

## LAB SCALE BIO-REACTOR



### TECHNICAL SPECIFICATIONS & SCOPE OF SUPPLY

#### 5-lit Autoclavable Glass fermenter

##### 1. Fermentor vessel :-

- Borosilicate (pyrex) glass vessel
- Total capacity 5 litres
- Working volume range 1 litres (minimum) to 3.5 litres (maximum)
- Stainless steel support plates (top & bottom) with ports & fittings for the following :-
- Air Inlet deep pipe

- Air Vent
- Inoculation port cum sampling
- Thermowell
- Media in
- Addition port(s)
- Spare port(s) with blind plug(s)

## **2. Agitation (stirring) arrangement :-**

- Magnetic stick stirrer along with heavy duty motor.
- Motor speed variation, range 100 – 1500 RPM
- Digital RPM meter for motor speed.

## **3. Aeration control system:-**

- Air compressor
- Air flow rotameter with needle valve for manual flow control setting
- Autoclavable air filter capsules, rating 0.2 micron, for air inlet & exhaust

## **4. Cooling-based temperature measurement & control system:-**

- RTD Pt-100 temperature sensor
- Microprocessor-based digital on/off type temperature controller for cold water control
- Control range: From ambient temperature up to 50°C

## **5. Automatic pH control system: -**

- Autoclavable PH sensor with connecting cable (vessel mounted), Controller (panel mounted)
- Peristaltic pump for pH adjustment (3 lit per hour) for Acid/Base

## **6. Control panel console:-**

- Powder coated control panel console with electrical switchgear, panel accessories & mounting arrangement for various panel-mounted instruments

- Suitable for tabletop mounting adjacent to fermenter

### **7. Mounting arrangement:-**

- Sturdy powder coated benchtop mounting stand for the complete system, dimensions 25" x 14"(approx.)

### **This model is suitable for the following applications:-**

- College-level experiments, demonstration, practical
- Research work on the following :-  
Microbial cultures (bacteria, yeasts, actinomycetes, fungi)
- Low, medium or high conditions of the following :-  
Broth viscosity, broth density & cell density

### **Models Available :-**

<b>SR.NO.</b>	<b>Model Name</b>	<b>Full Capacity</b>	<b>Model type</b>
1	Autoclavable Lab Glass Fermenter (ALF-2)	02 lits	Basic, Premium
2	Autoclavable Lab Glass Fermenter (ALF-3)	03 lits	Basic, Premium
3	Autoclavable Lab Glass Fermenter (ALF-5)	05 lits	Basic, Premium