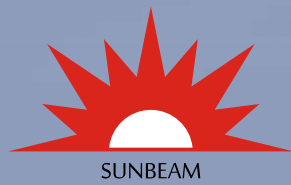


Collapsible Gates



Website

Version 2018.05



SUNBEAM

High-security, Smart, Rugged, Wind Resistant Gating Systems

SSUNBEAM is a brand name of Golden Mountain Machinery Co., Ltd., which is one of the early pioneers and modern-day innovators of Gating Systems for home and office facilities. Established in 1973, SUNBEAM's award-winning products include **Roller Shutter Motors, Roller Shutters, Smart Strong-Wind Resistant Roller Shutters, Speedy Roller Shutters, Fence Sliding Gate Operators, and Smart Collapsible Gates**, all of which are developed and produced in our **ISO9001 certified, 8,983 square-meter office and factory facilities**, operating out of **Central Taiwan**.

SUNBEAM's staying-power is firmly entrenched in a culture of attention-to-detail and reinvention, introducing new services, materials and technology to help focus on raising the standards on **smart, rugged, long-lasting gating solutions**. SUNBEAM technologies has secured countless patents across Taiwan, Europe, America, Malaysia and Japan, and has garnered generous subsidies from the SBIR (Small Business Innovation Research) for the advancement of new technologies for the Gating Industry.

Local/International Patents



Each of our product lines are the culmination of many years of professional experience and technology evolution that are backed up by a long list of patent certificates and decorations, both locally and internationally - it is a testament to our dedication and commitment to bring new directions and ideas to the Gating Industry.



Golden Mountain Established by President HUNG, CHIN-SHAN

Moved to first factory and office complex

ISO 9001

Launched new second factory

Strong-Wind Resistant Roller Shutter technology 20-year patent (MOEA subsidized)

Launched Speedy Roller Shutter Factory

1973

1991

2001

2007

2016

1987

Far Eastern Asia Invention Fair Award Winner

1992

Upgraded factory to accommodate expanding business

2005

Launched Smart Fence Sliding Gate Operators with MOEA patent and subsidy

2014

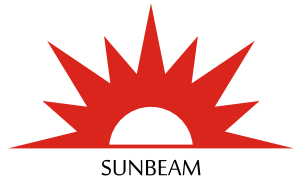
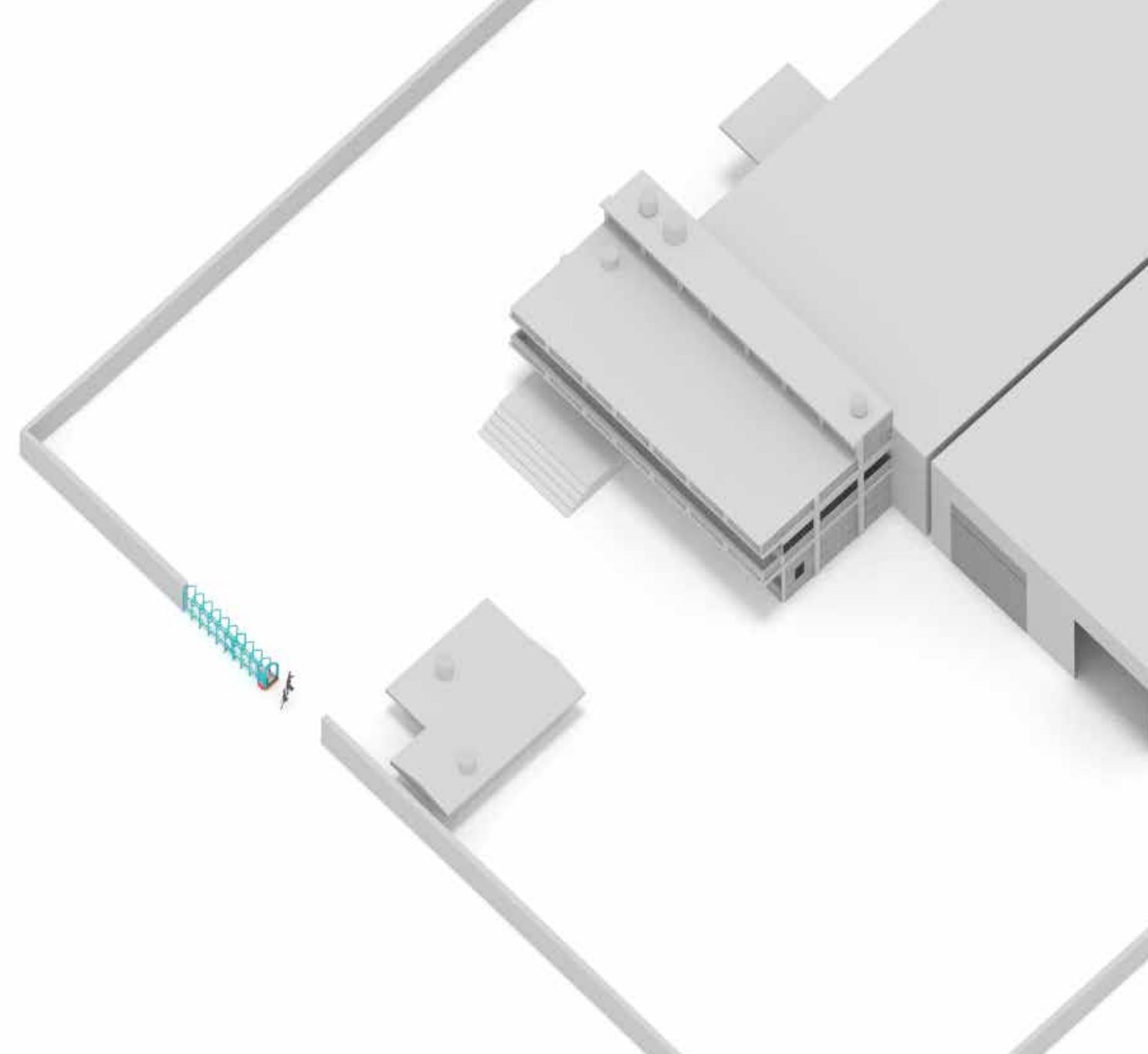
Launched Speedy Roller Shutters

Other Gating Systems - Plenty to go wrong

Motor-driven, retractable gate systems are extremely susceptible to problems because of constant motion and friction, exposure to harsh outdoor conditions, and a myriad of ways humans interact with them.



derailment
wobbling
jamming
friction
safety-issues
high-winds
security-risks
chain-slippage
power-outage
emergency
wear
rust
breakdown



Collapsible Gates

One less thing to worry about – SUNBEAM has spent the last 50 years researching, refining, restructuring and retooling their Gating Systems with an attention to detail that eliminates the factors that typically undermines longevity and safety. SUNBEAM Collapsible Gates are built to adapt to you and keep you secure for the long run - one less thing to worry about.



Long-Lasting

Stainless Steel construction



Rugged

Structural integrity in inclement weather



Convenient

Complete Multi-Gate remote control access



Safe

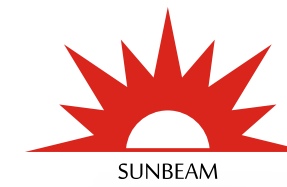
Stop-in-tracks infrared trip sensor



Buzzer

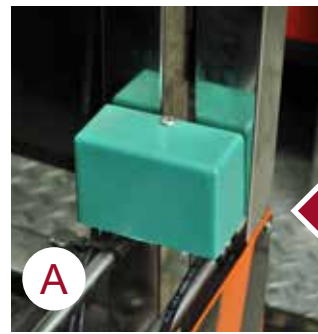


Warning Light

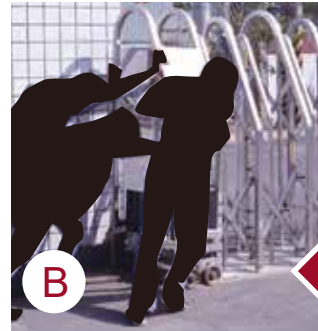


Collapsible Gate

Attention to Detail



A
Touch-Stop Safety Mechanism (patented)



B
Mechanical design lock mechanism prevents forced entry (patented)



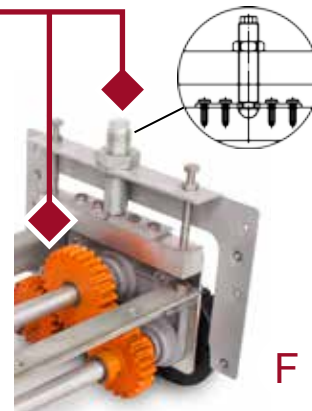
C
Gate Stop-Lock



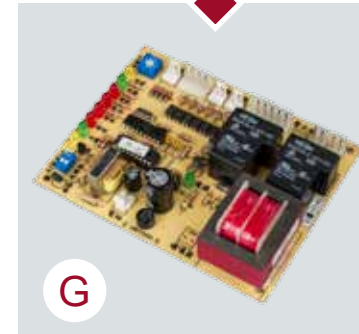
D
Drive Shaft Bearing Water-proofed Encasement



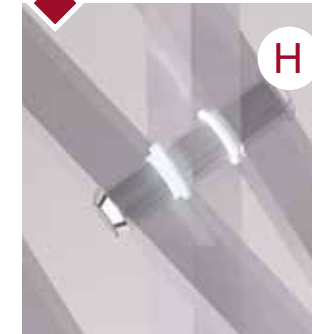
E
Neutral Clutch Lever disengages gear for emergency situations



F
Self adjusting bolt and tri-gear design reduces slippage (patented)



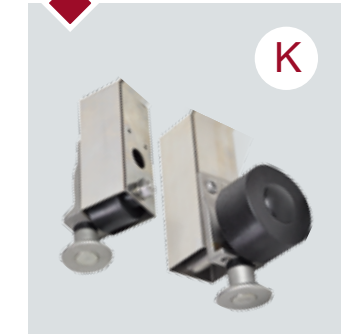
G
Circuit board provides for many powerful applications



H
All Stainless Steel bushings and caps for durable structural support (patented)



J
Stainless Steel Needle Roller Bearings prevents jamming and drag (patented)



K
Rail Hook Wheels secure gate in high winds (patented)



I
Our Gates can open and close in sections, alleviating motor wear for wider entryways (patented)



L
Stainless Steel Tube Guide



M
Safe Electrical Design

A
The Touch-stop mechanism is an invaluable SUNBEAM safety feature protecting persons and objects from harm and injury. When a gate is closing and the Touch-Stop tube contacts and senses an object, the gate will stop and immediately retreat for 3 seconds and pause for 4 seconds before trying to close again, starting the process again until reaching a limit count. Smart applications as the Touch-stop is closely integrated with our circuit board design.

