SAINT-GOBAIN

INTRASTACK
STEEL FRAME

› CREATING CERTAINTY AT THE CORE OF ANY STEEL FRAME PROJECT.

intrastack

WORKING WITH INTRASTACK

HOW DOES IT WORK?

Light gauge steel construction can deliver fast, adaptable and cost-effective buildings at multiple storey heights. The Intrastack offer is designed to further enhance these strengths through the application of off-site manufacturing principles. By implementing Intrastack, the need for teams to deliver on-site construction is dramatically reduced, alongside improvements in quality, greater speed of installation and lower risk.

The solution includes pre-assembled structural components for walls, floors and roofs, available in open and closed panel options. Through our flexible design and manufacturing approach, we have the ability to work across multiple LGSF technologies, enabling us to optimise the load-bearing structure for each project. We pre-stage your delivery, working with your chosen installation service to make sure your panels are delivered and erected in sequence, ready for the follow on trades.

Intrastack's compelling panelised light gauge steel frame solution has been developed to support the delivery of multi-storey, multi-occupancy residential & commercial projects, along with cost-effective low-rise housing solutions.

The benefits of implementing the Intrastack system for your project include:

Accurate panel construction means less work on site

Factory driven quality means fewer snags and rework

Fast and clean construction improves speed of delivery

Flexibility of procurement and installation does not restrict your supply chain

A cost efficient and durable off-site solution that is simple to implement

Construction details that are designed to work with Saint-Gobain products, if required.

We offer developers and contractors seamless solutions that are progressive, innovative and efficient, whilst being cost-effective, providing quick returns on investment, and reducing risk on-site.

For more details visit **www.intrastack.co.uk**

CUSTOMER SECTORS
WORKING WITH YOU

WE WORK WITH YOU AND YOUR SUPPLY CHAIN

We provide a flexible, adaptable, partnership approach to suit your own supply-chain and project-specific requirements.

Our philosophy is to work with you, and your wider team as early as possible, and throughout your project, ensuring that the Intrastack process is smooth, efficient, and customer-centric.

We work across the majority of multi-occupancy residential & commercial projects, typically up to 8 storeys, but with the ability to deliver fully load-bearing structures up to 12 storeys. We also offer low-rise, affordable housing solutions. From assisted living to student accommodation, we can provide a solution to suit your project requirements.

- **Clients, Developers & Architects**
- **Principal Contractors**
- **Sub-Contractors & Specialist-Installers**
- **Affordable & Social Housing**
- **Care Homes & Assisted Living**
- **Hotels**
- **Multi-Storey Projects**
- **Apartments**
- **Student Accommodation**

BENEFITS

KEY BENEFITS OF LGSF TECHNOLOGIES

CREATING CERTAINTY AT THE CORE OF ANY STEEL FRAME PROJECT

Light gauge steel construction can deliver fast, adaptable and cost-effective buildings to multiple storey heights. The Intrastack system is designed to further enhance these strengths through the application of off-site manufacturing principles.

By implementing Intrastack, the on-site labour requirement and build-programme is dramatically reduced, alongside improvements in quality, health & safety, and overall site-productivity.

The Mall, Ealing

Life Span

The NHBC and other housing warranty providers accept LGSF structures as having a life span in excess of 60 years, however the predicted life span of a steel framed building with warm wall construction is over 250 years.

Fire Protection & Performance

Unlike timber frame, during construction of steel frame structures, fire protection is not required. Intrastack LGSF structures can offer up to 120 min fire performance based on our tested configurations.

Safety

When using pre-panellised LGSF structures the HSE states that site safety is improved by a factor of 5 through the reduction in site labour, reduced working-at-height, less waste on site (trip hazards).

Construction Predictability

Due to the nature of off-site construction, LGSF is less reliant on site and weather conditions, along with the usual 'wet-trade' labour resources.

Dimensional Stability

LGSF construction is a dry process eliminating shrinkage after construction, steel sections do not suffer from creep, shrinkage or warping under load.

Weight Reduction

A lightweight steel frame structure can be up to 70% lighter than a traditional structure, resulting in lighter and cheaper foundations and podium structures.

Design Flexibility

Our LGSF construction kit-of-parts, combined with our forward-thinking approach to structural design, provides maximum flexibility to meet almost all building typologies and floorplans.

Reduced Carbon Footprint

Considerable reduction in production of on-site waste material, and up to 20% reduction in embodied carbon in building fabric.

Speed of Construction

Intrastack, pre-panellised structures can improve the overall construction programme by 50%, providing a much quicker ROI for your project.

System Robustness

Intrastack structures offer the option of a composite concrete floor, delivering a quality under foot feel to all levels of the building. We can also provide acoustic and durability upgrade options to all structural walls beyond regulatory performance.

Quality & Accuracy of Build

The accuracy and precision of LGSF technology (up to 1mm per structural storey height), allows for a more exacting interface with finishing systems, leading to higher levels of quality & performance.

Increased Productivity

An Intrastack framed building can be constructed up to 50% faster than a traditional structure, leading to reduced site preliminaries, reduced plant costs, and an earlier ROI.

The Mall, Ealing

ABBEY WALL APARTMENTS
CASE STUDY

Steel frame system from Intrastack reduces construction time by over a third at Abbey Wall development.

A six-storey apartment block at the Abbey Wall development in Merton, Southwest London, constructed over a third faster than traditional concrete methods, while mitigating on-site safety risks, thanks to a pre-manufactured steel framed system from Intrastack.

Constructed in just 25 weeks by RJB Interiors (RJB) for main developer, Indigo Scott, the mixed-use residential scheme comprises 66 apartments and a commercial unit to the ground floor.

- Six-storey apartment block
- LGSF structure installed in 25 weeks
- 66 apartments and a commercial unit to the ground floor
- Reduced build time by approx. 15 weeks
  (versus traditional concrete build)

Please refer to our online case studies page for detailed information on the projects:
www.intrastack.co.uk/projects

A QUICKER RETURN-ON-INVESTMENT

Due to the six-storeys and composite concrete floor, a lighter, more versatile structure was required to support the construction. The developer opted for Intrastack's light gauged steel system. Not only was it able to provide the right strength and weight-bearing capacity, but it also enabled the team to speed up the construction programme to deliver a quicker return-on-investment.

A typical concrete frame project of this size would likely run to a 30-week programme to install the frame, followed by a further 10 weeks of exterior wall construction. In contrast, the Intrastack solution was installed fully in just 25 weeks.

Critical to the project's success was the ability to manufacture the steel frame off-site, using a just-in-time approach to help improve build times and eliminate on-site fabrication. This process was carefully coordinated with planned delivery sequences to complement the build programme and ensure a seamless installation process.

ACCURATE & LONG-LASTING SOLUTION

Accuracy of the finished structure was to within just a couple of millimetres. Combined with the average lifespan of a steel framed building with warm wall construction, which can be as much as 250 years, the overall result is a high-quality, durable solution.

The Intrastack solution is designed to provide the full primary structure in multi-occupancy buildings; it is delivered pre-panelised to site for installation to create the finished load-bearing structure. According to the Steel Construction Institute, a key benefit of this type of lightweight steel frame construction system is that foundation loads and sizes are reduced by over 70 per cent relative to concrete and blockwork construction.

EFFICIENT & COST-EFFECTIVE

Matthew Kirby, Commercial Director from RJB Interiors explains:

"We spent approximately 15 weeks less on site than would have been required with a concrete frame construction and this clearly translates into both labour and plant cost savings, estimated to be in the region of £60,000."

"Fabricating the panels off-site in a quality, process-driven manufacturing environment has helped to reduce health and safety concerns."

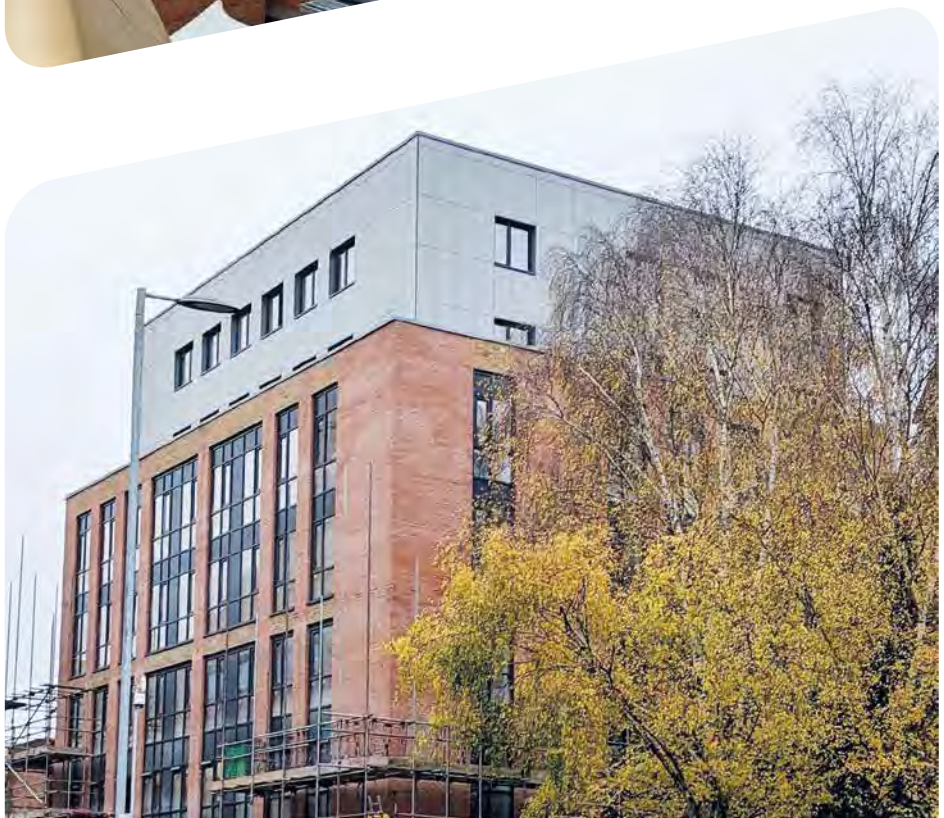
"In particular, the off-site manufacturing techniques meant that waste was handled in a controlled environment, and we had confidence that any off cuts would be either reused or disposed of responsibly. This is a significant benefit on site, and we estimate that waste was reduced by as much as 50 per cent, plus the associated time of processing and managing waste disposals."

