

UNIFLOW

# SMOOTHER



高速開閉で熱損失が少ない

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

RX-Series are under application

**MAXWELL**

PT. MAXWELL INDO MAKMUR



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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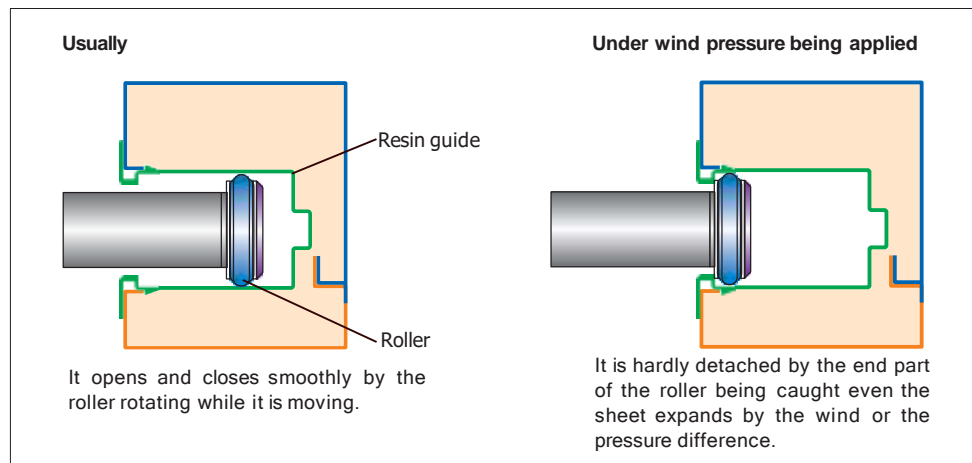
|   |                                     |             |
|---|-------------------------------------|-------------|
| Nine Distinctive Features                                   | —————                               | <b>P.3</b>  |
| Specifications and Options                                  | —————                               | <b>P.8</b>  |
| Medium to Large-sized Model for both Indoor and Outdoor Use | ————— <b>NEW</b> <b>RX-2,3</b> ———— | <b>P.11</b> |
| Compact Model for Indoor Use                                | ————— <b>RB-1</b> ————              | <b>P.13</b> |
| Compact Model for both Indoor and Outdoor Use               | ————— <b>RB-1Ta</b> ————            | <b>P.13</b> |
| Largest Model for both Indoor and Outdoor Use               | ————— <b>RB-4Z</b> ————             | <b>P.15</b> |
| Explosion-Proof Model                                       | ————— <b>RA-2Es</b> ————            | <b>P.17</b> |

## Wind Resistance

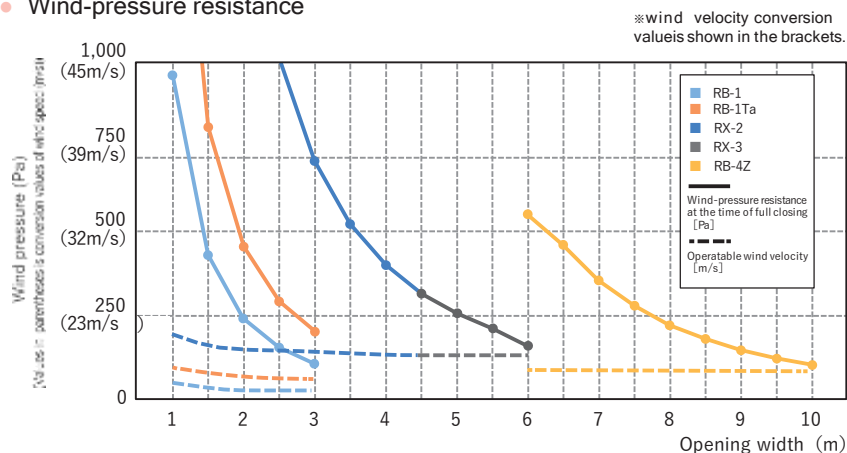
The wind resistant performance is exhibited remarkably not only at the time of full closing but also during the operation under strong wind.

- The structure of the rail

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



- 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)

| 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 | 21  | 159 |     |     |     |     |     |     |     |     |
| RB-4Z                       |      |      |      |      |     |     |     |     |     |     | 549 | 460 | 355 | 279 | 222 | 180 | 147 | 122 | 102 |

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

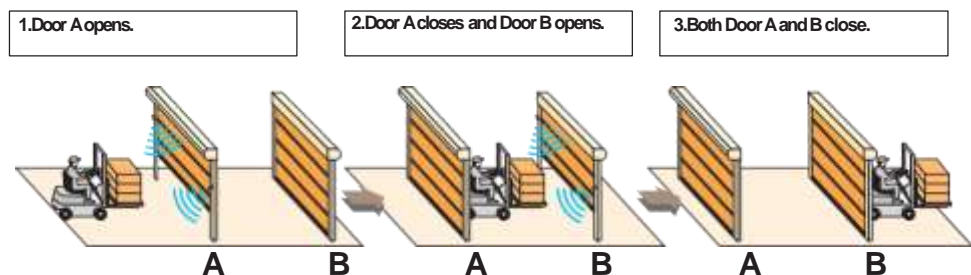
| Effective opening width (m) | 1    | 1.5  | 2    | 2.5  | 3    | 3.5  | 4    | 4.5  | 5    | 5.5  | 6    | 6.5  | 7    | 7.5  | 8    | 8.5  | 9    | 9.5  | 10   |
|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| RB-1                        | 9.8  | 8.7  | 7.9  | 7.7  | 7.5  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| RB-1Ta                      | 14.0 | 12.7 | 1.7  | 1.4  | 1.3  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 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 |

## Air Conditioning

# Suppressing outflow of air by setting a limit on opening of a door

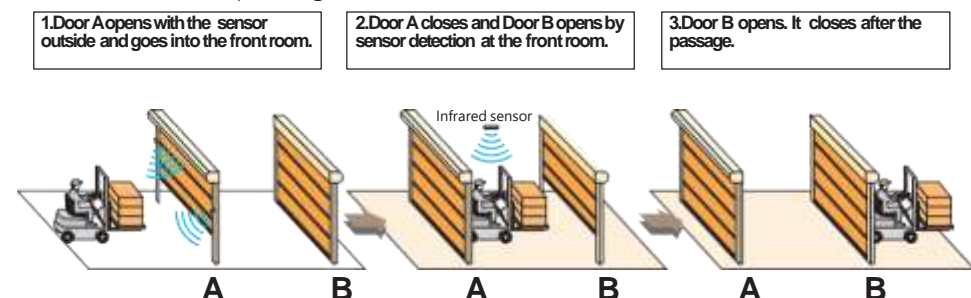
### • Interlock

Two units of Smoothers constitute to a front and rear chamber, which are coordinated via a micro-processor. An interlocking operation in which one side opens and the other side closes, is possible. As it prevents external air from entering, it can enhance air-conditioning efficiency. An optional PC board can be added for linked operation with belt conveyors, AGVs or other equipment.



