



# Desktop Climatic Chamber

*INSMCP*



# The innovation as an attitude

## *The company*

**Ineltec** is a company with more than 20 years of experience in the sector and 5.000 equipments installed all around the world. Our achievements are due to the ability of offering tailored solutions to perform any kind of test.

*“Technology, research and innovation are the basis for creating equipments of high reliability.”*



# Model

Desktop climatic  
Chambers from the  
INSMCP



Our range of climatic chambers from the  
INSMCP models has several volumes



# Model

## *Description of the equipments*

The **Compact Climatic Chambers of the INECC line** simulates environmental conditions of heat and cool mixed with humidity.

The maximum temperature range of the standard models are from -10°C to +150°C. We also design tailored equipments according to the specifications given to us. That way we modify or amplify the standard features.

The climatic chambers are used in all the industrial sectors since they meet the standards for environmental tests for any product or material.

## Volumes

01 50 liters

02 100 liters

03 150 liters

01



02



03



# Sectors



Aerospace,  
Aeronautical,  
Automotive,  
Railway,  
Naval



Construction,  
Luminary,  
Wood,  
Cork,  
Glass,  
Coating,  
Wiring,  
Ceramics



Pharmaceutical,  
Cosmetic,  
Veterinarian,  
Food industry



Plastic,  
Chemical,  
Petroleum,  
Carton,  
Paper,  
Rubber



Biologic,  
Biotechnologies,  
Agrobiologic,  
Insects



R+D,  
Technological  
centers,  
Universities,  
Laboratories



Electronic,  
Appliances,  
Telecommu-  
nications,  
Mechanical  
constructions,  
Metallurgic



Defense,  
Armament



Mineral  
Ironwork,  
Galvanic,  
Metallurgic



Textile

# Standards

DIN	EN	UNE	NF	ICH	FDA	ISO	ASTM	MIL	STD	VDA
IEC	BS	VG	IRAM	ETS	Telcordia	ECSS	RTCA	TR	SAE	UL
GR	NTS	ETSI	NEBS	NCh	SEMI	AS	NZS	ANSI	NMX	IRAM
ABNT	UNIT	INTN	NTP	...						

# Features of the equipments

## *construction*



01

### 01/ interior/exterior

The interior is built in stainless steel and the exterior in a white aluminum plate.



02

### 02/ mobility

The machine provides 4 multidirectional wheels with break dispositive.



03

### 03/ polycrystalline observation window

At the door it is located a polycrystalline observation window to observe the interior of the chamber.



04

### 04/ bulkheads

The climatic chambers have bulkheads for putting the electrical wiring or the calibration probe.



05

### 05/ trays

It is included 2 sample holder trays that are adjustable in its height and that are able to stand till 50Kg.



06

### 06/ control system

The touch screen PC comes with a control software that is simple and intuitive and allows the programming, acquisition, recording and controlling of all the variables.

# Features of the equipment

## Standard performance

Modelo INSMCP	Temperature	R.H.	Maximum thermal load at + 20°C	Gradients according to IEC-60068-3-5		Dimensions HxWxD (mm)	Approx. Weight
Vol. Liters	-10°C	10%	1 Kw	Ref.	Cal.	Internal	Kg.
	+150°C	98%		2,7°C min	4°C min		
50	*	*	*	*	*	500x400x250	100
100	*	*	*	*	*	500x500x400	110
150	*	*	*	*	*	600x600x400	130

## On all the volumes

### Stability

Temp.  $\pm 0,3^{\circ}\text{C}$  max.

R.H.  $\pm 2\%$  max.

### Resolution

Temp. 0,1°C

R.H. 0,1%

### Accuracy

Temp.  $\pm 0,5^{\circ}\text{C}$  max.

R.H.  $\pm 2\%$  max.

