



# SOLECHECK

SMART INDOORS  
CLEANING SUCTION MAT  
FOR SHOE SOLES

**Provide a Clean and Pleasant**  
indoor environment by blocking fine dust  
and harmful particles with Solecheck's  
Cyclone function vacuum mat!

APPLICATION VIDEO >



**AMS** ADVANCED  
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# AWARD-WINNING CLEANSING



## REVOLUTIONARY CLEANSING FOR THE WORKPLACE

Solecheck is essential for all indoor spaces exposed to **micro dust** and **harmful particles**. Enjoy a clean and pleasant indoor experience with our **Award-Winning** sole cleanser.

# SOLECHECK PROFILE



## SOLECHECK PROFILE

### Easy to Use

It's simple, just stand on the mat and watch it vacuum dust and harmful substances from shoe soles.

### Strong and Durable

Through its Polycarbonate build, the modular mat has great resistance against shock, bends, and twists.

### Easy to Maintain

The horizontal dust collector allows you to open the lid directly to replace the filters and easily discard the dust tray where the dust accumulated.

## MOTIVATING FACTORS FOR DEVELOPMENT

### Safety

About **80%** of indoor pollutants come from visitors' shoes (International Association Study).

### Disadvantages of Previous Suction Mat

The limited suction mat proved inconvenient with its difficult maintenance.

### Cyclone Function

With the addition of the Cyclone function, the HEPA Filters have a longer life span and are odorless.



# WHAT IS SOLECHECK?



## Health Conscious

It creates a clean and pleasant indoor environment by effectively vacuuming micro-dust, soil, particles, and harmful substances that enter indoor spaces through shoe soles.



**10" HD Monitor with USB**  
Easily transfer information



**Automatic Sensor**  
Operational precision



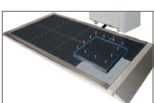
**Dust Collector**  
1. Cyclone Function (Above 10 $\mu$ m)  
2. 1<sup>st</sup> Non-woven Filter (Below 10 $\mu$ m)  
3. 2nd Round HEPA Filter (Up to 0.3 $\mu$ m)  
4. 3rd Square HEPA Filter (Up to 0.3 $\mu$ m)



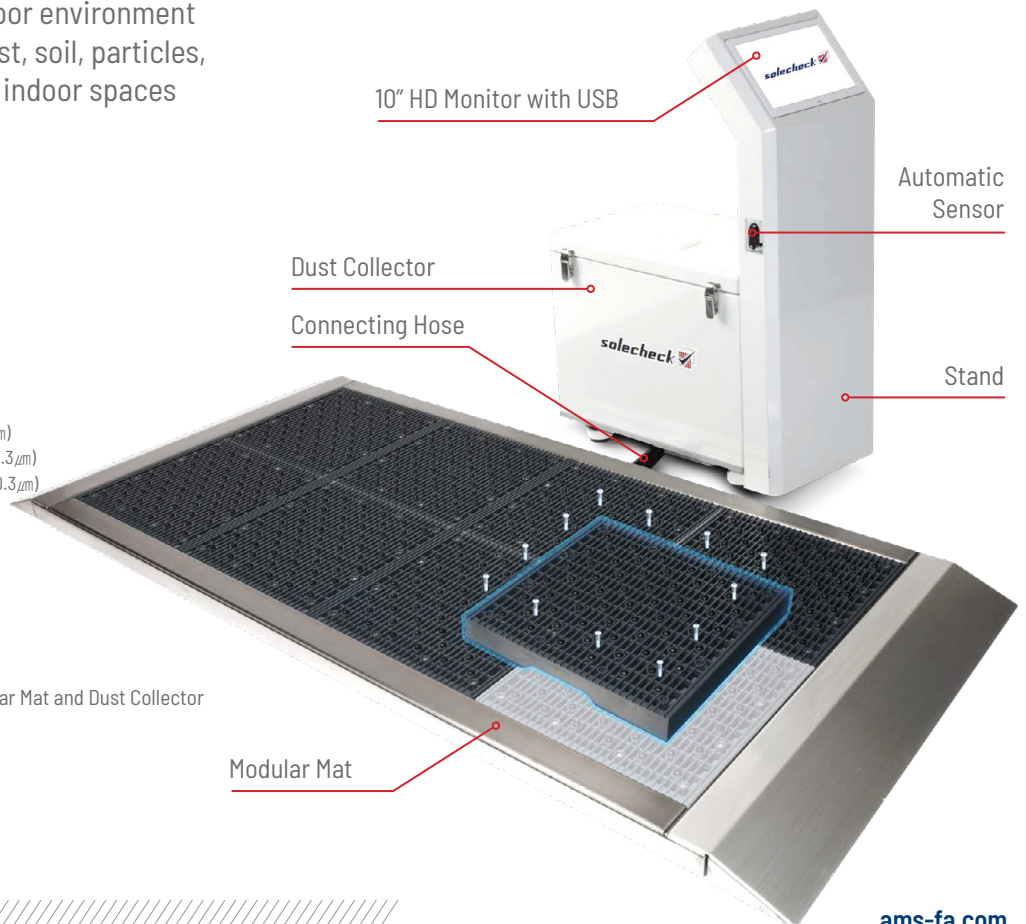
**Stand**  
1. PCB Panel  
2. Suction Power Control  
3. USB Port