IMAGES STUDENT ACCOMMODATION
CASE STUDY

Off-site steel frame system transforms Worcester nightclub into student halls

The former site of Images Nightclub in Worcester has been transformed into 83 student flats, with Intrastack supplying the steel-frame structure and the installation being undertaken by installer, Intastruct, on behalf of the main developer, Spec Projects.

Intrastack, part of the Saint-Gobain Off-Site Solutions division, manufactured and delivered the light gauge steel frame (LGSF) system which saw three installers erect the seven-storey student accommodation block in just 10 weeks.



- Seven-storey student accommodation
- Five self-supporting storeys of LGSF atop a two-storey concrete base
- Structure completed in just 10 weeks
- 83 student flats made available for private rent

Please refer to our online case studies page for detailed information on the projects:
www.intrastack.co.uk/projects

THE DEMAND

With over 10,000 students at the University of Worcester, local plans to increase purpose-built accommodation aim to reduce pressure on the on-street rental market, in order to free up accommodation for families. Meanwhile, meeting the specific needs of students with purpose-built and managed schemes makes the city an attractive prospect to future learners.

THE PROJECT

The old Images nightclub site, demolished late in 2021, now houses the new seven-storey accommodation. The building comprises five self-supporting storeys of light gauge steel frame panels atop a two-storey concrete base.

The speed of construction was noticeable to onlookers, as the work took place over just 10 weeks – a reduction from the originally scheduled 12 weeks – and was noted as one of the reasons for the developers choosing LGSF for the project in the first place. The system also required fewer installers on-site at any given time, with the majority of the work completed by a team of three.

Rapid turnaround of design and materials, as well as the speed of installation and safety benefits, were also indicated as reasons for going with off-site steel frame manufacture. Capitalising on LGSF's shorter construction times can provide developers with a quicker return on investment, as students are able to move in sooner than they would be able to with a traditional build.

The build site, which was first used over 150 years ago, is very restricted with limited space available for storage of the steel panels needed for the construction. Intrastack scheduled and delivered the panels to the site on a 'just-in-time' basis, working with the installer to ensure materials were on site as and when they were needed. This also reduced the waste on-site at any given time, with all system elements arriving cut to size.

THE RESULTS

Andy Higson, Business Director at Intrastack, said:

"An off-site approach is essential to deliver on the scale required. LGSF systems can help developers to build accommodation faster while tackling on-site challenges such as safety risks and labour shortages. When you discover how much smoother it makes the process, it becomes a no-brainer."

Paul Hazelwood, Contracts Manager at Intastruct, the system installers, said:

"There's no doubt that the steel frame system sped up the job, and allowed us to comfortably build a storey every two weeks. It's a fast system, and incredibly robust."

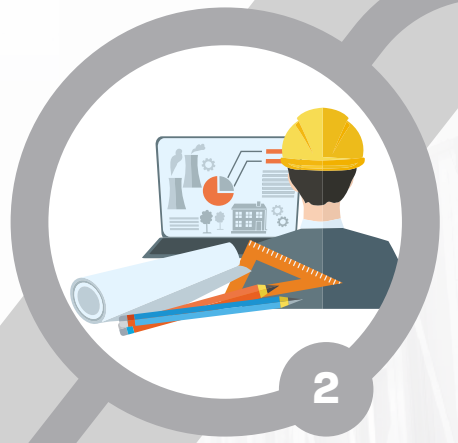
"I also found Intrastack a pleasure to work with. Glitches were minimal and ironed out immediately. In fact, we received great management and support from day one until after the project is complete. I would certainly recommend this system to other developers as the best way to build multi-storey projects."

WORKING WITH INTRASTACK
MILESTONES

THE INTRASTACK PROCESS

Intrastack's focus is on having the earliest possible involvement with your project. Through this approach we can ensure that the Intrastack LGSF system is optimised to meet your specific project requirements, and that waste, inefficiency, and unnecessary cost is designed out – whilst providing a smooth, professional, and excellent customer-experience.

INTRASTACK LIGHT-GAUGE STEEL FRAME (LGSF)
CUSTOMER JOURNEY



Our project milestone check points guarantee each project is on track - and stays that way.

Key Milestone 1:
Preparation & Brief

- Project and building performance specification details discussed
- Intrastack system design guidance & example details reviewed
- Intrastack system accreditation information provided
- Key project supply-chain contacts established

Key Milestone 2:
Concept Design

- Sharing of architectural designs
- Feasibility study completed
- Intrastack Installers introduced to Principal Contractor
- Budget costing & outline installation programme developed

Key Milestone 3:
Technical Design

- Detailed quotations to Intrastack Installers
- Intrastack Installer selected, then appointed by Principal Contractor
- Installer places design & supply order with Intrastack
- Upon design-freeze, a full set of General Arrangement drawings are produced for pre-manufacture review

Key Milestone 4:
Manufacture & Assembly

- Site call-off schedule agreed between the Installer and Intrastack
- Intrastack commences panel manufacture & assembly for call-off
- Any site-applied sections, stairs, balconies are fabricated ready for call-off

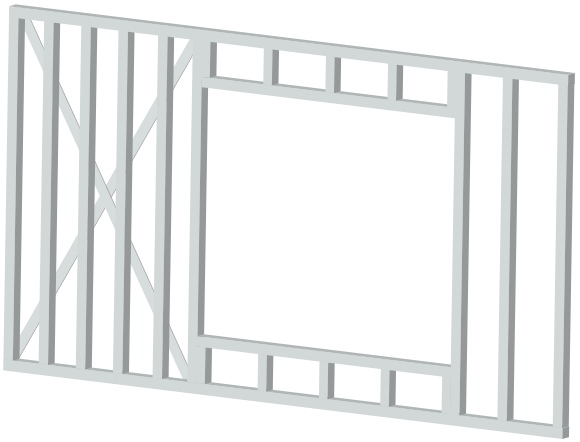
Key Milestone 5:
On-Site Installation

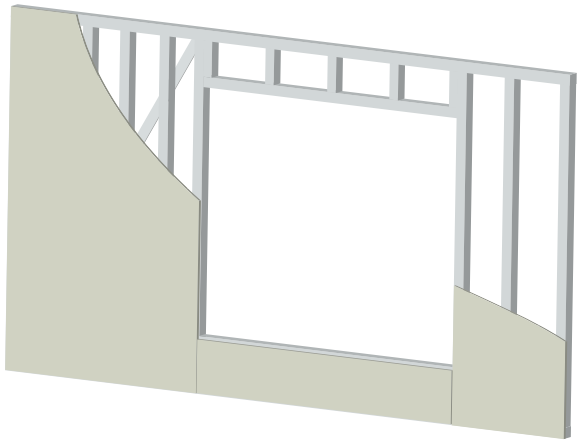
- Intrastack system components delivered to meet schedule
- Intrastack installation take places with regular on-site visits throughout
- Engineering & technical support provided if required

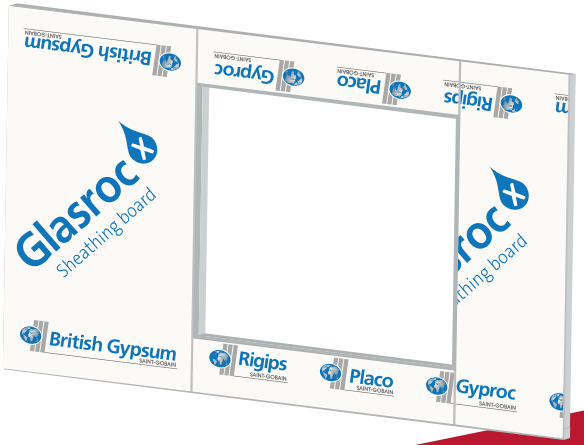
Key Milestone 6:
Handover

- Intrastack system-installation completed
- Any project-specific documentation & warranties provided
- Complete project information pack issued
- Post-project review meeting held

› INTRASTACK
STEEL FRAME







As standard, Intrastack steel frame panels are provided without insulation. External facing panels are supplied with a British Gypsum Glasroc X cladding.

*

The following pages show indicative tested wall constructions that have been fire tested with Saint-Gobain products, provided for illustration purposes only at concept stage. Test data is available for review, upon request. These designs are not to be considered specification advice, nor should they replace project specific design undertaken by qualified specialists.

