DETAILS

**Application:** Central sterile supply, Class 1 & 2 MRI and imaging rooms, Corridors & Clean corridors, Decontamination rooms, Endoscope processing rooms, Laboratories, Laundry areas, Nurse's stations, Patient rooms, Pharmacies, Treatment and procedure rooms

**Thickness:** 19mm, 22mm

**Size:** 600 x 600mm, 610 x 610mm, 600 x 1200mm, 610 x 1220mm

**Edge Detail Trim:** Square, Reveal [SLT, FLB]

**Noise Reduction Coefficient [NRC]:** [0.75] [0.80]

**Ceiling Attenuation Class [CAC]:** [37 - 40 dB]

**Color:** White similar to RAL 9016

**Clean Room Classification as per ISO 14644-1:** ISO 4

**Mold Prevention Application as per ASTM D3273:** Rate 10

**Humidity Resistance:** Maximum 99% RH / 40°C for ClimaPlus™

**Light Reflectance Coefficient [LR]:** 0.89

**Surface Burning Characteristics as per ASTM E84:** Class A

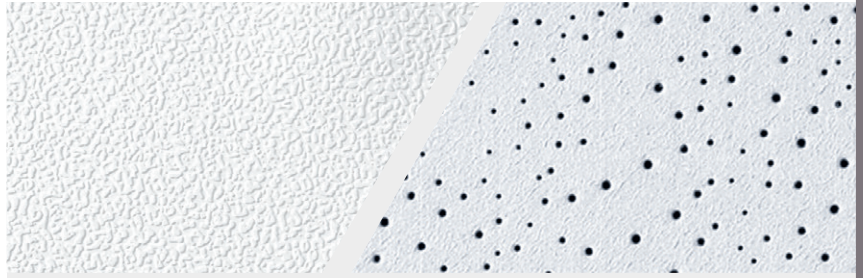
**Thermal Conductivity:**  $\lambda = 0.05 \text{ W/m}^2\text{K}$

Sonata Healthcare



## MODULAR CEILING: MINERAL FIBER

# CLEAN ROOM™



VISIT [USGME.COM](http://USGME.COM) TO ORDER SAMPLES

### FEATURES & BENEFITS

- Clean Room™ is ISO 5 according to the norm ISO 14644-1 : 2015.
- Has an embossed, vinyl-laminated face with sealed back and edges for use in Class 100 (Clean Room™ Non-Perforated pattern cross-reference to Class 5 per ISO 14644-1). Clean Room™ Perforated pattern also for use in 10M-100M clean rooms for perforated pattern as per Federal standard 209E for Classification of Airborne particles.
- Available in multi perforation pin pattern for acoustic areas with high humidity; also anti-mold and resists mildew growth.
- Made with Firecode™ base materials to meet life safety codes.
- Classified HRC panels (High Recycled Content), which is greater than 50%.
- Recommended to be used with CE grid (gasketed tee flanges) for hospitals laboratories and hospital general areas.
- Certified USDA bio based product requirements for food processing areas where Clean Room™ has achieved both bio-preferred initiatives: Federal Procurement Preference and Certified Product Labeling.
- Cleanroom classified, meets Federal Spec. 209E for non-perforated "Clean Room™ and workstation specifications in a controlled environment".

### SPECIFICATION DETAILS

**Application:** Class 1 MRI & imaging rooms, Food preparation, Food storage Hydro-therapy rooms, Laboratories, Laundry areas, Pharmacies, Ware washing

**Thickness:** 15mm, 19mm

**Edge Detail Trim:** Square

**Noise Reduction Coefficient [NRC]:** [0.10] [0.65]

**Ceiling Attenuation Class [CAC]:** [37 - 38 dB]

**Clean Room Classification as per ISO 14644-1:** ISO 5

**Mold Prevention Application as per ASTM D3273:** Final rating at scale 10 as per ASTM D3273- 12 indicates that Clean room™ is resistant to Mold growth

**Humidity Resistance:** Maximum 99% RH / 40°C for ClimaPlus™

**Light Reflectance Coefficient [LR]:** [0.79] [0.80]

**Surface Burning Characteristics as per ASTM E84:** Class A

**Reaction to Fire as per EN 13501-1:** Euroclass A2-s1, d0

**Fire Rating as per ASTM E119:** 3hrs Time-Rated Assembly [D218]

**Thermal Conductivity:**  $\lambda = 0.057 \text{ W/m}^{\circ}\text{K}$

**Washability / Scrubbability as per ASTM D4828 & D2486:** Exceeds 1000 Wash/Scrub cycles without surface break or the extent of abrasion

**VOC Class:** Greenguard Gold

**Formaldehyde Classification:** Class E1 as per EN717-1

# MODULAR CEILING: MINERAL FIBER SPARTA



VISIT [USGME.COM](http://USGME.COM) TO ORDER SAMPLES

## FEATURES & BENEFITS

- Laminated washable vinyl facing ceiling tile for easy maintenance.
- Available only in plain facings with smooth appearance.
- Ultra high humidity resistant; sag resistance ensures durability in standard or extreme environmental conditions.
- May be installed in early project stages.
- Standard with aluminum foil at the rear side which acts as a vapor barrier and resists breathing so panel stays clean for a long time
- Scrub resistant, dirt marks are easy to remove.
- Suitable for Healthcare applications.
- Economical and easy to trim and install.

## SPECIFICATION DETAILS

**Application:** Hydro-therapy rooms, Nurse's stations, Patient rooms, Kitchen Groceries, Bathroom

**Substrate and Surface Finish:** Mineral fiber substrates laminated with embossed vinyl-faced membrane and aluminium foil layer at the rear side

**Thickness:** 15mm, 19mm

**Size:** 600 x 600mm, 610 x 610mm

**Edge Detail Trim:** Square

**Ceiling Attenuation Class [CAC]:** [35 - 36 dB]

**Mold Prevention Application as per ASTM D3273:** Inherent to Mold/Mildew growth

**Humidity Resistance:** Maximum 99% RH / 40°C for ClimaPlus™

**Light Reflectance Coefficient [LR]:** 0.84

**Color:** White similar to RAL 9003

**Surface Burning Characteristics as per ASTM E84:** Class A

**Thermal Conductivity:**  $\lambda = 0.057 \text{ W/m}^{\circ}\text{K}$

**Washability / Scrubbability as per ASTM D4828 & D2486:** Exceeds 1000 Wash/Scrub cycles without surface break or the extent of abrasion

**VOC Class:** Greenguard Gold

**Formaldehyde Classification:** Class E1 as per EN717-1





# MODULAR CEILING: MINERAL FIBER

## TAIGA HYGIENE



EN 13964 : 2014 + A1 : 2007



PRODUCT  
CERTIFIED  
FOR LOW VOC  
EMISSIONS



CEILING  
ATTENUATION  
CLASS



HEALTHCARE  
APPLICATION

VISIT [USGME.COM](http://USGME.COM) TO ORDER SAMPLES

### FEATURES & BENEFITS

- Taiga Hygiene in normal condition face and back is ISO 4 according to the norm ISO 14644-1 : 2015.
- All Taiga Hygiene items have a special fungicide treatment in the core and on the finished painted surface to enhance resistance to growth of microorganisms and ensure regular cleanability. Contains a broad spectrum of antimicrobial additives on the face and back of the panel, which provides resistance against the growth of mold and mildew.
- The microbiological class according to the norm NF S 90-351 : 2013 is as following: M100 / area 2 (Klebsiella pneumoniae), M1 / area 4 (Acinetobacter baumannii, Staphylococcus aureus MRSA, Bacillus cereus, Streptococcus pneumoniae, Escherichia coli, Candida albicans), <1 / area 2,3,4 (Aspergillus brasiliensis).
- Taiga Hygiene has been developed to meet the most stringent standards for hygiene and cleanability.
- High humidity resistant in ClimaPlus™, suitable for applications with intermittent heating and cooling.

### SPECIFICATION DETAILS

**Application:** Class 1 MRI and imaging rooms, Laboratories, Nurse's stations, Patient rooms, Pharmacies

**Substrate and Surface Finish:** Mineral fiber substrate finished with factory-applied water-based paint

**Thickness:** 15mm, 19mm

**Edge Detail Trim:** Square, Reveal [SLT, FLB]

**Noise Reduction Coefficient [NRC]:** [0.15]

**Ceiling Attenuation Class [CAC]:** [33 - 36 dB]

**Clean Room Classification as per ISO 14644-1:** ISO 4

**Mold Prevention Application as per ASTM D3273:** Rate 10

**Humidity Resistance:** Maximum 99% RH / 40°C for ClimaPlus™

**Light Reflectance Coefficient [LR]:** 0.86

**Color:** White similar to RAL 9016

**Surface Burning Characteristics as per ASTM E84:** Class A

**Reaction to Fire as per EN 13501-1:** Euroclass A2-s1, d0

**Thermal Conductivity:**  $\lambda = 0.057 \text{ W/m}^2\text{K}$

**Washability / Scrubbability as per ASTM D4828 & D2486:** Exceeds 1000 Wash/Scrub cycles without surface break or the extent of abrasion upon request

**VOC Class:** Greenguard Gold

**Formaldehyde Classification:** Class E1 as per EN717-1

Taiga Hygiene

## MODULAR CEILING: SOFT FIBER

# LOUNA™ HYGIENE



VISIT [USGME.COM](http://USGME.COM) TO ORDER SAMPLES

### FEATURES & BENEFITS

- Louna™ Hygiene is ISO 4 according to the norm ISO 14644-1 : 2015.
- Superb ceiling panel made of stone wool substrate with water repellent facing membrane designed to be durable and safe with common disinfectants and sealed edges.
- Elegant and refined acoustical facing and high performance mineral fleece membrane on the backside.
- For healthcare facilities this option provides an excellent combination of noise reduction (up to NRC-0.95) and sound attenuation (up to CAC-39) to improve patient recovery.
- High light reflectance (LR-0.88) reduces wear and tear on light fixtures and energy use.
- Recommended to be used with AX grid for hospitals in high-humidity or wet-cleaned areas.
- Washable & scrubbable finish.
- Impact & scratch resistant.
- Available in plank sizes compatible with Logix™ Integrated ceiling system.

### SPECIFICATION DETAILS

**Application:** Class 1 MRI & imaging rooms, Laboratories, Laundry areas, Lobbies, ICU / NICU, Pharmacies, Waiting areas, Ware washing

**Substrate and Surface Finish:** Stone Wool substrate laminated with pre-painted fiberglass scrim with sealed edges and water repellent membrane and back fiberglass tissue

**Water Absorbance:** Repellency membrane that resists mild water drippage for up to 2 hrs

**Thickness:** 19mm, 25mm, 38mm

**Edge Detail Trim:** Square, Reveal [SL, FL], Concealed [D-BESK, S-BESK, BESK]

**Noise Reduction Coefficient [NRC]:** [0.85] [0.90] [0.95]

**Ceiling Attenuation Class [CAC]:** [25 - 39 dB]

**Mold Prevention Application as per ASTM D3273:** Rate 10

**Humidity Resistance:** Maximum 99% RH / 40°C for ClimaPlus™

**Light Reflectance Coefficient [LR]:** 0.88

**Color:** Standard White similar to RAL 9016.

**Surface Burning Characteristics as per ASTM E84:** Class A

**Thermal Conductivity:**  $\lambda = 0.036 \text{ W/m}^{\circ}\text{K}$

**Washability / Scrubbability as per ASTM D4828 & D2486:** Exceeds 1000 Wash/Scrub cycles without surface break or the extent of abrasion upon request





## MODULAR CEILING: SOFT FIBER

# HALCYON™ HEALTHCARE



PRODUCT  
CERTIFIED  
FOR  
ENVIRONMENTAL  
PRODUCT  
DECLARATION



HIGH SOUND  
ABSORPTION



HEALTHCARE  
APPLICATION

VISIT [USGME.COM](http://USGME.COM) TO ORDER SAMPLES

### FEATURES & BENEFITS

- Halcyon™ Healthcare is ISO 3 according to the norm ISO 14644-1 : 2015.
- Fiberglass substrate with water repellent facing membrane designed to be durable and safe with common disinfectants.
- Elegant and refined acoustical facing and high performance mineral fleece membrane on the backside.
- Exceptional sound absorption with NRC values up to 1.
- Certificated for Environmental Product Declaration (EPD) as per ISO 14025.
- High light reflectance (LR-0.88) reduces light fixture & energy use.
- Recommended to be used with CE grid for hospitals in high-humidity or wet-cleaned areas.
- Washable & scrubbable finish.
- Impact & scratch resistant.
- Available in plank sizes compatible with Logix™ integrated ceiling system.

