



# WALK IN DUST TEST CHAMBER

Walk in Dust Test Chamber replicates the effects of natural elements like sand, wind, and dust on products and materials, which can lead to significant economic losses annually. These effects often result in corrosion, fading, deformation, reduced strength, swelling, mold growth, and other damage. Electrical products are particularly at risk of fires caused by short circuits from dust accumulation. Conducting dustproof testing on enclosures is a critical step to ensure the reliability and safety of specific products or materials.

This chamber is ideal for testing outdoor lighting, household appliances, automotive components, and other electronic or electrical devices.

## APPLICATIONS

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The Torontech Walk-in Dust Test Chamber is engineered to perform Ingress Protection (IP) testing, specifically evaluating a product's resistance to the damaging effects of solid particle and dust ingress. Its primary application is to simulate harsh, dust-laden environments to verify that enclosures for electrical and mechanical products can effectively prevent dust from penetrating and causing short circuits, abrasion, or operational failure. This testing is a critical step in product validation, safety certification, and ensuring long-term reliability.

This essential environmental simulation is vital for ensuring product durability in:

- **Automotive Manufacturing:** To test the integrity of enclosures for critical components such as engine control units (ECUs), sensors, lighting assemblies, and connectors, ensuring they can withstand the dust and grime of real-world driving conditions without failure.
- **Aerospace & Defense:** For validating the ruggedness of avionic systems, military electronics, and field equipment, ensuring they can operate reliably in harsh, desert-like environments where fine, abrasive dust poses a significant threat to mission-critical systems.
- **Outdoor & Industrial Electronics:** To certify the enclosures of products like outdoor lighting, security cameras, and industrial control panels, verifying their ability to prevent dust ingress which is essential for ensuring safety,

performance, and a long operational life in exposed or industrial settings.

- **Consumer & Home Appliances:** For ensuring the long-term reliability and safety of appliances by testing their resistance to household dust accumulation, which can lead to overheating, short circuits, and reduced product lifespan.

## TECHNICAL SPECIFICATIONS

|                              |                                                                                                       |                |                |                |                |
|------------------------------|-------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|----------------|
| Model                        | ToronSDC-125                                                                                          | ToronSDC-500   | ToronSDC-1000  | ToronSDC-1500  | ToronSDC-2000  |
| Volume                       | 125L                                                                                                  | 500L           | 1000L          | 1500L          | 2000L          |
| Internal Dimension W*H*D(mm) | 500x500x500                                                                                           | 800x800x800    | 1000x1000x1000 | 1500x1000x1000 | 2000x1000x1000 |
| External Dimension W*H*D(mm) | 950x1350x790                                                                                          | 1250x1755x1050 | 1450x2030x1250 | 1950x2120x1360 | 2450x2120x1360 |
| Dustfall form                | Free fall dust type □ The dust is blown to 1/5 of the tank top by centrifuge to make it free settling |                |                |                |                |
|                              | Dust blowing □ Bottom air blast , three grades pressure is adjustable                                 |                |                |                |                |
| Standard configuration       | With dust drying device, vibrator, sample holder, observation window (door)                           |                |                |                |                |
| Safety protection            | Overload breaking protection, earthing protection, etc.                                               |                |                |                |                |



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