For detailed information regarding the performance of the materials mentioned, please visit:
www.british-gypsum.com/literature/white-book

LOAD BEARING WALLS

60MIN INTERNAL LOADED PARTITION
GYPROC SOUNDBLOC

60MIN INTERNAL LOADED PARTITION
GYPFRAME RB1 RESILIENT BAR

60MIN INTERNAL LOADED WALL
GYPROC HABITO

60MIN EXTERNAL LOADED WALL
SOUNDBLOC & GLASROC X

60MIN EXTERNAL LOADED WALL
FIRELINE & GLASROC X

60MIN EXTERNAL LOADED WALL
FIRELINE & CEMBRIT

90MIN EXTERNAL LOADED WALL
FIRELINE & GYPROC HABITO

90MIN EXTERNAL LOADED WALL
100MM POLTERM MAX PLUS

90MIN EXTERNAL LOADED WALL
FIRELINE & GLASROC X

120MIN EXTERNAL LOADED WALL
FIRELINE & GLASROC X

60MIN INTERNAL LOADED PARTITION
GYPROC SOUNDBLOC

TESTED IN ACCORDANCE WITH BS EN 1365-1:2012

WALL BUILD UP:*

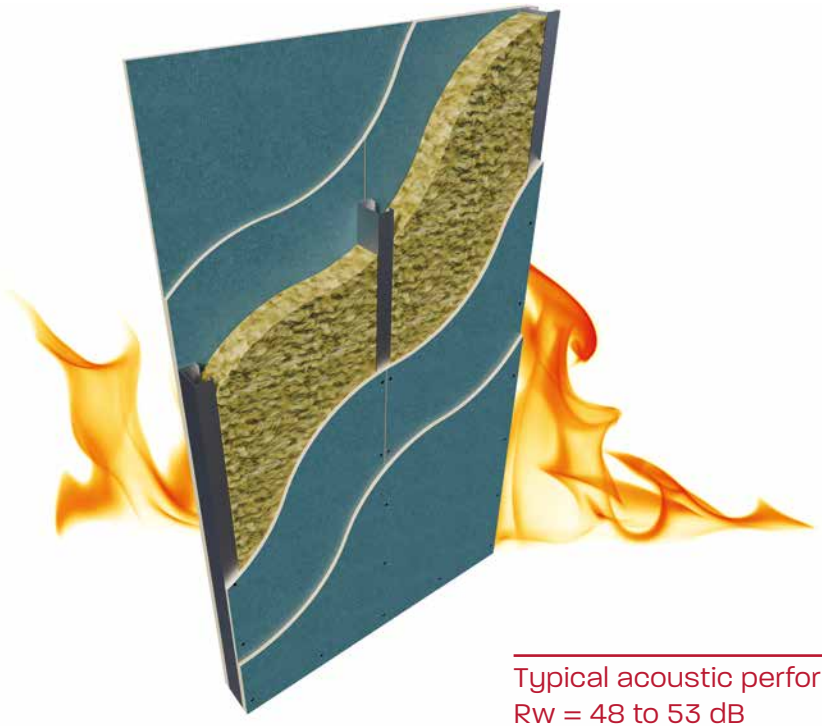
- 2 layers 15mm British Gypsum Gyproc SoundBloc plasterboard (fireside)
- 100mm Intrastack loadbearing steel frame
- 100mm Isover Acoustic Partition Roll (APR 1200) in stud zone
- 2 layers 15mm British Gypsum Gyproc SoundBloc plasterboard (non-fireside)

FIRE TEST RESULT:

- 60 minutes
- Tested in accordance with BS EN 1365-1:2012
- Tested load 60kN
- Suitable for internal wall within dwelling

APPLICATION RESTRICTIONS:

- Minimum stud depth 100mm
- Maximum stud centres 600mm
- Minimum stud metal gauge 1.2mm



Typical acoustic performance:
Rw = 48 to 53 dB

Disclaimer:
* Restrictions apply for material specification and fixing details for the testing to be relevant. These will be accounted for within the Intrastack design platform.
All testing information to be applied using the direct field of application of the results.

60MIN INTERNAL LOADED PARTITION

GYPFRAME RB1 RESILIENT BAR

TESTED IN ACCORDANCE WITH BS EN 1365-1:2012

WALL BUILD UP:*

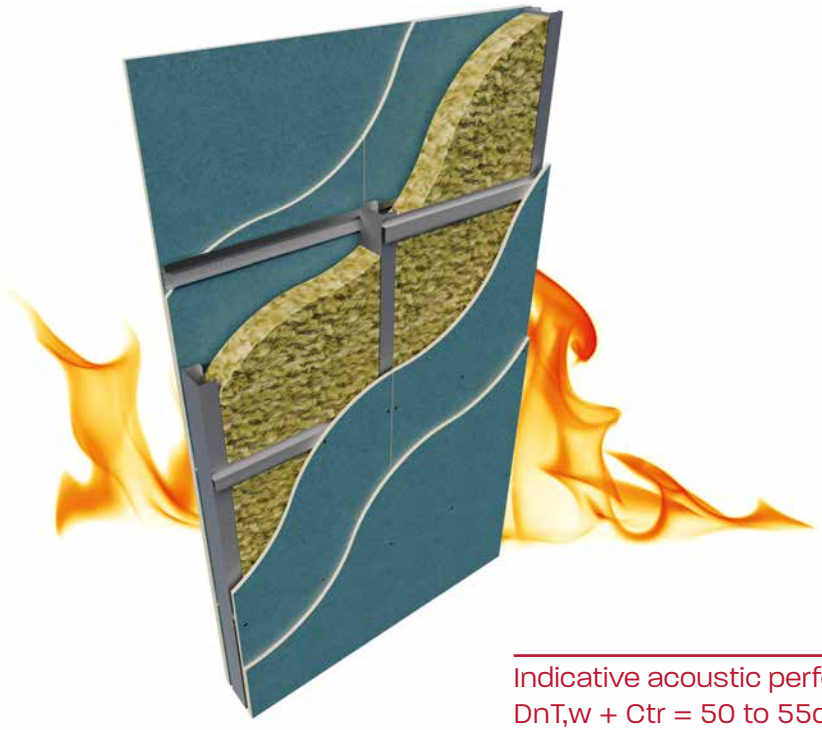
- 2 layers 15mm British Gypsum Gyproc SoundBloc plasterboard (fireside)
- British Gypsum Gypframe Resilient Bar (RB1)
- 100mm Intrastack loadbearing steel frame
- 100mm Isover Acoustic Partition Roll (APR 1200) in stud zone
- British Gypsum Gypframe Resilient Bar (RB1)
- 2 layers 15mm British Gypsum Gyproc SoundBloc plasterboard (non-fireside)

FIRE TEST RESULT:

- 60 minutes
- Tested in accordance with BS EN 1365-1:2012
- Tested load 60kN

APPLICATION RESTRICTIONS:

- Minimum stud depth 100mm
- Maximum stud centres 600mm
- Minimum stud metal gauge 1.2mm



Indicative acoustic performance:
DnT,w + Ctr = 50 to 55dB

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60MIN INTERNAL LOADED WALL
GYPROC HABITO

TESTED IN ACCORDANCE WITH BS EN 1365-1:2012

WALL BUILD UP:*

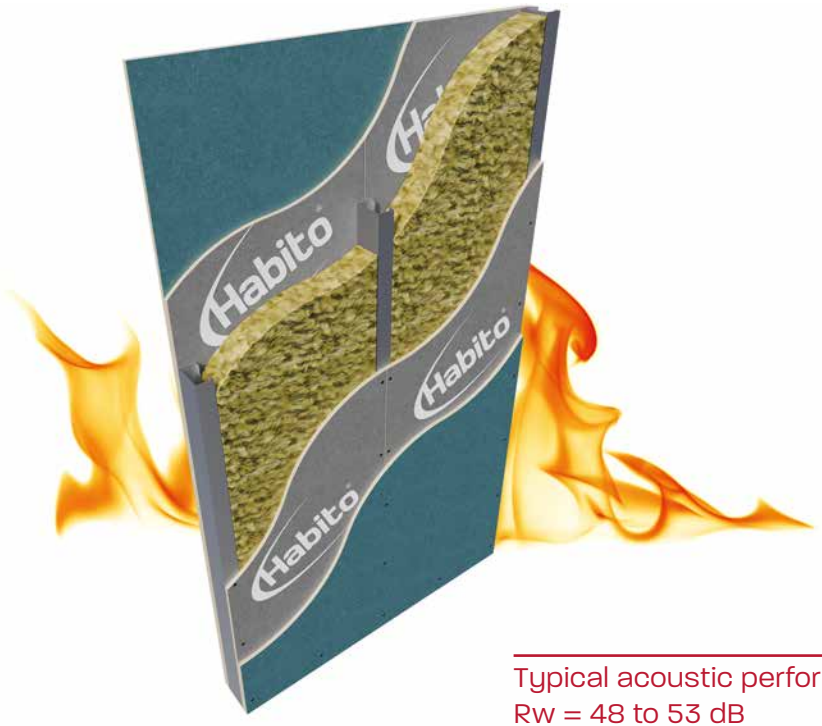
- Layer 1: 1 layer 12.5mm British Gypsum Gyproc Habito (fireside)
- Layer 2: 1 layer 15mm British Gypsum Gyproc SoundBloc plasterboard (fireside)
- 100mm Intrastack loadbearing steel frame
- 100mm Isover Acoustic Partition Roll (APR 1200) in stud zone
- Layer 1: 1 layer 12.5mm British Gypsum Gyproc Habito (non-fireside)
- Layer 2: 1 layer 15mm British Gypsum Gyproc SoundBloc plasterboard (non-fireside)

FIRE TEST RESULT:

