

## 100 lit Lab Fermenter



**Model Name: - DF-LF-100L**

### TECHNICAL SPECIFICATIONS & SCOPE OF SUPPLY:-

#### 1. Fermenter vessel :-

- MOC- SS316 for all Wetted parts & SS 304 for no wetted parts.
- Total capacity -100 liters
- Working volume -70% of total capacity

- Stainless steel tank with jacket, ports & fittings for the following :
- Air sparger
- Vent
- Inoculation port cum sampling
- Pressure Gauge
- Safety valve
- Thermo well
- Sensor port
- Spare port

## **2. Tank's Jacket Nozzles:**

- Water in
- Water out
- Steam in
- Steam out
- Steam Trap
- Spare ports

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

- Bottom driven seal-less & totally leak-proof magnetic drive agitator with single/double turbine impeller
- Industrial grade AC induction motor
- Variable frequency (ACVFD) drive for motor speed variation, range 100 – 400 RPM
- Digital RPM meter for motor speed

## **4. 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

## **5. 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 : 5 above cold water temperature upto 60°C

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

- Powder coated control panel console with electrical switchgear, panel accessories & mounting arrangement for various panel-mounted instruments
- Suitable for Trolley/Wall mounting adjacent to fermentor

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

- Sturdy Trolley top mounting stand for the complete system to move.

### **Optional Features:**

- Automated Electric operated Steam generator trolley mounted
- Air compressor
- Water chiller
- Automated PH control
- Automated DO control

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

- Demonstration, Manufacturing.
- Batch production on the following :-  
Microbial cultures (bacteria, yeasts, actinomycetes, fungi)
- Low, medium or high conditions of the following :-  
Broth viscosity, broth density & cell density