

DUST TEST SYSTEMS



Dust Test Chambers Types ST



Dust Test Chamber SYSTEM WEISS, Type ST 1000 U

WEISS Dust Chambers allow reproducible testing of the resistibility of electro-technical products against dust, and the determination of IP-protection types by housings of electrical devices and equipment of road vehicles.

Special Features:

- Chambers are suitable to meet test specifications
- Compact design, ready for connection
- Easy operation
- Easy to service

Design Features

ST 1000 for standard SAE J575

**ST 1000U for DIN/VDE 0470
part 1 (EN 60529),**

IEC 68-2-68, La2 (DIN EN 60068-2-68)

- Waste air exhaust via dust filter (ST1000)
- Abrasion resistance of all components in contact with the dust
- Transparent doors for easy charging, with surrounding special gaskets
- Dust collecting section below the test chamber

Optional Equipment

- Test chamber lighting
- Low pressure system for specimen
- Ports, 50 mm and 100 mm Ø
- movable design

Test Chamber Dimensions			Overall Dimensions			Door opening	
Height mm	Width mm	Depth mm	Height mm	Width mm	Depth mm	Height mm	Width mm
1.000	950	950	1.900	1.250	1.050	850	850

Special sizes upon request

DUST TEST SYSTEMS

Dust test chambers for horizontal air flow with wind simulation

Design Features for ST 600 and ST 2000

- Housing made of galvanised sheet steel, enamelled
- Ring duct with integrated test chamber (horizontal air flow)
- Uniform and steered flow by air baffle plates
- Air velocity control by speed adjustable air fan
- Abrasion resistance of all components in contact with the dust
- Large doors for easy loading, with surrounding special gaskets
- Dust measurement and control by means of a dust dosage device
- Temperature-conditioning device
- Dehumidification system with compressed air drier
- Operating hour counter



Dust test plate ST 600, System Weiss

Optional Equipment

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

Type	Test Chamber Dimensions			Overall Dimensions			Door opening		for tests acc. to
	Height mm	Width mm	Depth mm	Height mm	Width mm	Depth mm	Height mm	Width mm	
ST 600	800	1.000	800	2.400	4.200	1.500	840	740	MILSTD 810D Meth. 510.2 DIN 40 050, part 9 IEC 68-2-68, Lc1
ST 2000	800	3.100	800	2.500	6.400	1.800	700	3.000	

Special sizes upon request

All data are subject to technical modifications

Test Specifications

No.	Test Specification	Protection Grade	Test Duration	Temperature (°C)	Rel. Humidity (%)	Air - velocity (m/sec.)	Dust Density	Dust Composition	Particle Size
1	DIN/VDE 470 part 1 picture 2 (EN 60529)	IP 5 X dust protected resp. IP 6 X dust-tight	2 - 8 h depending on the air flow rate			vertically, to achieve slowest possible down-ward settlement	2 kg per m ³ chamber volume	100 % dry fine grained talcum	wire diameter 50 µm, mesh size 75 µm, square mesh
2	IEC 68-2-68, La2 (DIN EN 60068-2-68)		2 - 8 h depending on the air flow rate		<25 %	vertically, to achieve slowest possible down-ward settlement	2 kg per m ³ chamber volume	100 % dry fine grained talcum	wire diameter 50 µm, mesh size 75 µm, square mesh
3	IEC 68-2-68, Lc1 (DIN EN 60068-2-68)		2 - 24 h		<25 %	1,5 - 10 horizontal	1 ± 0,3 2 ± 0,5 5 ± 1,5 10 ± 3	Olivin, quartz or felspar	fine dust 2-75 µm dust 2-150 µm
4	DIN 40050 part 9, May 1993 picture 1 vertically	IP 5KX IP 6KX	20 cycles 15 min Pause, 6 sec. dust whirl up				2 kg per m ³ chamber volume	50 % limestone 50 % flue dust	33 weight parts ≤ 32 µm 67 weight parts ≥ 32 µm; ≤ 250 µm
	DIN 40050 part 9, May 1993 picture 2 horizontal	IP 5K X IP 6K X	0,5 - 24 h			1,5	5 ± 2	50 % limestone 50 % flue dust	33 weight parts ≤ 32 µm 67 weight parts ≥ 32 µm; ≤ 250 µm
5	MIL-STD-810D Method 510.2 (flue dust)		6 + 16 h	23 °C	max. 30 %	9 and 1,5	10,6 ± 7	97-99 % SiO ₂	US standard 100 % No. 100 98±2 No. 140 90±2 No. 200 75±2 No. 325
6	SAE standard J 575		5 h 15 min Pause, 2 - 15 sec whirl up dust					Portland cement acc. to ASTM C 150-77, Type 1	

