

WR WORLD RACK



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WORLD RACK INTELLIGENCE STORAGE EQUIPMENT CO., LTD

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Focus on High-density Storage

About WR

The letter " W " is composed of two check marks, symbolizing our quality control and safety assurance.

The letter " R " is composed of a hyphen and an upward arrow, which represents the reduction of space, management and manpower, and at the same time can effectively improve production capacity and efficiency. The upward arrow also represents continuous innovation and improvement.



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FRAME (teardrop)

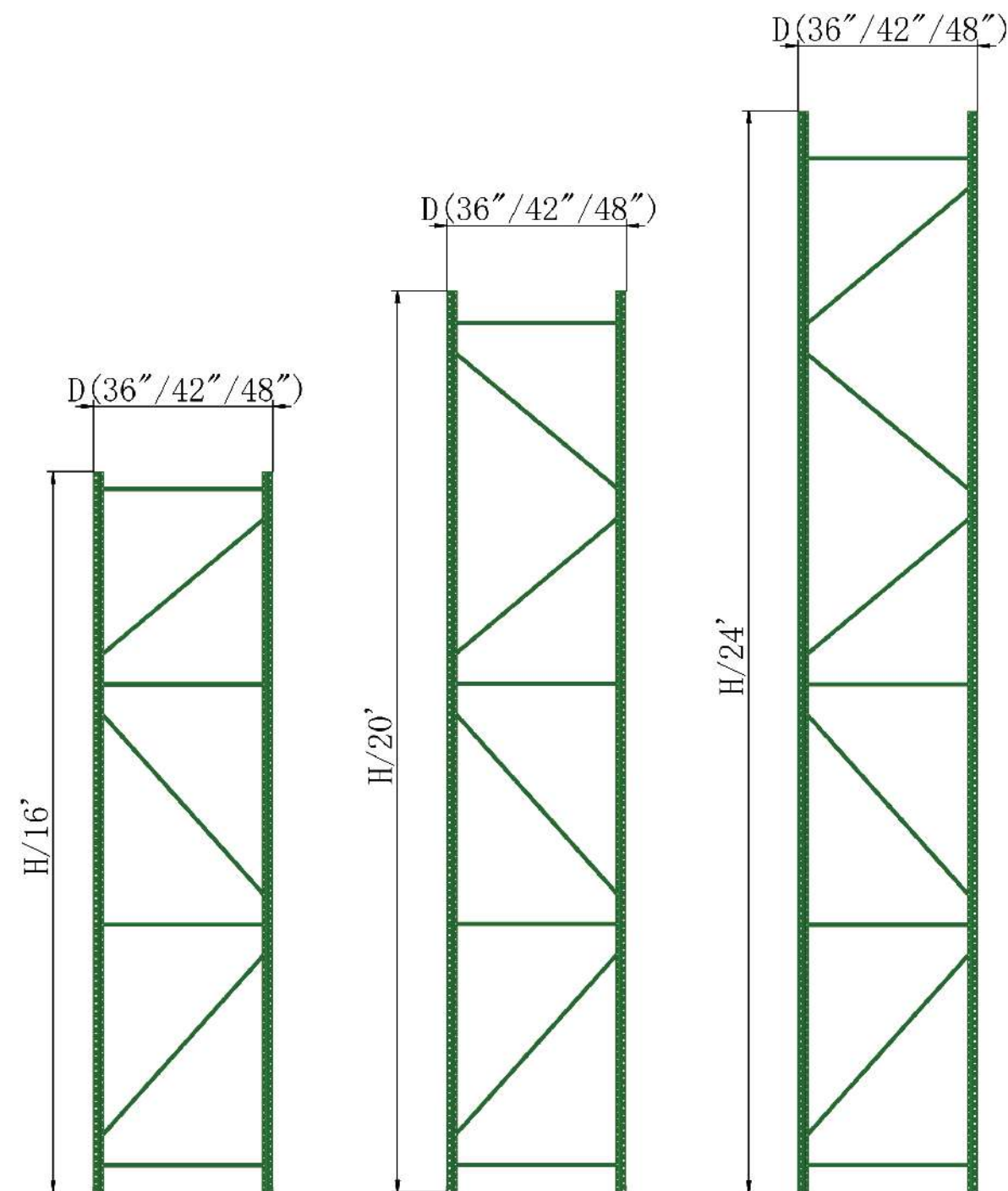
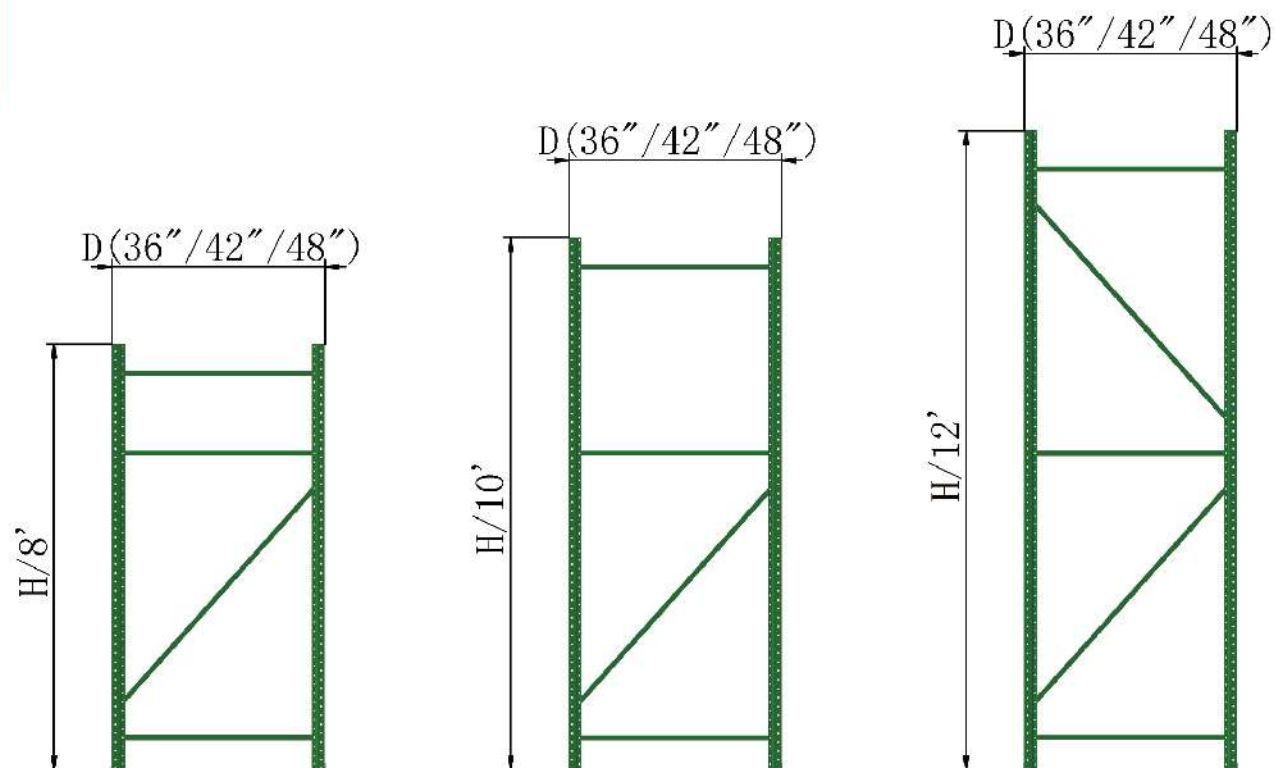
The cross-section of the upright is composed of 11 folded faces, with a large moment of inertia, strong bearing capacity, and high impact resistance.

The high-quality Q235B hot-rolled steel coil is cold-rolled through imported rolling machines, an advanced forming process offering stable material performance.

