



T1-83

TEST CHAMBER FOR WATER TESTS IPX1 to IPX4

KEYWORDS

IP CHAMBER, DRIP BOX, OSCILLATING TUBE, TURNTABLE, IEC TEST EQUIPMENT, EN, UL, http://webstore.iec.ch/preview/info_iec60529%7Bed2.2%7Db.pdf, Degrees of protection provided by enclosures (IP Code), EN ,GB.

COMPLIANCE

It is constructed in compliance with IEC 60529, 60335-1, IEC 60065, 60950, ,...

INTRODUCTION

IP chamber is intended for performing IPX1, IPX2, IPX3 and IPX4 test, for checking degrees of protection provided by enclosures (IP Code).

Our climatic chambers were designed with the following goals:

- Safety
- Reliability
- Ease of operation
- Ergonomical design

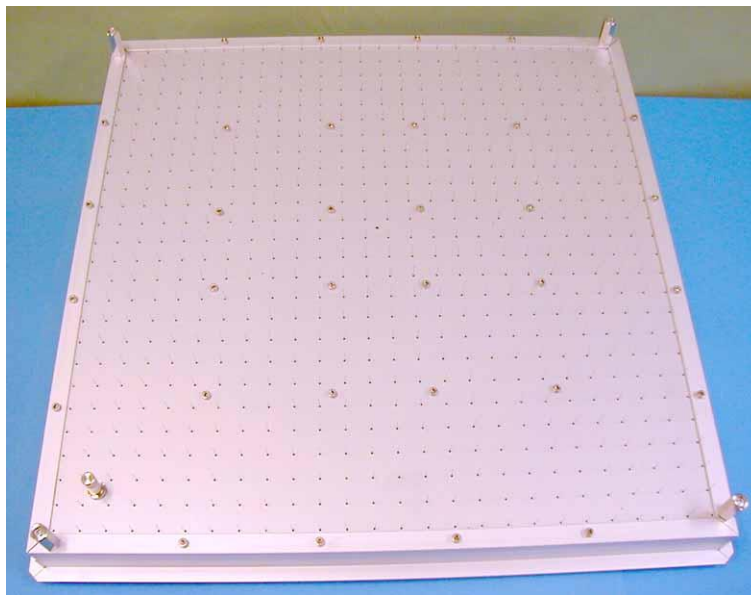
The **BOLD** features below are some of advantages that were introduced to reach these goals.

MAIN FEATURES

- Self standing chamber on 4 massive legs or 4 swivel rollers (optional)
- Internal dimensions: WxDxH: 1050 x 1050 x 1050 mm
- External dimensions: WxDxH: 1500 x 1925 x 1300 mm
- All stainless steel interior **AISI 304**
- Glass door, with wiper, robust hinges, safety switch, spring loaded latch and reinforced seal
- Powder coated exterior (RAL 7035) – **scratch resistant**
- Inside on the top is located drip box 700 x 700 mm
- In the middle are located oscillating tubes of R200 and R400, that are easy exchangeable
- On the bottom is turntable with height adjustable tiltable telescopic support, for sample position adjustment. 1 RPM, two modes of operation: circular and angular (+/- 360 deg, to allow the sample to be power supplied during the test). Carrying capacity 25 kg.
- Below the table is located extractable reservoir of water with draining valve and water pump.
- On the right side is electric control unit with all electrical components: switches for selecting the test, start and stop buttons, knob for water pressure/flow regulation, thermometer for measuring water temperature, timer for test duration, knob for oscillation speed, oscillation angle selector (60 and almost 180 deg.), knob for turntable rotation speed adjustment and switch for turning water on/off.
- Below the chamber is water control unit with the following elements: manual valve for flow controlling, flow-meter 20-200 l/h, water filter, pressure gauge, electromagnetic valve that is controlled by control unit, over-pressure protection switch, pump. Water is recycled.
- After operating time that had been set on the timer runs out the tube returns to vertical position, apparatus is switched off, and the water is shut off.