### Homogeneity

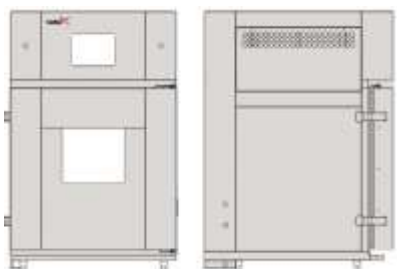
Temp.  $\pm 2^{\circ}\text{C}$  max.

R.H.  $\pm 2\%$  max.

### Other features under request

# Features of the equipment

## External dimensions



*\*Approximated dimensions*

Volume	High (mm)	Width (mm)	Depth (mm)
50	1150	700	925
100	1150	700	925
150	1250	800	925

## Electrical consumption and noise level

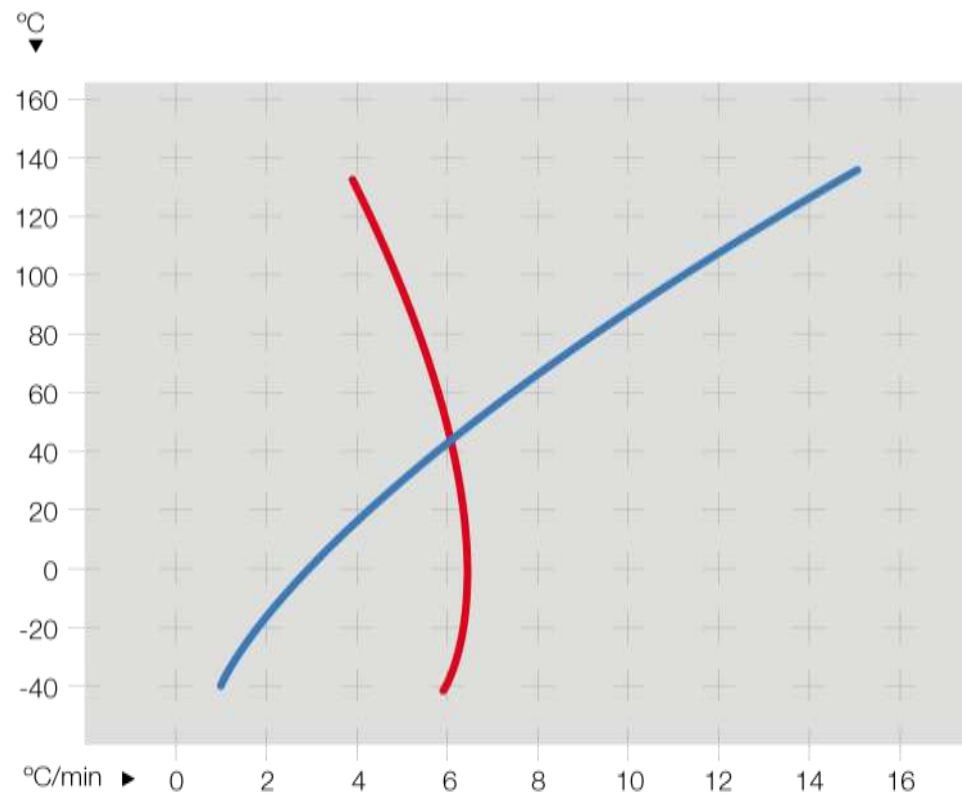
Modelo INSMCP	Connection voltage and power	Maximum consumed voltage	Calorific power	R.H. power	Noise level
Vol. Liters	230V II+TT	Kw	Kw	0,75	<65
	50 Hz			Kw	dB
50	*	3	1	*	*
100	*	4	1,5	*	*
150	*	5	2	*	*



