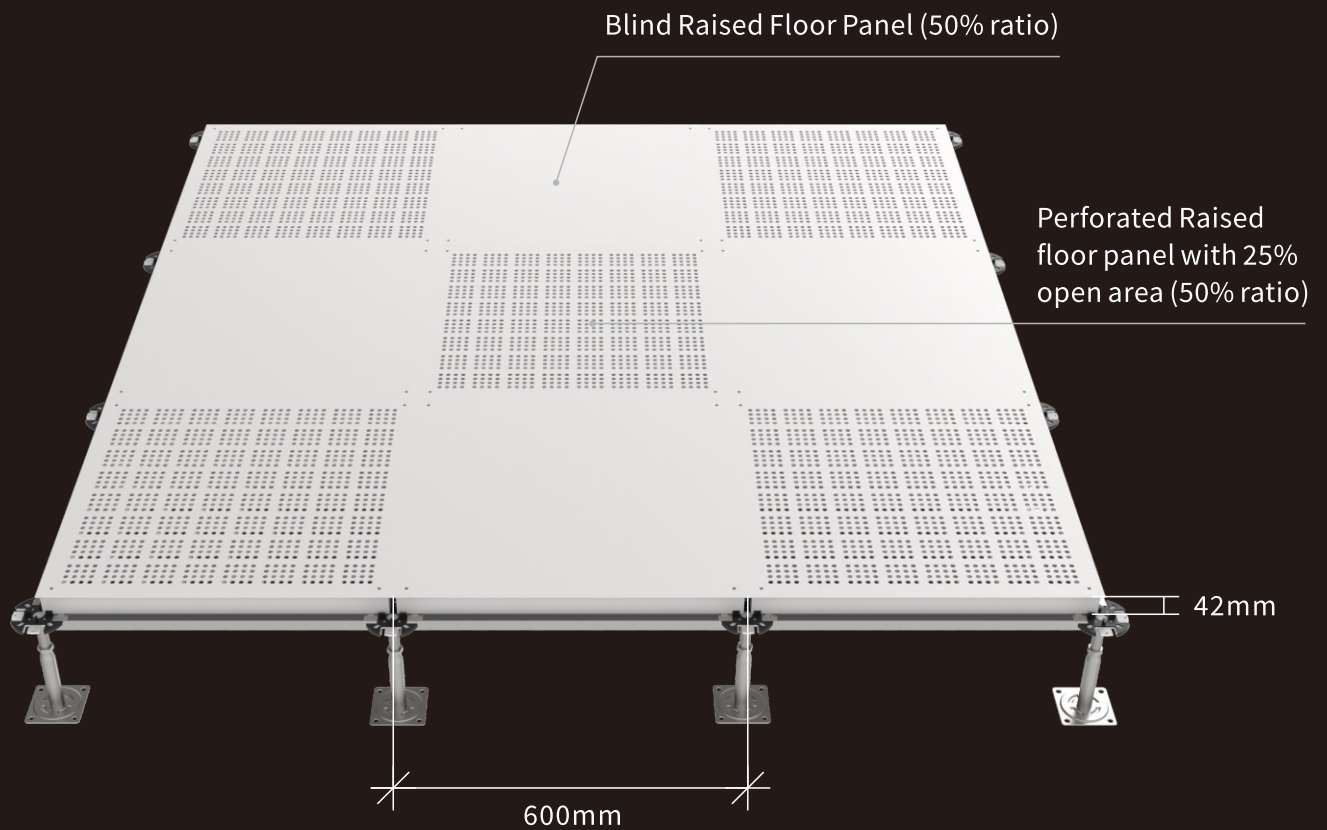


Recommended Raised Floor System Solution for Class 100 Cleanrooms (Steel)