B
When the Gate is closed, our mechanical design lock mechanism prevents unauthorized use-of-force entry (patented) and provides reliable stability in high-winds.

C
The Stop-Lock provides a mechanical, rust-proof, non-electrical contingency for opening the gate during emergency power-outages.

D
Drive-shaft load bearings and bushings are enclosed in protective waterproof seals and o-rings to greatly increase the longevity of the product.

E
Pulling out the Neutral Clutch Lever disengages gears and allows you to manually push the gate open during emergency power outage. Pushing the Lever back-in returns the gate to normal operating mode.

F
Transmission-chassis structure is designed with a self-adjusting bolt with a spherical bolt that automatically adjusts for torque and imbalance - this together with a Tri-gear design makes sure that all wheels stay flat on the rail, ensuring maximum friction and preventing slippage - this also means that additional weights are not needed to weigh down the chassis on the rails as typically done in the industry.

G
The power of our multi-functional circuit board design supports several smart applications, provides informative LED indicators to quickly troubleshoot problems (e.g. faulty switches), and allows operators to custom configure gate opening positions, telephone communications, remote control operations, and warning lights.

H
Stainless Steel caps that are locked on tight secure tubes together and durable Stainless Steel bushings are installed between intersecting tubes of the collapsing sections to maintain uninhibited, free movement between tubes when gate expands and retracts (plastic bushings are typically used and are prone to rapid wear).

I
Gate retraction can be setup to be done in sections, limiting constant full-open retraction, greatly alleviating motor and transmission wear and stress.

J
Rail wheels are fitted with Stainless Steel Needle Roller Bearings, eliminating the rust factor, ensuring smooth rotation and doing away with jams and drag due to corrosion.

K
Vertical Hook Wheels slide under the rail edge providing vertical support under heavy-crosswind conditions.

L
Independent Stainless Steel tube guides ensure balanced, consistent tube movement. (note that plastic guides are typically used in the industry and rapidly wear or gutters are carved in the tubes themselves which compromise structural stability).

M
All push buttons and switches are designed with mild-power 12V, preventing operators from electrical shock in rain and water-soaked conditions.

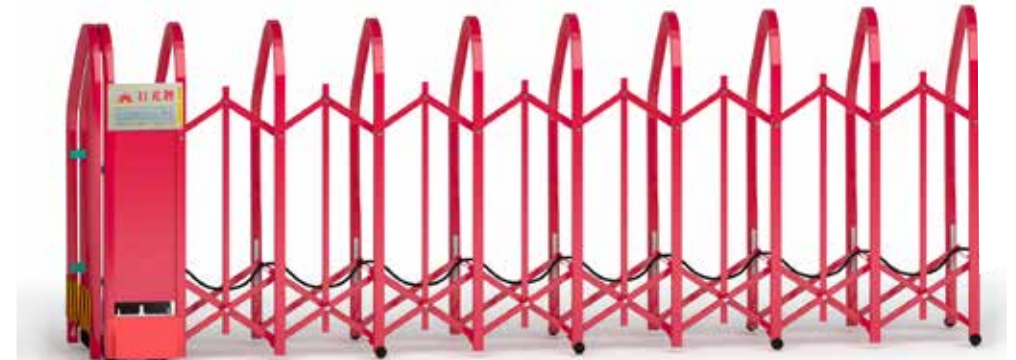
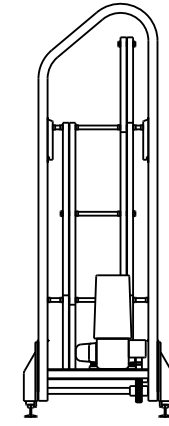
Features

This section lists the differentiating features of our Collapsible Gate products.

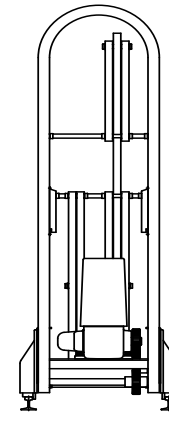
Top Tube Bar Shape

Top Tube Bar Shape refers only to the upper portion shape of the tubes.

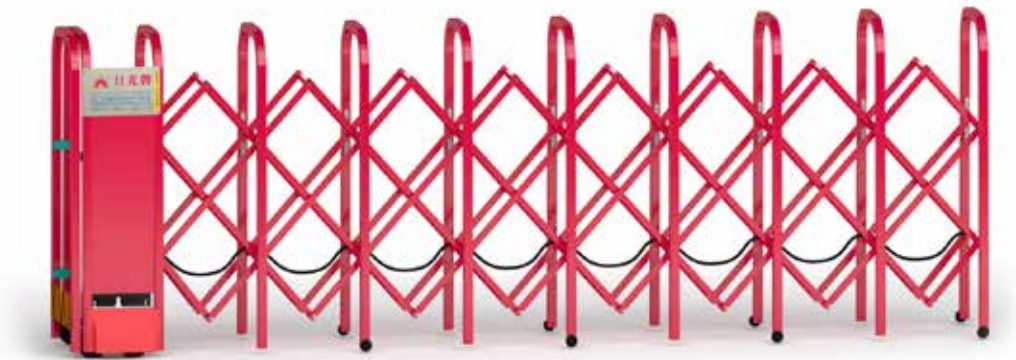
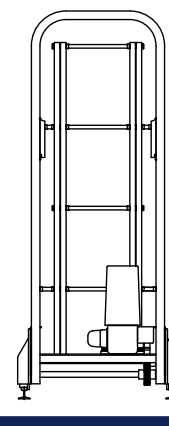
A - Slant Top



B - Round Top



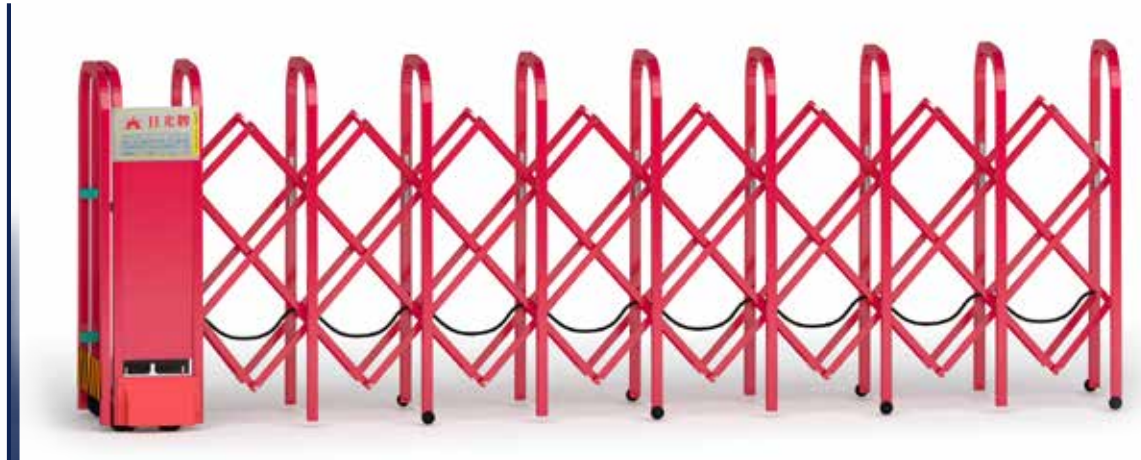
C - Square Top



Covers

Covers refer to the metal sheets added to the front of the gate allowing for more privacy and security. Stainless Steel tubes come with Stainless Steel covers. Aluminum Alloy tubes come with Iron covers. Iron tubes come with Iron covers. Please see Appendix II on cover heights and thicknesses.

A - No Cover



B - Half Cover



C - Full cover



Intersecting Tube Bar Structures

Intersecting tube bars are the tubal structures that connect the vertical tubes together - they are designed to expand and retract as the gate opens and closes.

4A



2V



3V



3X



4X



Materials

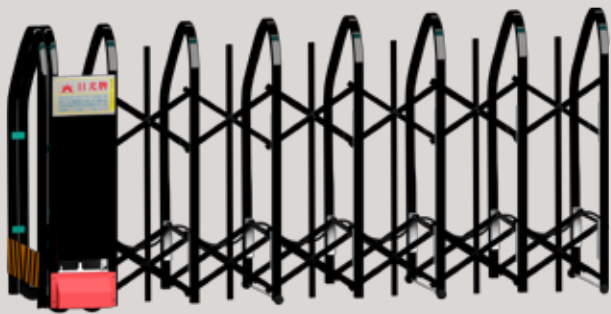
- Iron (Powder Coated)
- Aluminum Alloy (Powder Coated)
- Stainless Steel #304 (Polished, Electrolytic Polish, or Powder Coated)