### • Simple-Interlock【 New function】

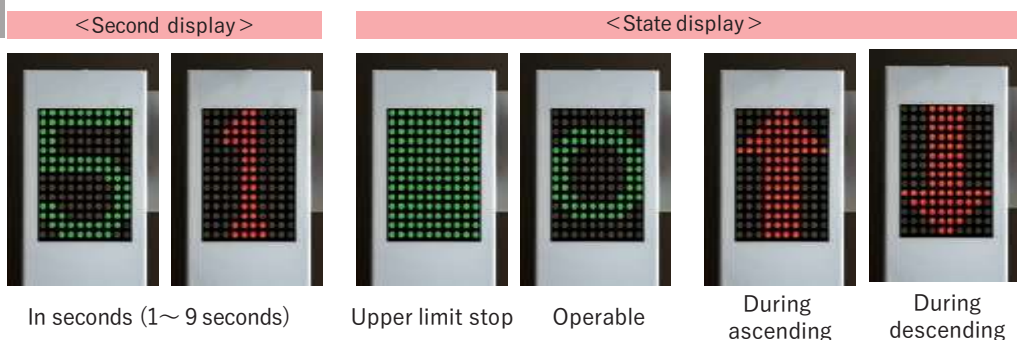
In the case of a narrow front room, the roll-up door sometimes does not activate because the sensor at the Door A side detects even after passing. 1 unit of the sensor installed in a front room can activate interlock. Corresponding model: RX-2, RX-3



## Warning

# Safe passage with the countdown indicator

The countdown indicator function is added in order to prevent from running-in of passengers. State display during ascending/descending of a sheet etc. is possible. Corresponding model: RX-2, RX-3 (as an option)



<In addition> Midway stop • During limiting operation etc.

※Up to 4 units per roll-up door can be installed.

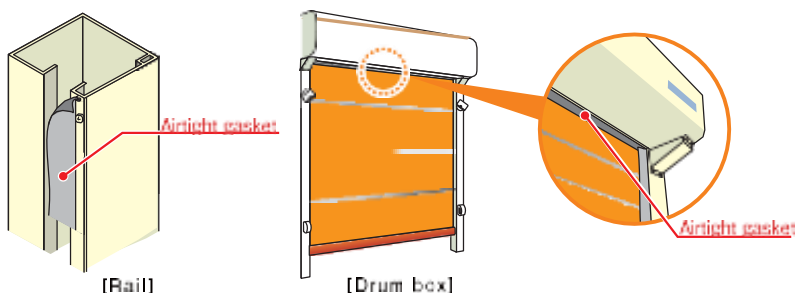
## High Air Tightness

# 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.

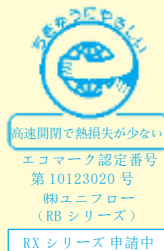
|                   | Air leak volume at 10 Pa (m <sup>3</sup> /hr m <sup>2</sup> ) |                           |
|-------------------|---|---------------------------|
|                   | RB-1 with airtight option                                     | RX-2 with airtight option |
| Positive pressure | 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



## Eco Mark-certified products.

Eco Mark certification is attained as the goods with high energy-saving effect are useful for environmental preservation. We are offering an Energy saving diagnostic service according to use environment of a customer. Please feel free to contact us.



## Backup power supply

# 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)

< Backup power supply >  
Power failure compensation: : Frequency of sheet operation 2 times (in 30 minutes during standby time)  
Output voltage: Nominal DC 96V  
Battery service life: Replacement every 3 years is recommended  
Power supply type: NICKELHYDROGEN STORAGE BATTERY  
\* NICKEL-CADMIUM BATTERY issued for RB-1, RB-1Ta.  
Charging time: 48 hours (charging time required after discharging to below 50% of battery capacity)

[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.  
※ During operation using a back-up battery, an interlock is disabled.  
※ Reverse move-up is performed when a safety sensor is usable and detected while a sheet is moving down.





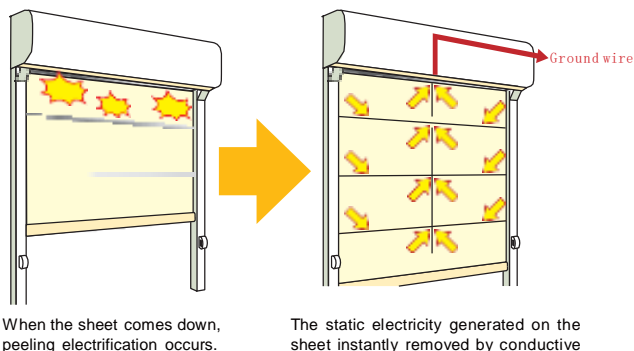
# Antistatic and flame retardant sheets are standardized. Newly adopted structure prevents from accumulation of static electricity.

**Patented**

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]

Any static electricity that may be generated by opening and closing the sheet is instantly discharged with this structure.  
Corresponding model : RA-2Es (Standard equipment)  
Option for RB-1, RB-1Ta, RX-2,RX-3



## 【Voltage generated and its attenuation time by a sheet opening and closing】

Static electricity is instantly discharged!

Static electricity countermesure standard **0** sec. to reach under 100V

RA-2Es Measurement result

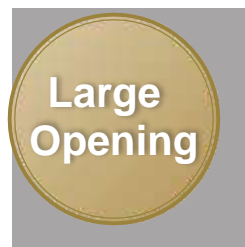
|    | A         | B         | C         |
|----|-----------|-----------|-----------|
| S1 | 2 0 3 V   | 2 1 1 V   | 2 4 2 V   |
|    | 1 1 . 0 s | 1 4 . 9 s | 1 2 . 7 s |
| S2 | 1 5 7 V   | 1 6 7 V   | 1 8 8 V   |
|    | 1 3 . 6 s | 1 8 . 1 s | 1 7 . 1 s |
| S3 | 1 1 7 V   | 1 1 5 V   | 8 3 V     |
|    | 2 . 3 s   | 3 . 3 s   | 0 . 0 s   |
| S4 | 2 2 V     | 3 0 V     | 3 0 V     |
|    | 0 . 0 s   | 0 . 0 s   | 0 . 0 s   |

<Without the instant static electricity discharge structure> <With the instant static electricity discharge structure>

|    | A     | B     | C     |
|----|-------|-------|-------|
| S1 | 3 4 V | 2 5 V | 3 6 V |
|    | 0s    | 0s    | 0s    |
| S2 | 2 0 V | 1 1 V | 1 6 V |
|    | 0s    | 0s    | 0s    |
| S3 | 2 5 V | 2 1 V | 1 1 V |
|    | 0s    | 0s    | 0s    |
| S4 | 2 7 V | 1 7 V | 3 7 V |
|    | 0s    | 0s    | 0s    |

Upper stage: An electrification peak voltage  
Lower stage: An attenuation time from the peak to 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 tertian circumstances.