### SPECIFICATION DETAILS

**Application:** Class 1 MRI & imaging rooms, Laboratories, Laundry areas, Lobbies, ICU / NICU, Pharmacies, Waiting areas, Ware washing

**Substrate and Surface Finish:** Glasswool substrate laminated with factory applied painted fiberglass scrim and water repellent membrane, and back fiberglass tissue

**Water Absorbance:** Repellency membrane that resists mild water drippage for up to 2 hrs

**Thickness:** 19mm, 25mm, 38mm

**Edge Detail Trim:** Square, Reveal [SL, FL]  
Concealed [D-BESK, S-BESK, BESK]

**Noise Reduction Coefficient [NRC]:** [0.90] [0.95] [1.0]

**Ceiling Attenuation Class [CAC]:** [24 - 31 dB]

**Mold Prevention Application as per ASTM D3273**

Rate 10

**Humidity Resistance:** Maximum 99% RH / 40°C

**Light Reflectance Coefficient [LR]:** 0.88

**Color:** White similar to RAL 9016.

**Surface Burning Characteristics as per ASTM E84:** Class A

**Thermal Conductivity:**  $\lambda = 0.034 \text{ W/m}^{\circ}\text{K}$

**Washability / Scrubbability as per ASTM D4828 & D2486:** Exceeds 1000 Wash/Scrub cycles without surface break or the extent of abrasion upon request

Halcyon™ Healthcare

## GRIDS AND SUSPENSIONS FOR HEALTHCARE

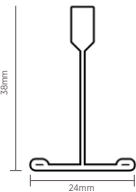
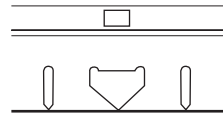
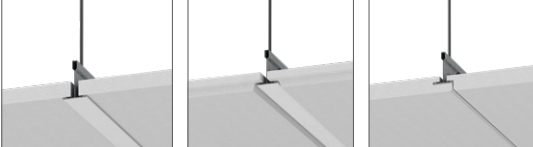
# DONN® BRAND DX®/DXL® T24 FIRE RATED

### FEATURES & BENEFITS

- Main tees are designed to expand at the fire lance in the event of a fire. This maintains the structural integrity of the ceiling and holds tiles in place.
- DONN® Brand DX®/DXL™ T24 Heavy Duty - Fire Rated features a body and cap made of G30 hot-dip galvanized steel as per EN 10346/ASTM A653 with pre-painted 24mm width capping to ensure that the cap remains clean and rust-free.
- Four-step coating process that outperforms in paint adhesion and corrosion resistance, as proven by industry-standard salt spray tests conducted by an Independent laboratory.
- Safe, fast and simple to install & easily accessible.
- Maximum economy and design simplicity.
- Cross-tees with override-ends resist twisting and give professionally finished look with no exposed steel edges.
- Patented QUICK-RELEASE™ clip design: demountable without tools.
- Compatible with Square, SLT, and Concealed ceiling tile edges.
- Audible Click means you know when tees are connected.
- Exceeds load compliance specifications as per ASTM C 635.
- Available in metric and imperial sizes.

### APPLICATIONS

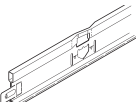
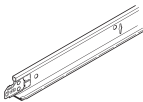
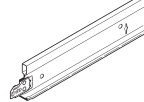
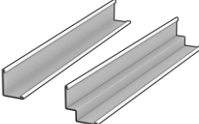
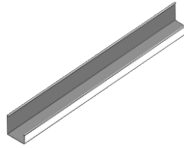
- Fire-rated interior general-use area

PROFILE	FIRE LANCE	EDGE DETAIL
		

### PRODUCT INFORMATION

Description	Item Reference		Profile Height	Body Thickness	Component Length	Reaction To Fire*
	Metric	Imperial				
Main Runner	801DXL3600	801DXL3660	38MM	0.38MM	3600/3660MM	Class A
Long Cross Tee	803DX1200H38	803DX1220H38	38MM	0.30MM	1200/1220MM	Class A
Short Cross Tee	804DX600H38	804DX610H38	38MM	0.30MM	600/610MM	Class A
Wall Angle	802MT3600		22MM	0.50MM	3600MM	Class A
Wall Angle Shadowline	802MS3600 - 802MS164L		19/9MM - 20/20MM	0.50MM	3600MM	Class A
U-Trim	UT123525 - UT124825 - UT125325		25.4/12.7MM	0.50MM	3000MM	Class A

\* As per EN 1364 : 2014 and EN 13501-1 : 2018

MAIN RUNNER	LONG CROSS TEE	SHORT CROSS TEE	WALL ANGLE	U-TRIM
				





## GRIDS AND SUSPENSIONS FOR HEALTHCARE

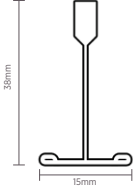
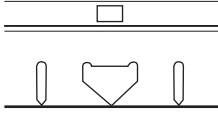
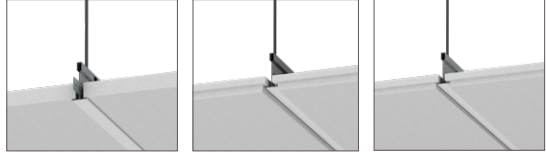
# DONN® BRAND DX®-DXL® T15 CENTRICITEE- FIRE RATED

### FEATURES & BENEFITS

- Main tees are designed to expand at the fire lance in the event of a fire. This maintains the structural integrity of the ceiling and holds tiles in place.
- DONN® Brand DX®/DXL™ T15 Centricitee - Fire Rated features a body and cap made of G30 hot-dip galvanized steel as per EN 10346/ASTM A653 with pre-painted 15mm width capping to ensure that the cap remains clean and rust-free.
- Four-step coating process that outperforms in paint adhesion and corrosion resistance, as proven by industry-standard salt spray tests conducted by an Independent laboratory.
- Safe, fast and simple to install & easily accessible.
- Maximum economy and design simplicity.
- Cross-tees with override-ends resist twisting and give professionally finished look with no exposed steel edges.
- Patented QUICK-RELEASE™ clip design: demountable without tools.
- Compatible with Square, SLT, and Concealed ceiling tile edges.
- Audible Click means you know when tees are connected.
- Exceeds load compliance specifications as per ASTM C 635.
- Available in metric and imperial sizes.

### APPLICATIONS

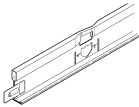
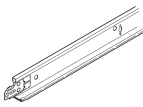
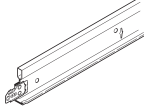
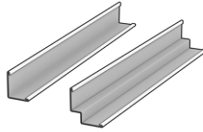
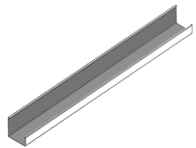
- Fire-rated interior general-use areas
- Logix™ Integrated Ceiling Systems

PROFILE	FIRE LANCE	EDGE DETAIL
		

### PRODUCT INFORMATION

Description	Item Reference		Profile Height	Body Thickness	Component Length	Reaction To Fire*
	Metric	Imperial				
Main Runner	801DXLT15-3600	8801DXLT15-3660	38MM	0.38MM	3600/3660MM	Class A
Long Cross Tee	803DXT15-1200H38	803DXT15-1220H38	38MM	0.30MM	1200/1220MM	Class A
Short Cross Tee	803DXT15-600H38	803DXT15-610H38	38MM	0.30MM	600/610MM	Class A
Wall Angle	802MT15-3600		24MM	0.50MM	3600MM	Class A
Wall Angle Shadowline	802MS3600 - 802MS164L		19/9MM - 20/20MM	0.50MM	3600MM	Class A
U-Trim	UT123525 - UT124825 - UT125325		25.4/12.7MM	0.50MM	3000MM	Class A

\* As per EN 1364 : 2014 and EN 13501-1 : 2018

MAIN RUNNER	LONG CROSS TEE	SHORT CROSS TEE	WALL ANGLE	U-TRIM
				

## GRIDS AND SUSPENSIONS FOR HEALTHCARE

# DONN® BRAND CE® SUSPENSION SYSTEM

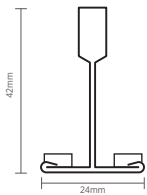
### FEATURES & BENEFITS

- Meets 2018 Guidelines for Healthcare Facilities.
- Grid system with factory-applied white, closed-cell foam gaskets for controlled-environments.
- Min. G30 hot-dipped galvanized body provides corrosion protection.
- Supports Clean Room HEPA filters and lights.
- ICC-ES evaluated for building code compliance and seismic installations (ICC-ESR-1222).
- Capable of withstanding cleaning and/or disinfecting chemicals as tested in accordance with ASTM D402.

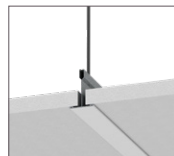
### APPLICATIONS

- Clean Rooms
- Hospitals
- Food processing areas
- Healthcare facilities, restricted and semi-restricted areas
- Certified to meet ISO 14644-1 Class 5-8 (Fed. Standard 209E Class 100- 100,000)

#### PROFILE



#### EDGE DETAIL



SQUARE EDGE - SQ

### PRODUCT INFORMATION

Description	Item Reference	Load *	Profile Height	Component Length
Main Runner	DXCE24	17.75KG/LM	42MM	3600/3660MM
Long Cross Tee	DXCE424		38MM	1200/1220MM
Short Cross Tee	DXCE224		38MM	600/610MM
Wall Angle	M7CE		22MM	3660MM
U-Trim	UT123525 - UT124825 - UT125325		25.4/12.7MM	3000MM

\* Load of 4" hanger spacing in KG/LM and deflection limit of L/360

MAIN RUNNER	LONG CROSS TEE	SHORT CROSS TEE	WALL ANGLE	U-TRIM



DONN® Brand CE®  
Suspension System





## GRIDS AND SUSPENSIONS FOR HEALTHCARE

# DONN® BRAND AX™/AXCE™ SUSPENSION SYSTEM (ALUMINIUM)

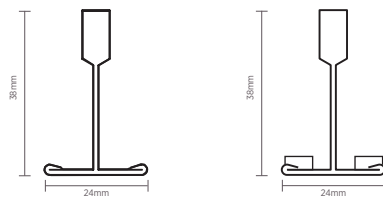
### FEATURES & BENEFITS

- Meets 2018 Guidelines For Healthcare Facilities.
- Noncorrosive aluminium 24mm exposed grid system with stainless steel clip, ideal for high-humidity or wet-cleaned areas.
- Capable of withstanding cleaning and/or disinfecting chemicals as tested in accordance with ASTM D5402.
- Tested for environmental conditions in accordance with ASTM C635.
- Aluminum components can be used in nonmagnetic environments and meet USDA/FSIS requirements.
- Cross-tee override-ends resist twisting and give a professionally finished look.
- Proprietary stainless steel Quick-Release™ clip.
- Up to 90% recycled content.
- Factory applied, white closed cell foam gasket.