Colors



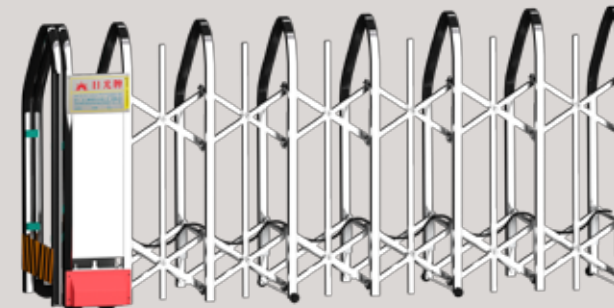
Black



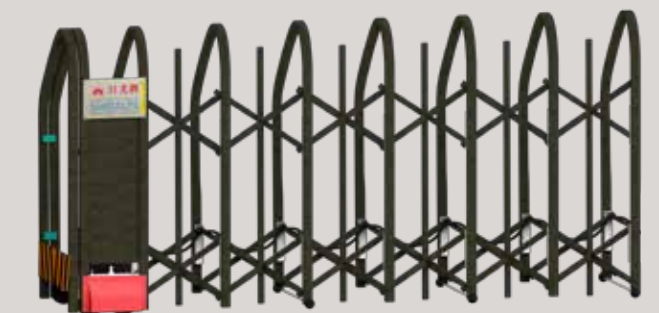
Ivory White



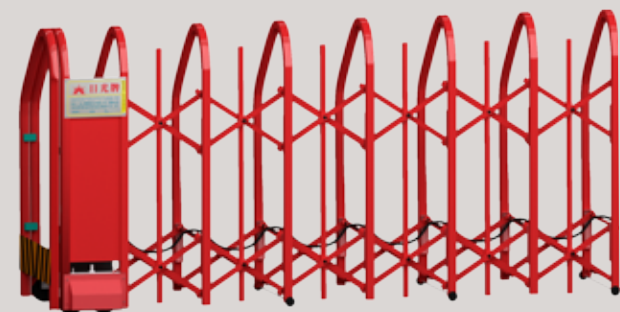
Stainless Steel



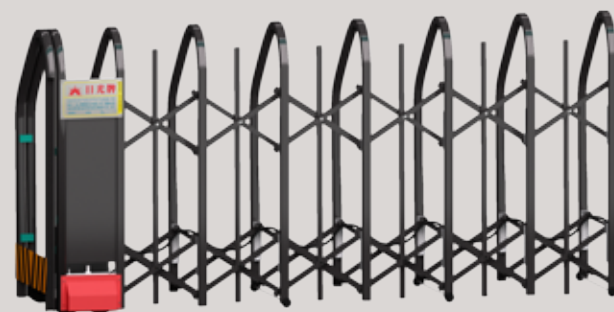
Bronze colored hammer paint-baking



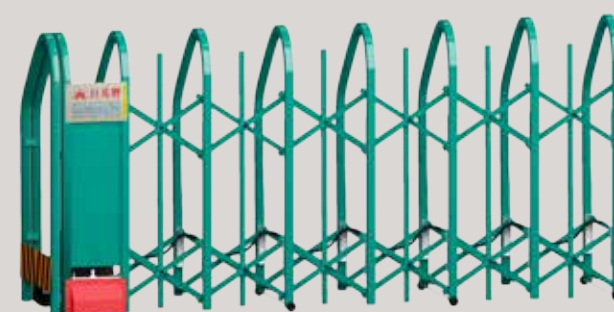
Red



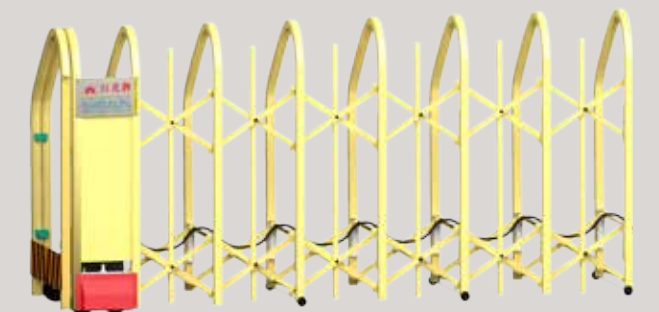
Dark Gray



Emerald Green



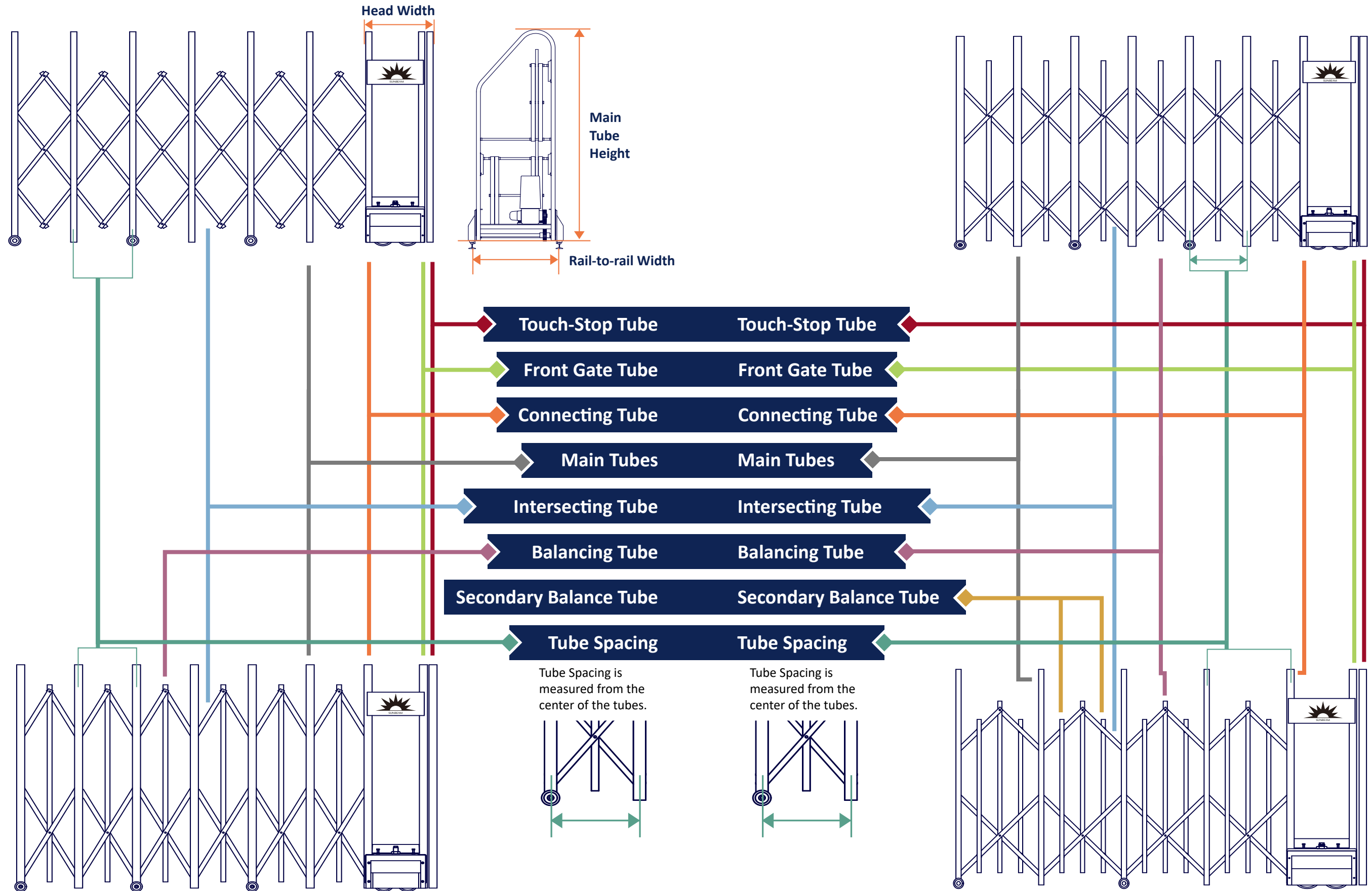
Pale Yellow



Colors may vary slightly with batch

Tube Terminology

Here we establish the terminology to differentiate the tubes for subsequent descriptions.



Gate Installation Methods

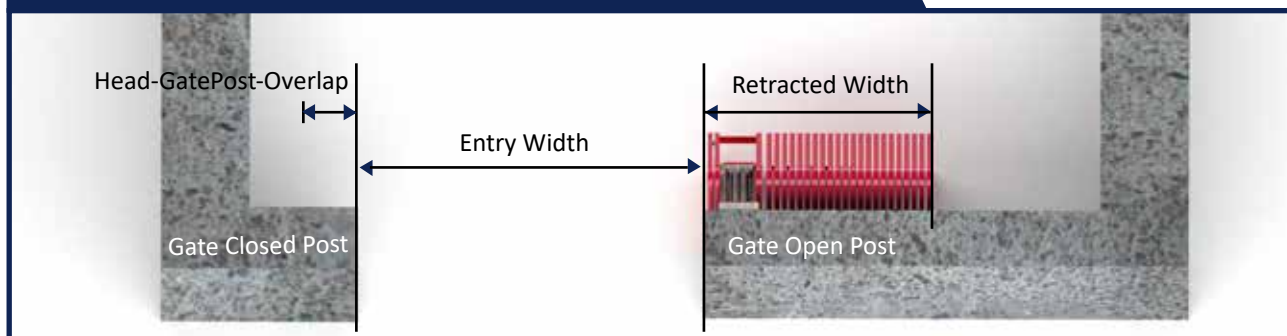
Gate Installation refers to the 3 methods of installing a gate between an entryway.

Method A - Between Wall Entry (partial open)



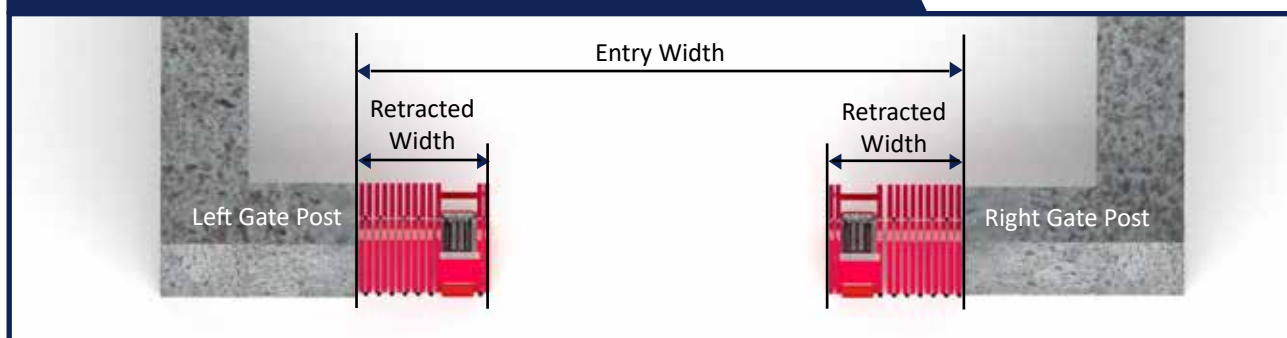
In this method, the Gate is placed inside the entryway. When the gate is closed, it will make a complete enclosure with the surrounding walls. When the Gate is fully retracted, the collapsed gate will still take up some space within the entry opening (partial open).

Method B - Behind Wall Entry (full open)



With this method, the gate is placed behind the wall within the courtyard. The fully retracted gate will sit completely behind the enclosure, exposing the entire length of the entryway opening (full open).