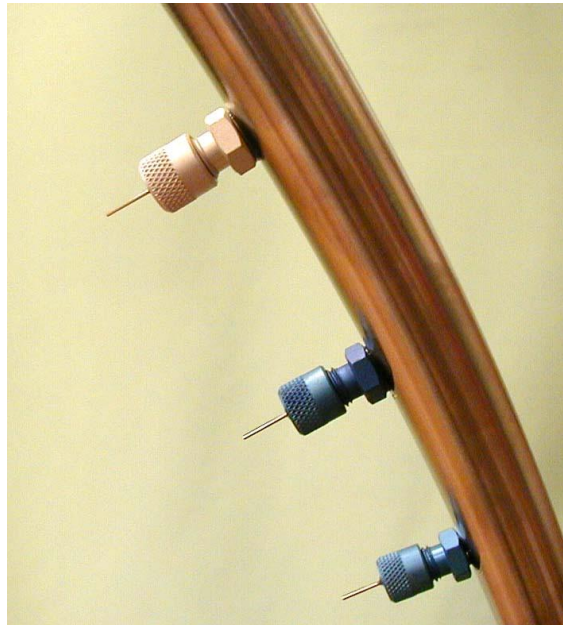
IPX1, IPX2

- Drip box 700 x 700 mm, with drain valve and air release vent
- Hermetically closed and to prevented from dust and other causes of nozzle blockage/jamming
- Exact setting of water flow (dripping) rate with adjusting of pressure of water
- Recycling of water from internal reservoir
- Casing is made of anodized aluminum and stainless steel
- On the bottom surface drip nozzles are spaced 20x20 mm
- Nozzles fast replaceable (in case of jamming or damage).
- Drain off valve for emptying the drip box located on the bottom side
- 100 spare nozzles enclosed
- Nozzles are very simple and inexpensive.



IPX3, IPX4

- Oscillating tubes are made of stainless steel tubes, that are bent in a shape of semicircles with radii that are prescribed with IEC standards
- In this chambers can be mounted either $r=200$ or $r=400$ mm.
- Inside tubes are located 50 mm spaced nozzles $\varnothing 0,4/0,9$
- These nozzles enable centering (all of them) of out-coming jets and its shutting-off (blue only), when the spraying angle should be limited to $\pm 60^\circ$. Nozzles are screwed in the tube and can be replaced (obstruction or damage) and/or cleaned.
- Swiveling angle can be selected by switch

**DESIGN**

Free standing apparatus on 4 swivel castors with brakes.

Solid construction, Non-sensitive, scratch-resistant surfaces through powder-coating, galvanized steel sheets.

Internal chamber: Stainless steel AISI 304.

TECHNICAL SPECIFICATIONS

Line voltage 230V, 50Hz
Power consumption 500 VA

DRIP BOX

Dimensions WxDxH 730 x730 x36 mm
Dripping surface 700 x 700 mm
Maximum height of sample 470 mm
(for dripping height 200 mm)

Spacing of nozzles 20 x 20 mm
Nozzle dimensions ø 0,45/0,27x 20 mm - inox
Air release vent automatic 3/8"
Drain off plug 3/8"
Allowable pressure max.0,5 bar