**Connecting Hose**  
Connecting hose between Modular Mat and Dust Collector



**Stand**  
1. Modular Cells  
2. Moldings



10" HD Monitor with USB

Automatic Sensor

Dust Collector

Connecting Hose

Stand

Modular Mat



# ADVANTAGES

Solecheck can be installed at any entrance of any dimension to perform a quick, strong cleanse. Its Cyclone function inhibits micro dust and contaminants from polluting air quality and promotes wellness for everyone!

\*Water Clean is available.

## 01 Safe Environment for Visitors

Improve your indoor environment by welcoming visitors to a clean, contaminant-free workspace.



## 02 Improve Indoor Air Quality

In the performance tests of KTL and KIMM, a minimal amount of fine dust (about 0.01 micron) was discharged into the air.



## 03 Avoid Quality Sanctions

Quality starts with cleanliness. You can avoid quality complaints and sanctions by using our suction cleaner mat!



## 04 Cost-Saving Cleansing

Regular cleaning can cause a significant spike in costs. Solecheck's low maintenance helps companies keep the budget down.



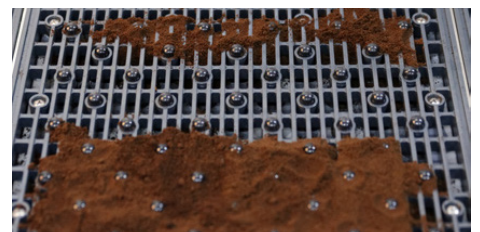
## 05 Healthy Work Place: ✓

A healthy work place is essential to any company. Promote wellness and health with Solecheck's strong performing cleansing.