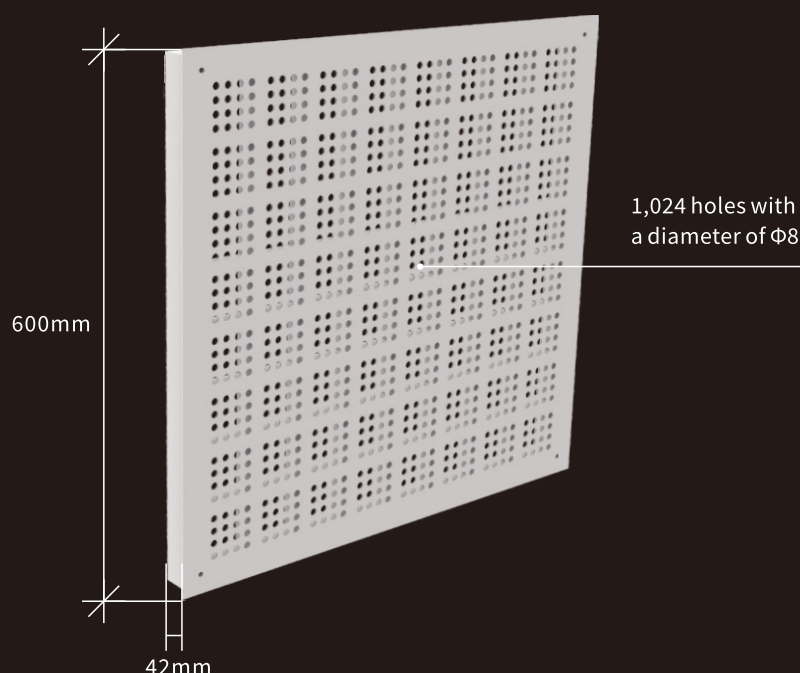


Why Class 100 clean room require raised floor

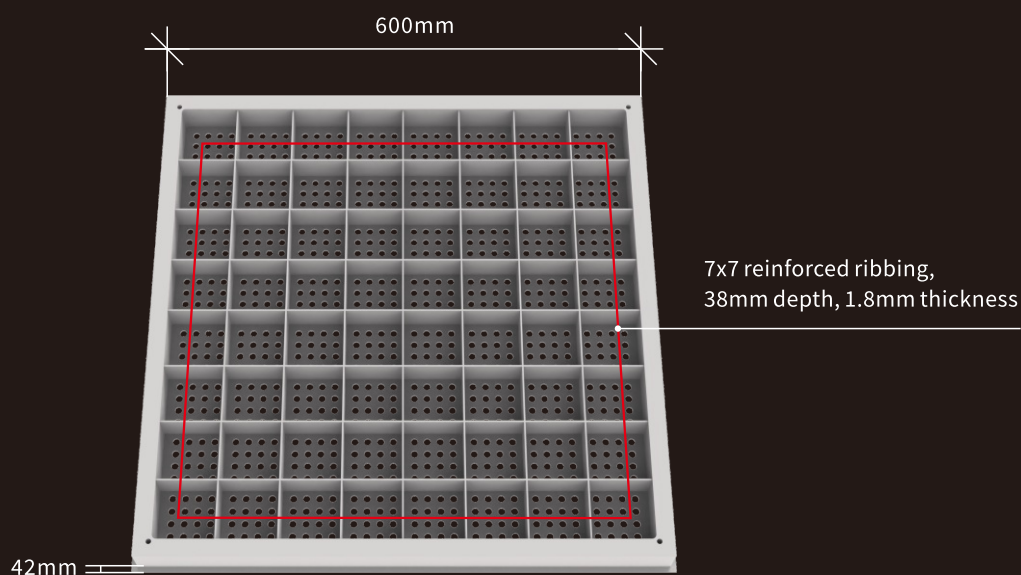
A Class 100 clean room is defined as a space where the concentration of particles ≥ 0.5 micrometers in size does not exceed 100 per cubic foot. Raised floor is utilized to facilitate a vertical unidirectional airflow in conjunction with the overhead air supply. Air flows through the perforations in the floor directly into the under-floor return air plenum, preventing the turbulence and particle rebound that would occur upon impact with a standard floor; this design enables rapid self-cleaning while also accommodating utility lines and providing anti-static properties.

Perforated Raised Floor Product Display (25% Airflow Rate)

Raises floor panel with 25% perforation rate (front view rendering)



