



lange+grant



LANGE & GRANT

CATALOGUE

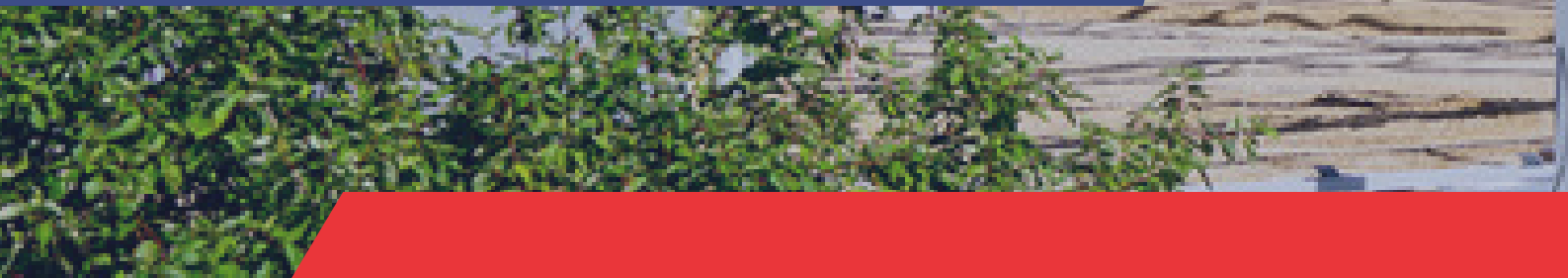




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COMPANY PROFILE

ABOUT US

We are a manufacturing and integrated projects development company with a complete in-house assembling line facility specialized in modular construction and production in a massive scale large insulated sandwich panel, made with polyurethane foam, for commercial projects and low cost housing using modular building technology and pre-engineered system. These are also essential materials for building low cost industrial estate. We cater for various industrial sectors by providing much needed infrastructure, these sectors are Agriculture, Oil & Gas, Pharmaceutical, Low cost Housing, Aviation and Telecomm. Our innovation and expertise has earned us international recognition and We are among the proud winners of the all world Nigeria Fast growth 50 award winners.

OUR VISION

To continue expanding our role as a leader in the construction industry by building relationships with our clients and employees based on performance, trust and confidence.

OUR MISSION

Working in harmony with our clients and strategic partners, to provide the knowledge and skills necessary to successfully complete high quality construction projects on time and within budget.



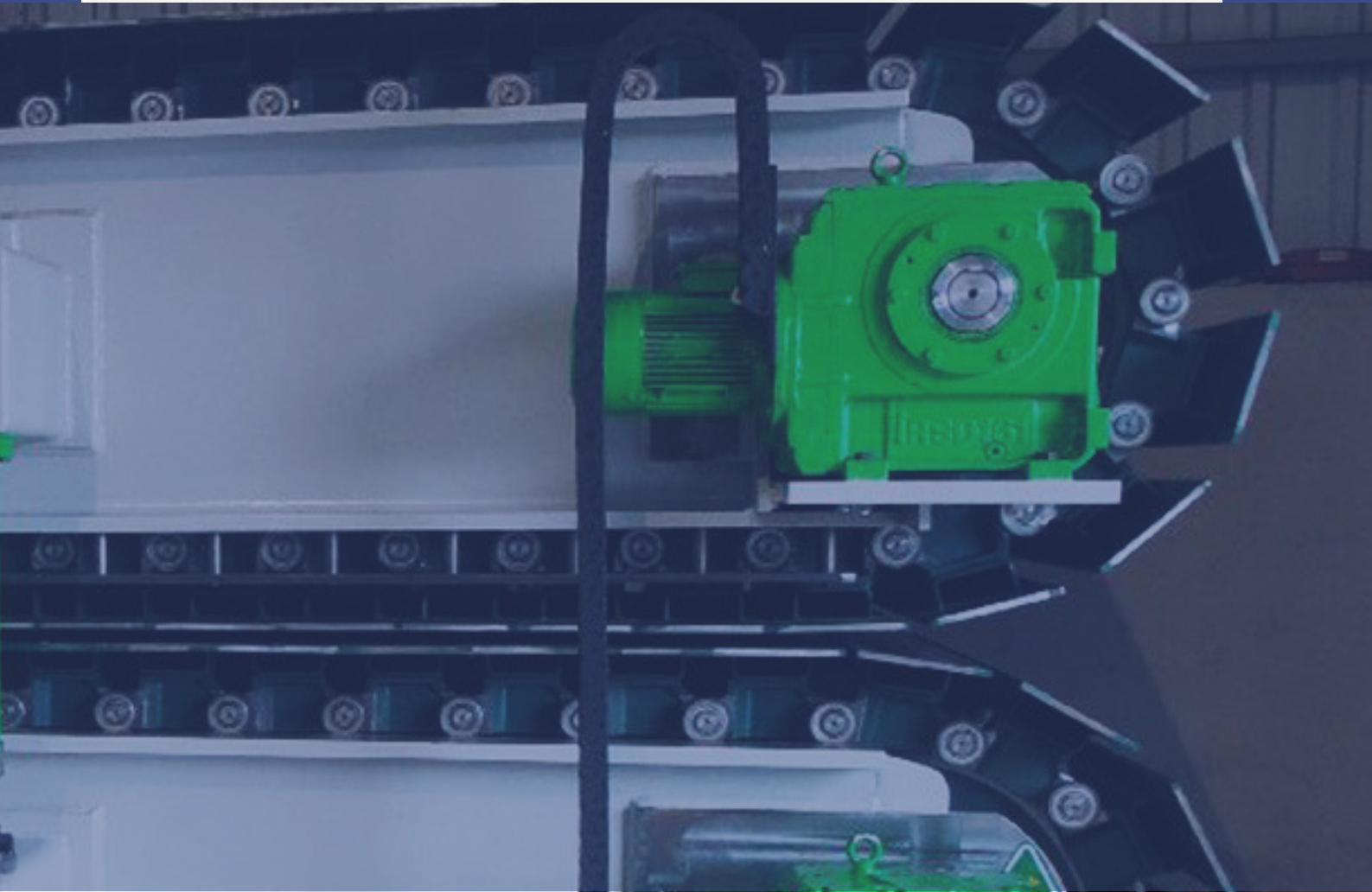
PRODUCT TECHNOLOGY

Lange and Grant production line is a state of the art continuous production facility from turkey with a production capacity of over 3 million square meters of panels per annum.

The production technology, assisted by a complex automated control system, is designed to streamline the different parts of the manufacturing process enabling a minimal number of operators to run the line.

The production system consists of multiple stations, a profiling section, a foam application station, a special cut to length system, curing zone, and an automatic stacking and packaging unit. The fully automated line requires minimum operator intervention, eliminating mistakes and maximizing quality and efficiency.

The plant operates using environment friendly blowing agents meeting international standards in line with Kyoto Protocols,



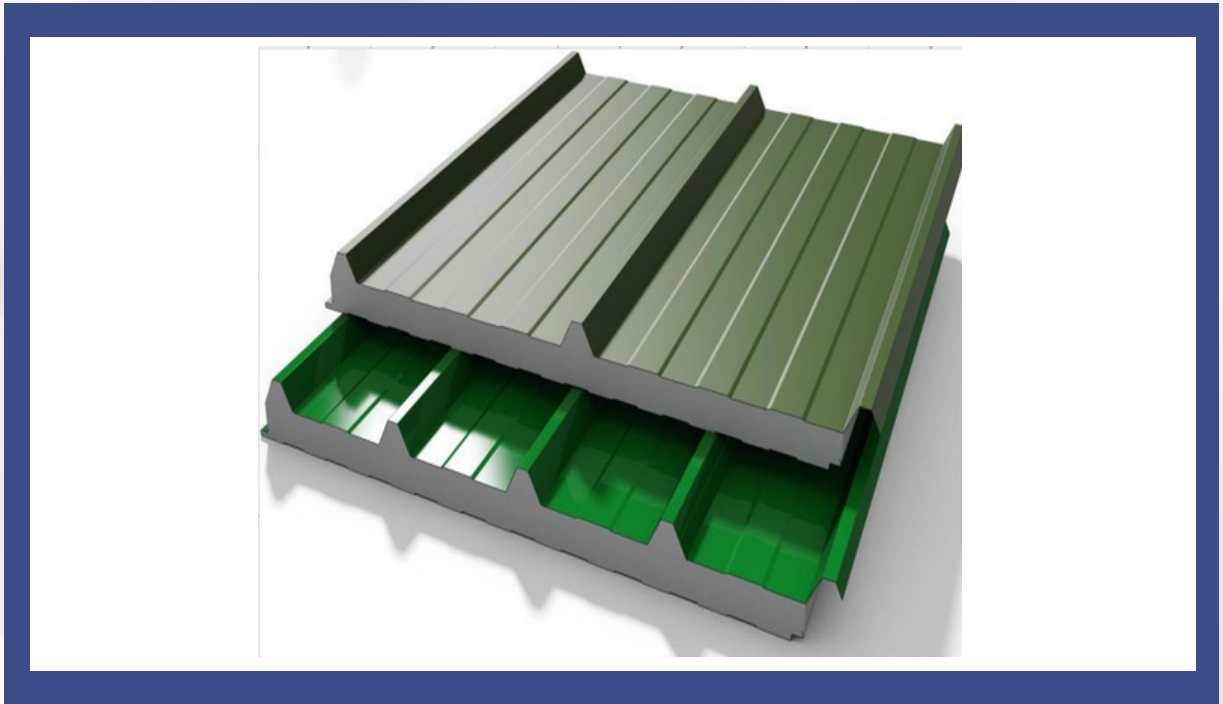
LANGE & GRANT PANEL BENEFITS

Lange and grant sandwich panels offer unique features which includes:

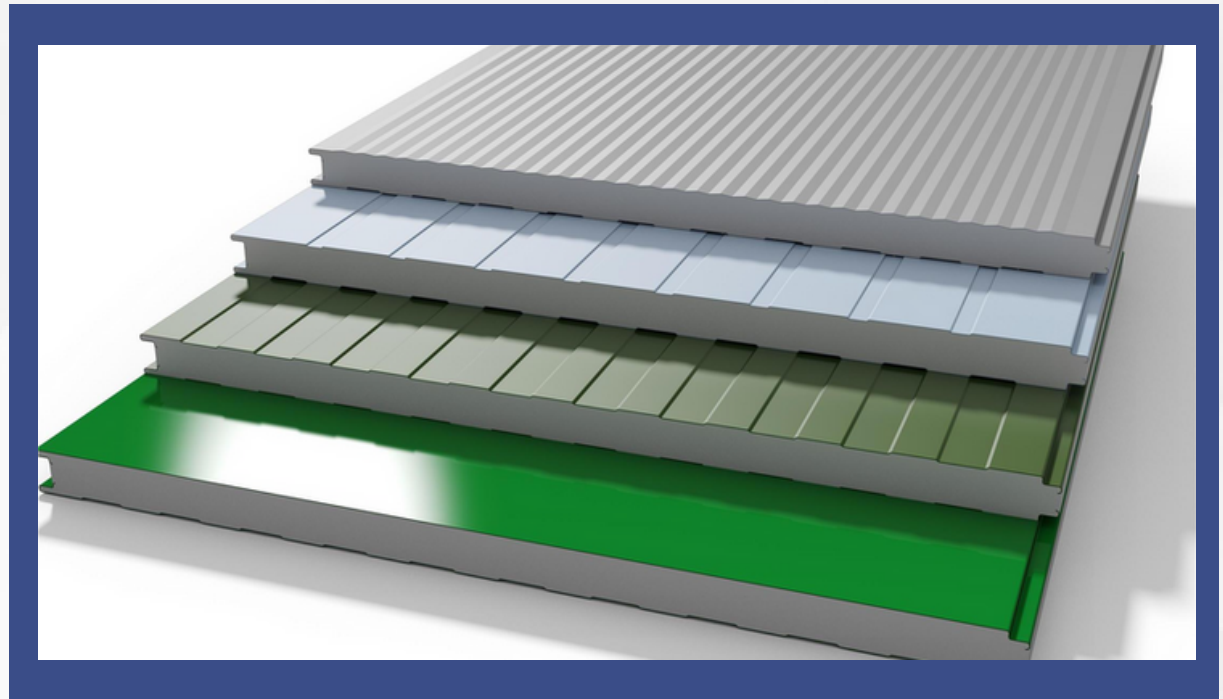
- Light weight High rigidity
- High insulation properties
- Air tight fire rated joint
- High fire resistance properties Closed cell foam structure Easy to install
- Fiber free core
- Resistant to adverse weather conditions Hygiene surface meeting HACCP regulations Environment friendly - Zero ODP, low GWP



OUR PRODUCTS



INSULATED ROOF PANELS



INSULATED SANDWICH PANELS

MATERIAL SPECIFICATIONS

Metal Factors

The standard substrate for Internal and external facers are prepainted and hot-dip galvanised steel to BS EN 10143 standard.

Thickness: 0.50mm

Steel Grade: DX51D

Zinc Coating: Z275 or Z200

Top coat: Polyester, PES, 25microns thick

Colour: RAL9002 Off-White

Surface Protection: Polyethylene film

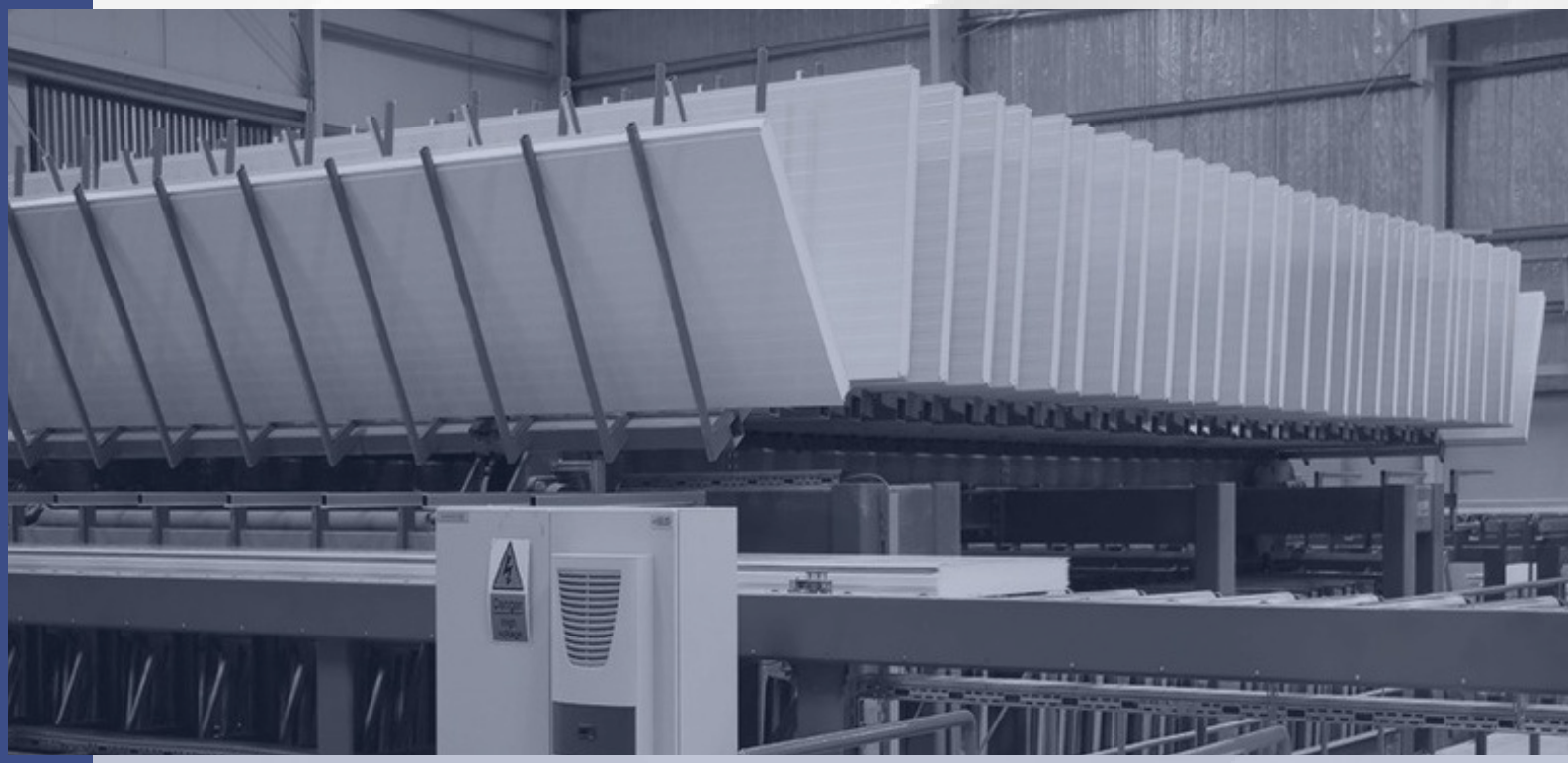
Variations are possible in the surface material specifications to suite a wide range of specialized applications:

Thickness options: 0.40mm to 0.80mm

Substrate options: Aluzinc-coated steel, Stainless steel (SS 304 or 316), Aluminum

Top coat options: PVDF, Multi-Layer PVDF, High Durable Polyester, Food Safe, Plastisol, PolyDura

Colour: Any colour from RAL catalogue



MATERIAL SPECIFICATIONS

High Durable Polyester coating is suitable for increased resistance against corrosion and harsh cleaning agents.

PVDF coating is suitable for external applications where higher resistance against corrosion, colour fading and harsh environment conditions is required.

Plastisol coating is suitable for internal applications for non-contact level food safety and where higher resistance against washing of surfaces is required.

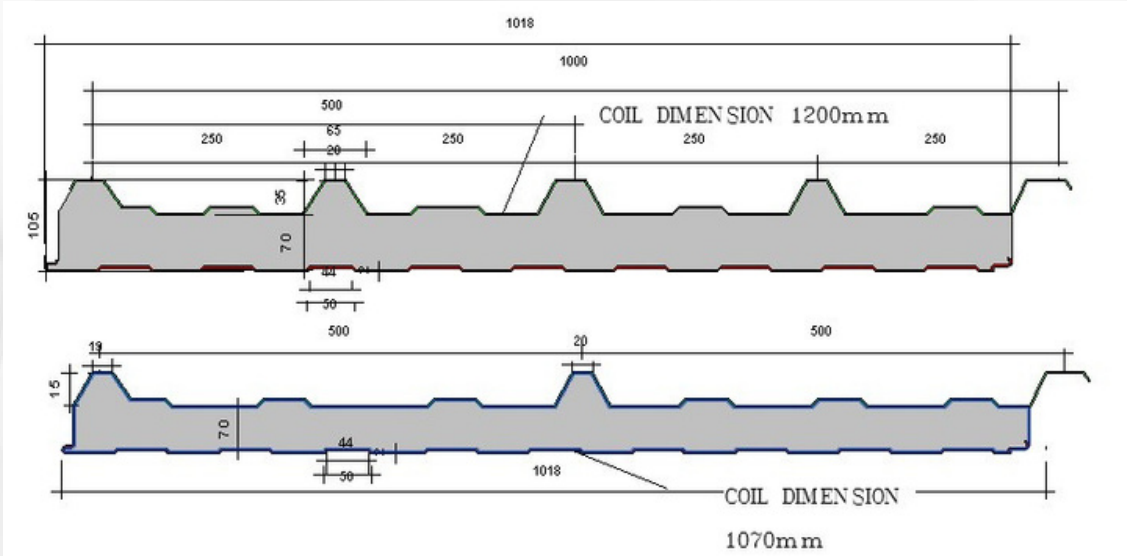
Food Safe coating is suitable for internal applications for contact level food safety with anti-microbial properties.

