

UNIFLOW

SMOOTHER

Smother
UNIFLOW



高速開閉で熱損失が少ない

エコマーク認定番号
第 10123020 号
(株)ユニフロー
(RX・RB シリーズ)



Wind resistant performance is improved. The control board is upgraded.

“RX-series are newly launched”





We achieved adding new functions which were frequently requested by users and improved various functions. More user-friendly with its reliability and high quality, making customer's working environment more comfortable.

※Product lines of RX-series are scheduled to expand gradually.



More environmentally and user friendly.
SMOOTHER satisfies customer needs.





I N D E X

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Medium to Large-sized Model for both Indoor and Outdoor Use	— NEW RX-2,3 ———	P.15	
Compact Model for Indoor Use Compact Model for both Indoor and Outdoor Use	— RB-1,1Ta ———	P.17	
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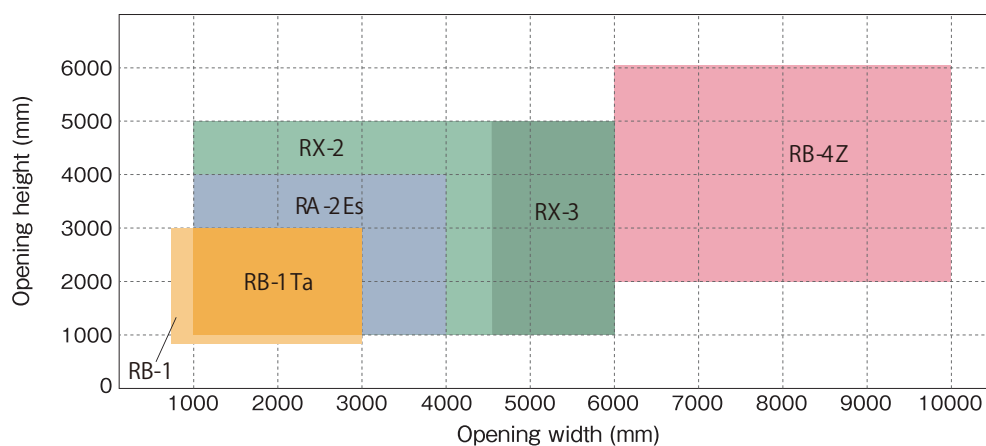
CADダウンロード ▶ <https://www.uniflow.co.jp>

Specifications and Options

○ Standard
● Available as an option

		For Indoor use only	For both Indoor and Outdoor Use			Explosion-Proof Model
						
Model name		RB-1	RB-1Ta	RX-2,RX-3	RB-4Z	RA-2Es
Features	Air-tight specification	●	●	●	●	—
	Electrostatic discharge	●	●	●	—	○
	Replacement of a lower-stage-sheet	—	—	●	●	●
	Flap function	○	○	—	—	—
	Draining specification	●	●	●	●	—
	Drum box, rail SUS specification	●	●	●	△ (SUS for only rails)	●
	HACCP sloped cover	●	●	●	●	●
	Countdown indicator	△ (Signal Mode only)	△ (Signal Mode only)	●	△ (Signal Mode only)	—
	Backup power supply	●	●	●	—	—
	Simple-Interlock	—	—	●	—	—

● List of models according to effective openings



Specifications		Compact Model for Indoor Use	Model for both Indoor and Outdoor Use				Explosion-Proof Model
		RB-1	RB-1Ta	RX-2	RX-3	RB-4Z	RA-2Es
Effective opening regulation	Effective opening width (mm)	W800~3000	W1000~3000	W800~4500	W4501~6000	W6000~10000	W1000~4000
	Effective opening height (mm)	H900~3000	H1000~3000	H1000~5000		H2000~6000	H1000~4000
Components used	Box	Ivory colored steel plate					Ivory colored steel plate
	Rotor pipe	Ivory colored steel plate					Ivory colored steel plate
	Rotor pipe	Aluminum alloy φ150		Aluminum alloy φ216			Aluminum alloy φ216
	Sheet	Polyester yarn encapsulated vinyl sheet					Antistatic flame retardant sheet
	Intermediate pipe	φ19.1	φ25.4	φ38.1 With the roller at the end part		φ48.6 With rollers on both ends	φ38.1
	Lower-stage pipe	φ25.4	φ38.1	φ38.1 With the roller at the end part		φ48.6 With rollers on both ends	φ38.1
Operation method	Drive	Induction motor (output 400 W)		Induction motor (output 750 W)		Induction motor (output 1.5 kW)	Explosion-proof motor with reduction gears and brakes (d2G4) 400 W
	Sheet speed※	1.3m/s(Ascent velocity of the sheet) · 1.0m/s(Descent velocity of the sheet)		1.2m/s(Ascent velocity of the sheet) · 0.6m/s(Descent velocity of the sheet)	0.8m/s(Ascent velocity of the sheet) · 0.6m/s(Descent velocity of the sheet)	0.6m/s(6m<W≤8m) (Ascent velocity of the sheet) · 0.5m/s(8m<W≤10m) ·0.5m/s (Descent velocity of the sheet)	0.6m/s (Ascent velocity of the sheet) 0.5m/s (Descent velocity of the sheet)
	Upper/ lower limits setting method	Encoder control and teaching control					Upper/lower limit switches and teaching control
	Opening/ closing speed control	Slow start/slow stop control					Slow start/ slow stop control
Sensor	Photoelectric sensor	Photoelectric sensor (phototransmitting / photoreceiving type)		Photoelectric sensor (phototransmitting/photoreceiving type · 2 optical axes)			Explosion-proof type Photoelectric sensor (reflection type)
Power supply	Standard specifications	Single phase AC 200V±10% (50Hz/60Hz) 6A and below		Three-phase AC 200V±10% (50Hz/60Hz) 6A and below		Three-phase AC 200V±10% (50Hz/60Hz) 7A and below	Three-phase AC 200V±10% (50Hz/60Hz) 5A and below
	Single phase 200V option	(Single phase AC200V as standard)		Single phase AC 200V±10% (50Hz/60Hz) 6A and below			
	Overseas voltage specification option	Built into the drum box	Single phase AC 220, 240V±10% (50Hz/60Hz) 6A and below				
Control box	Standard specifications	Built into the drum box	W198xH600xD135			W267xH680xD136	W432.2xH632xD151.6
	Single phase 200V option	(Single phase AC200V as standard)					
	Overseas voltage specification option	Built into the drum box	W198xH600xD135	W267xH680xD136			
Allowable frequency	120 times/h, 2 times/min			90 times/h, 1.5 times/min	60 times/h, 1 times/min	120 times/h, 2 times/min	
Ambient temperature	5~40°C	Main Body -10~40°C Control Box 5~40°C				sheet drumbox -10~40°C control board 5~40°C	
Ambient humidity	There should be no freezing or condensation at 20% to 85%.					There should be no freezing or condensation at 20% to 85%.	
Environmental conditions	There should be no toxic gas, powder dust, and condensation.					There should be no toxic gas, powder dust, and condensation.	

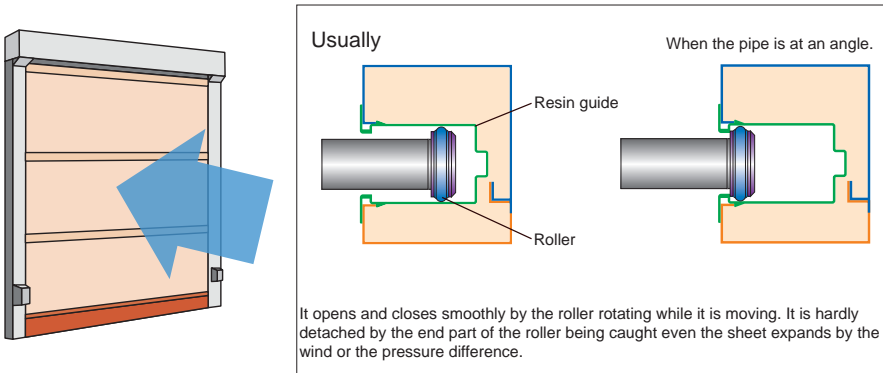
※Maximum speed

New functions of RX **NEW**

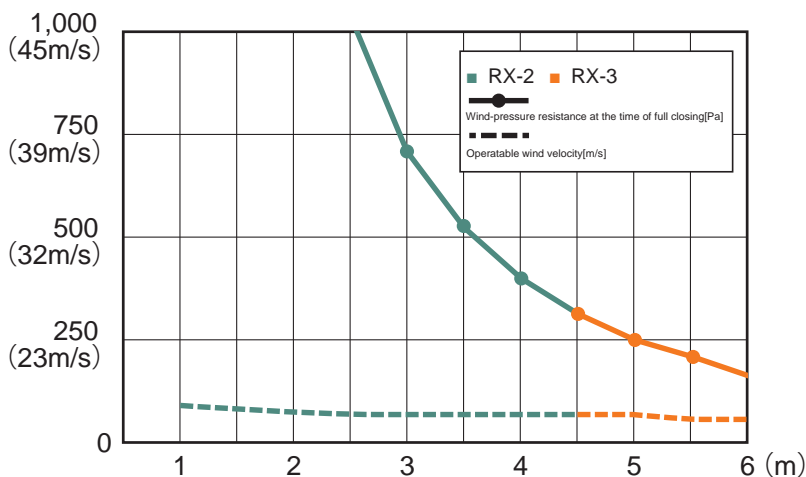
Improved wind resistance

The wind resistant performance is exhibited remarkably not only at the time of full closing but also during the operation under strong wind.

RX-series withstand wind pressure and operate stably under strong wind by adopting the end part of the roller and renewed structure of the rail.



Wind-pressure resistance



Higher functionality

Improved interlock operation

■ Simple interlock

This interlock is compatible with space-saving anterooms. A sensor in the anteroom is shared and controls the roll-up doors on both sides.

■ Release of interlock operation

A new switch can be installed to enable/disable interlock operation.