- 60 minutes
- Tested in accordance with BS EN 1365-1:2012
- Tested load 60kN
- Suitable for internal wall within dwelling

APPLICATION RESTRICTIONS:

- Minimum stud depth 100mm
- Maximum stud centres 600mm
- Minimum stud metal gauge 1.2mm



Typical acoustic performance:
Rw = 48 to 53 dB

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60MIN EXTERNAL LOADED WALL
SOUNDBLOC & GLASROC X

TESTED IN ACCORDANCE WITH BS EN 1365-1:2012

WALL BUILD UP:*

- 2 layers 15mm British Gypsum Gyproc SoundBloc plasterboard (fireside)
- 100mm Intrastack loadbearing steel frame
- 100mm Isover Acoustic Partition Roll (APR 1200) in stud zone
- 1 layer 12.5mm British Gypsum Glasroc X sheathing board (non-fireside)
- 200mm Isover Polterm Max Plus insulation (non-fireside)

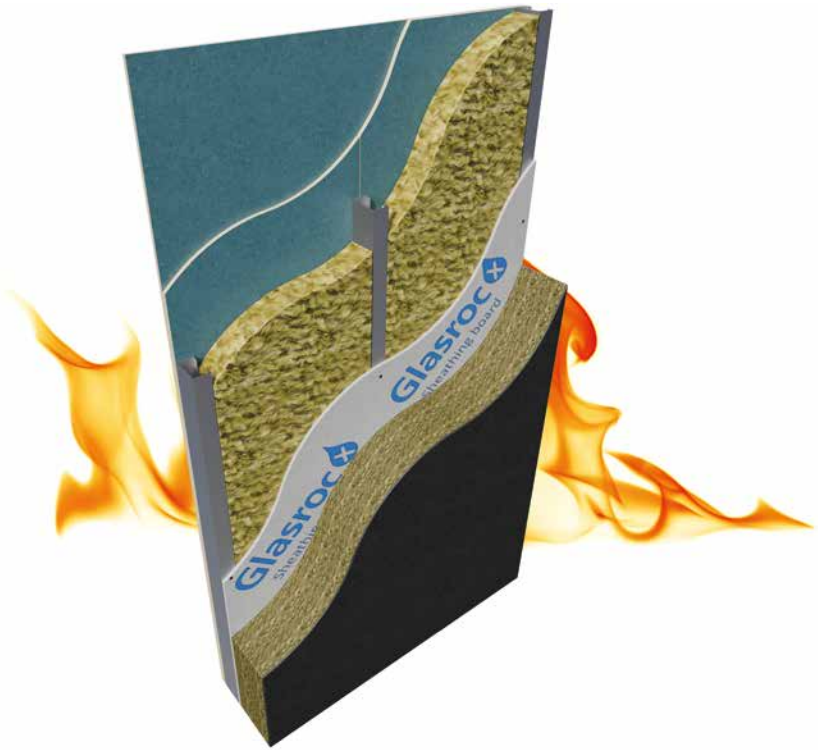
Tested build up did not include breather membrane or vapour control layers, client to assess.

FIRE TEST RESULT:

- 60 minutes
- Tested in accordance with BS EN 1365-1:2012
- Tested load 60kN
- Direction of fire: in to out (internal lining through to façade)

APPLICATION RESTRICTIONS:

- Minimum stud depth 100mm
- Maximum stud centres 600mm
- Minimum stud metal gauge 1.2mm



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All testing information to be applied using the direct field of application of the results.

60MIN EXTERNAL LOADED WALL
FIRELINE & GLASROC X

TESTED IN ACCORDANCE WITH BS EN 1363-1:2020 and BS EN 1365-1:2012

WALL BUILD UP:*

- 2 layers 12.5mm British Gypsum Gyproc Fireline plasterboard (fireside)
- 100mm loadbearing steel frame
- 100mm Isover Acoustic Partition Roll (APR 1200) in stud zone
- 1 layer 12.5mm British Gypsum Glasroc X sheathing board (non-fireside)
- 180mm Isover Polterm Max Plus insulation (non-fireside)

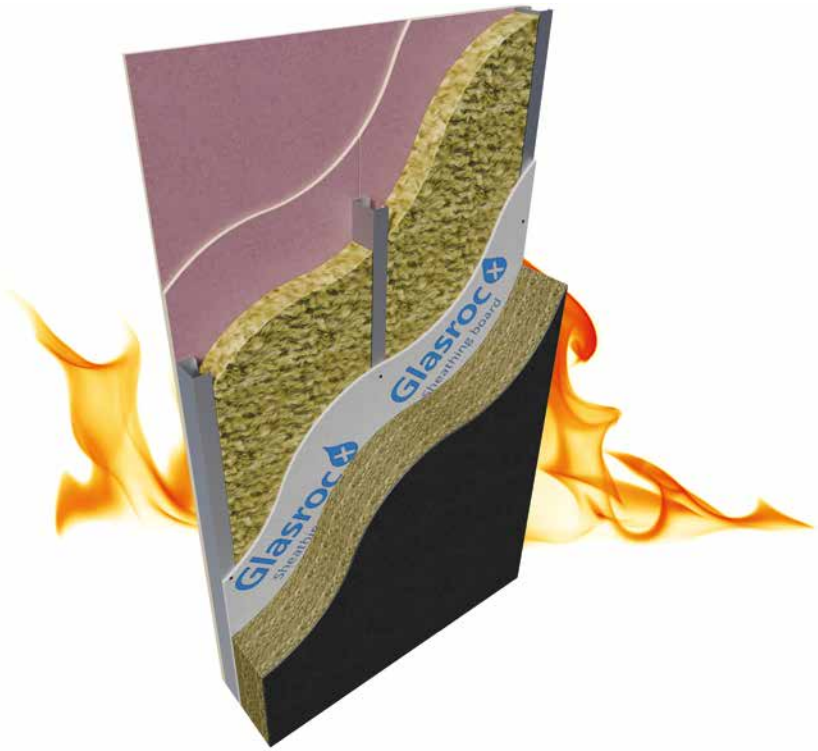
Tested build up did not include breather membrane or vapour control layers, client to assess.

FIRE TEST RESULT:

- 60 minutes
- Tested in accordance with BS EN 1363-1:2020 & BS EN 1365-1:2012
- Tested load 138kN
- Direction of fire: in to out (internal lining through to façade)

APPLICATION RESTRICTIONS:

- Minimum stud depth 100mm
- Maximum stud centres 600mm
- Minimum stud metal gauge 1.2mm



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60MIN EXTERNAL LOADED WALL
FIRELINE & CEMBRIT

TESTED IN ACCORDANCE WITH BS EN 1363-1:2020 & BS EN 1365-1:2012

WALL BUILD UP:*

- 2 layers 12.5mm British Gypsum Gyproc Fireline plasterboard (fireside)
- 100mm loadbearing steel frame
- 100mm Isover Acoustic Partition Roll (APR 1200) in stud zone
- 1 layer 9mm Cembrit Windstopper Basic sheathing board (non-fireside)
- 100mm Isover Polterm Max Plus insulation (non-fireside)

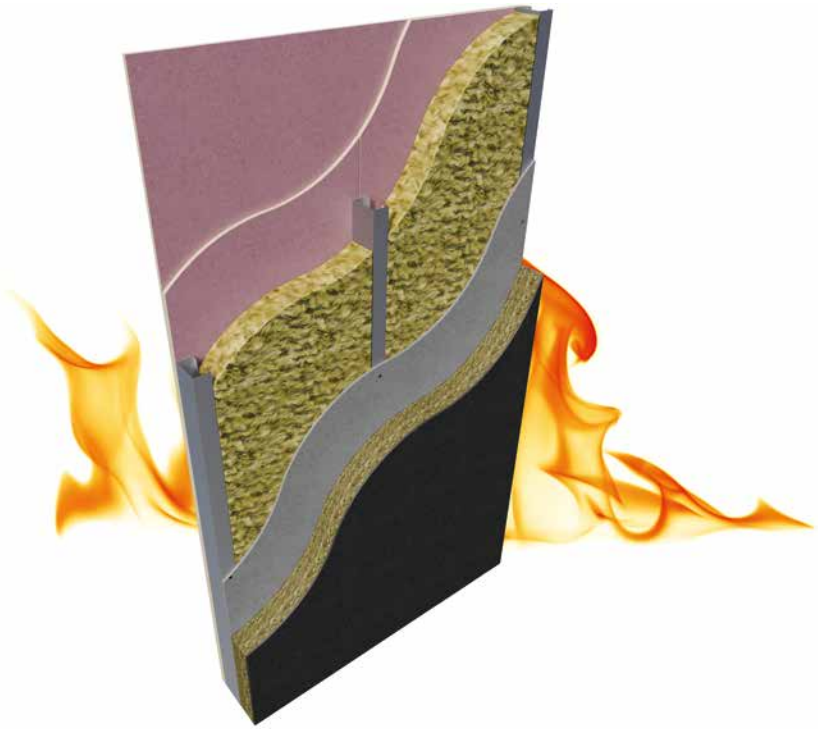
Tested build up did not include breather membrane or vapour control layers, client to assess.

FIRE TEST RESULT:

- 60 minutes
- Tested in accordance with BS EN 1363-1:2020 & BS EN 1365-1:2012
- Tested load 138kN
- Direction of fire: in to out (internal lining through to façade)

APPLICATION RESTRICTIONS:

- Minimum stud depth 100mm
- Maximum stud centres 600mm
- Minimum stud metal gauge 1.2mm



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All testing information to be applied using the direct field of application of the results.

