

HOT AIR OVEN-cum-INCUBATOR I Nx™

INTRODUCTION

Determination of effect of ageing on various physical properties of different materials may be carried out, by heating the material under test, inside the oven-cum-incubator as temperature required so that the effects of long-term ageing are reproduced within a much shorter duration of time.

For this evaluation, physical properties of the material under test are determined before ageing, and again after ageing the test specimen at the specified temperature, for a set duration of time and subsequent cooling to the room temperature before conducting the tests again.

For this purpose the equipment needed for conducting the determination can either be kept inside the heating chamber with the test specimens, or if this is not feasible because of certain constrains, by taking the heated specimens out from the heating chamber and conducting the test in still air within the shortest possible span of time.

EQUIPMENT

Paramount Hot Air Oven-cum-Incubator I Nx™ has the latest design with latest German Technology and it can be used as a Hot Air Oven or an Incubator. The Equipment has a user friendly, head-up Control panel for convenience and ease in operations. It has a triple walled inner chamber made of special grade stainless steel. Two perforated Stainless Steel shelves are provided for keeping the samples. The inner walls are made of Stainless Steel and outer walls of mild steel sheet, duly powder coated for striking appearance. The forced air circulation system, with a horizontal blower, keeps the temperature in the inner chamber uniform and consistent. Hot Air Oven-cum-Incubator range. The Temperature Range is from ambient to 250 °C with an accuracy of ± 2 °C. It has 2 special Heaters of 750 watts each while operating on oven both heaters are working. While daily incubator, only one Gets operated. The Heaters are made of high-quality ni-chrome wire and finest ceramic Beads. The Heaters are duly placed in, specially fabricated deep drawn ribs, in the Inner Stainless Steel Chamber, for uniform Temperature in the Oven. With two displays one for Oven & one for Incubator.

The insulated Door is fixed with toughened Glass view panel, so that the sample inside can be viewed without disturbing the Temperature. The complete circuitry is on the top, with a special cooling Fan, to let the Oven run continuously for unusually longer hours. A specially fabricated door with specially designed handle keeps the inside temperature completely stable. The specially fabricated foot rest keeps the whole oven in correct equilibrium. The equipment adheres to CE requirements as a special MCB is provided at the back to protect the unit from sudden (high or low) Voltage fluctuations. The unit is fixed with Caution and other stickers, as per International Safety norms. The Equipment is provided with ventilation port with adjustable opening on the control panel to monitor natural change of air inside through convection.

The finest components and best raw material has been used to manufacture this exceptionally robust and reliable instrument.

SALIENT FEATURES

- Dual unit which acts as an Hot Air Oven for Heating and Drying and also as an Incubator for Perspiration Fastness Test. A special switch converts the Equipment into an Oven or an Incubator.
- Ergonomically designed equipment with excellent aesthetics and guaranteed performance. The only Equipment of its kind available in India incorporating German Technology.
- Two Separate Digital Temperature Controllers. One for Oven having Range: Ambient to 250° C degrees + 1° C. Other for Incubator having Range from Ambient to 140 degree + 0.5° C.



- Double Walled Body with air curtains on the Front and Both sides to keep the outer body Cool. Inside Chamber complete made of Stainless Steel (Grade SS316).
- A special Thermostat to control the flow of current to Heaters for uniform Heating.
- Insulated Glass Windows to view the samples without opening the Door.
- Twin Blowers are fitted to keep the Door and the Body Cool and the third Blower to keep Inside Temperature Uniform.
- Air Slider unit to eject the inside humidity of the chamber.
- Supplied complete with two stainless Steel (Grade SS 316) Trays to keep the samples.

TECHNICAL DETAILS

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|----------------------------|---------------------------------|
| Inner Chamber Construction | : Special Grade Stainless Steel |
| Air Circulation | : Fan assisted |
| Usable Volume | : 3.375 cube feet |
| Capacity | : Up to 4 Perspirometer Units |
| No. of Shelf | : 2 S. Steel Shelf (removable) |

For Hot Air Oven

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|---------------------|---------------------|
| Maximum Temperature | : Ambient to 250 °C |
| Least Count | : 1 °C |
| Accuracy | : ± 2 °C |
| Heater Capacity | : 1.5 K watts |

For Incubator

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|--------------------------------|--|
| Maximum Temperature | : Ambient to 140 ° |
| Least Count | : 0.1°C |
| Accuracy | : ± 0.5°C |
| Heater Capacity | : 750 watts |
| Electric Supply | : 220 Volt . 50 Hz Single Phases. AC Supply. |
| Inner Chamber Dimensions | : 450(L) x 450(W) x 450(H) mm |
| Overall Dimensions of the UNIT | : 550 (L) x 700 (W) x 820 (H) mm. 21.5" (L) x 27.5" (W) x 32.5" (H) Inch. |
| Net weight of the unit | : 84 kg. (185 lbs) |

RELATED STANDARD

ASTM D 5427 - 98