For further material testing Weiss Umwelttechnik GmbH provides an extensive program of units and systems:



- Temperature and climate test cabinets from 64 l up to walk-in chambers
- Shock test cabinets for temperature shocks from -80 to +250 °C
- combined temperature and climate test cabinets and units with vibrator
- Temperature-conditioning chamber for tension testing machine
- Corrosion test units
- Climate test cabinets for combined climate and gassing tests
- Climate cabinets for combined climate and gassing tests
- Spray and Splash water test units according to the relevant national and international standards.

Technical Field Offices

Berlin

13407 Berlin-Reinickendorf • Flottenstraße 58
Phone (0 30) 40 99 05-10 • Fax (0 30) 40 99 05-50
eMail: berlin@wut.com

Hamburg

22459 Hamburg-Niendorf • Sperberhorst 6
Phone (0 40) 68 59 96 • Fax (0 40) 68 52 91
eMail: hamburg@wut.com

Hannover

30853 Langenhagen • Walsroder Straße 149
Phone (05 11) 7 28 19-10 • Fax (05 11) 7 28 19-30
eMail: hannover@wut.com

Oberhausen

46045 Oberhausen • Mülheimer Straße 48
Phone (02 08) 6 20 65-10 • Fax (02 08) 6 20 65-20
eMail: oberhausen@wut.com

Stuttgart

70567 Stuttgart-Möhringen • Zettachring 10
Phone (0711) 90 02 45-10 • Fax (0711) 90 02 45-30
eMail: stuttgart@wut.com

Nürnberg

90592 Schwarzenbruck • Robert-Bosch-Straße 15
Phone (0 91 28) 92 37 55 • Fax (0 91 28) 92 37 65
eMail: nuernberg@wut.com

München

82166 Gräfelfing • Wandlhamer Straße 31
Phone (0 89) 89 80 45-10 • Fax (0 89) 89 80 45-30
eMail: muenchen@wut.com

Leipzig

04105 Leipzig • Tschaikowskistraße 14
Phone (03 41) 9 84 57-10 • Fax (03 41) 9 84 57-30
eMail: leipzig@wut.com

Subsidiaries

Weiss Umwelttechnik Ges.m.b.H.

A-1232 Wien • Ober-Laaer Straße 316
Phone (0222) 6 16 66 97 • Fax (02 22) 6 16 66 97-13
wien.wuw@schunk-group.com

Weiss Technik Belgium B.V.B.A.

B-1770 Liedekerke
Nijverheidszone • Begijnenmeers 63
Phone (053) 68 10 10 • Fax (0 53) 68 10 20
eMail: sales@weissstechnik.be

Weiss Technik AG

CH-8802 Kilchberg • Böndlerstraße 29
Phone (01) 7 16 10 66 • Fax (01) 7 16 10 76
eMail: info@weiss-technik.ch

Weiss Technik France Sàrl

F-78955 Carrières-sous-Poissy • 283, route d'Andrésey
F-78304 Poissy Cedex • B.P. 4015
Phone (1) 34 01 11 00 • Fax (1) 39 27 37 84
eMail: weissfr@easynet.fr

Weiss Technik Ltd.

GB-Marlow • Buckinghamshire SL7 1NX
Willowbank House • 84 Station Road
Phone (0 14 94) 43 43 24 • Fax (0 14 94) 43 43 25
eMail: info@weissstechnik.co.uk

Weiss Technik Italia S.r.l.

I-20013 Magenta (Mi) • Via Murri, 22-28
Phone (02) 97 29 16 16 • Fax (02) 97 29 16 18
eMail: info@weissitalia.it

Weiss Enet Industrietechnik B.V.