# Features of the equipment

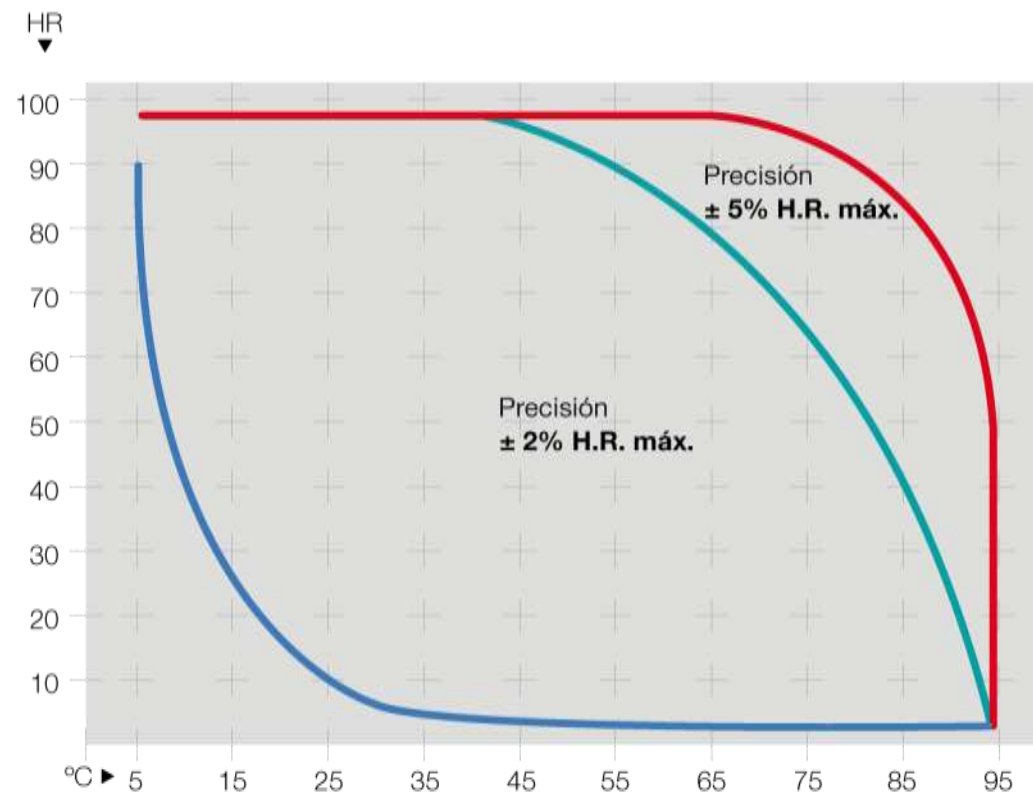
*graphs*

## Gradients IEC-60068-3-5



■ Frío ■ Calor

## Working range R.H.

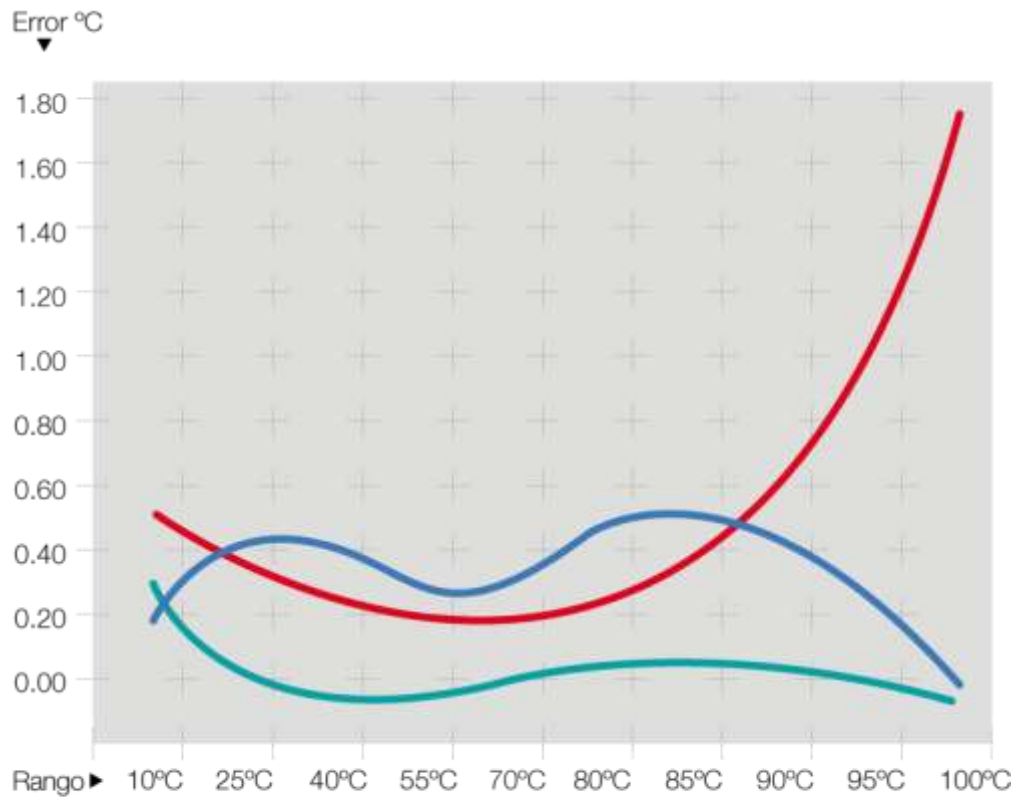


■ HR máxima (rango aumentado) ■ HR máxima ■ HR mínima

# Features of the equipment

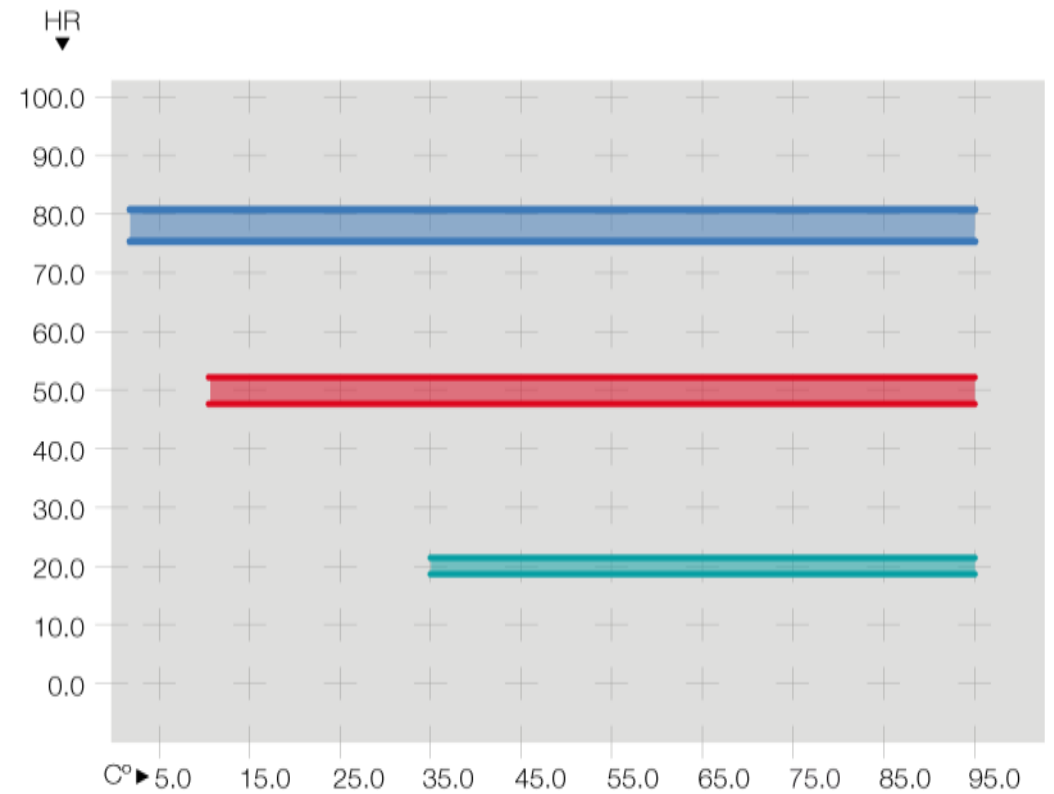
*graphs*

## Temperature error



■ Error de uniformidad (+/-) ■ Error de lectura (+/-) ■ Estabilidad

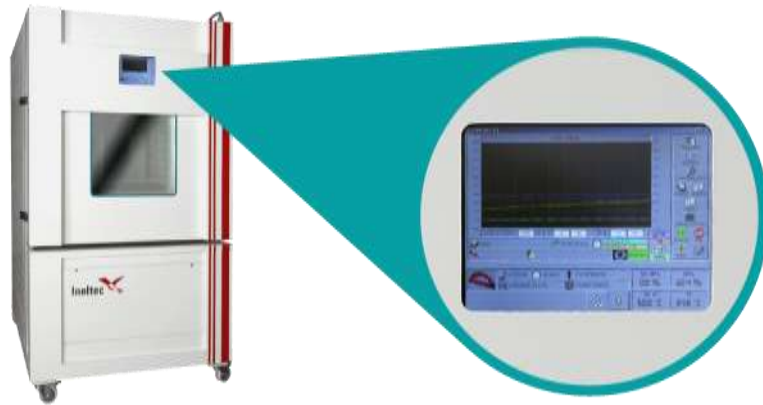
## Stability R.H. / T<sup>a</sup>



■ Estabilidad H.R. 20% ■ Estabilidad H.R. 50% ■ Estabilidad H.R. 80%

# Control system

*Touch screen PC hardware*



## Features

01 USB

02 Ethernet

03 Wi-Fi (opcional)

04 CF Socket

05 VGA Com.

06 RS 232 Com.

07 PS/2

*software/  
use*

*With the **PROCAM-WIN** integrated software it is possible to perform the programming, acquisition, recording, control and analysis of the results.*

*software/  
features*

- 1/ Possibility of automatic or manual programming
- 2/ Programming the test's start up on the specified date and hour
- 3/ Allows to take / entering notes during the tests
- 4/ Different access levels

- 5/ Maximum 11 operators
- 6/ More than 100 programs
- 7/ Maximum 100 segments per program
- 8/ Linking of 4 programs
- 9/ 1 to 999999 or infinite programming cycles

- 10/ Visualization and record of the tests in a graphic or table
- 11/ Option to export to Excel or similar
- 12/ Setting of minimum and maximum limits for alarms of temperature and humidity for each cycle.
- 13/ Controlling from distance through Ethernet, WIFI and WEB