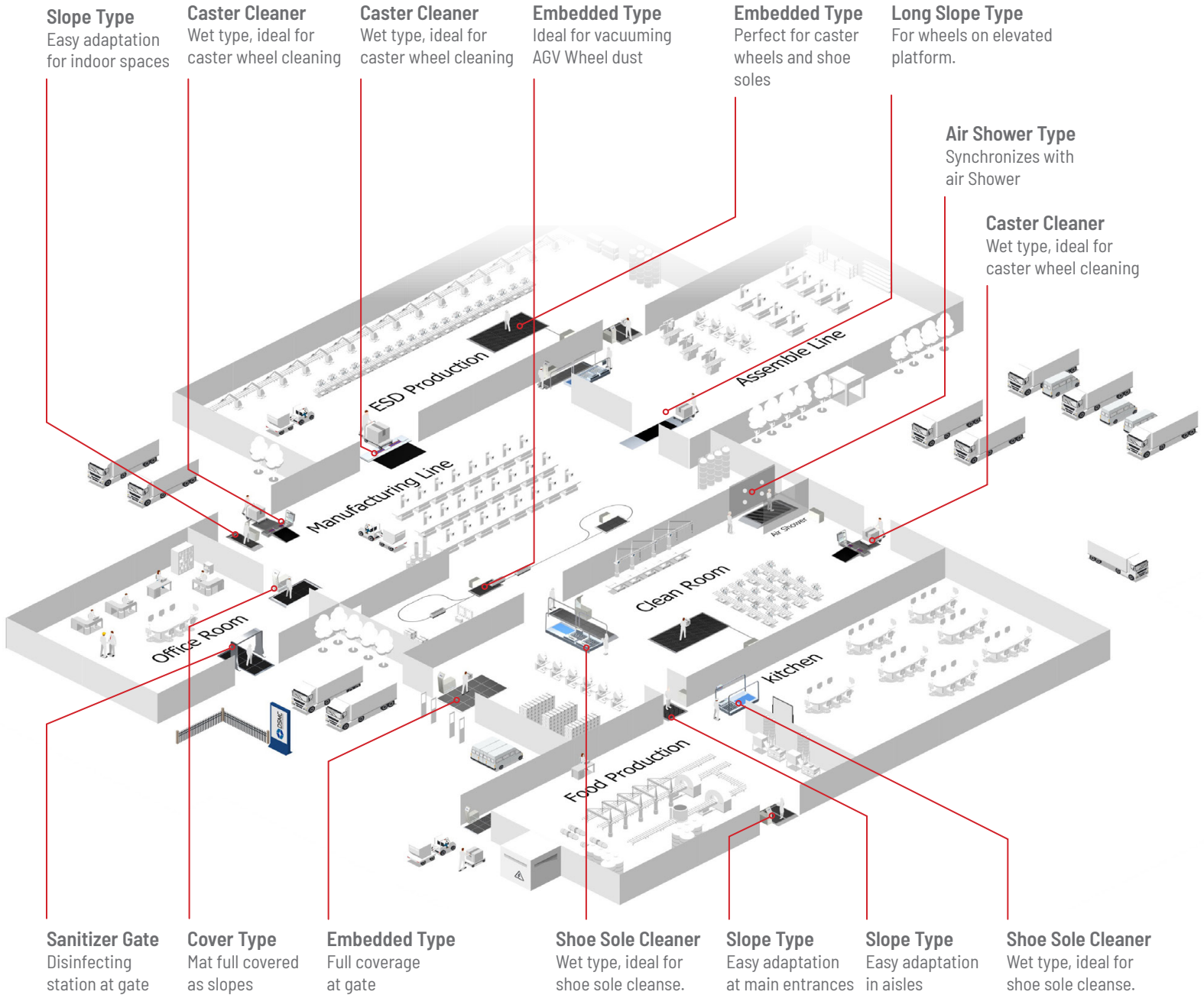
## 06 Be Safe, Be Smart

Creating a smart clean factory is easy and cost-saving! Start a SmartClean factory with Solecheck today.





# FACTORY MAP



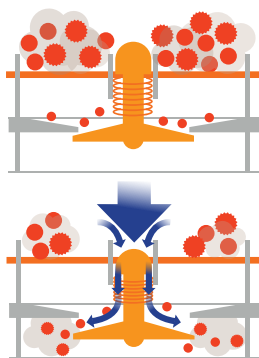


# GRATING STRUCTURE

## NON-GRATING STRUCTURE

### Previous Model

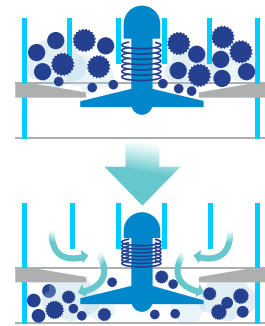
With the previous Non-Grating model, we acquired poor vacuum performance results. Leftover dust remained on the top plate and consequently, dust made its way indoors through shoe soles.



## GRATING STRUCTURE

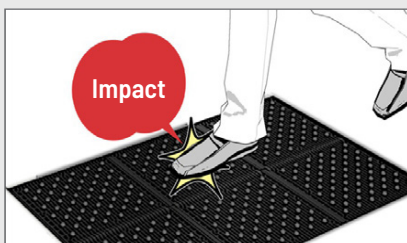
### Upgraded Model

With the development of a Grating Structure, there was a notable improvement in performance due to its high vacuum capacity. Grating walls capture large amounts of dust and traps them in the grater, effectively preventing dust from reaching the air.



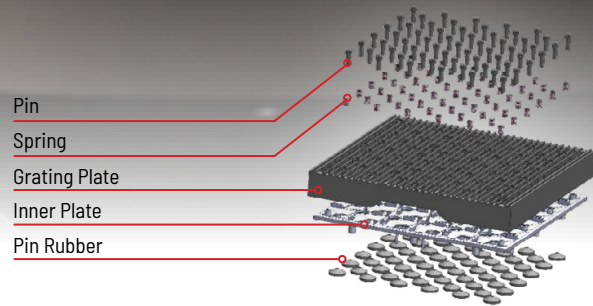
## NO DUST SCATTERING

The Grating Structure prevents dust from scattering and going airborne. All dust particles fall down entirely and are vacuumed between the gratings. Mat can be kicked, warped, or squished, we guarantee that no dust will ever reach the air!





