

LAY S. GO WALL SOLUTION

INNOVATIVE WALL SYSTEM FOR ENHANCING EFFICIENCY.

BROCHURE

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VT Innovative Alliances Co., Ltd. Innovative and sustainable construction materials





VT INNOVATIVE ALLIANCES CO., LTD. (VTIA) was

established on January 15, 2016, by professionals with over 30 years of experience in civil engineering, materials science, and industrial engineering. Our company is dedicated to advancing the construction industry through innovation and production of cutting-edge construction materials. We aspires to become a leader in innovative construction materials in Thailand. Presently, we have a manufacturing facility that produces LAY&GO WALL SOLUTION in Pak Kret District, Nonthaburi Province.

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LAY S. GD PARTITIONING SYSTEM



The LAY&GO wall system is designed to enhance the efficiency of wall construction by being fast, cost-effective, and meeting standards. It consists of LAY&GO blocks and LAY&GO LAY&GO formworks made from Cellular Lightweight Concrete (CLC), which is strong, heat and sound resistant, and crack-resistant in humid conditions, reducing mold issues. Therefore, it is a system suitable for Thailand's climate. The LAY&GO wall system is designed to enhance the efficiency of wall construction by being fast, cost-effective, and meeting standards. It consists of LAY&GO blocks and LAY&GO LAY&GO formworks made from Cellular Lightweight Concrete (CLC), which is strong, heat and sound resistant, and crack-resistant in humid conditions, reducing mold issues. Therefore, it is a system suitable for Thailand's climate (CLC), which is strong, heat and sound resistant, and crack-resistant in humid conditions, reducing mold issues. Therefore, it is a system suitable for Thailand's climate for Thailand's climate.

The LAY&GO formwork is a prefabricated formwork for casting concrete lintel/column made from CLC. The formwork is sufficiently strong to allow continuation of block piling with out having to wait for the concrete to dry, thus allowing wall construction to be completed within the same day. When used together with LAY&GO blocks, they make the walls strong, durable, reduce the risk of cracking, solve major wall construction issues, and save costs.





LAY&GO Block - Page 3

LAY&GO formwork- page 4

The LAY&GO wall system is versatile and suitable for use in various projects, including condominium, factories, schools, office buildings, and single houses.





BLOG L**AY S. GO**



The LAY&GO block is a lightweight Cellular Lightweight Concrete (CLC) block suitable for hot weather in Thailand. It is made from environment raw materials such as natural foaming agent and fly-ash. The block is lightweight and its surfaces are textured for easy plastering with regular cement. It is strong, durable, can withstand weight, and can be used for building bathrooms without worrying about mold or water leakage stains. It serves as good sound and heat insulation, helping to reduce air conditioner usage costs. It eliminates concerns about cracked walls due to temperature differences inside and outside because CLC has high density and low flexibility. Choosing CLC blocks is a confident choice due to their quality and reasonable pricing.

Block comparison

Parameter	Unit	LAY&GO blog	Red brick	AAC Block
Weight per unit area of material	kg./m2	80	130	70
Strength of Compression	ksc.	>50	15 - 40	>40
Density	kg./m3	1,001 - 1,200	1,100	510 - 700
Rate of Water Absorption	%	18	20	30
Soundproofing	dB	43	38	43
Fire Resistant	Hour	4	3	4
Heat Conduction	W/mk	0.187	1.15	0.098
Weight per Point Received	Kg.	40 - 60	50	30 - 40
Weight of the wall including plaster on 2 sides	kg./m ²	100 - 110	180	90 - 100

Pallet block specifications



Parameter	Unit	Information			
Dimensions (Length x Height)	cm.	60 x 20			
Width	cm.	8	10	16	20
Quantity of blocks per pallet	Block/p allets	150	130	80	60
Construction Site	m²	18	16	10	7

Key Features



Durable: Suitable for both indoor and outdoor use.



Textured surface: the surface is designed for easy plastering.



Soundproofing: effectively absorbs sound to minimize external noise.



Heatproof : A good heat insulator that reduces electricity bill.



Strong mount: standard anchor bolt can be usded for furniture anchors or TV wall mounts .



Affordable option: Utilizes standard plaster cement. Lightweight leads to lower structural expenses.



Mold-resistant: low water absorption, resulting in low fungal growth.



Reduce cracking: Improved resistance to cracking under humid conditions.