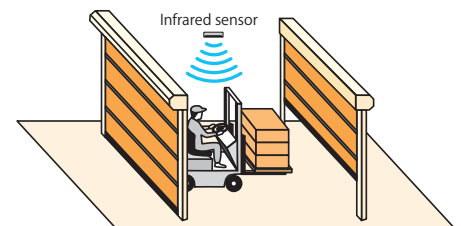
*The lockout signal is output even while the interlock is being released, so the rotating display light and buzzer will operate.

In the narrow anteroom, the sensor may detect the object and not close the sheet even after it passes through.



Conventional interlock system

The front closes, and when the sensor in the anteroom detects it, the direction of travel opens.



Simple-Interlock
[New function]

Countdown indicator

To prevent accidents by preventing from running-in of passengers.

Count-down display Mode

In addition to displaying the remaining seconds before the sheet descends, it is also available to display the status of the sheet, such as "ascending" / "descending".

[Second display] 1 ~ 9 seconds

[Status Display] Upper limit stopped, operable, ascending / descending

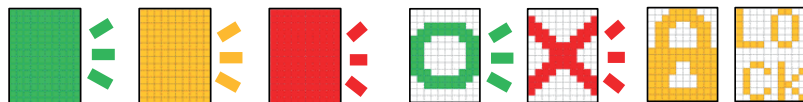
* Only compatible with RX series



Signal-display Mode

It can also be used as an alternative to the rotating display light by changing the setting to signal mode.

*Signal mode is also available for RB-1, -1Ta models, RA model (discontinued) and JT model. (The countdown display function is not available on these models.)



Used as a revolving light and indicator light.
(1 light type / 2 light type alternate)

Indicates whether open/close operation is possible when interlocked with a conveyor, etc.

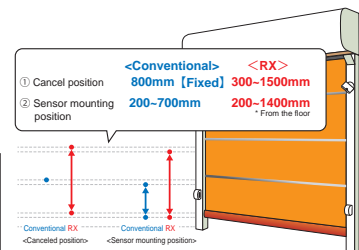
Display of the interlock status, "Restricted".

Other New Functions

Safety Sensor Cancel Position Setting

Since the setting range of the cancel position has been expanded, the availability of the safety sensor mounting position has increased.

If the cancel position and the mounting position are the same, it may cause malfunction. The safety sensor cancel position must be set to +100 or higher than the safety sensor mounting position.

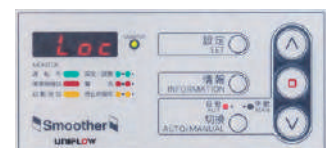


Multi-step Setting of Operating Speed

The maximum speed when ascending and descending can be selected from 9 levels, and the slowing-down time can be selected from 5 levels. It can be finely adjusted to the slowing-down, making it safer to use.

Operation Panel Lock to Prevent Wrong Operation

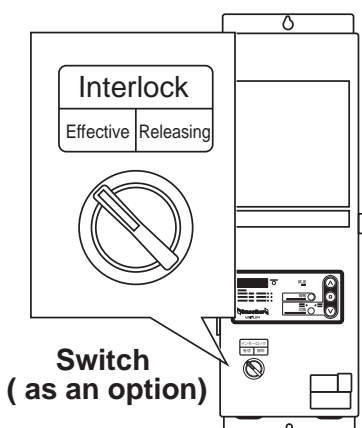
All buttons on the operation panel can be released in such cases like when the sensor is linked to other devices.



New Input and Output Connectors

It supports automatic mode fixation during signal input and external output of the driving mode and operating state of the roll-up door. It is now possible to link with the sequencer and to operate the rotating display light according to the operating condition.

[Example of use] Operation of different revolving lights depending on the operation mode (manual / automatic), operation of the rotating display light only descending, etc.



Fast Opening and Closing

Improved profitability and energy efficiency.

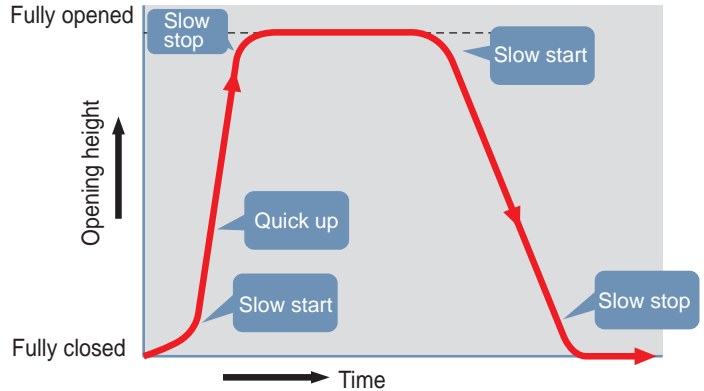
It opens at a speed of up to 1.3 m/s, more than 20 times that of steel shutters.

Minimize waiting time and increase work efficiency.

In addition, it maintains the air conditioning effect and contributes to insect and dust proof and energy saving efforts.

● Slow start and slow stop

The rotation of the motor is controlled so that the start of the ascent and the end of the descent are slow. This control reduces the load on the Smoother drum box and frame and improves durability.

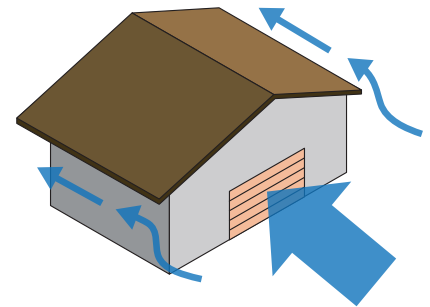
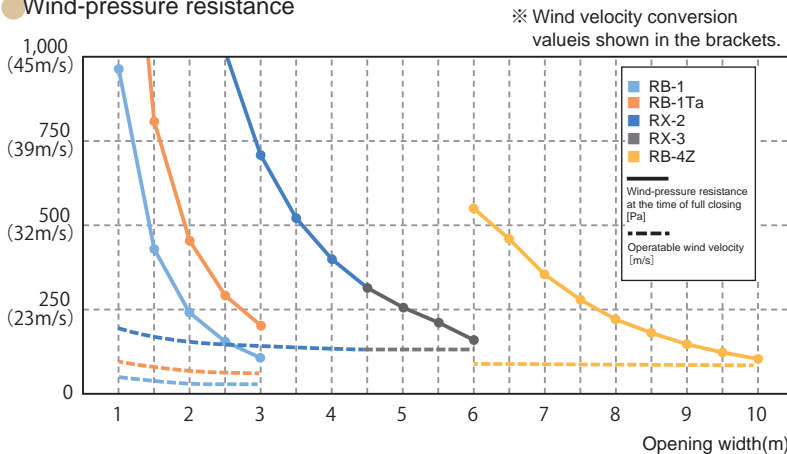


Wind Resistance

High wind resistance design unique to pipe type.

It provides high wind pressure resistance not only in strong winds, but also in environments where there is a pressure difference.

● Wind-pressure resistance



● Wind-pressure resistance

(At the time of full closing: The wind velocity when a pipe yields or a rail come off at the lower limit position)

(Pa)

Effective opening width (m)	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	
RB-1	963	428	241	154	107															
RB-1Ta	1815	807	454	290	202															
RX-2	6370	2831	1593	1019	708	520	398	315												
RX-3								315	255	211	159									
RB-4Z											549	460	355	279	222	180	147	122	102	

● Wind speed-resistant performance (During operation: The lowerable wind speed)

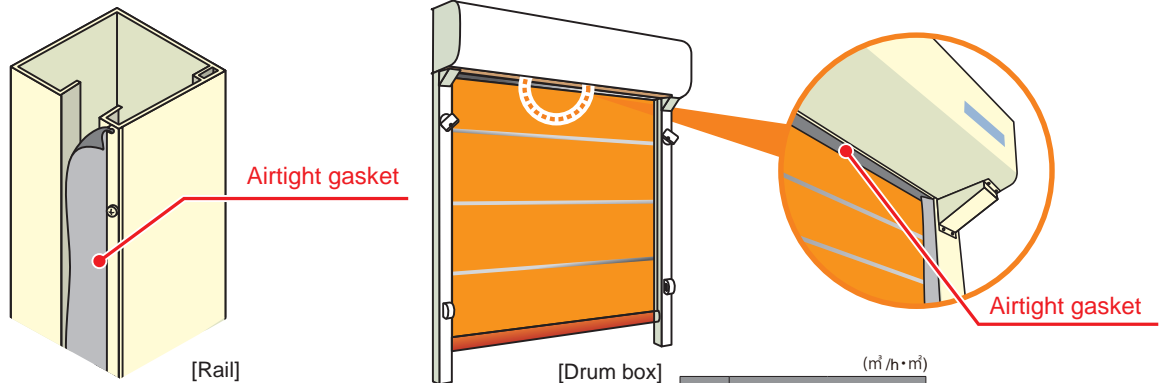
(m/s)

Effective opening width (m)	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	
RB-1	9.8	8.7	7.9	7.7	7.5															
RB-1Ta	14.0	12.7	11.7	11.4	11.3															
RX-2	19.8	18.5	17.8	17.3	17.0	16.8	16.7	16.5												
RX-3								16.5	16.4	16.3	16.3									
RB-4Z											13.4	13.4	13.4	13.4	13.3	13.3	13.3	13.3	13.3	

High Air Tightness

Excellent air-tight performance equivalent to the A-3 Class.

RB-1 series are a piped model that provides approximately 10 times the air tightness of conventional products and offers air-tight performance equivalent to the A-3 Class as defined by the Japanese Industrial Standards. It effectively provides an insect-proof, a dust-proof and an energy-saving effect by its sealing degree enhanced structure.



