Hospitality Environment

Hotel brochure

Gyproc
SAINT-GOBAIN

INTRODUCTION

The Middle East has one of the fastest growing hospitality sectors of any region in the world, with tourism continuing to grow rapidly and events such as Expo 2020 expected to attract 20 million visitors to the region over a 12 month period.

Accommodating this growth in visitor numbers is putting pressure on the hospitality sector, not only to massively expand the number of hotels, but to create exceptional buildings that meet and surpass the highest global standards, particularly in areas like acoustics, fire safety and durability, and to build them faster and more efficiently, within tight cost budgets.

In addition to providing a safe refuge where guests can relax and enjoy a quiet night's sleep, modern hotel interiors must meet the highest aesthetic standards, provide fresh clean air to protect the health of guests and staff and minimise disruptive maintenance that could impact the guest experience.

WHAT'S INSIDE?

In this brochure, we cover each of these areas in detail, and point you towards a range of innovative, drywall solutions that have already been extensively tried and proven in many of the world's leading hotels. Solutions that provide guaranteed levels of performance, so you know that they will match and exceed your requirements in every area.

Solutions that are backed by the expertise and knowledge of Saint-Gobain Gyproc, the world leader in lightweight construction techniques, and a company that fully understands the unique demands of the hospitality sector in the Middle East.

Hyatt Capital Gate Hotel
Abu Dhabi - UAE

CONTENTS

HOW WILL DRYWALL SYSTEMS HELP MY PROJECT?

Drywall systems bring together rigid metal frameworks with linings of environment friendly plasterboard, to provide high performance, flexible, tested wall partition, lining and ceiling systems to meet the demanding requirements of hotels and hospitality buildings from simple single-storey extensions to complex, multi-function facilities and high rise developments.

In most developed countries, they are replacing old traditional masonry construction methods, due to their speed of construction, flexibility and ability to provide exceptionally high levels of performance in key areas, such as fire protection; thermal and acoustic insulation.

VERSATILE

Practical solutions for every application – guest rooms, lobbies, reception areas, corridors, service shafts, conference rooms etc.

FAST AND SIMPLE TO CONSTRUCT

Quick to build using engineered components; easier project scheduling.

COST EFFECTIVE

Cut project time and cost.

GREAT ACOUSTICS

Up to R_w 80dB sound insulation, excellent sound absorbency.

FIRE SAFE

Up to 180 minutes fire resistance (integrity and insulation).

DURABLE

High levels of impact resistance to meet and surpass BS 5234 Severe Duty rating.

LIGHTWEIGHT

Easy and less costly to transport, saves money on foundations.

SUSTAINABLE

Recyclable, high recycled content, 50% reduction in deliveries to site, compared with masonry.

SAFE

Less site storage, meaning safer on-site working.

WARRANTED PERFORMANCE

Tested solutions; covered by unique SpecSure performance warranty.

10 AREAS TO CONSIDER WHEN DESIGNING A HOTEL

1 SOUND INSULATION AND ROOM ACOUSTICS

Our Gyproc wall, partitions and ceiling systems ensure guest privacy and contribute to a good night's sleep as well as providing quiet areas for various events. Our absorptive product surfaces help to optimize speech intelligibility and reduce noise build-up in public spaces

2 FIRE SAFETY FOR PEOPLE AND INVESTMENT

Passive fire protection of internal partitions is critical for the fire safety concept of a building. Gypsum is non-combustible and protects against fire.

3 DURABILITY AND MAINTENANCE

Our durable Gyproc drywall systems have a positive impact on whole lifecycle costs. They lead to more predictable maintenance cycles, which is cost-efficient and less disruptive to the hotel guests

4 HYGIENE - HEALTHY INDOOR CLIMATE

Our plasterboards do not contain any hazardous substances and our Gypsum drywall systems can be specified with Activ' Air board with air cleaning features to ensure a low formaldehyde level.

5 HYGIENE - MOLD & MOISTURE RESISTANCE

Gypsum drywall systems have been developed to offer high levels of protection from moisture and mold – they protect the structure - and prevent unsightly staining.

6 AESTHETICS AND DESIGN POSSIBILITIES

Our Gypsum drywall systems guarantee freedom in design and provide seamless and crack-free surfaces of the highest smoothness.

7 OPTIMISED PROJECT COSTS

Due to faster installation, faster completion and structural savings, our Gypsum drywall systems lead to significant savings in total project costs compared to traditional bricks and blocks.

8 SUSTAINABILITY AND ENERGY EFFICIENCY

Our gypsum plasterboards are 100% recyclable into new plasterboard. Installation reduces site water consumption, compared to traditional brick and block.

9 INNOVATION

Innovation is at the heart of everything we do - we are constantly developing new and improved products to meet changing market needs.

10 AVAILABILITY AND PERFORMANCE

Our products are available in over 60 countries with own sales and technical support. Our systems are developed to work together and will meet the most rigorous of building requirements.

WHY IS NOISE CONTROL SO IMPORTANT?

Hotels are inherently noisy environments, with guests talking and moving around in corridors or enjoying the gym, noisy restaurants, busy conference rooms and people on the telephone. Guests are looking for a quiet sanctuary where they can relax, unwind and enjoy a good night's sleep. Effective sound insulation is therefore a must.

It can be difficult and expensive to install effective sound insulation once the building is completed, so correct specification at the design stage is crucial.

Guidance

Where international standards are referred, Gyproc can assist in design and correct specification of systems.

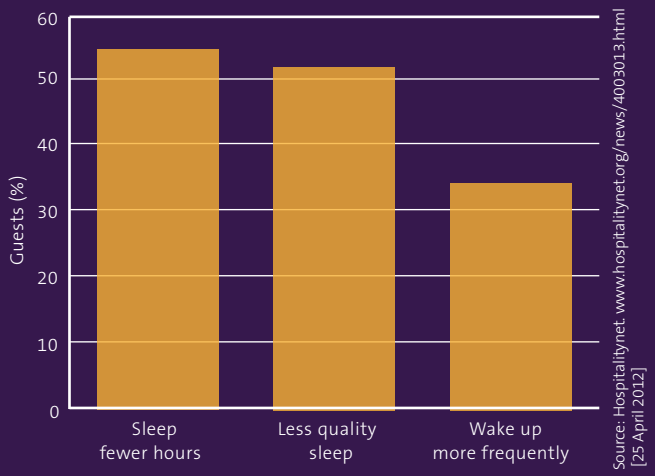
TYPICAL ACOUSTIC RATING FOR MIDDLE EAST HOTELS	Typical R_w dB	Recommended R_w dB
Guestroom to guestroom/pantry /staircase/Back of House	50-60	60-66
Guestroom to corridor	50-60	60-66
Bathroom walls in guestroom	35-40	40-46
Guestroom risers	40-45	45-55
Back of house to corridors	42-47	45-55
Back of house to shafts	40-45	42-55
Guestroom to service shaft	50-57	60-66
Meeting rooms (Low Performance)	40-50	54-60
Meeting rooms	55	60-66
Ballroom walls	68	68-76
Guestroom ceilings	50-60	62-66
Corridor ceilings	0.65 α_w	0.75 α_w
Bathrooms/Kitchen ceilings	55-65	60-70

HOW DOES **NOISE*** AFFECT **HEALTH?**

*Noise is unwanted sound

A good night's sleep is crucial to guests' well-being. Outside of their own home, guests sleep less well and can be disturbed or woken by even the slightest sound

SLEEP IN A HOTEL ROOM COMPARED WITH HOME



A lack of sleep results in guests being irritable and less able to manage their daytime experience. It can even affect their ability to concentrate when driving or operating equipment – with potentially serious consequences.