LAY S. GO Locksmith

The main functions of columns and lintels are crucial parts of the wall system as they bear weight and various forces acting on the walls. There are two main methods for installing columns and lintels: The first method is to cast them on-site using wooden/metal molds. This method slows down the process as one has to wait for the concrete to set before continuing with wall construction. The second method is to use columns and lintels prefabricated from factories. This method allows fast installation, but they are very expensive, requires skilled labor and may not be suitable for all areas as it cannot be cut easily. The LAY&GO formwork address these installation methods by making the construction process faster, eliminating the need to wait for concrete to set and avoiding the time-consuming process of mold installation in the first method. They can be cut to the desired size and the steel and concrete placed in the LAY&GO form work ensure durability and strength of the wall.

Components post-installation



Locksmith concrete Rebar RB 9

Compatibility with various block types

CLC block AAC block

Solid block





LAYSGO



Red brick

Pallet specifications

Parameter	Unit	information							
Dimensions (Length x Height)	cm.	120 x 15							
Width	cm.	8	10	16	20				
Number of bars per pallet	Pieces/Pallet	72	60	36	30				
Total length	m.	86.4	72	43.2	36				



Product features



Strong: provide the wall with rigid steel reinforced concrete lintels and columns.



Efficient: Simple and fast installation reduces wall piling time by up to 90%.



Simple to plaster: the surface is designed for easy plastering.



Adjustable size: the formwork can be cut to the desired size using a saw for light-weight concrete .



Reduce waste and pollution: Eco-friendly materials and minimal leftover scraps.



Requires fewer workers: increases work efficiency, as the installation does not require skill workers.



Cost-effective: fast wall construction, reduces labor costs, l low leftover scraps.



Low dimensional variations: produces uniform size columns and lintels.



LAY S. GD CONSULTATION SERVICE

LAY&GO offers expert advice, training for off-site use, design reproduction with an engineer, problem-solving suggestions, assistance with wall system inquiries, quality inspection services for walls, and a specialized team of technicians for LAY&GO wall system installation, ensuring customer satisfaction through comprehensive services.

Should you have any inquiries, please reach out to us at

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LAY S. GO CONSTURCTION METHOD

Before starting work, the worker should choose the appropriate thickness of blocks based on requirements, allowing 1-1.5 cm for plaster on each side. The rough surfaces should be scraped around the posts and the area where the block is laid to enhance bonding with the mortar. In some cases, a bonding agent may be applied. Avoid scraping during work as vibrations can cause previously laid blocks to develop cracks around the posts or on the floor. The steps are as follows:

Wall piling:

- Cleaning the construction area: Clean the lightweight block construction area with water and remove all dust to ensure better bonding. Clearly mark the alignment and tie strings along the specified alignment to facilitate block laying.
- Laying the blocks: Apply a layer of lightweight block mortar on the floor as the first layer of block laying. Use regular sand mortar to level and adjust. The sand mortar should be twice the thickness needed once the blocks are laid. The mortar should be dense but not thicker than 5 cm, as thicker sand mortar can crack easily when it contracts. Use a trowel specifically for lightweight blocks to ensure consistent and continuous mortar application at the bottom of the blocks and areas touching the posts.
- Reinforcing with steel: Reinforce every third block or every 60 cm with RB6 steel. Insert steel reinforcements into the main structure posts at least 5 cm, and ensure they are at least 30 cm above the block to secure the wall to the main structure of the house, preventing cracks in the wall during vibrations and temperature fluctuations.

Installing Columns, lintels, and beams:

- Position columns every 2.5 meters and lintels not exceeding 2 meters.
- Installation of lintels: Install LAY&GO formwork, insert RB9 steel, and pour concrete into the LAY&GO formwork's groove.
- Installation of columns: Insert RB9 steel, install LAY&GO formwork at column position, and pour concrete into the LAY&GO formwork's groove.
- Continue building until reaching the lintel: Leave a gap of at least 2.5 cm, and fill it with flexible materials such as foam or rubber sheets to prevent wall pressure.

Plastering:

- Preparing the wall surface: Clean the wall by sweeping off dust and dampen it adequately. Choose lightweight block plaster or pre-made plaster that allows easy control over the mixture and includes setting retardants.
- Wall preparation: Scratch and dampen the wall surface before plastering to achieve appropriate thickness and level.
- Plastering: Plaster should not exceed 1.5 cm in thickness. If thicker plaster is necessary, divide it into layers, allowing the first layer to dry and contract fully before applying the next layer.
- After plastering: Once the plastering is complete and dried, dampen the wall continuously at least once a day for 3-7 days to strengthen the wall and prevent cracks. In hot, sunny, or windy conditions causing rapid water loss from the wall, increase watering to 2-3 times a day and extend the duration or use shade cloth to protect the wall from direct sunlight or wind to prevent excess water loss.





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LAY S. GD WALL SOLUTION

Innovative wall system for enhancing efficiency.



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