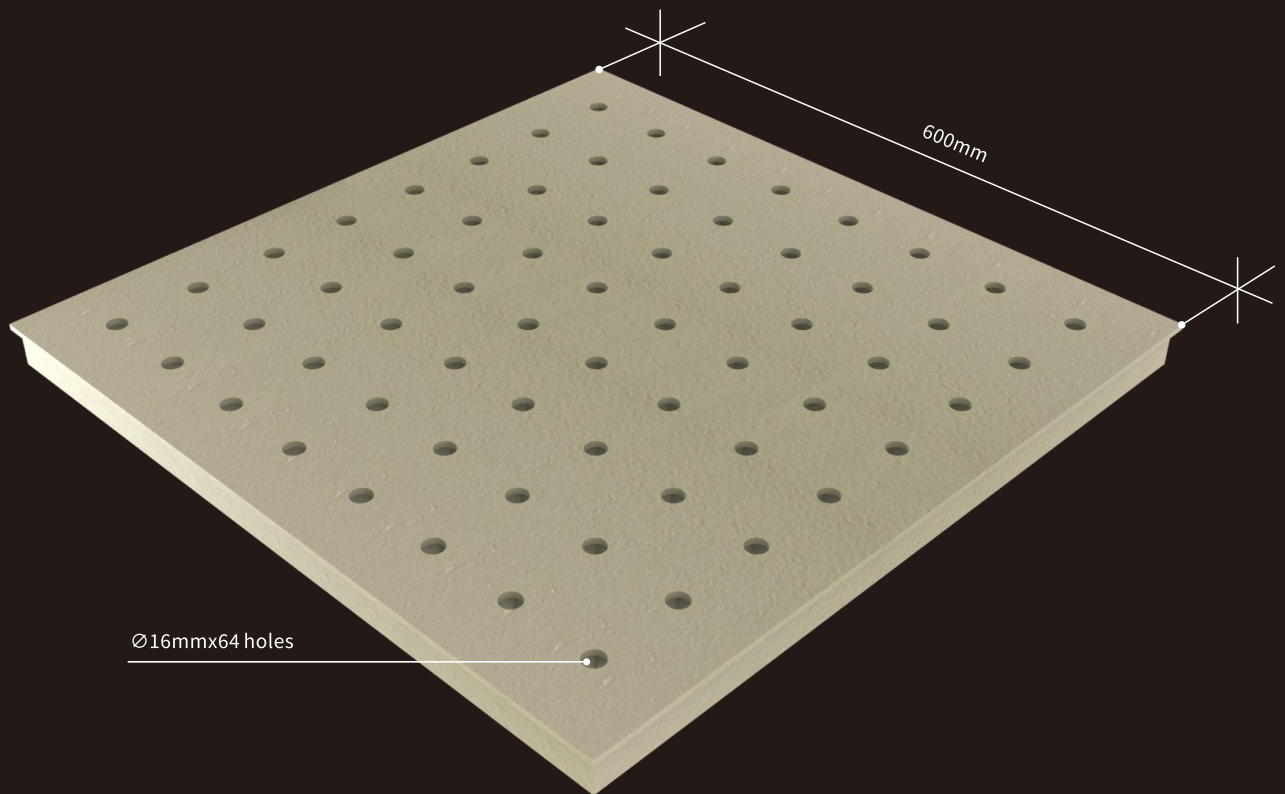


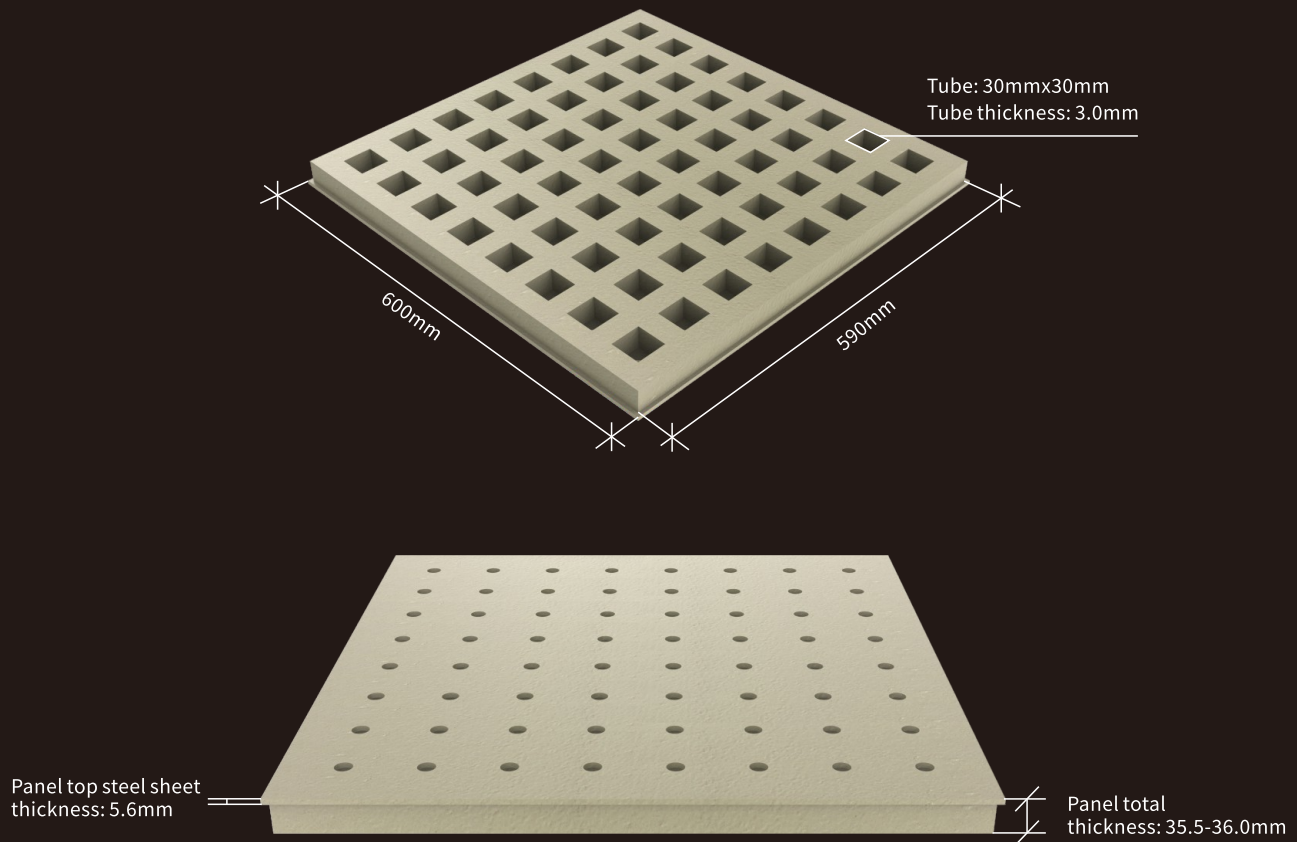
5.0MT POINT LOAD PERFORATED STEEL PANEL

The customized ventilation floor used in the construction of modern intelligent ship engine rooms and control rooms is specifically designed to meet the high-density equipment cooling and airflow organization needs of ship control rooms, balancing structural strength and ventilation efficiency. It can meet the stringent requirements of the shipbuilding industry for load-bearing capacity, fire resistance, and electromagnetic shielding. It can withstand the dynamic loads generated by heavy mobile intelligent robots moving and operating on the floor surface, ensuring long-term safe and stable operation.



The floor adopts a welded structure consisting of a top steel plate and a bottom cold-rolled square tube. The top plate is made of 5.6mm thick cold-rolled steel, with its surface treated by epoxy resin spraying. The diameter of the perforations is Ø16mm, and there are up to 64 holes on the plate.

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Parameter configuration	600mm length x 600mm width x 35.5mm-36.0mm thickness	Overall weight of a single floorboard: 35.5KG/piece
Raw material configuration	Steel plate: 600mm length x 600mm width x 5.6mm thickness	Hole size: $\varnothing 16\text{mm}$ Number of holes: 64 holes
Bottom frame	Parameters of cold-rolled square tube for outer frame: 30mm width x 30mm height x 3.0mm wall thickness Inner frame cold-rolled square tube parameters: 30mm width x 30mm height x 3.0mm wall thickness	