PolyDura coating is suitable for an all-round improved performance against all factors, comparable to PVDF coating but with a wider colour range.

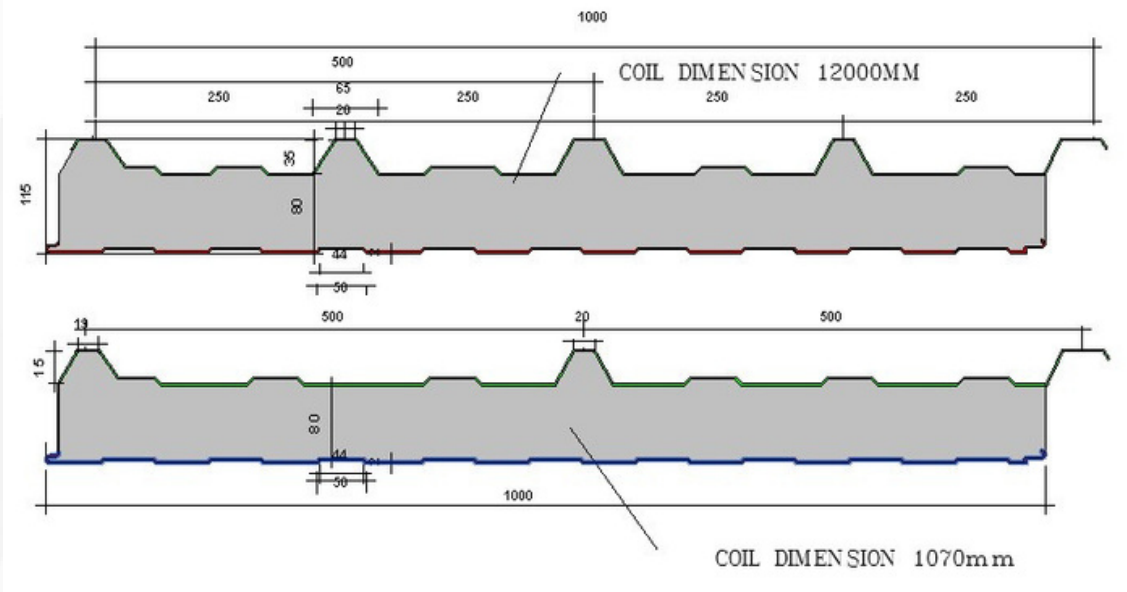


ROOF PANEL SIZES

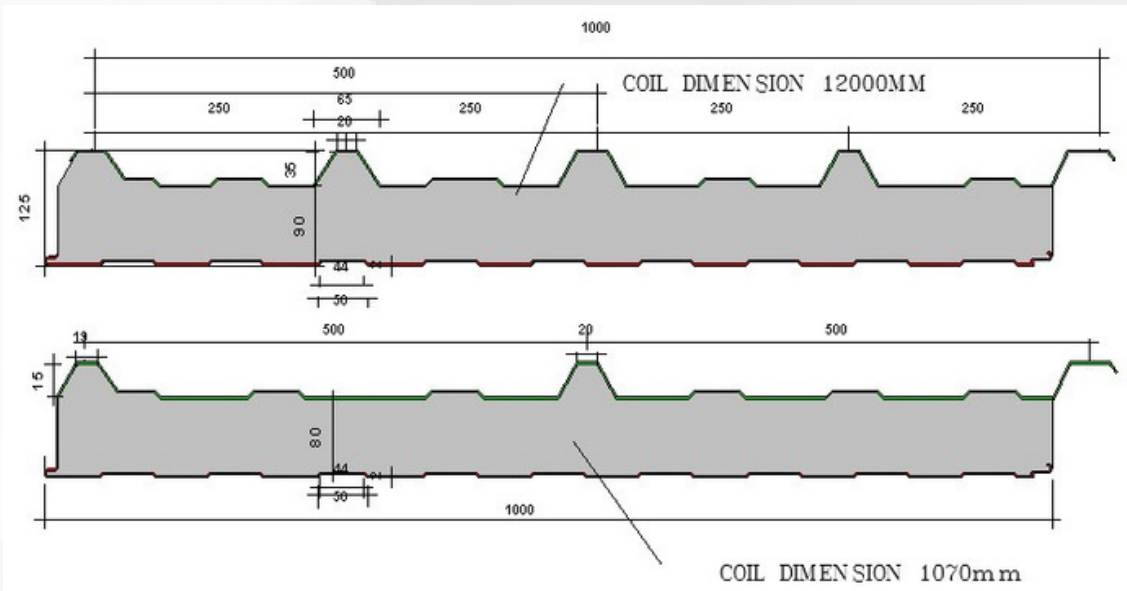
L&GRP 105mm



L&GRP 115mm



L&GRP 125mm



ROOF PANELS

GENERAL FOAM PROPERTIES

DENSITY (kg/m ³)	37-40
THERMAL CONDUCTIVITY COEFFICIENT λ (W/mK)	0,022
CLOSED CELL RATIO (%)	95
VAPOUR DIFFUSION (μ)	30-100
COMPRESSIVE STRENGTH (Mpa) (σ_{10})	min. 0,06
WATER ABSORPTION (% VOLUME)	2
MAXIMUM SERVICE TEMPERATURE (°C)	-200/110

GENERAL FACINGS PROPERTIES

EXTERNAL & INTERNAL SHEET - POLYESTER COATEDPPGI	0.5 MM
TOP COATING - NOMINAL (5+15)	20 Micron
BOTTON COATING - NOMINAL (7-10)	7-10 Micron

GENERAL ACOUSTIC PROPERTIES

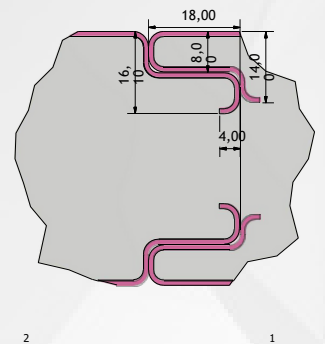
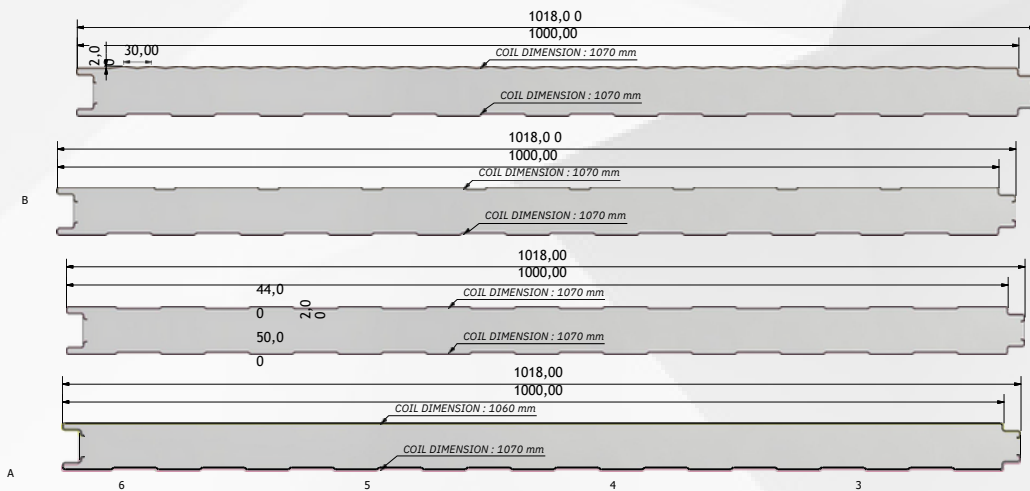
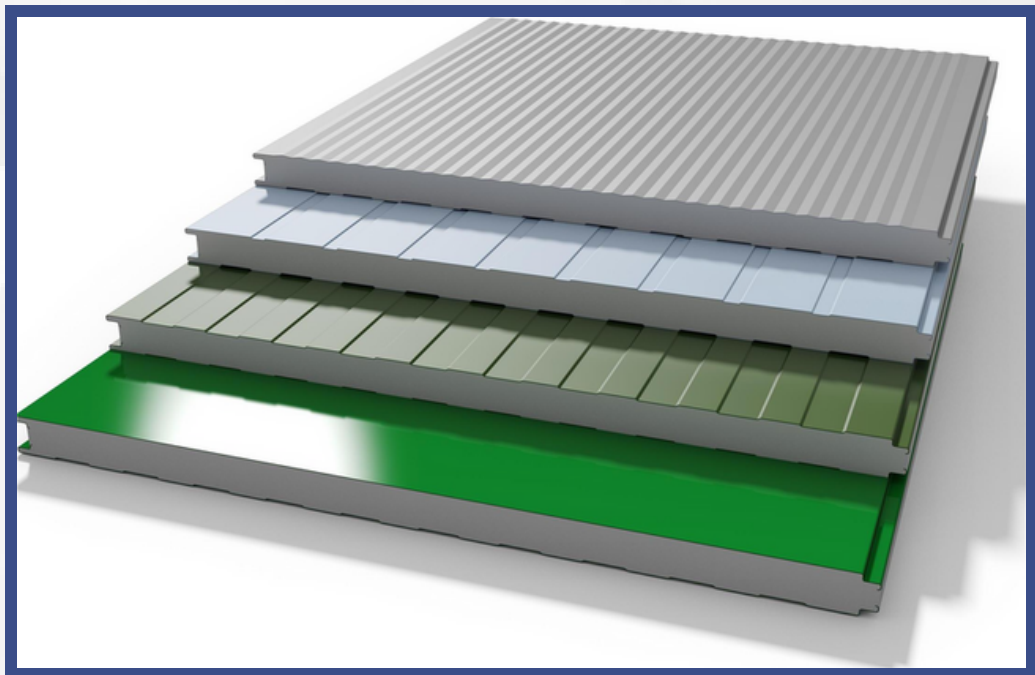
DECIBLE REDUCTION - 50mm Panel	5-7 dB
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WALL PANELS