After a long day of travelling, meetings and sightseeing, the hotel room should provide a place for relaxation

Multi-functional spaces

Hotels today can be multi-functional, providing space for offices, conferences, spas, restaurants and nightclubs. They must cope with different acoustic challenges, from containing noise from equipment, to controlling reverberation in conference rooms to enable people to talk and be heard clearly.

Noise is the number one complaint in guest satisfaction surveys - good sound insulation will ensure a good night's sleep, even in unfamiliar surroundings

REDUCING NOISE LEVELS

Sound Transmission

Televisions, ringing telephones and even guests bathing or moving around all generate sound that is carried through the air as sound waves. When these waves impact a wall or ceiling, some of the sound will be reflected back into the space, whilst some will pass through to increase the noise levels in adjoining spaces or rooms.

To ensure that guests are not disturbed either by noisy corridors, bathrooms, or just general sounds from other rooms and suites, it is therefore important to minimise the amount of transmitted noise passing through the separating structure.

This can be achieved by interposing a high performance acoustic separating partition or ceiling and acoustically sealing all perimeters and openings. The performance specification of the separating element should be selected based on the appropriate Rw rating* for the space and any regulatory requirements (see the Middle East White Book and associated user guides for details of all systems available).

Why do we need to control it?

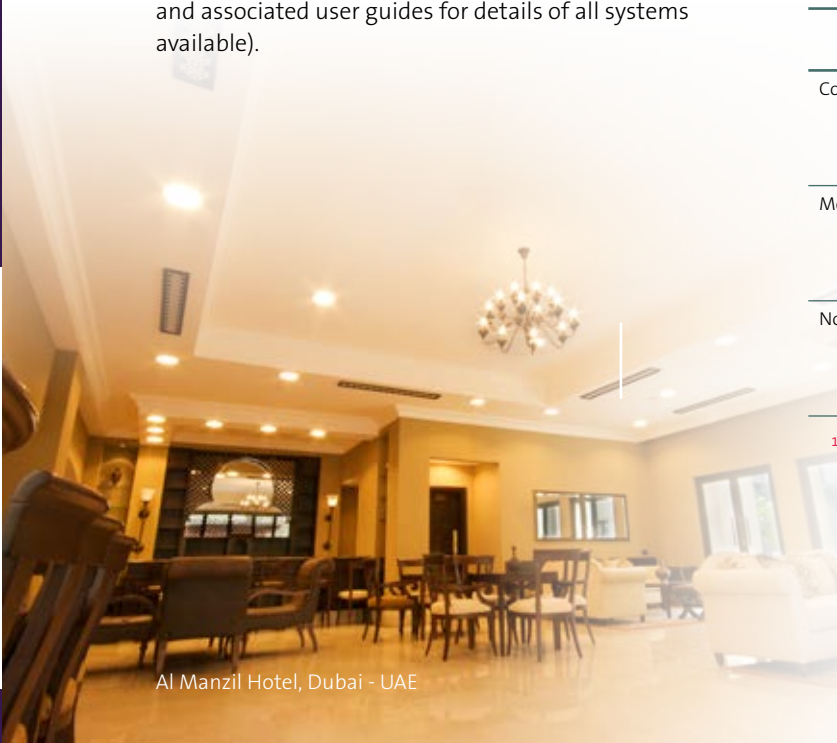
Noise is distracting and can prevent guests from relaxing and enjoying peaceful sleep, it is therefore essential to consider ways of minimising airborne sound transmission at the design stage. It is good design practice to separate noisy from quiet areas when designing the interior layout. Where potential noise problems exist, for instance where a busy corridor abuts a guest room, sound transfer can be reduced by a high performance acoustic separating partition or ceiling and acoustically sealing at all perimeters and openings.

The table below shows typical acoustic performance needed for different degrees of acoustic privacy

Example on-site sound insulation matrix ($D_{nT,w}$ dB)

Privacy	Activity noise of source room	Noise sensitivity of receiving rooms		
		Low sensitivity	Medium sensitivity	Sensitive
Confidential	Very high	47	52	57[1]
	High	47	47	52
	Typical	47	47	47
	Low	42	42	47
Moderate	Very high	47	52	57[1]
	High	37	42	47
	Typical	37	37	42
	Low	No rating	No rating	37
Not private	Very high	47	52	57[1]
	High	37	42	47
	Typical	No rating	37	42
	Low	No rating	No rating	37

[1] $D_{nT,w}$ 55dB or greater is difficult to obtain on-site and room adjacencies requiring these levels should be avoided wherever practical.



Al Manzil Hotel, Dubai - UAE

The hotel lobby can provide access to bars, restaurants, shops etc., but for guests, it creates an important first impression. The level of noise should be controlled by effective sound absorption to walls and or ceilings.

Hyatt Capital Gate, Abu Dhabi - UAE

Measuring Noise

The decibel(dB) is a unit of Sound Energy. This can be measured in a number of ways.

- Laboratory tested performance figures are generally used to compare the performance of different systems – European R_w (Weighted sound reduction index) and American STC (Sound Transmission Class) are the most popular.
- The actual performance of a partition or ceiling when built on site is affected by the surrounding structure and junction details, and is generally lower than the laboratory figure. European D_{nTw} or American FSTC are generally used for site measurements.
- It is normal to allow a safety margin of around 7dB between the laboratory figure and expected site performance to allow for downgrading due to flanking transmission etc.
- Separating elements are typically specified based on the appropriate R_w rating for the space and any regulatory requirements (see the Middle East WHITE BOOK and associated user guides for details of all systems available).

Sound absorption

In hotel lobbies, restaurants and other large meeting areas, it is equally important to manage the noise created within a space itself, for instance by guests talking. This is particularly important in areas with hard reflective surfaces that will bounce the sound around, exacerbating the noise – often affecting the guests' ability to talk and be heard clearly.

The simple answer can be to add special suspended sound absorbent acoustic ceilings or wall panels. A qualified acoustician will be able to advise on the type and area of sound absorption required

Impact sound

Impact sound is caused by footsteps, falling objects or vibrating equipment and is transmitted through the hard structure (generally a floor). The level of impact noise can sometimes be reduced using a good quality floor covering, although In some situations it is more effective to install a suspended plasterboard ceiling to the lower space..

Scan this QR code with your device's QR Code scanner app to know more about acoustic solutions from our Gyptone, Rigitone and Ecophon range.

Alternatively, visit **gyproc.ae/acoustic-ceilings**

HOW CAN I MAKE SURE MY BUILDINGS ARE SAFE FROM FIRE?

Fire safety is one of the biggest issues facing the hotel designer, not only to provide a safe environment for guests and staff, but to protect the building and its contents and ensure continuity of operation.

It is not always possible to prevent fires occurring, so the building designer and operator must focus on containing any fire and prevent it from spreading, and providing a safe and reliable means of exit for guests and staff, and protected access for fire fighters, particularly in high rise hotels.