OSCILLATING TUBES

Radii 200, 400 mm
Nozzles stainless steel, ID 0,4 mm, adjustable

Water container capacity 60 l
Flow meter 20 - 200 l/h

Internal dimensions

Width	1000 mm
Depth	1000 mm
Height	1000 mm

External dimensions

Width	1370 mm
Depth	1150 mm
Height	1910 mm

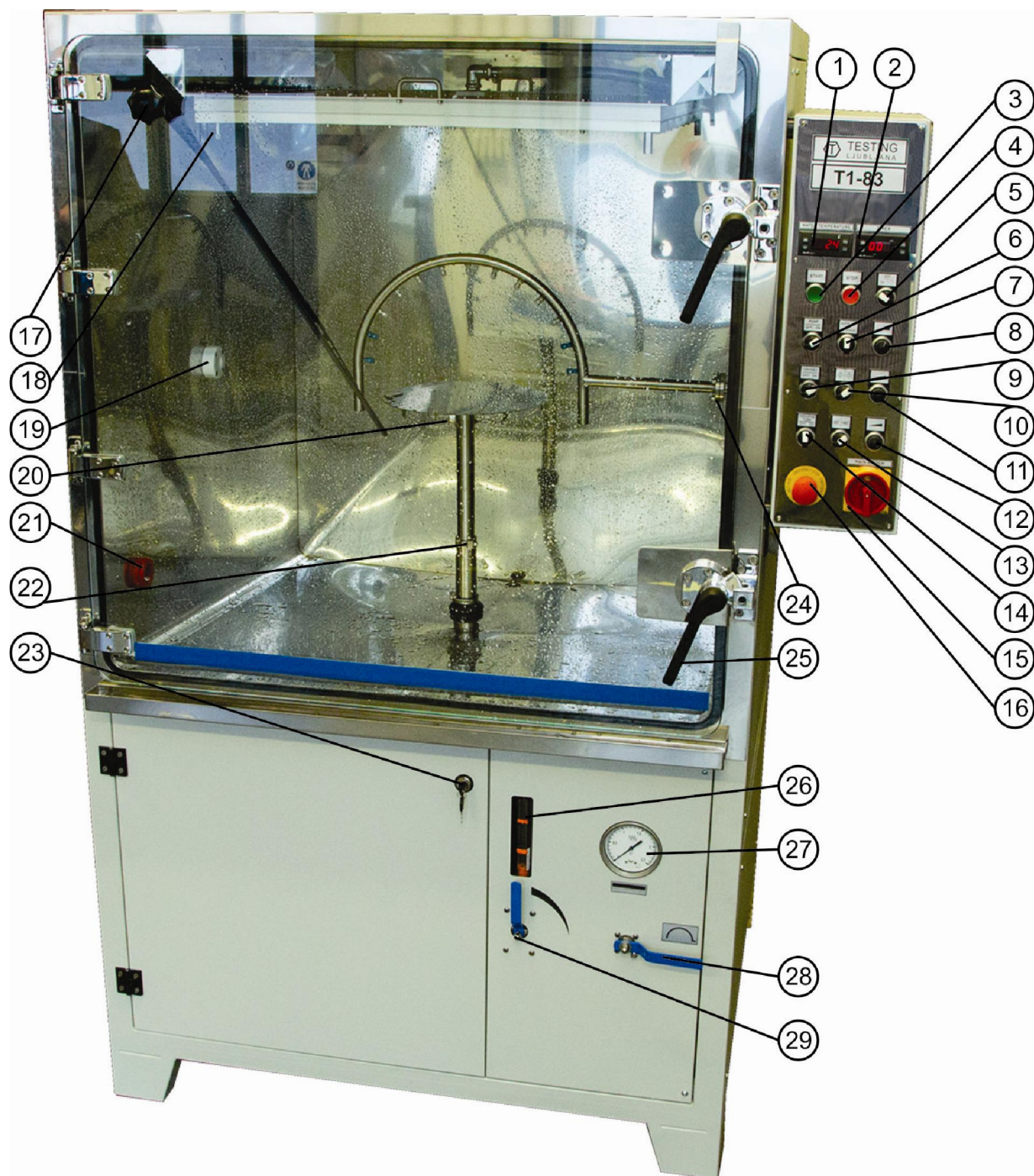


Fig. 1

LEGEND WITH Fig. 1

1. Thermometer for water temperature measuring
2. Timer
3. START push button
4. STOP push button
5. Selector Switch: ON, OFF, TIMER
6. Pump ON/OFF switch
7. Pump MANUAL/AUTOMATIC selector
8. Pump speed regulation knob (pressure adjustment)
9. Turntable ON/OFF switch
10. Turntable mode selector (continuous turning or +-360 degrees)
11. Turntable speed adjustment knob
12. Oscillation speed selection knob
13. Angle of oscillation 60/180 selector switch
14. Oscillating tube ON/OFF selector switch
15. Main switch
16. Emergency STOP button
17. Wiper handle
18. Water draining plug
19. Pivot point for large oscillating tube (radii 400 mm)
20. Hex screw for adjusting 15 degree angle of tilt for IPX2 test
21. Entry port
22. Hex screw for height of support adjustment / rod exchange
23. Door with water container
24. Hex screws for mounting/exchange of selected oscillating tubes
25. Handle of door latch
26. Flow meter – upper surface is relevant
27. Pressure gauge
28. Valve for selection of IPX1,2 or IPX3,4 test
29. Valve for pressure adjustment