

SUN METAL PRODUCT LINE UP

LOGISTICS SOLUTION



Introduction of SUN METAL

Since its establishment, Sun Metal Co., Ltd. (SMC) has become one of the major players in its field of business, manufacturing rolling metal doors, steel doors, fire resistant doors. The company count leading construction companies, car manufacturers, industrial plants and department stores among its major customers. The company has been granted BOI promotional status, having constructed a factory in Nakhonratchasima in BOI zone 3. The new high technology plant was located on a 7 rai plot of land.

An important factor in the establishment of the company was the role played by Sanwa shutter Corporation of Japan. Sanwa were invited to become a partner in the new venture by the founder of Sun Metal Khun Sawang Laohathai, because of the company's firm financial standing state-of-the-art technology and technical know-how.

RECOGNIZED STANDARD

And in order achieve absolute quality at work, Sun Metal Co., Ltd. has incorporated the ISO system into the company's current working procedures and processes. After many months of hard work and dedication, Sun Metal Co., Ltd. was finally awarded ISO 9001:2000 certification of August 9,2002 by MASCI. The perfect blending of the ISO 9001:2000 system with exiting systematic working procedures will position Sun Metal as a strategic supplier of products that better meet the customer's needs



PRODUCT LINE UP



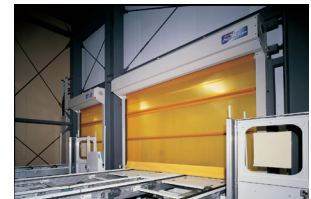
■ QUICK SAVER S13



■ QUICK SAVER S14



■ QUICK SAVER GR-S



■ QUICK SAVER GR-W/KR-W



■ QUICK SAVER KR



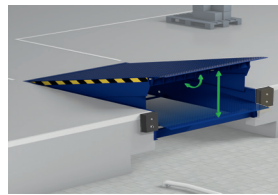
■ SUN COOL



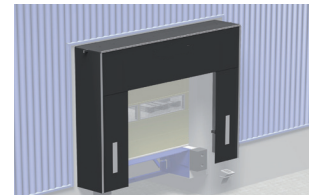
■ SUN CHILLED



■ SUN DOCK



■ SUN SEAL FL



■ SUN SEAL SP



■ SUN SEAL AG



■ SUN FLEX



■ SUN TRAFFIC



Quick Saver S13 -High Speed Sheet Shutter-

Compact body for W3m x H3m interior use, no pipe frame structure suits for people access.



Features

- Curtain variation : Clear, Clear orange, Clear red, Solid orange, Solid blue with break away and self reset function (Option curtain sheet) PP Orange, Glass cloth ivory/green/gray, Clear windows, Clear yellow windows
- Finish : Hood and guide rail finished by powder coat beige color
- Start switch : Infrared sensor, pull switch, push button, micro wave sensor, loop sensor
- Obstacle detect : In and out photo beams
- Other functions : Interlocking terminal, Status LED indicator

Power/Speed

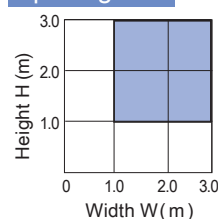
Power source	Motor power [kw]	Speed[m/s]	
		Open	Close
Single phase 220V 50/60Hz	0.4	2.0	0.8 [H>2.8m] 0.5 [H≤2.8m]

Airtightness

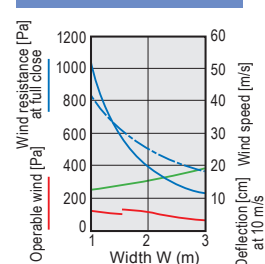
Pressure [Pa]	Air volume [m ³ /h·m ²]	
	Positive	Negative
10	7.8	7.9
50	20.7	16.7
100	31.0	25.3

※Inhouse test data

Opening Size



Wind Resistance



Notice

- Keep curtain open fully when windy condition to prevent curtain break.
- Where windy condition, over operable wind pressure causes frequent curtain break away and self reset which may damage on curtain and guide rail. See "Wind Resistance".

Quick Saver S14 -High Speed Sheet Shutter-

W4.5m x H4.5m interior and W4m x H4m exterior use, no pipe frame structure suits for people access.



Features

- Curtain variation : Clear, Clear orange, Clear red, Solid orange, Solid blue with break away and self reset function
(Option curtain sheet) Glass cloth ivory/green/gray, Clear windows, Clear yellow windows
- Finish : Hood and guide rail finished by powder coat beige color
- Start switch : Infrared sensor, pull switch, push button, micro wave sensor, loop sensor
- Obstacle detect : In and out photo beams
- Other functions : Interlocking terminal, Status liquid panel

Airtightness

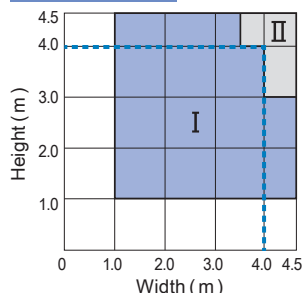
Pressure [pa]	Positive (m ³ /h · m ²)	Negative (m ³ /h · m ²)
10	16.2	9.5
30	30.4	17.4
50	40.3	23.5
100	70.0	40.9

※Inhouse test data

Power/Speed

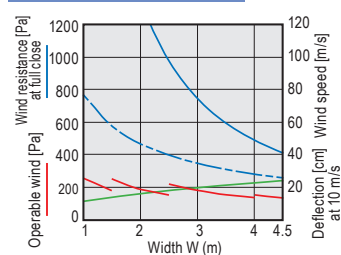
Power source		Motor power [kw]	Speed[m/s]	
			Open	Close
Single phase 220V 50/60	I	0.75	2.5	0.8 [H > 2.8m]
	II	0.75	1.5	0.5 [H ≤ 2.8m]

Opening size



※Exterior use up to W4.0×H4.0

Wind Resistance



Notice

- Keep curtain open fully when windy condition to prevent curtain break.
- Where windy condition, over operable wind pressure causes frequent curtain break away and self reset which may damage on curtain and guide rail. See "Wind Resistance".