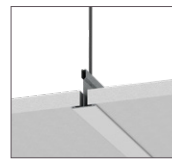
### APPLICATIONS

- Healthcare facilities, restricted and semi-restricted areas
- MRI rooms
- Magnetic-free zones
- High-humidity areas
- Food processing areas
- Certified to meet ISO 14644-1 Class 5 (Fed. Standard 209E Class 100)

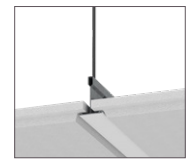
### PROFILE USG DONN® BRAND AX™ USG DONN® BRAND AXCE™



### EDGE DETAIL



SQUARE EDGE - SQ



SHADOWLINE TAPERED - SLT

### PRODUCT INFORMATION

Description	Item Reference	Load*	Profile Height	Component Length
Main Runner	AX26/AXCE26	10.5KG/LM	38MM	3600/3660MM
Long Cross Tee	AX424/AXCE424		38MM	1200/1220MM
Short Cross Tee	AX224/AXCE224		38MM	600/610MM
Wall Angle	M7A/ M7ACE		22MM	3600MM
U-Trim	UT123525 - UT124825 - UT125325		25.4/12.7MM	3000MM

\* Load of 4" hanger spacing in KG/LM and deflection limit of L/360

MAIN RUNNER	LONG CROSS TEE	SHORT CROSS TEE	WALL ANGLE	U-TRIM



# HEALTHCARE SOLUTIONS

DRYWALL PARTITION  
ASSEMBLIES





## DRYWALL ASSEMBLIES



**32%**

REDUCTION  
IN CONSTRUCTION TIME



**21%**

REDUCTION USAGE OF  
STRUCTURAL CONCRETE



**20%**

REDUCTION IN  
SUPERSTRUCTURE COST



**17%**

REDUCTION IN  
SUBSTRUCTURE COST

*Results from 3<sup>rd</sup> party studies commissioned by USG ME for drywall and post-tension flat slab construction*



# HEALTHCARE FACILITIES WALL DESIGN REQUIREMENTS

TABLE 6: Healthcare Walls Assemblies Requirements

WALL 1 Single Stud With Two Layer Each Side (Regular Or Fire Rated )		WALL 2 Single Stud With Two Layer Each Side Wet Area (Regular Or Fire Rated )		WALL 3 Chase Wall With Two Layer Each Side (Regular Or Fire Rated )	
<b>Type</b>	Regular or Fire Rated	<b>Type</b>	Wet Area	<b>Type</b>	Regular or Fire Rated
<b>Description</b>	2 Layers of Regular or Fire Rated Gypsum Board	<b>Description</b>	2 Layers of Moisture Resistant Gypsum Board or Cement Board on Wet Side of Stud, 2 Layers of Gypsum Board on Other Side of Stud	<b>Description</b>	Double Stud. 2 Layers of Regular or Fire Rated Gypsum Board on Both Sides of Stud
<b>Stud Size</b>	92mm	<b>Stud Size</b>	70 mm	<b>Stud Size</b>	2x92mm
<b>Panel Thickness</b>	As Per Design	<b>Panel Thickness</b>	As Per Design	<b>Panel Thickness</b>	As Per Design
<b>Fire Rating</b>	As Per Design	<b>Fire Rating</b>	As Per Design	<b>Fire Rating</b>	As Per Design
<b>Moisture Resistance</b>	N/A	<b>Moisture Resistance</b>	From Wet Side of Stud	<b>Moisture Resistance</b>	N/A
WALL 4 Chase Wall With Two Layer Each Side (Moisture Resistant )		WALL 5 Shaft System With Two Layer (Fire Rated )		WALL 6 Shaft System With Two Layer Wet Area (Fire Rated )	
<b>Type</b>	Wet Area	<b>Type</b>	Fire Rated	<b>Type</b>	Fire Rated Wet Area
<b>Description</b>	Double Stud. 2 Layers of Moisture Resistant Gypsum Board or Cement Board on Both Sides of Stud	<b>Description</b>	2 Layers of Fire Rated Gypsum Board on One Side of CH Stud	<b>Description</b>	2 Layers of Fire Rated Moisture Resistant Gypsum Board or Cement Board on One Side of CH Stud
<b>Stud Size</b>	2x92mm	<b>Stud Size</b>	50mm	<b>Stud Size</b>	92mm
<b>Panel Thickness</b>	As Per Design	<b>Panel Thickness</b>	As Per Design	<b>Panel Thickness</b>	As Per Design
<b>Fire Rating</b>	As Per Design	<b>Fire Rating</b>	Yes	<b>Fire Rating</b>	Yes
<b>Moisture Resistance</b>	From Both Side of Stud	<b>Moisture Resistance</b>	N/A	<b>Moisture Resistance</b>	From Wet Side of the CH Stud
WALL 7 Lining Wall Single Stud With Two Layer (Non Fire Rated)		WALL 8 Lining Wall Single Stud With Two Layer Wet Area (Non Fire Rated)			
<b>Type</b>	Non Fire Rated	<b>Type</b>	Wet Area Non Fire Rated		
<b>Description</b>	2 Layers of Gypsum Board on One Side of the Stud	<b>Description</b>	2 Layers of Moisture Resistant Gypsum Board or Cement Board On One Side of the Stud		
<b>Stud Size</b>	92mm	<b>Stud Size</b>	92mm		
<b>Panel Thickness</b>	As Per Design	<b>Panel Thickness</b>	As Per Design		
<b>Fire Rating</b>	Non-Rated	<b>Fire Rating</b>	Non-Rated		
<b>Moisture Resistance</b>	N/A	<b>Moisture Resistance</b>	Yes		



**TABLE 7: USG ME Recommended Wallboards Products**

BRAND	WALLBOARD	WALL TYPE
<b>SHEETROCK® BRAND</b>	REGULAR BOARD 12.7mm	WALL 1 WALL 2
	FIRECODE® TYPE X 15.9mm	WALL 3 WALL 5
	FIRECODE® TYPE C 12.7mm and 15.9mm	WALL 6
	WETSTOP 12.7mm and 15.9mm	
	GYPSUM LINER PANEL 25.5mm	
<b>SECUROCK® BRAND</b>	GLASS-MAT SHEATHING TYPE X 15.9mm	WALL 2 WALL 4
	GLASS-MAT SHEATHING 12.7mm	WALL 6 WALL 8
	GLASS-MAT MOLD TOUGH® FIRECODE® LINER PANEL 25.5mm	
<b>USG ME AND SKYROCK® BRANDS</b>	REGULAR BOARD 9.5mm, 12.5mm and 15mm	WALL 1 WALL 2
	FIRE RATED (FR) 12.5mm and 15mm	WALL 3 WALL 4
	FIRE MOISTURE RESISTANT (FMR) 12.5mm and 15mm	WALL 5 WALL 6
	MOISTURE RESISTANT (MR) 12.5mm and 15mm	WALL 7 WALL 8
	MOLD AND MOISTURE RESISTANT (MMR) 12.5mm and 15mm	
	FIRE RESISTANT MOISTURE RESISTANT (FRMR) 12.5mm and 16mm	
	IMPACT FIRE RESISTANT (IFR) 12.7mm and 15.9mm	
	IMPACT FIRE MOISTURE RESISTANT (IFMR) 12.7mm and 15.9mm	
<b>SOLIDROCK® BRAND</b>	FIBER CEMENT BOARD 6mm, 9mm, 12mm, 16mm and 18mm	WALL 2, WALL 4 WALL 6, WALL 8

**TABLE 8: Single and Double Board System 15.9mm Standard Board Performance**

Single Board

STUD SIZE AT 600MM CTC	60	60	70	70	90	90	148	148
Thickness	0.6	0.7	0.6	0.7	0.6	0.7	0.6	0.7
Acoustic	46	46	47	47	47	47	48	48
Max Height at 600	3.6	3.6	4.2	4.4	4.9	5.1	6.5	6.7
Max Height at 400	3.8	4.0	4.4	4.6	5.1	5.3	6.7	6.9
Duty Rating <sup>1</sup>	MD	MD	MD	MD	MD	MD	MD	MD

Double Board

STUD SIZE AT 600MM CTC	60	60	70	70	90	90	148	148
Thickness	0.6	0.7	0.6	0.7	0.6	0.7	0.6	0.7
Acoustic	53	53	54	54	55	55	56	56
Max Height at 600	4.0	4.1	4.4	4.6	5.4	5.6	7.8	8.0
Max Height at 400	4.1	4.3	4.6	4.8	5.6	5.8	8	8.2
Duty Rating <sup>1</sup>	SD	SD	SD	SD	SD	SD	SD	SD

<sup>1</sup> • Medium duty MD      • Severe duty SD  
Please refer to USG ME Technical Department for system design

# STRUCTURAL STRENGTH

## USG ME PARTITIONS NON-LOADBEARING

The strength of a partition is judged by its ability to resist deflection under load, or by the force needed to break through the partition when subjected to an impact by either a hard or soft body. The factors which control these aspects of acceptability are:

- The bending strength of the frame
- The height of the frame
- The thickness of the plasterboards
- The number of plasterboard layers.
- The rigidity of the head fixing
- The spacing of the studs
- The axial load (if any) from above
- The wind load – uniformly distributed load (UDL) if any
- Any temporary point load (if any) at mid height
- The stiffness of the plasterboards
- The hardness of the plasterboards
- The bending/breaking strength of the plasterboards

It is not possible to write a mathematical equation which takes into account all these factors and which, when the physical properties of the materials are used to calculate, for example, height limit, gives a satisfactory relationship to practical acceptability.

Instead, over the years, plasterboard manufacturers have built up a dossier of knowledge which relates the main parameters to the acceptability of known generic systems. There is also a nucleus of testing data, to fall back upon, where this acceptability is in doubt.

### The 5 main tests are:

- Stiffness: 500 N temporary pressure
- Small hard body impact: 5 kg swing hammer
- Large soft body impact: 50 kg swinging bag
- UDL and crowd pressure: 2.5m beam pressure
- Door slamming: 20 slams, 35 kg door for LD and MD  
100 slams, 60 kg door for HD and SD

From these tests it is possible to judge whether the partition is graded as:

- Light duty LD
- Heavy duty HD
- Medium duty MD
- Severe duty SD

The duty ratings for partitions are shown in the tables of performance, in subsequent chapters of this Technical Manual.