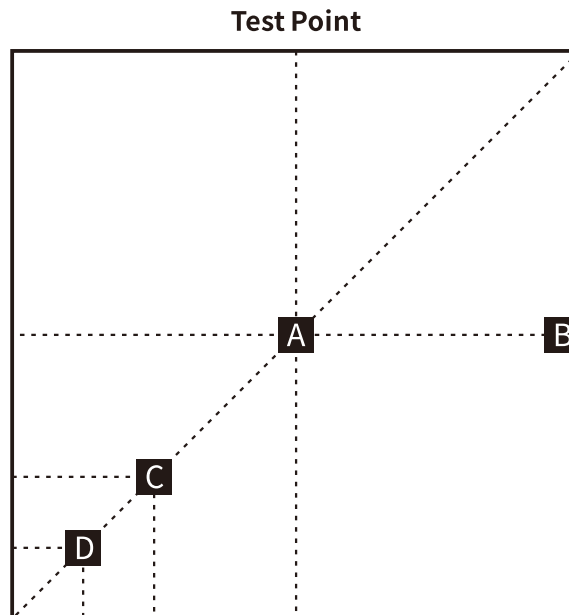
Raised floor panel with 25% perforation rate (view of the underside)



Mechanical properties

Concentrated Load: Concentrated load testing was conducted in accordance with CISCA 2007 Section 1: a load of 4,500 N (450 kg) was applied via a 25.4 mm x 25.4 mm steel block. The deflection of the raised floor panel was required to be less than 2.5 mm. Testing was performed at four designated points.

The actual test results are as follows:



Only one point is tested on a single floor panel

Test Result:

Test Location	Bottom Surface Deflection (mm)	Bottom Surface Permanent Set (mm)	Client's Requirement	Conclusion
At the Centre of the Panel	1.67	0.08	Deflection $\leq$ 2.50mm	Pass
At the Center of the Edge	1.87	0.20		
A quarter along a diagonal of the panel	1.48	0.23		
70cm x70cm Corner a diagonal of the panel	1.35	0.27		

Uniform Load

Uniform load assessment conducted in accordance with US CISCA 2007 Section 1: A pressure of 20,000 N (2,000 kg)/m² converts to a test load of 7,200 N (720 kg) for a 600 mm x 600 mm floor panel.

Actual test results are as follows:

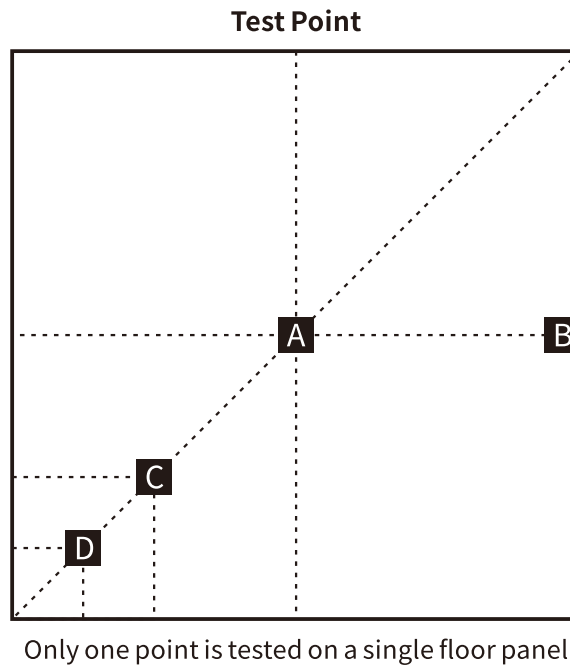
Summary of Results:

Test Item	Test Method	Result	Conclusion
Uniform Load Test	CISCA Recommended Test Procedures for Access Floors (2007) Section 7	See Result	Pass

Ultimate Load Test

Ultimate load evaluation was conducted in accordance with CISCA 2007 Section 2: Maximum pressure was applied via a 25.4 mm x 25.4 mm steel block until the floor panel failed; testing was performed at four designated points.

The actual test results are as follows:



Test Result:

Test Location	Ultimate Load (N)
At the Centre of the Panel	25258
At the Center of the Edge	18485
A quarter along a diagonal of the panel	19051
70cm x70cm Corner a diagonal of the panel	19375

Acid and Alkali Resistance Test

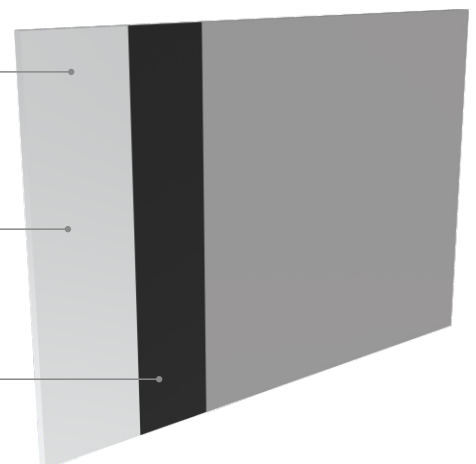
- Specialized Coating Process.
- Dual-Layer Protection (Electrophoresis + Spray Coating).
- To meet the acid and alkali resistance requirements of cleanrooms, HUIYA's raised floor systems utilize a dual-layer anti-corrosion protection method.