Upright holes employ a teardrop shape, allowing firm connections with hanging structures, which effectively prevent the risk of falling beams.

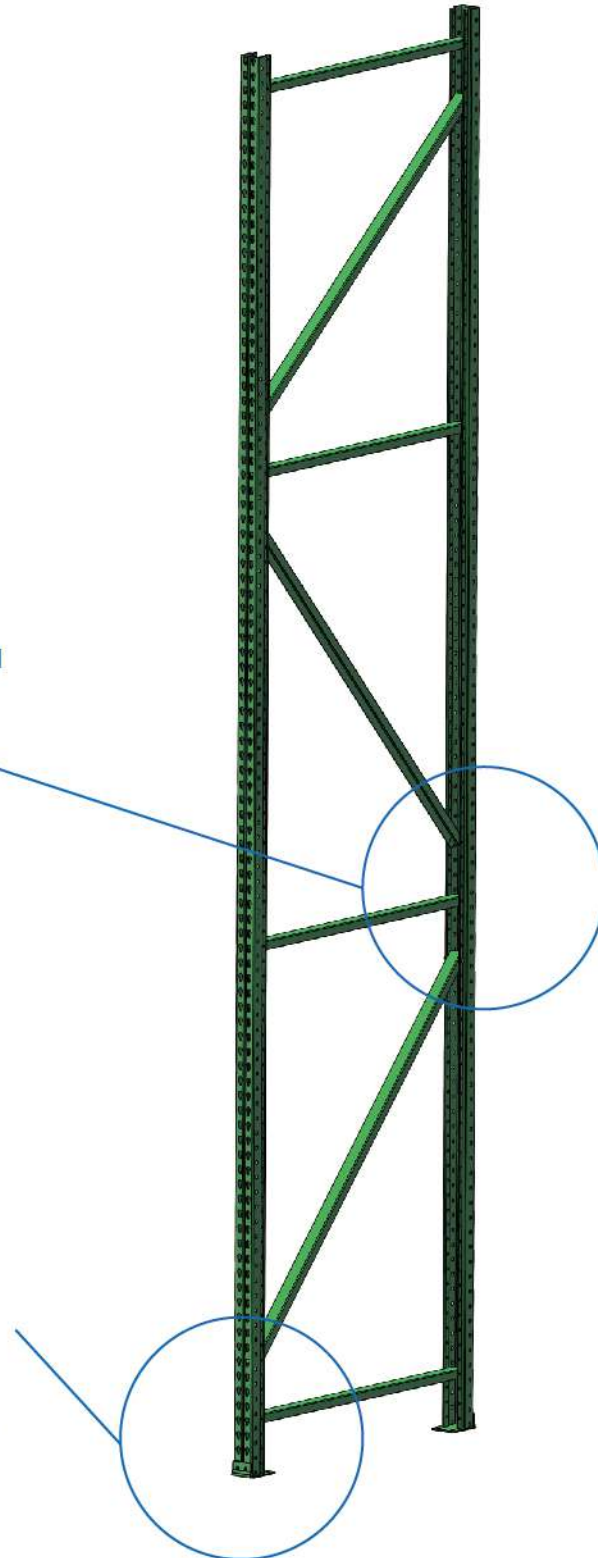
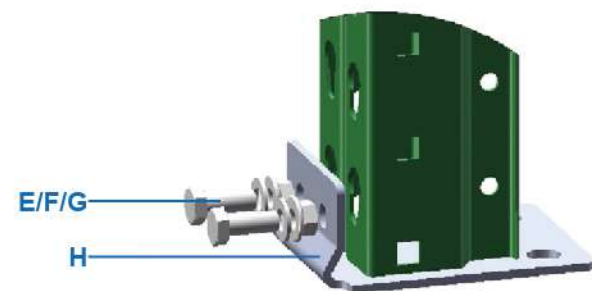
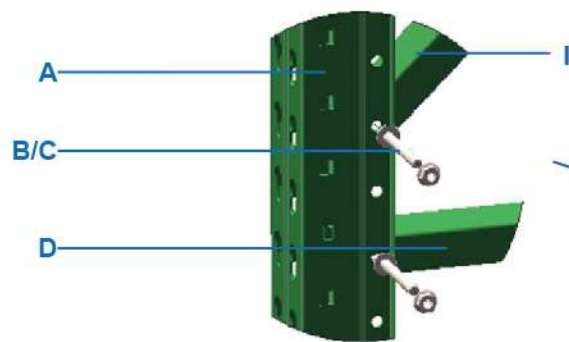
The surface is electrostatically sprayed with epoxy resin powder, which has strong anti-corrosion and anti-rust properties as well as a beautiful appearance.

The standard color is dark green RAL6000.



FRAME (teardrop)

- A. Upright
- B. Hex flange bolt M8x65
- C. Hexagonal flange face nut M8
- D. Horizontal brace
- E. Hexagon head bolt M10x25
- F. Plain washer I series A10
- G. Hexagonal flange face nut M10
- H. Upright foot
- I. Diagonal brace

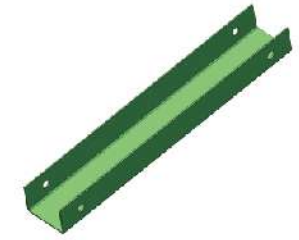


A. Upright



B. Hex flange bolt M8x65

C. Hexagonal flange face nut M8



D. Horizontal brace



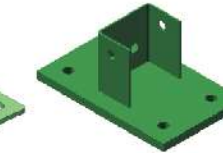
E. Hexagon head bolt M10x25

F. Plain washer I series A10

G. Hexagonal flange face nut M10



H. Upright foot

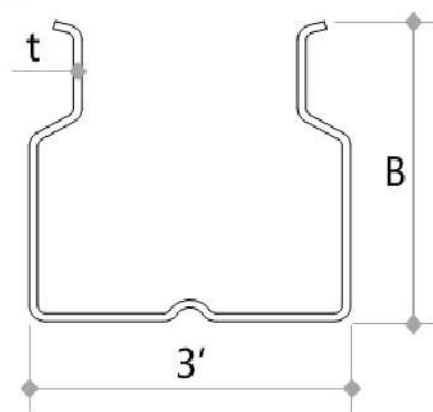


I. Diagonal Brace

Component Quantity List for Upright Frame

	Name	8'H	10'H	12'H	14'H	16'H	18'H	20'H	24'H
A	Upright	2	2	2	2	2	2	2	2
B/C	M8*65L screw set	8	8	10	12	14	16	16	18
D	Horizontal brace	3	3	3	4	4	5	4	4
E/F/G	M10*25L screw set	4	4	4	4	4	4	4	4
H	Upright foot	2	2	2	2	2	2	2	2
I	Diagonal brace	1	1	2	2	3	3	4	5

FRAME (teardrop)



Model	Specifications	Material quality	Pitch-row
Ω3A16	3" *3" *16GA	Q235B	2" n
Ω3A14	3" *3" *14GA	Q235B	2" n
Ω3A13	3" *3" *13GA	Q235B	2" n
Ω3A12	3" *3" *12GA	Q235B	2" n

The cross-section at left shows the upright is composed of 11 folded faces, with a large moment of inertia, strong bearing capacity, and high impact resistance.

The high-quality Q235B hot-rolled steel coil is cold-rolled through imported rolling machines, an advanced forming process offering stable material performance.

Upright holes employ a teardrop shape, allowing firm connections with hanging structures, which effectively prevent the risk of falling beams.

The surface is electrostatically sprayed with epoxy resin powder, which has strong anti-corrosion and anti-rust properties as well as a beautiful appearance.

The standard color is dark green RAL6000.

