

GOLD WIND ENGINEERING (S) PTE LTD

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Gold Wind Engineering (S) Pte Ltd Proposed Sigma Racking System

Title: **Sigma Racking Support Open Decking System**

Project Design Team : **EDWARD ONG / TONG BOON YIK**

Date: **9 March 2019**

DESIGN FEATURE

Deck Height : 3010mm FFL
Deck Surface : Epoxy Powder Coated Steel Plank
Handrails : 132-SM-HRS1000
Deck Design Code : 01MFP-SR50-1200
Staircase : 01-IS2-3010
Structural Height : 132-SM-C120H3000
Loading Gate : 132-SM-SLIDING/SWING GATE



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About Us

Gold Wind Engineering (S) Pte Ltd was established in 2011. We provide that delivers material handling products and services to our clients throughout Singapore. Primarily focussing on all kind of storage racking and Warehouse safety inspections, you will find that our services of your storage equipment to a standard.

We specialize in the design, fabrication, installation of storage racking systems. Our company has also started expanding with more professional installation team. This is just the beginning, we are on our way to becoming a first level professional producer of storage logistics equipment in Singapore.

Our Vision

To provide excellent customer service and become the preferred choice of the supplier

Our Mission

The enhancement of safety standards throughout the pallet racking industry. Where there are costs we will find reductions, problems, we shall seek solutions, confusion bring clarity and doubt we shall bring understanding

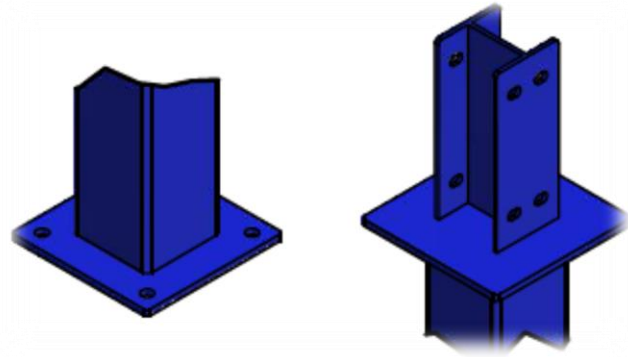
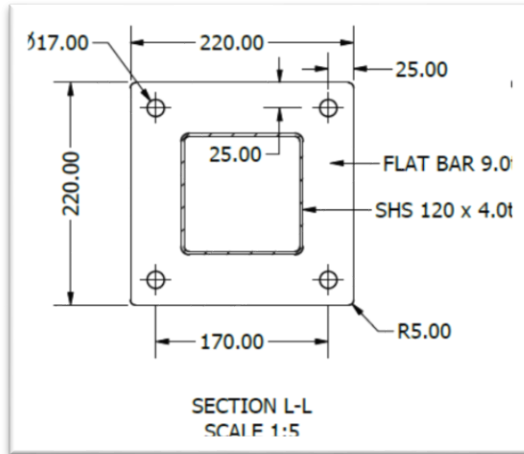
Why Choose Gold Wind Engineering?

We believe experience is just as important as knowledge. We possess both knowledge and practical experience to provide excellent services to our client.

- High Trained Gold Wind Installation Team
- In-house safety practise weekly.
- Designed & built experience more than 18 Years.
- Ex- Stock in Singapore & Malaysia
- Re-Design our client current racking to new warehouse
- Quickly Sales Response to client.