Method C - Double Gate (between wall entry)



The Double Gate method employs two Gate Systems. This is advantageous with wider entryways because it will take less time for two gates to retract from both directions rather than one long gate retracting in one direction.



Determining the total number of tubes

SUNBEAM Collapsible Gates are ordered according to the dimensions of your “entryway” and the Installation Method, both of which determine the number of tubes you will need. You can estimate your total number of tubes with our tables in Appendix I or you can contact your SUNBEAM representative for help.

According to the table below, if your entryway is 6.2 meters wide and you are using the Between-wall-entry installation method, you will need a total number of 19 tubes.

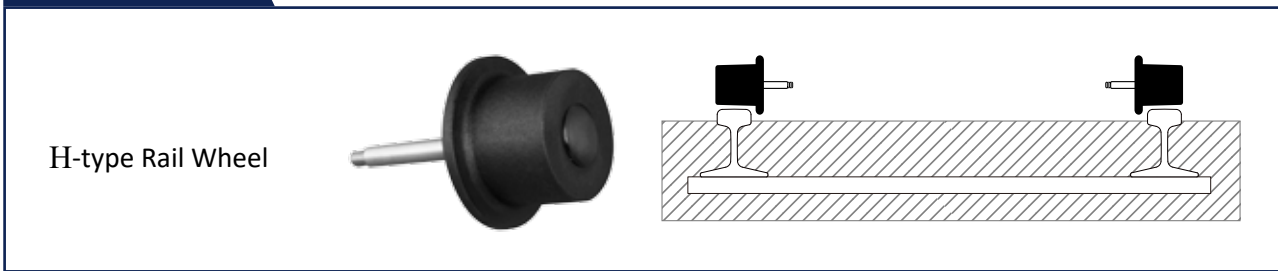
Below is an excerpt from a larger table in Appendix I - Table A.

Total number of tubes required including Main Gate Tubes, Touch-Stop Tube and Motor	Required entry width using Between-wall-entry installation.	Total length of gate when fully retracted (collapsed) - includes motor section and Touch-Stop Tubes	Required entry width (including overlap) using Behind-wall-entry installation
19	6.20	1.08	4.79
20	6.56	1.12	5.11
21	6.92	1.16	5.43
22	7.28	1.20	5.75
23	7.64	1.24	6.07

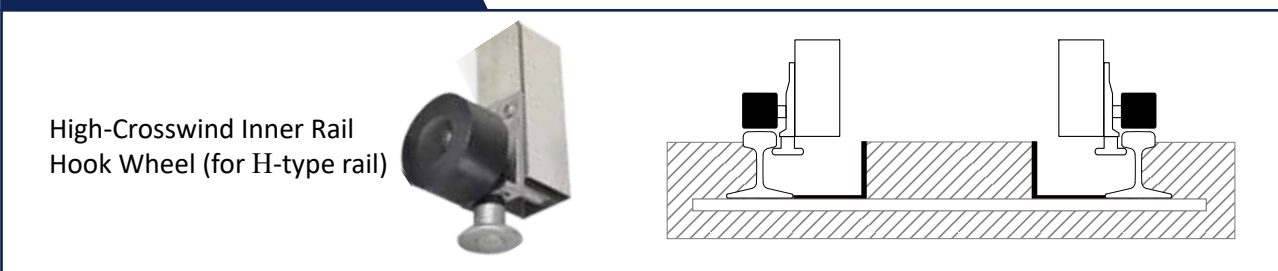
Rail Construction Methods

There are four types of wheel-to-rail systems for SUNBEAM Collapsible Gates.

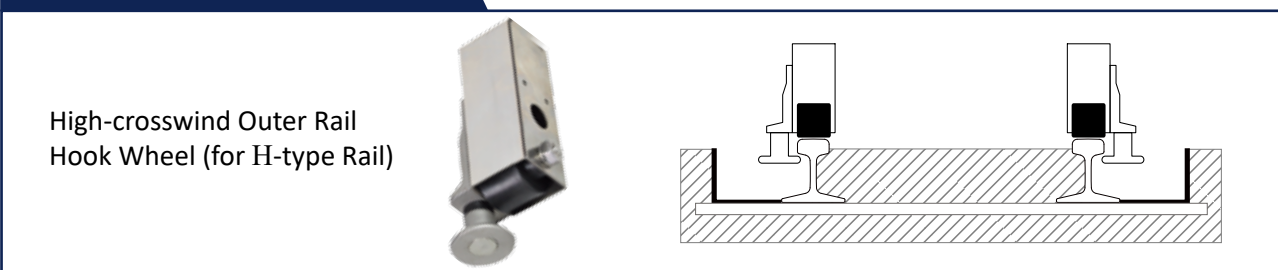
H-type Rail



Rail Inner-Hook Wheel



Rail Outer-Hook Wheel



Angle-type Rail



Ordering Golden Mountain Products

- ◆ Select Top Tube Bar shape
- ◆ Select Intersecting Tube Bar structure
- ◆ Select material and color
- ◆ Select cover (half or full) or no cover
- ◆ Determine installation method
- ◆ Determine the number of tubes from Appendix I Table or contact your SUNBEAM representative for help
- ◆ Determine Rail Construction method
- ◆ Browse our Standard Models to see if our models fit your specifications. These models include tube cross-section dimensions, gate heights and rail-to-rail widths.

Call your friendly SUNBEAM Representative

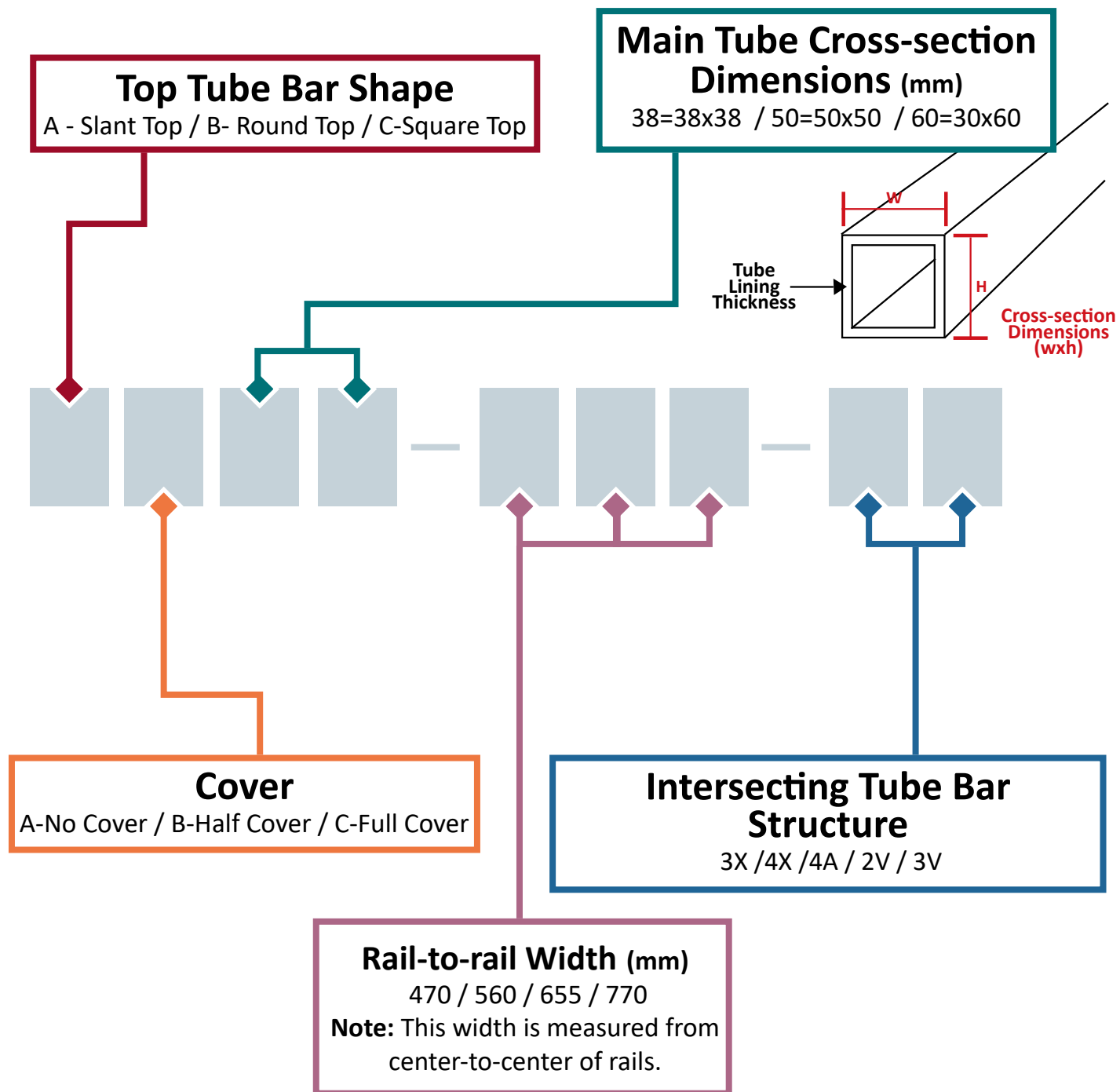


Standard Models

To make ordering easier, we have a list of standard models to choose from. They are ordered by Top Tube shape, Cover Type and Intersecting Tube Structure. Other options such as Tube Cross-section Dim. are listed in accompanying tables. Customized orders are welcome but some configurations may not be possible due to structural and dimensional challenges.