BOLTED FRAMES CAPACITIES(lb)											
HBL (in)	FM UH	Ω3A16	Ω3A14	Ω3A13	Ω3A12	HBL (in)	FM UH	Ω3A16	Ω3A14	Ω3A13	Ω3A12
		≤24						≤24			
36		12200	16270	18750	21200	84		7493	9758	11892	13875
42		11850	15820	18240	20640	90		6543	8595	10397	12130
48		11470	15330	17690	20030	96		5722	7597	9174	10703
54		11060	14810	17100	19390	102		5134	6761	8240	9614
60		10620	14250	16440	18720	108		4619	6086	7368	8596
66		10170	13680	15860	18040	114		4100	5496	6562	7656
72		9925	12982	15705	18323	120		3732	4989	5979	6976

NOTE:

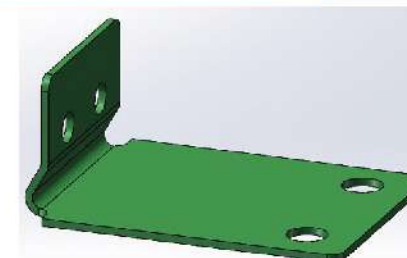
HbL= Height between Levels

1.Capacities are according to the most important RMI guidelines and ANSI MH16.1 2012 specifications; Steel strength: FY = 55 KSI.

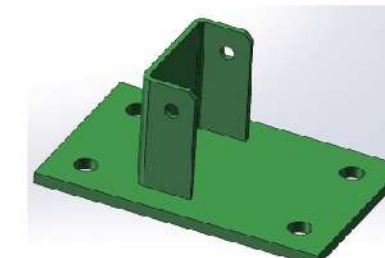
2.Capacities for static loads only; including product load plus dead load (dead load = 2% of product load)

3.Maximum unsupported length is measured from the floor to the top of the first beam or the maximum beam spacing (assuming equally spaced levels and equally load per level)

FOOT PLATES



3''*3''-1



3''*3''-2

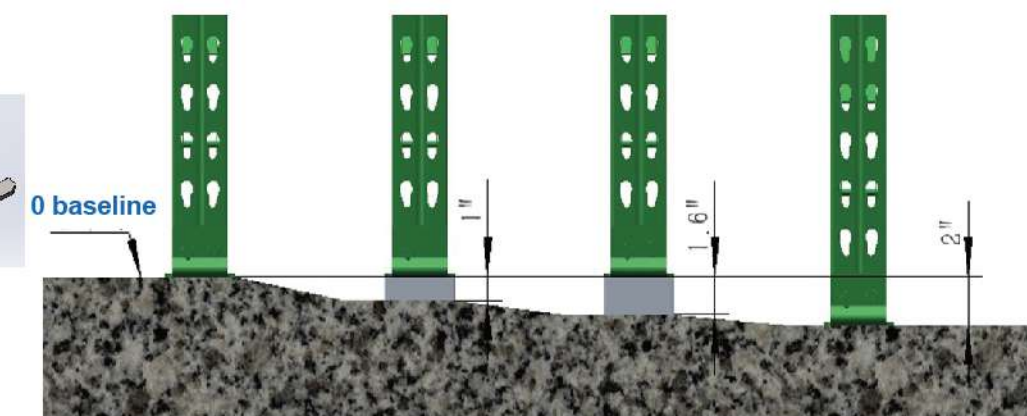
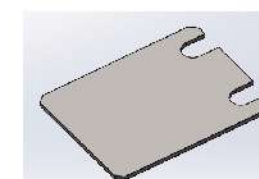
Bolted Foot Plates			
Frame	Gauge	Finish	Remarks
3''*3''-1	11	RAL6000	
3''*3''-2	-	RAL6000	Seismic condition

The high-quality steel plate is formed by punching and bending, providing a large moment of inertia, strong bearing capacity, and high impact resistance.

The expansion bolt is firmly connected to the ground to ensure the safety and stability of the whole rack.

The surface is treated with either epoxy resin electrostatic powder or galvanization, providing high wear resistance, strong anti-corrosion and anti-rust properties, as well as a beautiful appearance.

FOOT PLATE SHIMS

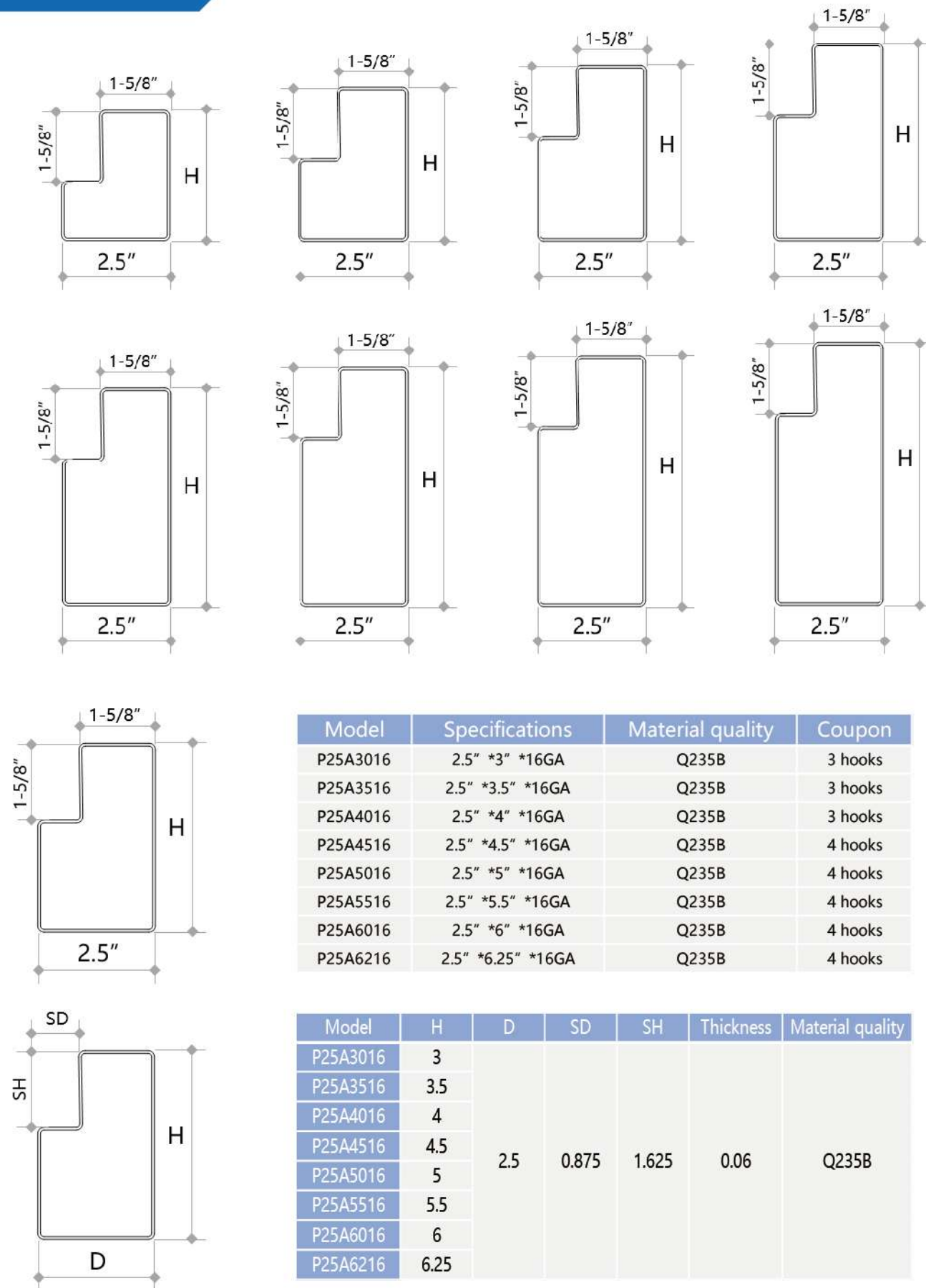


Foot Plate shims			
Frame	Gauge	Quantity per Frame	Finish
3''*3''	11	x2	galvanized
3''*3''	19	x1	galvanized
3''*3''	14	if requestedx1	galvanized