# At most 60m<sup>2</sup> of Extra-Large size correspondence type.

RB-4Z is the extra-large size that allows large vehicles such as a truck to pass through smoothly. A photoelectric sensor with rail embedded type of two optical axes is also equipped as standard and the safety is enhanced.



## Sheet Replacement

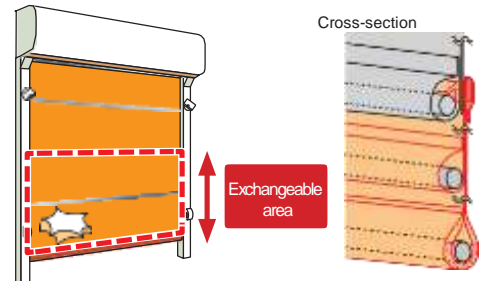
Patented

# A sheet exchange function of a lower segment NEW 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. 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)

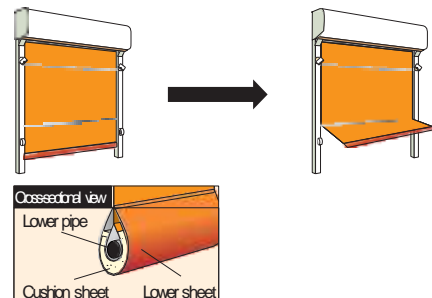
\* This function does not correspond to the intermediate pipe with Ø50.8 specification.



## Breakage Prevention

# Equipped with a “Flap function” that allows the pipe to easily disengage when something contacting a sheet.

- Even if something contacting a sheet, the pipe is easily disengaged, thereby minimizing rail and sheet damages.  
Corresponding models:  
RB-1, RB-1Ta (Standard equipment)
- The lower stage sheet incorporating a cushion material relieves an impact by contact.

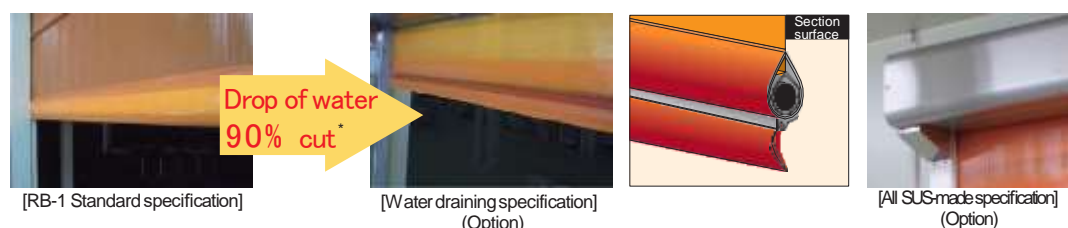


## HACCP Compatible

Patented

# 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: RB-1, RB-1Ta (As an option)
- For the environment using water, the SUS specification that is resistant to corrosion is recommended.  
(All stainless steel-made / Only the rail is made of stainless steel)  
Corresponding models: RB-1, RB-1Ta, RX-2, RX-3, RB-4Z  
(As an option. A jointed drum box and a rail are applied due to the size.)



\* 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.



▲ Example of use:  
Slope top for drum box



▲ Example of use:  
Slope top for control box

## ● Sheet

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



Transparent sheet  
(Flame-retardant finish)

[Antistatic Flame retardant]  
(RB-1)



Transparent sheet  
(Antistatic flame-retardant finish)

[Antistatic Flame retardant]  
(RA-2Es)



Ivory sheet  
(Explosion-proof finish)

[Sheet option for window]



Clear \*



Clear orange \*



Flame-retardant clear



Insect-resistant orange sheet  
(Flame-retardant finish)



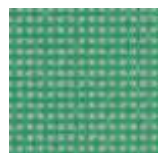
Insect-resistant orange sheet  
(Antistatic flame-retardant finish)



Light green 1003 \*



Light green 1004 \*



Dark green 1003 \*

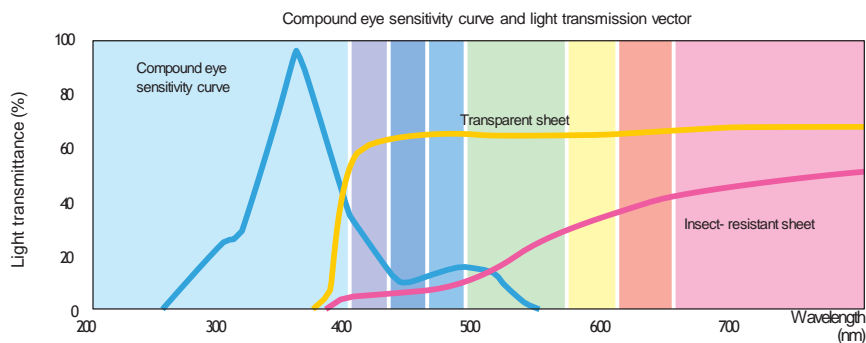


Dark green 1004 \*

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

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

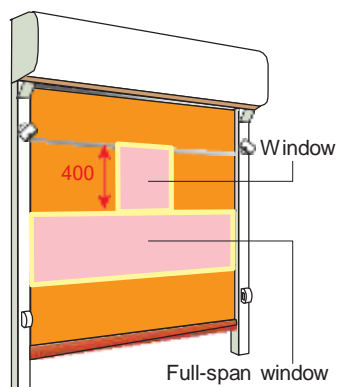
## ● Insect-resistant effect



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

## ● 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.



|        | Maximum width | Minimum width |     |       |                                     |
|--------|---------------|---------------|-----|-------|-------------------------------------|
| RB-1   | W-500         | 500           | 400 | W+110 | Maximum height set for each segment |
| RB-1Ta |               |               |     | W+140 |                                     |
| RX-2   |               |               |     | —     |                                     |
| RX-3   |               |               |     | —     |                                     |
| RB-4Z  | W-800         | 500           | 400 | —     | —                                   |
| RA-2Es | W-500         |               |     | —     |                                     |

\* Windows that can be mounted are 1 to 3 windows for a single or a full-span window. (The number of windows varies depending on the width of a sheet.)

