

Dust Test Chambers - VDT Series

Application Branches:

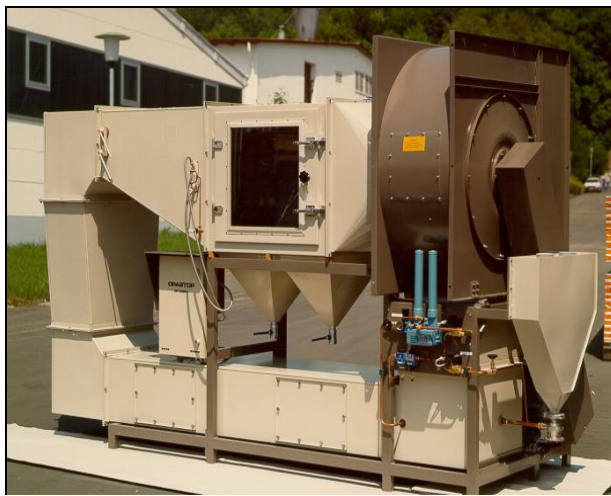
- I Automobile industry
- I Lacquer and textile industry
- I Pharmaceutical industry
- I Coating industry
- I Automobile supplier industry
- I Leather industry
- I Paper industry
- I Defense Research industry
- I Plastic processing industry
- I Data Systems industry (LCD)
- I Research and testing institutes

When present in the housings of electrical equipment sand, dust and water can adversely affect operatibility and safety. Tests which conform to standards, applying suitable testing and simulation systems for determining the class of protection of housings ensure the trouble-free operation of equipment even under tough industrial conditions - **Vötsch Solutions**

VDT 1000/1000A



VDT 0060 DIN /MIL



TECHNICAL SPECIFICATIONS

Model	Test Space Dimensions h/w/d -mm	Overall Dimensions h/w/d -mm	Door opening h/w-mm	Standards	Equipment
VDT 1000	1000/950/950	1900/1250/1050	850/850	SAE J575	Features :Waste air exhaust via dust filter (VDT 1000) Abrasion resistance of all components in contact with the dust ,large door for easy charging ,Dust collection section below the test chamber.
VDT 1000 A	1000/950/950	1900/1250/1050	850/850	DIN VDE 0470 part 1 (EN 60529); DIN 40050, part 9, vertical air flow; EN 60068-2-68 La 2	
VDT 0060 DIN	800/1000/800	2400/4200/1500	740/840	DIN 40050 sec. 9 EN 60068-2-68 Lc1	Features: Housing made of galvanized sheet steel , blue enameled ; Ring duct with integrated test chamber (horizontal airflow) ;Uniform and steered flow by air baffle plates; Air velocity control by speed adjustable air fan ;Abrasion resistance off all components in contact with the dust ; Large doors for easy loading with surrounding gaskets ; Dust measurement and control by means of a dust density meter and a dust dosage device Temperature conditioning device ;Dehumidification system with compressed air drier ; Operation hour counter
VDT 0060 MIL	800/1000/800	2500/4250/1800	740/840	MIL STD 331 MIL STD 810 D Meth. 510.2 (NO SAND TESTING !!)	

Optional Equipment

- Test chamber lighting
- Low pressure system for specimen
- Port, Ø 50 mm, Ø 100 mm
- Movable design
- Digital programmer
- Low pressure system for specimen
- Point printer for registration of temperature, air velocity, dust density
- Rotary table , Ø 300 mm

Dust Test Specifications

TEST SPECIFICATION	PROTECTION GRADE	TEST DURATION [H]	TEMPERATURE	REL. HUMIDITY [%RH]	AIR VELOCITY [M/SEC]	DUST DENSITY [G/M ³]	DUST COMPOSITION % MATERIAL	PARTICAL SIZE
DIN 40050 part 9 May 1983 picture 1; DIN/VDE 470 part 1; DIN EN 60529; DIN EN 600 68-2-68 Meth. La 2	IP 5 dust protected or IP 6 dust-tight	2-8 acc. to air volume			Vertically to achieve slowest possible downward settlement	2 kg per m ³ chamber volume	100 dry fine grained talcum	wire diameter 50 µm, mesh size, 75 µm square mesh
DIN 40050 Part 9 May 1993 picture 2	IP 5KX IP 6KX	2-24		<25	1,5 horizontal	5 ± 1,5	Olivin, quartz or felspar	fine dust 2-75µm dust; dust 2-150µm
DIN EN 60068-2-68 (IEC 68-2-68) Meth. Lc1		2-24			1,5-10 horizontal	1 ± 0,3 2 ± 0,5 5 ± 1,5 10 ± 3	Olivin, quartz or felspar	
MIL-STD-810D Method 510.2 (fine dust)		6 + 16	23°C + 63°C	max. 30	9 and 1,5	10,6 ± 7	97-99 SiO ₂	US Standard 100 % No. 100 98±2No. 140 90±2No. 200 75±2No.325
SAE standard J 575		5 blow 2" in 15"					Portland cement acc. to ASTM C 150-77, Type 1	

Desert-Tests

The sand and dust test (510.2) includes both testing methods "airborne dust and "drifting sand". The airborne dust test method is performed during wind velocities of 1.5 m/s and 8.9 m/s with a dust density of 10.6 g/m³ ± 7 g/m³ and an air humidity of < 30 % r. h. The testing duration amounts to six hours at 23 °C and six hours at storage or operating temperature. The dust used is composed of red china clay or silicium oxide.

The drifting sand test method is performed during a wind velocity ranging from 18 m/s to 29 m/s and with a dust density of 0.177 g/m³ and 1.1 g/m³ or 2.2 g/m³ at an air humidity of < 30 % r. h. The testing duration amounts to more than 90 minutes per testing area. Arenaceous quartz is used. The purpose of this very real-to-life sand and dust test is to ascertain if the resistibility of test specimens is adequate enough to withstand the influences caused by dust particles.