BEAM

PALLET RACKING

PALLET RACKING



BEAM CAPACITY PER PAIR (lbs)								
Length	3 TABS			4 TABS				
(in)	P25A3016	P25A3516	P25A4016	P25A4516	P25A5016	P25A5516	P25A6016	P25A6216
48	7937	-	-	-	-	-	-	-
54	6592	7937	-	-	-	-	-	-
60	5335	7474	-	-	-	-	-	-
66	4409	6173	7937	-	-	-	-	-
72	3704	5181	7099	-	-	-	-	-
78	3153	4409	6041	7937	-	-	-	-
84	2712	3814	5203	6945	7937	-	-	-
92	2205	3307	4542	6063	7871	-	-	-
96	-	2910	3990	5313	6923	7937	-	-
102	-	2205	3527	4718	6129	7782	-	-
108	-	-	3153	4189	5467	6945	7937	-
114	-	-	2822	3748	4894	6239	7782	7937
120	-	-	2205	3395	4409	5622	7011	7804
126	-	-	-	2800	4012	5379	6371	7077
132	-	-	-	2557	3660	4652	5798	6437
138	-	-	-	2359	3329	4255	5313	5886
144	-	-	-	2205	3064	3902	4872	5423
150	-	-	-	-	2822	3594	4497	4982
156	-	-	-	-	2601	3329	3858	4608
162	-	-	-	-	2425	3086	4057	4277
168	-	-	-	-	2249	2866	3571	3968



RADIO SHUTTLE SYSTEM

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11 SHUTTLE RACKING

12 SHUTTLE RACKING

INTRODUCTION

The entire high-density shuttle racking system is composed of racking, shuttles, and forklifts. Forklifts are used to help loading and unloading on the end of racking aisles. This kind of dense and efficient storage mode brings new choices for improving warehouse space utilization rate.

FEATURES AND ADVANTAGES

High usage of floor space

Obtaining higher storage space per unit area, reducing ineffective spaces such as forklift aisles, and significantly improving warehouse utilization rate.

High efficiency in operation

The access efficiency is several times higher than traditional racking, especially suitable for storing products with large quantity but less SKUs.

Reduced labor cost

Automation can effectively reduce the workload of warehouse personnel, further lowering maintenance cost.

Portable battery

Battery of the shuttle is portable and rechargeable, and it won't be affected by the central power supply.

Improved safety, less damage

Loads are handled in a safer way during daily loading and unloading, which helps to reduce damage during operation.

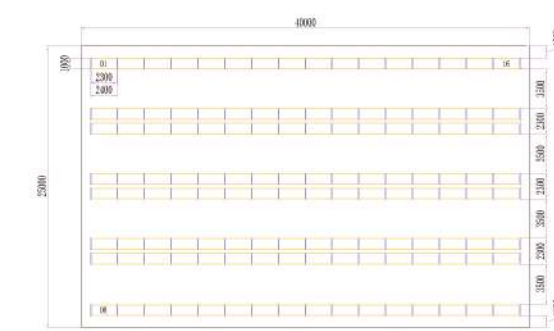
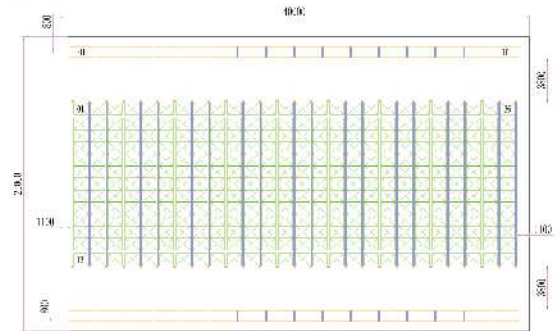
Environmental-friendly lithium battery

Our lithium battery is environmental-friendly, with strong durability.

RADIO SHUTTLE SYSTEM VS PALLET RACKING



VERSUS



1000m²
Warehouse area

635m²
Rack area

63%
Warehouse utilization

VERSUS

1000m²
Warehouse area

342m²
Rack area

63%
Warehouse utilization

PALLET SHUTTLE RACKING BENEFITS:

Improve 60%~80% warehouse utilization rate

Highly efficient operation, FIFO/LIFO

Improve warehouse efficiency and reduce labor cost

Change shuttle quantity to meet difference throughput requirements

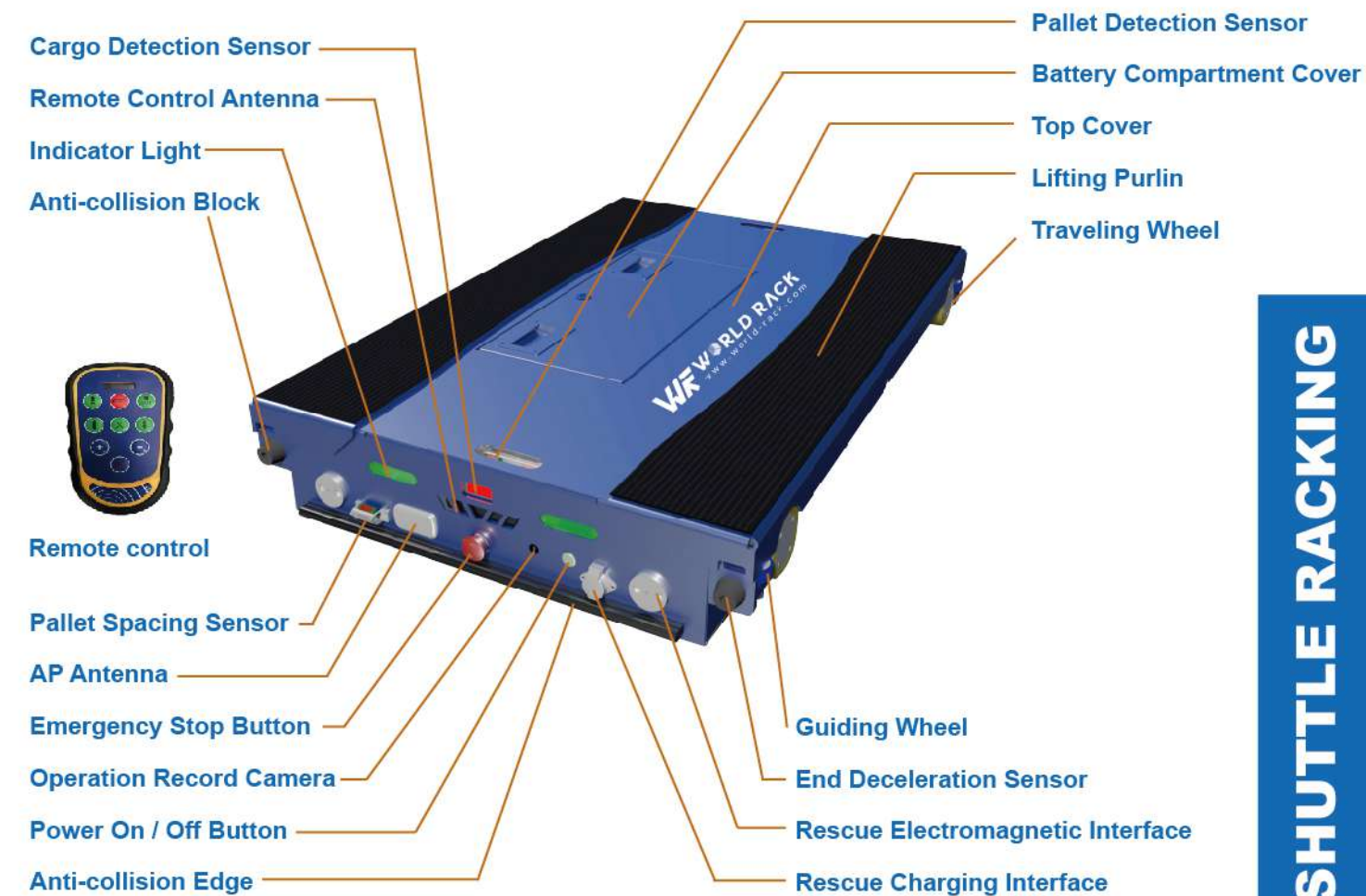
SHUTTLE RACKING APPLICATION SCENARIO:

Intensive product storage/semi-finished product storage/raw material storage

Fresh/frozen storage

Chemical raw material storage

Third party logistics warehouse



Performance Name	Performance Parameter
RATED LOAD	1.8T
WORK TEMP	-30°C~+40°C
EMPTY LOAD	1.4-1.5m/s
FULL LOAD	0.9-1.0m/s
LIFING STYLE	Eccentric Cam
LIFTING HEIGHT	40mm
SHUTTLE WEIGHT	≈260Kg
NOISE	≤60dB
BATTERY TYPE	
BATTERY CAPACITY	48V40AH
BATTERY LIFE	6~8/H
CHARGING TIME	≤3/H
CHARGING VOLTAGE	180-260AC
CHARGING POWER	1200W
CONTROL STYLE	
RADIO FREQUENCY	400-470MHz
CONTROL DISTANCE	≈50m

FUNCTION

15 SHUTTLE RACKING

BASIC FUNCTION	Storage (per time)
	Continuous Automatic Pickup (per time)
	Automatic Pickup of Specified Quantity
	A/B Side Switching
	Goods-moving Function
	Manual Operation (moving, lifting, etc.)
	Battery Level Display
	Low Battery Alarm & Automatic Return
	One to Many Remote Control
	Pallet Stocktaking
	Aisle Recognition
	Remote Control/ Wi-Fi Compatible Device
	Automatic Charging
SAFETY FUNCTION	Forklift Assisted Positioning
	High Position Self-locking
	Collision Prevention & Safety bumper
	User Permission Settings
	Emergency Stop Button
	Built-in Positioning
	Tilt Detection and Fall Prevention
	Shuttle Camera
MAINTENANCE FUNCTION	End Anti-collision Laser
	Fault Code Display
	Maintenance Prompt
	Mileage Count
	Fault Rescue

SIEMENS

PEPPERL+FUCHS
倍加福
SENSING YOUR NEEDS

MOTION & CONTROL™
NSK

SICK
Sensor Intelligence.

Schneider
Electric

The core electrical components are selected from international first-line brands or domestic high-quality brands, which ensures a more stable performance and longer service life of our shuttle!

OPTIMIZATION OF NETWORK CONTROL SYSTEM

1. WALKING SYSTEM

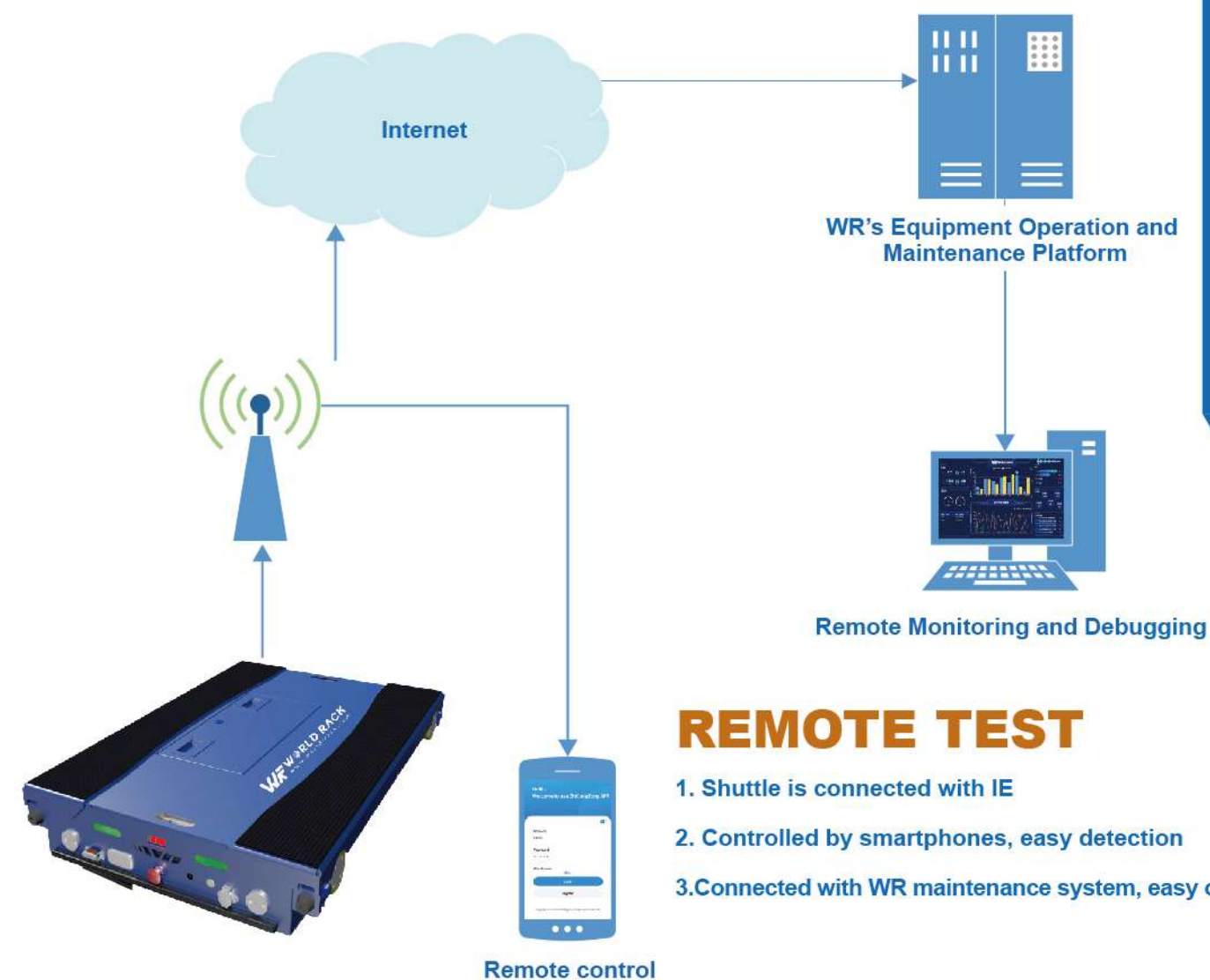
More reliable integrated bearings with longer lifespan