90MIN EXTERNAL LOADED WALL
FIRELINE & GYPROC HABITO

TESTED IN ACCORDANCE WITH BS EN 1365-1:2012

WALL BUILD UP:*

- Layer 1: 1 layer 12.5mm British Gypsum Gyproc Habito (fireside)
- Layer 2: 1 layer 15mm British Gypsum Gyproc Fireline plasterboard (fireside)
- 100mm Intrastack loadbearing steel frame
- 100mm Isover Acoustic Partition Roll (APR 1200) in stud zone
- 1 layer 12.5mm British Gypsum Glasroc X sheathing board (non-fireside)
- 200mm Isover Polterm Max Plus insulation (non-fireside)

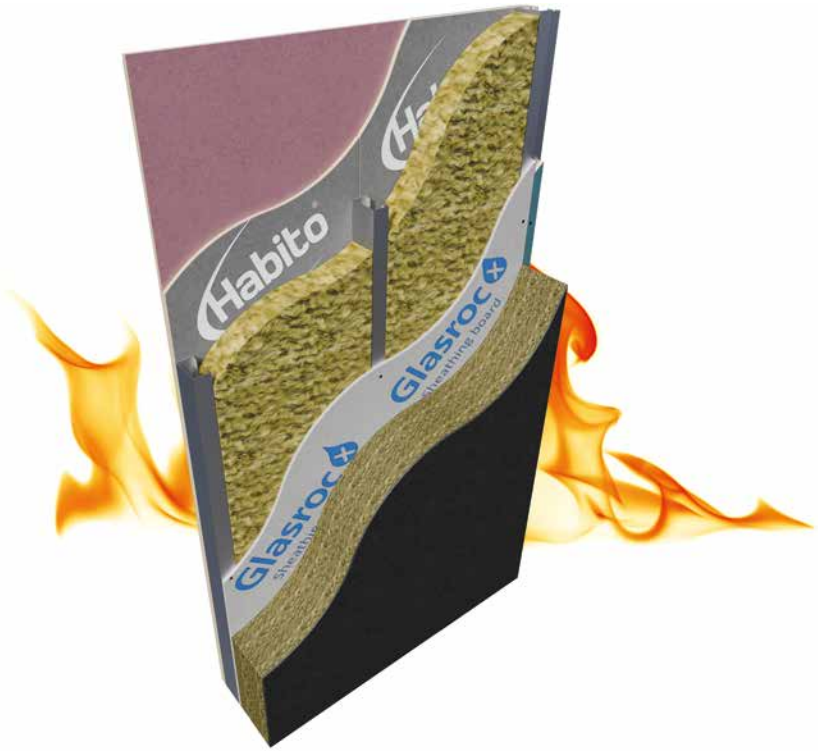
Tested build up did not include breather membrane or vapour control layers, client to assess.

FIRE TEST RESULT:

- 90 minutes
- Tested in accordance with BS EN 1365-1:2012
- Tested load 60kN
- Direction of fire: in to out (internal lining through to façade)

APPLICATION RESTRICTIONS:

- Minimum stud depth 100mm
- Maximum stud centres 600mm
- Minimum stud metal gauge 1.2mm



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All testing information to be applied using the direct field of application of the results.

90MIN EXTERNAL LOADED WALL
100MM POLTERM MAX PLUS

TESTED IN ACCORDANCE WITH BS EN 1365-1:2012

WALL BUILD UP:*

- 2 layers 15mm British Gypsum Gyproc SoundBloc plasterboard (non-fireside)
- 100mm Intrastack loadbearing steel frame
- 100mm Isover Acoustic Partition Roll (APR 1200) in stud zone
- 1 layer 12.5mm British Gypsum Glasroc X sheathing board (fireside)
- 100mm Isover Polterm Max Plus insulation (fireside)

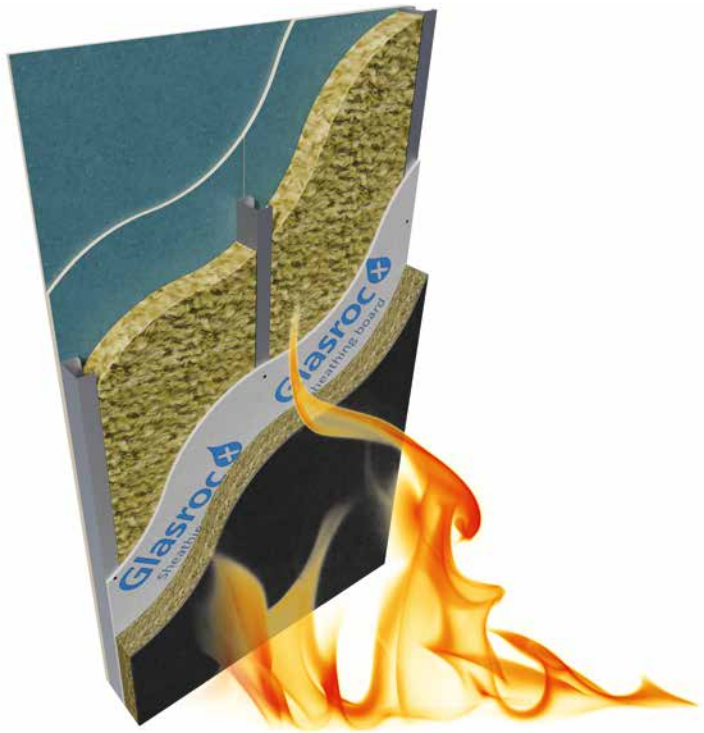
Tested build up did not include breather membrane or vapour control layers, client to assess.

FIRE TEST RESULT:

- 90 minutes
- Tested in accordance with BS EN 1365-1:2012
- Tested load 60kN
- Direction of fire: out to in (external insulation through to internal lining)

APPLICATION RESTRICTIONS:

- Minimum stud depth 100mm
- Maximum stud centres 600mm
- Minimum stud metal gauge 1.2mm



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90MIN EXTERNAL LOADED WALL

FIRELINE & GLASROC X

TESTED IN ACCORDANCE WITH BS EN 1365-1:2012

WALL BUILD UP:*

- 2 layers 15mm British Gypsum Gyproc Fireline plasterboard (fireside)
- 100mm Intrastack loadbearing steel frame
- 100mm Isover Acoustic Partition Roll (APR 1200) in stud zone
- 1 layer 12.5mm British Gypsum Glasroc X sheathing board (non-fireside)
- 200mm Isover Polterm Max Plus insulation (non-fireside)

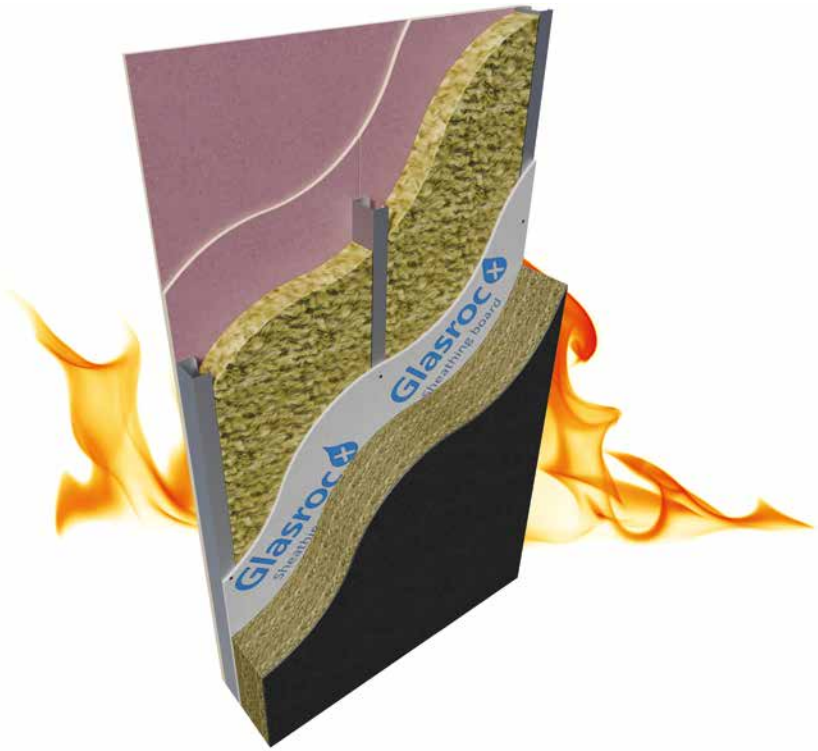
Tested build up did not include breather membrane or vapour control layers, client to assess.

FIRE TEST RESULT:

- 90 minutes
- Tested in accordance with BS EN 1365-1:2012
- Tested load 60kN
- Direction of fire: in to out (internal lining through to façade)

APPLICATION RESTRICTIONS:

- Minimum stud depth 100mm
- Maximum stud centres 600mm
- Minimum stud metal gauge 1.2mm



Disclaimer:
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These will be accounted for within the Intrastack design platform.
All testing information to be applied using the direct field of application of the results.