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COLUMN TOP & BOTTOM VIEW

COLUMN 120mm x 120mm x 4.0mm thick

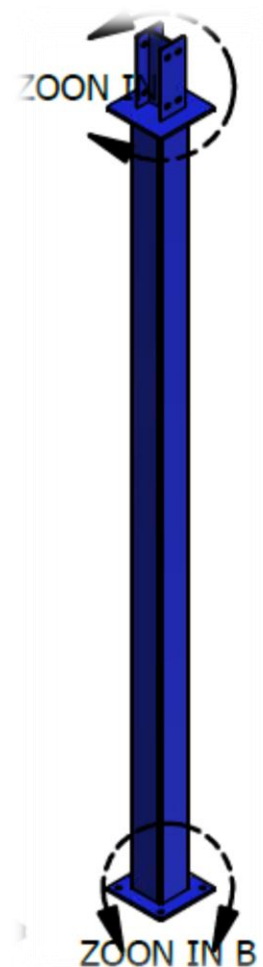
Sigma Column in SHS welded together, strengthening the resistance to compression and buckling. Column have trapezoidal slotted rows at the corner. These slots assure the perfect lateral anchorage of the beams.

Each Column consist as following

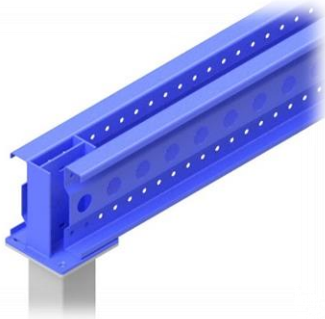
1. Column welded by SHS 120mm x 120mm x 4.0mm thick
2. Metal Base Plate 220mm x 220mm x 9.0mm thick
3. Bolts & Nuts for Base Plate M16 x 85 = **4 nos**
4. Finished: Epoxy Powder Coated in Blue (Close to RAL5017)



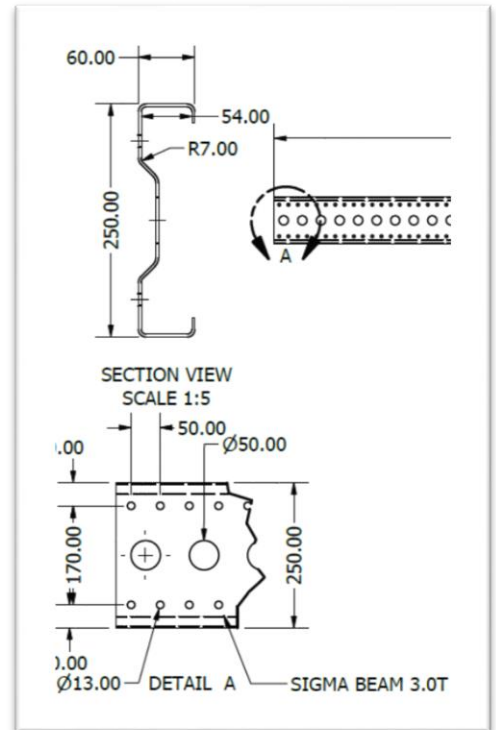
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////// SUPPORT BEAM



132-SM-L Bracket



Sigma Beam 250mm x 60mm x 3.0mm thick

The Horizontal Support Beams making up the load levels consist of an exclusively-designed Rectangle Shape double box beam-type section. Secure beam between support beam by connected with M12 Bolts & Nuts.

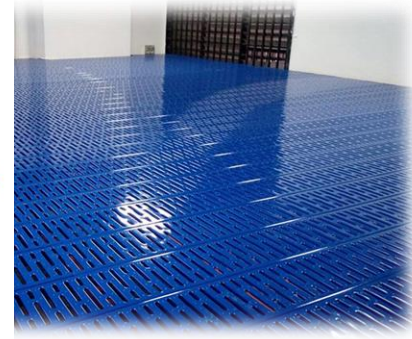
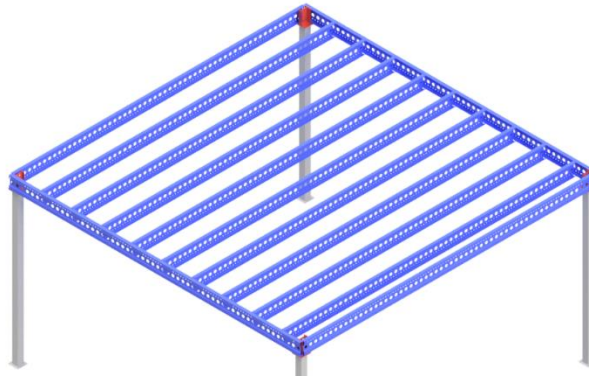
Transversal stability is reinforced by the transversal support beams of the column that fulfil the function of latticing beams.