2. DRIVE SYSTEM

High rigidity gear transmission with long service life

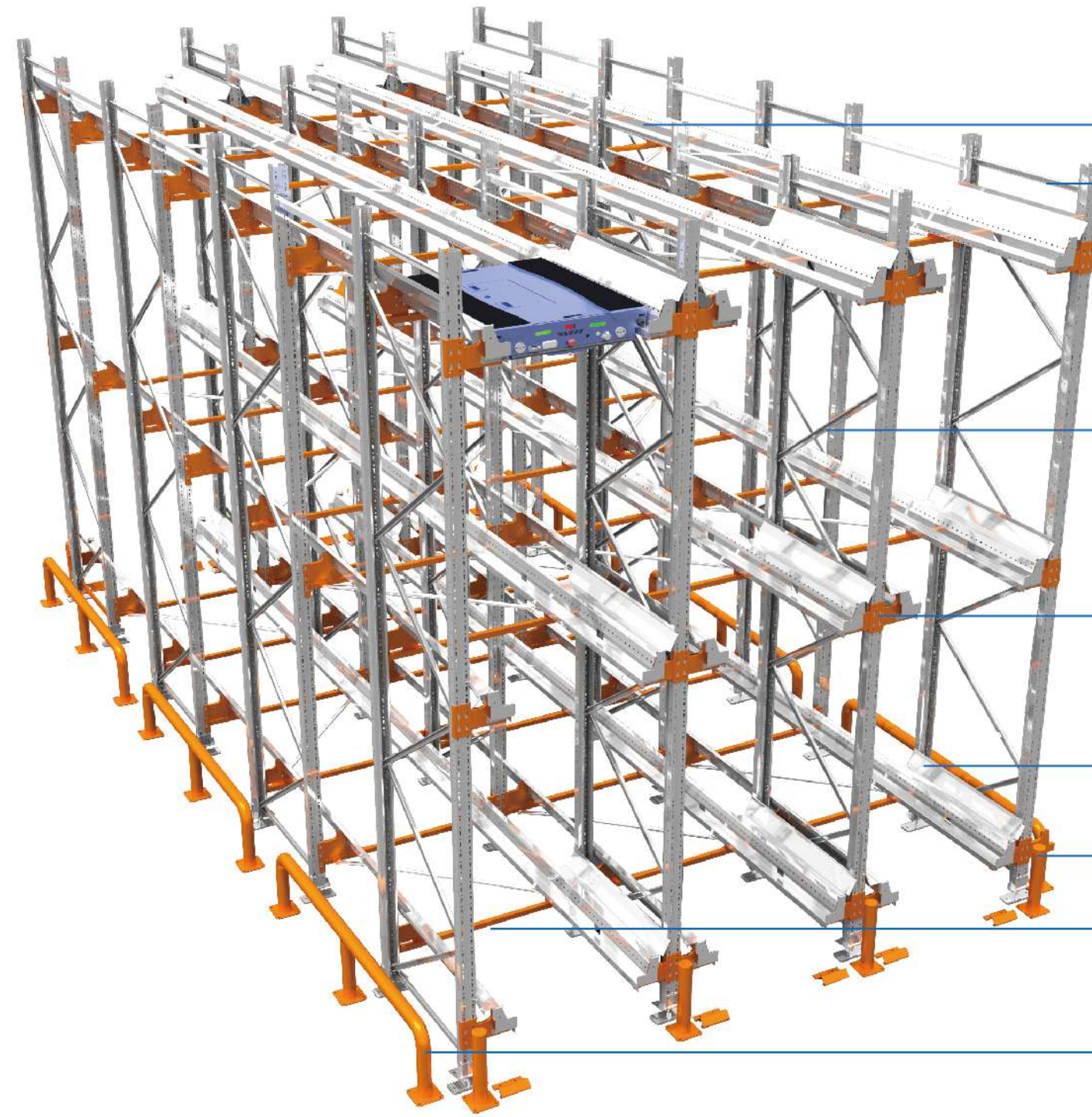
3. MALFUNCTION RECORD

Working status is well recorded



16 SHUTTLE RACKING

- 1 Rails
- 2 Row spacer
- 3 Corss bracing
- 4 Bracket protector
- 5 Guider for pallet
- 6 Pole protector
- 7 Support beam
- 8 Fence protector



- 1 Rails
- 2 Row spacer
- 3 Corss bracing
- 4 Bracket protector
- 5 Guider for pallet
- 6 Pole protector
- 7 Support beam
- 8 Fence protector



CHARACTERISTIC

ASRS racking comprises uprights and beams, the structure is simple, which makes it easy to assemble and disassemble. The connection between uprights and beams is usually achieved by bolts. According to the size of the pallet and the height of the goods, beams can be adjusted to meet the storage needs of different specifications.

Cooperating with stacker cranes, ASRS racking can achieve fast and accurate cargo storage and retrieval, reducing manual operations, further improving work efficiency. The size, color, material, etc. of racking can be customized according to customers' needs, meeting different storage requirements.

Safety:

Mechanized climbing, no personnel climbing operation on site

Efficient:

Standardized workflow and complete management personnel

Quality:

Product quality is inspected layer by layer

Delivery time:

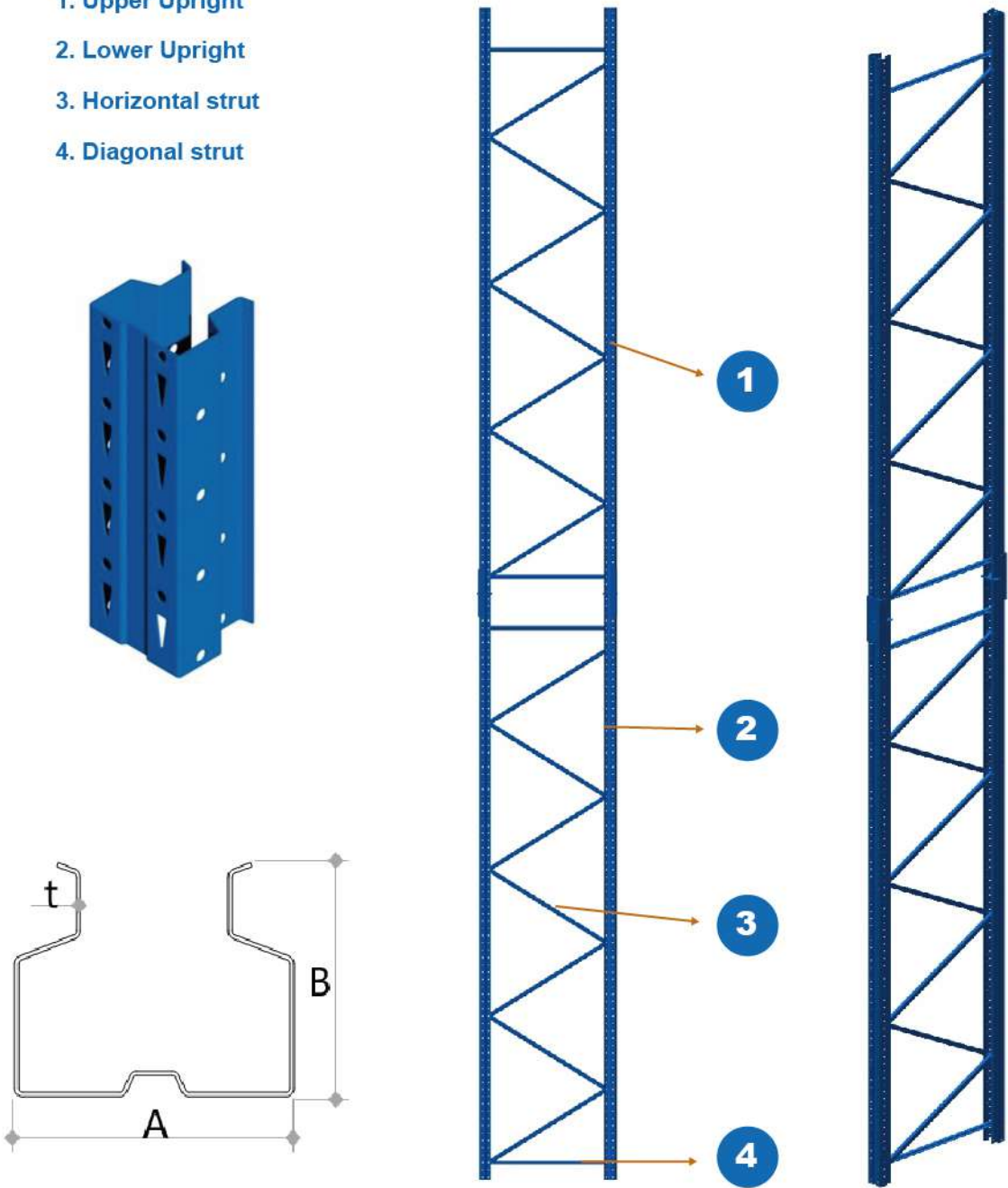
Own installation team, flexible personnel deployment