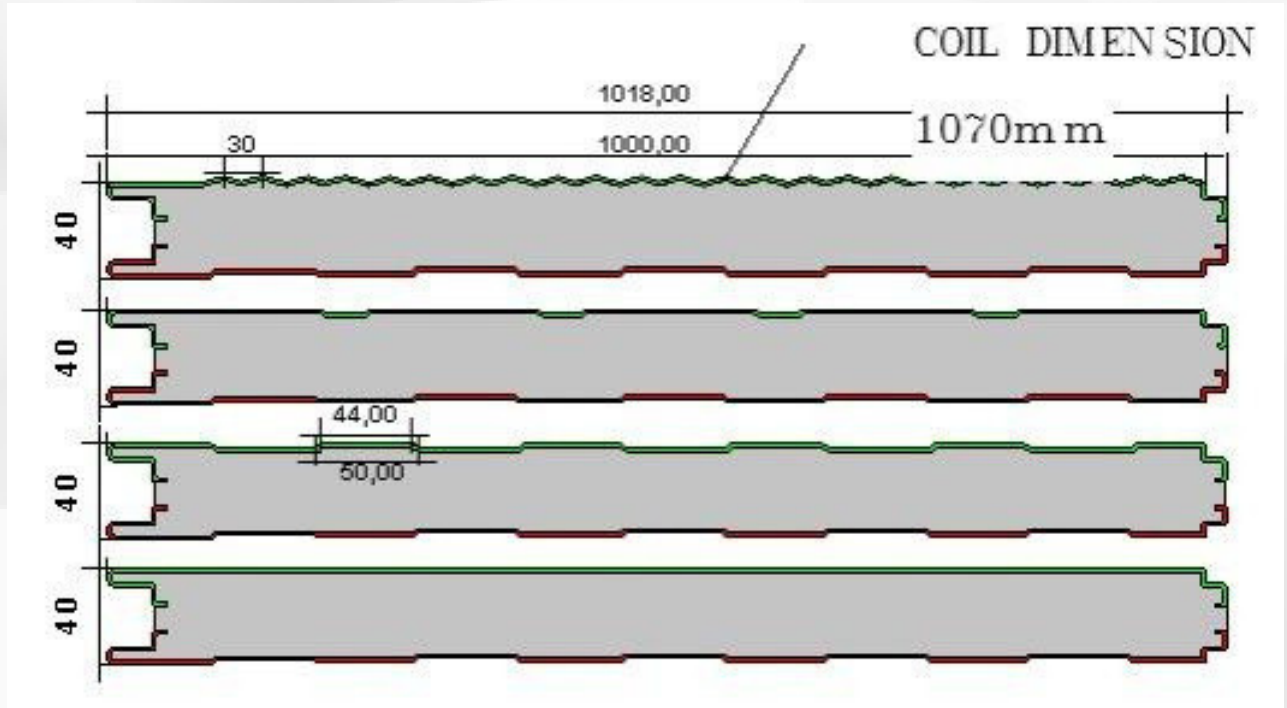
LANGE AND GRANT L&GWP Through-Fix Wall & Partition

The L&GWP is a standard, double-tongue-and-groove joint wall panel, through fixed onto the structures. It can be installed horizontally or vertically on any type of building. Thanks to their design, TFW panels can be used as self-standing internal partition walls and suspended ceilings.