Quick Saver GR-S -High Speed Sheet Shutter-

W6m x H5m, W5m x H6m for both exterior and interior use, pipe frames strengthen curtain stability.



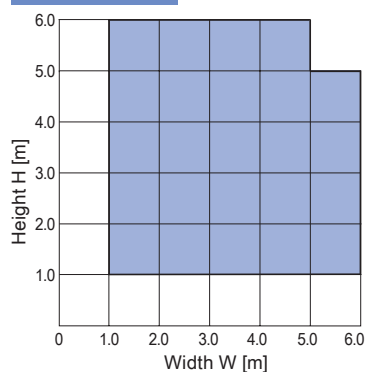
Features

- Curtain variation : Clear, Clear orange, Clear red, Solid orange, Solid blue
(Option curtain sheet) PP Orange, Glass cloth ivory/green/gray, Clear windows, Clear yellow windows
- Finish : Hood and guide rail finished by powder coat beige color
- Start switch : Infrared sensor, pull switch, push button, micro wave sensor, loop sensor
- Obstacle detect : In and out photo beams
- Other functions : Interlocking terminal, Status liquid panel

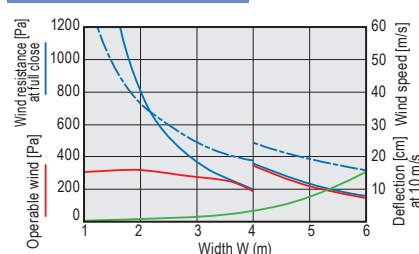
Power/Speed

Power source	Motor power [kw]	Speed [m/s]	
		Open	Close
Single phase 220V 50/60Hz	0.75	1.0	0.5

Opening Size



Wind Resistance



Notice

- Adopt pipe frameless model S13, S14, SR, SR-F where people and hand cart use the access exclusively.
- ※ Curtain will not stop immediately after detecting the obstacle and then bottom pipe frame catch the people which may cause people injured.

Quick Saver GR-W -High Speed Sheet Shutter-

Available large opening size W10m x H5.5m interior use and W8m x H5.5m exterior use.



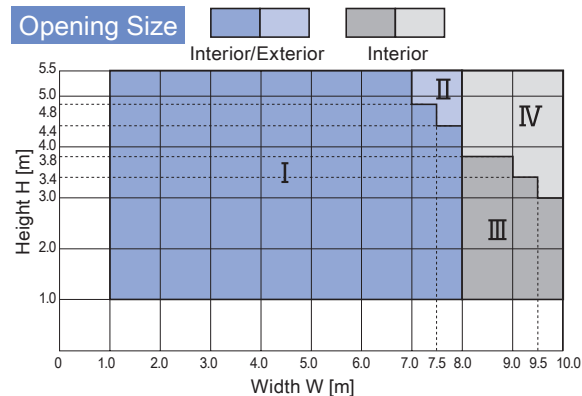
Features

- Curtain variation : Clear, Clear orange, Clear red, Solid orange, Solid blue (Option curtain sheet) PP Orange, Glass cloth ivory/green /gray, Clear windows, Clear yellow windows
- Finish : Hood and guide rail finished by powder coat beige color
- Start switch : Infrared sensor, pull switch, push button, micro wave sensor, loop sensor
- Obstacle detect : In and out photo beams
- Other functions : Interlocking terminal, Status liquid panel

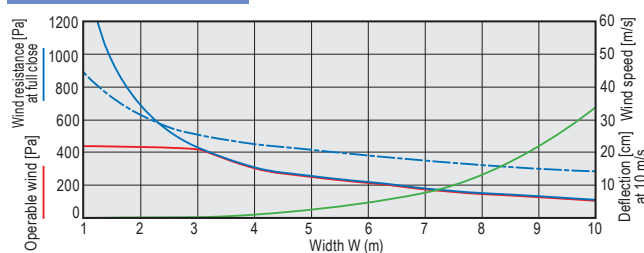
Power/Speed

Power source		Motor power [kw]	Speed [m/s]	
			Open	Close
I & III Single phase 220V 50/60[Hz]	I	0.75	0.8	0.5
	II	1.5		
II & IV Three phases 200V 50/60[Hz]	III	0.75	0.6	
	IV	1.5		

Opening Size



Wind Resistance



Notice

- Adopt pipe frameless model S13, S14, SR, SR-F where people and hand cart use the access exclusively.
- ※ Curtain will not stop immediately after detecting the obstacle and then bottom pipe frame catch the people which may cause people injured.

Quick Saver KR -High Speed Sheet Shutter-

Pipe frames strengthen wind resistance up to 250Pa as wind speed 20m/sec.



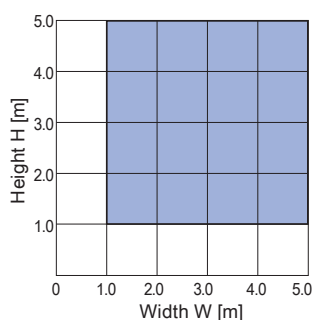
Features

- Curtain variation : Clear, Clear orange, Clear red, Solid orange, Solid blue
(Option curtain sheet) PP Orange, Clear windows, Clear yellow windows
- Finish : Hood and guide rail finished by powder coat beige color
- Start switch : Infrared sensor, pull switch, push button, micro wave sensor, loop sensor
- Obstacle detect : In and out photo beams
- Other functions : Interlocking terminal, Status liquid panel

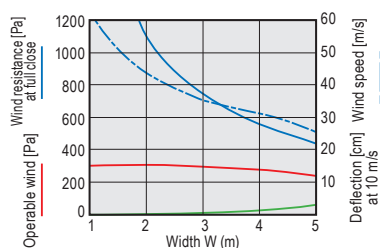
Power/Speed

Power source	Motor power [kw]	Speed [m/s]	
		Open	Close
Single phase 220V 50/60Hz	0.75	1.0	0.5

Opening Size



Wind Resistance



Notice

- Adopt pipe frameless model S13, S14, SR, SR-F where people and hand cart use the access exclusively.
- ※ Curtain will not stop immediately after detecting the obstacle and then bottom pipe frame catch the people which may cause people injured.