\* Window mounting positions may be located on the first, second third, and fourth segments.

\* 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.

## ● Sensors

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

### Infrared sensor OA-203C\*

External dimension: W221×H63×D29.9mm  
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: W210×H59×D28.5mm  
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: W267×H62×D45mm  
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: W265×H61×D37.5mm  
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: W207×H157.5×D118mm  
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: W321×H101.8×D90.5mm  
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.

### FALCON / FALCON XL

External dimension: W103×H97×D160mm  
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)



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

### Laser scanner J

External dimension: W124.8×H83.7×D92.5mm  
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

|                    |   | Pull Switch                       | Pull Switch                       |                                  |                            |
|--------------------|---|-----------------------------------|-----------------------------------|----------------------------------|----------------------------|
|                    |   |                                   |                                   |                                  |                            |
| Type               | Receiver: RX13-1143<br>Transmitter: TX20-1011UF   | —                                 | —                                 | WBSTT2210N                       | SJW4200                    |
| External dimension | W36×H80×D12.3 (Transmitter)   | W140×H154×D33 (Main body portion) | W140×H154×D33 (Main body portion) | W60×H98×D47.5                    | W82×H134×D81               |
| 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 |

● Guard pole

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

● Triple pushbutton switch

● Photoelectric sensor (photo-transmitting / photo-receiving type)

● Buzzer

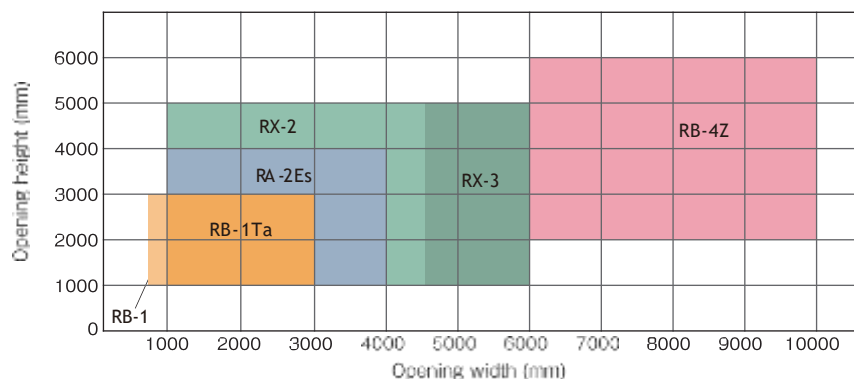
● Countdown indicator (Only for RX-series)

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

| Specifications                  |   | Compact Model<br>for Indoor Use  | Model for both Indoor and Outdoor Use  |  |  |   | Explosion-Proof<br>Model   |
|---------------------------------|---|--|--|--|--|---|--|
|                                 |   | RB-1   | RB-1Ta                                 | RX-2   | RX-3   | RB-4Z   | RA-2Es   |
| Effective opening<br>regulation | Effective<br>opening width<br>(mm)          | W900~3000  | W1000~3000                             | W1000~4500   | W4550~6000   | W6050~10000   | W1000~4000   |
|                                 | Effective<br>opening height<br>(mm)         | H900~3000  | H1000~3000                             | H1000~5000   |  | H2000~6000  | H1000~4000   |
| Components used                 | Box   | Ivory colored steel plate  |  |  |  |   | Colored steel plate  |
|                                 |   | Ivory colored steel plate  |  |  |  |   | Colored steel plate  |
|                                 | Rotor                                       | Aluminum alloy φ150  |  | Aluminum alloy φ216  |  |   | Aluminum alloy<br>φ216   |
|                                 | Sheet                                       | Polyester yarn encapsulated vinyl sheet  |  |  |  |   | Antistatic flame<br>retardant sheet  |
|                                 | pipe  | φ19.1  | φ25.4                                  | φ38.1 With the roller at the end part  |  | φ48.6<br>With rollers on both ends  | φ38.1  |
|                                 | pipe  | φ25.4  | φ38.1                                  | φ38.1 With the roller at the end part  |  | φ48.6<br>With rollers on both ends  | φ38.1  |
|                                 | Drive                                       | Induction motor<br>(output 400 W)  |  | Induction motor<br>(output 750 W)  |  | Induction motor<br>(output 1.5Kw)   | Explosion-proof motor<br>with reduction gears and<br>brakes (d2G4) 400 W               |
|                                 |   | 1.3m/s(Ascent velocity of the sheet)・<br>1.0m/s(Descent velocity of the sheet) |  | 1.2m/s(Ascent<br>velocity of the sheet)・<br>0.6m/s(Descent<br>velocity of the sheet) | 0.8m/s(Ascent<br>velocity of the sheet)・<br>0.6m/s(Descent<br>velocity of the sheet) | 0.6m/s(6m<W≤8m)<br>Ascent velocity of the sheet)・<br>0.5m/s(8m<W≤10m)・0.5m/s<br>(Descent velocity of the sheet) | 0.6m/s (Ascent<br>velocity of the sheet)・<br>0.5m/s (Descent<br>velocity of the sheet) |
| Operation method                | Upper/<br>lower limits<br>setting<br>method | Encoder control and teaching control   |  |  |  |   | Upper/lower limit switches<br>and teaching control                                     |
|                                 | Opening/<br>closing speed<br>control        | Slow start/slow stop control   |  |  |  |   | Slow start/<br>slow stop control   |
|                                 | Photoelectric<br>sensor                     | Photoelectric sensor<br>(phototransmitting / photoreceiving type)              |  | Photoelectric sensor<br>(phototransmitting/photoreceiving type・2 optical axes)       |  |   | Explosion-proof type<br>Photoelectric sensor<br>(reflection type)                      |
| Power supply                    |   | Single phase 200V±10%<br>(50Hz/60Hz) 6A  |  | Three-phase 200V±10%<br>(50Hz/60Hz) 6A   |  | Three-phase<br>AC 200 V<br>(50 Hz/60 Hz) 7 A  | Three-phase<br>AC 200 V<br>(50 Hz/60 Hz) 5 A   |
|                                 |   | 120 times/h, 2 times/min   |  |  | 90 times/h,<br>1.5 times/min   | 60 times/h,<br>1 times/min  | 120 times/h,<br>2 times/min  |
|                                 |   | 5~40℃  | Main Body -10~40℃<br>Control Box 5~40℃ |  |  |   | sheet drumbox -10~40℃<br>control board 5~40℃   |
|                                 |   | There should be no freezing or condensation at 20% to 85%                      |  |  |  |   | There should be no<br>freezing or condensation<br>at 20% to 85%.                       |
|                                 | Environmental<br>conditions                 | There should be no toxic gas, powder dust, and condensation                    |  |  |  |   | There should be no toxic gas,<br>powder dust, and condensation                         |

※Maximum speed

- List of models according to effective openings



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

**NEW**

## RX-2, RX-3

Wind-pressure resistance is greatly improved by the redesigned rail structure.  
This is the new model with the upgraded control board and the enhancement of function.