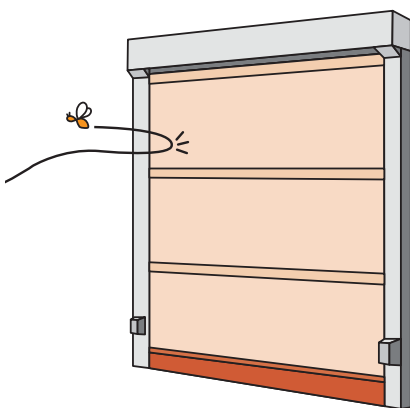
	Air leak volume at 10 Pa (m ³ /h·m ²)	
	RB-1 with airtight option	RX-2 with airtight option
Positive pressure	10.6	19.2
Negative pressure	7.5	18.7

※The size of a test body: W2000 x H2000
The test result corresponding to JIS A 1516

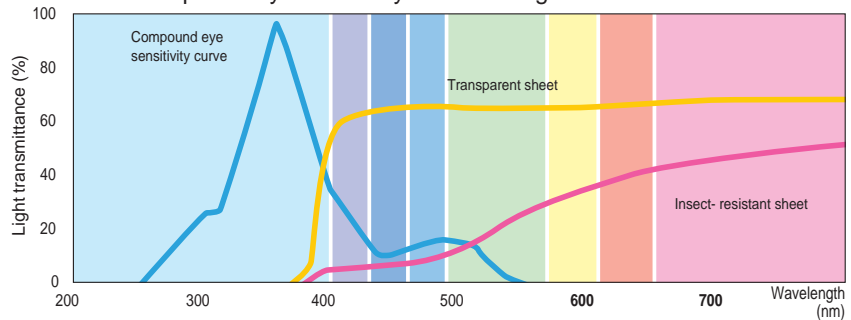
Insect resistant effects

Orange sheets that keep insects away.

UNIFLOW's insect-resistant sheets use an orange color that does not attract insects, preventing insects from entering inside the building. The effect has also been proven in tests by a major insecticide manufacturer.



Compound eye sensitivity curve and light transmission vector



Cutting a wavelength zone of around 350nm, to which insects are most responsive, thereby prevents their entry.

A comparison test was conducted between orange and green sheets, assuming a situation where insects are attracted to the roll-up door.

In terms of transmitted light (light leaking from buildings at night), the results confirmed that orange was less likely to attract insects.

Comparison of number of flying insects attracted by transmitted light

Cooperation: DAINIHON JOCHUGIKU CO., LTD.

Average number of insects caught	Day 1		Day 2		Average attraction ratio	Result (Insect resistance performance)
	Orange	Green	Orange	Green		
Common house mosquito	21	53	13	35	2.6	Orange is more effective
Asian tiger mosquito	20	19	11	18	1.3	Equal
Houseflies	23	72	13	95	5.2	Orange is more effective
Drosophila	30	51	4	22	3.6	Orange is more effective
Drosophila hydei	11	12	3	10	2.2	Orange is more effective
Phoridae	10	13	2	4	1.3	Equal
Fruit fly	1	0	0	0	—	

The results of the experiment showed that the insect-resistant orange sheet was more effective at keeping insects away.

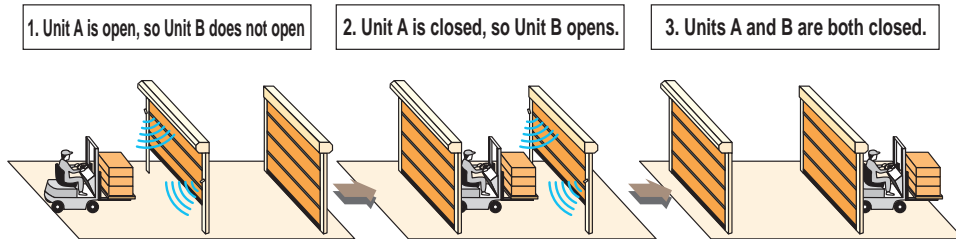
*Attraction ratio: Ratio of the number of green to orange captures

Less than 1: attraction to orange, 1 to less than 1.5: no apparent difference, 1.5 to 5: attraction to green, 5 and above: strong attraction to the green Data excluded if both catches are less than 10.

Restricts door opening to control airflow.

● Interlock

2 sets of Smoother can be linked by microcomputer control. If one side is open, the other side can be operated with an interlock. It prevents outside air from entering, further improving air conditioning efficiency. By adding an option board, the system can be interlocked with belt conveyors, AGVs, and other equipment. → Simple interlock (P.5)

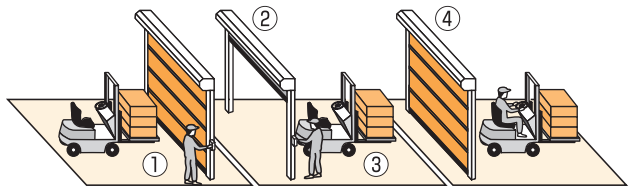


● Operation mode

Manual operation

Set the operation mode of the Smoother to manual, using the control panel or the single or 3-momentary pushbutton.

- ① Press the single push button or the 3-momentary push button to rise and give the rise instruction.
- ② The sheet will be fully open.
- ③ After the object passing, push the descent button on the control panel and give a descent instruction.
- ④ Sheet will be fully closed.



*Instead of the single push button, the same operation will be performed with the pull switch.

Automatic operation

Set the Smoother's operation mode to automatic and use the startup sensor.

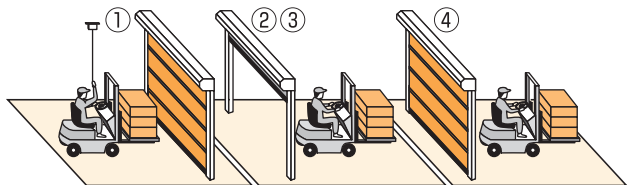
- ① The startup sensor reacts, and an ascent instruction is issued.
- ② The sheet will be fully open.
- ③ The sheet will descend automatically after the upper stop time.
- ④ It will be fully closed.



Semi-automatic operation

Set the Smoother's mode to automatic and use the pull switch.

- ① Pull the pull switch and give an ascent instruction.
- ② The sheet will be fully open.
- ③ The sheet will descend automatically after the upper stop time.
- ④ Sheet will be fully closed.

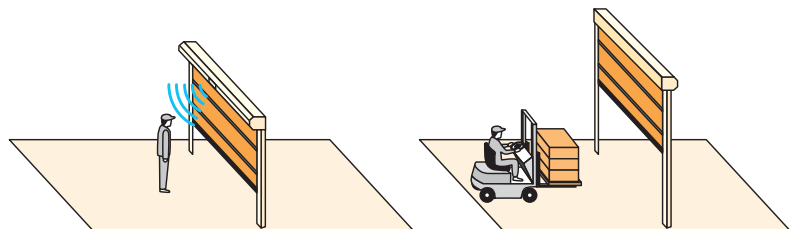


*Instead of the pull switch, the same operation will be performed with the single pushbutton.

● Intermediate height setting

If there is an excessive opening height, it can be set to open and close at the height necessary for passage.

*The intermediate height setting is only available in automatic operation mode. Not available in manual operation mode.



Sheet Replacement

A sheet exchange function of a lower segment Remarkably reduced the repair cost and the time.

Lower part of a broken sheet (up to its 2nd segment from the bottom) can be partially replaced and it reduces the repair cost and the time.

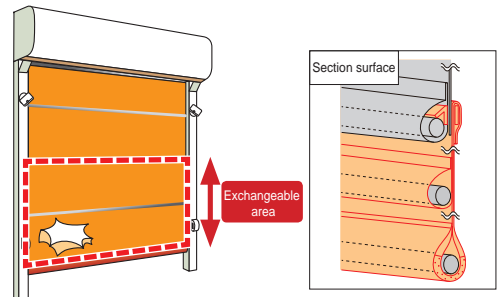
Patented

(特許第6475272号)

Even in the case of large opening, high elevation work vehicle is not necessary which used to be conventionally required, thus it can be safely repaired.

Corresponding models
RX-2, RX-3, RB-4Z (Existing models)
RA-2, RA-2H, RA-2.5, RA-3, RA-2a,
RA-3a, RB-2a, RB-3a, RB-4*
RB-2s, RB-3s (Discontinued models)

* This function does not correspond to the intermediate pipe with $\varnothing 50.8$ specification.



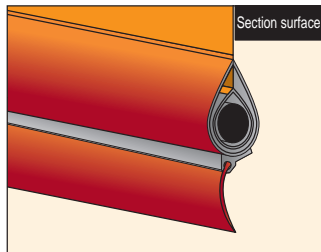
HACCP Compatible

A sanitary water draining specification that reduces water drop to 1/10.

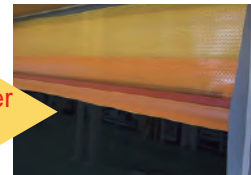
The drop of water from the lower end of the sheet during opening is reduced to 1/10* compared to conventional products (Industry's 1st specification). It improves the sanitary environment in food factories using water. Easy maintenance replacement and it is sanitary. Corresponding models: RX-2, RX-3, RB-4Z, RB-1, RB-1Ta (As an option)

Patented

(特許第5601887号)



[RB-1 Standard specification]



[Water draining specification] (Option)

Drop of water
90% cut*

* In the case of W2000 mm with our product comparison.

Values indicated are based on our test results and are not guaranteed values.

HACCP compatible option

An insect-resistant orange sheet certainly repels insects, a high performance airtight gasket (option) can also enhance an insect-proof and a dust-proofing effect.

In addition, attaching a slope cover on a drum box or a control box makes it easier to confirm its contamination state. Apart from that, a stainless steel-made rail or a drum box, and baking coating finishing are available.



[All SUS-made specification] (Option)



▲ Example of use: Slope top for drum box



▲ Example of use: Slope top for control box

(All stainless steel / Stainless steel for rail only)

Corresponding models: RB-1, RB-1Ta, RX-2, RX-3, RB-4Z (rail only), RA-2Es (all optional; can be connected depending on size)

Explosion Proof

Antistatic and flame retardant sheets are standardized. Newly adopted structure prevents from accumulation of static electricity.

