

## HYBRIDIZATION OVEN



### PRODUCT OVERVIEW

Hybridization oven operates with the microprocessor control to monitor the rotation speed of temperature and bottles for dynamic mixing capacity. It is ideal for DNA library screening, primer synthesis and all optimal conditions for nucleic acid hybridization. The UV cross linker provides a very similar shortwave radiation exposure cell for nucleic acids to fast medium, usually done before hybridization. UV output is measured by an internal sensor and controlled by an on-board microprocessor, which enables accurate, reliable and secure laboratory crossings.

### APPLICATIONS

#### **Nucleic Acid Hybridization Studies:**

Used extensively in molecular biology for DNA-DNA, DNA-RNA, and RNA-RNA hybridization experiments, allowing precise probe binding and detection.

#### **Southern and Northern Blotting Procedures:**

Essential equipment for performing Southern blot (DNA analysis) and Northern blot (RNA analysis) techniques, ensuring efficient transfer and probe hybridization to membranes.

#### **Western Blot and Protein Binding:**

Suitable for protein hybridization studies, including the incubation and washing of membranes during Western blot assays.

### KEY FEATURES

- **Uniform Heat Distribution:** The chamber provides uniform heating through advanced air circulation.
- **Rotary Mixing System:** A built-in rotisserie or rotating platform allows continuous movement of hybridization bottles or tubes, ensuring complete and uniform exposure of the membrane to the hybridization solution. This motion promotes efficient molecular binding and enhances accuracy.
- **Digital Display and Programmable Controls:** The incubator features an easy-to-read digital display for temperature, speed, and time settings. Programmable controls allow users to set incubation periods with automatic shutoff, improving workflow and repeatability.
- **Over-Temperature Protection:** Safety mechanisms automatically cut off heating if the temperature exceeds the set limit, protecting both the samples and the equipment from overheating.
- **Durable and Corrosion Construction:** Built from high-quality stainless steel from inside & Outer MS Duly powder-coated
- **Quiet and Energy-Efficient Operation:** Engineered for low noise and minimal vibration, ensuring stable operation and a comfortable laboratory environment.
- **Compact and Ergonomic Design:** The compact design fits easily on laboratory benches while offering a user-friendly interface for effortless operation.

## TECHNICAL MATRIX

Model No	PTE-HO -411
Construction	Double-walled chamber – Inner chamber made of stainless steel (SS 304) Outer body made of powder-coated mild steel
Inner Size	450x350x350 mm WxDxH
Insulation	High-grade glass wool insulation to prevent heat loss
Temperature Range	Ambient above +10°C to 70 °C
Temperature Accuracy	±0.5°C
Temperature Uniformity	±1°C throughout the chamber
Temperature Control System	Digital PID temperature controller with LED display
Heating System	Uniform air circulation or forced convection for even temperature distribution
Rotisserie / Rotary Motion	Built-in motorized rotisserie for continuous rotation of bottles
Rotisserie Speed	Adjustable between 5–15 RPM
Bottle Capacity	Can accommodate 6 hybridization bottles (standard 35 mm dia × to 300 mm length)
Bottle Material Compatibility	Borosilicate glass bottles or similar heat-resistant materials
Timer Function	Digital programmable timer (up to 99 hours or continuous mode)
Display Type	Digital dual display for temperature and timer
Door Type	Front-opening door with toughened glass window for viewing
Safety Features	Over-temperature protection with automatic cut-off; audio-visual alarm
Power Supply	230 V ±10%, 50 Hz, single phase AC
Power Consumption	1 KW
Weight	50-70 Kg (depending on model)
Accessories Supplied	Hybridization bottles, bottle holders, adjustable shelves, and power cord

## OPTIONAL - ADD ONS

- Additional hybridization bottles (various sizes)
- Interchangeable bottle holders/racks
- Temperature data logger / recorder RS-232 or USB port for PC Interface
- Touchscreen HMI PLC controller upgrade
- Rocking Shaker at the bottom