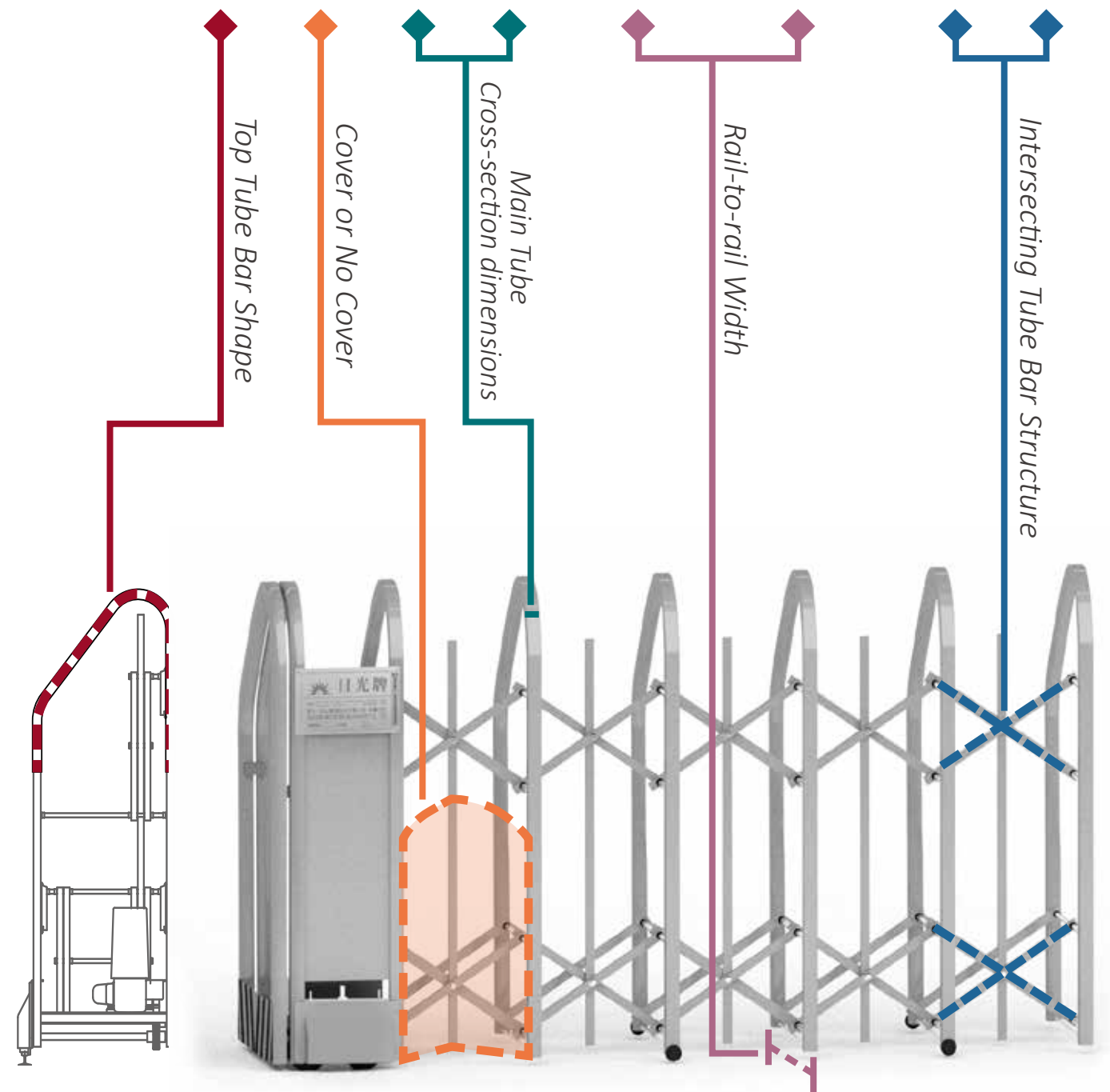


Standard Model Naming Convention



Example

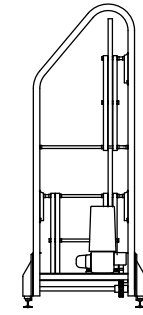
AA38 - 770 - 3X



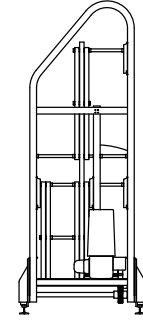


Slant Top Models

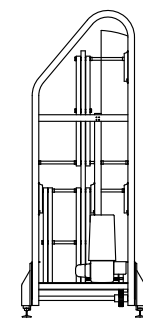
AA - 38 560
50 - 655 - 3X
60 770



AB - 38 560
50 - 655 - 3X
60 770



AC - 38 560
50 - 655 - 3X
60 770



Rail-to-rail (mm)	560 / 655 / 770 (type 50-560-3x does not apply to table below)			
Tube Bar Structure	3X			
Main Tube Cross-section Dim. (mm)	38 x 38	50 x 50	30 x 60	
Intersecting Tube Cross-section Dim. (mm)	25 x 25	30 x 30	30 x 30	
Balancing Tube Cross-section Dim. (mm)	25 x 25	30 x 30	20 x 40	
Height (cm)	132	152	172	192
Tube Spacing Range (cm)	36/40	36/40/45	36/40/45	36/40/45

Note: The thickness lining the tubes will vary slightly depending on the material used - Please see Appendix II.



Rail-to-rail (mm)	560 / 655 / 770 (type 50-560-4A does not apply to table below)			
Tube Bar Structure	4A			
Main Tube Cross-section Dim. (mm)	38 x 38	50 x 50	30 x 60	
Intersecting Tube Cross-section Dim. (mm)	25 x 25	30 x 30	30 x 30	
Height (cm)	132	152	172	192
Tube Spacing Range (cm)	36/40	36/40/45	36/40/45	36/40/45

Note: The thickness lining the tubes will vary slightly depending on the material used - Please see Appendix II.



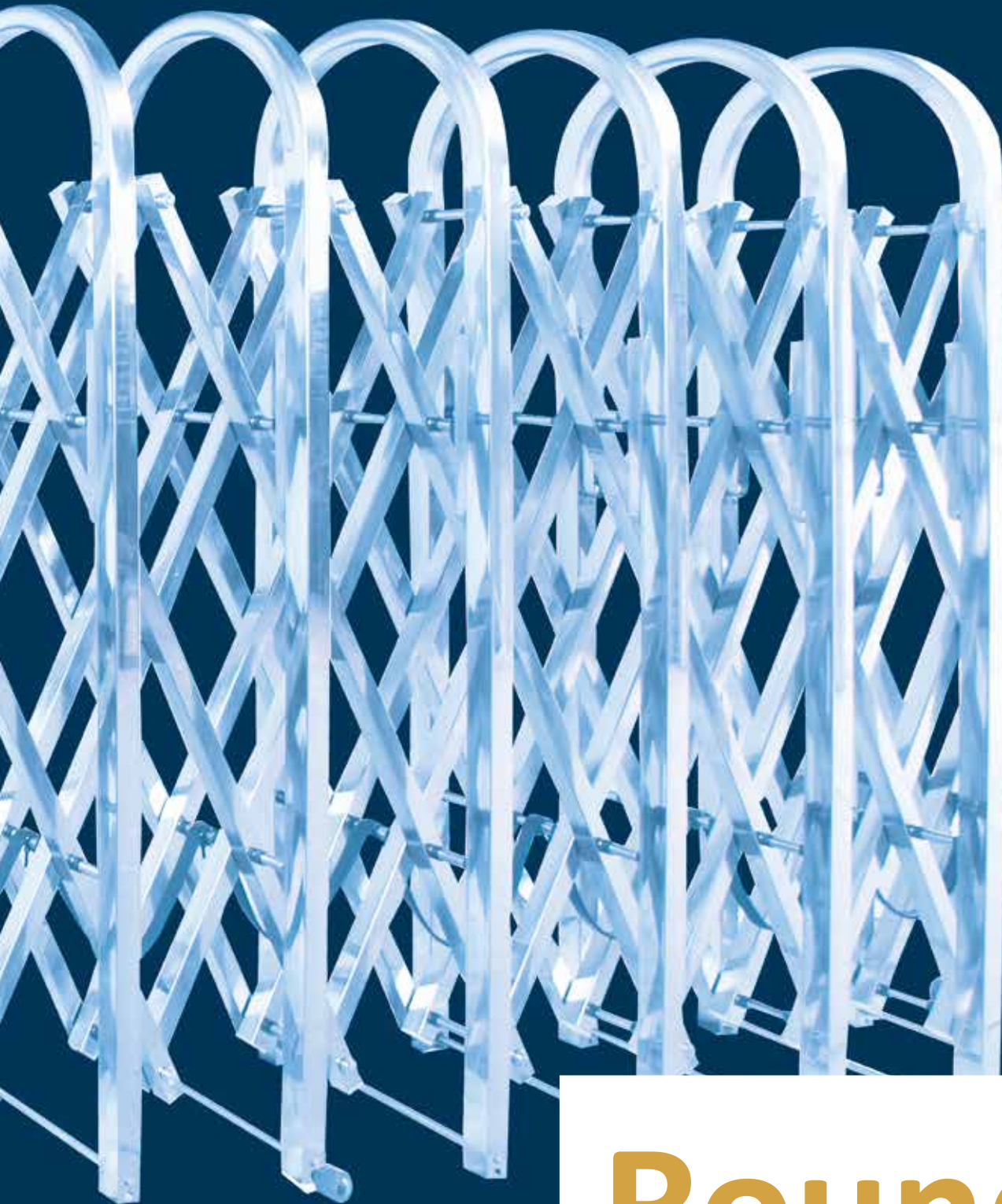
Rail-to-rail (mm)	560 / 655 / 770			
Tube Bar Structure	2V			
Main Tube Cross-section Dim. (mm)	38 x 38	50 x 50	30 x 60	
Intersecting Tube Cross-section Dim. (mm)	25 x 25	30 x 30	30 x 30	
Balancing Tube Cross-section Dim. (mm)	25 x 25	30 x 30	20 x 40	
Height (cm)	132	152	172	192
Tube Spacing Range (cm)	36/40	36/40/45	36/40/45	36/40/45

Note: The thickness lining the tubes will vary slightly depending on the material used - Please see Appendix II.



Rail-to-rail (mm)	560 / 655 / 770			
Tube Bar Structure	3V			
Main Tube Cross-section Dim. (mm)	38 x 38	50 x 50	30 x 60	
Intersecting Tube Cross-section Dim. (mm)	25 x 25	30 x 30	30 x 30	
Balancing Tube Cross-section Dim. (mm)	25 x 25	30 x 30	20 x 40	
Secondary Balancing Tube Cross-section Dim. (mm)	25 x 25	30 x 30	20 x 40	
Height (cm)	132	152	172	192
Tube Spacing Range (cm)	53	60	60/75	60/90

Note: The thickness lining the tubes will vary slightly depending on the material used - Please see Appendix II.