Quick Saver KR-W -High Speed Sheet Shutter-

Cover large opening W8m x H5.5m, pipe frames strengthen wind resistance up to 250Pa as wind speed 20m/sec.



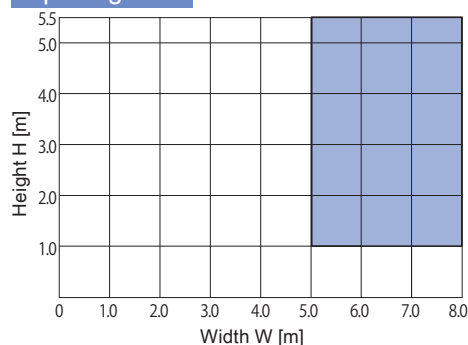
Features

- Curtain variation : Clear, Clear orange, Clear red, Solid orange, Solid blue
(Option curtain sheet) PP Orange, Clear windows, Clear yellow windows
- Finish : Hood and guide rail finished by powder coat beige color
- Start switch : Infrared sensor, pull switch, push button, micro wave sensor, loop sensor
- Obstacle detect : In and out photo beams
- Other functions : Interlocking terminal, Status liquid panel

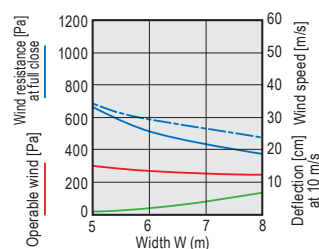
Power/Speed

Power source	Motor power [kw]	Speed [m/s]	
		Open	Close
Three phases 200V 50/60Hz	1.5	0.6	0.5

Opening Size



Wind Resistance

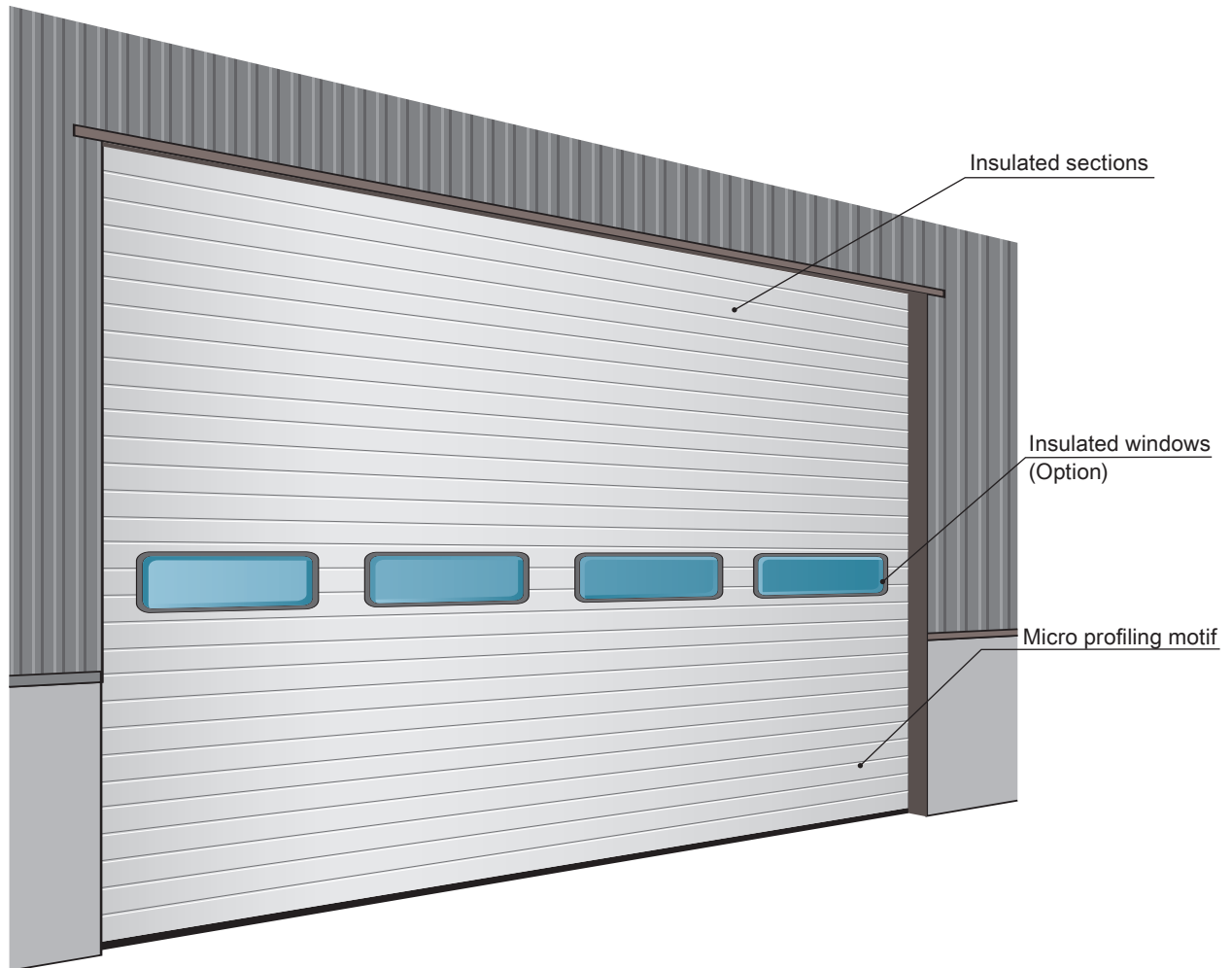


Notice

- Adopt pipe frameless model S13, S14, SR, SR-F where people and hand cart use the access exclusively.
- ⊗ Curtain will not stop immediately after detecting the obstacle and then bottom pipe frame catch the people which may cause people injured.

Sun Cool -Insulated Sectional Door-

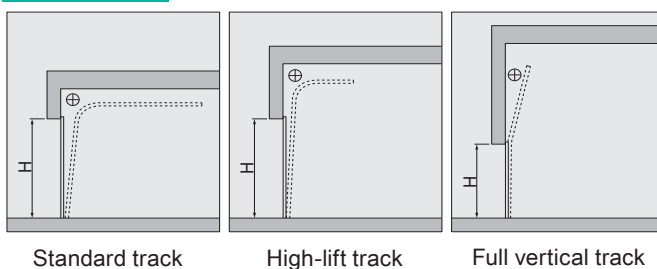
Insulated sections contribute energy environment.