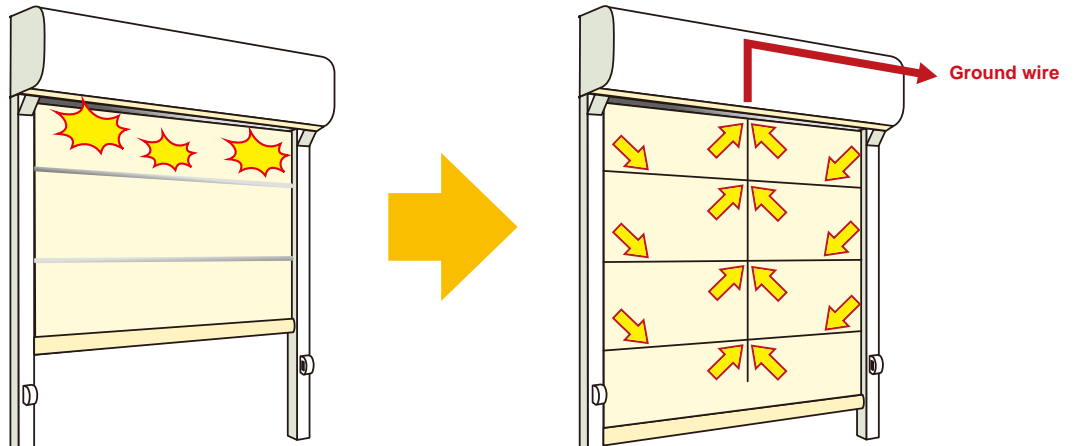
Patented

(特許第5554652号)

RA-2Es is an explosion-proof type that allows use in the explosion-proof area up to Zone 2 such as chemical plants, etc. It is safe to use with the industry's first antistatic flame retardant sheet and our original function of an instant static electricity discharge structure.

Instant static electricity discharge structure

Corresponding model: RA-2Es (Standard equipment)
Option for RB-1, RB-1Ta, RX-2, RX-3



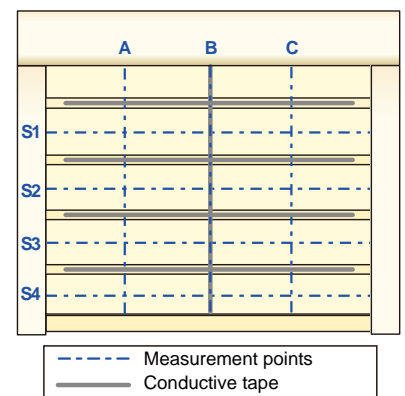
When the sheet comes down, peeling electrification occurs.

The static electricity generated on the sheet instantly removed by conductive tape put on the sheet front face.

[Voltage generated and its attenuation time by a sheet opening and closing]

(Instant static electricity discharge structure: Without → With)

	A	B	C
S1	203V → 34V	211V → 25V	242V → 36V
	11.0s → 0s	14.9s → 0s	12.7s → 0s
S2	157V → 20V	167V → 11V	188V → 16V
	13.6s → 0s	18.1s → 0s	17.1s → 0s
S3	117V → 25V	115V → 21V	83V → 11V
	2.3s → 0s	3.3s → 0s	0.0s → 0s
S4	22V → 27V	30V → 17V	30V → 37V
	0.0s → 0s	0.0s → 0s	0.0s → 0s



Static electricity is instantly discharged!

Static electricity countermeasure standard

0 sec. to reach under 100v

* The values are our examination results. (Environment: Temperature at 25°C, Humidity at 25%)
The actual values may be different depending on usage environment.
Please contact us for ensuring performance under tertiary circumstances.



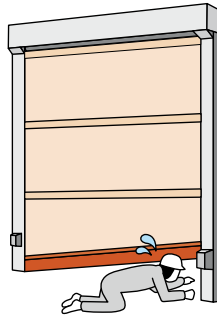
A reliable function that enables a sheet to be opened even in case of power failure.

A sheet can be opened even in case of power failure in an earthquake or a fire. It enables to prevent danger of cutting off an evacuation route blocked by a closed sheet in the case of evacuation in emergency.

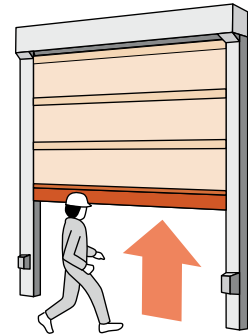
Corresponding models: RB-1, RB-1Ta, RX-2, RX-3(As an option)

Image

[Without backup]
You need to cut or lift the sheet.



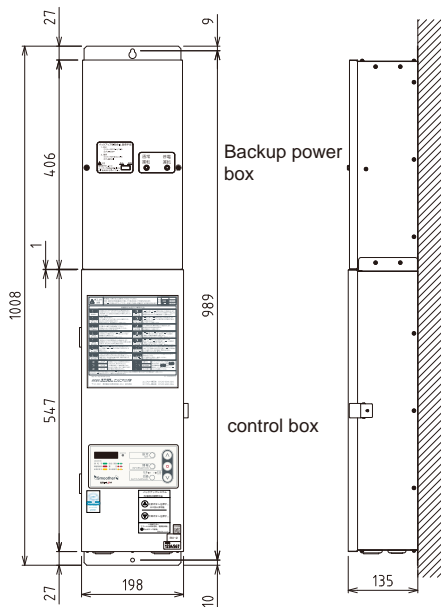
[With backup]
The sheet ascends automatically / manually.



[A sheet opening/closing operation in case of power failure can be selected from 4 types]

Type	Operation
1.Manual	Opening/closing by a button operation (It keeps the fully open state until restored for the 2nd time of operation)
2. Manual + with an external signal	Manual type + It automatically fully opens by an external signal (Manual opening/closing is no more than twice, an external signal is no more than once)
3. Automatic	It fully opens by detecting stopping functioning due to power failure. It keeps the fully open state until restored.
4. Automatic + with an external signal	Automatic type + It automatically fully opens by an external signal.

- ※If a back-up battery is equipped, a primary-side power supply energizing state and a battery using state are possible to distinguish.
A primary-side power supply energizing state (normally)--- Green LED is turned on. A battery using state (during a power failure) --- Red LED is turned on (Red LED is turned off if the battery runs down.)
- ※Midway stoppage is not possible while a sheet is rising but it is possible under move-down operation.
It only enables a sheet to rise from midway stoppage.



[Backup power supply]

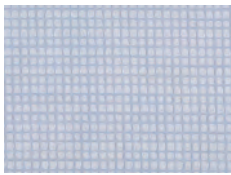
Power failure compensation	Frequency of sheet operation 2 times (in 30 minutes during standby time)
Output voltage	Nominal DC 96 V
Power supply type	NICKEL HYDROGEN STORAGE BATTERY * NICKEL-CADMIUM BATTERY is used for RB-1, RB-1Ta.
Charging time	48 hours (charging time required after discharging to below 50% of battery capacity)

* Backup power box is placed on the top of or below the control box. Only RB-1 has a built-in drum box.

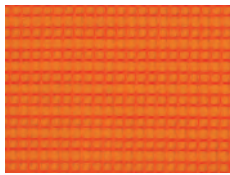
⚠ Request for regular parts replacement. Estimated replacement period: 3 years after the start of operation.
Backup batteries are consumables. If you use it for a long period of time beyond the estimated time of replacement, there is a concern that the back-up power supply may not function during a power outage. Please perform regular inspection and replacement.

Sheet

Standard (Standard specification for RB, RX excluding RB-1.)

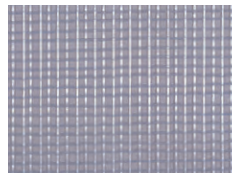


Transparent sheet
(Flame-retardant finish)

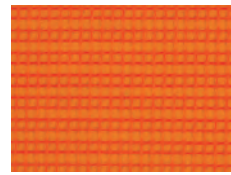


Insect-resistant orange sheet
(Flame-retardant finish)

Antistatic Flame retardant (Standard specification for RB-1)



Transparent sheet
(Antistatic flame-retardant finish)
*Not compatible with RB-4Z.



Insect-resistant orange sheet
(Antistatic flame-retardant finish)

Antistatic Flame retardant

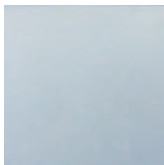


Ivory sheet
(Explosion-proof finish)
(Non-combustible Certification Number: NM-3671)

*The Fire defence Agency registration No.AE-13-1223

	Standard(flame-retardant)		Antistatic and flame-retardant		Antistatic and flame-retardant
	Clear	Clear orange	Clear	Clear orange	
Base fabric/surface material	Polyester/PVC				Glass fiber/PVC
Surface treatment	Acrylic fluorine antifouling treatment				—
Light transmission	60% or more	35% or more	—	35% or more	—
Certified flame retardant	Flame retardant certification number F-02043		F-19082	AT930083	NM-3671
Thickness (mm)	0.75		0.42	0.75	0.58

Sheet option for window



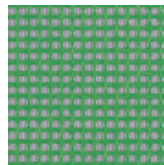
Clear*



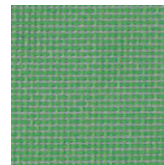
Clear orange*



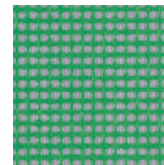
Flame-retardant clear
(Non-combustible Certification Number: NM-4334)



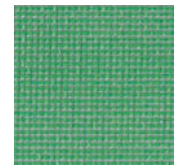
Light green1003*



Light green1004*



Dark green1003*



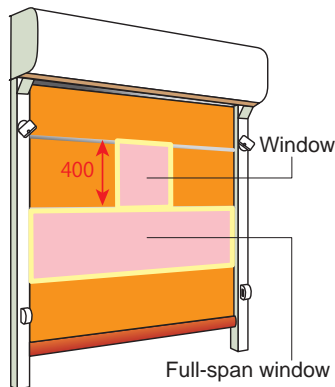
Dark green1004*

*Certification numbers are as of the time of publication and may differ from the latest.