Round Top Models



BA38 - 470 - 4A



Rail-to-rail (mm)	470			
Tube Bar Structure	4A			
Main Tube Cross-section Dim. (mm)	38 x 38			
Intersecting Tube Cross-section Dim. (mm)	25 x 25			
Height (cm)	132	152	172	192
Tube Spacing Range (cm)	36/40	36/40/45	36/40/45	36/45/45

Note: The thickness lining the tubes will vary slightly depending on the material used - Please see Appendix II

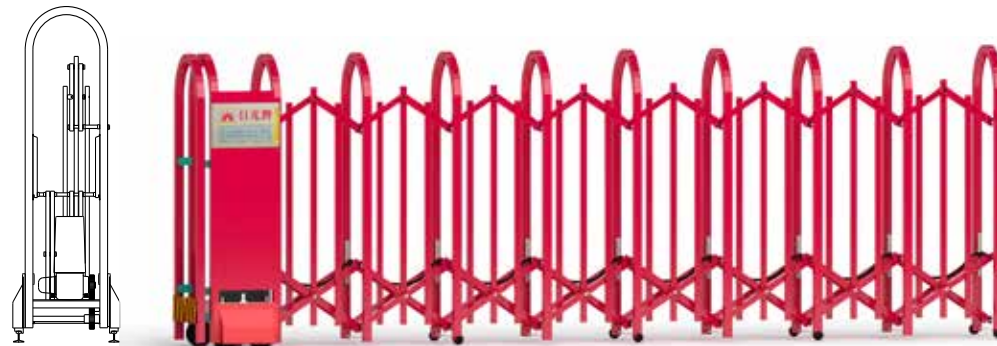
BA38 - 470 - 2V



Rail-to-rail (mm)	470			
Tube Bar Structure	2V			
Main Tube Cross-section Dim. (mm)	38 x 38			
Intersecting Tube Cross-section Dim. (mm)	25 x 25			
Balancing Tube Cross-section Dim. (mm)	25 x 25			
Height (cm)	132	152	172	192
Tube Spacing Range (cm)	36/40	36/40/45	36/40/45	36/45/50

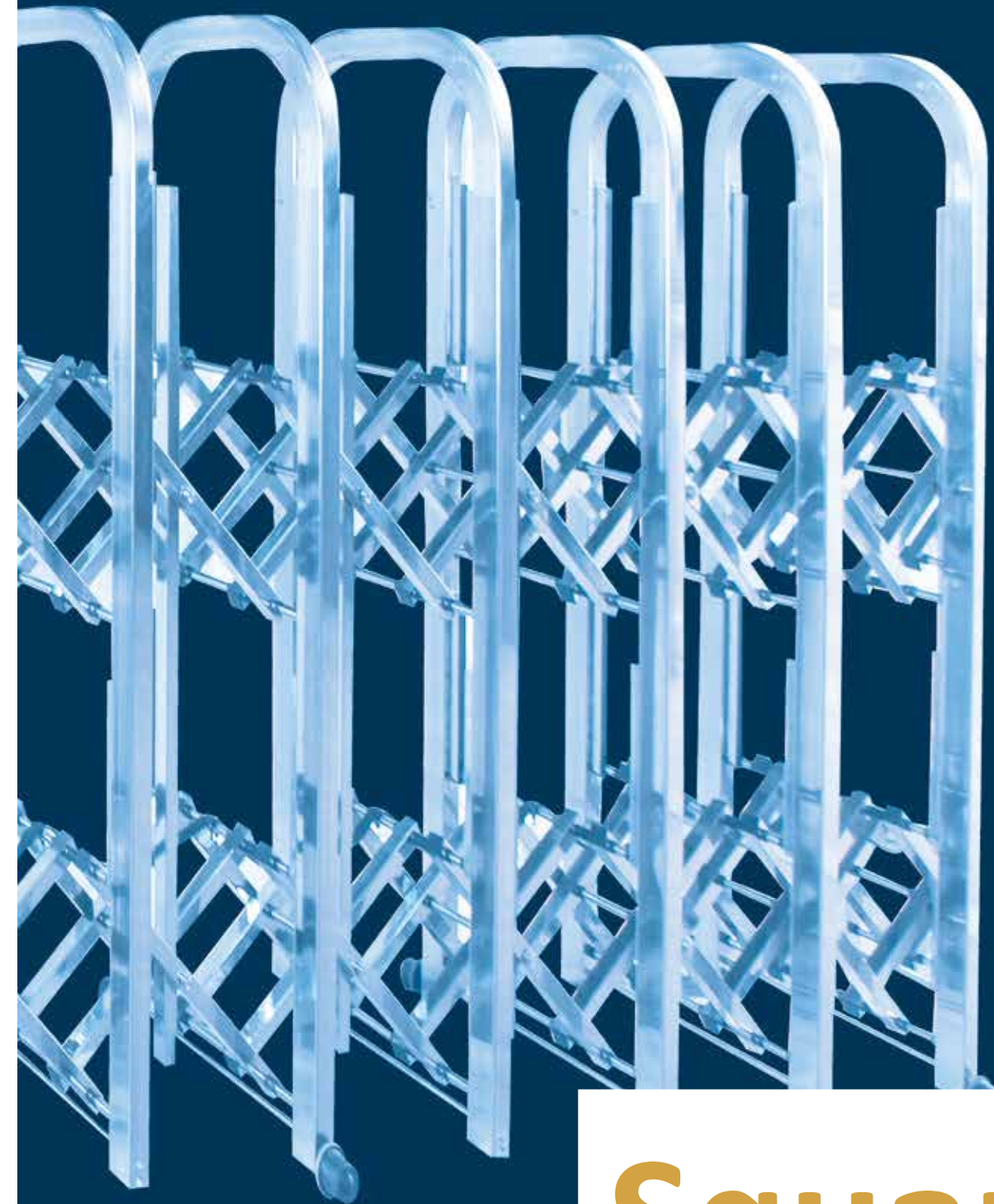
Note: The thickness lining the tubes will vary slightly depending on the material used - Please see Appendix II

BA38 - 470 - 3V



Rail-to-rail (mm)	470			
Tube Bar Structure	3V			
Main Tube Cross-section Dim. (mm)	38 x 38			
Intersecting Tube Cross-section Dim. (mm)	25 x 25			
Balancing Tube Cross-section Dim. (mm)	25 x 25			
Secondary Balancing Tube Cross-section Dim. (mm)	25 x 25			
Height (cm)	132	152	172	192
Tube Spacing Range (cm)	53	60	60/75	60/90

Note: The thickness lining the tubes will vary slightly depending on the material used - Please see Appendix II



Square Top Models



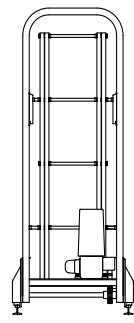
Rail-to-rail (mm)	560 / 655 / 770 (type 50-560-3X does not apply to table below)			
Tube Bar Structure	3X			
Main Tube Cross-section Dim. (mm)	38 x 38	50 x 50	30 x 60	
Intersecting Tube Cross-section Dim. (mm)	25 x 25	30 x 30	30 x 30	
Balancing Tube Cross-section Dim. (mm)	25 x 25	30 x 30	20 x 40	
Height (cm)	132	152	172	192
Tube Spacing Range (cm)	36/40	36/40/45	36/40/45	36/40/45

Rail-to-rail (mm)	560 / 655 / 770 (type 50-560-4X does not apply to table below)			
Tube Bar Structure	4X			
Main Tube Cross-section Dim. (mm)	38 x 38	50 x 50	30 x 60	
Intersecting Tube Cross-section Dim. (mm)	25 x 25	30 x 30	30 x 30	
Balancing Tube Cross-section Dim. (mm)	25 x 25	30 x 30	20 x 40	
Height (cm)	132	152	172	192
Tube Spacing Range (cm)	36/40	36/40/45	36/40/45	36/40/45

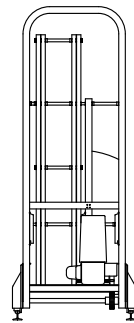
Note: The thickness lining the tubes will vary slightly depending on the material used - Please see Appendix II

Note: The thickness lining the tubes will vary slightly depending on the material used - Please see Appendix II

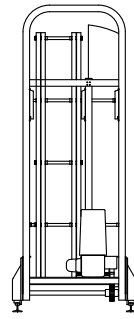
CA - 38 560
50 - 655 - 4A
60 770



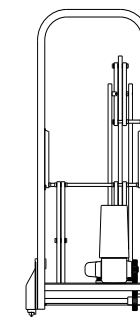
CB - 38 560
50 - 655 - 4A
60 770



CC - 38 560
50 - 655 - 4A
60 770



CA - 38 560
50 - 655 - 3V
60 770



Rail-to-rail (mm)	560 / 655 / 770 (type 50-560-4A does not apply to table below)			
Tube Bar Structure	4A			
Main Tube Cross-section Dim. (mm)	38 x 38	50 x 50	30 x 60	
Intersecting Tube Cross-section Dim. (mm)	25 x 25	30 x 30	30 x 30	
Height (cm)	132	152	172	192
Tube Spacing Range (cm)	36/40	36/40/45	36/40/45	36/40/45

Note: The thickness lining the tubes will vary slightly depending on the material used - Please see Appendix II

Rail-to-rail (mm)	560 / 655 / 770			
Tube Bar Structure	3V			
Main Tube Cross-section Dim. (mm)	38 x 38	50 x 50	30 x 60	
Intersecting Tube Cross-section Dim. (mm)	25 x 25	30 x 30	30 x 30	
Balancing Tube Cross-section Dim. (mm)	25 x 25	30 x 30	20 x 40	
Secondary Balancing Tube Cross-section Dim. (mm)	25 x 25	30 x 30	20 x 40	
Height (cm)	132	152	172	192
Tube Spacing Range (cm)	53	60	60/75	60/90

Note: The thickness lining the tubes will vary slightly depending on the material used - Please see Appendix II

Appendix I - Calculating the number of tubes to order

These Tables help you to calculate the approximate number of tubes according to the size of your entryway and the method of gate installation.