NL-4004 JP Tiel • Morsestraat 8
Phone (03 44) 67 04 00 • Fax (03 44) 67 04 05
eMail: info@weissenet.nl



Weiss Umwelttechnik GmbH Simulationsanlagen • Messtechnik

D-35447 Reiskirchen-Lindenstruth • Greizer Straße 41 - 49
Telefon (0 64 08) 84-0 • Telefax (0 64 08) 84-87 10
Internet <http://www.wut.com> • eMail: info@wut.com

supplyLAB

www.supplylab.pt
geral@supplylab.pt

Cacém Park - Edifício 9
Estrada de Paço de Arcos nº88
2739-512 Agualva Cacém
T +(351) 21 4278700
F +(351) 21 4278709

Ein **schunk** Unternehmen

Protection Tests (IP-Code)

Spray and Splash Water Test Units Series SWT

**Reproducible tests to check
protection against water for
application in**

- Research
- Development
- Production
- Quality control

Special Features

- compact design, ready to be plugged-in
- two sizes available
- designed to observe important test standards
- automatic test run
- low water consumption by circulation unit

Construction Features

- test room made of corrosion-resistant steel plate
- test chamber door made of plexiglass is hinged on the left
- specimen support, adjustable in height
- pneumatical drive of the swivel tube
- adjustable swivel angle
- replaceable swivel tubes
- nozzle fittings can be swivelled
- exchangeable nozzle fittings
- adjustable water volume flow
- measuring of water volume flow



supplyLAB

www.supplylab.pt
geral@supplylab.pt

Cacém Park - Edifício 9
Estrada de Paço de Arcos nº88
2739-512 Agualva Cacém
T +(351) 21 4278700
F +(351) 21 4278709

Leading by advanced technology



Standard Design

- stainless steel test chamber with plexiglass door and wipers
- automatic test run with switch clock to adjust the duration
- connection to water supply

Options

- different swivelling tubes
- circulation device
- rotation table adjustable in height
- modification for further protection codes
- modification for similar tests according to DIN, MIL, VTL, IEC, BSI, JIS

Technical Data		Model	SWT 200/SWT 400		SWT 600/SWT 800	
Testing time			adjustable from 3 sec to 30 hrs			
Specimen support			adjustable in height			
Swivel velocity of tubes		degr/sec	60	60	60	60
Swivel angle adjustable		degree	0 to approx. $\pm 180^{\circ}$			
Test chamber dimensions	height	mm approx.	1.015	1.015	1.810	1.810
	width	mm approx.	1.000	1.000	1.800	1.800
	depth	mm approx.	1.000	1.000	1.800	1.800
Outside dimensions	height	mm approx.	1.950	1.950	2.300	2.300
	width	mm approx.	1.400	1.400	2.200	2.200
	depth	mm approx.	1.100	1.100	1.900	1.900
Door opening	height	mm approx.	750	750	950	950
	width	mm approx.	650	650	950	950
Weight (without water stock)		kg approx.	350	400	550	600
Connected load (with circulation pump)		kVA approx.	3	3	3	3
Power supply			400 V/3 Ph + N + PE/50 Hz			
Option: ratio of swivel tube diameter of rotation table/speed		mm	400			800
		mm/min ⁻¹	300/4			500/4

Models SWT 200 to 800 are suitable for protection codes IPX3 and IPX4.

Testing accessories and main test specifications

for testing the protection against water acc. to DIN VDE 0470 Part 1 (EN 60529) 1)

Protection grade 2nd mark	Testing accessories	water volume flow	test duration
0	no test required	-	-
1	dripping unit	1 ± 0.5 mm/min	10 min
2	dripping unit housing in 4 stable, 15° inclined positions	3 ± 0.5 mm/min	2.5 min for every incline
3	swivelling tube	0.07 l/min $\pm 5\%$ per opening, with the number of openings	10 min
4	spraying $\pm 60^\circ$ from the vertical max. distance 200 mm or spray nozzle spraying $\pm 60^\circ$ from the vertical as figure 3	10 l/min $\pm 5\%$	1 min/m ² , mini 5 min
5	spraying $\pm 180^\circ$ from the vertical	as figure 3	as figure 3
6	jet nozzle nozzle 6.3 mm \varnothing distance 2.5 to 3 m	12.5 l/min $\pm 5\%$	1 min/m ² , mini 3 min
7	jet nozzle nozzle 12.5 mm \varnothing distance 2.5 to 3 m	100 l/min $\pm 5\%$	1 min/m ² , mini 3 min
8	immersion basin water level above the housing: 0.15 from upper border, 1 m from lower border immersion basin = water level: as agreed	-	30 min
		-	as agreed

1) replacement for
DIN 54 470 part 1/...
VDE 0470 part 1/12.84
DIN 40 050/07.80
DIN 40 052/07.80
DIN 40 053 part 1/07.80
DIN 40 053 part 2/07.80
DIN 40 053 part 3/07.80
DIN 40 053 part 4/07.80

We reserve the right to make any technical alterations.