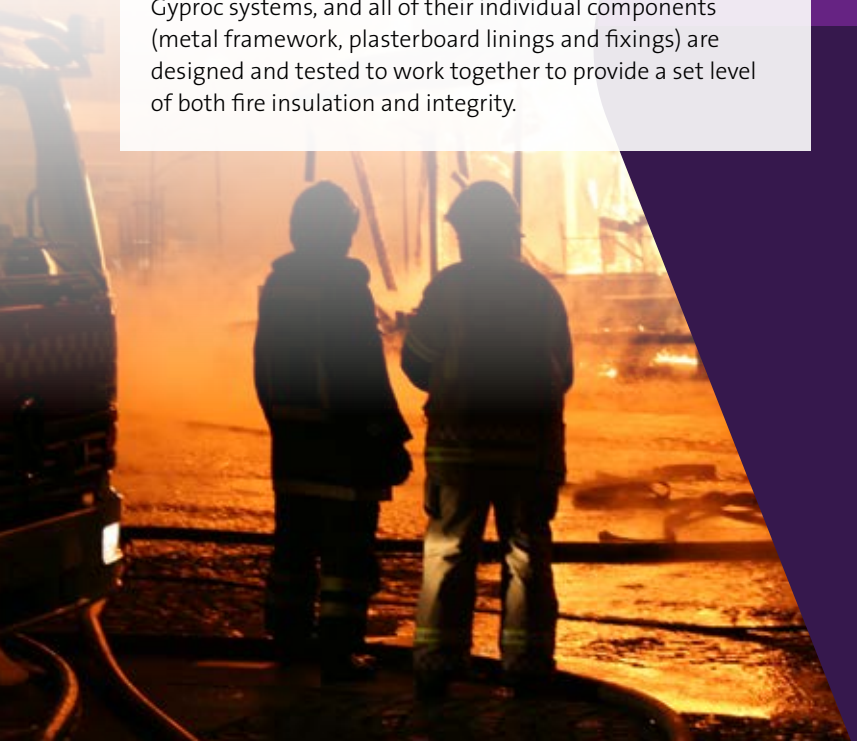
Fire performance

The fire performance of a non-loadbearing partition or ceiling is divided into two elements,

- **fire insulation** – the ability of the structure to prevent temperature rise to the 'cold' face
  and
- **fire integrity** – its ability to remain intact and therefore revent the passage of flame and smoke.

Gypsum plasterboard provides excellent levels of fire protection thanks to the inherent properties of the gypsum core, which releases water on exposure to fire, thereby delaying temperature rise. For even higher performance, specialist fire boards, like Gyproc FireStop, incorporate glass fibre and other additives within the core to improve core cohesion and strength for enhanced integrity and fire protection.

Gyproc systems, and all of their individual components (metal framework, plasterboard linings and fixings) are designed and tested to work together to provide a set level of both fire insulation and integrity.



Guidance

Gyproc systems are fully fire tested by internationally accredited independent laboratories against British, European & American standards. Gyproc also holds third party certification for fire rated systems complying with all the statutory requirements that are specific in hotel and hospitality buildings.

Typical fire rating standards for hotels in the Middle East

Area	Usage Type	Fire Rating Hours
Residential	Guestroom deviding walls	1
Public	Retail, gym	1-2
Public	Ballrooms, nightclubs, exhibition hall, function rooms	2
Public	Meeting rooms	1
Public	Corridors	2
Public	Fire escape stairs and shafts	2
Back of house	Mecahnical equipment room, supplies	1

WHY **FIRE PROTECTION** IS IMPORTANT IN HOTELS

- Safe and relaxed environment for guests.
- Safe means of escape for guests and staff (particularly in high rise multi-storey buildings).
- Safe access for fire fighters.
- Minimize structural damage.
- Prevent fire spread through the building, or to nearby buildings.
- Protect sensitive records and documents.
- Minimise hotel down time.
- Protect the investment (hotels can suffer financially or go out of business following a major fire).

HOW CAN OUR PLASTERBOARD PARTITIONS BE SO TOUGH?

In hotels, partition walls in corridors, lobby areas, gyms, stairwells and other high traffic areas are subject to a wide range of different impacts on a daily basis. Customers are less likely to show care for their surroundings than in their own homes, so the hotel fabric must be able to stand up to the challenge.

Knocks and scrapes not only damage to internal appearance but require expensive and disruptive ongoing maintenance. Once damaged, surfaces are difficult to clean and provide a breeding ground for germs and bacteria.

WHY ARE **LIGHTWEIGHT SYSTEMS BETTER** THAN **MASONRY**?

LOWER WEIGHT

Excellent levels of impact resistance at a fraction of the weight of masonry.

None of the drying out delays associated with masonry.

NO WET TRADES

NO CRACKING

Absorb and disperse impact energy, so won't crack and lose integrity like masonry.

Meet demanding performance requirements at a lower wall thickness than masonry – so more space for guests.

SAVE SPACE

QUICKER AND **EASIER**

Easier and quicker to install than masonry, simplifying scheduling and cutting build time.

CHOOSING PARTITIONS

Gyproc High performance, lightweight drywall systems provide equivalent levels of impact resistance at a fraction of the weight and without the construction and drying out delays associated with masonry. They also offer greater flexibility in providing different levels of impact resistance, preventing costly over-engineering, which can impact on both project viability and scheduling, whilst minimising ongoing maintenance and replacement costs.

The use of durable linings is strongly recommended by all Regional Authorities. Durable linings are specified by ESTIDAMA and contribute 1 point in the PEARL rating system, or adding valuable LEED points.

Gyproc wall and partition systems are rigorously tested for impact resistance to BS 5234 and offer the flexibility to achieve all four levels of Duty rating, subject to the type and thickness of lining board used. All will provide moderate resistance for low risk areas, whilst higher performance linings, such as Gyproc FireStop and DuraLine, will meet the more demanding requirements in corridors and high traffic areas. For very high risk areas, our GypWall ROBUST system has been specially developed to offer ultimate impact performance with just a single layer plasterboard lining.

Board type required to achieve a given duty rating

Board type	Maximum rating
Gyproc Regular	Medium
Gyproc FireStop 12.5mm	Medium
Gyproc FireStop 15mm	Heavy
Gyproc DuraLine*	Severe

All Double boarded gyproc systems achieve severe duty rating

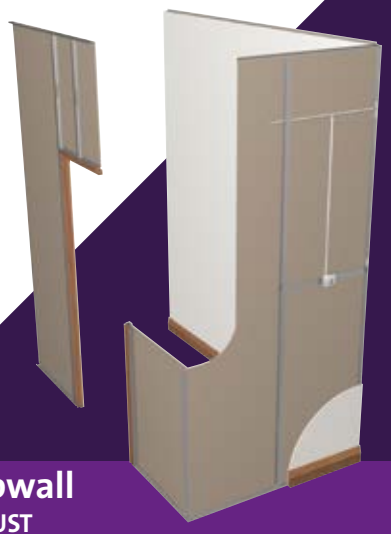
* also achieves abuse resistant classification under ASTM C 1629

Guidance

What should I be aiming for?

British Standard BS 5234 is a popular reference point for designers when choosing partitions. This useful standard includes a series of duty ratings which relate the strength and robustness of a partition system against specific end-use applications, thus helping the specifier to select the appropriate level of performance for each application.

Partition Duty	Category	Examples
Light	Adjacent space only accessible to persons with high incentive to exercise care. Small chance of accident occuring or misuse.	Domestic accommodation
Medium	Adjacent space moderately used, primarily by persons with some incentive to exercise care. Some chance of accident occuring or misuse.	Office accommodation
Heavy	Adjacent space frequently used by the public and others with little incentive to exercise care. Chance of accident occuring or misuse.	Public circulation areas, industrial areas
Severe	Adjacent space intensively used by the public and others with little incentive to exercise care. Prone to vandalism and abnormally rough use.	Major circulation areas, heavy industrial areas



INNOVATION

Gypwall ROBUST

A lightweight metal frame system that has been developed to provide very high impact resistance. It satisfies the most demanding BS 5234 Severe Duty rating, in the thinnest possible solution with just a single layer lining to each side, as well as providing a full 60 minutes fire rating.