Table A - Main Tube Cross-section Dimensions 38x38mm, Intersecting Tube Cross-section Dim. 25x25mm, Intersecting Tube Structure 4A, No Cover, Tube Spacing 45 cm

Total number of tubes required including Main Gate Tubes, Touch-Stop Tube and Motor	Required entry width using Between-wall-entry installation. (m)	Total length of gate when fully retracted (collapsed) - includes motor section and Touch-Stop Tubes (m)	Required entry width (including overlap) using Behind-wall-entry installation (m)
9	3.14	0.68	2.13
10	3.59	0.72	2.54
11	4.04	0.76	2.95
12	4.49	0.80	3.36
13	4.94	0.84	3.77
14	5.39	0.88	4.18
15	5.84	0.92	4.59
16	6.29	0.96	5.00
17	6.74	1.00	5.41
18	7.19	1.04	5.82
19	7.64	1.08	6.23
20	8.09	1.12	6.64
21	8.54	1.16	7.05
22	8.99	1.20	7.46
23	9.44	1.24	7.87
24	9.89	1.28	8.28
25	10.34	1.32	8.69
26	10.79	1.36	9.10
27	11.24	1.40	9.51
28	11.69	1.44	9.92
29	12.14	1.48	10.33
30	12.59	1.52	10.74
31	13.04	1.56	11.15
32	13.49	1.60	11.56
33	13.94	1.64	11.97
34	14.39	1.68	12.38
35	14.84	1.72	12.79
36	15.29	1.76	13.20
37	15.74	1.80	13.61
38	16.19	1.84	14.02
39	16.64	1.88	14.43
40	17.09	1.92	14.84
41	17.54	1.96	15.25
42	17.99	2.00	15.66
43	18.44	2.04	16.07
44	18.89	2.08	16.48
45	19.34	2.12	16.89
46	19.79	2.16	17.30
47	20.24	2.20	17.71
48	20.69	2.24	18.12
49	21.14	2.28	18.53
50	21.59	2.32	18.94
51	22.04	2.36	19.35
52	22.49	2.40	19.76
53	22.94	2.44	20.17
54	23.39	2.48	20.58
55	23.84	2.52	20.99

You can extend the table line by line - add 1 to col. 1, add 0.45 to col. 2, add 0.04 to col. 3

Table B - Main Tube Cross-section Dimensions 38x38mm, Intersecting Tube Cross-section Dim. 25x25mm, Balancing tube 25x25mm, Intersecting Tube Structure X/V, No Cover, Tube Spacing 45 cm

Total number of tubes required including Main Gate Tubes, Touch-Stop Tube and Motor	Required entry width using Between-wall-entry installation. (m)	Total length of gate when fully retracted (collapsed) - includes motor section and Touch-Stop Tubes (m)	Required entry width (including overlap) using Behind-wall-entry installation (m)
9	3.14	0.73	2.08
10	3.59	0.78	2.48
11	4.04	0.82	2.89
12	4.49	0.87	3.29
13	4.94	0.92	3.69
14	5.39	0.97	4.09
15	5.84	1.02	4.49
16	6.29	1.06	4.90
17	6.74	1.11	5.30
18	7.19	1.16	5.70
19	7.64	1.21	6.10
20	8.09	1.26	6.50
21	8.54	1.30	6.91
22	8.99	1.35	7.31
23	9.44	1.40	7.71
24	9.89	1.45	8.11
25	10.34	1.50	8.51
26	10.79	1.54	8.92
27	11.24	1.59	9.32
28	11.69	1.64	9.72
29	12.14	1.69	10.12
30	12.59	1.74	10.52
31	13.04	1.78	10.93
32	13.49	1.83	11.33
33	13.94	1.88	11.73
34	14.39	1.93	12.13
35	14.84	1.98	12.53
36	15.29	2.02	12.94
37	15.74	2.07	13.34
38	16.19	2.12	13.74
39	16.64	2.17	14.14
40	17.09	2.22	14.54
41	17.54	2.26	14.95
42	17.99	2.31	15.35
43	18.44	2.36	15.75
44	18.89	2.41	16.15
45	19.34	2.46	16.55
46	19.79	2.50	16.96
47	20.24	2.55	17.36
48	20.69	2.60	17.76
49	21.14	2.65	18.16
50	21.59	2.70	18.56
51	22.04	2.74	18.97
52	22.49	2.79	19.37
53	22.94	2.84	19.77
54	23.39	2.89	20.17
55	23.84	2.94	20.57

You can extend the table line by line - add 1 to col. 1, add 0.45 to col. 2, add 0.048 to col. 3.

Table C - Main Tube Cross-section Dimensions 38x38mm, Intersecting Tube Cross-section Dim. 25x25mm, Balancing tube 25x25mm, Intersecting Tube Structure **4A/2V/3V/3X/4X**, Half Cover/Full cover, Tube Spacing 45 cm

Total number of tubes required including Main Gate Tubes, Touch-Stop Tube and Motor	Required entry width using Between-wall-entry installation. (m)	Total length of gate when fully retracted (collapsed) - includes motor section and Touch-Stop Tubes (m)	Required entry width (including overlap) using Behind-wall-entry installation (m)
9	3.14	0.76	2.05
10	3.59	0.82	2.44
11	4.04	0.87	2.84
12	4.49	0.93	3.23
13	4.94	0.98	3.63
14	5.39	1.03	4.03
15	5.84	1.09	4.42
16	6.29	1.14	4.82
17	6.74	1.20	5.21
18	7.19	1.25	5.61
19	7.64	1.30	6.01
20	8.09	1.36	6.40
21	8.54	1.41	6.80
22	8.99	1.47	7.19
23	9.44	1.52	7.59
24	9.89	1.57	7.99
25	10.34	1.63	8.38
26	10.79	1.68	8.78
27	11.24	1.74	9.17
28	11.69	1.79	9.57
29	12.14	1.84	9.97
30	12.59	1.90	10.36
31	13.04	1.95	10.76
32	13.49	2.01	11.15
33	13.94	2.06	11.55
34	14.39	2.11	11.95
35	14.84	2.17	12.34
36	15.29	2.22	12.74
37	15.74	2.28	13.13
38	16.19	2.33	13.53
39	16.64	2.38	13.93
40	17.09	2.44	14.32
41	17.54	2.49	14.72
42	17.99	2.55	15.11
43	18.44	2.60	15.51
44	18.89	2.65	15.91
45	19.34	2.71	16.30
46	19.79	2.76	16.70
47	20.24	2.82	17.09
48	20.69	2.87	17.49
49	21.14	2.92	17.89
50	21.59	2.98	18.28
51	22.04	3.03	18.68
52	22.49	3.09	19.07
53	22.94	3.14	19.47
54	23.39	3.19	19.87
55	23.84	3.25	20.26

You can extend the table line by line - add 1 to col. 1, add 0.45 to col. 2, add 0.054 to col. 3.

Table D - Main Tube Cross-section Dimensions 30x60mm, Intersecting Tube Cross-section Dim. 30x30mm, Balancing tube 20x40mm, Intersecting Tube Structure **4A/2V/3V/3X/4X**, No cover, Tube Spacing 45 cm

Total number of tubes required including Main Gate Tubes, Touch-Stop Tube and Motor	Required entry width using Between-wall-entry installation. (m)	Total length of gate when fully retracted (collapsed) - includes motor section and Touch-Stop Tubes (m)	Required entry width (including overlap) using Behind-wall-entry installation (m)
9	3.18	0.85	1.97
10	3.63	0.91	2.36
11	4.08	0.98	2.74
12	4.53	1.04	3.13
13	4.98	1.10	3.52
14	5.43	1.16	3.91
15	5.88	1.22	4.30
16	6.33	1.29	4.68
17	6.78	1.35	5.07
18	7.23	1.41	5.46
19	7.68	1.47	5.85
20	8.13	1.53	6.24
21	8.58	1.60	6.62
22	9.03	1.66	7.01
23	9.48	1.72	7.40
24	9.93	1.78	7.79
25	10.38	1.84	8.18
26	10.83	1.91	8.56
27	11.28	1.97	8.95
28	11.73	2.03	9.34
29	12.18	2.09	9.73
30	12.63	2.15	10.12
31	13.08	2.22	10.50
32	13.53	2.28	10.89
33	13.98	2.34	11.28
34	14.43	2.40	11.67
35	14.88	2.46	12.06
36	15.33	2.53	12.44
37	15.78	2.59	12.83
38	16.23	2.65	13.22
39	16.68	2.71	13.61
40	17.13	2.77	14.00
41	17.58	2.84	14.38
42	18.03	2.90	14.77
43	18.48	2.96	15.16
44	18.93	3.02	15.55
45	19.38	3.08	15.94
46	19.83	3.15	16.32
47	20.28	3.21	16.71
48	20.73	3.27	17.10
49	21.18	3.33	17.49
50	21.63	3.39	17.88
51	22.08	3.46	18.26
52	22.53	3.52	18.65
53	22.98	3.58	19.04
54	23.43	3.64	19.43
55	23.88	3.70	19.82

You can extend the table line by line - add 1 to col. 1, add 0.45 to col. 2, add 0.062 to col. 3.

Table E - Main Tube Cross-section Dimensions 30x60mm, Intersecting Tube Cross-section Dim. 30x30mm, Balancing tube 20x40mm, Intersecting Tube Structure **4A/2V/3V/3X/4X**, Half Cover/Full cover, Tube Spacing 45 cm

Total number of tubes required including Main Gate Tubes, Touch-Stop Tube and Motor	Required entry width using Between-wall-entry installation. (m)	Total length of gate when fully retracted (collapsed) - includes motor section and Touch-Stop Tubes (m)	Required entry width (including overlap) using Behind-wall-entry installation (m)
9	3.18	0.94	1.88
10	3.63	1.01	2.26
11	4.08	1.09	2.63
12	4.53	1.16	3.01
13	4.98	1.24	3.38
14	5.43	1.32	3.75
15	5.88	1.39	4.13
16	6.33	1.47	4.50
17	6.78	1.54	4.88
18	7.23	1.62	5.25
19	7.68	1.70	5.62
20	8.13	1.77	6.00
21	8.58	1.85	6.37
22	9.03	1.92	6.75
23	9.48	2.00	7.12
24	9.93	2.08	7.49
25	10.38	2.15	7.87
26	10.83	2.23	8.24
27	11.28	2.30	8.62
28	11.73	2.38	8.99
29	12.18	2.46	9.36
30	12.63	2.53	9.74
31	13.08	2.61	10.11
32	13.53	2.68	10.49
33	13.98	2.76	10.86
34	14.43	2.84	11.23
35	14.88	2.91	11.61
36	15.33	2.99	11.98
37	15.78	3.06	12.36
38	16.23	3.14	12.73
39	16.68	3.22	13.10
40	17.13	3.29	13.48
41	17.58	3.37	13.85
42	18.03	3.44	14.23
43	18.48	3.52	14.60
44	18.93	3.60	14.97
45	19.38	3.67	15.35
46	19.83	3.75	15.72
47	20.28	3.82	16.10
48	20.73	3.90	16.47
49	21.18	3.98	16.84
50	21.63	4.05	17.22
51	22.08	4.13	17.59
52	22.53	4.20	17.97
53	22.98	4.28	18.34
54	23.43	4.36	18.71
55	23.88	4.43	19.09

You can extend the table line by line - add 1 to col. 1, add 0.45 to col. 2, add 0.076 to col. 3.