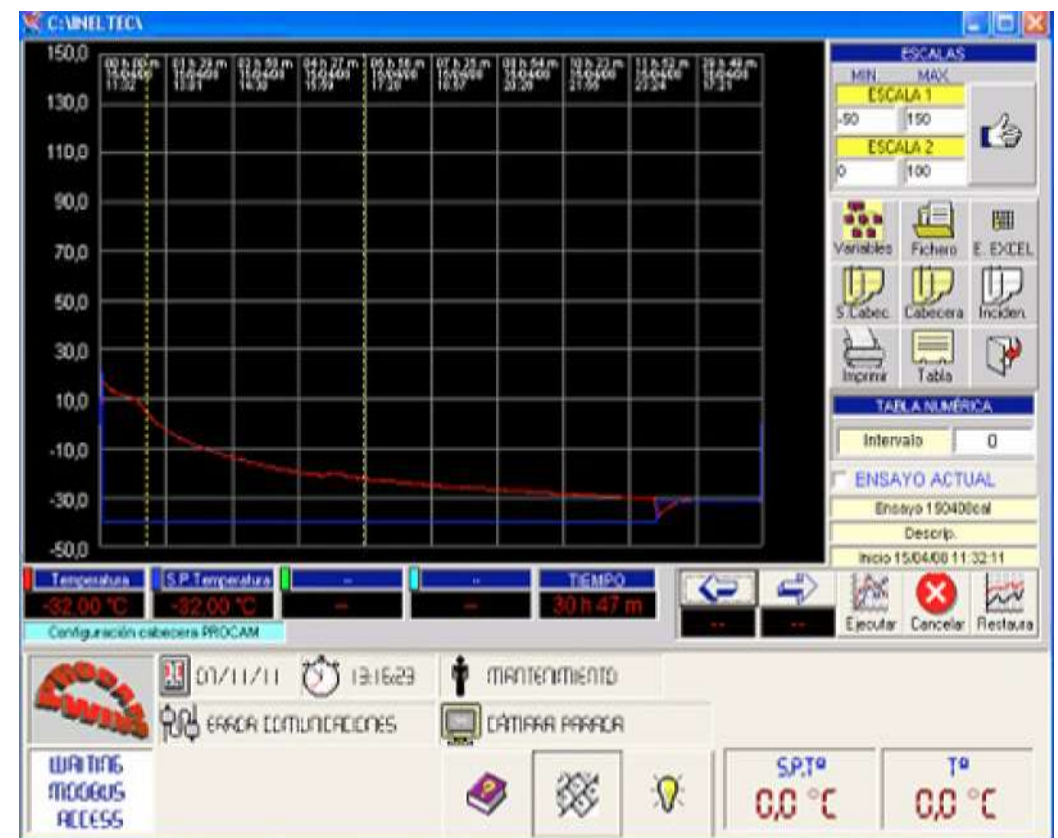
# Control system

software/  
screens

The  
Operators

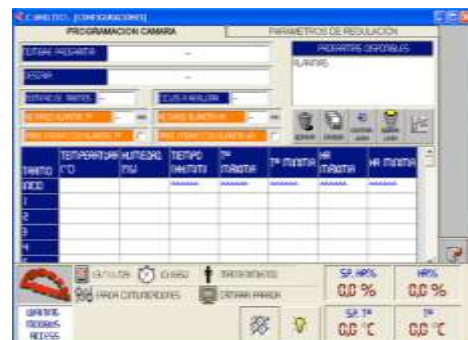
Maintenance  
screen

Software  
Procam-Win / graphics



Testing  
Conditions

Programming of the  
chamber



# Range of products

Compact Climatic Chambers  
INECC range/ INELTEC

## ES Simulation equipments



Climatic chambers



Modular chambers



Thermal shock



Combined tests



Specials



Stability



Generator groups



Calorimetric



Corrosion - combined



Corrosion



Frost / Defrost



Tightness – rain



Tightness



Freezer cabinet



Thermostatic bath



Furnace



Heating



# Range of products

Compact Climatic Chambers  
INECC range/ INELTEC

## BE Testing bench



Fatigue endurance



Characterization



Pulsing pressure



Rupture



Bursting



Liquid Thermal Shock



Normalized



Resistance to the fire - I



Resistance to the fire - II



Reaction to the fire - I



Reaction to the fire - II

## MC Measurement and control



Artificial vision - I



Artificial vision - II



Artificial vision - III



Finish line control - I



Finish line control - II



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# Standard annex

BS 2011	DIN 50014	IEC 60068-3-5	MIL-E-5272, Met. 4.4	MIL-T 5422 E, part 4.4	VG 95332
BS 2011, Part 2, Test A	DIN 50016	IEC 60721-4	MIL-STD 202	Telcordia GR1435, Part	VG 95332, page 22
BS 2011, Part 2, Test B	DIN 60068	IEC 61300-2-17	MIL-STD 202 E, Met. 106 D	4.4.3	VG 95332, page 23
BS 2011, Part 2, Test Ca	DIN 72300-4	IEC 61300-2-18	MIL-STD 202 E, Meth. 103B	Telcordia GR1435, Part	VG 95332, page 3
BS 2011, Part 2.1, TEST DA	DIN/IEC 68-2-30	IEC 61300-2-19	MIL-STD 750 B, Met. 1021.1	4.5.3	VG 95332, page 34
BS 2011, Part 2.1, Test N	DIN/IEC 68-2-30 DB Var. 1	IEC 61300-2-21	MIL-STD 810 D	Telcordia GR1435, Part	VG 95332, page 4