Salt spray test: No rust after 118 hours of salt spray exposure.

Q245 Cold-Rolled Steel Sheet.

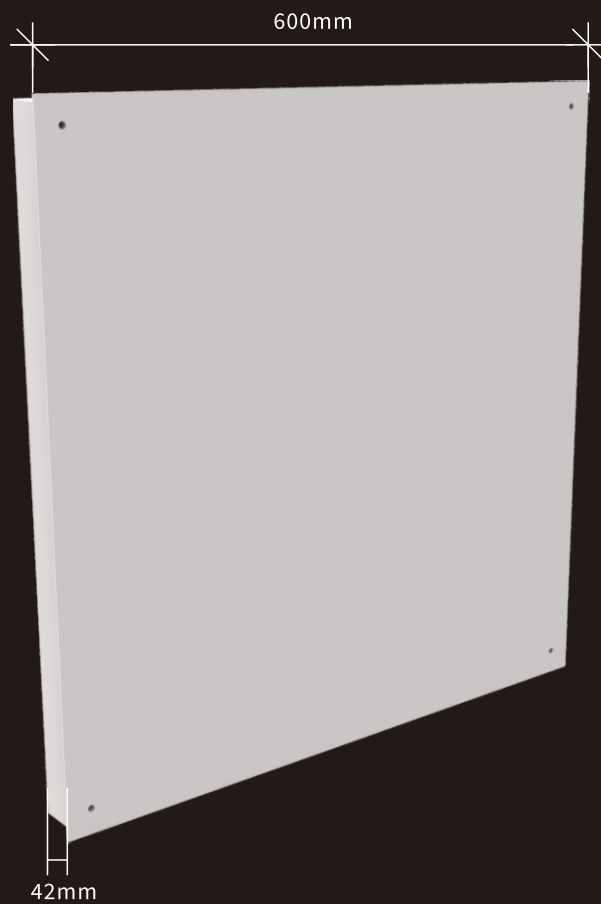
Electrophoretic treatment; the topcoat is black following the initial anti-corrosion treatment.

Spray coating treatment; the topcoat is gray following the second anti-corrosion treatment.