Physical Load Test



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//////////////// STEEL DECK & RUNNER DESIGN

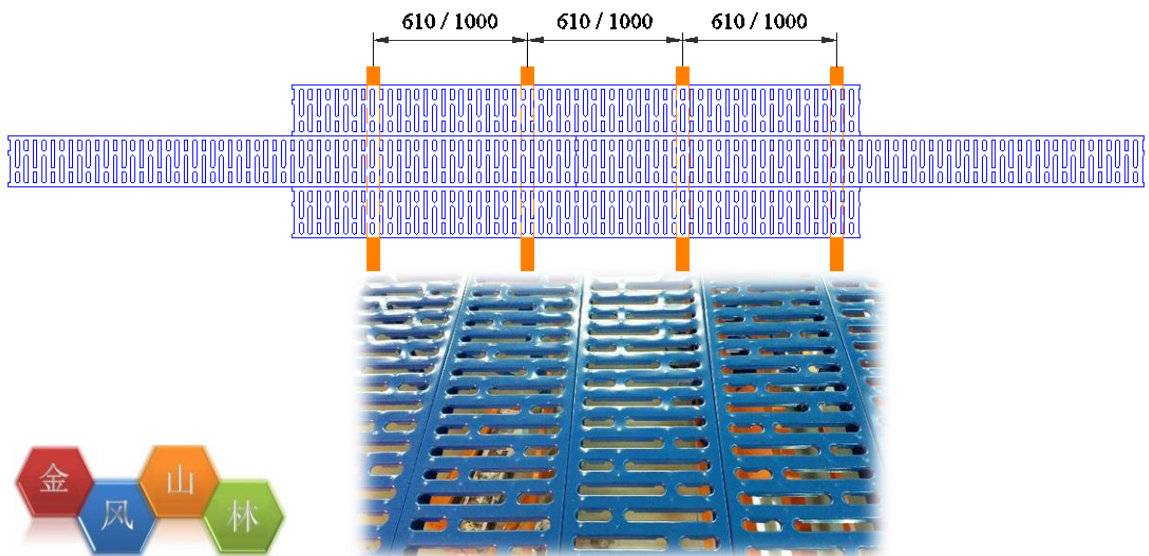


Sigma Beam supporting Metal Deck - Design Code 01MFP-SR50-610/800/1000/1200

Steel Runner is designed for reinforce the plywood decking. It's increase the strain to support greater Loading capacity.