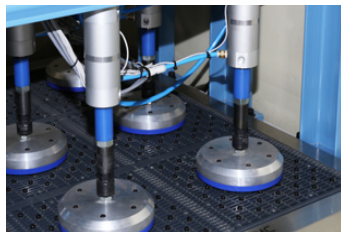
# MODULAR CELL



## Durable Suction Pin

Passed 1 million push tests with 150kg. Only **one** Suction Pin broke.

Source : KIMM  
(Korea Institute of Machinery and Materials).



## Maintenance Convenience

If a suction pin breaks, only the broken pin has to be replaced. You can always maintain strong suction power and keep the rest.



## Easy to Assemble

Anyone can easily remove and assemble the Modular Cell without technicians or experts.



## 1<sup>st</sup> of its Class

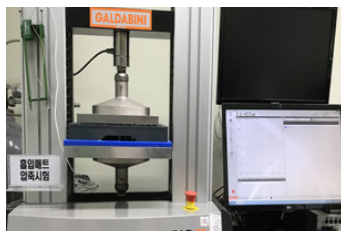
The world's first developed Modular Cell that is easy to maintain and easy to learn.



## Vertical Load Capacity

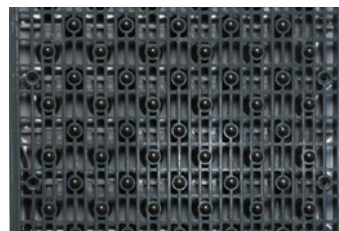
500KG load test on the modular cell. **No damage** to Modular Cell.

Source: KIMM  
(Korea Institute of Machinery and Materials).



## 61 Pins per Cell

Radical improvement in suction rate. With 61 suction pins in a Module Cell.



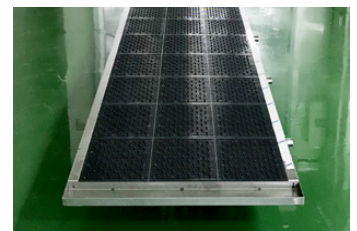
## Water Cleansing

You can clean the Modular Cell with water and reuse it. Make your indoor spaces safer.



## Avoid Quality Sanctions

You can make the Modular Mat fit any space you want and for any application.





# DUST COLLECTOR

## 104 TYPE

### Three-Step Filter

Completely block dust with Solecheck's three-step filtering process of up to  $0.3\mu\text{m}$ .

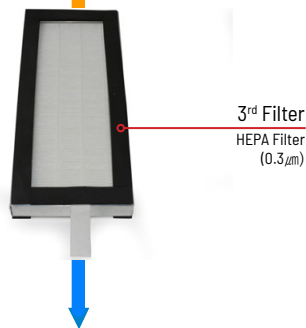
**Monitor with USB** (Optional)  
Real-time data management.



1<sup>st</sup> Filter  
Non-woven Filter  
( $10\mu\text{m}$ )



2<sup>nd</sup> Filter  
HEPA Filter  
( $0.3\mu\text{m}$ )



3<sup>rd</sup> Filter  
HEPA Filter  
( $0.3\mu\text{m}$ )

# DUST COLLECTOR

## 105 TYPE

105 Type is suitable for Modular Cells.  
From 40~ 59 cells (1 DC)  
From 60 ~ 144 cells (2 DC)



### Cyclone Function

Big particles (above  $10\mu\text{m}$ ) are collected in Dust Tray and do not enter the filters. The HEPA Filters have a longer life span and are odorless.

### Type 104

#### Suitable for Modular Cells

From 1 ~ 19 cells (1 DC)  
From 20 ~ 39 cells (2 DC)



Collects **99.37%** of fine dust, harmful particles, and molds.



- 1** Only **1 week use**. Collected at the entrance of PCV Factory.
- 2** Soil and dust collected after **294 hours**. Used indoors.
- 3** Dirt and dust collected after **3-4 months of use** at a food company's air shower room.



# PROVEN TOP QUALITY AND TECHNOLOGY

## Electric Shock Safety

After performing the 500V voltage test, it yielded a high insulation resistance of "76 GΩ"!

Electric shock rate: Low  
Electric shock safety Certified!

Source : KIMM (Korea Institute of Machinery and Materials).