HOW CAN I CREATE A HEALTHY INDOOR CLIMATE?

Indoor air quality is becoming increasingly important today, as airtight construction techniques and reductions in natural ventilation, introduced as part of a move to lower energy consumption and reduce air conditioning demands in buildings, allow a build-up of pollutants in the stale internal air.

The pollutants, which are generated by everyday activities, such as cleaning and cooking, and by glues and other chemicals used in floor and wall coverings, cleaning products, furniture and equipment etc., can cause a range of physical and medical problems from eye irritation, coughs and breathing difficulties, to longer term health problems – particularly in guests and staff with respiratory conditions.

Guidance

What should I be aiming for?

Gyproc Activ'Air Boards have been tested for dynamic reduction of formaldehyde against the international standard - ISO 16000. The Activ'Air board removed and converted more than 70% of the formaldehyde into inert compounds with no release, bringing levels of this damaging pollutant to well within the limits suggested by the World Health Organisation.

All Gyproc systems can be supplied with Activ'Air properties giving you clean air choices for every room type with no running or maintainance cost.

Reducing indoor air pollution

It is sensible to consider ways of improving air changes in the building at the design stage, such that exhausted, polluted internal air is regularly replaced by clean fresh air from outside. It is not enough however, to simply open windows and doors to increase ventilation, as this rarely, if ever, provides the level of air change required, and also allows in warm air and pollutants from outside. Careful selection of all building materials is also crucial.

IS INDOOR POLLUTION SUCH A BIG ISSUE?

Studies show that indoor air can be more polluted than outdoor air. Volatile Organic Compounds (VOCs) can be inhaled, affecting not only the concentration, but the health of guest and staff.

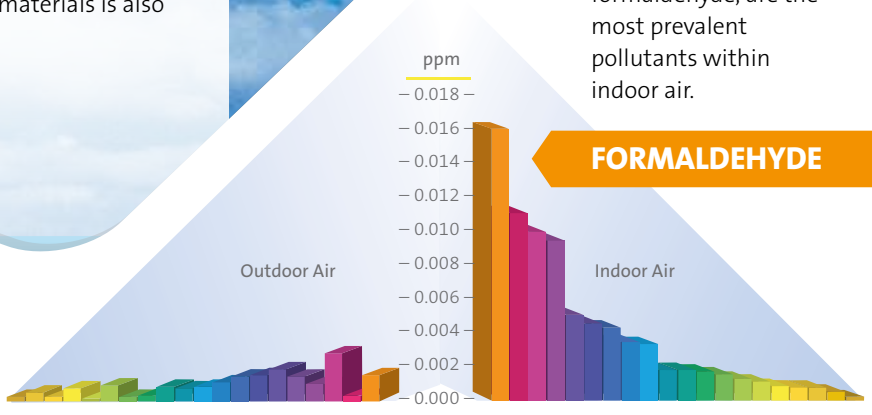
So common has the problem of indoor air pollution become that we've adopted a new term – Sick Building Syndrome (SBS). This is used to explain the situation where occupants experience acute health problems linked to time spent in a building, for which no specific illness or cause can be identified. In 1984, the World Health Organization suggested that up to 30% of all buildings worldwide may be affected.

Nearly 50% of respiratory illnesses, including asthma, are caused or aggravated by poor indoor air. Airborne formaldehyde acts as an irritant to the conjunctiva and upper and lower respiratory tract. It is also proven that formaldehyde poses a potential health threat for cancer, according to the World Health Organization (WHO).

VOC CONCENTRATIONS IN THE AIR

Analysis of chemical concentrations in residences, day care centers and school buildings indicate that VOCs (volatile organic compounds) are the most prevalent pollutants, with signifiantly higher levels in indoor air than in the outdoor atmosphere.

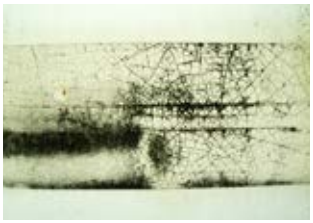
Aldehydes, including formaldehyde, are the most prevalent pollutants within indoor air.



WHY DO I NEED TO THINK ABOUT MOLD & MOISTURE?

Because the UAE does not suffer the extremes of temperature and rainfall common in many European countries, moisture control is often ignored when designing hotels. However, high levels of humidity in the external air and high interior/exterior temperature differentials mean warm, moist air condenses as it enters our buildings, and can quickly cause mold. Daily activities like cooking, bathing and exercising, and even breathing, create more moisture to add to the problem.

Damp and mold can have devastating long term effects, not only on the building structure, but on the health of guests and staff, and must be considered when designing the building.



Can I prevent moisture damage?

It is important to both reduce the opportunity for moisture to enter the building from outside, through airtight construction techniques and by creating positive internal pressure; and to address the issue of moisture generated inside. This can be achieved by the use of fresh air systems, which reduce the need for air conditioning, and localised moisture protection measures.

Particular attention must be paid to tiled areas, such as shower and bathing areas, kitchens etc., where water penetration through gaps and degeneration of grout is not generally obvious until tiles fall away from the wall, by which time the underlying structure could have suffered serious damage.

High performance moisture and mold resistant internal lining systems, such as the new Gyproc M2TECH moisture and mold Resistant system, should therefore be specified at the design stage to prevent difficult and expensive repairs in the future.

Regional authorities, such as the Dubai Green Building Council, encourage the reduction of mold in hotels.

Guidance

What should I be aiming for?

Gyproc Moisture and Mold Resistant Board gives outstanding protection against moisture penetration and achieved the highest possible ratings for mold resistance when tested to ASTM D 3273 and ASTM G 21, the industry standard tests for mold and fungal resistance.

All Gyproc systems can be supplied with a special M2TECH additive designed to prevent mold growth in the building.

WHAT DAMAGE CAN **MOISTURE** AND **MOLD** DO?

If not properly controlled, moisture can cause staining and mold growth on internal walls and ceilings and can reduce the thermal performance of wall and roof structures. It can eventually lead to corrosion of steel components, chemical deterioration of linings, finishes, ceiling tiles and even deterioration of concrete and masonry.

Damp, humid atmospheres create ideal breeding grounds for fungi, bacteria and dust mites, promoting asthma and lung problems, and potentially affecting the long-term health of guests and staff.

WHY DO I NEED TO THINK ABOUT INTERNAL DESIGN AND APPEARANCE?

Design and appearance are crucial in creating a high quality interior environment for the hotel - particularly with internal finishes, which can either deter guests or, if correctly specified, add an extra level of class and sophistication.

Clean lines, attractive curves and open areas create a more relaxed atmosphere for guests, whilst the stunning patterns of perforated linings help to visually break up large expanses of wall and ceiling, whilst controlling sound levels for a more subdued and inviting internal environment.

Dealing with services and fixtures

Surface mounted services and pipework can be ugly and distracting, but can be simply accommodated within or behind lightweight wall and floor systems, to maintain clean building lines. Such systems also enable heavier pipes and flush tanks to be encased, where needed.

When it comes to fixtures, it's easy to accommodate planned loads at the design stage and unplanned loads using a range of specially designed fasteners.

Hyatt Capital Gate, Abu Dhabi - UAE

KEEPING CONTROL OF COSTS

Cost optimisation and budget control are crucial factors in any hotel project, in order to deliver the best quality and value for money.