**TABLE 9: Performance Tables Partition Grades: Summary Of Requirements And Principle Test Performance Levels As Per BS 5234**

REQUIREMENT & TEST METHOD	UNITS	GRADE <sup>1</sup>				PRINCIPAL CRITERIA
		LD	MD	HD	SD	
Stiffness (A)	mm	25	20	15	10	Maximum deflection
	mm	5	3	2	1	Maximum residual deformation
Small hard body impact: surface damage (B)	N.m	3	3	6	10	Judgement of incident
Perforation (D)	N.m	2	5	15	30	No perforation on facing
Large soft body impact: damage (C)	N.m	20	20	40	100	2mm maximum deflection
Structural damage	N.m	60	60	120	120	No collapse or dislocation
Door slam	No.	20	20	100	100	No damage and 1mm maximum displacement

<sup>1</sup> • Light duty LD    • Heavy duty HD    • Medium duty MD    • Severe duty SD





# WALL PARTITIONS SOUND ISOLATION PERFORMANCE

TABLE 10: Design Criteria For Minimum Sound Isolation Performance Between Enclosed Rooms<sup>1</sup>. As Per 2018 FGI Guidelines For Design And Construction Of Hospitals

ADJACENCY COMBINATION		ACOUSTIC PERFORMANCE dB <sup>2</sup>	USG ME WALL ASSEMBLY COMMENTATION
<b>Patient Care Units</b>			
Patient Room	Corridor (with entrance)	35 <sup>3</sup>	HCW1
Patient Room	Patient Room (wall-same floor)	45 <sup>4</sup>	HCW1
Patient Room	Patient Room (floor-to-floor)	50	HCW2
Patient Room	Consultation Room	50	HCW2
Patient Room	Public Space	50	HCW2
Patient Room	Service Area	60 <sup>5</sup>	HCW7
Patient Room	MRI/X-Ray Room / CT Scan	60 <sup>5</sup>	HCW9
NICU Corridor	Corridor	55	HCW3
<b>Diagnostic and Treatment Location</b>			
Examination Room	Corridor (with entrance)	35 <sup>3</sup>	HCW1
Examination Room	Examination Room (with electric masking)	40 <sup>6</sup>	HCW1
Examination Room	Examination Room (no electric masking)	50	HCW2
Examination Room	Public Space	50	HCW2
Examination Room	MRI/X-Ray Room / CT Scan	60 <sup>5</sup>	HCW9
Treatment Room	Corridor (with entrance)	35 <sup>3</sup>	HCW1
Treatment Room	Treatment Room	50	HCW4
Operating Room	Operating Room	50	HCW4
Operating Room	MRI/X-Ray Room / CT Scan	60 <sup>5,7</sup>	HCW9
Consultation Room	Public Space	50	HCW8
Consultation Room	Corridor (with entrance)	35 <sup>3</sup>	HCW1
<b>Public Areas</b>			
Toilet Room	Public Space	45	HCW5
Public Space	MRI/X-Ray Room / CT Scan	50	HCW9

<sup>1</sup> Additional spaces shall be added based on the building program.

<sup>2</sup> The Acoustic performance values stated assume the need for normal speech privacy as shown in Table 2 (Design criteria for speech privacy for enclosed rooms and open-plan spaces)-except at corridor walls with doors-assuming a background sound level of at least 30 dB. When selecting assemblies based on their tested or published acoustic performance ratings it should be noted that laboratory acoustic performance test reports can, in general, be considered accurate to +/- 2 acoustic performance points. Consequently, an assembly with a tested or published acoustic performance rating as low as 2 points below the stated minimum may be considered acceptable.

<sup>3</sup>In cases where greater speech privacy is required between patient care rooms when both room doors to the connecting corridor are closed, the composite demising wall acoustic performance requirement shall be 50.

<sup>4</sup>This is the performance required for the wall around the door. Note that sound isolation in these instances will be limited by the door's performance (e.g., acoustic performance 20 for a close-fitted 5-PSF door). It is up to the facility to determine if doors require a higher acoustic or if full perimeter gasketing and bottom seals should be required. Doors are not required to be sound sealed to maintain the acoustic performance rating, although a facility may choose to do so for specialty patient environments such as bereavement rooms, consultation rooms, sleep therapy rooms, etc.

<sup>5</sup>Relaxation of acoustic performance 60 ratings shall be permitted if compliance with room noise requirements is achieved with lower performance constructions. See Table 1 (Maximum design criteria for noise in interior spaces caused by building systems).

<sup>6</sup>Electronic masking shall provide a maximum background level of acoustic performance 48dB.

<sup>7</sup>This requirement is operating rooms without doors directly communicating with the MRI scanner room as the acoustic performance value shown cannot be achieved when there is a door between an adjacent or and a MRI scanner room. However, where there is a connecting door, attention shall be paid to the door to assure sound isolation when the MRI is used independently from the operating room.

Note: This table shall not be applied to mobile/transportable medical units.

# WALL PARTITIONS SOUND ISOLATION PERFORMANCE

TABLE 11: Recommended Partition Sound Rating For Different Privacy Requirements

PRIVACY DESCRIPTION	PARTITION SOUND RATING
<b>"Normal" Degree of Privacy</b> Normal voices in adjacent space audible and intelligible some of the time raised voices and speakerphones mostly intelligible.	45dB Acoustic Performance
<b>"Good" Degree of Privacy</b> Normal voices in adjacent space barely audible but unintelligible most of the time. Raised voices and speakerphones partially intelligible.	50dB Acoustic Performance
<b>"Excellent" Degree of Privacy</b> Normal voices in adjacent space mostly inaudible. Raised voices and speakerphones audible but intelligible some of the time.	55dB Acoustic Performance
<b>"Confidential" Degree of privacy</b> Normal voices in adjacent space are not audible. Raised voices and speakerphones are barely audible but not intelligible	60dB Acoustic Performance

TABLE 12: Minimum Recommended Levels Of Airbone Sound Insulation Between Spaces

Table shows recommended levels of airborne sound insulation based on noise activity in the source room and acceptable noise tolerance levels in the receiving room.			Noise generation in source room			
			low noise	typical noise	high noise	very high noise
			Clean Utility, Store Rooms, Libraries/Study Areas	Single Bed Wards/On Call Rooms, Consulting Rooms, Treatment Rooms, Multi Bed Wards, Operating Theatres, Toilets, Private Offices, Laboratories, Dirty Utility and Sluice Rooms, Corridor, Ward Kitchens, Pantries, Open Plan Offices	Children's Single Wards, Geriatric Single Wards, Training Rooms, Board Room/Large Meeting Rooms, Children's Multibed Wards, Geriatric Multibed Wards, Restrooms, Dining, Waiting Rooms, Lecture Theatres	Nurseries, Delivery Rooms, Main Kitchen
<i>Note: It is important to check values from both rooms and use the highest value.</i>	<b>Privacy requirement in receiving room</b>	<b>non sensitive tolerance</b>	35	40	45	50
		<b>moderate tolerance</b>	40	50	50	60
		<b>private tolerance</b>	45	50	55	60
		<b>confidential tolerance</b>	50	50	55	60
			<b>ACOUSTICAL PERFORMANCE</b>			

The information provided is intended to enable designers, architects and specifiers to select partitions which meet the acoustic requirements having made some general assumptions. USG ME strongly recommend that a qualified acoustic consultant be appointed to check all acoustic specifications and details.



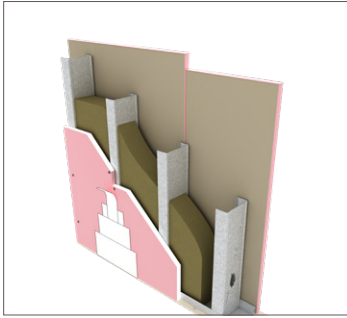




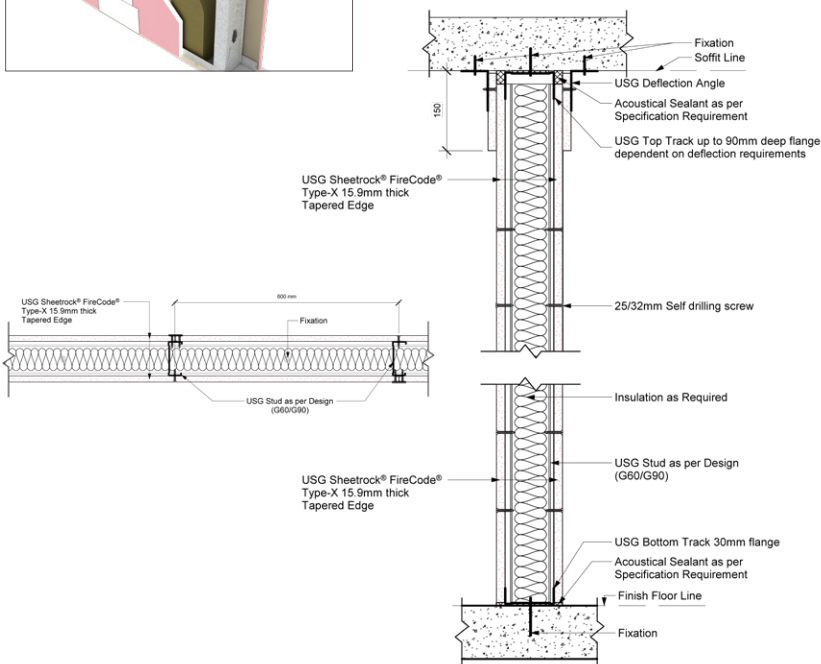
# HCW1

## PATIENT ROOM TO PATIENT ROOM (WALL-SAME FLOOR) EXAM ROOM TO EXAM ROOM (WITH ELECTRONIC MASKING)

1 HOUR FIRE RATED ASSEMBLY UL U 419 47dB



Fire Rating	1 hour
Acoustic Performance	47 dB
System Thickness	124mm



### WALL CONSTRUCTION

**GYPSUM BOARD:** One layer of 5/8" (15.9mm) thick USG Sheetrock® brand Type X Gypsum Board applied horizontally or vertically

**STEEL STUD:** 90.5mm C-Stud spaced at 600mm OC

**STEEL TRACKS :** Top Track: 92x50mm deep U-track  
Bottom Track: 92x30mm U-track

**INSULATION:** 50mm thick Mineral Wool insulation (Density 14 kg/m<sup>3</sup>)

**GYPSUM BOARD :** One layer of 5/8" (15.9mm) thick USG Sheetrock® brand Type X Gypsum Board applied horizontally or vertically

**JOINT COMPOUND :** USG Sheetrock® Brand All-Purpose Joint Compound

**ACOUSTICAL SEALANT:** USG Sheetrock® Brand Acoustical Sealant

**TAPES:** USG Sheetrock® Brand Paper Tape

**SCREWS :** First layer: 4.2 x 32mm Screw, Bugle Head - Self Drilling

**LEVEL 5 FINISH :** Sheetrock® Tuff-Hide® Primer-Surfacer

*Steel Studs and Steel Tracks Thicknesses as per design requirements.  
Deflection head as per design requirements.  
Please refer to USG ME Technical Department for system design.*

