



## Laboratory Hydrothermal Autoclave



### Hydrothermal Autoclave

The Hydrothermal Autoclave Reactor use to carry hydrothermal reaction at high pressure and high temperature. Hydrothermal synthesis reactor generally comes in a two variety; the first is Polytetrafluoroethylene (PTFE) or Teflon lined hydrothermal autoclave reactors and the second is PPL lined autoclave. Hydrothermal reactor mainly made up of two parts; outer high-quality stainless steel jacket and inner Teflon liner or Teflon chamber. In the Teflon-lined autoclave, the reaction is carried out at maximum 240-degree Celsius (428 Fahrenheit), while the safe temperature is 200-degree Celsius (392 Fahrenheit). PPL lined reactor use for the reaction operate at higher temperature, where the safe temperature will be 260-degree Celsius (500 Fahrenheit) and the maximum operating temperature is 280-degree Celsius (536 Fahrenheit). This product extensively used in the scientific laboratory, research and development labs, institutional organizations, quality analysis section in industries etc.

#### Features:

- operating temperature:  $\leq 220^{\circ}\text{C}$
- Safe temperature:  $- 200^{\circ}\text{C}$
- Working Pressure:  $\leq 3\text{MPa}$  or 30 Bar
- Heating and Cooling Rate:  $\leq 5^{\circ}\text{C}/\text{min}$
- Material: Shell made of high-quality nonmagnetic 316 stainless steel
- Easy to handle
- Threads are very smooth to lock and unlock
- Can be customized as per requirement
- Primary screw type cap for basic tightening
- Best price and cost effective
- Secondary cap has been provided at the top of the reactor for extra tightening to avoid leakage
- Customized stainless steel jacket/autoclave of SS 316 can also be provided if needed, which is better for corrosive materials.



#### Outer Jacket Material availability:

- Stainless Steel 304
- Stainless Steel 316

#### Inner Material availability:

- Teflon Lined
- PPL Lined

#### Capacity :

- 10ml, 25ml, 50ml, 100ml, 150ml, 200ml, 250ml, 300ml, 400ml, and 500ml,
- while the flange type sealing will be in a 1000ml, 1500ml, and 2000ml autoclave.

#### Applications:

- Environmental science
- Energy
- Advance material science
- Material Engineering
- Nanotechnology
- Polymer industry
- Catalysis
- Petrochemical Industry

Hydrothermal Autoclave		
Product Code	Capacity in cc	Lined
HTA-10	10	Teflon / PPL
HTA-25	25	Teflon / PPL
HTA-50	50	Teflon / PPL
HTA-100	100	Teflon / PPL
HTA-150	150	Teflon / PPL
HTA-200	200	Teflon / PPL
HTA-300	300	Teflon / PPL
HTA-500	500	Teflon / PPL