### Wind-pressure resistance is greatly improved.

· It opens and closes smoothly even under the environment of high differential pressure.

### The renewed control board having multifunction.

· Operating speed/slowing-down time are finely controlled. (9 stages of ascending/descending, 5 stages of slowing-down)  
· Operation panel lock to prevent wrong operation.



### [The flexibility of the safety sensor mounting position is improved.]

· Cancellation setting range FL300~1500mm

### [Interlock operation function is improved.]

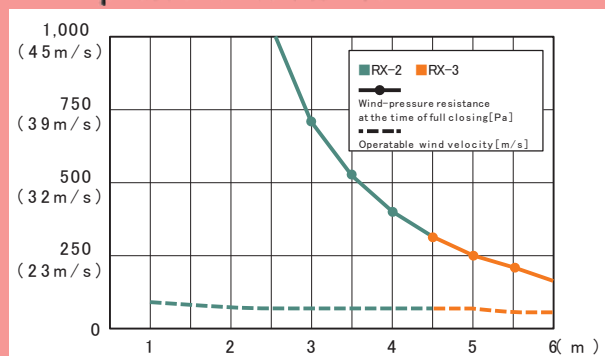
· Simple-Interlock which can be activated by 1 unit of infrared sensor in a narrow front room. (as an option)

· Operation / release switching switch is implemented (as an option)

### [Countdown indication before descending.]

· For to prevent from running-in of users (as an option).

## Wind-pressure resistance



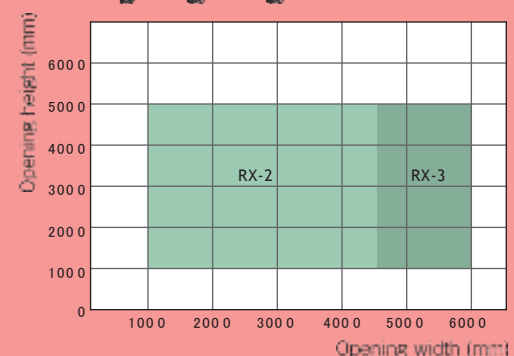
## Options

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

## Airtightness

|                   | Air leak volume at 10 Pa<br>(m <sup>3</sup> /h/m) |
|-------------------|---|
|                   | RX-2 with airtight option                         |
| Positive pressure | 19.2  |
| Negative pressure | 18.7  |

## Designing range



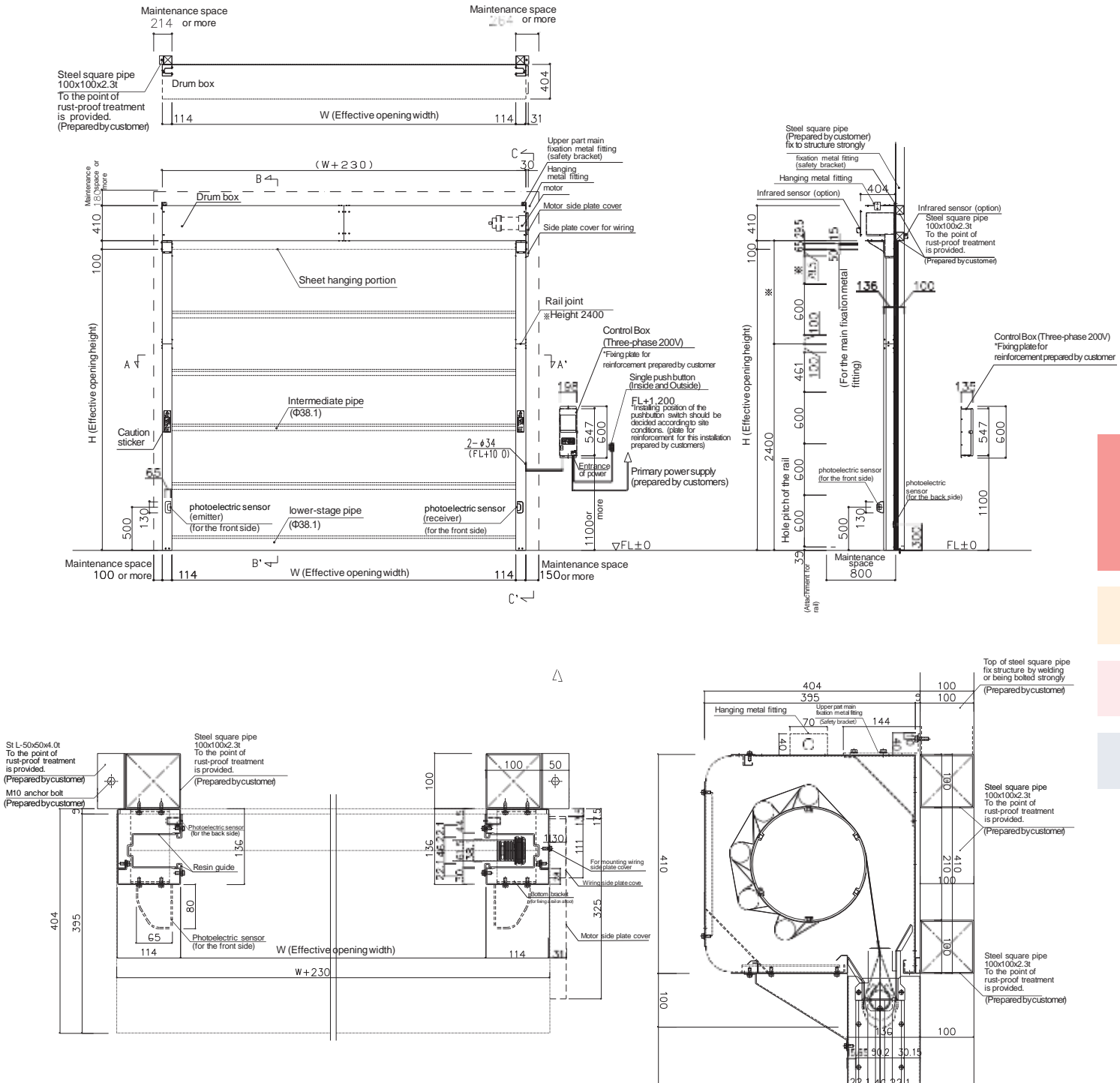
## RX-2 ,RX-3 for both Indoor and Outdoor Use

- Range of possible opening / Effective opening width (mm) : minimum W 1000 to maximum W 4500(RX-2)  
minimum W 4550 to maximum W 6000(RX-3)
- Effective opening height (mm) : minimum H 1000 to maximum H 5000

- Power : Three phases AC 200V 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 descending  
※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.