Technical Sales Offices

Berlin
13407 Berlin-Reinickendorf · Flottenstraße 58
Tel. (0 30) 40 99 05-10 · Fax (0 30) 40 99 05-50
eMail: berlin@wut.com

Hamburg
22459 Hamburg-Niendorf · Sperberhorst 6
Tel. (0 40) 68 59 96 · Fax (0 40) 68 52 91
eMail: hamburg@wut.com

Hannover
30853 Langenhagen · Walsroder Straße 149
Tel. (05 11) 7 28 19-10 · Fax (05 11) 7 28 19-30
eMail: hannover@wut.com

Oberhausen
46045 Oberhausen · Mülheimer Straße 48
Tel. (02 08) 6 20 65-0 · Fax (02 08) 6 20 65-20
eMail: oberhausen@wut.com

Stuttgart
70567 Stuttgart-Möhringen · Zettachring 10
Tel. (07 11) 90 02 45-10 · Fax (07 11) 90 02 45-30
eMail: stuttgart@wut.com

Nürnberg
90592 Schwarzenbruck · Robert-Bosch-Straße 15
Tel. (09 128) 92 37 55 · Fax (09 128) 92 37 65
eMail: nuernberg@wut.com

München
82166 Gräfelfing · Wandhamer Straße 31
Tel. (08 9) 89 80 45-10 · Fax (08 9) 89 80 45-30
eMail: muenchen@wut.com

Leipzig
04105 Leipzig · Tschakowskistraße 14
Tel. (03 41) 9 84 57-10 · Fax (03 41) 9 84 57-30
eMail: leipzig@wut.com

Subsidiaries

Weiss Umwelttechnik Ges.m.b.H.
A-1232 Wien · Ober-Laaer Straße 316
Tel. (01) 6 16 66 97 · Fax (01) 6 16 66 97-13
eMail: weiss.umwelttechnik-wien@schunk-group.com

Weiss Technik Belgium B.V.B.A.
B-1770 Liedekerke
Nijverheidszone · Begijnmeers 63
Tel. (053) 68 10 10 · Fax (053) 68 10 20
eMail: sales@weiss-technik.be

Weiss Technik AG
CH-8802 Kilchberg · Bändlerstraße 29
Tel. (01) 7 16 10 66 · Fax (01) 7 16 10 76
eMail: info@weiss-technik.ch

Weiss Technik France E.U.R.L.
F-78955 Carrières sous Poissy
283, route d'Andrézy
F-78304 Poissy Cedex · B.P. 4015
Tel. (1) 34 01 11 00 · Fax (1) 39 75 11 00
eMail: info@weissfr.com

Weiss Technik Ltd.
GB-Coleshill · Buckinghamshire HP7 0LS
The Old School House · Luckings Estate
Tel. (01494) 43 43 24 · Fax (01494) 43 43 25
eMail: info@weiss-technik.co.uk

Weiss Technik Italia S.r.l.
I-20013 Magenta (Mi) · Via Murri, 22 - 28
Tel. (02) 97 29 16 16 · Fax (02) 97 29 16 18
eMail: info@weissitalia.it

Weiss Enet Industrietechnik B.V.
NL-4004 JP Tiel · Morsestraat 8
Tel. (03 44) 67 04 00 · Fax (03 44) 67 04 05
eMail: info@weissenet.nl

Weiss Environmental Technology Inc.
Menomonee Falls, WI 53051, USA
W146 N9300 Held Drive
Tel. (262) 253-8730 · Fax (262) 255-1391
eMail: info@schunkgraphite.com



Weiss Umwelttechnik GmbH Simulationsanlagen · Messtechnik

D-35447 Reiskirchen-Lindenstruth
Tel. (0 64 08) 84-0 · Fax (0 64 08) 84-87 10
Internet <http://www.wut.com> · eMail: info@wut.com

A Company

SupplyLAB
www.supplylab.pt