CPMP/ICH/279/95	DIN/IEC 68-2-30 DB Var. 2	IEC 61300-2-22	MIL-STD 810 D, Met. 501.2	4.4.1	VG 95332, part 5
CPMP/ICH/380/95	DIN/IEC 68-2-56	IEC 61300-2-46	MIL-STD 810 D, Met. 502.2	Telcordia GR1435, Part	RTCA-DO-160G
DIN 12880 part 1	ECSS-Q-70-038	IEC 61300-2-47	MIL-STD 810, Met. 507 Proc. 1-2-	4.4.2	NCh2791.Of2003
DIN 40046	ECSS-Q-70-08A	IEC 61300-2-48	3	Telcordia GR1435, Part	NCh2802.Of2003
DIN 40046 part 2	ETS 300019-2	IEC 62108	MIL-STD 883	4.5.2	NMX-C-228-1984
DIN 40046 part 3	IEC 60068-2-1, Test A	IEC 68-2-1, part A	MIL-STD 883 C, Met. 1004.4	Telcordia GR1435, Part	UNIT 795:1990
DIN 40046 part 5, test C	IEC 60068-2-14 Test Nb	IEC 68-2-14	MIL-STD 883 C, Met. 1008.2	4.4.4	UNIT-IEC 60811-1-4:2004
DIN 40046, Part 101	IEC 60068-2-2, Test B	IEC 68-2-14 Nb	MIL-STD-202 E, Meth. 108A	Telcordia GR1435, Part	UNIT-IEC 60811-3-2:2005
DIN 40046, Part 14, Test Nb	IEC 60068-2-3, Test Ca	IEC 68-2-2, test B	MIL-STD-202, Meth. 103B	4.4.5	
DIN 40046, Part 14, Test Nb	IEC 60068-2-30, Test Db,	IEC 68-2-3, TEST	MIL-STD-202, Meth. 106D	Telcordia GR1435, Part	
DIN 40046, Part 14, Test Nb	Var.1	103B	MIL-STD-331 A, Meth. 105.1	4.5.1	
DIN 40046, Part 14, Test Nb	IEC 60068-2-30, Test Db,	IEC 68-2-3, test Ca	MIL-STD-331 A, Meth. 112.1	Telcordia GR1435, Part	
DIN 40046, Part 3, Test A	Var.2	IEC 68-2-30	MIL-STD-750 B, Meth. 1021	4.5.5	
DIN 40046, Part 31	IEC 60068-2-38	IEC 68-2-38	MIL-STD-810 D, Meth. 501	Telcordia GR326, Part	
DIN 40046, part 4, test 3	IEC 60068-2-4, Test D	IEC 68-2-4, test D	MIL-STD-810, Meth. 502	4.4.2.1	
DIN 40046, Part 4, Test B	IEC 60068-2-56	MIL-E 5272	MIL-STD-810, Meth. 507	Telcordia GR326, Part	
DIN 40046, Part 4, Test B	IEC 60068-2-66	MIL-E 5272, Met. 4.1	MIL-STD-883 C, Meth. 1008	4.4.2.2	
DIN 40046, Part 5	IEC 60068-2-67	MIL-E-5272, Met. 4.2	MIL-STD-883, Meth.1004	UNE-EN 60068	