Features

- Sections : PU foam insulated (HCFC free), galvanized steel 40mm sandwich panels [U value = 1.02 W/m²K at W5m x H5m], RAL9002 color, micro-profiling motif
- Airtight : Rubber seals for top, side, bottom and between sections
- Track : Galvanized steel material ,Standard / High-lift / Full vertical track types are available
- Operation : Manual pull rope / Manual chain hoist / Motorized push button
- Motorized type : Single phase 230V 50Hz up to medium size opening or three phases 400V 50Hz with switch button operation and safety bottom edge

Track Type

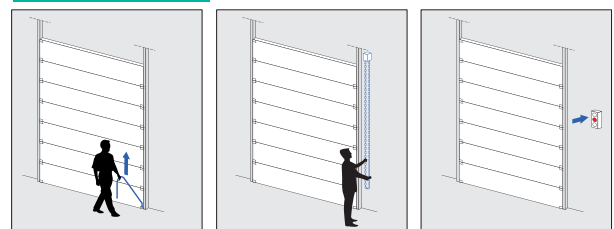


Standard track

High-lift track

Full vertical track

Operation Type



Manual pull rope

Manual chain hoist

Motorized push button

Sun Chilled TA -Insulated Sectional Door for Cold Storage Dock-

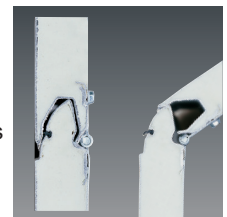
60mm insulated aluminum isolated skin sections with pair glass windows and double wall seals airtight structure are designed for cold storage loading dock.



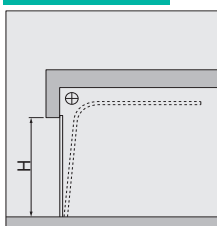
Features

- Sections : Foam insulated aluminum 60mm sandwich panels with finger pinch protection, isolated exterior skin and interior skin by resin frames [U value = 0.83 W/m²K], white, 420 or 504mm section high flat surface panel
- Windows : Resin window frame with 3-6-3 pair glass
- Airtight : Double layers rubber seal for top, side and large bottom seal and strip between sections
- Track : Galvanized steel, Standard / High-lift / Full vertical track types are available
- Operation : Manual pull up / Manual chain hoist / (Consult for motorized type)
- Option : Stainless steel covered base wall frame