Customized floor loading requirements by the client

Safety Factor: 1.5

Point Load Requirement: 2500KG, 3750KG, 5000KG

Condition 1: Point Load Requirement $2500\text{KG} \times \text{Safety Factor } 1.5 = 3750\text{KG}$, The load-bearing capacity can be achieved.

Condition 2: The flooring shall not crack or undergo elastic deformation exceeding 3.5mm.

Condition 3: The permanent deformation of the floor after pressure release shall not exceed 2mm.

Point Load Requirement $2500\text{KG} \times \text{Safety Factor } 1.5 = 3750\text{KG}$, meet the standard.

Meet the requirements of condition 1.

When subjected to a force of 3750KG, the floor did not break. Under this condition of maintaining a pressure of 3750KG, the elastic deformation was 4.0mm.

Meet the requirements of condition 2.

After the pressure is released, the actual permanent deformation of the floor is 1.0mm.

Meet the requirements of condition 3.

Summary: This flooring meets the load-bearing requirements specified by the customer.



Fire resistance

According to the EN13501:2018 classification standard for the burning behavior of building materials and products, this flooring has passed the Bfl-s1 level fire test, indicating that it has a low flame spread rate and smoke production, and produces no burning debris during combustion. It meets the mandatory fire protection requirements of the EU building regulations for flooring materials in public places.