120MIN EXTERNAL LOADED WALL
FIRELINE & GLASROC X

TESTED IN ACCORDANCE WITH BS EN 1365-1:2012

WALL BUILD UP:*

- 3 layers 15mm British Gypsum Gyproc Fireline plasterboard (fireside)
- 100mm Intrastack loadbearing steel frame
- 100mm Isover Acoustic Partition Roll (APR 1200) in stud zone
- 1 layer 12.5mm British Gypsum Glasroc X sheathing board (non-fireside)
- 200mm Isover Polterm Max Plus insulation (non-fireside)

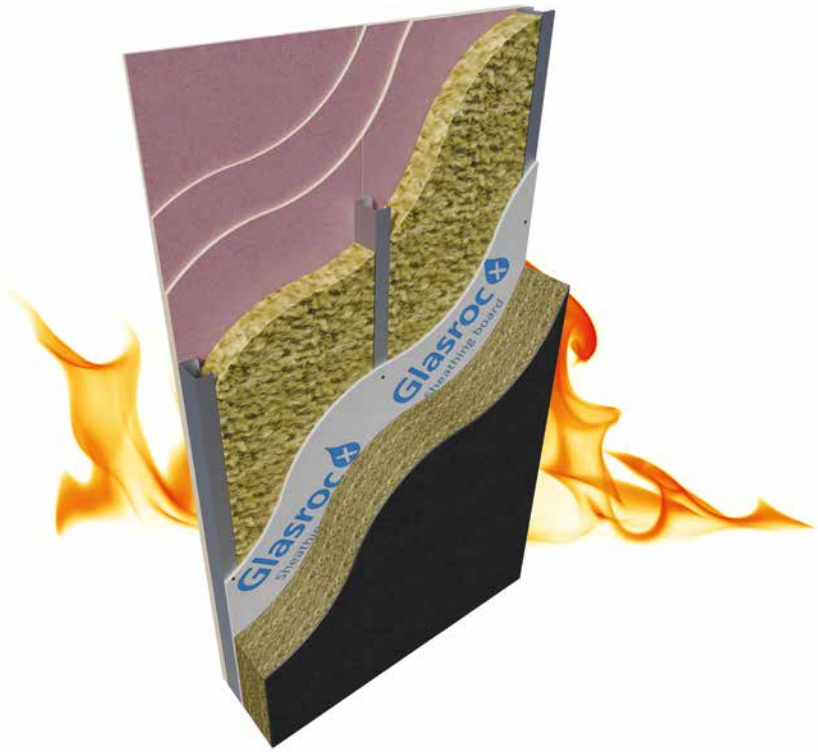
Tested build up did not include breather membrane or vapour control layers, client to assess.

FIRE TEST RESULT:

- 120 minutes
- Tested in accordance with BS EN 1365-1:2012
- Tested load 60kN
- Direction of fire: in to out (internal lining through to façade)

APPLICATION RESTRICTIONS:

- Minimum stud depth 100mm
- Maximum stud centres 600mm
- Minimum stud metal gauge 1.2mm



Disclaimer:
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NON-LOAD BEARING WALLS

60MIN NON LOAD BEARING

SOUNDBLOC

120MIN NON LOAD BEARING

ISOVER POLTERM MAX PLUS

60MIN NON LOAD BEARING
SOUNDBLOC

TESTED IN ACCORDANCE WITH BS EN 1364-1:2015

WALL BUILD UP:*

- 2 layers 15mm British Gypsum Gyproc SoundBloc plasterboard (fireside)
- 100mm Intrastack non-loadbearing steel frame
- 100mm Isover Acoustic Partition Roll (APR 1200) in stud zone
- 1 layer 12.5mm British Gypsum Glasroc X sheathing board (non-fireside)

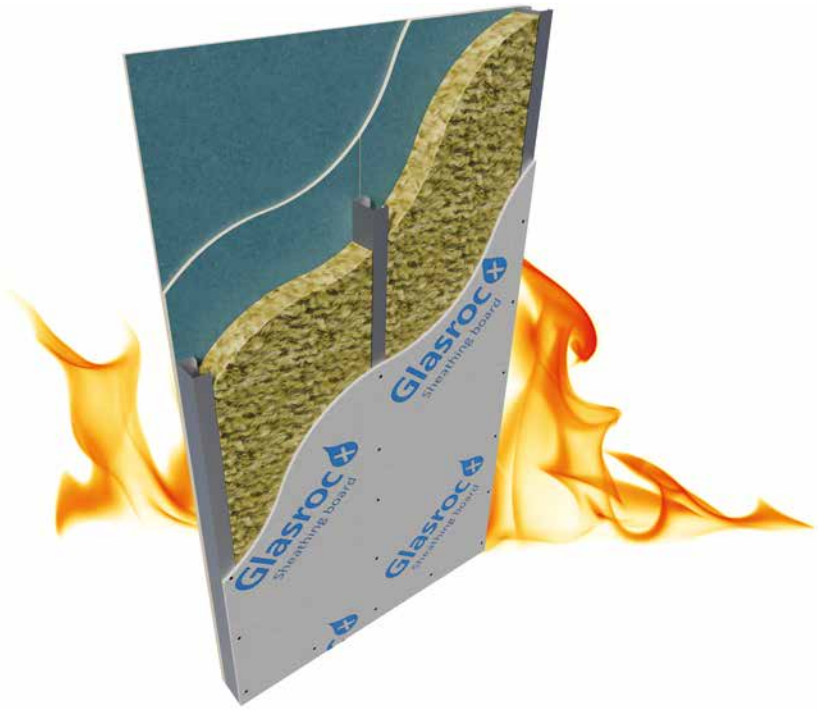
Tested build up did not include breather membrane or vapour control layers, client to assess.

FIRE TEST RESULT:

- 60 minutes
- Tested in accordance with BS EN 1364-1:2015
- Direction of fire: in to out (internal lining through to façade)

APPLICATION RESTRICTIONS:

- Minimum stud depth 100mm
- Maximum stud centres 600mm
- Minimum stud metal gauge 1.2mm



Disclaimer:
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All testing information to be applied using the direct field of application of the results.

120MIN NON LOAD BEARING
ISOVER POLTERM MAX PLUS

TESTED IN ACCORDANCE WITH BS EN 1364-1:2015

WALL BUILD UP:*

- 2 layers 15mm British Gypsum Gyproc SoundBloc plasterboard (fireside)
- 100mm Intrastack non-loadbearing steel frame
- 100mm Isover Acoustic Partition Roll (APR 1200) in stud zone
- 1 layer 12.5mm British Gypsum Glasroc X sheathing board (non-fireside)
- 200mm Isover Polterm Max Plus insulation (non-fireside)

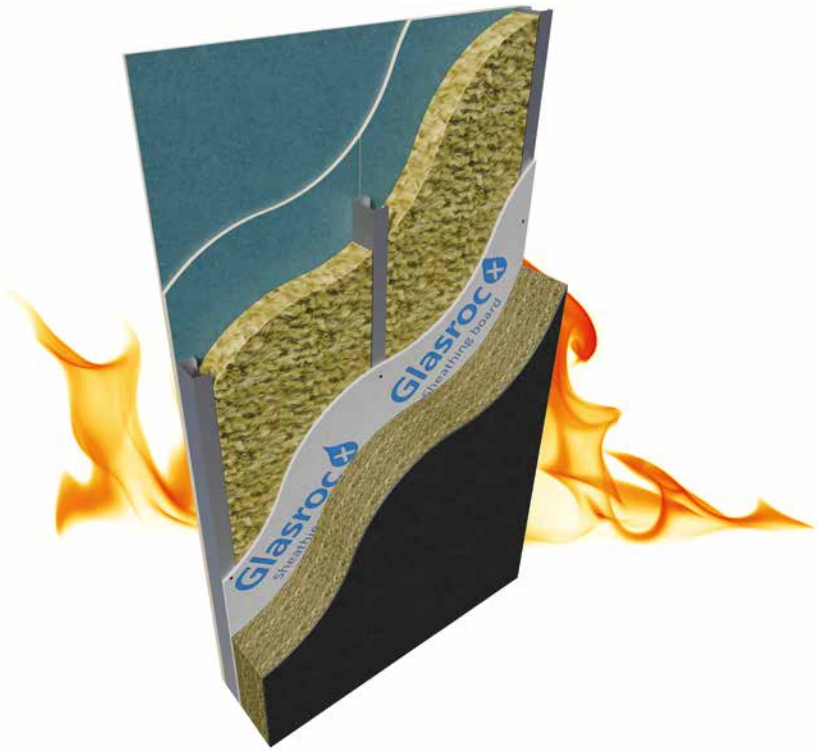
Tested build up did not include breather membrane or vapour control layers, client to assess.

FIRE TEST RESULT:

- 120 minutes
- Tested in accordance with BS EN 1364-1:2015
- Direction of fire: in to out (internal lining through to façade)

APPLICATION RESTRICTIONS:

- Minimum stud depth 100mm
- Maximum stud centres 600mm
- Minimum stud metal gauge 1.2mm



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All testing information to be applied using the direct field of application of the results.