# RB-1, RB-1Ta

The “RB-1 Series” makes the most efficient use of any opening in a space-saving environment, with its compact main body and the industry’s smallest maintenance space needs. High airtight performance and emergency backup power source (option) are add-on features.



▲Installation example  
(Automotive-related factory)



▲Installation example  
(Food factory)



▲Installation example  
(Supermarket)

- **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 \***  
Airtight design feature equivalent to the A-3 Class of the Japanese Industrial Standards reduces indoor energy loss and prevents entry of insects and dust.
- **Compactly fit, maximum opening**  
Enables inspections and work done at front side of the main body box.  
The maintenance space on both sides is reduced to make the opening wide.
- **Safe and secure during a power failure with built-in back-up power supply.\***  
Built-in back-up power supply is the only one of its kind in the industry. It can be used at ease during a power failure because the sheet can be raised to ensure an evacuation passage.(Various settings are possible →P5)



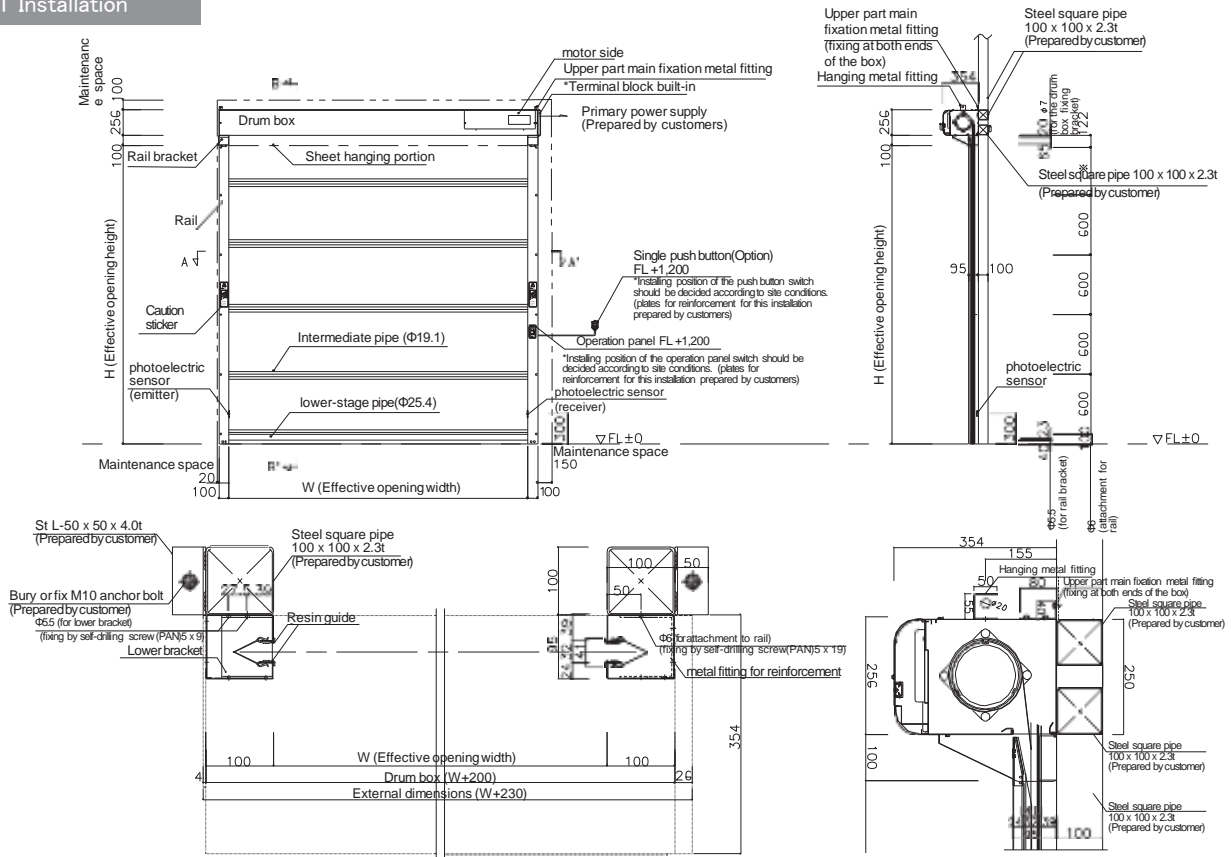
▲RB-1 Operation Panel

\*As an option

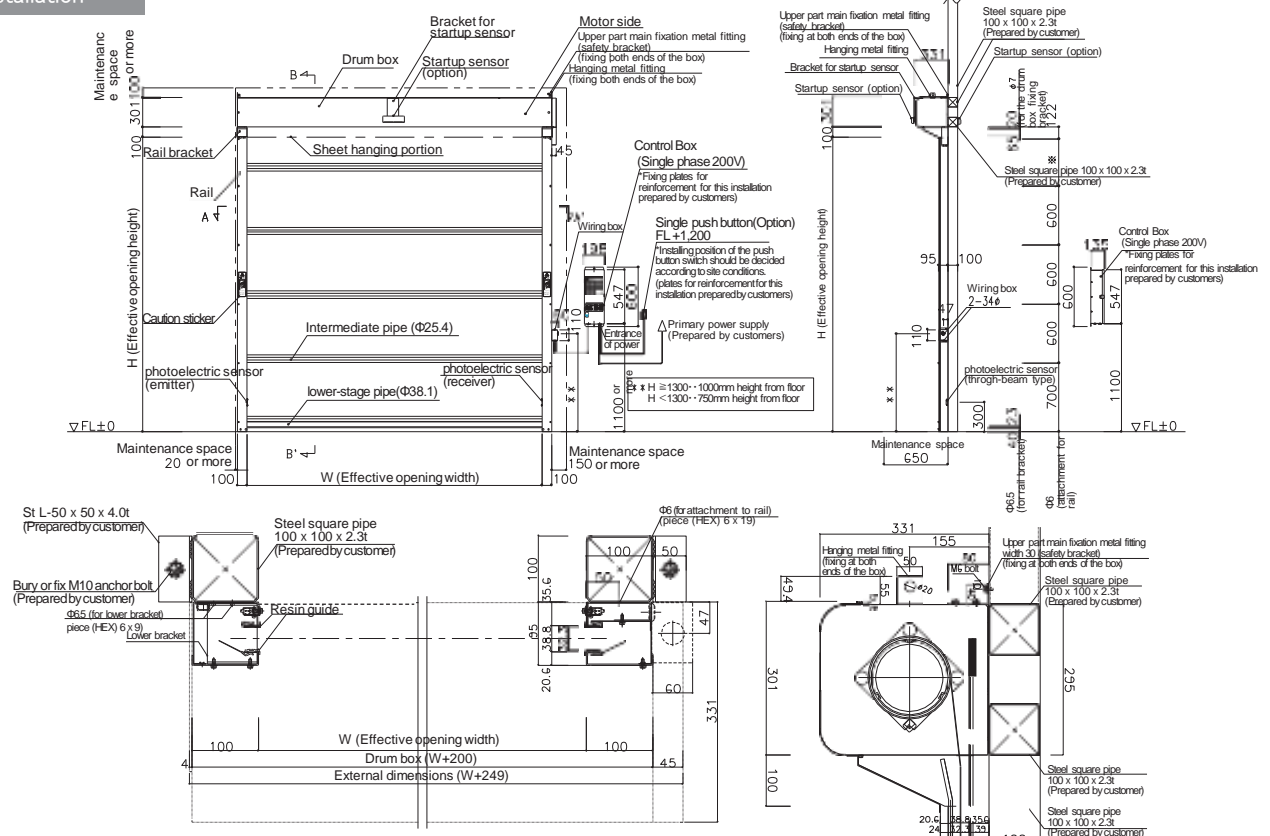
## Compact Model for Indoor Use RB-1 / Outdoor Use RB-1Ta

- 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 - 240V AC 6A
- Sheet speed : 1.3m/s when ascending, 1.0 m/s when descending

### 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.

The largest size in the industry, corresponding to large opening up to 60 m<sup>2</sup> at the maximum for factories and warehouses.