FRAME (triangle)

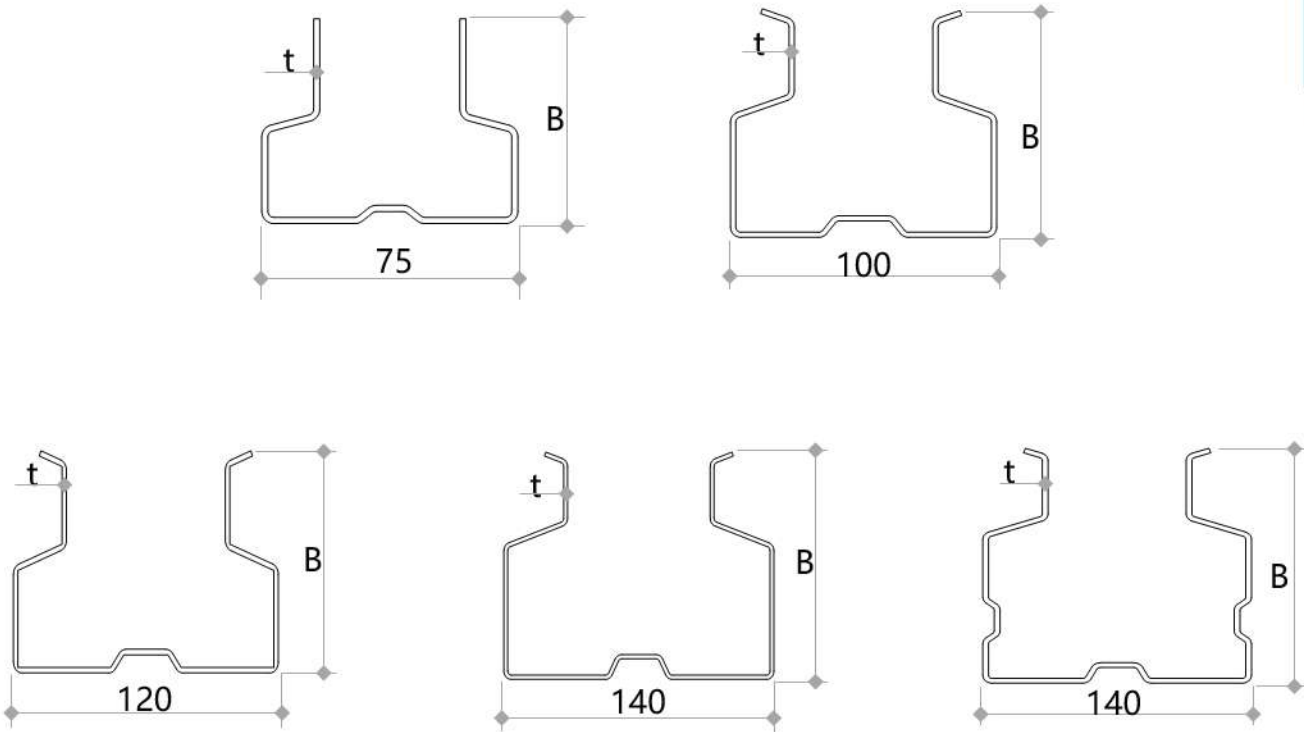
Frame is a vertical support structure of a three-dimensional shelf, which bears the horizontal and vertical loads of the shelf, ensuring the stability and safety of the shelf system. The height of the columns is usually matched with the height of the shelves, which can reach tens of meters, to achieve the utilization of high-rise space in the warehouse.

BASE COMPONENT

- 1. Upper Upright
- 2. Lower Upright
- 3. Horizontal strut
- 4. Diagonal strut



Model	Specifications	Material quality	Pitch-row
Ω75A18	75*55*1.8	Q355B	75n
Ω100A18	100*60*1.8	Q460C	75n
Ω100A20	100*60*2.0	Q460C	75n
Ω100B20	100*90*2.0	Q460C	75n
Ω100B25	100*90*2.5	Q460C	75n
Ω100B30	100*90*3.0	Q460C	75n
Ω100C30	100*120*3.0	Q460C	75n
Ω120A20	120*80*2.0	Q460C	75n
Ω120A25	120*80*2.5	Q460C	75n
Ω120A30	120*80*3.0	Q460C	75n
Ω120B30	120*130*3.0	Q460C	75n
Ω140A20	140*110*2.0	Q460C	75n
Ω140A25	140*110*2.5	Q460C	75n
Ω140A30	140*110*3.0	Q460C	75n
Ω140B30	140*150*3.0	Q460C	75n

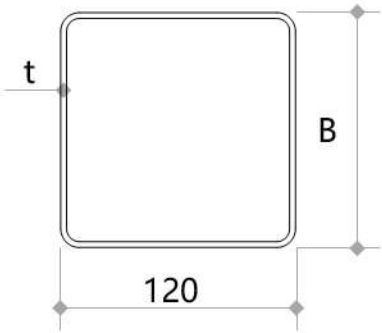
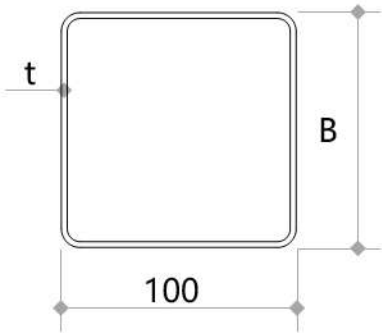
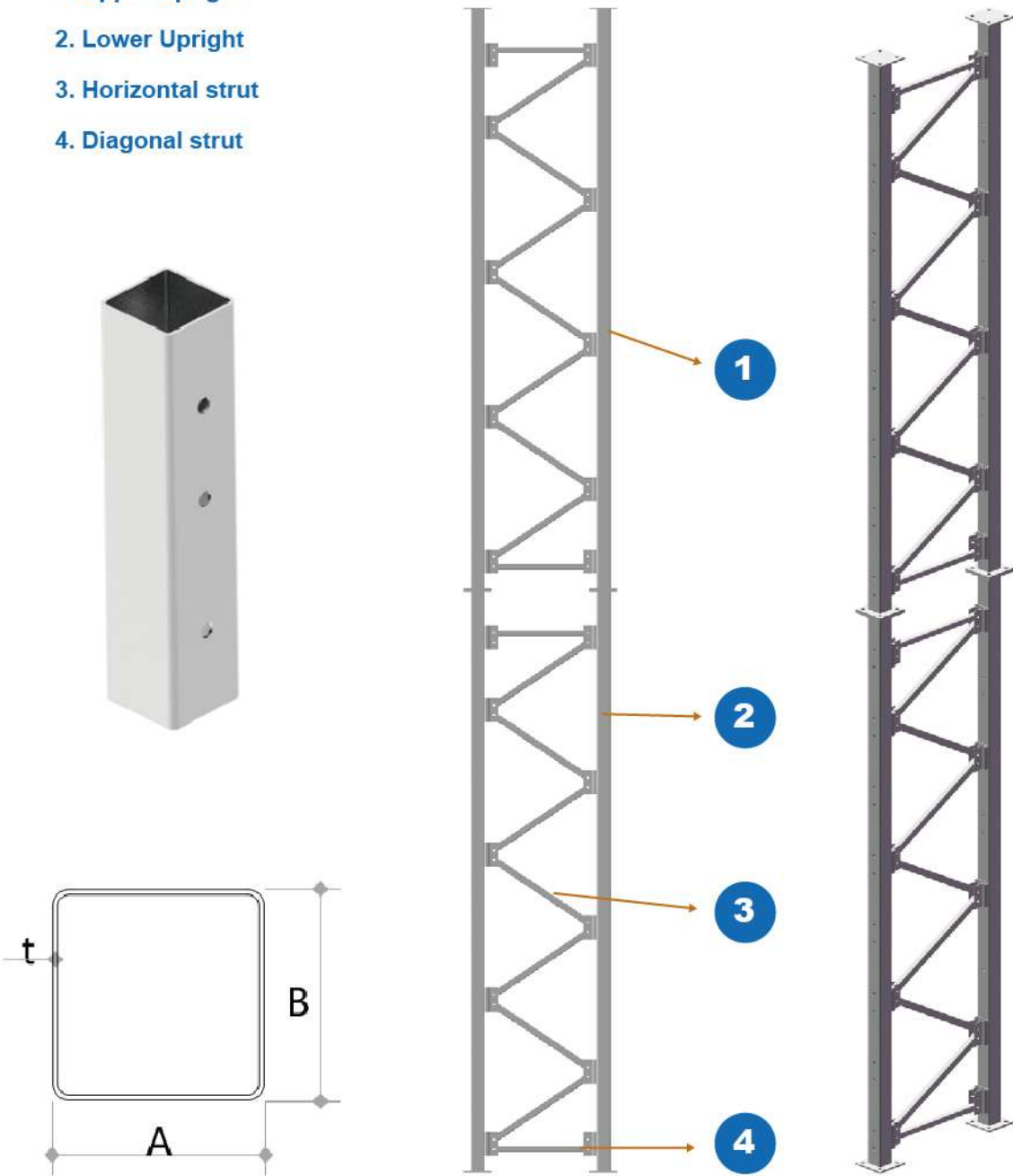