When considering individual elements, such as internal walls and ceilings, it is important to consider the total installed cost, rather than just cost of materials, as the labour and other costs associated with light weight systems are generally significantly lower than equivalent masonry systems. With heavy masonry systems, for instance, it is also easy to overlook costs such as scaffolding, storage and additional delivery costs, and even the cost of providing a water supply - items which are generally not required when using drywall systems.

COST ADVANTAGES OF GYPSUM PLASTERBOARD SYSTEMS OVER MASONRY/CONCRETE

LIGHTER

- Drywall systems are up to 10 times lighter than masonry
- Lightweight drywall systems can provide savings upto 20% on structural costs
- Less foundations, thinner slabs, greater spans

FASTER

- 50-70% saving in program time
- Ceilings are installed earlier
- MEP works is earlier, simpler, cleaner and quicker
- Far less remedial work

THINNER

- Same performance as masonry in thinner solutions
- Much greater performance in the same space
- No reinforcing columns, beams or lintels required
- Drywall partitions are adjustable
- Useable floor space is increased upto of 5% using Gyproc drywall systems

OTHER SAVINGS ASSOCIATED WITH DRYWALL SYSTEMS

- Weight savings can reduce cost of structural support and foundations
- Time savings in installation can reduce project duration and costs^
- Thinner Partitions increases available floor space and can reduce overall building footprint requirement
- Reduction in vehicle use and costs for deliveries to and around the site
- Reduced safety risks from moving vehicles and congestion on site
- Reduction in storage area requirements

^Significant benefits will be achieved in savings on interest payments and in the early income when construction time is reduced.

Total installed cost (TIC) models

Although, at first sight, blockwork may appear to be a cheaper option, lightweight systems deliver huge savings at all stages of the construction process, from delivery costs to site, less costly foundation and support requirements, to faster and easier installation, so typically provide a much more cost effective option on a total installed cost basis.

Gyproc specialists can provide assistance with TIC models, in order to maximise savings on construction costs

THINKING ABOUT THE ENVIRONMENT

Sustainability

Sustainability is becoming an increasingly important issue in all buildings. It is therefore important to ensure that, as well as designing for maximum energy efficiency and life, all building materials used in their construction should meet demanding sustainability standards.

The gypsum that forms the basis of our high performance wall, partition and ceiling systems is an inherently sustainable material that can be recycled and re-used an infinite number of times. Our systems therefore offer many benefits over more traditional block, sand and cement alternatives.

Ten times lighter than equivalent masonry partitions, our systems need fewer lorries to deliver to site, less crane and other handling once on site, thus cutting vehicle-related CO^2 emissions, and even reduce the depth of foundations, so they cut the amount of concrete and steel needed.

Being a dry solution there is less mess on the jobsite, and bespoke board sizes means less off-cuts and less site waste to take to landfill. When the building is eventually deconstructed there is also less weight and volume of waste to recycle, reducing handling, transport and recycling costs.

Energy Efficiency

Whilst hotels are often complex buildings designed to accommodate a wide range of activities, maintaining optimum temperature and internal climate is an essential element in supporting the living environment. It is therefore important to create an energy efficient structure that will help to reduce energy demands for air conditioning.

INNOVATION

As hotels and hospitality buildings become more complex and technically advanced, we must continually develop technically advanced solutions to meet changing needs – whether it be systems that;

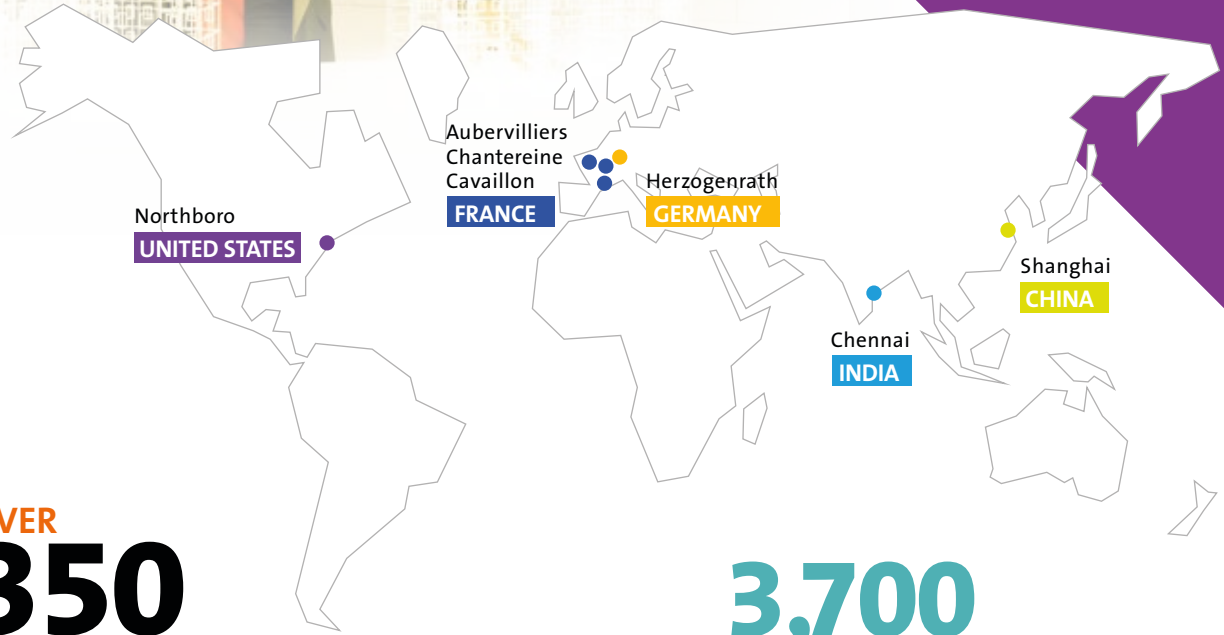
- let us build faster and more efficiently
- enable us to improve safety and reduce waste
- meet ever increasing demands for improved environmental standards and reduce waste
- provide better standards of acoustic and fire protection to provide an improved environment, improved security and relaxation for guests

At Gyproc, innovation is the driver in everything we do. As part of the global Saint-Gobain group, we benefit from an international network of 7 specialist research centres, with upwards of 3700 staff working in the market to develop a constant flow of new and improved products for construction related applications.

This is a significant commitment, that costs us around €400 million every year, but it pays substantial dividends for our customers, who today benefit from an increasingly sophisticated range of products and systems – 1 in 4 of which was not available five years ago

Today, these products and systems are enabling schools throughout the Middle East to be constructed faster to meet demanding treatment targets, whilst helping to create more sophisticated interiors that improve pupil concentration and make teaching more effective. They are cutting overall projects costs – and helping to push forward the boundaries of sustainability, a key consideration in every building project.

7 CROSS-FUNCTIONAL RESEARCH CENTERS



OVER 350
PATENTS FILED IN 2014

3,700
STAFF

ARE THE SOLUTIONS YOU CHOOSE READILY AVAILABLE LOCALLY?

All Gyproc systems utilise standard tested components which are readily available from stockists and merchants locally to meet any building programme. Where very large projects are involved, we will work closely with contractors to arrange a detailed logistical programme to ensure that Gyproc components can be delivered to site to meet even the most demanding schedule.

The building market is evolving very quickly when it comes to environmental issues. Saint-Gobain Gyproc provides training to its customers, enabling them to keep their skills up-to-date with the latest regulations and technologies.

TRAINING & TECHNICAL SUPPORT

Backed by the knowledge and expertise of the world's leading manufacturer and innovator of lightweight wall and ceiling systems, Gyproc provides unrivalled support throughout the design and construction phases of the project – and beyond.

From help with system selection and detailing, production of drawings and technical advice, Gyproc will be there to support you and your staff at every stage.