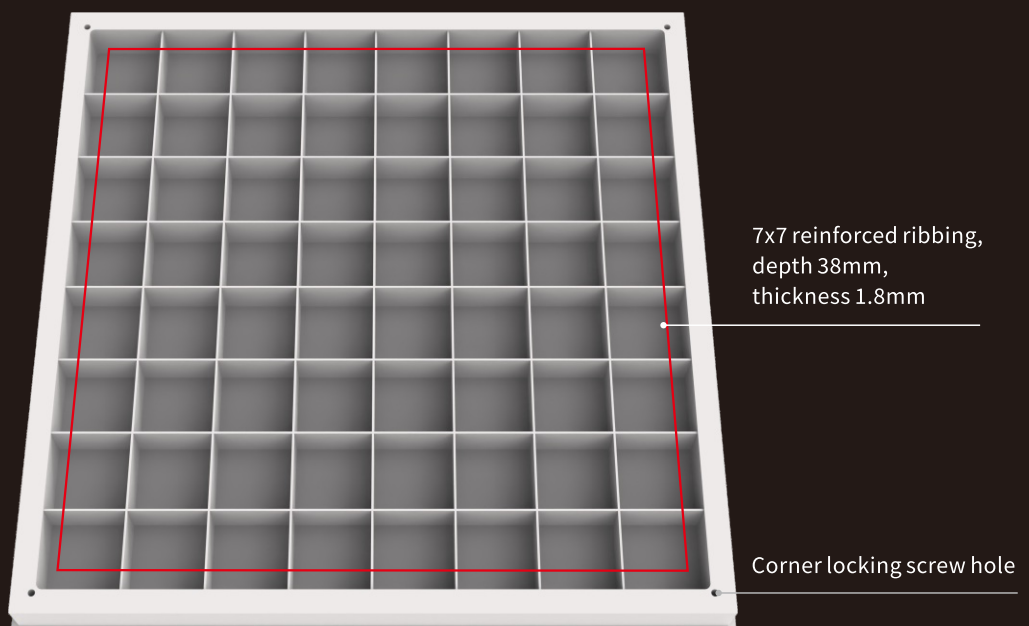


Huiya blind raised floor

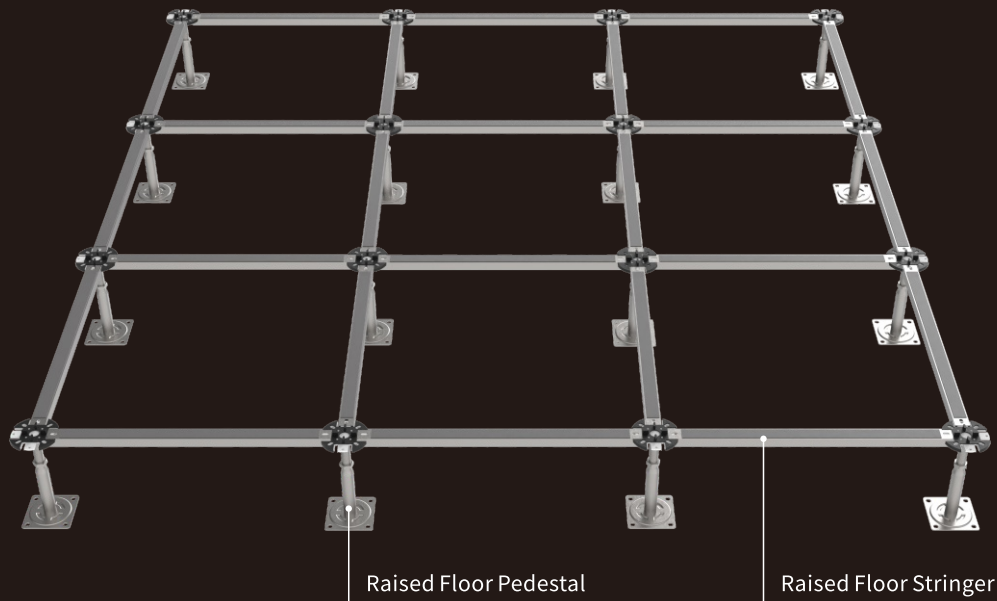
Bland Raised Floor (rendering of the top view)



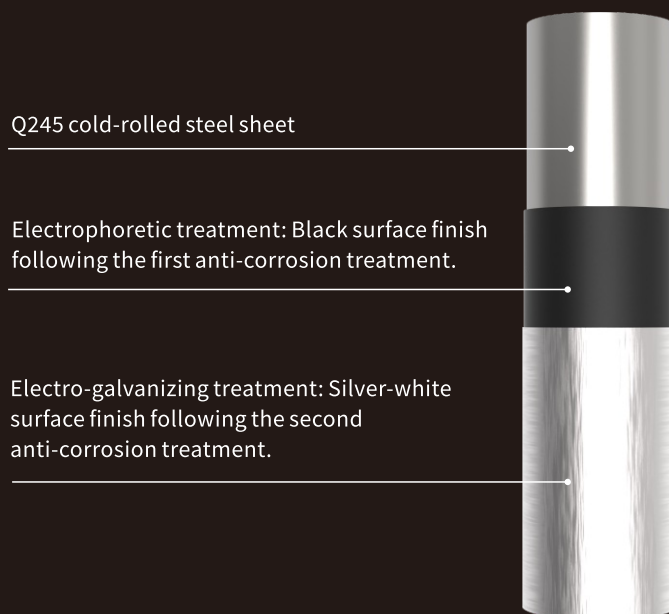
Bland Raised Floor (rendering of the underside)



Bottom pedestal system



- Pedestal & Stringer-Acid/Alkali Resistant and Anti-Corrosion Treated.
- Specialized coating process.
- Dual-layer protection via electrophoresis and zinc plating.
- To meet the acid and alkali resistance requirements of cleanrooms, HUIYA's raised floor systems utilize a dual-layer anti-corrosion treatment.



Salt spray test: No rust after 118 hours of salt spray exposure.

The height of the raised floor is customizable; for specific pedestal design solutions, please refer to the HUIYA pedestal design system brochure.