FRAME(hollow section)

Frame is a vertical support structure of an ASRS racking, which bears the horizontal and vertical loads of the racking. Frame is essential for ensuring the stability and safety of the racking system. The height of the uprights is usually matched with the height of the racking, and it can reach tens of meters in order to achieve a high space utilization rate.

BASE COMPONENT

- 1. Upper Upright
- 2. Lower Upright
- 3. Horizontal strut
- 4. Diagonal strut



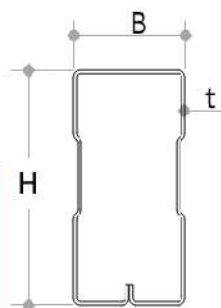
Model	Specifications	Material quality	Zinc layer thickness
□100A25	100*100*2.5	SGH440	275g
□100A30	100*100*3.0	SGH440	275g
□100A40	100*100*4.0	SGH440	275g
□100A60	100*100*6.0	SGH440	275g
□100A25	100*100*2.5	SGH440	140g
□100A30	100*100*3.0	SGH440	140g
□100A40	100*100*4.0	SGH440	140g
□100A60	100*100*6.0	SGH440	140g

Model	Specifications	Material quality	Zinc layer thickness
□120A30	120*120*3.0	SGH440	275g
□120A40	120*120*4.0	SGH440	275g
□120A60	120*120*6.0	SGH440	275g
□120A90	120*120*9.0	SGH440	275g
□120A30	120*120*3.0	SGH440	140g
□120A40	120*120*4.0	SGH440	140g
□120A60	120*120*6.0	SGH440	140g
□120A90	120*120*9.0	SGH440	140g

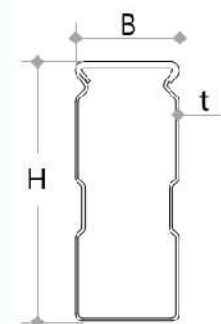
BEAM



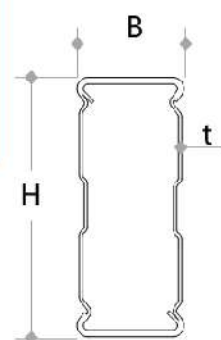
Applicable to FRAME (triangle)



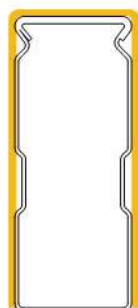
Model	Specifications	Material quality	Coupon
BO0403815	40*38*1.5	Q235B	A03
BO1055015	105*50*1.5	Q235B	A01
BO1205015	120*50*1.5	Q235B	A01



Model	Specifications	Material quality	Coupon
BS0805013	80*50*1.3	Q235B	A01
BS1105015	110*50*1.5	Q235B	A01
BS1205015	120*50*1.5	Q235B	A01
BS1305015	130*50*1.5	Q235B	A01



Model	Specifications	Material quality	Coupon
BD0805013	80*50*1.3	Q235B	A01
BD1005015	10*50*1.5	Q235B	A01
BD1205015	120*50*1.5	Q235B	A01
BD1405015	140*50*1.5	Q235B	A02
BD1605015	160*50*1.5	Q235B	A02



Weld



A03

A01

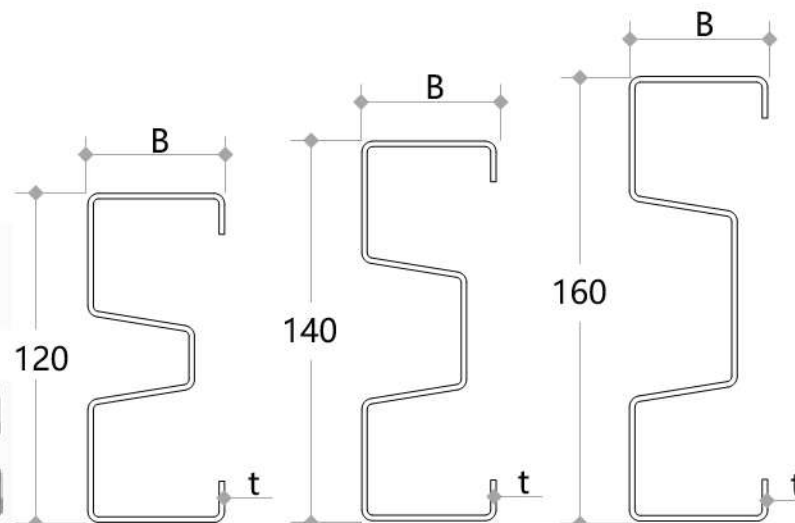
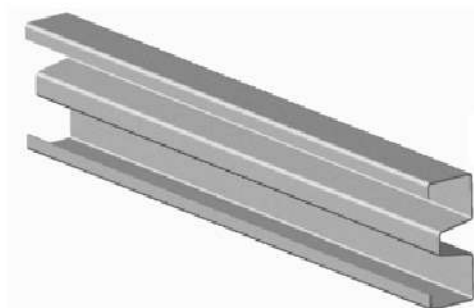
A02

End Plate

BEAM



Applicable to FRAME (triangle)
and FRAME(hollow section)



Model	Specifications	Material quality	Zinc layer thickness
Σ120A18	120*50*1.8	SGH440	140g
Σ120A20	120*50*2.0	SGH440	140g
Σ120A23	120*50*2.3	SGH440	140g
Σ120A25	120*50*2.5	SGH440	140g

Model	Specifications	Material quality	Zinc layer thickness
Σ140A18	140*50*1.8	SGH440	140g
Σ140A20	140*50*2.0	SGH440	140g
Σ140A23	140*50*2.3	SGH440	140g
Σ140A25	140*50*2.5	SGH440	140g

Model	Specifications	Material quality	Zinc layer thickness
Σ160A18	160*50*1.8	SGH440	140g
Σ160A20	160*50*2.0	SGH440	140g
Σ160A23	160*50*2.3	SGH440	140g
Σ160A25	160*50*2.5	SGH440	140g