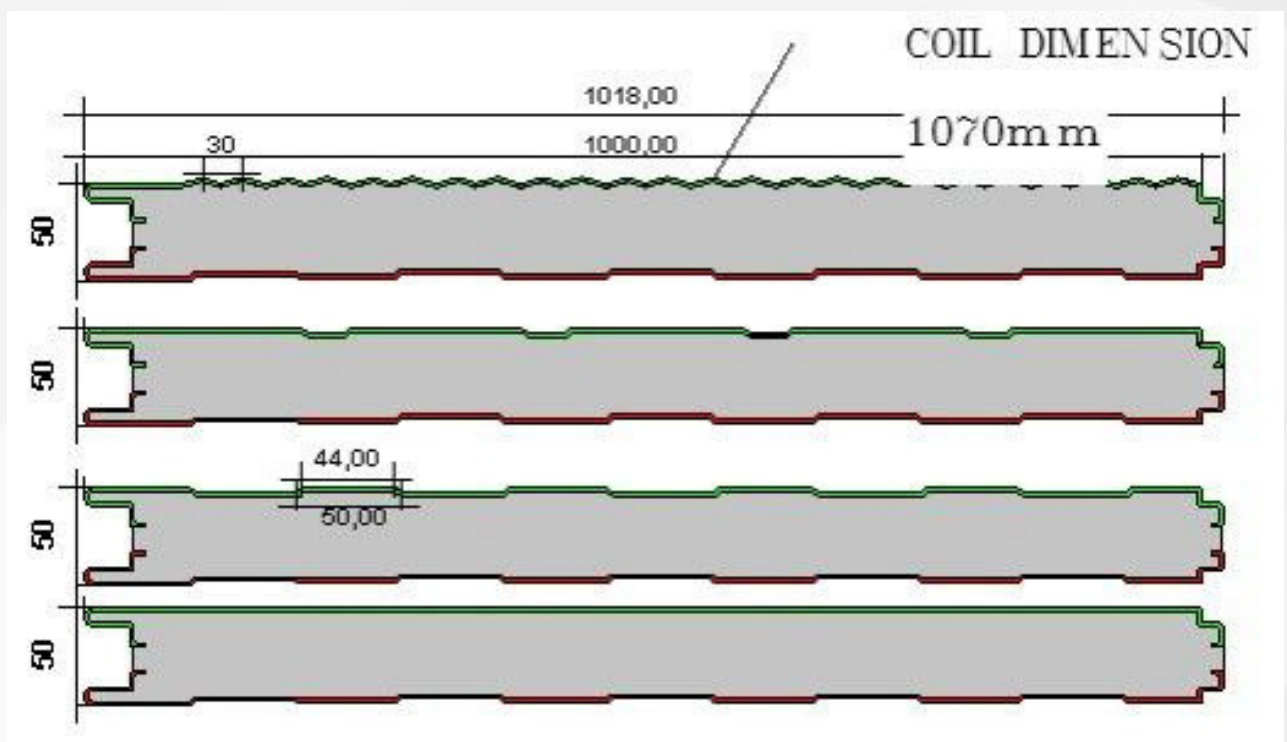


WALL PANELS SIZES

L&GWP 40mm

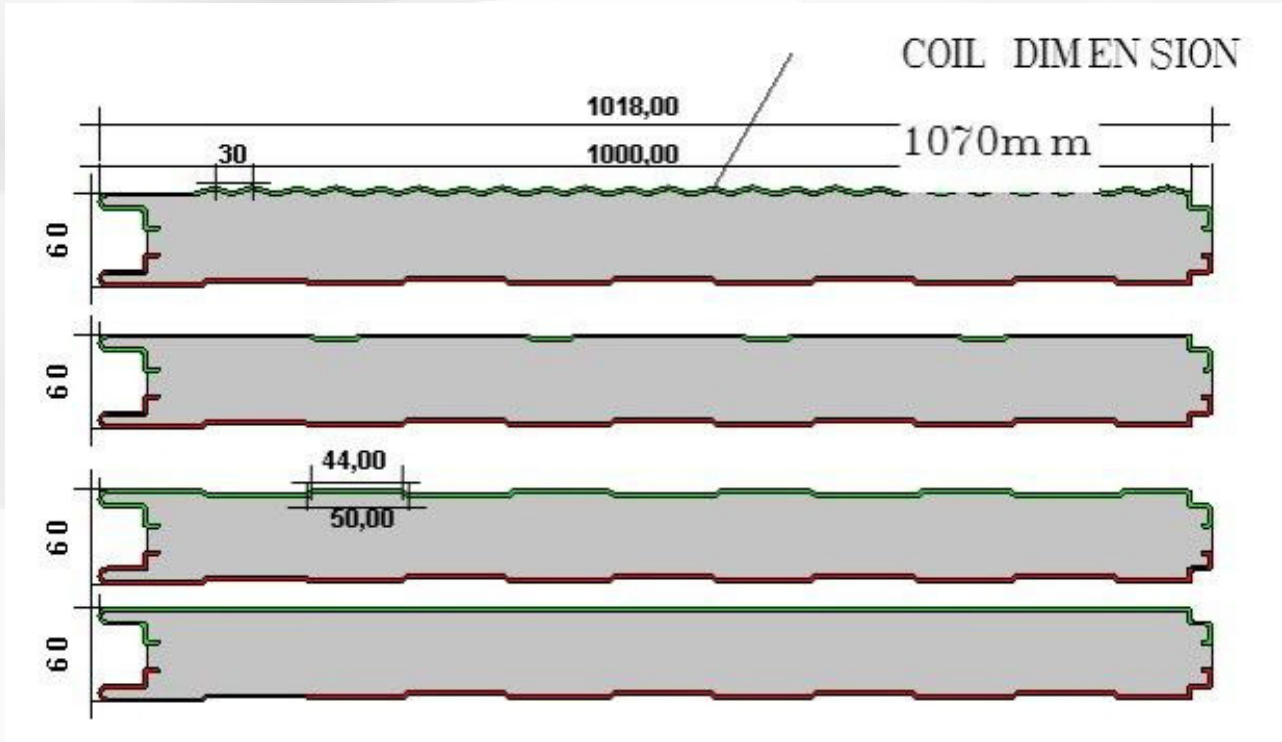


L&GWP 50mm

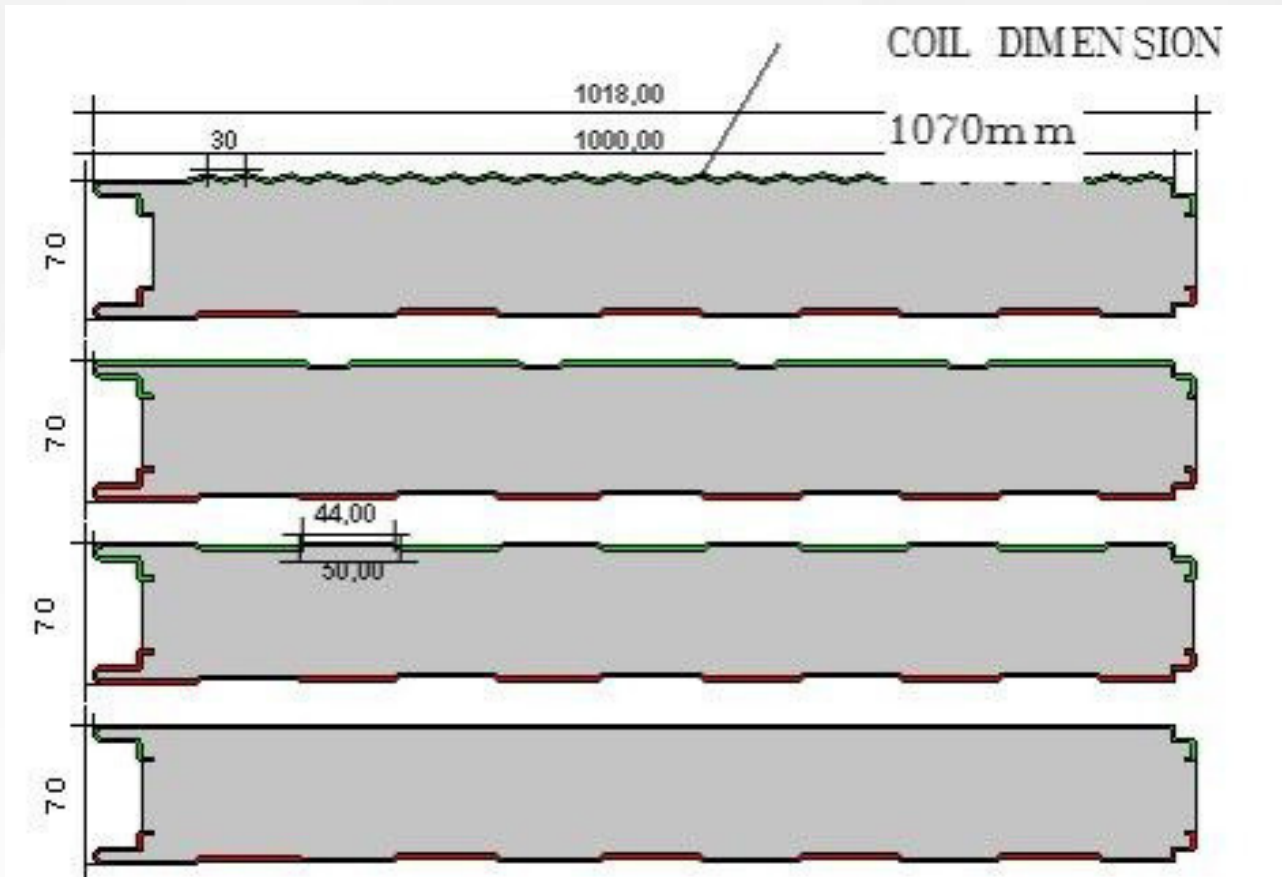


WALL PANELS SIZES

L&GWP 60mm

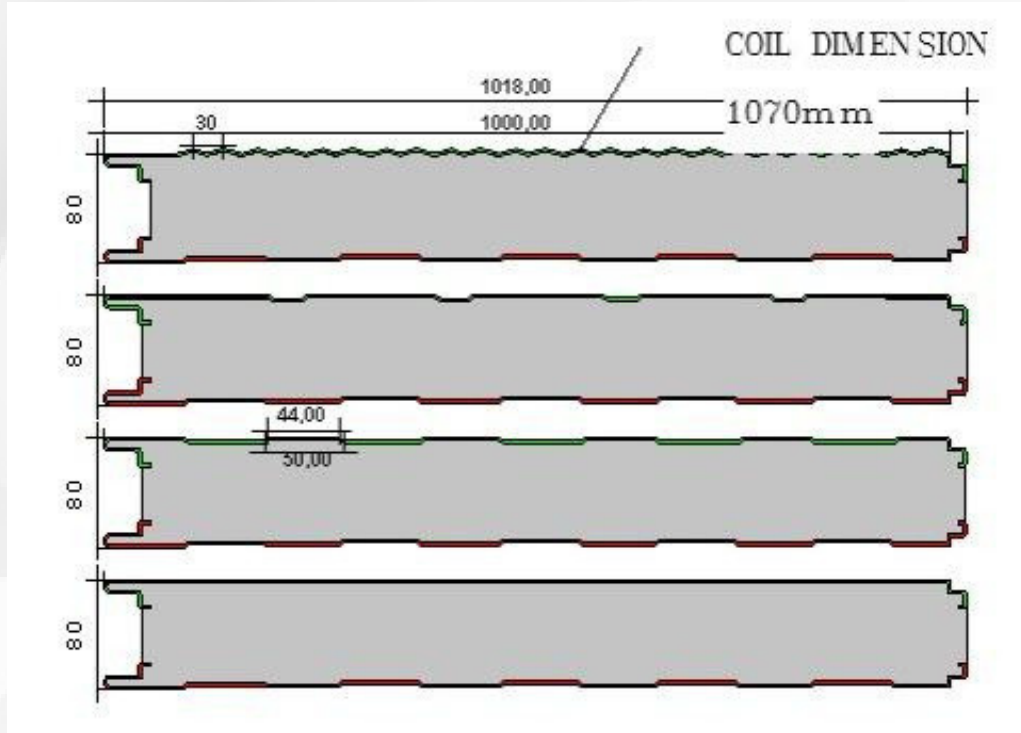


L&GWP 70mm

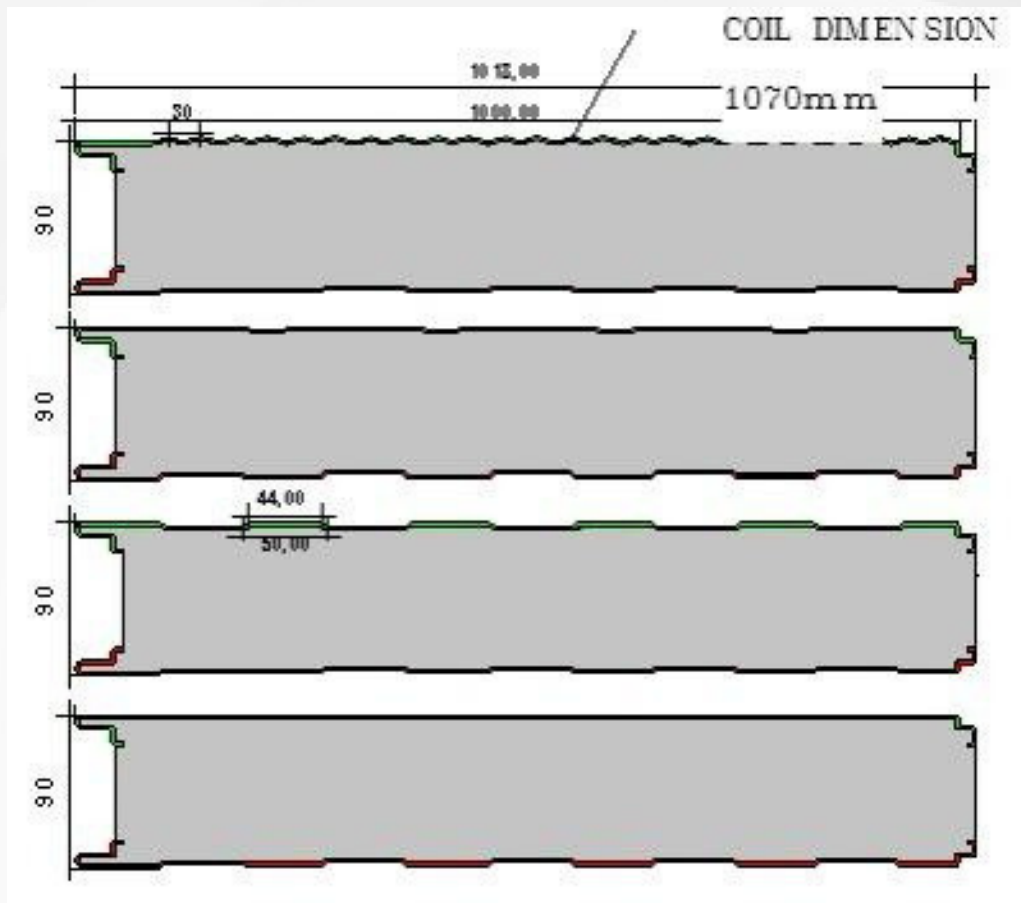


WALL PANELS SIZES

L&GWP 80mm

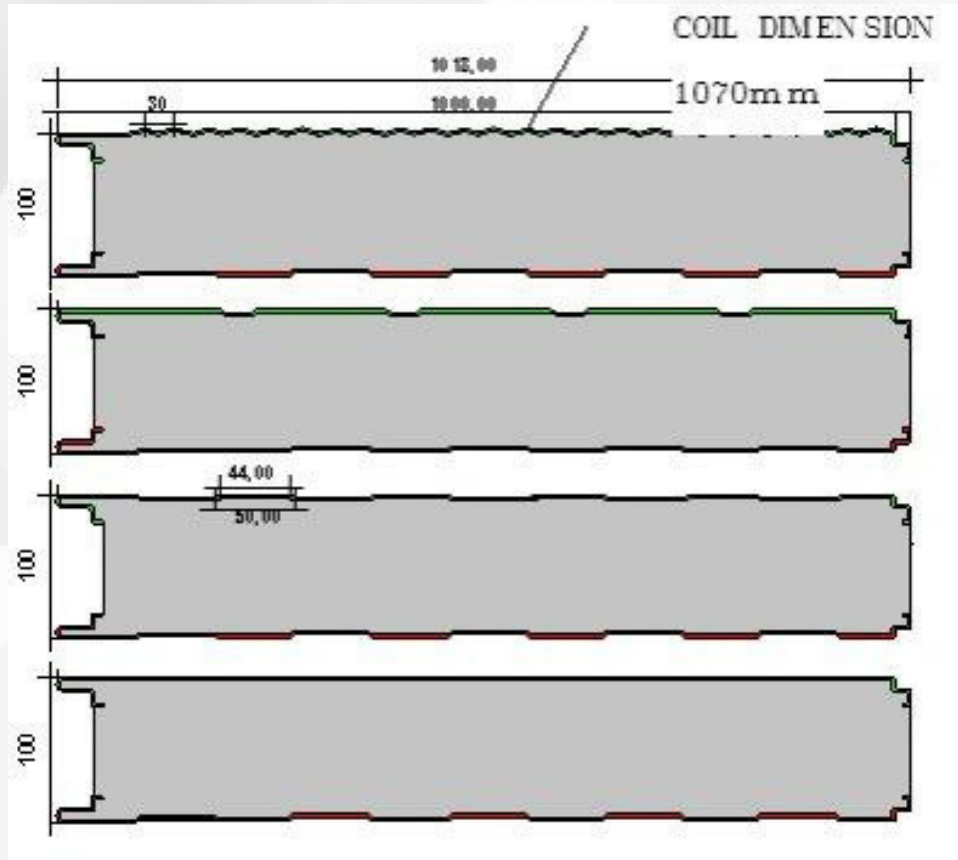


L&GWP 90mm

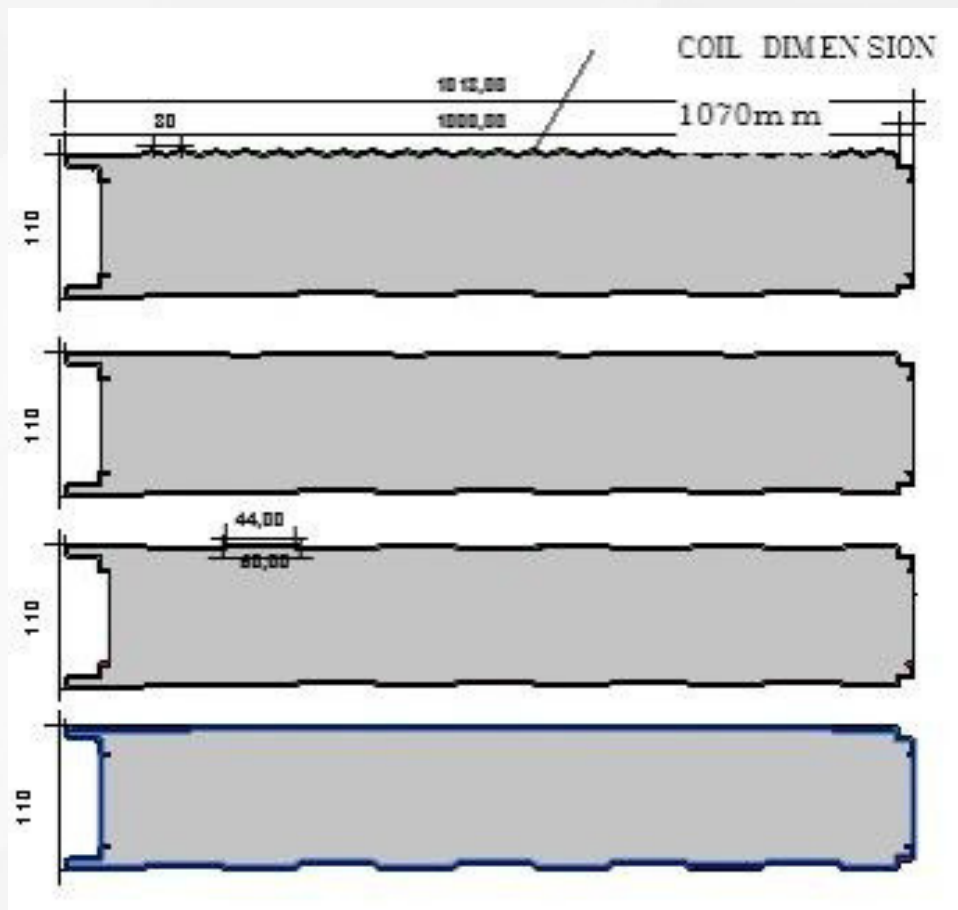


WALL PANELS SIZES

L&GWP 100mm

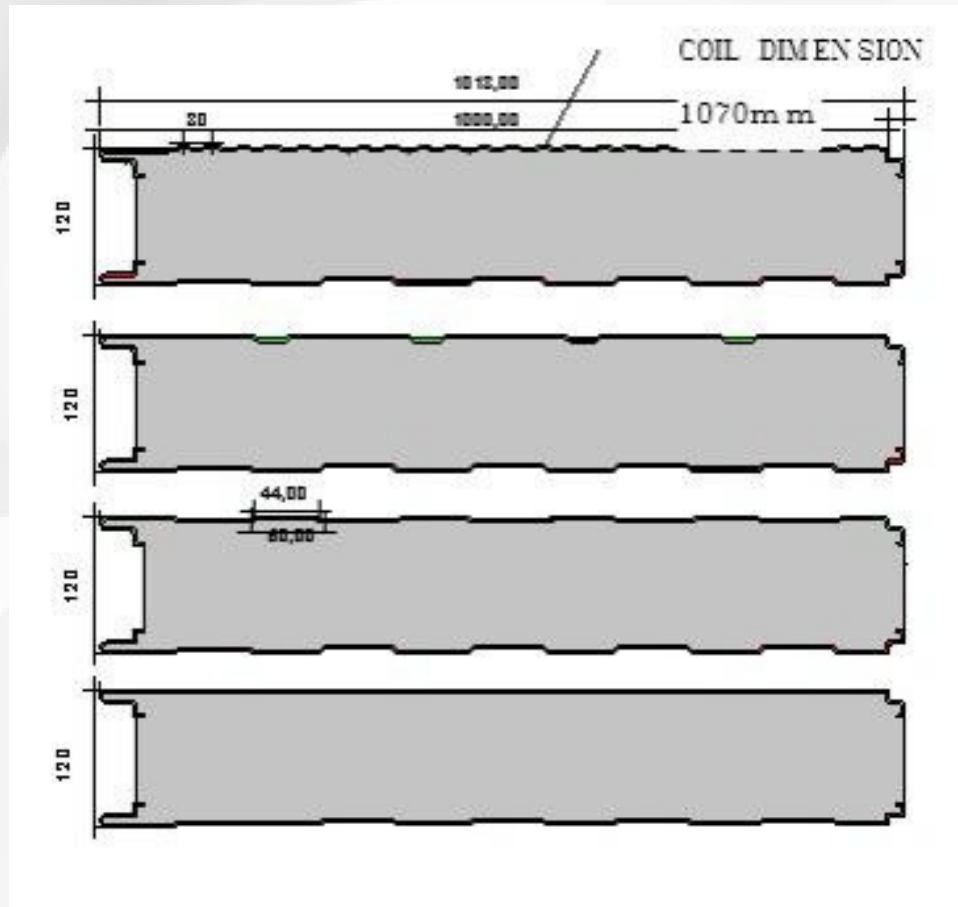


L&GWP 110mm

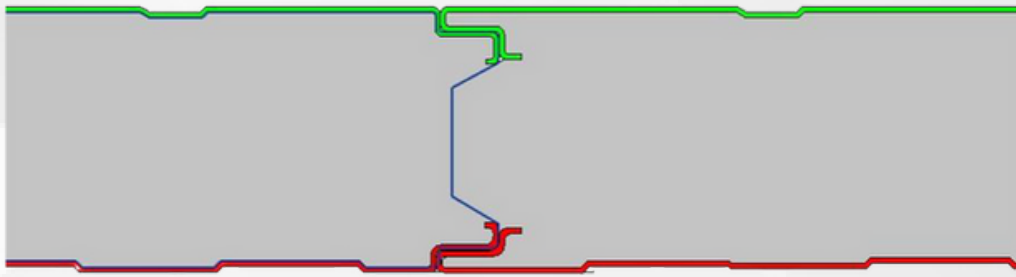
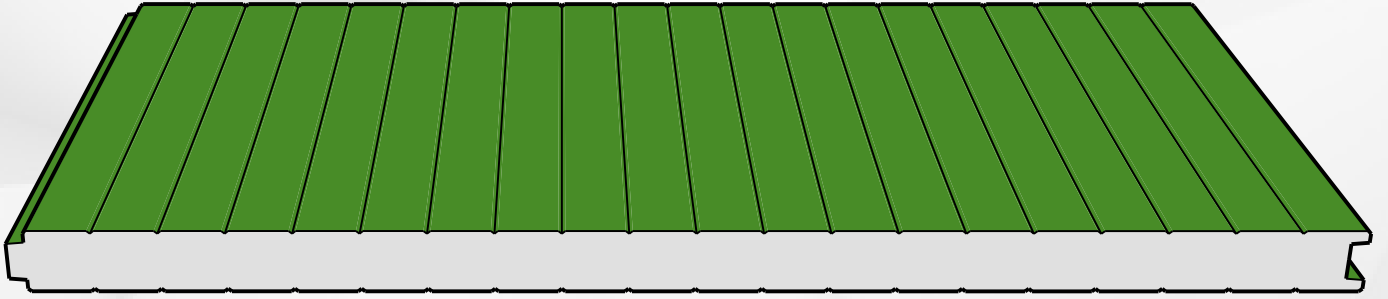


WALL PANELS SIZES

L&GWP 120mm



POLYURETHANE SECRET FIX.



Polyurethane Secret Fix Wall Panel.

Panel Thickness (t)(mm)	50mm	80mm
U Thermal Conductivity W/M ² H°C TS EN 14509	0,34	0,23
Fire Resistance TS EN 14509	B1 B2 Ve PIR	B1 B2 Ve PIR
TS EN 14509	$\pi=0.022$ W/mK	$\pi=0.022$ W/mK
PU Sound reduction (dB) (0,50/0,40mm)	Minimum 16 desebel	Minimum 16 desebel
Cover Width (mm)	1000mm	1000mm
Panel Length (m) Standard Truck	Min 2000mm/Max 13,40 ft	Min 2000mm/Max 13,40 ft
Panel length (Container 40FT)	Min 2000mm/Max 11,90 ft	Min 2000mm/Max 11,90 ft
Panel Length (Container 20FT)	Min 2000mm/Max 5,90 ft	Min 2000mm/Max 5,90 ft



FIRE PROPERTIES

As a response to industry demands, (Lange and Grant) has introduced a new generation of fire resistant sandwich panels: Lange and Grant Fire Shield!