*A flame retardant product label is attached when a window is attached to a flame retardant sheet.

● Sheet window

Attaching a sheet window enables to see a person or a forklift at an opposite side in which can avoid collision accident etc. Available window options are Clear, Insect-resistant clear orange, Mesh, Flame-retardant clear.



	Window			Full-span warindow	
	Maximum width	Minimum width	Height	Width	Height
RB-1	W-500	500	400	W+110	Maximum height set for each segment
RB-1Ta					
RX-2					
RX-3	W-800	—	—		
RB-4Z	W-500	—	—		
RA-2Es	—	—	—		

* Mesh window does not comply with a full-span window.

* For RB-1, if the opening width is less than 900, the maximum window is W-300.

* The flame retardant transparent type window for the RA-2Es become bleached over time due to deterioration.

Other options



● Guard pole



● Revolving light
(Red, Yellow, Green, Blue)



● Highly airtight option



● Printed sheet
(Inkjet printing)

- Photoelectric sensor (phototransmitting /photoreceiving type)
- Buzzer

etc.

Sensors

For a small-size opening, that allows people or trolleys to pass through

Infrared sensor OA-203C*

External dimension: W221xH63xD29.9mm
Mountable height (from FL): 2~3.5m
Static detection: 2,15,180 sec / Infinity
Power supply: AC/DC12~30V
Mountable model:
RB-1,RB-1Ta,RX-2,RX-3,RB-4Z



Infrared sensor SHA-3200

External dimension: W210xH59xD28.5mm
Mountable height (from FL): 2~3.2m
Static detection: 2,10,60 sec / Infinity
Power supply: AC / DC24V
Mountable model:
RB-1,RB-1Ta,RX-2,RX-3,RB-4Z



For a small-size to medium-size opening, with a wider infrared radiation area

Infrared sensor OA-4700S

External dimension: W267xH62xD45mm
Mountable height (from FL): 2.5~4.7m
Static detection: 260 sec / 10 min / Infinity,
Power supply: AC/DC12~24V
Mountable model: RB-1,RB-1Ta,RX-2,RX-3,RB-4Z
Remarks: Rainproof cover available (sold separately)



Infrared sensor SHA-4701

External dimension: W265xH61xD37.5mm
Mountable height (from FL): 2.0~4.7m
Static detection: [1,2,3 Row] 2,10,30 sec
/ Infinity[4,5 Row] 2,10 sec
Power supply: AC / DC12~24V
Mountable model: RB-1,RB-1Ta,RX-2,RX-3,RB-4Z
Remarks: Rainproof cover available (sold separately)



For a small-size to medium-size opening, with high-intensity radiation area

Intelligent sensor II OAM-EXPLORER J

External dimension: W207xH157.5xD118mm
Mountable height (from FL): 2.0~6.2m (An operation confirmation is required if detecting a person at more than H5.2M.)
Static detection: 2,10,30 sec / 1,3,10 min / Infinity
Power supply: AC / DC12~24V
Mountable model: RB-1,RB-1Ta,RX-2,RX-3,RB-4Z
Remarks: Crossing canceling function, Direction discriminating function, Infinite function in plural areas, Remote control application setting



Infrared sensor SHA-6502

External dimension: W321xH101.8xD90.5mm
Mountable height (from FL): 2.0~6.5m
Static detection: 2,10,30 sec / Infinity
Power supply: AC / DC12~24V
Mountable model: RB-1,RB-1Ta,
RX-2,RX-3,RB-4Z
Remarks: Direction detecting function, traverse cancel function, rainproof construction, (separately sold), remote control



Detecting just a vehicle is possible, durable against natural environment.

Wide detection area, adjustable in length and width separately with increments of 10cm.

FALCON / FALCON XL

External dimension: W103xH97xD160mm
Mountable height (from FL): 2~3.5m (FALCON XL)
3.5~7m (FALCON)
Detection system: Microwave Doppler system (moving body detection)
Power supply: AC / DC12~24V
Mountable model: RB-1,RB-1Ta,RX-2,RX-3,RB-4Z
(FALCON is only available for RX-2,RX-3,RB-4Z)
Remarks: Water repellence (IP65 level), a remote controller is available (sold separately)



Laser scanner J

External dimension: W124.8xH83.7xD92.5mm
Mountable height (from FL): 0.5~9.9m
Detection system: Laser (stationary detection)
Power supply: DC24V
Mountable model: RB-1,RB-1Ta,RX-2,RX-3,RB-4Z
Notes: 2 detection area setting, remote control setting



Switches

	Wireless remote control (1-key type / 3-key type)	Pull Switch	Pull Switch (for RA-2Es)	Single pushbutton switch	Explosion-proof single pushbutton switch
Type	Receiver: RX13-1143 Transmitter: TX20-1011UF	—	—	WBSTT221ON	SJW4200
External dimension	W36xH80xD12.3 (Transmitter)	W140xH154xD33 (Main body portion)	W140xH154xD33 (Main body portion)	W60xH98xD47.5	W82xH134xD81
Power supply	DC12~24V	—	—	—	—
Power consumption	Below 2.4W	—	—	—	—
Mountable model	RB-1,RB-1Ta, RX-2,RX-3,RB-4Z	RB-1,RB-1Ta, RX-2,RX-3,RB-4Z	RA-2Es	RB-1,RB-1Ta, RX-2,RX-3,RB-4Z	RA-2Es
Remarks	Possible to use 100 transmitter units in each group, maximum 200 units for one receiver	—	—	Explosion-proof & jet-proof IP65	Explosion-proof grade d2G4

* Specifications are subject to change without notice for product improvement.

UNIFLOW's No.1 hit model appears with drastically updated function and performance.

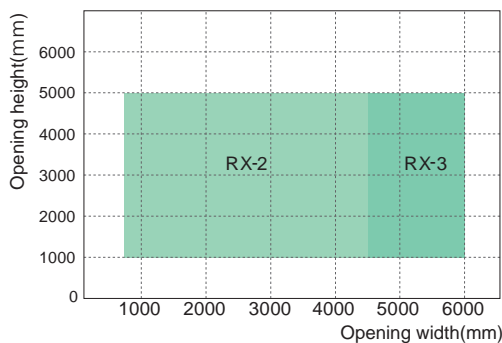


NEW For both Indoor and Outdoor Use

RX-2, RX-3

- Wind pressure resistance has been greatly improved. Smooth opening and closing are achieved even in environments with wind and pressure differences.
- Improved interlock operation (→ P.5,9)
Simple interlock: Interlocking system can be activated with a single sensor in the narrow anteroom.
Operation release switch is available. (option)
- Countdown indicator(→P.6)
Countdown display: seconds, status display, and more.
Signal mode: Can be used as an alternative to rotating display light and signal lights.
- The availability of the safety sensor mounting position has increased
- Multi-step setting of operating speed
- Control panel can be locked

Designing range



Options

- Instant static electricity discharge structure
- Replacement of a lower-stage sheet
- Water draining specification
- Backup power supply
- Stainless steel (drum box, rail)
- Simple-Interlock
- Countdown indicator

Specification

		RX-2	RX-3
Designing range	Effective opening width(mm)	W800 ~ 4500	W4501 ~ 6000
	Effective opening height(mm)	H1000 ~ 5000	
Components Used	BOX	Ivory colored steel plate	
	Rail	Ivory colored steel plate	
	Rotor pipe	Aluminium alloy φ 216	
	Sheet	Polyester yarn encapsulated vinyl sheet	
	Intermediate pipe Lower-stage pipe	φ 38.1 With the roller at the end part	
Operation method	Driving section	Induction motor(output 750W)	
	Opening/closing speed(highest)	1.2 m/s when ascending, 0.6 m/s when descending	0.8 m/s when ascending, 0.6 m/s when descending
	Upper/lower limits setting method	Encoder control and teaching control	
Sensor	Opening/closing speed control	Slow start/slow stop control	
	Safety sensor	Photoelectric sensor (phototransmitting / photoreceiving type • 2optional axes)	
power supply		Three phases AC 200V ±10% (50Hz/60Hz) 6A	
Allowable frequency		120 times/h, 2times/min	90 times/h, 1.5times/min
Ambient humidity		Main body 10~40°C Control Box 5~40°C	
Ambient temperature		There should be no freezing or condensation at 20% to 85%	
Environmental conditions		There should be no toxic gas, powder dust, and condensation.	