And once the job gets to site, our specialist training staff can quickly get your installers up to speed on individual systems and good practice, as well as key issues like safe handling and waste minimisation.

4000+
installers trained by Gyproc Middle East since 2011

TRAINING ON OFFER

Gyproc Middle East offer a wide range of training courses for installers, site supervisors or managers and distributors covering a variety of subjects:

- Basic system introduction for newcomers to drylining techniques.
- Advanced system installation for demanding constructions.
- Performance characteristics including; moisture, fire, acoustics, impact, mold and indoor air quality.
- Aesthetics in the form of curved partitions or perforated acoustic wall and ceiling systems.
- Finishing plasterboard systems though taping and jointing or skimming with gypsum plasters.
- Total install cost benefits and the sustainability measures achievable with drylining systems.
- Understanding our products and systems and how to sell them.

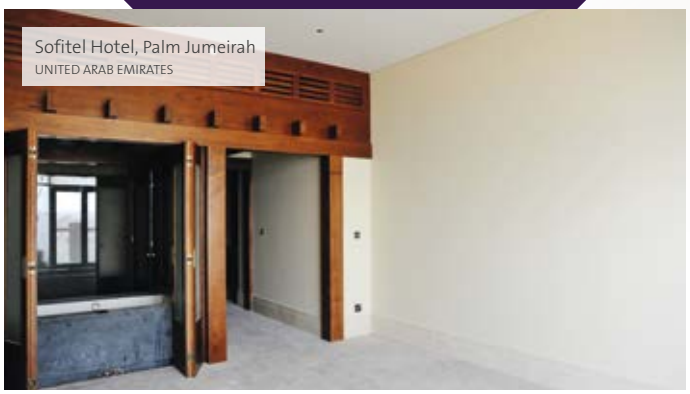
PROJECT REFERENCES

Middle East Project References

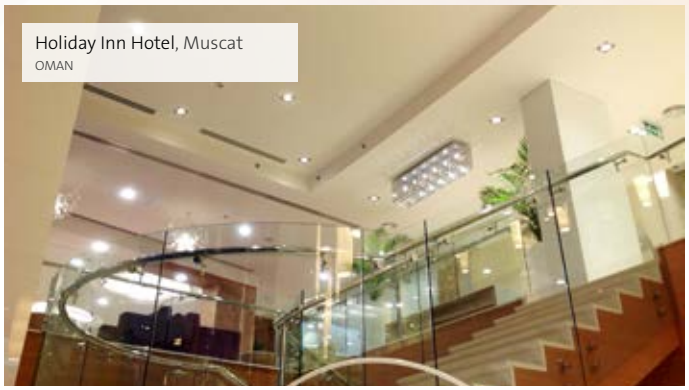
Find below a selection of hotels we have worked on extensively:

- **Rosemont Hotel**, Abu Dhabi - United Arab Emirates
- **Yas Viceroy Abu-Dhabi**, Abu Dhabi - United Arab Emirates
- **The Regis Saadiyat Island Resort**, Abu Dhabi - United Arab Emirates
- **Hilton Al Edafah Hotel**, Abu Dhabi - United Arab Emirates (under constructions)
- **Atlantis Hotel, Palm Jumeirah,** Dubai - United Arab Emirates
- **BVLGARI Resort & Residences**, Dubai - United Arab Emirates
- **Mina Siyahi Hotel and Resort**, Dubai - United Arab Emirates
- **Madinat Jumeirah - Phase 4**, Dubai - United Arab Emirates
- **Hyatt Regency, Deira,** Dubai - United Arab Emirates
- **Lapita Hotel, Dubai Parks & Resorts** - United Arab Emirates
- **Ibis Hotel**, Doha - Qatar
- **Adagio Hotel**, Doha - Qatar
- **Rocco Forte Hotel**, Jeddah - Saudi Arabia
- **Crowne Plaza,** Duqm - Oman

Hyatt Capital Gate Hotel, Abu Dhabi
UNITED ARAB EMIRATES

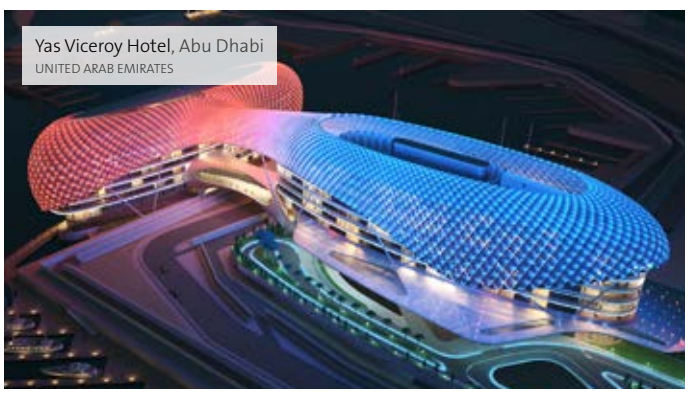


Sofitel Hotel, Palm Jumeirah
UNITED ARAB EMIRATES



Holiday Inn Hotel, Muscat
OMAN

Bab Al Shams, Dubai
UNITED ARAB EMIRATES



Yas Viceroy Hotel, Abu Dhabi
UNITED ARAB EMIRATES

RECOMMENDED SOLUTIONS

In any hotel environment, the design and specification of interior spaces must be appropriate for the individual functions they serve. However, it is possible to identify major spaces or areas which have similar needs, such as guestrooms, corridors, bathrooms, administrative areas and other more specific areas, such as back of house, meeting rooms and restaurants.

Requirements will vary, depending on international standards and operator guidance, the location and use of the particular space. The following table shows some of the key performance areas to consider:

ELEMENT	KEY PERFORMANCE PARAMETERS			
	Sound Insulation	Fire Resistance	Aesthetics	Moisture Resistance
GUEST AREAS (Guestrooms, corridors, bathrooms, shaft areas)				
Wall between two guest bedrooms	✓	✓		
Wall between guestroom and corridor	✓	✓		
Wall between bathroom and corridor	✓	✓		✓
Wall between two bathrooms	✓	✓		✓
Shaft wall	✓	✓		✓
Internal wall in bathroom				✓
Guestroom ceiling				
PUBLIC AREAS (Hotel lobby, conference and meeting areas, corridors, offices, lounge areas, spas and gyms, restaurants)				
Banquet hall walls	✓	✓	✓	
Meeting rooms	✓			
Conference rooms	✓	✓		
Public area toilets	✓	✓		✓
Walls between business centers	✓	✓		
Walls between office an public area			✓	
Ceilings in conference room and meeting rooms (acoustical)			✓	
Ceilings in banquet hall and restaurants (acoustical)			✓	
BACK OF HOUSE (Food preparation and storage areas, offices, housekeeping, staff canteens, laundry, stores)				
Canteen walls (acoustical)	✓	✓		
Corridor walls	✓	✓		
Laundry and kitchen walls	✓			✓
Public toilets wall				✓
Administrative office wall (acoustical)	✓			
Ceilings in administrative office			✓	
Ceilings in wet areas				✓
Ceilings in back of house		✓	✓	

SOLUTIONS FOR THE GUESTROOM

EXPECTATIONS

- Acoustic privacy and comfort for guests
- Guest privacy
- Reduced levels of sound transmission
- Fire resistance and sound insulation
- Satisfies BS 5234 requirements up to and including Severe Duty

1 GUESTROOM to GUESTROOM/ PANTRY/ STAIRCASE AND BACK OF HOUSE

GypWall QUIET

120 min | 60 dB | Severe Duty

Gypwall QUIET - 50mm Gypframe 'C' Stud 1x15 FireStop + 1x15 Duraline & 50mm Isover APR Insulation