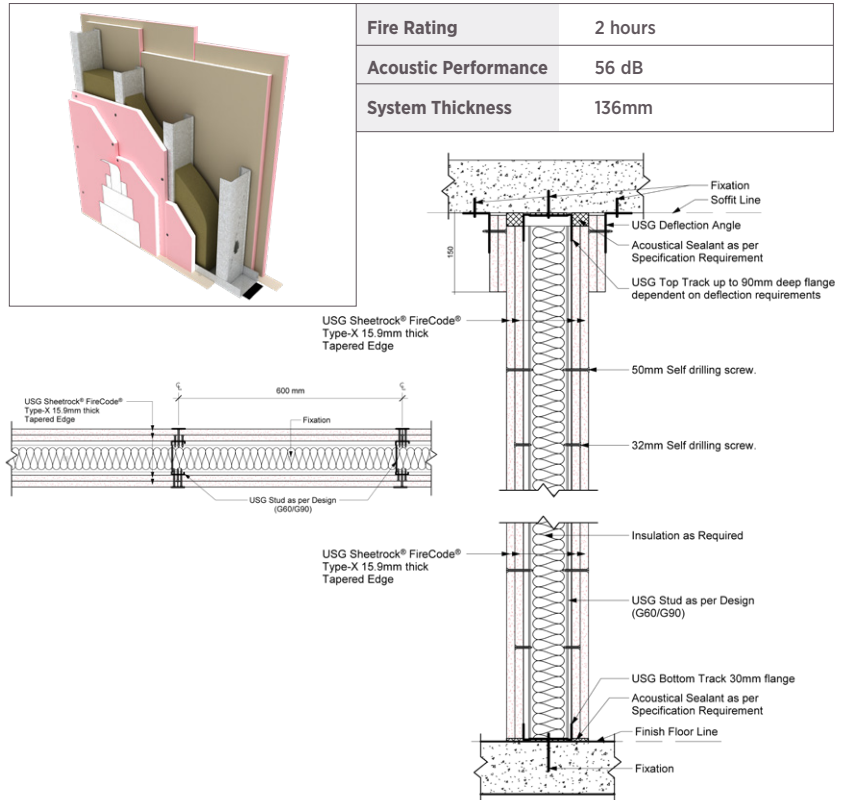




## HCW2

# PATIENT ROOM TO PATIENT ROOM (WALL-SAME FLOOR) EXAM ROOM TO EXAM ROOM (WITH ELECTRONIC MASKING)

2 HOURS FIRE RATED ASSEMBLY UL U 419 56dB



### WALL CONSTRUCTION

**GYPSUM BOARD :** Two layers of 5/8" (15.9mm) thick USG Sheetrock®

brand Type X Gypsum Board applied horizontally or vertically

**STEEL STUDS :** 70.5mm C-Stud spaced at 600mm OC

**STEEL TRACKS :** Top Track: 72x50mm deep U-track  
Bottom Track: 72x30mm U-track

**INSULATION :** 50 mm Mineral Wool (Density 14 kg/m<sup>3</sup>)

**GYPSUM BOARD :** Two layers of 5/8" (15.9mm) thick USG Sheetrock®

brand Type X gypsum board applied horizontally or vertically

**JOINT COMPOUND :** USG Sheetrock® Brand All-Purpose Joint Compound

**ACOUSTICAL SEALANT :** USG Sheetrock® Brand Acoustical Sealant

**TAPES :** USG Sheetrock® Brand Paper Tape

**SCREWS :** First layer: 4.2 x 32mm Screw, Bugle Head – Self Drilling

Second Layer : 4.2 x 50mm Screw, Bugle Head – Self Drilling

**LEVEL 5 FINISH :** Sheetrock® Tuff-Hide® Primer-Surfer

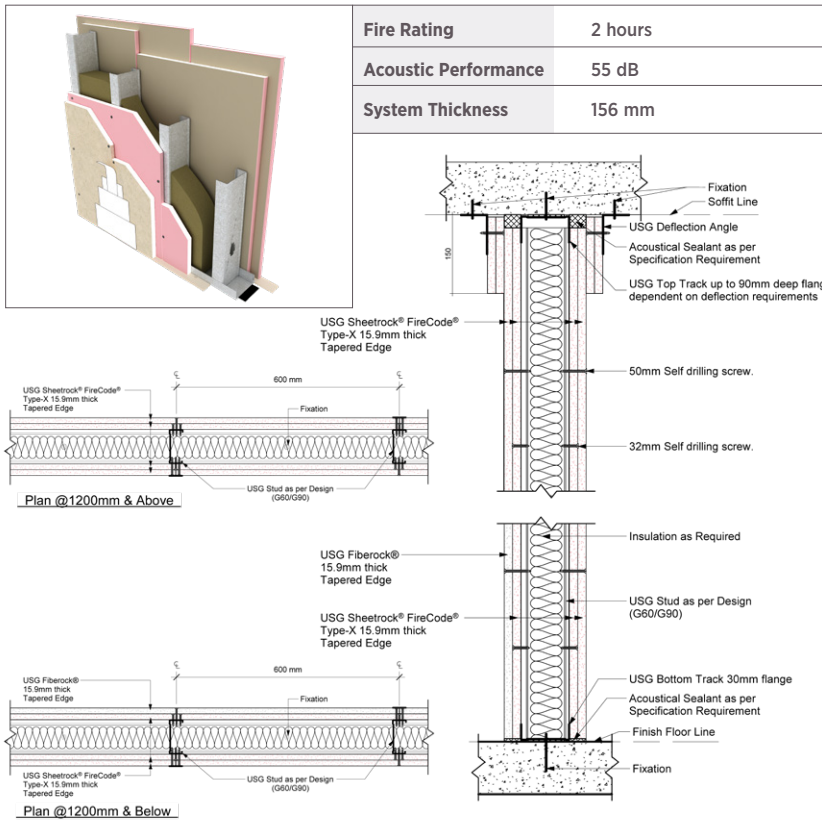
*Steel Studs and Steel Tracks Thicknesses as per design requirements.*

*Deflection head as per design requirements.*

*Please refer to USG ME Technical Department for system design.*

## NICU TO CORRIDOR

2 HOURS FIRE RATED ASSEMBLY UL U 419 55dB



### WALL CONSTRUCTION

**INNER LAYER :** Two layers of 5/8" (15.9mm) thick USG Sheetrock® brand Type X gypsum board applied horizontally or vertically

**OUTER LAYER :** 1 layer of USG Fiberock® 5/8" (15.9mm) thick board (Impact resistant) applied horizontally on the bottom of corridor's side 1200 mm from floor

**GYPSON BOARD ABOVE FIBEROCK®:** One Layer of 5/8"(15.9mm) thick USG Sheetrock® brand Type X gypsum board applied horizontally or vertically

**STEEL STUDS :** 92mm C-Stud spaced at 600mm OC

**STEEL TRACK :** Top Track: 92x50mm deep U-track  
Bottom Track: 92x30mm U-track

**INSULATION :** 75mm thick Mineral Wool insulation (Density 14 kg/m<sup>3</sup>)

**RESILIENT CHANNEL :** 13mm deep Resilient channel spaced at 600mm horizontally

**JOINT COMPOUND :** USG Sheetrock® Brand All-Purpose Joint Compound for Type X Gypsum Board and USG Durabond® for Fiberock® joint finishing

**ACOUSTICAL SEALANT :** USG Sheetrock® Brand Acoustical Sealant

**TAPES :** USG Sheetrock® Brand Paper Tape

**SCREWS :** First layer: 4.2 x 32mm Screw, Bugle Head – Self Drilling  
Second Layer: 4.2 x 50mm Screw, Bugle Head – Self Drilling

**LEVEL 5 FINISH :** Sheetrock® Tuff-Hide® Primer-Surfac

*Steel Studs and Steel Tracks Thicknesses as per design requirements.  
Deflection head as per design requirements.  
Please refer to USG ME Technical Department for system design.*

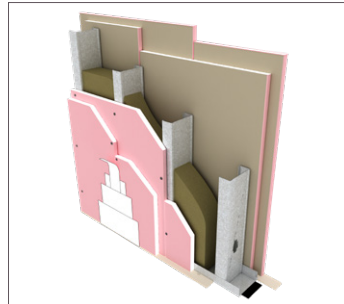




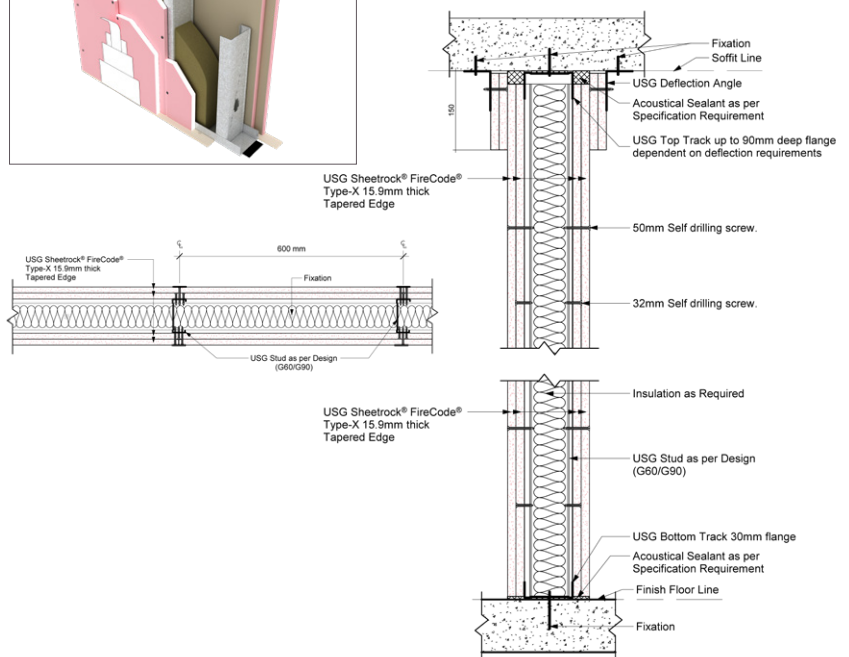
## HCW4

# TREATMENT ROOM TO TREATMENT ROOM & OPERATING ROOM TO OPERATING ROOM

2 HOURS FIRE RATED ASSEMBLY UL U 419 55 dB



Fire Rating	2 hours
Acoustic Performance	55 dB
System Thickness	143mm



### WALL CONSTRUCTION

**GYPSUM BOARD :** Two layers of 1/2" (12.7mm) USG Sheetrock® brand Type C gypsum board applied horizontally or vertically

**STEEL STUDS :** 92mm C-Stud spaced at 600mm OC

**STEEL TRACKS :** Top Track: 92x50mm deep U-track  
Bottom Track: 92x30mm U-track

**INSULATION :** 50mm thick Mineral Wool insulation (Density 14 kg/m<sup>3</sup>)

**GYPSUM BOARD :** Two layers of 1/2" (12.7 mm) USG Sheetrock® brand Type C gypsum board applied horizontally or vertically

**JOINT COMPOUND :** USG Sheetrock® Brand All-Purpose Joint Compound

**ACOUSTICAL SEALANT :** USG Sheetrock® Brand Acoustical Sealant

**TAPES:** USG Sheetrock® Brand Paper Tape

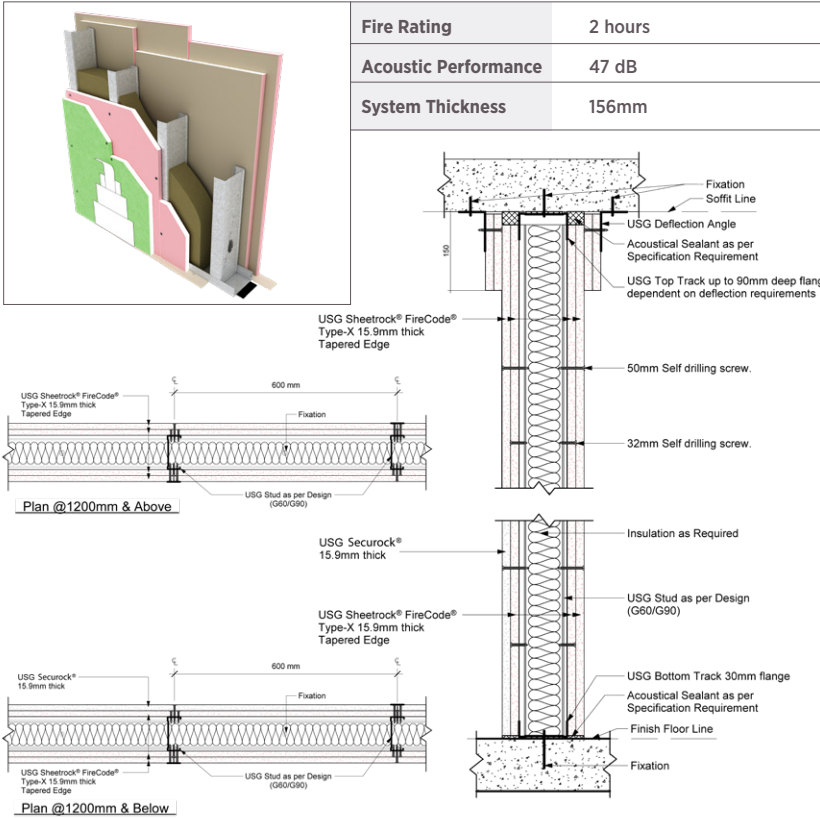
**SCREWS :** First layer: 4.2 x 32mm Screw, Bugle Head – Self Drilling  
Second Layer : 4.2 x 50mm Screw, Bugle Head – Self Drilling