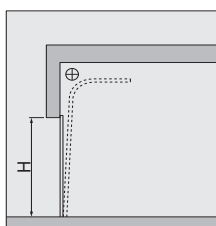
Pinch protection



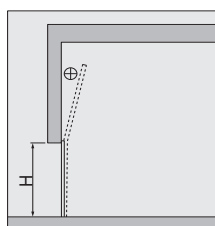
Track Type



Standard track

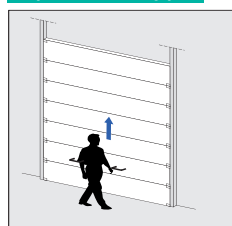


High-lift track

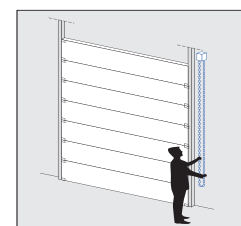


Full vertical track

Operation Type



Manual pull up

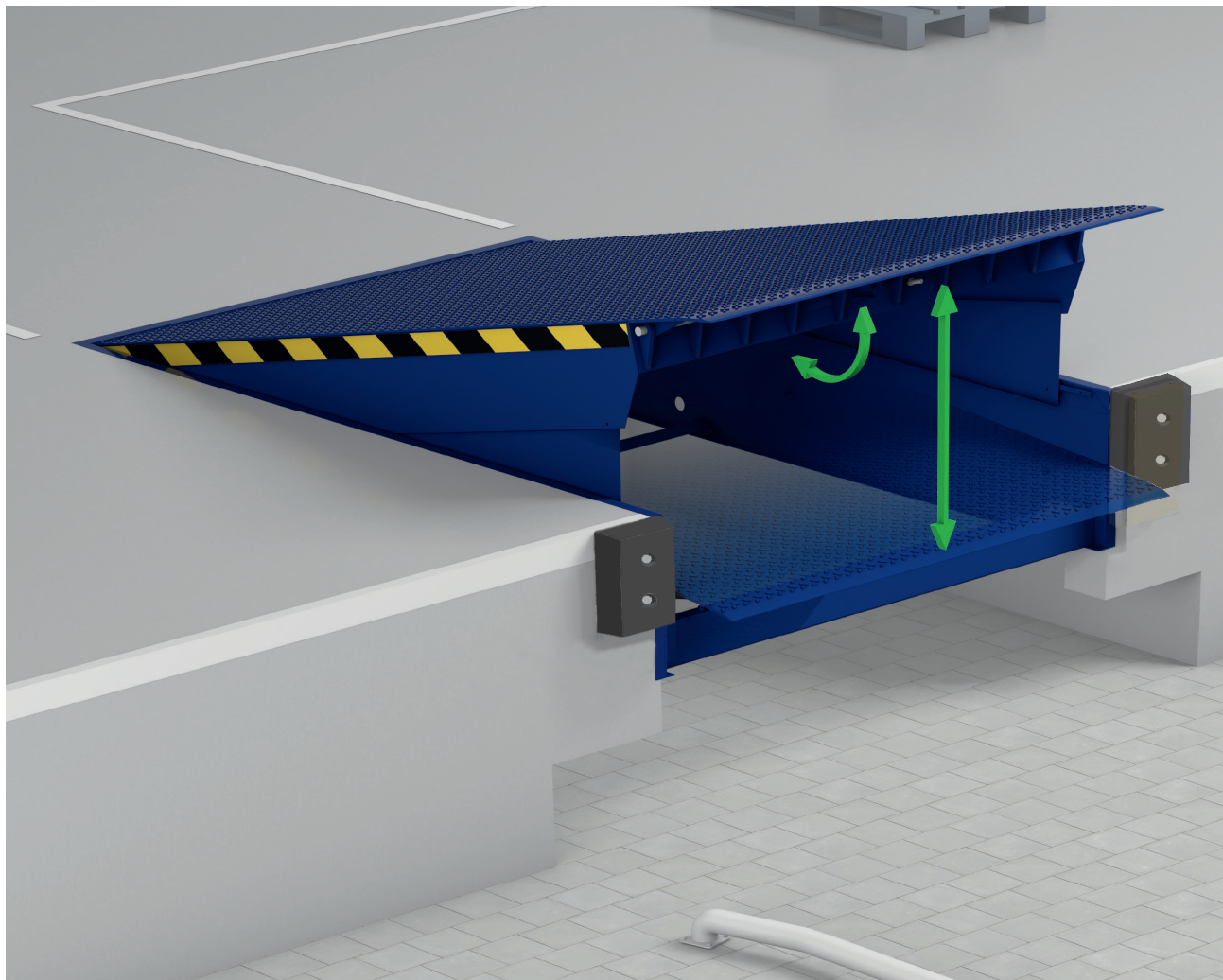


Manual chain hoist

- Sectional doors installed on foamed wall panel directly may cause damage on the wall panel and easy condensation surround wall opening. In order to minimize the condensation, it is recommended to use stainless steel covered insulated base frame (option).

Sun Dock LT320 -Hydraulic Dock Leveler-

60KN dynamic loading conventional hinged hydraulic dock leveler.



Features

- **Systems** : High quality Euro low pressure hydraulic system with the dual stroke cylinders for the main deck and the hinged lip cylinder with systematic control unit
- **Finish** : Steel parts with RAL5010 (gentian blue) painted
- **Safety** : Hydraulic emergency stop and stopping all movements in case of power failure / side yellow -black warning markers / Maintenance strut
- **Bumpers** : Rubber bumpers are installed at both side of dock leveler
- **Operation** : Push button
- **Option** : Floor side gap rubber seals

Power source

Power source	Power [kw]
Three phases 400V 50Hz/16A	0.75

Size

Leveler width [mm]		Leveler Length [mm]	Lip size [mm]	Leveler Height [mm]	Operating Range [mm]	
					Above Dock	Below Dock
Standard	2000	2500	400	600	380	330
		2000	400	600	360	270
	Basic 2000 2100 2250	2500	400	600	380	330
		2750	400	600	390	360
		3000	400	600	400	390

Classic plus control

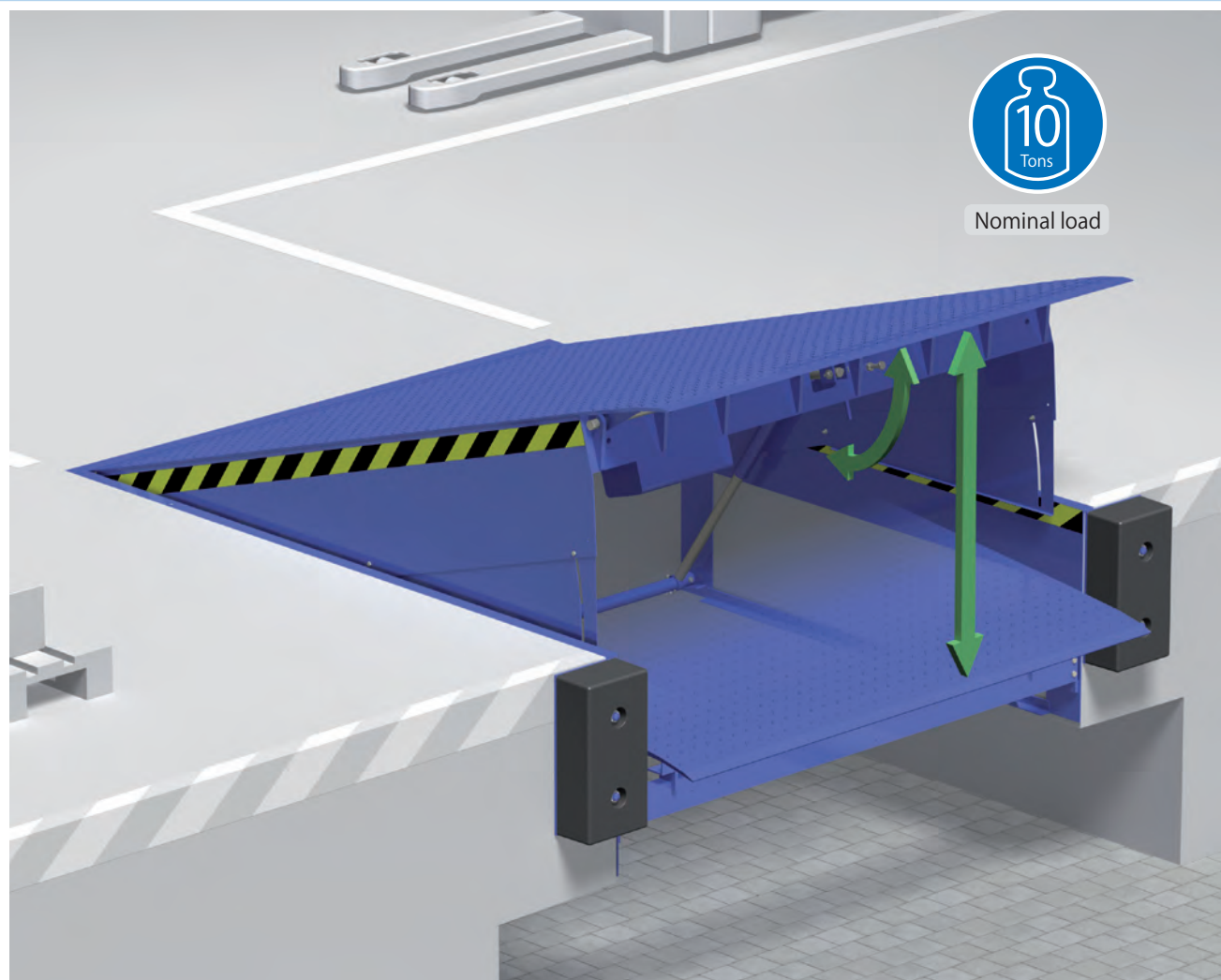


Notice

- In case of fork lift trucks with very small wheels are used, nominal load capacity is 40kN in order to follow EN 1398 as maximum permissible incline 12.5%.
- Pit frame work and floor embeded conduit work are required by customer.