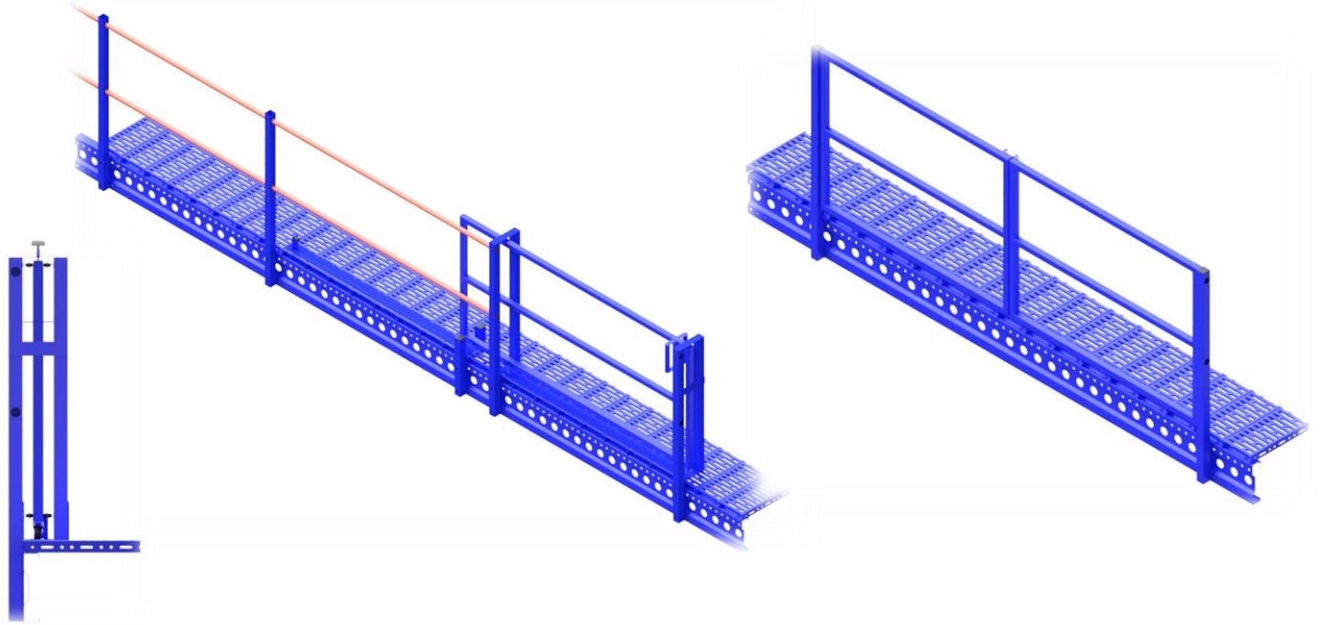
Feature of Sigma Beam support designed:

- a) Sigma Beam support to decking. Beam Section 250mm X 60 X 3.0t
- b) Open Steel Plank (Opening 32% and Closed 68%)
- c) Epoxy Power Coated in Blue
- d) Load tested.
- e) Beam to be installed at 406mm c/c every piece of beam direction.
- f) Loading Capacity refer to Designed drawing.
- g) Secure beam between support beam : Connected with M12 Bolts & Nuts.
- h) Secure Metal Deck between steel runner : Free sitting without any screw.
- i) Secure between metal decking : Bolt & Nuts M8 x 16 at 4 Conner of each piece (200mm x 2240mm)



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////////////////////// LOADING GATE SLIDING



Loading Gate Design Code 132-SM- SLIDING GATE / SWING GATE

Gold Wind Loading gate design can be easily relocation in future and also changed of Sliding direction.

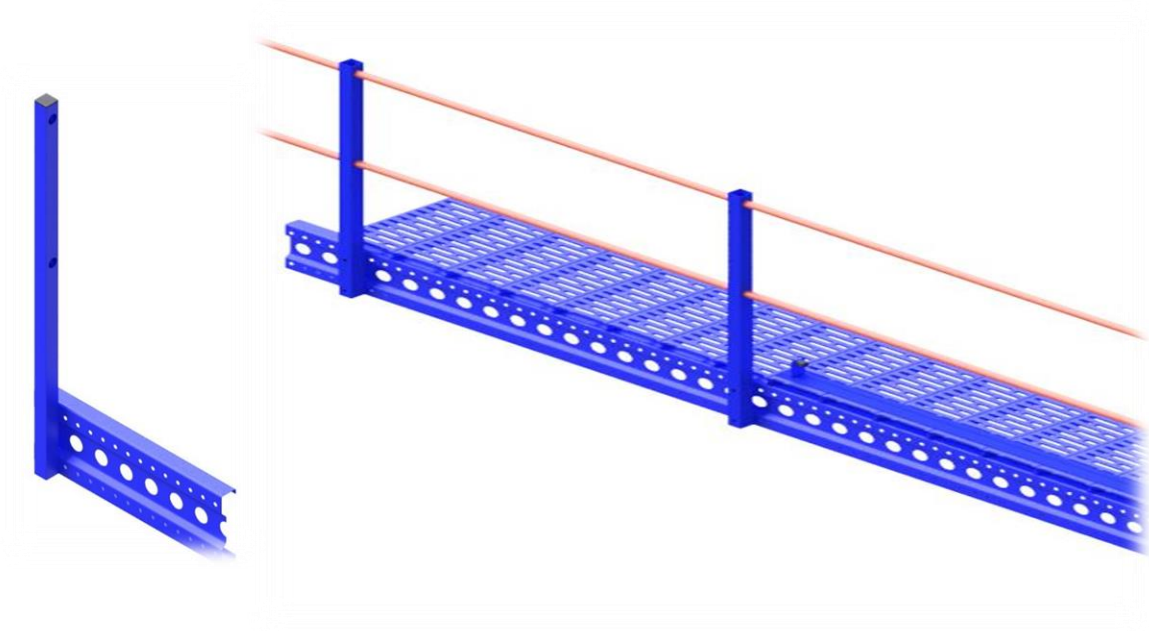
Feature of Loading gate designed:

- a) Frame Work : Square Hollow Section 38mm x 38mm x 1.6t
- b) Colour : Epoxy Power Coated in Orange
- c) Secure post between decking: 2 x (M10 x 40 Bolts & Nuts) tighten up with the based plate
- d) Locking Device : Self Locking system
- e) Without Based Plate.
- f) Plastic Cap : Black colour plastic Cap each of Handrails Post.
- g) Welding: 3mm fillet weld all around on Square Hollow Section attached with Based Plate.



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////////// Handrail System



Handrails System Design Code 132-SM--HRS1000

Gold Wind Handrail system can be easily relocation in future and also changed of Rails direction if needed.

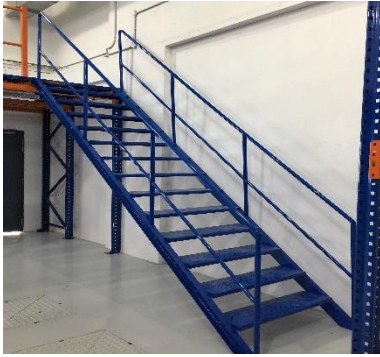
Feature of Rails designed:

- a) Post : Square Hollow Section 50mm x 50mm x 1.6mm thick (17% +/-)
- b) Horizontal : Hollow Steel Pipe : 33mm x 1.9mm thick.
- c) Colour : Epoxy Power Coated in Orange
- d) Secure handrail post between decking: 4 x (M10 x 40 Bolts & Nuts) tighten up with the based plate
- e) Secure horizontal pipe between post : Set screw M5 x 20 tighten up with Post and Pipe.
- f) Without Based Plate.
- g) Plastic Cap : Black colour plastic Cap each of Handrails Post.
- h) Welding: 3mm fillet weld all around on Square Hollow Section attached with Based Plate.