Lange and Grant fire Shield incorporates a high grade polyurethane (PU) insulation core together with a specially-designed, double tongue & groove fire-rated joint. Lange and Grant Fire Shield PU core provides superior fire- resistance and the special joint further protects the core from flame ingress and enables the panel to maintain its structural integrity when exposed to fire.

Fire Safety Testing & Certification

Panels are classified as fire-resistant when they satisfy certain performance criteria during a real fire situation. Fire resistant panels do not spread fire, contribute to it, spit out burning droplets or emit excessive smoke. Fire resistant panels preserve their integrity and heat insulation properties for a certain period of time. By successfully meeting these criteria during a fire. Fire-resistant panels will provide sufficient time for occupants to safely evacuate the building and implement fire-fighting measures.



PANELS FIELDS OF USAGE

- Factories and Industrial Buildings
- Supermarkets, Logistic Warehouses
- Warehouses and hangars
- Industrial buildings related to agriculture
- Industrial cold storages
- Social facilities (dormitories, hotels, motels, etc.)
All sorts of foodstuff facilities (vegetables, fruits, vegetable and animal products, sea products, chocolate, oil, etc.)
- Facilities producing bakery products, patisseries
Medical material producers and depots (drug manufacturers, laboratories, hospitals, etc.)



ENGINEERING & DESIGN

Starting from estimation of the panel requirement of any project, Lange and Grant is able to provide its customers with a range of engineering and technical advice services.

Some of the services that Lange and Grant provides

- Panel estimation based on project drawings
- Preparation of shop drawings, including detail solutions
- Final BOQ to include panels, flashings & accessories
- Preparation of drawings to guide the installation team Site supervisor to guide the installation team
- Assistance in selecting a certified contractor for installation of sandwich panels

***All or a combination of the above services are available upon assessing the requirement of each project.**



QUALITY ASSURANCE



Lange and Grant Quality System meets the requirements of ISO 9001:2008 standard and is regularly audited by three separate bodies.

Lange and Grant is committed to providing clients with quality products and service through having the following systems in place :

Well equipped laboratory with high technology content
An effective Quality Management System.

Preset quality objectives and a system of continuous review

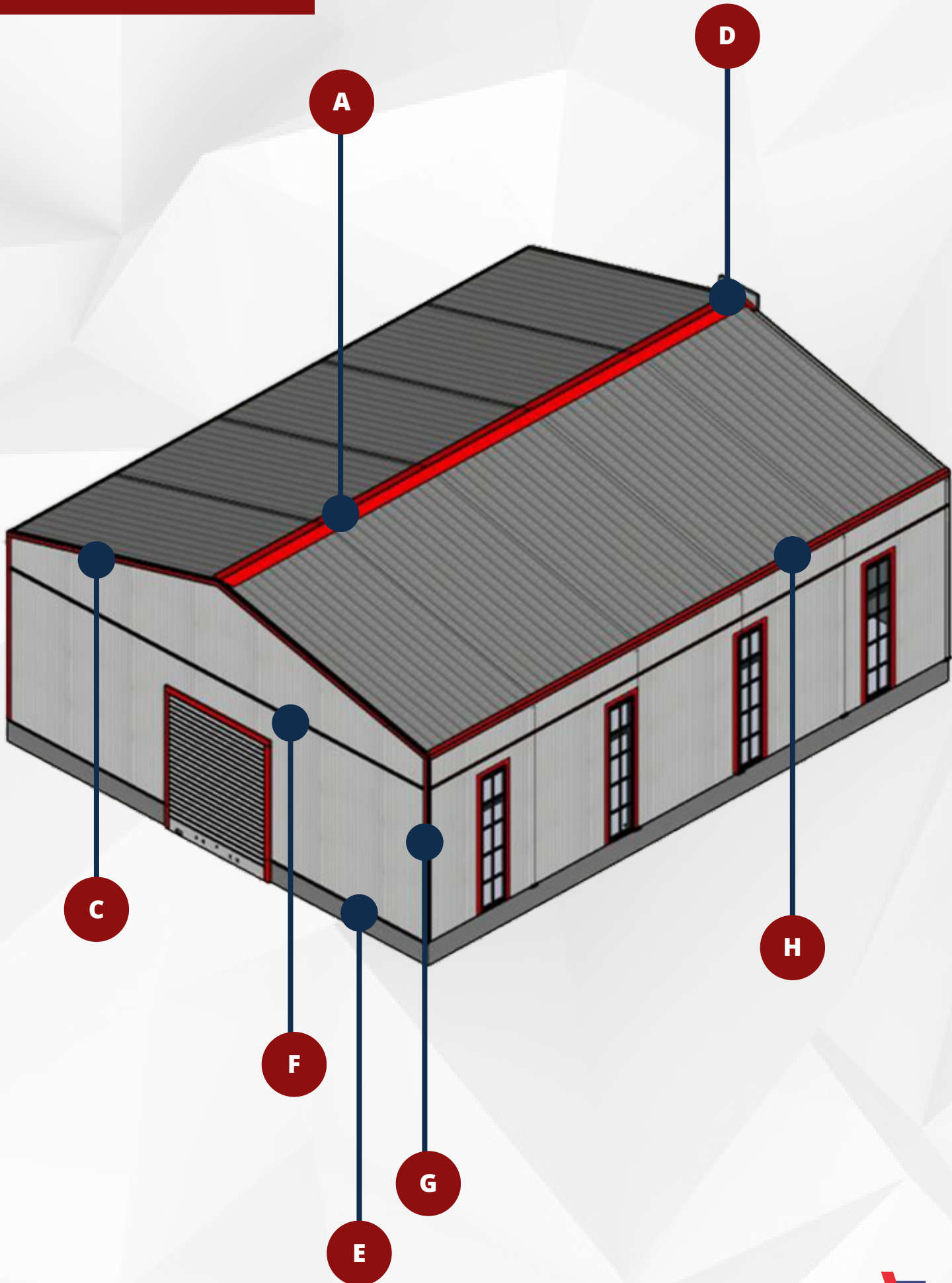
A team of qualified and experienced personnel