Sun Dock LT350 -Hydraulic Dock Leveler-

100KN dynamic loading conventional hinged hydraulic dock leveler.



Features

- **Systems** : High quality Euro hydraulic system with deck cylinders and hinged lip cylinder with systematic control unit
- **Finish** : Steel parts with RAL5010 (gentian blue) painted
- **Safety** : Hydraulic emergency stop and stopping all movements in case of power failure / side yellow -black warning markers / Maintenance strut
- **Bumpers** : Rubber bumpers are installed at both side of dock leveler
- **Operation** : Push button
- **Option** : Floor side gap rubber seals

Power source

Power source	Power [kw]
Three phases 400V 50Hz/16A	1.5

Size

Leveler width [mm]	Leveler Length [mm]	Lip size [mm]	Leveler Height [mm]	Operating Range [mm]	
				Above Dock	Below Dock
1750 2000 2250	2000	400	600	250	270
	2000	400	700	290	340
	2500	400	600	310	240
	2500	400	700	360	330
	3000	400	600	360	230
	3000	400	700	430	320
	3500	400	800	520	320
	4000	400	900	550	330
	4500	400	900	600	340

i-Vision HA

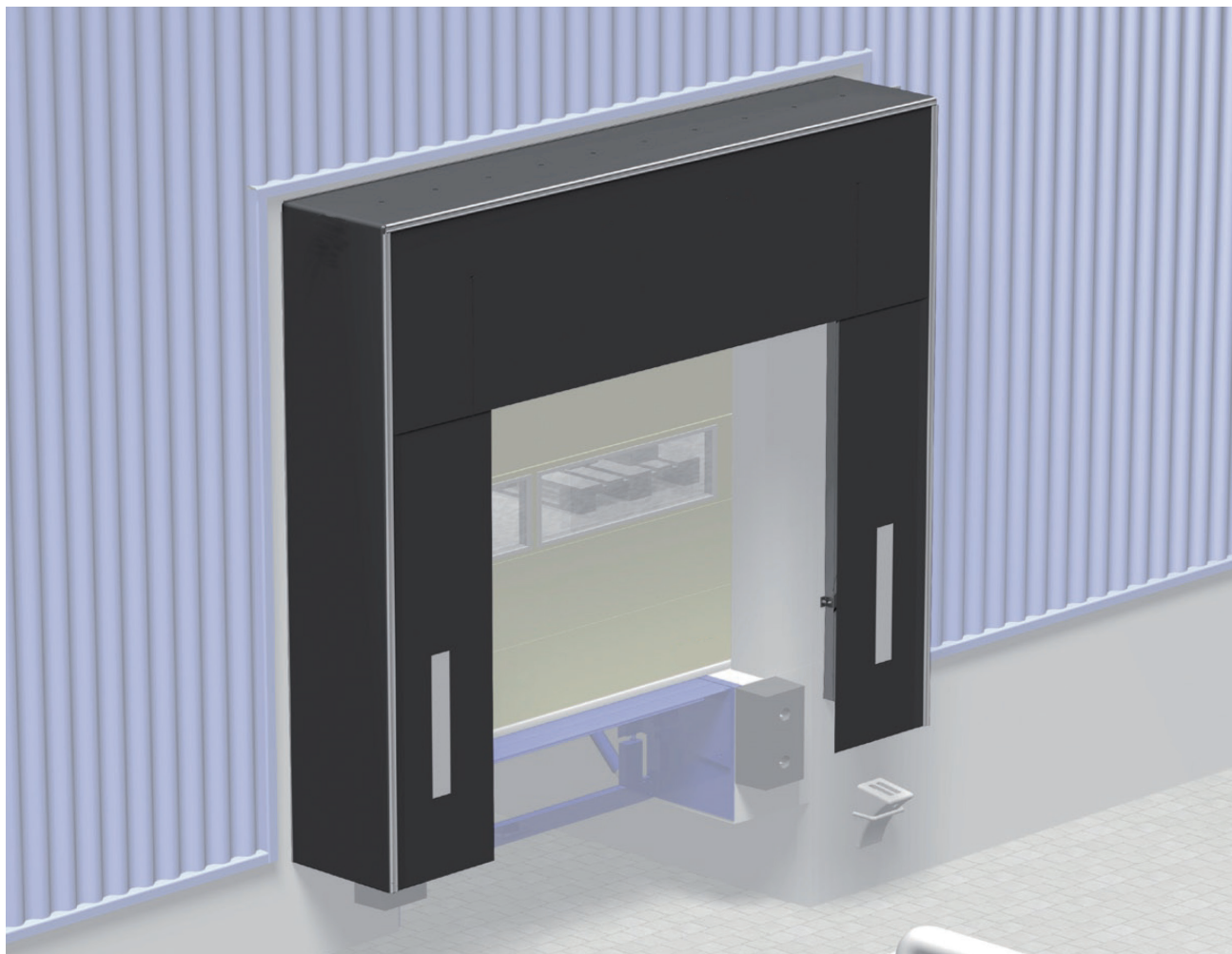


Notice

- Maximum permissible incline 12.5% as EN 1398.
- Pit frame work and floor embeded conduit work are required by customer.

Sun Seal FL -Flexible Flap Dock Shelter-

Protect against birds, rain, wind, energy loss and possible damage to the cargo during loading/unloading the goods.