**LEVEL 5 FINISH :** Sheetrock® Tuff-Hide® Primer-Surfacer

*Steel Studs and Steel Tracks Thicknesses as per design requirements.  
Deflection head as per design requirements.  
Please refer to USG ME Technical Department for system design.*

## TOILET ROOM TO PUBLIC SPACE

2 HOURS FIRE RATED ASSEMBLY UL U 419 47 dB



### WALL CONSTRUCTION

**GYPSUM BOARD :** Two Layers of 5/8" (15.9mm) thick USG ME Sheetrock® Brand Type X Gypsum Board. Other side (Wet side): One Layer of 5/8" (15.9mm) thick USG ME Sheetrock® Brand Type X Gypsum Board and One Layer of 5/8" (15.9mm) thick USG Sheetrock® Glass Mat Sheathing board (Impact Resistant)

**STEEL STUDS :** 90.5mm C-stud spaced at 600mm o.c

**STEEL TRACK :** Top Track: 92x50mm deep U-track  
Bottom Track: 92x30mm U-track

**INSULATION:** 50mm thick Mineral Wool insulation (Density 14 kg/m<sup>3</sup>)

**JOINT COMPOUND :** USG Sheetrock® Brand All-Purpose Joint Compound

**BASE COAT :** USG Durock® Base Coat

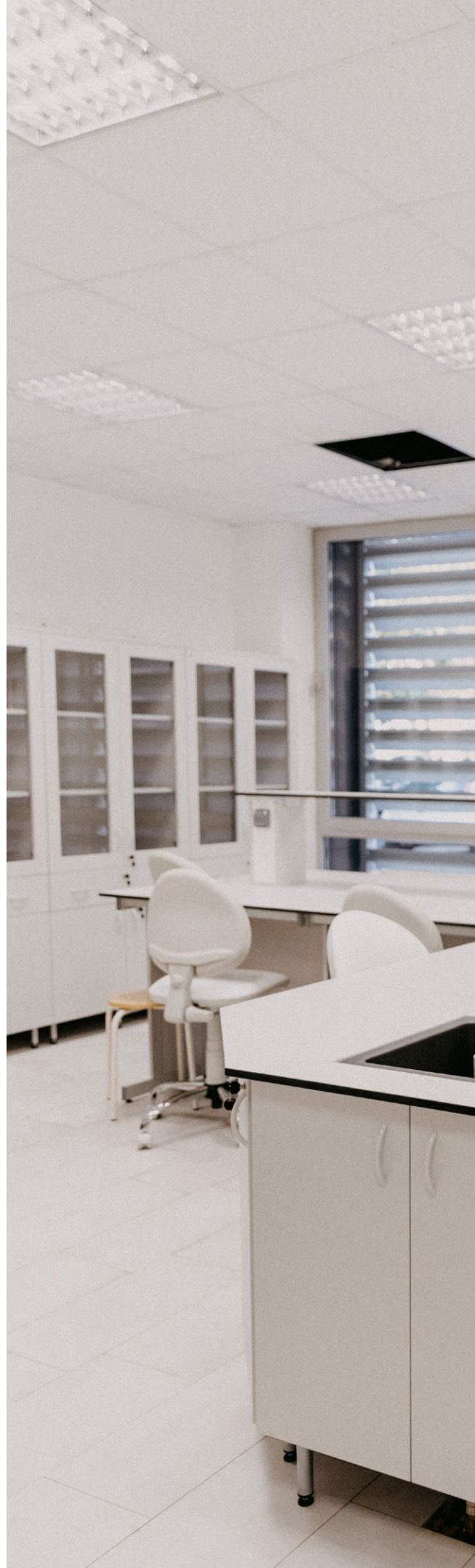
**ACOUSTICAL SEALANT :** USG Sheetrock® Brand Acoustical Sealant

**TAPES :** USG Sheetrock® Brand Paper Tape & USG 2" Interior Durock® tape

**SCREWS :** First layer: 4.2 x 32mm Screw, Bugle Head – Self Drilling  
Second Layer : 4.2 x 50mm Screw, Bugle Head – Self Drilling

**LEVEL 5 FINISH :** Sheetrock® Tuff-Hide® Primer-Surfacer

*Steel Studs and Steel Tracks Thicknesses as per design requirements.  
Deflection head as per design requirements.  
Please refer to USG ME Technical Department for system design.*

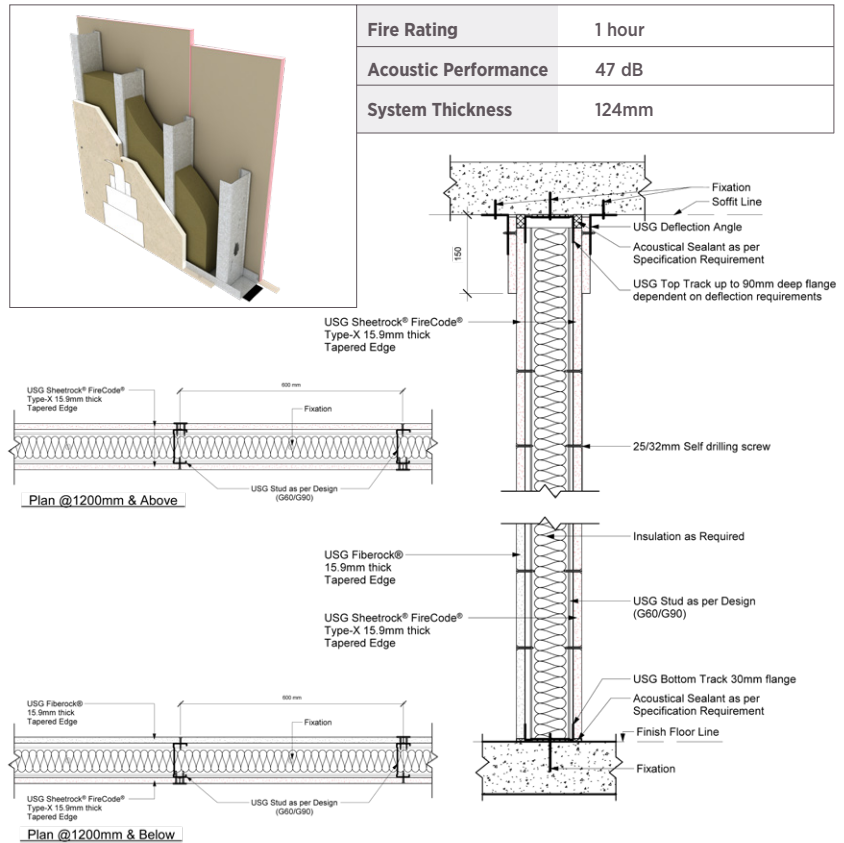




# HCW6

## PATIENT ROOM TO CORRIDOR (WITH ENTRANCE) AND CONSULTATION ROOM TO CORRIDOR (WITH ENTRANCE)

1 HOUR FIRE RATED ASSEMBLY UL U 419 47 dB



### WALL CONSTRUCTION

**OUTER LAYER :** One layer of USG Fiberock® 5/8" (15.9mm) thick board (Impact resistant) applied horizontally on the bottom of corridor's side 1200mm from floor

**GYPSON BOARD ABOVE FIBEROCK® :** One layer of 5/8" (15.9mm) thick USG Sheetrock® brand Type X gypsum board applied horizontally or vertically

**STEEL STUDS :** 90.5mm C-Stud spaced at 600mm OC

**STEEL TRACK :** Top Track: 92x50mm deep U-track  
Bottom Track: 92x30mm U-track

**INSULATION :** 50mm thick Mineral Wool insulation (Density 14 kg/m<sup>3</sup>)

**GYPSON BOARD :** One layer of 5/8" (15.9mm) thick USG Sheetrock® brand Type X gypsum board applied horizontally or vertically

**JOINT COMPOUND :** USG Sheetrock® Brand All-Purpose Joint Compound for Type X Gypsum Board and USG Durabond® for Fiberock® joint finishing

**ACOUSTICAL SEALANT :** USG Sheetrock® Brand Acoustical Sealant

**TAPES :** USG Sheetrock® Brand Paper Tape

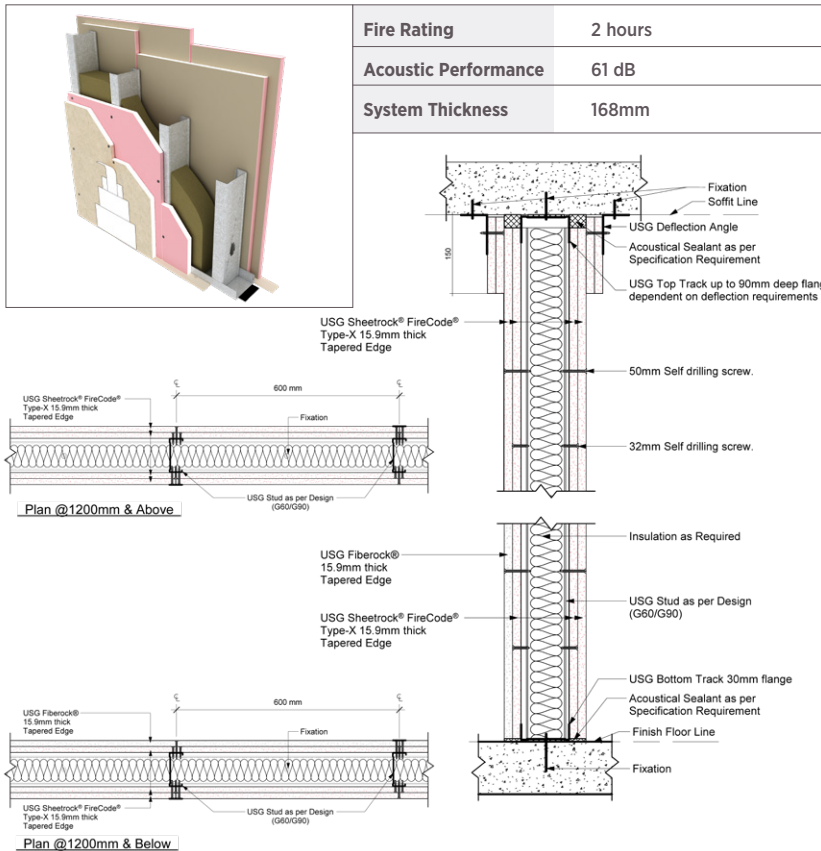
**SCREWS :** First layer: 4.2 x 32mm Screw, Bugle Head – Self Drilling

**LEVEL 5 FINISH :** Sheetrock® Tuff-Hide® Primer-Surfacer

*Steel Studs and Steel Tracks Thicknesses as per design requirements.  
Deflection head as per design requirements.  
Please refer to USG ME Technical Department for system design.*

## PATIENT ROOM TO SERVICE AREA

2 HOURS FIRE RATED ASSEMBLY 61 dB



### WALL CONSTRUCTION

- GYPSUM BOARD :** Two layers of 5/8" (15.9mm) thick USG Sheetrock® brand Type X gypsum board applied horizontally or vertically
- STEEL STUDS :** 90.5mm thick C-Stud spaced at 600mm OC
- STEEL TRACK:** Top Track: 92x50mm deep U-track  
Bottom Track: 92x30mm U-track
- INSULATION :** 75mm thick mineral wool insulation Density (14 kg/m<sup>3</sup>)
- RESILIENT CHANNEL :** 13mm deep Resilient channel spaced at 600mm horizontally
- GYPSUM BOARD :** Two layers of 5/8" (15.9mm) thick USG Sheetrock® brand Type X gypsum board applied horizontally or vertically
- JOINT COMPOUND :** USG Sheetrock® Brand All-Purpose Joint Compound
- ACOUSTICAL SEALANT :** USG Sheetrock® Brand Acoustical Sealant
- TAPES :** USG Sheetrock® Brand Paper Tape
- SCREWS:** First layer: 4.2 x 32mm Screw, Bugle Head – Self Drilling  
Second Layer : 4.2 x 50mm Screw, Bugle Head – Self Drilling
- LEVEL 5 FINISH :** Sheetrock® Tuff-Hide® Primer-Surfacer