RX-2 ,RX-3 for both Indoor and Outdoor Use

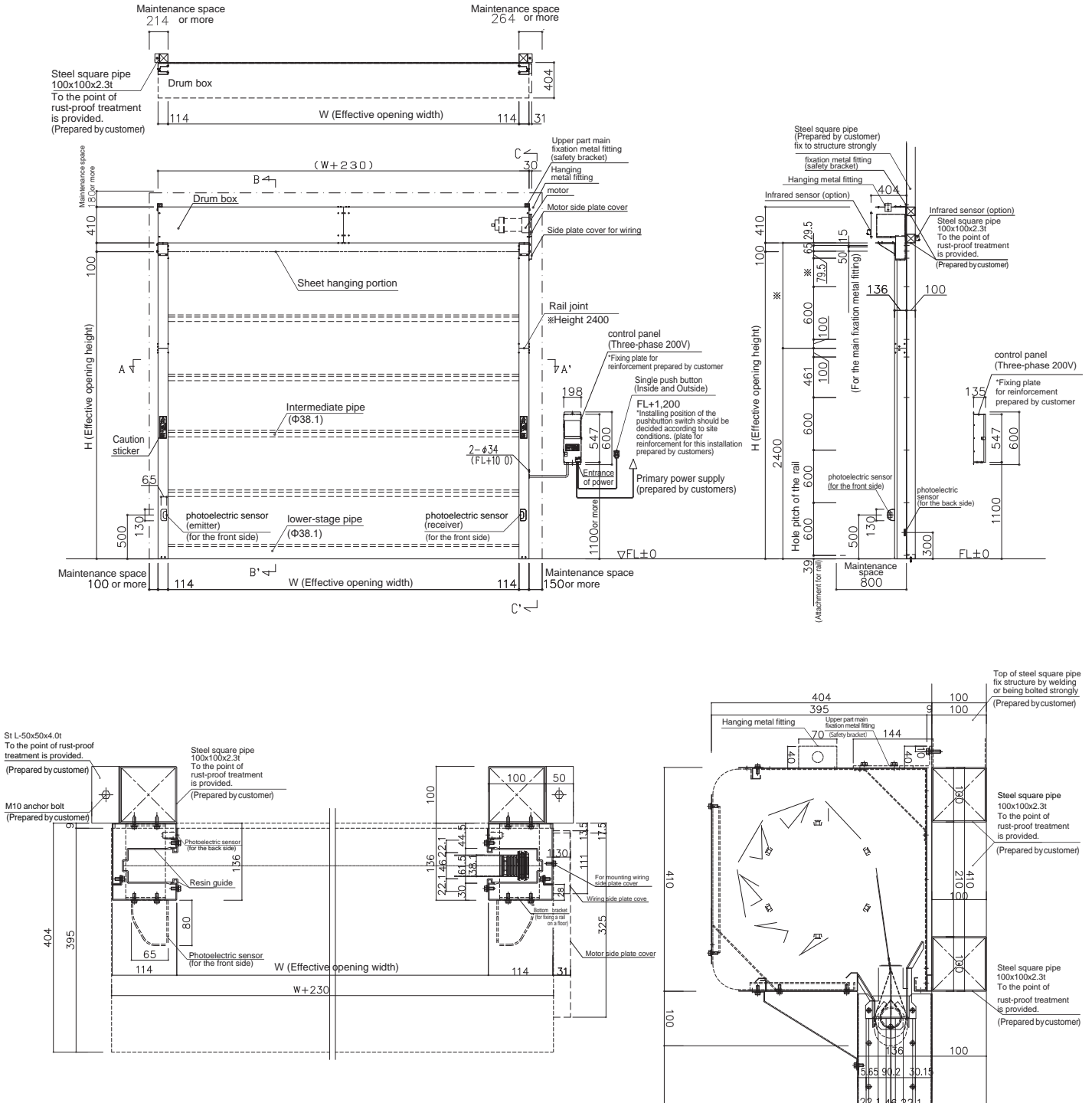
- Range of possible opening / Effective opening width (mm) : minimum W S800 to maximum W 4500(RX-2)
minimum W 4501 to maximum W 6000(RX-3)
- Effective opening height (mm) : minimum H 1000 to maximum H 5000

- Power / Three phases AC 200V ±10% (50Hz/60Hz) 6A

- Sheet speed ※/ [RX-2] 1.2 m/s when ascending, 0.6 m/s when descending / [RX-3] 0.8 m/s when ascending, 0.6 m/s when descend

※Maximum speed

RX-2,RX-3 Installation



* The installation location of the control panel or optional equipment will be determined upon on-site consultation.
* Please check the model of start-up sensor at each site.

Compact high-speed roll-up door ideal for all factories, in space-saving environments.

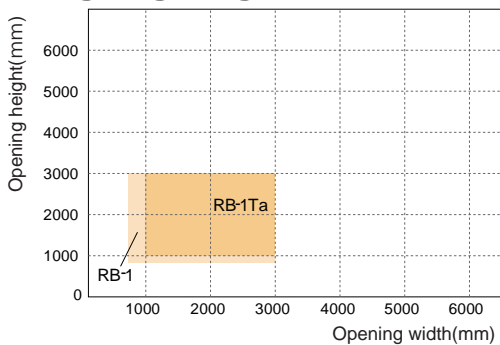


Compact Model for Indoor Use
Compact Model for both Indoor and Outdoor Use

RB-1, RB-1Ta

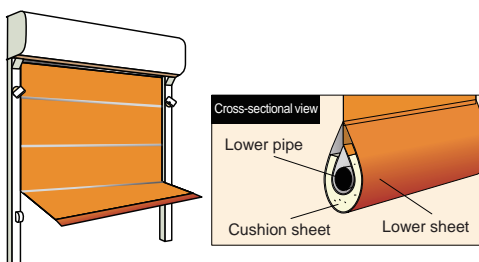
- Industry's first creasing design feature
Dripping from the lower end of the sheet is only 1/10 of conventional products.
- High energy saving performance, protection against insects and dust-proof performance.
Can be activated with airtight performance equivalent to JIS Standard A-3 grade.
- Compactly fit, maximum opening
Can be operated from the front side of the drum box during inspection.
Reduced maintenance space on both sides.
- Backup power supply (As an option)
Even during a power failure, you can pass through with the sheet ascending.

Designing range



Flap function

RB-1, RB-1Ta (Standard equipment)



Even if something contacting a sheet, the pipe is easily disengaged, thereby minimizing rail and sheet damages.

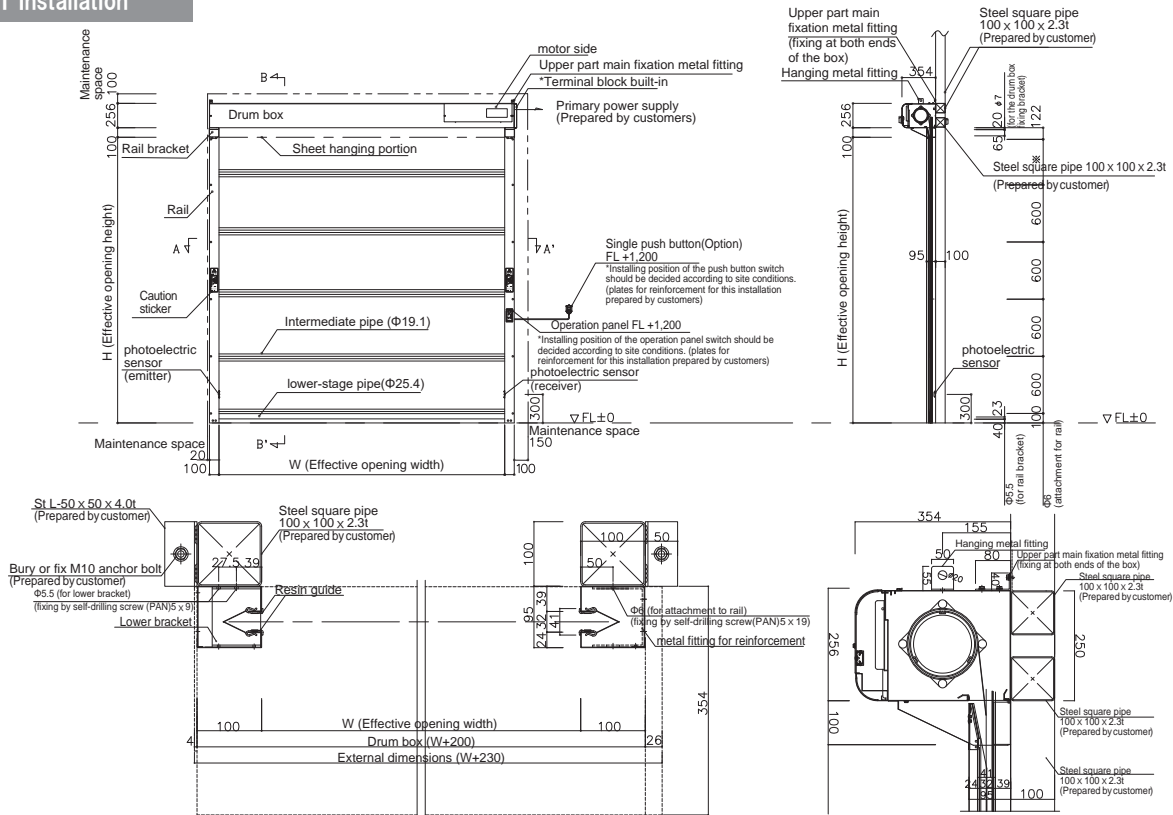
Specification

		RB-1	RB-1Ta
Designing range	Effective opening width(mm)	W800 ~ 3000	W1000 ~ 3000
	Effective opening height(mm)	H900 ~ 3000	H1000 ~ 3000
Components Used	BOX	Ivory colored steel plate	
	Rail	Ivory colored steel plate	
	Rotor pipe	Aluminium alloy φ 150	
	Sheet	Polyester yarn encapsulated vinyl sheet	
	Intermediate pipe	φ 19.1	φ 25.4
Operation method	Lower-stage pipe	φ 25.4	φ 38.1
	Driving section	Induction motor(output 400W)	
	Opening/closing speed(highest)	1.3m/s(Ascent velocity of the sheet) 1.0m/s(Descent velocity of the sheet)	
	Upper/lower limits setting method	Encoder control and teaching control	
Sensor	Opening/closing speed control	Slow start/slow stop control	
	Safety sensor	Photoelectric sensor (phototransmitting / photoreceiving type)	
power supply		Single phase 200V ±10% (50Hz/60Hz) 6A	
Allowable frequency		120 times/h, 2times/min	
Ambient humidity		5 ~ 40°C	Main Body -10~40°C/Control Box 5~40°C
Ambient temperature		There should be no freezing or condensation at 20% to 85%	
Environmental conditions		There should be no toxic gas, powder dust, and condensation.	

