INNOVATIVE TEST & MEASUREMENT SYSTEMS

DOCUMENTATION / FAQ

Drip devices for tests according to IPX1/2 and MIL standard - What are the differences between the devices?

Rev. 00

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1. Question

Drip devices for tests according to IPX1/2 and MIL standard - What are the differences between the devices?

2. Answer

The IPX1 and IPX2 dripping water tests in accordance with the DIN EN 60529 and ISO 20653 do not differ in their requirements. Both standards make the the following guidelines for conducting the audit.

IP X1

- DIN EN 60529 / ISO 20653: Drip rate: 1mm/min
- Ø 0.4mm drip nozzle
- Position of DUT: Turntable (1rpm), eccentricity 100 mm
- Test duration: 10min

IP X2

- DIN EN 60529 / ISO 20653: Drip rate: 3mm/min
- Ø 0.4mm drip nozzle
- Position of DUT: In 4 fixed positions of 15° tilt
- Test duration: 10min (4 x 2.5min per position)

In both standards, a grid of 20 x 20 mm is used for the drip needles.
Unfortunately, this design of the drip devices does not match the required design of the MIL 810-STD. The following table shows the main differences between the design of the devices. Within the MIL STD 810, even the

	ISO 20653 / DIN EN 60529	MIL STD 810 Pro.1	MIL STD 810 Pro.2
Grid:	20 x 20	20 x 20	25 x 25
Nozzle diameter:	0.4 mm	0.5-0.6 mm	0.33 mm
Nozzle shape:	Needle	Needle	Drilled hole
Material:	Stainless Steel	Stainless Steel	Brass material
Drip quantity:	1-3 mm/min	280l/m² per h	>280l/m² per h

This means that 3 drip devices are required to meet all standards.

3. Note on ITS products

If the water hardness is over 6°dH, we recommend that you always use a water softening system when using our drippers. Otherwise, the small diameter of the drip needles will quickly lead to clogging with limescale deposits.