# RB-4Z

Ultra-large type available for sizes of up to 10 m in width and 6 m in height. Featuring the industry's highest level of wind resistance, with its safe and firm design structure, there is no necessity to work on elevated places during adjustment.



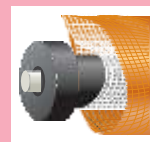
## ■ Largest size in the industry for ultra-wide opening

Affords an effective opening size up to 10 m in width and 6 m in height, thus allowing large vehicles like trucks to pass through smoothly. Improved durability particularly in the driving unit where a high load is applied.

## ■ TOP-CLASS wind-resistant performance in the industry

Easy opening and closing operation even in strong winds by bearings facilitated on the pipe ends of the sheet. Achieves the highest wind pressure resistance in the industry at 33.5 m/s when fully closed (conversion values of wind speed)\*.

\* In the case of effective opening width of 6,050 mm.



▲ The roller at the end part of the sheet

## ■ Safe structure with new control panel

Eliminates the need of high lift work, as the handy control panel equipped with an emergency stop button (push-to-lock and turn-to-reset type) as a standard feature to ensure safety in case of emergency. The encoder control system enables to configure all functional settings including the upper/lower limit position settings from the control panel within the reach of the person.



▲ Control panel

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

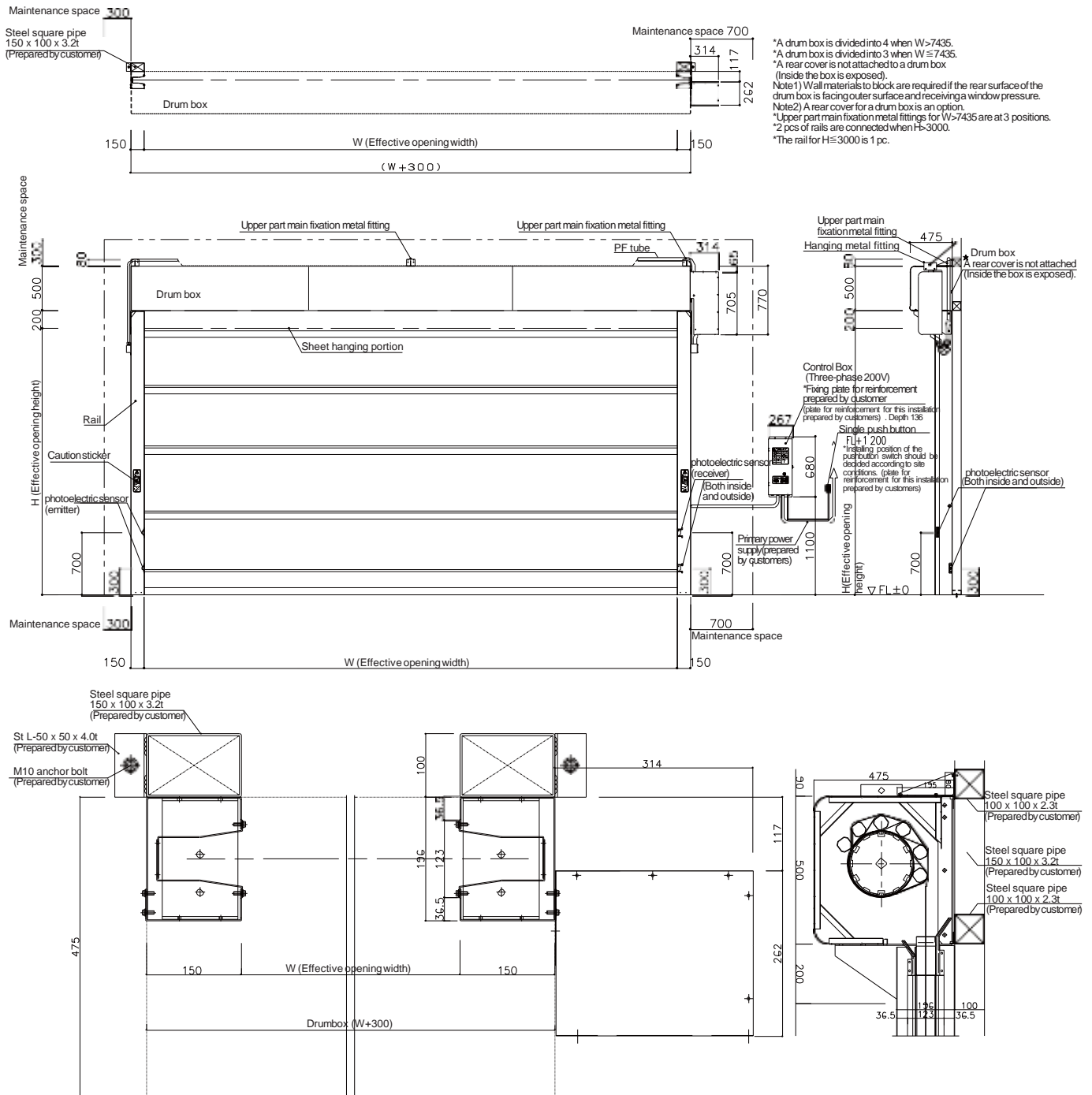
● Range of possible opening / Effective opening width (mm) : minimum W 6050 to maximum W 10000