Table F - Main Tube Cross-section Dimensions 50x50mm, Intersecting Tube Cross-section Dim. 30x30mm, Balancing tube 30x30mm, Intersecting Tube Structure **4A/3X/4X/2V/3V**, No cover, Tube Spacing 45 cm

Total number of tubes required including Main Gate Tubes, Touch-Stop Tube and Motor	Required entry width using Between-wall-entry installation. (m)	Total length of gate when fully retracted (collapsed) - includes motor section and Touch-Stop Tubes (m)	Required entry width (including overlap) using Behind-wall-entry installation (m)
9	3.16	0.77	2.04
10	3.61	0.82	2.44
11	4.06	0.88	2.83
12	4.51	0.93	3.23
13	4.96	0.98	3.63
14	5.41	1.03	4.03
15	5.86	1.08	4.43
16	6.31	1.14	4.82
17	6.76	1.19	5.22
18	7.21	1.24	5.62
19	7.66	1.29	6.02
20	8.11	1.34	6.42
21	8.56	1.40	6.81
22	9.01	1.45	7.21
23	9.46	1.50	7.61
24	9.91	1.55	8.01
25	10.36	1.60	8.41
26	10.81	1.66	8.80
27	11.26	1.71	9.20
28	11.71	1.76	9.60
29	12.16	1.81	10.00
30	12.61	1.86	10.40
31	13.06	1.92	10.79
32	13.51	1.97	11.19
33	13.96	2.02	11.59
34	14.41	2.07	11.99
35	14.86	2.12	12.39
36	15.31	2.18	12.78
37	15.76	2.23	13.18
38	16.21	2.28	13.58
39	16.66	2.33	13.98
40	17.11	2.38	14.38
41	17.56	2.44	14.77
42	18.01	2.49	15.17
43	18.46	2.54	15.57
44	18.91	2.59	15.97
45	19.36	2.64	16.37
46	19.81	2.70	16.76
47	20.26	2.75	17.16
48	20.71	2.80	17.56
49	21.16	2.85	17.96
50	21.61	2.90	18.36
51	22.06	2.96	18.75
52	22.51	3.01	19.15
53	22.96	3.06	19.55
54	23.41	3.11	19.95
55	23.86	3.16	20.35

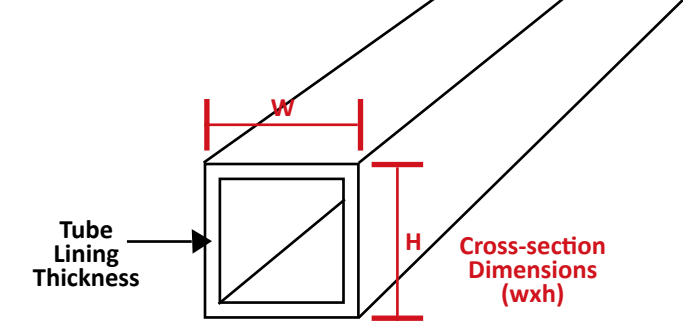
You can extend the table line by line - add 1 to col. 1, add 0.45 to col. 2, add 0.052 to col. 3.

Table G - Main Tube Cross-section Dimensions 50x50mm, Intersecting Tube Cross-section Dim. 30x30mm, Balancing tube 30x30mm, Intersecting Tube Structure 4A/2V/3V/3X/4X, Half Cover/Full cover, Tube Spacing 45 cm

Total number of tubes required including Main Gate Tubes, Touch-Stop Tube and Motor	Required entry width using Between-wall-entry installation. (m)	Total length of gate when fully retracted (collapsed) - includes motor section and Touch-Stop Tubes (m)	Required entry width (including overlap) using Behind-wall-entry installation (m)
9	3.16	0.86	1.95
10	3.61	0.92	2.34
11	4.06	0.99	2.72
12	4.51	1.05	3.11
13	4.96	1.12	3.49
14	5.41	1.19	3.87
15	5.86	1.25	4.26
16	6.31	1.32	4.64
17	6.76	1.38	5.03
18	7.21	1.45	5.41
19	7.66	1.52	5.79
20	8.11	1.58	6.18
21	8.56	1.65	6.56
22	9.01	1.71	6.95
23	9.46	1.78	7.33
24	9.91	1.85	7.71
25	10.36	1.91	8.10
26	10.81	1.98	8.48
27	11.26	2.04	8.87
28	11.71	2.11	9.25
29	12.16	2.18	9.63
30	12.61	2.24	10.02
31	13.06	2.31	10.40
32	13.51	2.37	10.79
33	13.96	2.44	11.17
34	14.41	2.51	11.55
35	14.86	2.57	11.94
36	15.31	2.64	12.32
37	15.76	2.70	12.71
38	16.21	2.77	13.09
39	16.66	2.84	13.47
40	17.11	2.90	13.86
41	17.56	2.97	14.24
42	18.01	3.03	14.63
43	18.46	3.10	15.01
44	18.91	3.17	15.39
45	19.36	3.23	15.78
46	19.81	3.30	16.16
47	20.26	3.36	16.55
48	20.71	3.43	16.93
49	21.16	3.50	17.31
50	21.61	3.56	17.70
51	22.06	3.63	18.08
52	22.51	3.69	18.47
53	22.96	3.76	18.85
54	23.41	3.83	19.23
55	23.86	3.89	19.62

You can extend the table line by line - add 1 to col. 1, add 0.45 to col. 2, add 0.066 to col. 3.

Appendix II Tube Lining Thickness



The thickness of the lining of the tube will vary depending on the type of tube, the material and the cross-section dimensions of the tube. For example, if I chose my Main Tubes to be Stainless Steel with the cross-section dimensions of 50x50 mm, the tube lining will be 1.2 mm.

	Stainless Steel		Iron		Aluminum Alloy	
	Tube Dim. (mm)	Tube Thickness (mm)	Tube Dim. (mm)	Tube Thickness (mm)	Tube Dim. (mm)	Tube Thickness (mm)
Main Tube	38x38	1.0	38x38	1.2	38x38	1.5
	50x50	1.2				
	30x60	1.2				
Intersecting Tube	25x25	0.8	25x25	1.0	25x25	1.2
	30x30	0.8				
Balancing Tube	25x25	0.8	25x25	1.0	25x25	1.2
	30x30	0.8				
	25x40	0.9				

Cover Height

Main Tube Dim.	Main Tube Height (m)	Rail-to-rail width (mm)	Full Cover Height (mm)	Half Cover Height (mm)
38x38	1.32	470/770	1090/1040	590/540
	1.52	470/770	1290/1240	690/640
	1.72	470/770	1490/1440	790/740
	1.92	470/770	1690/1640	890/840
38x38	1.32	560/655	1190/1140	590/540
	1.52	560/655	1390/1340	690/640
	1.72	560/655	1590/1540	790/740
	1.92	560/655	1790/1740	890/840
50x50	132	655/770	1090/1040	590/540
	152	655/770	1290/1240	690/640
	172	655/770	1490/1440	790/740
	192	655/770	1690/1640	890/840
60x30	132	655/770	1190/1140	590/540
	152	655/770	1390/1340	690/640
	172	655/770	1590/1540	790/740
	192	655/770	1790/1740	890/840

Cover Thickness

Covers vary in thickness depending on material. Stainless Steel covers are 0.7 mm in thickness. Iron covers are 1.0 mm in thickness. (note: there are no Aluminum Alloy covers).

Golden Mountain Collapsible Gates

One less thing to worry about



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Other reliable, long-lasting SUNBEAM Products



Intelligent, Durable Wind-Resist Roller Shutters

- Touch-stop bottom safety slat
- Strong-wind resistant wheel hooks
- Fire sensor (auto door open or close)
- Anti-jamming guide rails within guides
- Anti-friction plastic wheels between slats and guide rails
- Circuit board smart applications
- Low noise

Safe

Wind-Resist Speedy Roller Shutters **Fast**

- Durable, break-resistant slats
- Hook wheels keep shutters on tracks in strong winds
- Remote control can switch door to manual operations (from inside or outside)
- AC brake motor makes forced entry impossible
- Motor is located at the inside corner of axle housing for easy access



Roller Shutter Motors

Electro-Magnetic Brake System

- No need for Brake Coil or Commutator

Rugged



SUNBEAM

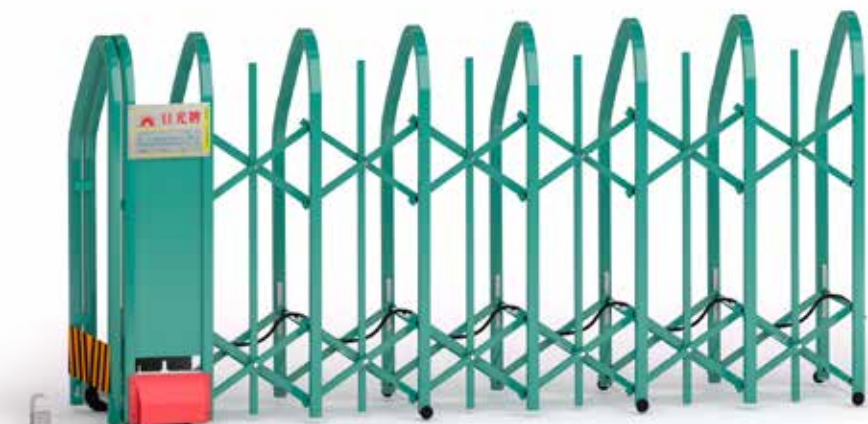
Smart Sliding Gate Operators **Smart**



- Resistance safety design
- Cell phone remote control
- Partial-open setting
- Auto-close
- Auto-stop timer if malfunction causes gate to move past end-points
- Circuit board intelligence
- Gear release (for manual operations during power outages)



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