## KR Patent Evaluation

Solecheck has been evaluated with "Excellent-AA" results in all areas of the patent for mechanical technology.

KR Patent Evaluation Report  
Source: Korea Intellectual Property Office, Korea Promotion Invention Association (December 29, 2019).



Solecheck	Total Evaluation (100%)	Rights (35%)	Technical (35%)	Usability (30%)
	<b>AA</b> Top 0.5%	<b>A</b> Top 11.5%	<b>BBB</b> Top 35.3%	<b>AAA</b> Top 1.0%

## Temperature Dependant Operation

Normal operation at  
Low Temperature (-7C° ~25C°),  
High Temperature (25C° ~55C°)

Source : KIMM (Korea Institute of Machinery and Materials).



## Emission of Fine Dust

Emission of fine dust from Solecheck:  
0.0175mg/m<sup>3</sup>.

Result: **Excellent**

Fine Dust Forecast Grade (Source: KTL).

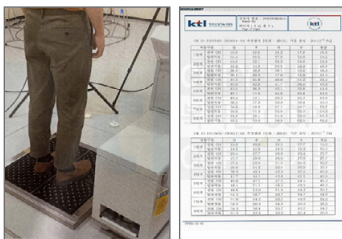
	양산	Test 1	Test 2
배기량 측정 (l/min)	142.30	143.23	141.30
공기량 (l/min)	12.43	12.49	12.37
미세먼지 (μg)	11.48	11.47	11.42
미세먼지 농도 (mg/m <sup>3</sup> )	0.0175	0.0149	0.0200

Section mg/m <sup>3</sup> . Day	Excellent	Good	Fair	Poor	Very Poor
	0-30	31-80	81-120	121-200	201-300+

## Noise

Excellent for indoor use with 62.2 dB! Compare: Vacuum Cleaner Noise 86dB

Source : KTL (Korea Testing Laboratory).



## Dust Size 0.3μm~100μm

**Micro Dust Suction Rate 99.37%**

Source: KIMM (Korea Institute of Machinery and Materials).

**Micro Dust (Size 0.3 μm to 1 μm) Significantly Reduced!**

Source: KIMM (Korea Institute of Machinery and Materials).



7. Test Results

Sample number	Content	Dust collection efficiency test (Before the test 0%)				Efficiency (%)
		Container 1	HEPA filter container 2	Container 3	Filter	
1	Before the test	240.01	270.01	412.28	256.79	123.57
	After the test	240.00	270.00	412.37	276.49	123.57
2	Before the test	258.63	298.63	426.63	242.73	126.76
	After the test	258.63	298.63	426.73	276.56	126.69
3	Before the test	251.62	281.62	404.22	260.04	126.70
	After the test	251.62	281.62	404.19	259.36	126.69

8. Test Results

Sample number	Content	Fine dust emission test			
		1	2	3	4
1-2	Air measurement	1,191,760	141,070	40,500	20,740
	Dust Collector operate	3,279,820	370,770	63,750	24,280
1-2	Dust "input" with "Dust Collector"	3,176,000	439,770	81,030	28,620

# COMPARISON VS PREVIOUS METHODS

Method	Advantage	Disadvantage
<p><b>CARPET</b></p>	<ul style="list-style-type: none"> <li>• Easy to install</li> <li>• Cheap</li> <li>• Absorbs Small Amount of Water</li> <li>• Commonly used</li> <li>• Large contact area</li> </ul>	<ul style="list-style-type: none"> <li>• Difficult to manage</li> <li>• Limited ability to remove dust from shoe sole completely</li> <li>• Short mat life</li> <li>• Requires over ten min utes to see effect</li> </ul>
<p><b>STICKY MAT</b></p>	<ul style="list-style-type: none"> <li>• Easy to install</li> <li>• Cheap</li> </ul>	<ul style="list-style-type: none"> <li>• Annoying to remove continuously</li> <li>• Cannot absorb moisture</li> <li>• Usage place is limited</li> <li>• Waste disposal expense</li> <li>• Dust removal area is small</li> <li>• Prone to failure</li> </ul>
<p><b>SOLECHECK</b></p>	<ul style="list-style-type: none"> <li>• Vacuum large amounts of dust with instant suction method</li> <li>• Strong suction: Up to (0.3<math>\mu</math>m) of fine dust</li> <li>• Low maintenance with cell modular type</li> <li>• The long-lasting filters are economical with cyclone technology</li> <li>• Short mat lengths are effective</li> <li>• Cost-saving on cleaning maintenance</li> </ul>	<ul style="list-style-type: none"> <li>• 60 dB of noise</li> </ul>