Effective opening height (mm) : minimum H 2000 to maximum H 6000

● Power : Three phases AC 200 V 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

### 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).

Patented  
structure

# RA-2Es

Genuine explosion-proof specification based on the explosion-proof guidelines. Safety is further enhanced by the adoption of an antistatic flame retardant sheet and a new structure.



- **Industry's first antistatic flame retardant sheet is standard equipment**

- **Newly developed instant static electricity discharge structure(Paternted structure)**

Our proprietary new structure instantly discharges static electricity that may be generated when the high-speed roll-up door is opened or closed. It is safer to use because no static electricity builds up on the sheet.

- **Wide range of explosion-proof options available**

It has been prepared that an existing antistatic clear sheet and an antistatic insect-resistant orange sheet as well as a push button and a viewing window corresponding to frame retardant sheet.

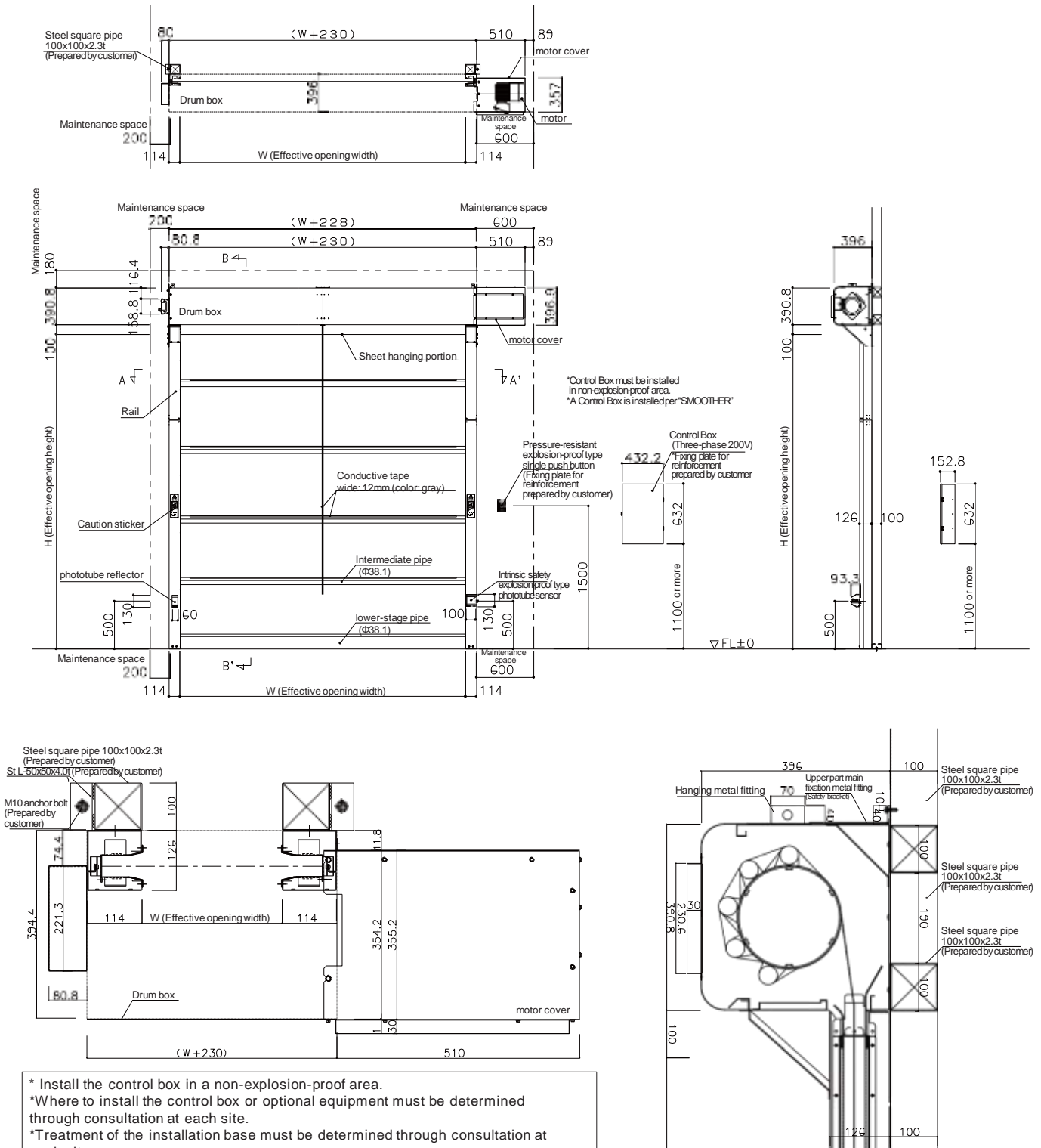
\* An explosion-proof type (RA-2Es), in accordance to explosion-proof regulations in Japan.  
There is no guarantee of compliance with explosion-proof regulations outside Japan.  
Relevant verifications with local explosion-concern authority are required in advance, before order confirmation.  
It is a MUST to handle this product as regulated by the relevant local authority.



## 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 200 V (50 Hz/60 Hz) 5 A
- Sheet speed / 0.6 m/s when ascending / 0.5 m/s when descending

### 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  $\Omega$  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.



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