Partition thickness	**200mm**
Approx. Weight	**57kg/m²**

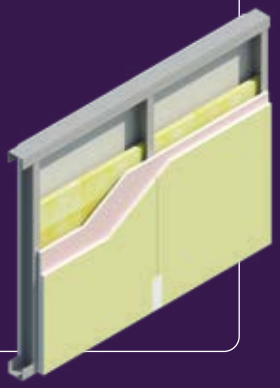
2 GUESTROOM to CORRIDOR

GypWall CLASSIC

120 min | 55 dB | Severe Duty

Gypwall CLASSIC - 70mm Gypframe 'C' Stud 1x15 FireStop + 1x15 Duraline & 50mm Isover APR Insulation

Partition thickness	**132mm**
Approx. Weight	**56kg/m²**



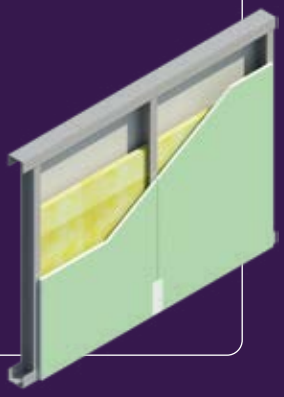
3 BATHROOM WALL in GUESTROOM

GypWall CLASSIC

30 min | 45 dB | Severe Duty | Moisture resistant

Gypwall CLASSIC - 70mm Gypframe 'C' Stud 1x15 Moisture Resistant + 1x15 Duraline & 25mm Isover APR Insulation

Partition thickness	**102mm**
Approx. Weight	**26kg/m²**



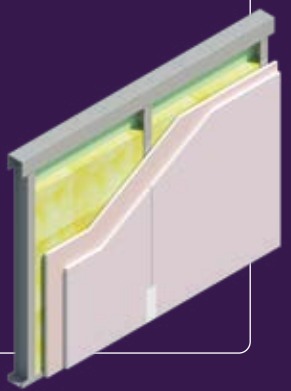
4 GUESTROOM RISERS

Gyproc ShaftWall

120 min | 45 dB | Severe Duty

Gypcroc Shaftwall Sealed System - 70mm Gypframe 'I' Stud 1x15 FireStop Moisture Resistant + 1x15 FireStop & 50mm Isover APR Insulation

Partition thickness	**102mm**
Approx. Weight	**43kg/m²**



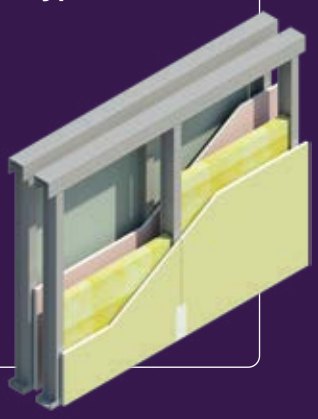
5 GUESTROOM adjacent to SHAFT

Gyproc ShaftWall

120 min | 50 dB | Severe Duty

Gypcroc Shaftwall Sealed System 70I70 Gypframe 'I' Stud 1x15 + 1x15 FireStop + GypLyner IWL 1x Duraline

Partition thickness	**200mm**
Approx. Weight	**46kg/m²**



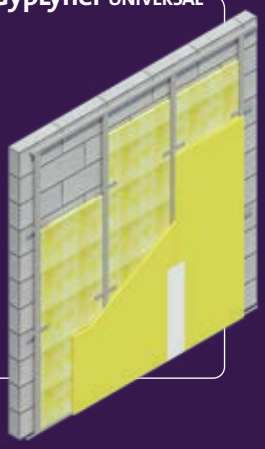
6 GUESTROOM MASONRY WALL LININGS

GypLyner UNIVERSAL

60-240 min DEPENDS ON BLOCK | 50-75 dB DEPENDS ON BLOCK | Severe Duty

GypLyner UNIVERSAL - 1x15 Duraline & 25mm Isover APR Insulation

Partition thickness	**50mm**
Approx. Weight	**15kg/m²**



SOLUTIONS FOR BUSINESS AND CONFERENCE CENTRE

EXPECTATIONS

- Surrounding partitions should stop noise being transferred in and out of the room
- Fire resistance and sound insulation
- Satisfies BS 5234 requirements upto and including Severe Duty

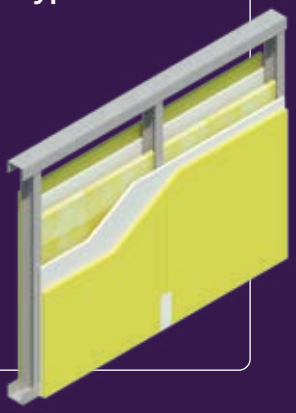
7 MEETING ROOMS BASIC

GypWall CLASSIC

90 min | 54 dB | Severe Duty

Gypwall CLASSIC 70mm 'C' Stud 1x12.5 Regular board + 1x15 Duraline & 50mm Isover APR Insulation

Partition thickness	**127**mm
Approx. Weight	**46**kg/m²



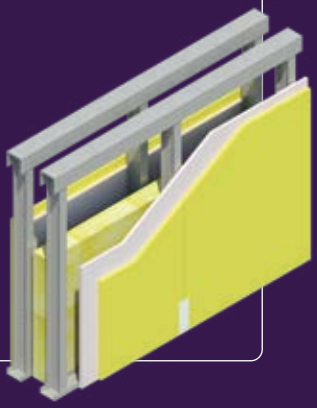
8 BALLROOM WALLS

GypWall QUIET

120 min | 68 dB | Severe Duty

GypLyner QUIET - 70I70 'I' Stud 1x15 FireStop + 1x15 Duraline & 100mm Isover APR Insulation

Partition thickness	**300**mm
Approx. Weight	**55**kg/m²



OTHERS

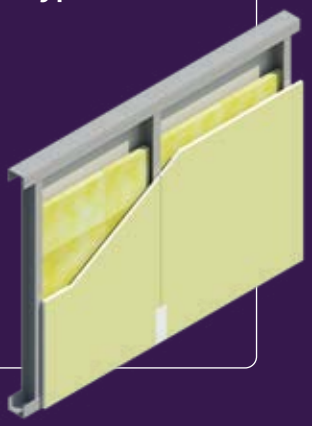
9 CORRIDOR to BACK OF HOUSE

GypWall ROBUST

60 min | 47 dB | Severe Duty

Gypwall ROBUST - 70mm Gypframe 'C' Stud 1x15 + 1x15 Duraline & 25mm Isover APR Insulation

Partition thickness	**102**mm
Approx. Weight	**29**kg/m²



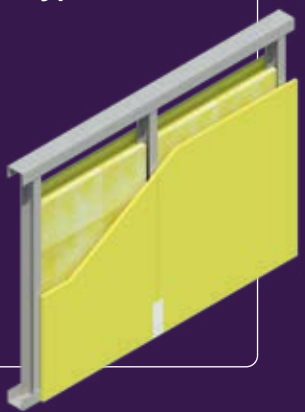
10 BACK OF HOUSE to SHAFTS

GypWall ROBUST

120 min | 42 dB | Severe Duty

Gypwall ShaftWall System 70I70 Gypframe 'I' Stud 1x15 + 1x15 FireStop + 1x15mm Duraline

Partition thickness	**102**mm
Approx. Weight	**45**kg/m²



CONTROL OF SOUND

- **Conference & Business Rooms**
  With better room acoustics the success of an event is much higher
- **Lobby & Reception**
  Guests can talk in privacy with reception staff
- **Corridors**
  Running, shouting, and general excitement is contained and does not echo through the building
- **Restaurants & Bars**
  Music should be clear and you should be able to converse and hear each other – clearly.
- **Back of House**
  With so much industrial noise, staff needs to concentrate and be able to make decisions without the annoyance and disturbance of nuisance noise.