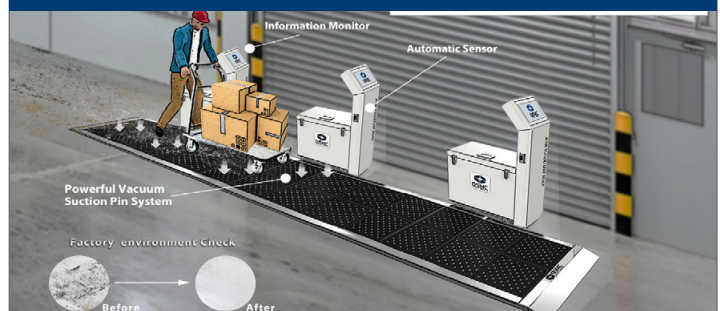
## AIRPORT INSTALLATION

Can also be used in buildings, factories, schools, and airports.



## FACTORY INSTALLATION

Remove foreign substances from wheels with Solecheck. Commonly used for factories, hospitals, and marts.

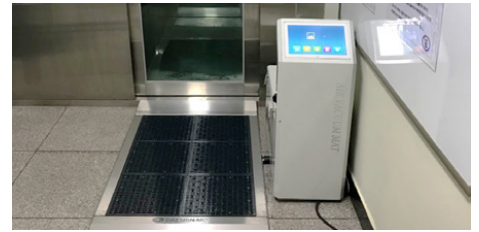
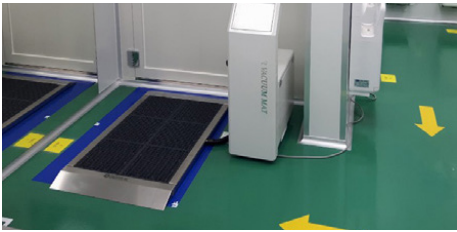




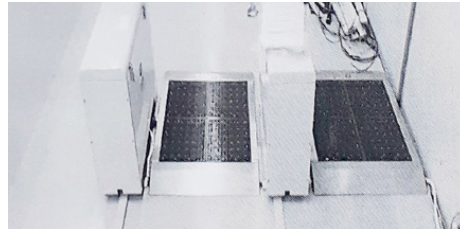
# USAGE BY TYPE

## Slope Type

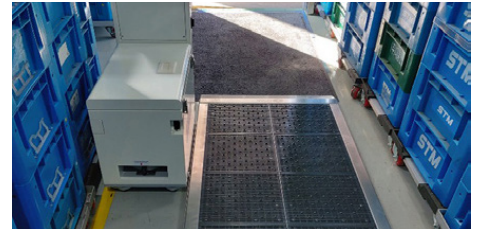
Shown in front of Air Shower Booth.



Shown on main entrance of building with monitor.



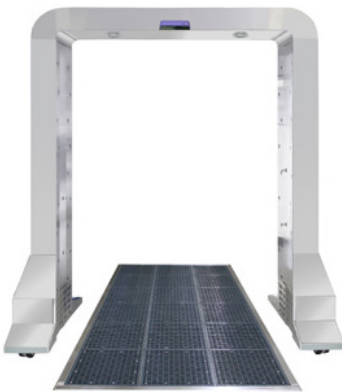
Between aisles.



Entrance to factory.

## SANITIZER GATE

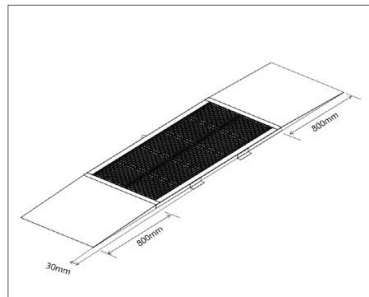
Our Sanitizer Gate sprays sanitizing liquid while you clean your shoe bottom.



### COMPATIBLE WITH:

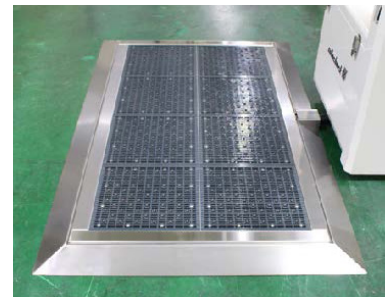
#### Long Slope Type

For wheels on elevated platform.