*Steel Studs and Steel Tracks Thicknesses as per design requirements.  
Deflection head as per design requirements.  
Please refer to USG ME Technical Department for system design.*

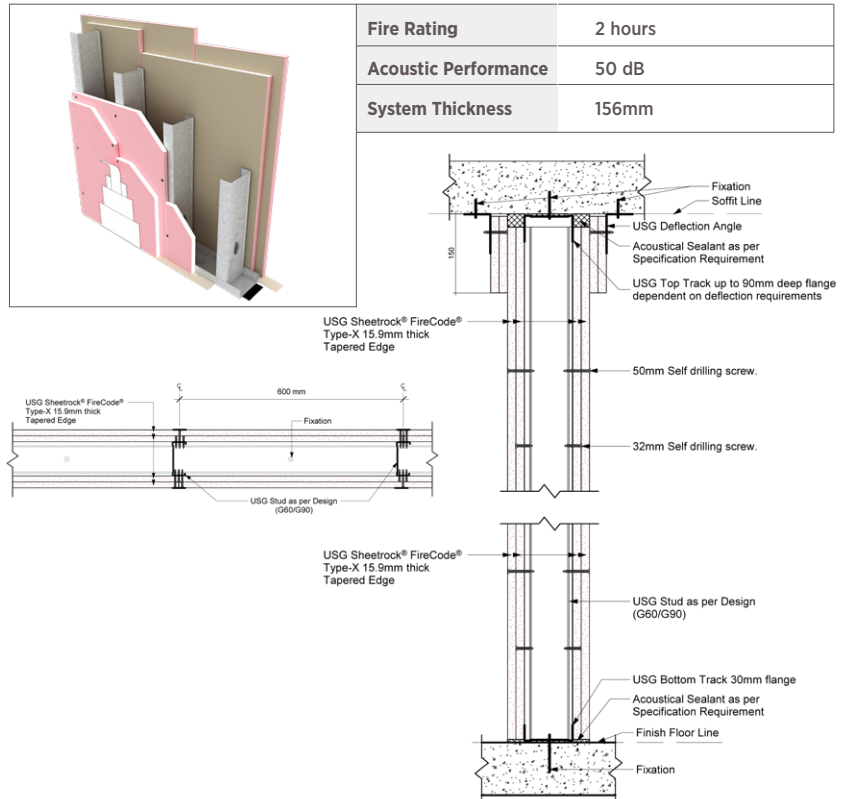




## HCW8

# OUT-PATIENT/ CONSULTATION ROOM TO PUBLIC PLACES

2 HOURS FIRE RATED ASSEMBLY UL U 419 50 dB



### WALL CONSTRUCTION

**GYPSUM BOARD :** Two layers of 5/8" (15.9mm) thick USG Sheetrock®

brand Type X gypsum board applied horizontally or vertically

**STEEL STUDS :** 90.5mm thick C-Stud spaced at 600mm OC

**STEEL TRACK:** Top Track: 92x50mm deep U-track  
Bottom Track: 92x30mm U-track

**GYPSUM BOARD :** Two layers of 5/8" (15.9mm) thick USG Sheetrock®

brand Type X gypsum board applied horizontally or vertically

**JOINT COMPOUND :** USG Sheetrock® Brand All-Purpose Joint

Compound

**ACOUSTICAL SEALANT :** USG Sheetrock® Brand Acoustical Sealant

**TAPES :** USG Sheetrock® Brand Paper Tape

**SCREWS :** First Layer: 4.2 x 32mm Screw, Bugle Head - Self Drilling

Second Layer: 4.2 x 50mm Screw, Bugle Head - Self Tapping

**LEVEL 5 FINISH :** Sheetrock® Tuff-Hide® Primer-Surfacer

*Steel Studs and Steel Tracks Thicknesses as per design requirements.  
Deflection head as per design requirements.*

*Please refer to USG ME Technical Department for system design.*

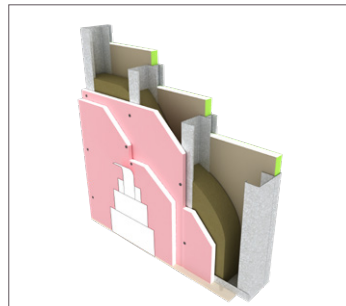




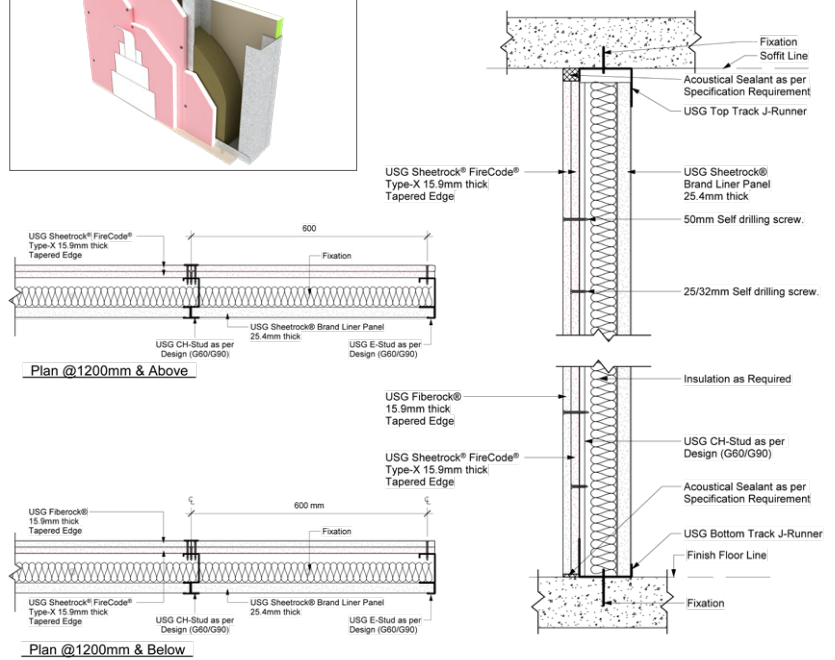
# HCSW1

## SHAFTWALL SYSTEM

2 HOURS FIRE RATED ASSEMBLY UL U 415 50 dB



<b>Fire Rating</b>	2 hours
<b>Acoustic Performance</b>	50 dB
<b>System Thickness</b>	125mm



### WALL CONSTRUCTION

- GYPSUM BOARD :** Two layers of 1/2" (12.7mm) thick USG Sheetrock® brand Type C gypsum board applied horizontally or vertically
- CH-STUD :** 4" (101.6mm) x 0.9mm thick CH-Stud spaced at 600mm OC
- E-STUD :** 4" (101.6mm) x 0.9 mm thick E-Stud installed at corners
- J-RUNNER :** 4" (101.6mm)x0.9 mm thick J-Runner installed at top and bottom
- INSULATION :** 75mm thick Mineral Wool insulation (Density 14kg /m<sup>3</sup>)
- GYPSUM BOARD :** One layer of 1" (25.4mm) thick USG Sheetrock® brand Gypsum Liner or Securock Liner® friction fit
- JOINT COMPOUND :** USG Sheetrock® Brand All-Purpose Joint Compound
- ACOUSTICAL SEALANT:** USG Sheetrock® Brand Acoustical Sealant
- TAPES :** USG Sheetrock® Brand Paper Tape
- SCREWS :** First layer: 4.2 x 32mm Screw, Bugle Head – Self Drilling  
Second Layer: 4.2 x 50mm Screw, Bugle Head – Self Drilling
- LEVEL 5 FINISH :** Sheetrock® Tuff-Hide® Primer-Surfacer

### SHAFTWALL STEEL COMPONENTS

CH Stud Sizes	J Runner Size	E Stud Sizes
63.5MM, 101.6MM, 152.4MM	63.5MM, 101.6MM, 152.4MM	63.5MM, 101.6MM, 152.4MM

Deflection head as per design requirements.

# FINISHING SOLUTIONS

Offering the industry's broadest selection of finishing solutions, our high-quality drywall compounds, joint tapes, beads, and trims provide superior performance on every job, every time. Whether you're taping, applying a finish coat, or patching a crack, there is a USG finishing product to meet your needs. Builders, project managers, and architects can count on our broadest selection of finishing solutions to deliver.

## GYPSUM SURFACE FINISHING SOLUTIONS

USG Middle East gypsum surface finishing solutions provides professional-grade performance. Sheetrock® Brand All Purpose Joint Compound and Premium Premix are combines single-package convenience with good taping and topping performance. Recommended for laminating and repairing cracks in interior plaster and masonry not subject to moisture, these compounds feature great open time and cold bond, and has smooth and slick properties. This joint compound qualifies as a low VOC emitting material and complies with ASTM C475.

The Gypsum Plaster Setting-Type of Easycoat 30 and Easyjoint™ 60 provides quick set times allow for one-day drywall finishing and next-day decoration of drywalls in interiors and exterior areas. Let our setting-type collection set the pace with a range of formulations that provide a choice in setting times. They provide low shrinkage and superior bond, which make them excellent for projects like laminating gypsum panels, acoustical gypsum boards and above-grade all gypsum surfaces.

## CEMENT SURFACES FINISHING SOLUTIONS

Concrete plaster is a type of plaster that is made from a mixture of Portland cement, sand, and water. It is a strong and durable material that is often used as a finish for walls and ceilings. Unlike traditional plaster, which is made from gypsum, concrete plaster is not as brittle and is more resistant to water damage. It is typically applied in multiple layers and can be finished with a variety of textures, depending on the desired look.

Our concrete plaster includes Durock® & General Purpose Setting-Type Basecoat, Easycoat Advanced Formula Ready-Mix and other cementitious surfaces finishing products are commonly used as a finish for both interior and exterior walls and ceilings. This range is often applied to concrete, brick, or masonry surfaces to create a smooth, durable finish. Concrete plaster is also used to repair and resurface damaged walls and ceilings, and to cover up imperfections in the underlying surface. In addition, concrete plaster can be used to create decorative elements such as moldings, cornices, and ceiling medallions. Used in the construction of swimming pools, to create a smooth, waterproof finish.

## ACOUSTICAL CEILINGS FINISHING SOLUTIONS

Acoustical plasterboard ceilings require special finishing materials to achieve the required acoustic performance. We offer the Monosilent Compound for the acoustical ceiling joint treatment which is specially formulated to achieve very low shrinkage joint compound for acoustical plasterboard ceilings.

USG ME also offers highly engineered, acoustically transparent spray-applied finish of Monosilent Spray-Applied Finish and Mac Spray-Applied Finish. Sprayed with pneumatic spray texture equipment and yields a fine finish, with a monolithic appearance. The Acoustical transparent finish is available in a standard white color and available in other RAL colors to meet the architect choice.







## BONDING SOLUTIONS

Our Setting-Type Bonding Premium Compounds are a plaster-based adhesive formulated to bond gypsum board to masonry, brick or concrete walls and for bonding decorative cornices to plaster surfaces and for reinforcing joints in cornices. These Premium Compounds have high bond strength and offers a long working time, mixes easily to a creamy, lump-free gauge, high strength, excellent adhesion to masonry, brick and concrete walls and decorative cornices. Easybond™ 60 Setting-Type Bonding Premium Compound Provides enhanced plaster adhesion to surfaces like gypsum plaster, cinder block, stone, drywall panels, and other similar materials. Fastbond Hightack Formula is easily applied by Sealant Gun for quick and instant bonding requirements. The Fastbond Hightack Formula has extremely high initial tack and can be applied as a universal adhesive for bonding many building materials such as: stone, concrete, glass, plasterboard, PU, PVC, hard plastics, enamel, ceramic, copper, lead, zinc, tin, aluminium, metals, alloys, stainless steel, HPL and cement fiber panels, wood and paints stems.