LOW RISE HOUSING

30MIN EXTERNAL - LOW RISE LOAD BEARING
FIRELINE GLASROC X

30MIN INTERNAL - LOW RISE LOAD BEARING
SOUNDBLOC

60MIN INTERNAL - LOW RISE LOAD BEARING
SOUNDBLOC

30MIN FLOOR - LOW RISE LOAD BEARING
FIRELINE

60MIN FLOOR - LOW RISE LOAD BEARING
FIRELINE

30MIN EXTERNAL - LOW RISE LOAD BEARING
FIRELINE GLASROC X

TESTED IN ACCORDANCE WITH BS EN 1363-1:2020 and BS EN 1365-1:2012

WALL BUILD UP:*

- 1 layer 15mm British Gypsum Gyproc Fireline plasterboard (fireside)
- 70mm Intrastack loadbearing steel frame
- 65mm Isover Acoustic Partition Roll (APR 1200) in stud zone
- 1 layer 12.5mm British Gypsum Glasroc X sheathing board (non-fireside)
- 180mm Isover Polterm Max Plus insulation (non-fireside)

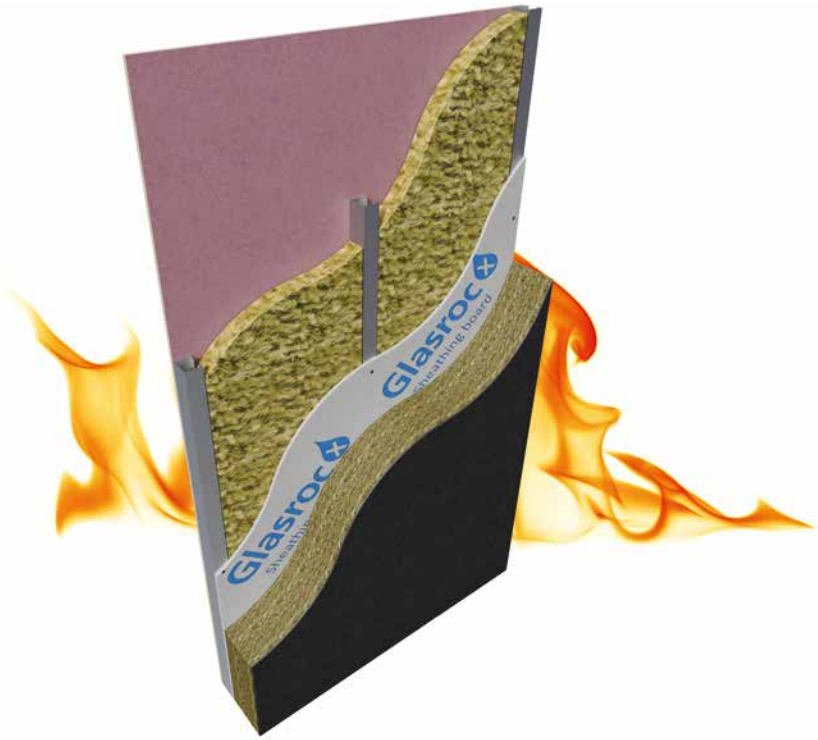
Tested build up did not include breather membrane or vapour control layers, client to assess.

FIRE TEST RESULT:

- 30 minutes
- Tested in accordance with BS EN 1363-1:2020 & BS EN 1365-1:2012
- Tested load 46.2kN
- Direction of fire: in to out (internal lining through to façade)

APPLICATION RESTRICTIONS:

- Minimum stud depth 70mm
- Suitable for low rise housing up to 3 storeys only
- Maximum stud centres 600mm
- Minimum stud metal gauge 1.2mm



Disclaimer:
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All testing information to be applied using the direct field of application of the results.

30MIN INTERNAL - LOW RISE LOAD BEARING SOUNDBLOC

TESTED IN ACCORDANCE WITH BS EN 1365-1:2012

WALL BUILD UP:*

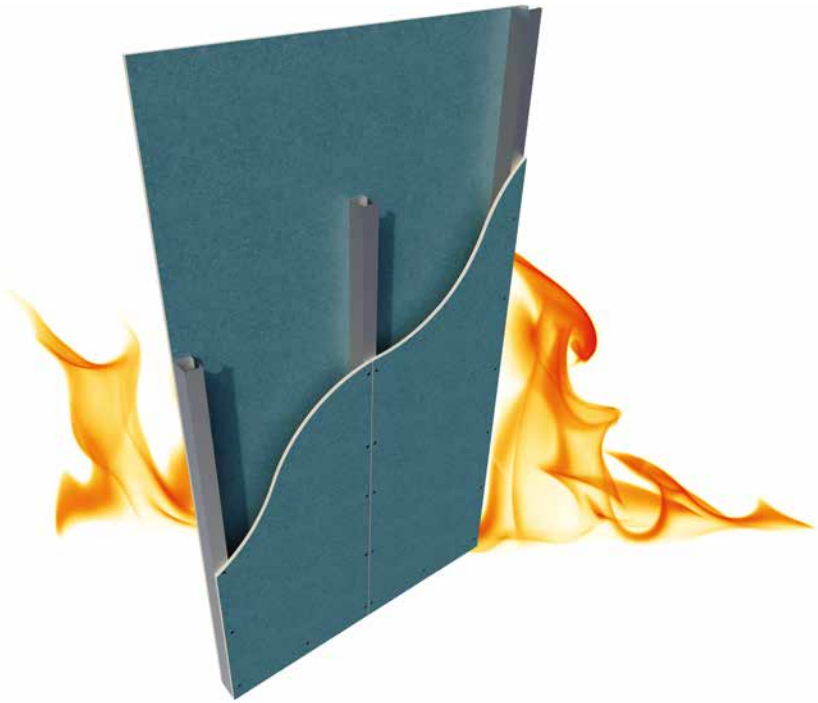
- 1 layer 15mm British Gypsum Gyproc Soundbloc plasterboard (fireside)
- 70mm Intrastack loadbearing steel frame
- 1 layer 15mm British Gypsum Gyproc Soundbloc plasterboard (non-fireside)

FIRE TEST RESULT:

- 30 minutes
- Tested in accordance with BS EN 1365-1:2012
- Tested load 42kN

APPLICATION RESTRICTIONS:

- Minimum stud depth 70mm
- Suitable for low rise housing up to 3 storeys only
- Maximum stud centres 600mm
- Minimum stud metal gauge 1.2mm



Disclaimer:
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60MIN INTERNAL - LOW RISE LOAD BEARING SOUNDBLOC

TESTED IN ACCORDANCE WITH BS EN 1363-1:2020 and BS EN 1365-1:2012

WALL BUILD UP:*

- 2 layers 15mm British Gypsum Gyproc SoundBloc plasterboard (fireside)
- 70mm Intrastack loadbearing steel frame
- 65mm Isover Acoustic Partition Roll (APR 1200) in stud zone
- 50mm cavity filled with Isover Acoustic Partition Roll (APR 1200)
- 70mm Intrastack loadbearing steel frame
- 65mm Isover Acoustic Partition Roll (APR 1200) in stud zone
- 2 layers 15mm British Gypsum Gyproc SoundBloc plasterboard (non-fireside)

Tested build up did not include breather membrane or vapour control layers, client to assess.

FIRE TEST RESULT:

- 60 minutes
- Tested in accordance with BS EN 1363-1:2020 & BS EN 1365-1:2012
- Tested load 38.5kN

Disclaimer:
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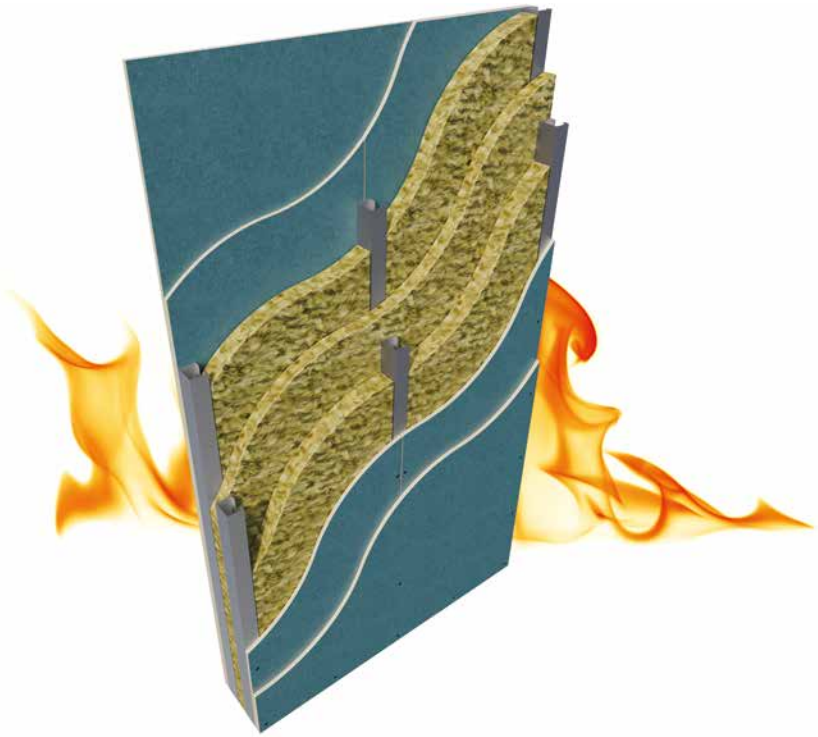
All testing information to be applied using the direct field of application of the results.

APPLICATION RESTRICTIONS:

- Minimum stud depth 70mm
- Suitable for low rise housing up to 3 storeys only
- Maximum stud centres 600mm
- Minimum stud metal gauge 1.2mm



30MIN FLOOR - LOW RISE LOAD BEARING
FIRELINE

TESTED IN ACCORDANCE WITH BS EN 1363-1:2020 and BS EN 1365-2:2014

BUILD UP:*

- 1 layer 15mm British Gypsum Gyproc Fireline plasterboard (fireside)
- 200mm Intrastack steel joists
- 50mm Isover Acoustic Partition Roll (APR 1200) in joist zone
- 1 layer 22mm CaberDek (non-fireside)

FIRE TEST RESULT:

- 30 minutes
- Tested in accordance with BS EN 1363-1:2020 & BS EN 1365-2:2014
- Tested load 3.0kN/m2
- Direction of fire: from below

APPLICATION RESTRICTIONS:

- Minimum joist depth 200mm
- Suitable for low rise housing up to 3 storeys only
- Maximum joist centres 600mm
- Minimum joist metal gauge 1.2mm

Disclaimer:
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All testing information to be applied using the direct field of application of the results.