#### Cover Type

Cover all four areas with slopes.



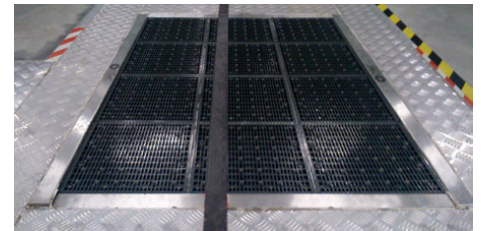
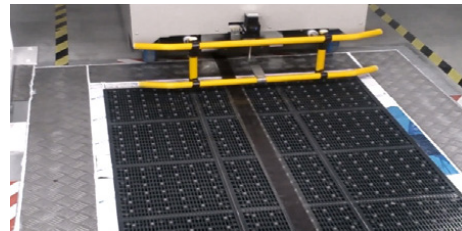
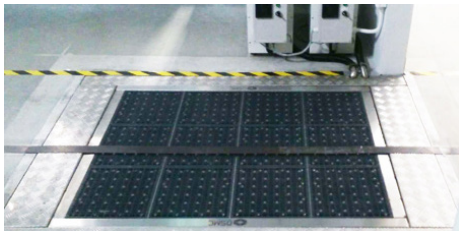
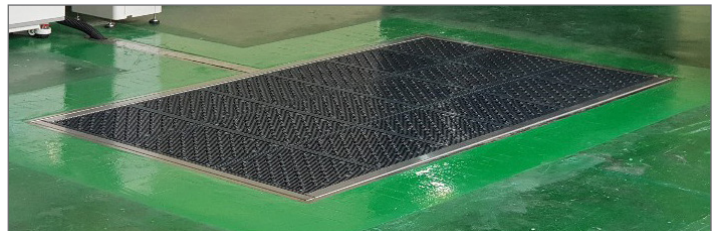
# USAGE BY TYPE

## Embedded Type

For caster wheels and shoe soles.



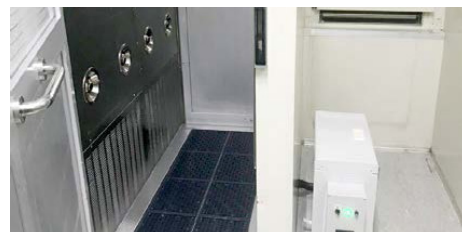
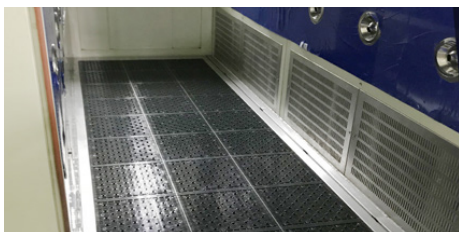
Entrance to factory.



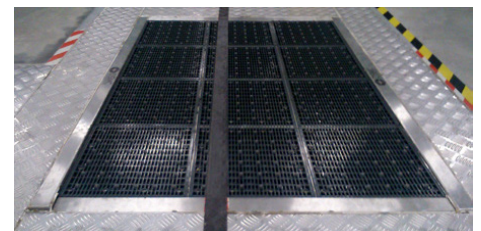
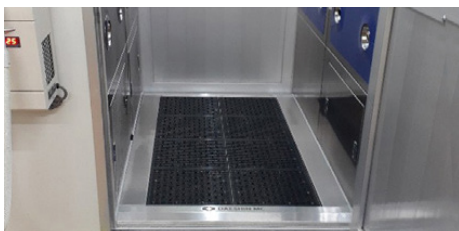
For AGV wheels/ shoe soles.

## Air Shower Type

Fully covers the bottom of Air Shower Booth.



Partially covers the bottom of Air Shower in Embedded type.

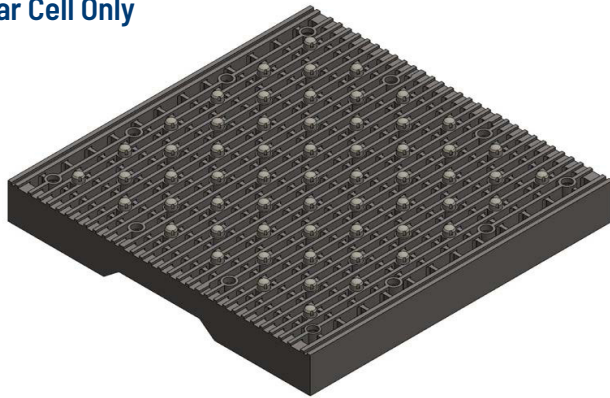


Dust Collector next to Air Shower Booth.