GUESTROOM CEILINGS

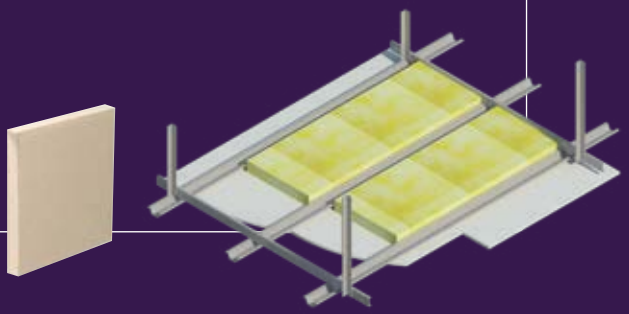
Gyproc MF Ceiling System with REGULAR BOARD

60-240 min
DEPENDS ON SOFFIT

50-75 dB
DEPENDS ON SOFFIT

Gyproc MF Ceiling - 1 x 12.5mm Regular board & 50mm Isover APR Insulation

Approx. Weight **9.5**kg/m²



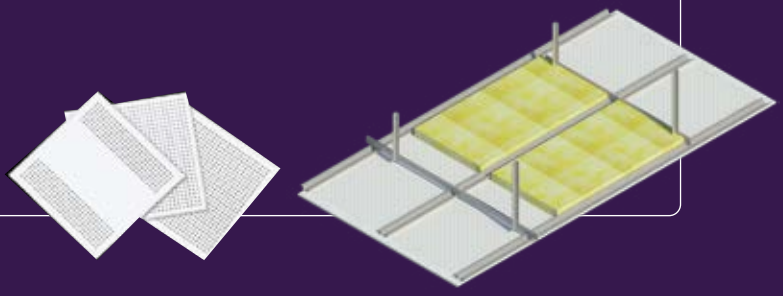
CORRIDOR CEILINGS

Gyproc MF with GYPTONE Ceiling System

0.6 – 0.85
C αW
ABSORPTION CLASS

Gyproc MF Ceiling - 1 x 12.5mm Gyptone board & 50mm Isover APR Insulation

Approx. Weight **9.5**kg/m²



BATHROOM AND KITCHENS

Gyproc MF with MR BOARD

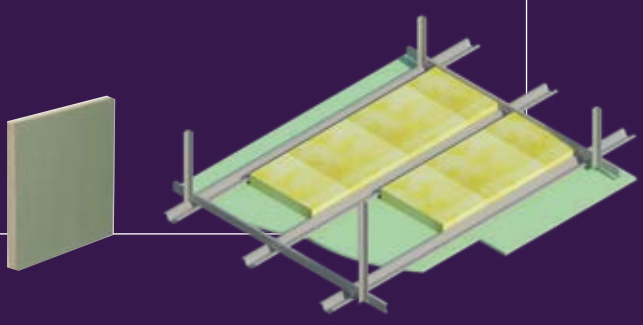
60-240 min
DEPENDS ON SOFFIT

50-75 dB
DEPENDS ON SOFFIT

M2TECH Moisture resistant

Gyproc MF Ceiling - 1 x 12.5mm Moisture Resistant board & 50mm Isover APR Insulation

Approx. Weight **10**kg/m²



available with ACTIV air

available with M2TECH MOISTURE & MOULD RESISTANT

Eligible for the **SpecSure warranty** from Gyproc

FUTURE PROOF

SYSTEM WARRANTY

SpecSure

SpecSure is a unique 'off the shelf' warranty to end users that confirms Gyproc proprietary systems will perform to the parameters published in our current literature from the day they are installed. SpecSure - a warranty for the future performance of your system.

The Gyproc promise

SpecSure is your guarantee that the system you have chosen:

- **Comprises only the highest quality components, designed to work individually and together to deliver the specified level of performance.**
- **Has the technical expertise and experience of the Middle East's leading drywall specialists behind it.**
- **Has been tested at UKAS approved fire, acoustic, and structural test laboratories.**
- **Has been site tested to demonstrate installation integrity and simplicity.**
- **Will be supported as required at every stage of the project by the Middle East's leading on and off-site technical support personnel.**
- **Will perform to published parameters when installed to our recommendations.**
- **Will be replaced in the unlikely event of system failure attributed to; products manufactured outside published standards and system performance outside of published standards.**

0010-CERT-02 May 2014

To qualify for SpecSure

- Specify and install Gyproc systems in line with the recommendations in the current White Book - Middle East Edition. (www.gyproc.ae/literature.html)
- The systems must comprise only genuine branded Gyproc components (**Gyproc, Gypframe, Aquaroc and Glasroc**), tried and tested in buildings for many decades.
- We cannot guarantee that the use of other manufacturers' components will meet our rigorous performance and quality standards when installed in our tested systems.

Paul Button
Managing Director

SpecSure - guaranteeing the future of drywall

For further information on **SpecSure** system warranty, contact our Gyproc Technical Team on +971 800 GYPROC (497762) or email gyproc-me@saint-gobain.com

Gyproc SAINT-GOBAIN

All together covered

What you get with SpecSure

The best components

All Gyproc systems are precision engineered to provide the right level of performance for your building. They comprise high quality branded components – Gyproc plasterboards, Gypframe metal products, Aquaroc fibre cement boards and Glasroc specialist boards – developed specifically to work together to provide the widest range of market leading wall, ceiling, floor and encasement solutions in the Middle East. These individual components are manufactured to, and often surpass, all relevant test standards.

A range of systems designed for today's buildings

Our systems have been purpose-designed by experienced technicians to meet the challenging needs of today's increasingly demanding buildings. Whether it is straight forward partitions or sophisticated shaft wall systems for high speed lift shafts - every aspect is taken into consideration, from performance to speed and ease of installation – and from safe handling to the ready availability of components, across the Middle East.

Guaranteed performance

The systems are exhaustively tested at UKAS approved testing laboratories including our own in the UK. Amongst the best-equipped and most advanced drywall testing facilities in Europe and around the World where technicians are able to test full size panels for fire and acoustic performance and structural integrity up to 15 metres in height, our laboratories have more than 10,000 actual test and substantiation reports already available to underpin the performance of Gyproc systems.

Full technical support

Gyproc is the leading authority on drywall systems, with a full team of designers, technicians, trainers and qualified technical advisors to help with every aspect of system design and installation, including:

- Full technical support at the design stage, including specification advice and provision of full specification documentation to support the design requirements.
- A complete range of test certificates; including fire and acoustic performance, and product specific technical data sheets.
- On-site guidance throughout the installation process.
- Off-site training of operatives and supervisory personnel through our network of purpose built training centres.

The backing of the world leader in gypsum products

Gyproc is the worldwide market leader and recognised authority on drywall systems, with expertise and experience gained during more than a century of supporting the construction industry. It is a part of Saint-Gobain, the world leader in plaster and plasterboard, whose worldwide operations encompass more than 50 countries.

SpecSure – system performance future proofed

Gyproc
SAINT-GOBAIN

Aloft Hotel, Abu Dhabi
UNITED ARAB EMIRATES

St. Regis, Amman
JORDAN

Hyatt Capital Gate Hotel, Abu Dhabi
UNITED ARAB EMIRATES

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