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Industrial Staircase

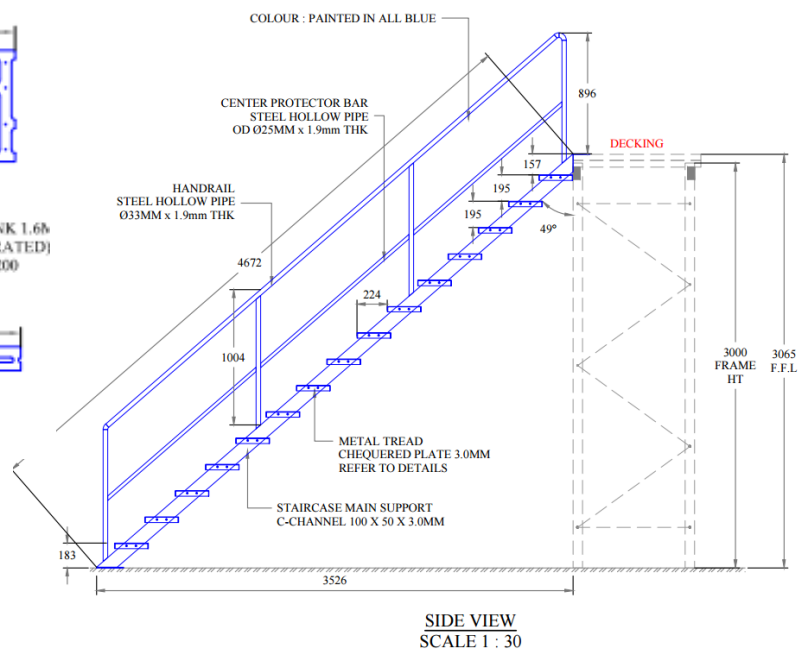
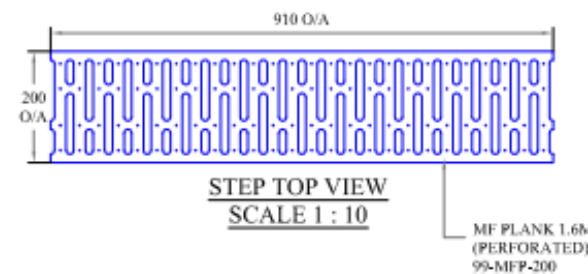


Staircase Design Code 01-IS2-3010

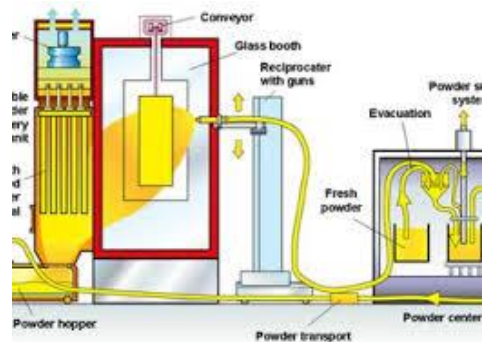
Gold Wind Staircase system can be dismantled and re-used when you relocate your warehouse in the future.

Feature of Staircase designed:

- Main Structural : C-Channel 100 x 50 x 3.8mm Thick.
- Top Handrail : Steel pipe 33mm x 1.9mm Thick.
- Middle Railing : Steel Pipe 25mm x 1.9mm Thick
- Metal Tread : Open Steel Plank (Opening 32% and Closed 68%)
- Colour : Epoxy Power Coated in blue (Closer to RAL5017)
- Secure Staircase between decking: 2x (M10 x 40 Bolts & Nuts) tighten up with the metal plate.
- Secure Staircase between floor : 2 x Expansion Bolt M10 x 50 anchor to the concrete floor.
- Secure metal tread to side staircase structural : Each step 4pcs of M10 x 20 Bolt & Nuts.
- Metal Tread size : 910mm (W) x 250mm (D) x 41mm (H)
- Welding on Handrail: 3~5mm fillet weld all around.
- Welding on Metal tread & flat bar: 3~5mm fillet weld at specify location.



////////// EPOXY POWDER COATING



What Is Powder Coating?

Powder coating is the process of applying a dry powdered paint compound made of pigments, specialized resins and fillers that melt and fuse together during the curing process to form a painted finish. The solid powder particles are electrostatically charged when exiting the low-velocity air powered spray gun. This electrostatic charge attracts paint particles to the work surface and holds them during the high temperature curing process which can exceed 350 degrees.

Why Is It Environmentally Friendly?

Powder coating is recognized as an environmentally friendly process because it doesn't rely on solvents or chemical carriers like traditional wet-paint systems. Because powder coating relies on the electrostatic charge to hold the paint to the work piece, powder coating eliminates VOC emission problems.


How Durable Is It?