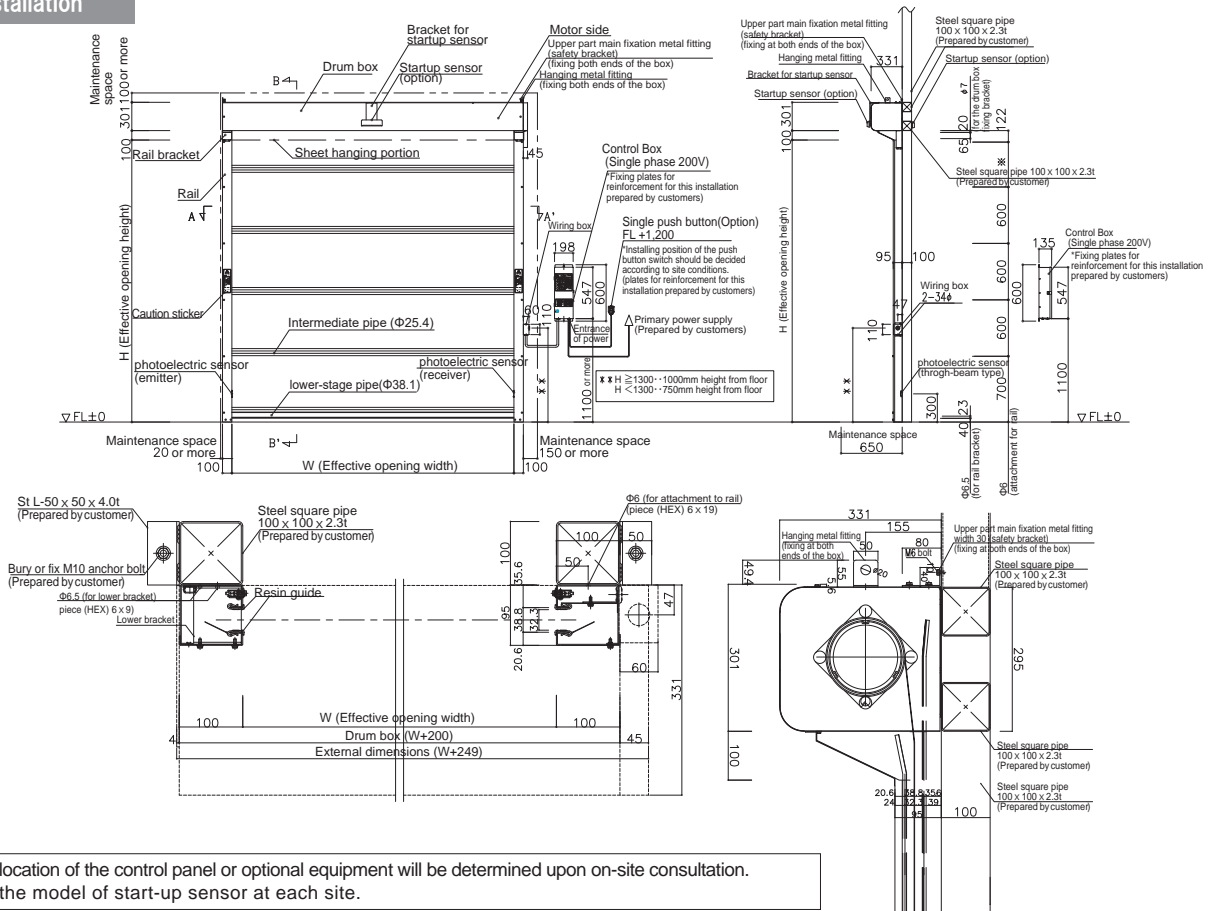
Compact Model for Indoor Use RB-1 / Outdoor Use RB-1Ta

- Range of possible opening / Effective opening width (mm) : minimum W 800 to maximum W 3000(RB-1),
minimum W 1000 to maximum W 3000(RB-1Ta)
Effective opening height (mm) : minimum H 900 to maximum H 3000(RB-1),
minimum H 1000 to maximum H 3000(RB-1Ta)
- Power : Single phase 200V ±10% (50Hz/60Hz) 6A ● Sheet speed ※/ 1.3m/s when ascending, 1.0 m/s when descending
※Maximum speed

RB-1 Installation



RB-1Ta Installation



* The installation location of the control panel or optional equipment will be determined upon on-site consultation.
* Please check the model of start-up sensor at each site.

This is one of the largest models in the industry, with a width of 10m x height of 6m, suitable for factories and warehouses.

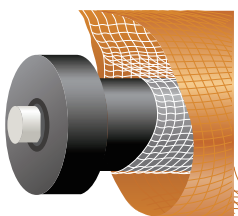
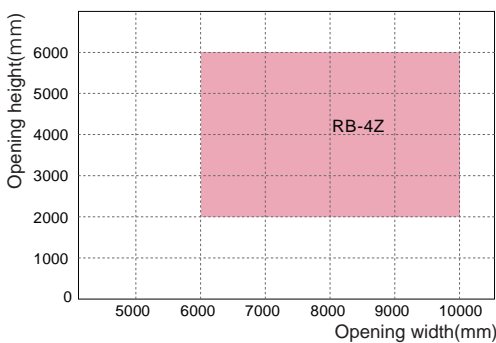


Largest Model for both Indoor and Outdoor Use

RB-4Z

- Largest size in the industry for ultra-wide opening
Can be manufactured with an up to a width of 10m x height of 6m, allowing large vehicles such as trucks to pass through smoothly.
- TOP-CLASS wind-resistant performance in the industry
The rollers at both ends of the sheet make it easy to open and close even in strong winds. It has wind resistance of 33.5 m/s (wind speed equivalent) * when fully closed.
- Safe structure with new control panel
An emergency stop button (push-lock, turn-reset type) is equipped as standard on the control panel. Function settings are completed on the panel, eliminating the need to work at heights.
* In the case of effective opening width of 6,050 mm.

Designing range



The roller at the end part of the sheet



Despite its extra-large size, it is equipped with a photoelectric sensor with two optical axes (built-in rail) as standard, increasing safety.

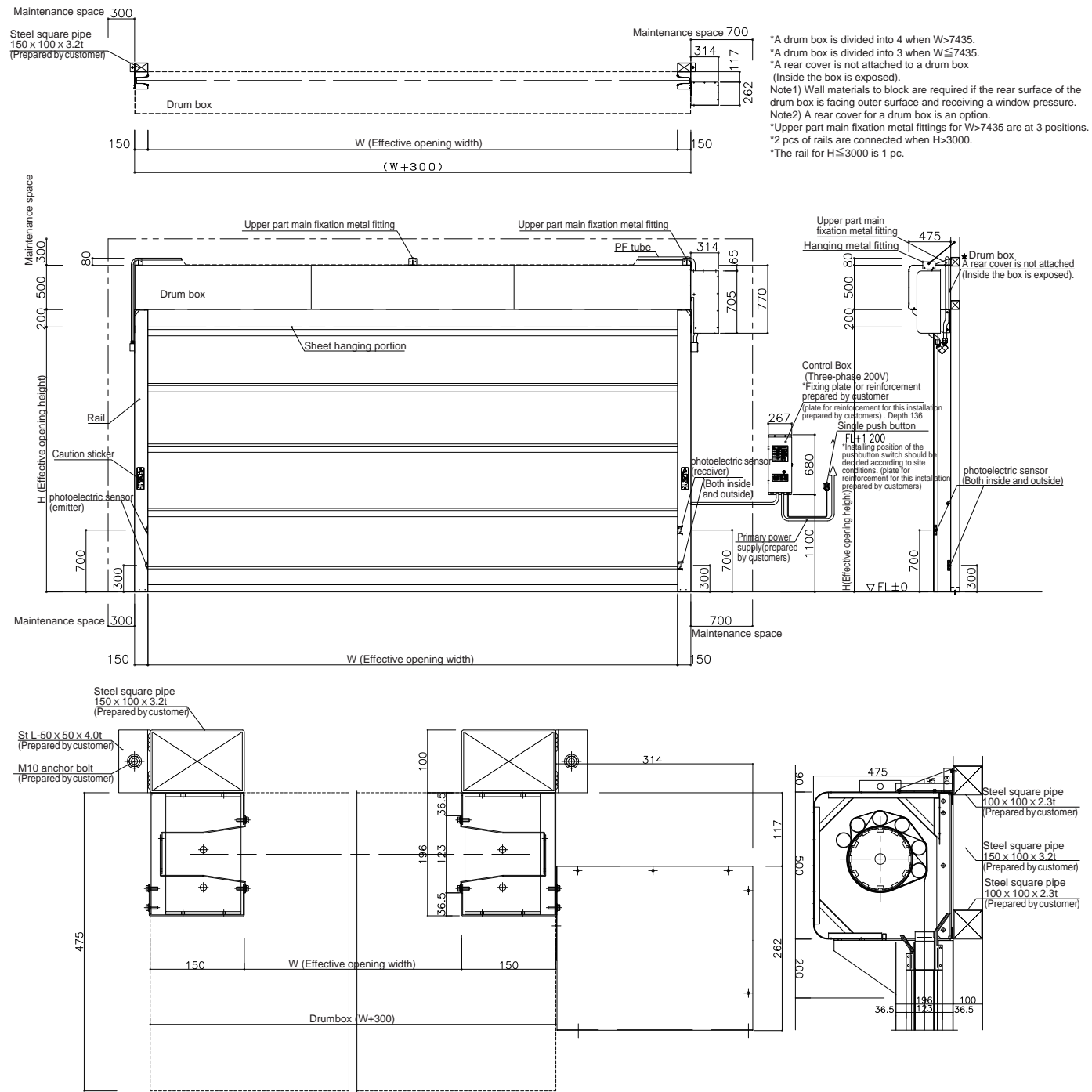
Specification

		RB-4Z
Designing range	Effective opening width(mm)	W6000 ~ 10000
	Effective opening height(mm)	H2000 ~ 6000
Components Used	BOX	Ivory colored steel plate
	Rail	
	Rotor pipe	Aluminium alloy φ 216
	Sheet	Polyester yarn encapsulated vinyl sheet
	Intermediate pipe	φ 48.6 Polyester yarn encapsulated vinyl sheet
Operation method	Lower-stage pipe	φ 48.6 Polyester yarn encapsulated vinyl sheet
	Driving section	Induction motor (output 1.5Kw)
	Opening/closing speed(highest)	0.6m/s[6m<W≤8m] (Ascent velocity of the sheet) 0.5m/(8m<W≤10m)·0.5m/s(Descent velocity of the sheet)
	Upper/lower limits setting method	Encoder control and teaching control
Sensor	Opening/closing speed control	Slow start/slow stop control
	Safety sensor	Photoelectric sensor (phototransmitting / photoreceiving type · 2optional axes)
power supply		Three phases AC 200V ±10% (50Hz/60Hz) 7A
Allowable frequency		60 times/h, 1 times/min
Ambient humidity		Main body 10~40°C Control Box 5~40°C
Ambient temperature		There should be no freezing or condensation at 20% to 85%
Environmental conditions		There should be no toxic gas, powder dust, and condensation.