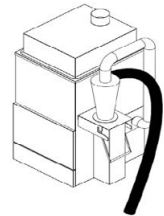
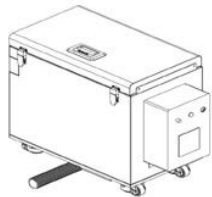
# SPECIFICATION

## Modular Cell Only



Size (mm)	300 x 300 x 35H	
Weight	1.6kg	
Durable Weight (per module)	500kg	
Pin Broken Frequency (times)	1,000,000	
Material	Pin	Polycarbonate
	Spring	Stainless
	Grating	Polycarbonate
	Inner Plate	ABS
	Pin Rubber	NBR
	Square Rubber	NBR
Material	Pin Quantity	61 EA
	Pin Height	3mm
	Distance	32.53/ 46 mm
Dust Size to Enter Max	Approx. 2.5mm	

## DUST COLLECTOR (DC)

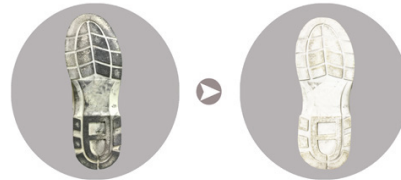


Model	104A	104	104M	105
Size (mm)	606 x 300 x 490H	586 x 300 x 930H	586 x 300 x 930H	680 x 540 x 1100H
Weight	28kg	45kg	46kg	80 kg
Material		Steel	Steel	
Hose Length	100mm	100mm	100mm	1600mm
Outer Size		40ø	40ø	
Inner Size		32ø	32ø	
Electricity		(220-240V Single, 50/60 Hz)	(220-240V Single, 50/60 Hz)	
Cyclone Dust Capture		Above 10 µm	Above 10 µm	
Filter Dust Capture		Up to 0.3 µm	Up to 0.3 µm	
Suction Rate	99.37%	99.37%	99.37%	99.5%
Motor	1.35kw	1.35kw	1.35kw	1.9kw
Dust Tray Capacity	1ℓ	1ℓ	1ℓ	21ℓ =9ℓ (Cyclone)+13ℓ (Dust Tray)
Power Cord Length	2m	2m	2m	3m
Average Noise	62.2 dB	62.2 dB	62.2 dB	69 dB
Max. Modular Cell		~19 Cells (1 DC) ~39 Cells (2 DC)		~59 Cells (1 DC) ~144 Cells (2 DC)
Monitor Screen	-	-	10" HD	-

# THERE'S MORE

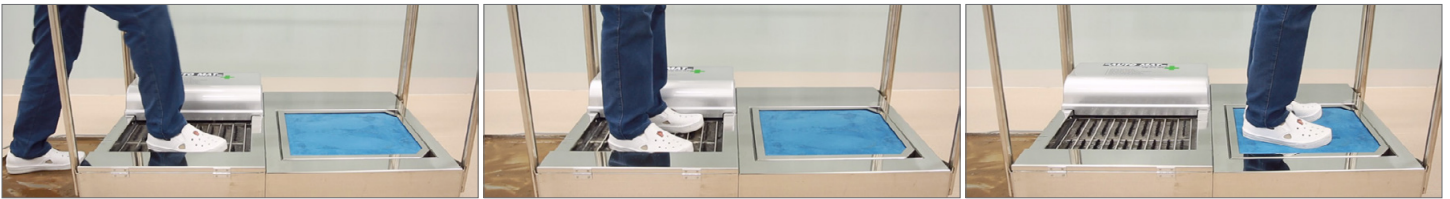
## WET TYPE SHOE SOLE CLEANER

THOROUGH CLEANSE FOR SHOE SOLES



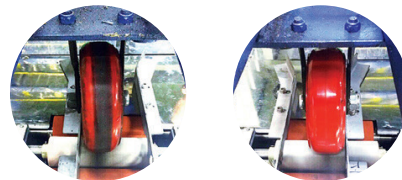
Before

After



## WET TYPE CASTER CLEANER

THOROUGH CLEANSE FOR CASTER WHEELS



Before

After