Powder coatings are very resistant to cracking and peeling and provide very high abrasion, corrosion and chemical resistance. These attributes vary according to the specific application and paint choice. Powder coatings typically meet or exceed the finish performance characteristics of conventional solvent based wet paint coatings




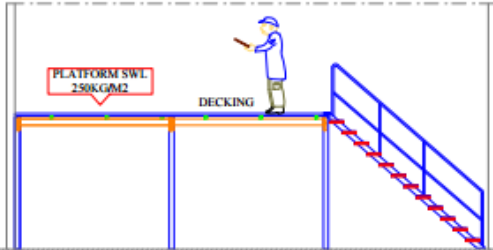
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SAFETY LOAD CHART



SAFETY LOAD CHART

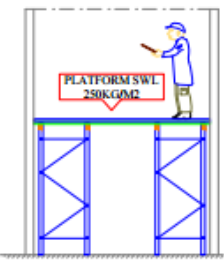




FRONT VIEW

* MAXIMUM LOADS IN KILOGRAM (KG) *
LOAD CHART ONLY VALUE FOR GOLD WIND'S PRODUCTS

MAXIMUM LEVEL LOAD CAPACITY
(UDL = UNIFORMLY DISTRIBUTED LOAD)



SIDE VIEW







RACKING STRUCTURAL INFORMATION


NAME OF COMPONENT	SECTION	WEIGHT (APPROXIMATELY)	MAX LOAD
LOAD BEAM 2700L	90 x 50 (2 x 1.8t)	14 KGS	2000KG UDL
END FRAME (M TYPE)	90 x 70 x 2.0t	--	12,000KG USWL

NOTE :

1. The chart listed were obtained considering that all components are in a perfect state of assembly and maintenance.
2. Improper use may result in load capacity loss and may lead to replace the damaged components.
3. Any alteration of the configuration of the structure must be notified to **GOLD WIND ENGINEERING (S) PTE LTD.**

MAINTENANCE NOTICE

	<p style="font-size: small;">Conduct regular inspection to check for</p> <ol style="list-style-type: none"> 1. Correct application and use. 2. Load within allowable safe limits 3. Accidental damage 4. Dislodgement of structure components 		<p style="font-size: x-small;">DO NOT ALTER STRUCTURE WITHOUT OBTAINING NECESSARY APPROVAL OF GOLD WIND.</p>
	<p style="font-size: x-small;">USE ONLY PALLET OF THE BEST QUALITY The use of "no return" pallets // broken pallets is strictly forbidden</p>		<p style="font-size: x-small;">DO NOT CLIMB</p>
	<p style="font-size: x-small;">REPORT ALL RACK DAMAGES TO SAFETY OFFICER</p>		<p style="font-size: x-small;">IF IN DOUBT ALWAYS CONTACT GOLD WIND ENGINEERING (S) P/L</p>



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About Racking support mezzanine floor.

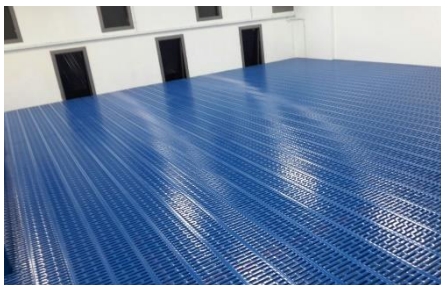
A Mezzanine Floor is an intermediate floor between main floors of a building, The majority of mezzanine floors, which Gold Wind supply and install, are free standing structures and not fixed to the fabric of the building. However this can be achieved where necessary.

Mezzanine Floor can be designed for a wide range of applications and usages including Storage, Offices and Production. The loading of a mezzanine floor can range from 150kg per m²~ 400kg per m² and will be designed by our project team to suit your requirements.

Project Experienced

Over the years of business development. Signature Bridal demands has been greatly increasing. In 2015, They expanded their warehouse at Yishun new warehouse.

Gold Wind provide site survive also design to increase their existing warehouse space up to additional nearly 55% increment.





Welcome to Gold Wind Engineering (S) Pte Ltd
Engineering of Storage Solutions



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Business Hours:

Monday to Friday : 8:00am to 6:00pm
Saturday : 8:00am to 12:00pm
Sunday & PH : OFF



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