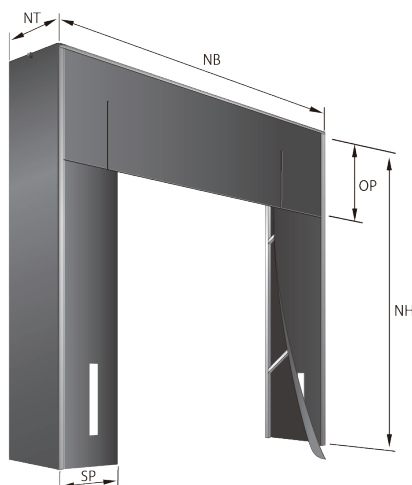


Features

- **Structure** : Aluminum frames with no screws fitting face PVC flap and galvanized steel pantograph bracing. Collapsible face curtain frames absorb truck docking action, no screws face curtain fitting minimize a damage of container body when trucks dock with misaligned.
- **Curtain** : 3mm black color face curtain flame retardant DIN 75200 and 1mm black color side curtain flame retardant JFRA F-16077.
- **Option** : Size order upon a request, block bumpers, D shape bumper, corner pads and column pads are available.

Standard Size

	(mm)
Width (NB)	3450
Height (NH)	3200,3400,3600
Depth (NT)	600
Width side curtain (SP)	700
Height top curtain (OP)	1000



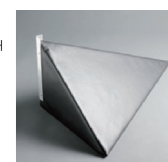
Option



Block bumpers



D shape bumper



Corner pads



Column pads

Sun Seal SP -Sealing Pad Dock Shelter-

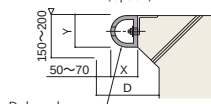
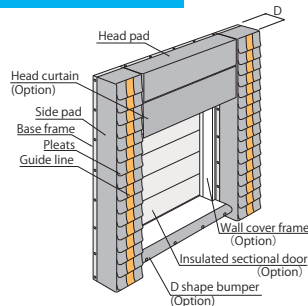
Foamed urethane core minimize air leakage during loading and unloading good for cold storage and temperature controlled facilities.



Features

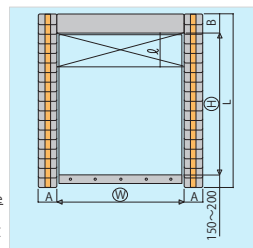
- Structure : PU foamed core with high quality black color polyester backing PVC skin and pleats fit on galvanized steel frames. Movable head pad is able to adjust the position in accordance with truck body.
- Curtain : Black color polyester backing PVC coated both side flame retardant JFRA F-16077
- Option : Size order, movable head pad, head curtain, segmented pads, bottom pad and D shape stop rubber

Fixed Head Pad



■ D shape bumper (Option)

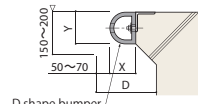
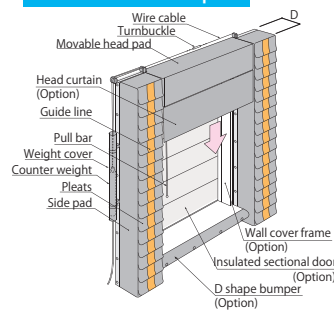
Vehicle	X	Y
Standard	100	100
Large	130	150



■ Dimension

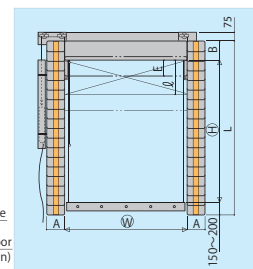
Part name	Item	Size
Pad	A B	300 · 350 · 400 · 450 · 500
	D	300 · 350 · 400
Head curtain (Option)	ℓ	500~1,000

Movable head pad



■ D shape bumper (Option)

Vehicle	X	Y
Standard	100	100
Large	130	150

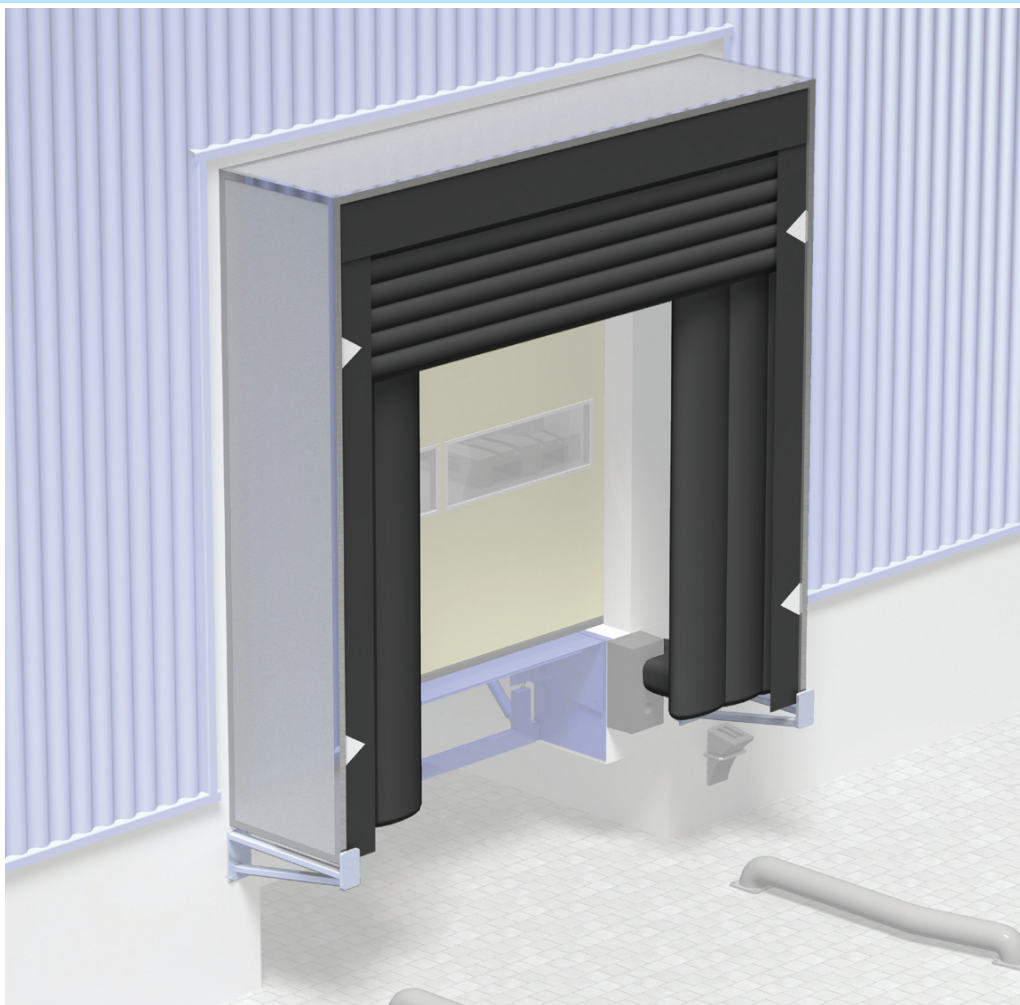


■ Dimension

Part name	Item	Size
Pad	A B	300 · 350 · 400 · 450 · 500
	D	300 · 350 · 400
Head pad stroke	E	300 · 400 · 500
Head curtain (Option)	ℓ	500~1,000