## SEALANT

USG ME sealants are acrylic-based for use as sealants in fire-rated partitions, smoke barriers and sound-rated assemblies as acoustical barrier. The sealant exhibits exceptional structural integrity, forms a continuous flexible bead that resists collapse and flows into all but the most intricate joints, resists water penetration and offers excellent resistance to thermal shock. These sealants are low-flowing, forming a dense and continuous barrier against air and other gases. It provides excellent resistance to vibration and movement, making it ideal for joints in fire-rated assemblies that have little or no movement, they're produced with high fire rating and acoustical performances. Where the acoustical sealant which is a type of sealant that is specifically designed to reduce the transmission of sound through gaps or cracks in walls, ceilings, and floors. It is often used in construction and renovation projects to improve the acoustics of a space and reduce noise pollution.

## ACCESSORIES

USG Middle East offers a full range of accessories for the project's builders. The accessories range of varieties from jointing tapes for interior and exterior use that add strength and crack resistance for smooth concealment at flat joints and inside corners, to the durable beads and trims that installs easily by screwing, nailing or tapping to steel or wood framing. Our corner beads and trims protect external corners, angles and panel intersections in drywall construction. It is concealed with our joint compounds, delivering a smooth finished surface and even that protects corners from impact.

## ACCESS PANELS

Offering wide range of access panels and doors. For wet areas, USG Middle East offers moisture- and mold-resistant access doors and plumbing accessories with plasterboard inlay, circumferential rubber lip seal, hidden snap locks, and self-adjusting safety catch arms. These moisture resistance access panels are panels that are designed to prevent the ingress of moisture. They are often used in buildings where access is needed to areas that may be exposed to water or damp conditions, such as bathrooms or kitchens. Smoke, air, and dust-tight requirements are met by USG ME Smoke Control and Acoustic Access Doors and Plumbing Accessories, includes an EPDM hollow chamber seal for installation on walls and ceilings. Where the smoke control access panels are panels that are designed to prevent the spread of smoke in the event of a fire. They are often used in buildings to provide access to areas that are part of a smoke control system, such as ducts or shafts. Smoke control access panels are an important component of a building's fire safety system, and are typically installed in ceiling or floor areas.





# SUSTAINABLE SYSTEMS



## GREEN MANUFACTURING

Flexible and scalable production options with quicker delivery time. Our regional manufacturing facilities reduce the supply chain costs, energy consumption and transportation. USG ME is an excellent source of ceiling solutions for the regional community helping the environment with lesser emissions and energy usage. We care about earth: we provide green and sustainable products.



## ENVIRONMENTAL PRODUCT DECLARATION

The Environmental Product Declaration (EPD) relies on the assessment tool—following ISO series 14040—to provide information on a number of environmental impacts of a product over its life cycle. EPD's are primarily intended to facilitate business transactions with clients who are focused on sustainable environmental practices. Since adhering to the ISO series 14040, we have improved our goals for sustainability and demonstrated our commitment to sound environmental practices and our customers.



## GREENGUARD

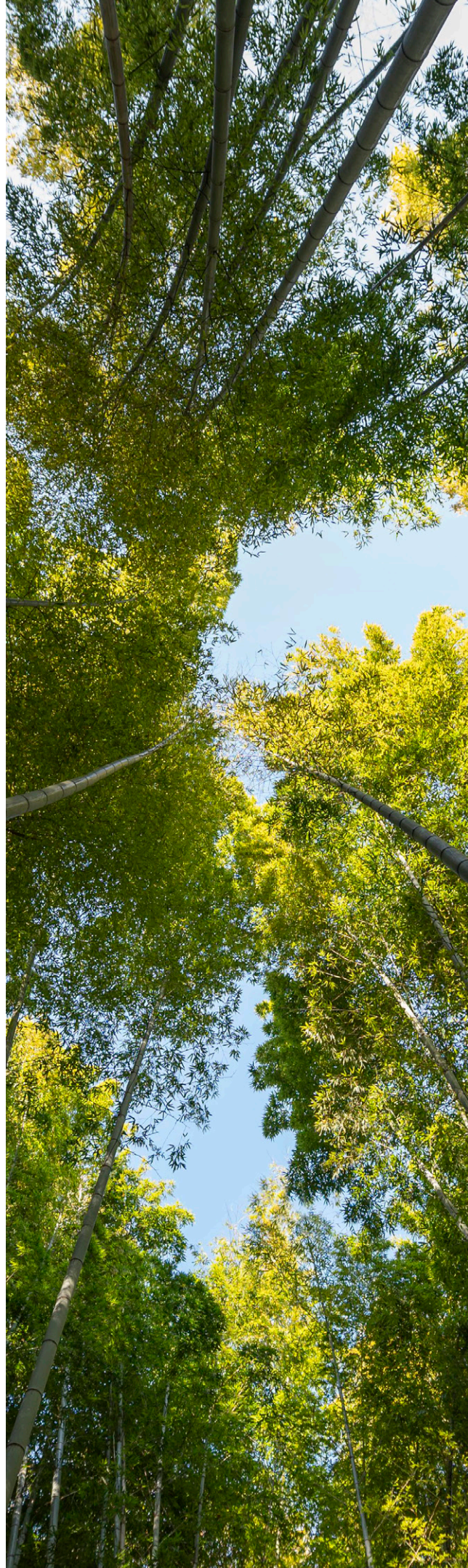
GREENGUARD Certification Program is for Products that have scientifically been proven to meet many of the world's most rigorous third-party chemical emissions standards, helping to improve indoor air quality. By choosing products with GREENGUARD Certification, you are creating a healthier indoor environment for your home, office, or institution and reducing chemical exposure. USG Middle East's Ceiling Systems are certified as GREENGUARD Gold as per the UL 2818 - 2013 Gold Standard for Chemical Emissions for Building Materials, Finishes, and Furnishings.



## ENVIRONMENTAL AIR QUALITY

USG ME's ceiling panels do not contain asbestos, carcinogens, mutagens, or toxic substances.

Our ceiling products are classified and certified to have low impact on indoor air quality. Even when installed in a fully furnished room with little fresh air, the concentration of VOCs and Formaldehyde are well below accepted standards.





# COMPANY CERTIFICATION AND COMPLIANCE

## ISO CERTIFICATION

### ISO 9001:2015 QUALITY MANAGEMENT SYSTEM



**TÜV NORD**

**CERTIFICATE**

Management system as per  
**ISO 9001 : 2015**

The Certification Body TÜV Middle East hereby confirms as a result of the audit, assessment and certification decision according to ISO/IEC 17021-1:2015, that the organization

**Factory of USG Middle East Ltd. Co.**  
مصنع شركة بوس اس جي للشرق الأوسط المحدودة  
CR: 2050014850  
P.O. Box 7410 (Waseel), Street # 23 Cross 76  
2nd Industrial City, 34326-4201 / Dammam  
Kingdom of Saudi Arabia

**USG ME**  
INNOVATIVE SOLUTIONS, EMERGING.

with the location:  
Branch of Factory of USG Middle East Ltd. مصنع شركة بوس اس جي للشرق الأوسط المحدودة  
Street # 23 Cross 76, 2nd Industrial City, 34326-4201 / Dammam Kingdom of Saudi Arabia  
operates a management system in accordance with the requirements of ISO 9001: 2015 and will be assessed through periodic surveillance audits for conformity within the validity of the certificate.

Scope:  
**Manufacturing of Acoustical Ceiling Panels & Tiles (Mineral Fiber, Soft Fiber, Metal & Gypsum), Ceiling Suspension Systems, Drywall Steel Framing Systems and Interior Finishing Products (Powder and Ready Mix Jointing Compound, Plasters, Skim Coatings)**

Certificate Registration No. IAS 01 2200339      Valid from 20-08-2022  
Audit Report No. 8000 1783      Valid until 19-08-2025  
Initial certification 2007



Certification Body  
TÜV Middle East      Abu Dhabi, 13-10-2022

TÜV Middle East, Mezzanine Floor, Canal Tower A, Airport Road, P.O. Box 46030, Abu Dhabi, UAE      www.tuvme.com

### ISO 45001:2018 OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM



**TÜV NORD**

**CERTIFICATE**

Management system as per  
**ISO 45001 : 2018**

The Certification Body TÜV Middle East hereby confirms as a result of the audit, assessment and certification decision according to ISO/IEC 17021-1:2015, that the organization

**Factory of USG Middle East Ltd. Co.**  
مصنع شركة بوس اس جي للشرق الأوسط المحدودة  
CR: 2050014850  
P.O. Box 7410 (Waseel), Street # 23 Cross 76  
2nd Industrial City, 34326-4201 / Dammam  
Kingdom of Saudi Arabia

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with the location:  
Branch of Factory of USG Middle East Ltd. مصنع شركة بوس اس جي للشرق الأوسط المحدودة  
Street # 23 Cross 76, 2nd Industrial City, 34326-4201 / Dammam Kingdom of Saudi Arabia  
operates a management system in accordance with the requirements of ISO 45001: 2018 and will be assessed through periodic surveillance audits for conformity within the validity of the certificate.

Scope:  
**Manufacturing of Acoustical Ceiling Panels & Tiles (Mineral Fiber, Soft Fiber, Metal & Gypsum), Ceiling Suspension Systems, Drywall Steel Framing Systems and Interior Finishing Products (Powder and Ready Mix Jointing Compound, Plasters, Skim Coatings)**

Certificate Registration No. IAS 03 2200339      Valid from 13-10-2022  
Audit Report No. 8000 1783      Valid until 27-08-2023  
Initial certification 2023



Certification Body  
TÜV Middle East      Abu Dhabi, 13-10-2022

TÜV Middle East, Mezzanine Floor, Canal Tower A, Airport Road, P.O. Box 46030, Abu Dhabi, UAE      www.tuvme.com

### ISO 14001:2015 ENVIRONMENTAL MANAGEMENT SYSTEM



**TÜV NORD**

**CERTIFICATE**

Management system as per  
**ISO 14001 : 2015**

The Certification Body TÜV Middle East hereby confirms as a result of the audit, assessment and certification decision according to ISO/IEC 17021-1:2015, that the organization

**Factory of USG Middle East Ltd. Co.**  
مصنع شركة بوس اس جي للشرق الأوسط المحدودة  
CR: 2050014850  
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Street # 23 Cross 76, 2nd Industrial City, 34326-4201 / Dammam Kingdom of Saudi Arabia  
operates a management system in accordance with the requirements of ISO 14001: 2015 and will be assessed through periodic surveillance audits for conformity within the validity of the certificate.

Scope:  
**Manufacturing of Acoustical Ceiling Panels & Tiles (Mineral Fiber, Soft Fiber, Metal & Gypsum), Ceiling Suspension Systems, Drywall Steel Framing Systems and Interior Finishing Products (Powder and Ready Mix Jointing Compound, Plasters, Skim Coatings)**

Certificate Registration No. IAS 02 2200339      Valid from 13-10-2022  
Audit Report No. 8000 1782      Valid until 20-04-2024  
Initial certification 2019



Certification Body  
TÜV Middle East      Abu Dhabi, 13-10-2022

TÜV Middle East, Mezzanine Floor, Canal Tower A, Airport Road, P.O. Box 46030, Abu Dhabi, UAE      www.tuvme.com



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#### FACTORY OF USG MIDDLE EAST LTD. CO.

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2nd Industrial City, Dammam 34326-4201  
Kingdom of Saudi Arabia

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INNOVATIVE SOLUTIONS. EVERYTIME.