RB-4Z, large model for Indoor and Outdoor Use

- Range of possible opening / Effective opening width (mm) : minimum W 6050 to maximum W 10000
Effective opening height (mm) : minimum H 2000 to maximum H 6000
- Power / Three phases AC 200 V $\pm 10\%$ (50Hz/60Hz) 7A
- Sheet speed / 0.6 m/s ($6m < W \leq 8m$), 0.5m/s ($8m < W \leq 10m$) when ascending, 0.5 m/s when descending ※Maximum speed

RB-4Z Installation



* Where to install the control panel or optional equipment must be determined through upon on-site consultation.
 * Installation base will be determined upon on-site inspection and consultation.
 * For outdoor use, install the products under a roof and mount the covers for External motor.
 * The above drawings show the motor set in right side option (standard type).

For partitions in explosion-proof area in chemical plants, etc. This model conforms to explosion-proof guidelines, and can be used in areas up to Zone 2 (formerly, Class I, Division 2).



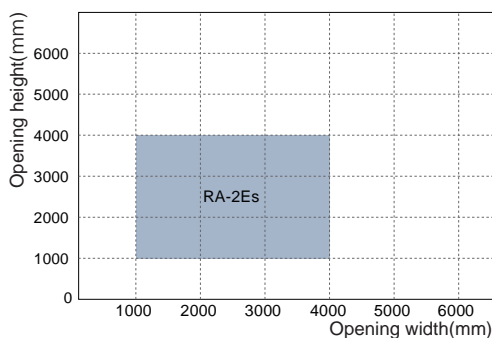
For Indoor use only
Explosion-Proof Model

Patented
(特許第5554652号)

RA-2Es

- Explosion-proof structure
Full-fledged explosion-proof specifications that comply with the "Recommended Practices for Explosion-protected Electrical Installations" of the National Institute for Occupational Safety and Health (Germany)
- The industry's first to equip anti-static, flame retardant sheet as a standard.
(Non-combustible Certification Number: NM-3671)
- Instantly discharges static electricity when opening and closing (patented).
The grounding on the surface of the sheet discharges and eliminates static electricity.
- Highly expandable electrical control specification
Interlock operation is also available.
- Extensive options are available.
Explosion-proof pushbutton switches, pull switches, and flame retardant transparent windows are also in the lineup.

Designing range



Using electrical equipment in accordance with explosion-proof guidelines.

Structure	Member	Grades and standards
Pressure-proof and explosion-proof structure	Motor	d2G4
	Push buttons	
Essential safety explosion-proof structure	Limit switch	Exia II CT6
	Photoelectric sensor	Exia II BT4
	Pull switch	Exia II CT6

This product is compatible with gas and steam explosion protection.
(Not compatible with dust explosion protection)
This model can be installed in places where the hazardous area corresponds to Zone 2 and where explosive gases are present, classified up to explosion class 2 / ignition G4 (d2G4).

Specification

		RA-2Es
Designing range	Effective opening width(mm)	W1000 ~ 4000
	Effective opening height(mm)	H1000 ~ 4000
Components Used	BOX	Ivory colored steel plate
	Rail	
	Rotor pipe	Aluminium alloy ϕ 216
	Sheet	Antistatic flame retardant sheet
	Intermediate pipe Lower-stage pipe	ϕ 38.1
Operation method	Driving section	Motor with explosion-proof brake (d2G4) 400W
	Opening/closing speed(highest)	0.6m/s(Ascent velocity of the sheet) 0.5m/s(Descent velocity of the sheet)
	Upper/lower limits setting method	Encoder control and teaching control
	Opening/closing speed control	Slow start/slow stop control
Sensor	Safety sensor	Explosion-proof photoelectric sensor (reflective type) * Essential safety explosion-proof structure
	power supply	Three phases AC 200V \pm 10% (50Hz/60Hz) 5A
Allowable frequency	120 times/h, 2 times/min	
Ambient humidity	Main body 10~40°C Control Box 5~40°C	
Ambient temperature	There should be no freezing or condensation at 20% to 85%	
Environmental conditions	There should be no toxic gas, powder dust, and condensation.	

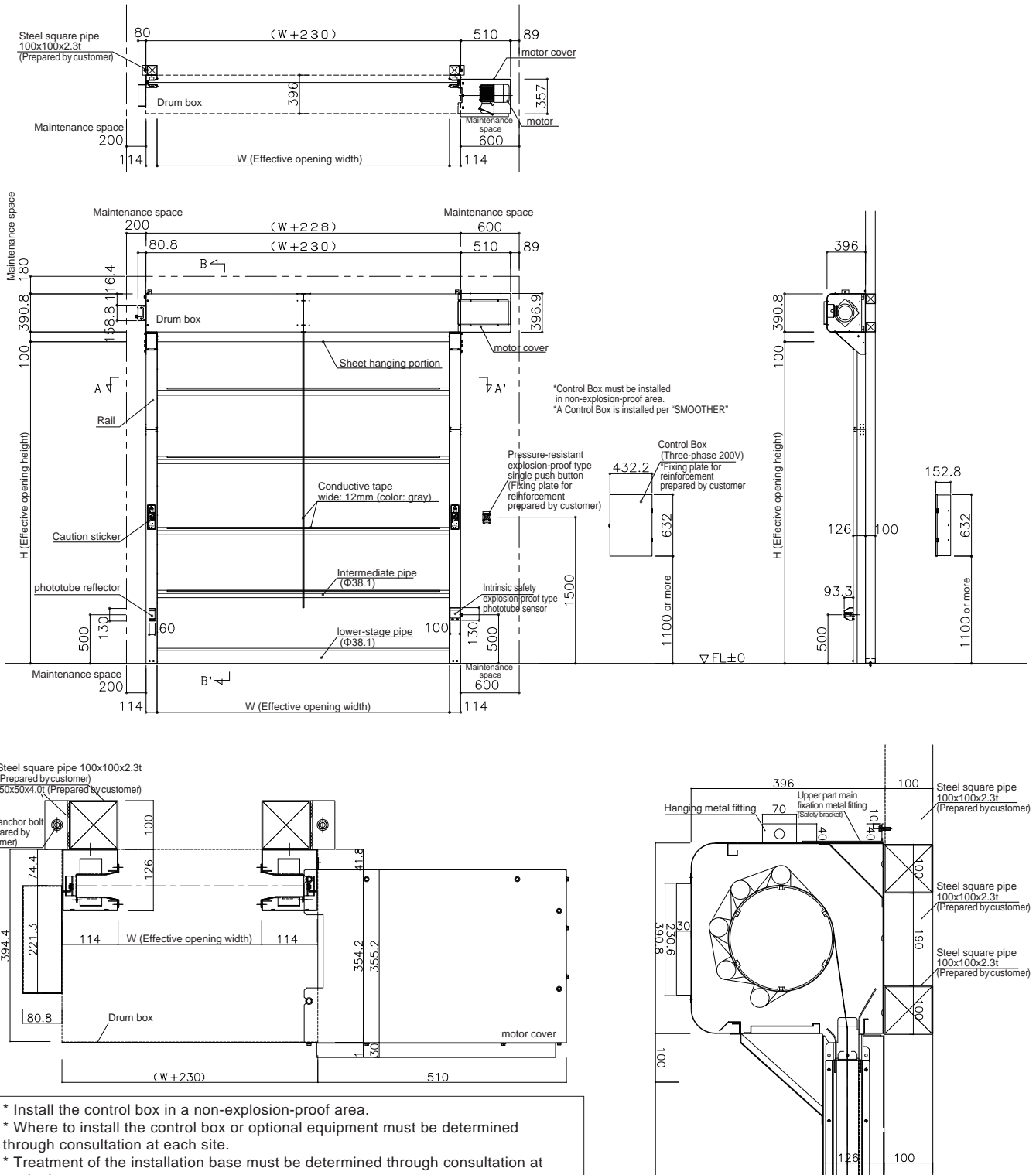
*This product complies with explosion-proof standards in Japan. Conformity to explosion-proof standards outside Japan are not guaranteed. Vendors are requested to handle them in accordance with the laws of the country in which they are installed.

RA-2Es, explosion-proof model for Indoor Use

- Range of possible opening / Effective opening width (mm) : minimum W 1000 to maximum W 4000
Effective opening height (mm) : minimum H 1000 to maximum H 4000
- Power / Three phases AC 200V ±10% (50Hz/60Hz) 5A
- Sheet speed ※ / 0.6 m/s when ascending / 0.5 m/s when descending

※Maximum speed

RA-2Es Installation



- * Install the control box in a non-explosion-proof area.
- * Where to install the control box or optional equipment must be determined through consultation at each site.
- * Treatment of the installation base must be determined through consultation at each site.
- * An additional construction is necessary for both primary and secondary-side power supplies. Please carry out piping connection from an explosion-proof area to a control box in a non-explosion proof area. The customer must make arrangements with electric construction suppliers to perform such work.
- * Class C grounding work (measuring 10 Ω or less in grounding resistance) should be done.
- * The drawings above show the motor set in right side (standard type).
- * The length of piping (wiring) from a control box to a motor should not exceed 15M.

UNIFLOW

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