Sun Seal AG -Inflatable Dock Seal-

Inflated bag sealing system is good for reefer container and cold storage facility for energy saving.



Features

- Structure : 3mm PVC face wall protecting inflated bags from sides and top, modular structure maintains firm operation. Roof and sides are covered by coated metal sheet cladding with hot dipped galvanized steel bottom bumpers.
- Operation : Operate twin fan motors by ON /OFF switch button.
- Option : Size order, Interlocking with sectional doors / rolling shutters / dock levelers

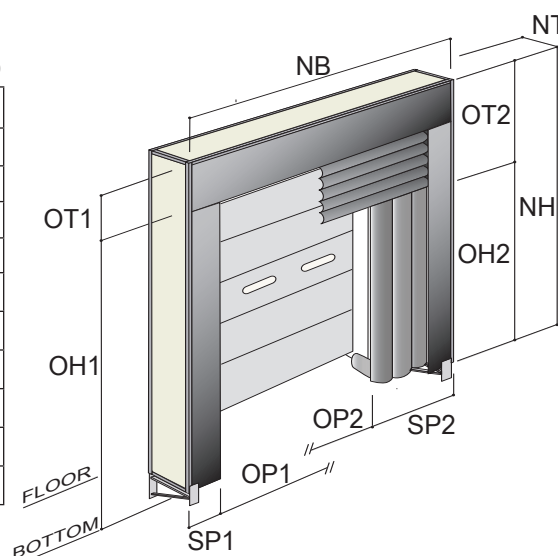
Power source

Power source	Power [kw]
Single phase 230V 50Hz	0.7

Standard size

	(mm)
NB	3400
NH	3500
NT	800
SP1	250
OP1	2900
SP2 (Inflated)	600
OP2 (Inflated)	2200
OT1	400
OH1	3100
OT2 (Inflated)	1200
OH2 (Inflated)	2300

*Confirm the size between floor and bottom of dock seal.



SUN FLEX -Strip Curtain-

Effective for dust and insect proof, noise reduction and saving energy by transparent strips, visible strips provide safe traffic.

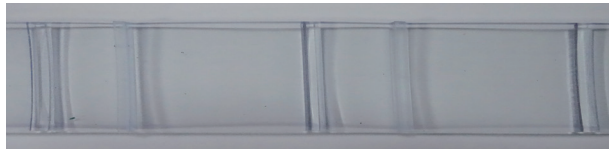


Curtain Variations

■ Clear 200mmx2mmt / 300mmx3mmt



■ Rib Clear 200mmx2mmt / 300mmx3mmt



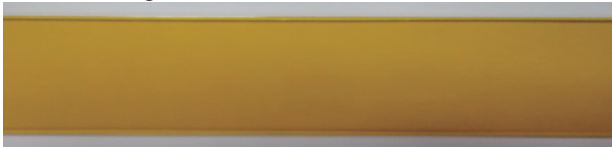
■ Clear Blue 200mmx2mmt / 300mmx3mmt



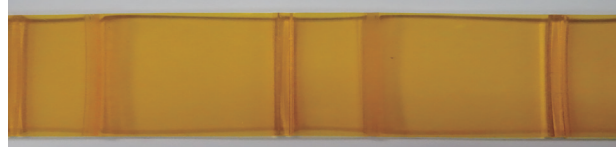
■ Rib Clear Blue 200mmx2mmt / 300mmx3mmt



■ Clear Orange 200mmx2mmt / 300mmx3mmt



■ Rib Clear Orange 200mmx2mmt / 300mmx3mmt



■ Clear Yellow 200mmx2mmt / 300mmx3mmt

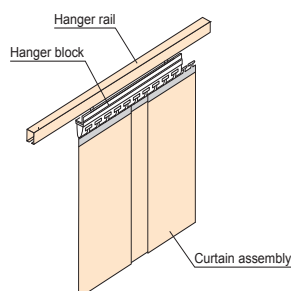


■ Rib Clear Yellow 200mmx2mmt / 300mmx3mmt

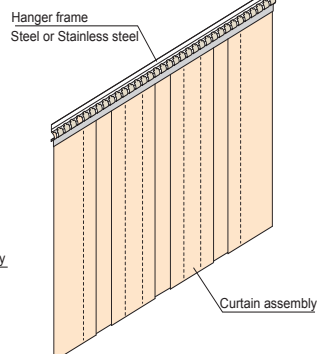


Fitting type

■ Slide Type



■ Fixed Type



Curtain variation (Option)

Anti-static clear/Anti-static insect proof orange/
Welding bronze/Anti-static rib clear/Super cold/
Flame proof/Smoke gray/Anti-static rib insect proof orange

SUN TRAFFIC -Swing door-

Easy to open the door from both direction and close by self door weight, even do not use hand.



Features

- Door Panel : Polyurethane insulated core with stainless steel surface, seal rubber along edge of door leaf.
- Door Frame : Stainless steel
- Operation : Push door panel open and close by self weight automatically.
- Accessories : Windows and bumpers
- Variation : Steel surface for door panel and steel door frame.

SUN METAL OTHER PRODUCTS LINE UP

Rolling Shutter



Steel Door



Self Closing Door



Hanger Door



Overhead Door



Transparent Shutter



Grill Shutter





- Specifications are changed without notice subject to quality improvement.
- The actual product may look different in color with this printed matter.



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