Extensive interaction program with customers

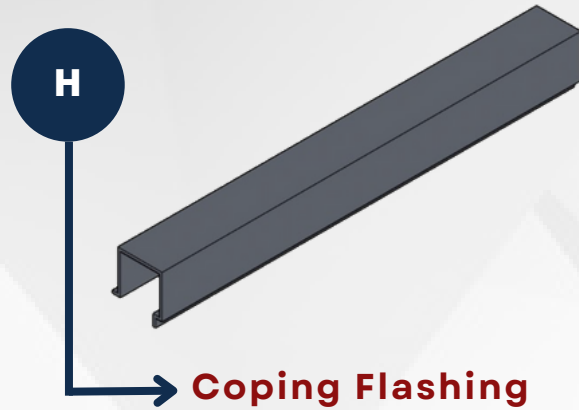
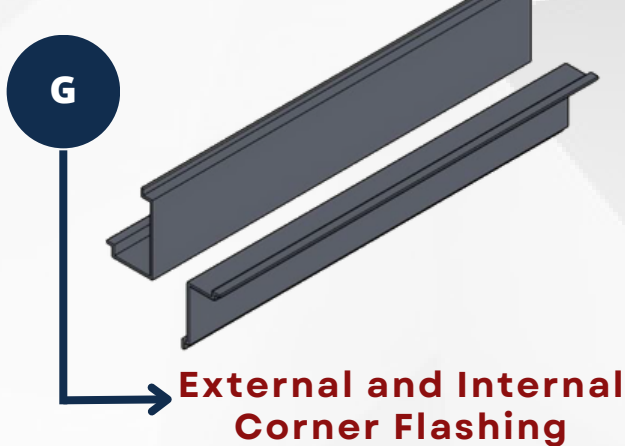
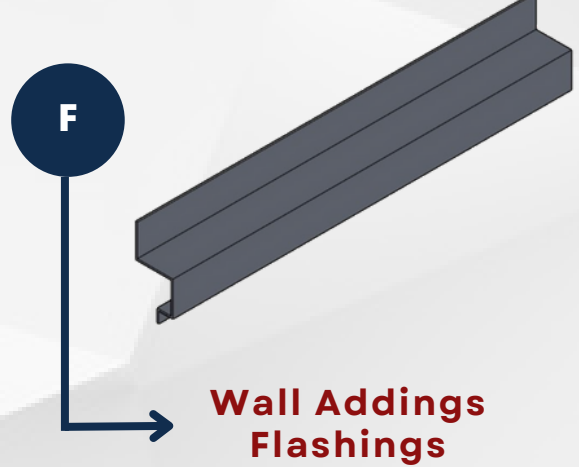
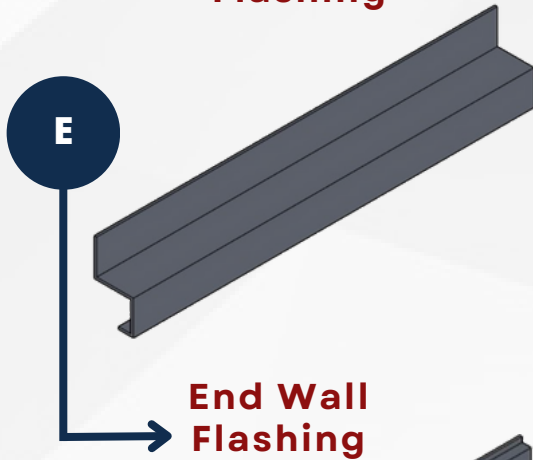
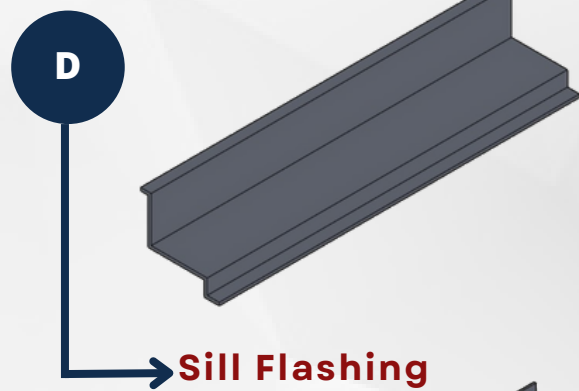
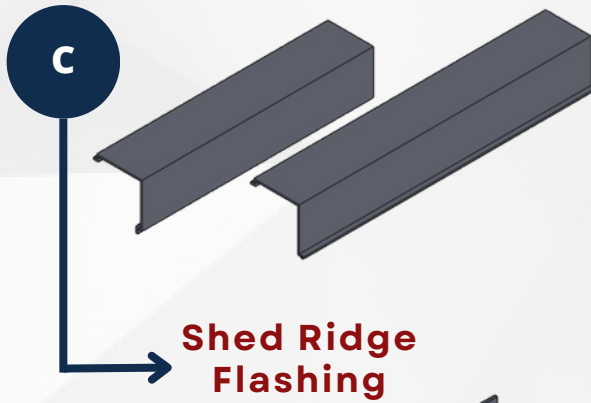
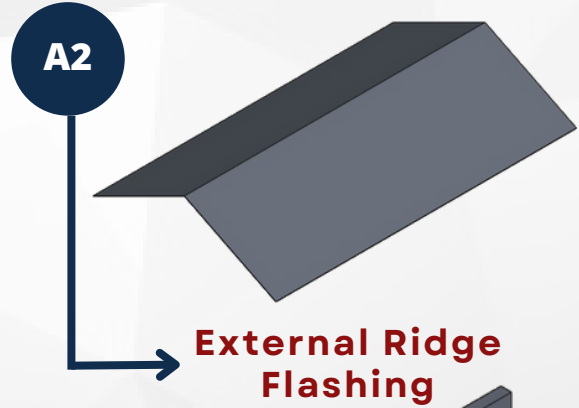
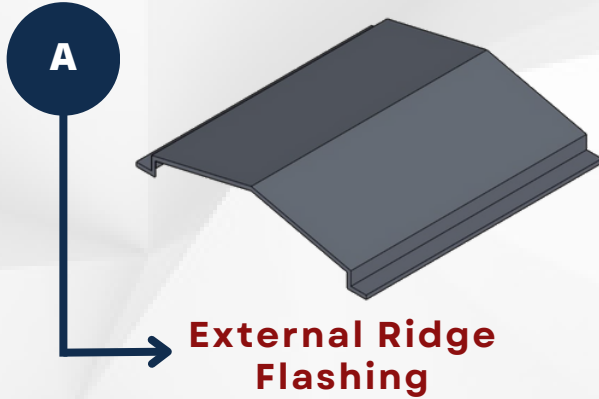
A motivation program for the employees to achieve optimum results



INSTALLATION PROCESS



INSTALLATION PROCESS



PACKAGING & HANDLING

Panels are delivered in bundles to customer premises, with each bundle containing multiple panels wrapped in transparent polyethylene film and supported at the bottom by polystyrene blocks. Individual panels also have protective film to prevent scratches. Transport vehicles can accommodate four rows of panels, with varying panel counts per bundle for different panel types. Land and sea freight capacities differ due to vehicle dimensions. For specific details on the number of panels per bundle, contact Lange and Grant.

Special Packaging

Certain destinations may necessitate specialized packaging. We can recreate strengthened packaging utilizing extra wrappings, wood accents, or custom design.

Additional fees apply.

Handling

Panel stacks are meticulously loaded and strapped at the plant to ensure that L&GIP clients receive their items in the best possible condition. It is vital to pay extra attention to appropriately managing the panels while unloading/moving in order to keep the panel quality in top shape.

Clients are asked to carefully inspect the panel stacks prior to unloading and to report visible damages on delivery of goods as soon as possible.

All L&GIP panel bundles come with "Handling, Transport, and Storage Instructions*" sheets. Please read the instructions carefully and follow them.

Unloading on site

When unloading the panels on-site, extreme caution is required. To avoid pressure on the edges of the panels, which might damage the joints and generate waviness on the panel surface, a forklift or a crane equipped with a spreader beam should be utilized.



OFFLOADING & STORAGE

Store panels in a covered area on a clean, flat surface, with no more than two bundles stacked. If no covered area is available, store outside on a clean, flat surface, covering them with a cloth to shield from dust and rain, while allowing air circulation. Ensure panels are on a slightly inclined surface when stored outside to prevent water accumulation. Always keep panels away from potential fire hazards.



PROTECTIVE FILM

The standard procedure requires prompt installation of panels upon receipt to prevent extended storage, and the protective film should be removed after installation. Prolonged storage in packed condition may harm panel surfaces, requiring removal of the protective foil. Contact Lange and Grant for guidance if faced with this situation.

SAFETY

In the developing world of construction materials, higher standards in fire safety are being demanded by end users all across the application spectrum.

These demands are firstly motivated by the need to preserve human life, property and products and secondly, the need to improve the quality and performance of insulated structures. Standard polyurethane and polystyrene insulated panels are vastly inefficient against fire, providing hardly any protection at all.

Government legislation is now demanding higher fire resistance for insulated panels while maintaining their structural and insulation properties.



MODULAR BUILDINGS



MODULAR BUILDINGS





THANK YOU

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