60MIN FLOOR - LOW RISE LOAD BEARING
FIRELINE

TESTED IN ACCORDANCE WITH BS EN 1363-1:2020 and BS EN 1365-2:2014

BUILD UP:*

- 2 layers 12.5mm British Gypsum Gyproc Fireline plasterboard (fireside)
- British Gypsum Gypframe Resilient Bar (RB1)
- 200mm Intrastack steel joists
- 50mm Isover Acoustic Partition Roll (APR 1200) in joist zone
- 1 layer 22mm CaberDek (non-fireside)

FIRE TEST RESULT:

- 60 minutes
- Tested in accordance with BS EN 1363-1:2020 & BS EN 1365-2:2014
- Tested load 3.0kN/m2
- Direction of fire: from below

APPLICATION RESTRICTIONS:

- Minimum joist depth 200mm
- Suitable for low rise housing up to 3 storeys only
- Maximum joist centres 600mm
- Minimum joist metal gauge 1.2mm

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U-VALUE TABLE
ACHIEVED VALUES

Polterm thickness (mm)	Internal board	Insulation within stud cavity**	U-value achieved (W/m^2K)
100	2x 12.5mm Fireline	APR 1200	0.19
150	2x 12.5mm Fireline	APR 1200	0.15
200	2x 12.5mm Fireline	APR 1200	0.13
100	2x 15mm Fireline	APR 1200	0.19
150	2x 15mm Fireline	APR 1200	0.15
200	2x 15mm Fireline	APR 1200	0.13
100	3x 15mm Fireline	APR 1200	0.19
150	3x 15mm Fireline	APR 1200	0.15
200	3x 15mm Fireline	APR 1200	0.12
100	2x 15mm Soundbloc	APR 1200	0.19
150	2x 15mm Soundbloc	APR 1200	0.15
200	2x 15mm Soundbloc	APR 1200	0.13
100	1x 12.5mm Habito 1x 15mm Fireline	APR 1200	0.19
150	1x 12.5mm Habito 1x 15mm Fireline	APR 1200	0.15
200	1x 12.5mm Habito 1x 15mm Fireline	APR 1200	0.13

What is a U-value?

A U-value (given in W/m^2K) is the rate of transfer of heat through a structure divided by the difference in temperature across the structure. It is a method of calculating **thermal transmittance**.

The U-value of a wall is affected by the materials used in its construction. This table gives an indication of values but please contact us for a project specific calculation.

SYSTEM CERTIFICATIONS
TESTED & CERTIFIED

SCI/ NHBC STAGE 1

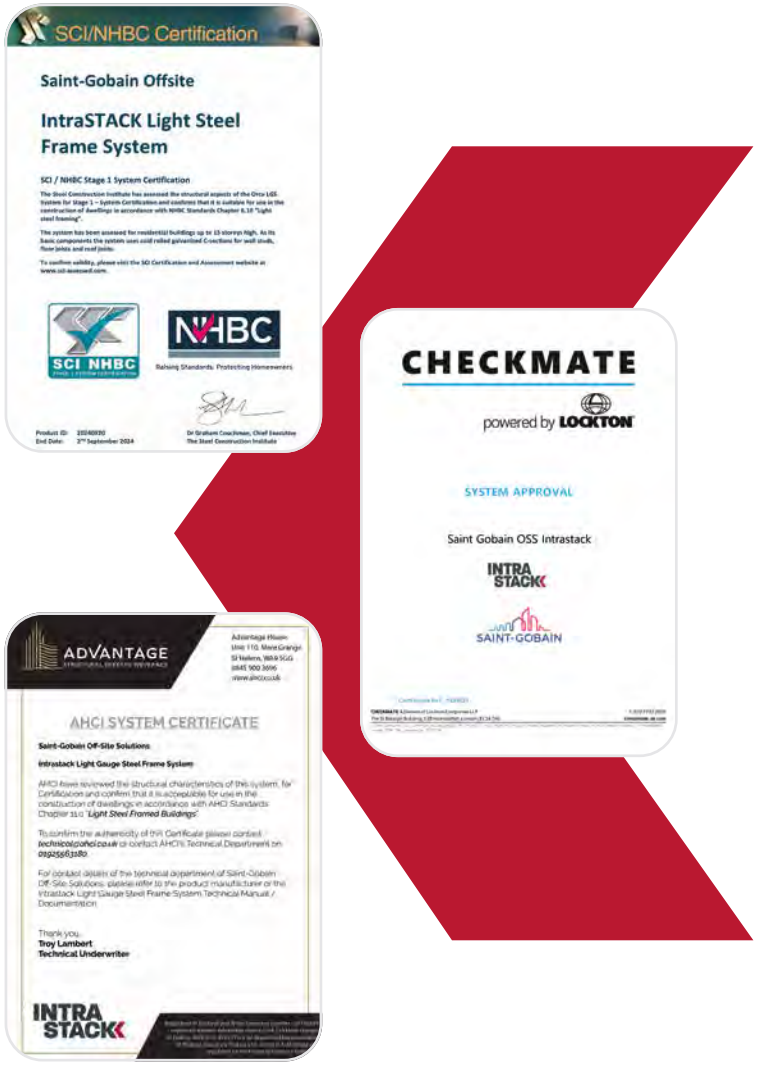
The Steel Construction Institute has assessed the structural aspects of this system for Stage 1 - System Certification and confirms that it is suitable for use in the construction of dwellings in accordance with NHBC Standards Chapter 6.10 “Light steel framing”.

CHECKMATE

System Approval: Intrastack Low-Rise Housing (ILRH)
Certificate ref: SG0823

ADVANTAGE APPROVAL (AHCI)

AHCI have reviewed the structural characteristics of this system for certification and confirm that it is acceptable for use in the construction of dwellings in accordance with AHCI Standards Chapter 11.0 “Light Steel Framed Buildings”.



PART OF SAINT-GOBAIN
OFF-SITE SOLUTIONS

Intrastack is a part of Saint-Gobain's Off-Site Solutions division (OSS), working alongside other MMC brands to offer expertise in design, logistics, supply chain and sourcing, delivered through a partnership approach.

OSS is made up of brands covering MMC categories 2, 3, 5 & 6, from full building structures, through to components & sub-assemblies, enabling accelerated build-programmes on-site, whilst ensuring the highest levels of quality, performance, and project-certainty.

SAINT-GOBAIN

SAINT-GOBAIN OFF-SITE SOLUTIONS

intrastack

› WHO WE ARE
KEY CONTACTS

Andy Higson
Business Director

Andy is committed to delivering Intrastack's strategy, to growing the business and developing the team. He has worked for Saint-Gobain since 2005 and for Intrastack since its inception. Andy is the go-to-guy for all things Intrastack.

E: Andy.Higson@saint-gobain.com

Matt Grant
Head of Technical & Sales Support

Matt is a core member of the Intrastack team and a key contact for our customers.

In his role, Matt keeps projects on schedule and assists customers with everything from initial design through to on-site installation. He joined Saint-Gobain and Intrastack in 2021.

E: Matthew.Grant@saint-gobain.com

Danny Johnson
National Sales Manager

Danny uses his unrivalled industry knowledge to support new and existing customers through the construction process. He has previously worked with Saint-Gobain Off-Site Solutions and Scotframe and has excellent understanding of the benefits of MMC.

E: Danny.Johnson@saint-gobain.com

Cherise Hardy-Edwards
Marketing Manager

Cherise's focus is on promoting the benefits of the business and its offering to our customers, as well as providing resources to help our customers with their steel frame projects. She has worked for Saint-Gobain since 2015, and has been with OSS and Intrastack since 2021.

E: Cherise.Hardy-Edwards@saint-gobain.com

INTRASTACK.CO.UK

intrastack@saint-gobain.com

Saint-Gobain House, East Leake, LE12 6JU

Disclaimer:

*These drawings are provided to customers free of charge and the details shown are subject to the accuracy of the information provided to Saint-Gobain Construction Products trading as Intrastack at the time the drawing was originally requested. No duty of care is owed to the recipient or any other third party and Saint-Gobain Construction Products and Intrastack cannot accept liability in respect of the details shown. The drawings should therefore be approved by the project design and management authority before use to ensure that it meets with their specific project requirements. It should also be read in conjunction with Intrastack's current literature available at www.intrastack.co.uk. Please note: drawings may show Intrastack products fixed by or to products that are not Saint-Gobain or Intrastack products/fixings, please refer to the Specifying Authority for specification details. These drawings are valid at the time of issue, please check with Intrastack for the latest version.

**Typically, Isover Steel Frame Infill Batt would be specified for these applications, rather than APR1200. A 1.2mm gauge SFS has been assumed, no plaster skim has been included. Please note: the indicative U-value calculations are to be used as part of a whole wall calculation, following the component assessment method. These do not account for any junction detailing, structural variations or other items which may cause significant thermal bridging issues. The final wall U-value will depend on the integration of this system into the frame of the building. If the design has not yet been finalised, nor the size or gauge of steel frame specified, please bear in mind the impact of the two details upon the potential width of wall construction.

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V3.0