Glass Fermenter, 5L
Model: ST-GF5L

- This system comprises 1 culture vessel with a total volume of 5L, pipelines, aeration system, sensor and instruments, local control system (based PLC and touch screen monitor), remote control system (including software and communications) and stainless steel bench etc.

BASIC UNIT:

1. Vessel

Total volume: 5L, working volume: 3.5L.
Special borosilicate glass vessel with flat stainless steel (316L) top-plate and bottom end. Autoclavable

2. Top Plate

Stainless steel (316L) top-plate, surface finished; with 2 septum addition ports, 1 flame inoculation port (also for harvest), 1 air inlet nozzle, 1 exhaust nozzle and 1 sampling tube etc. With 3 baffle cages and 1 “U” type cooling water tube. 1 Pt100 temperature sensor and 1 foam probe are provided. Clamp for silica gel hose at the side of the top-plate.

3. Drive

With AC motor, speed adjustable. Magnetic drive from bottom. P=180W

4. Agitator

Solid stirrer shaft with 2 pieces of 6-blade disk impeller and 1 set of foam breaker. Rotate speed range: 50-1000rpm

5. Aeration

With stainless steel ring sparger in the vessel and silica gel tube and PALL air filter outside.

6. Exhaust

With stainless steel condenser and PALL filter

7. Peristaltic pumps

4 peristaltic pumps each assignable to function for acid/alkali, anti-foam and nutrient feeding. Each pump including perforation needles and silicone hose. Automatic or manual control.

8. Reagent bottles

Two 250ml and two 500ml glass bottles with screw-on cap. Autoclavable

9. Thermal Circuit

Electrical heating unit under the bottom end of vessel; piping and all required valves to be connected to cooling water supply.

10. Sterilization

Off-situ sterilization in the autoclave

11. Power

Main power supply for all electrical circuits, 220V/50Hz/1KW

12. Control cabinet

Cabinet with beveled control panel. Accommodate all control loops ordered.

13. Bench

Stainless steel (SS304) bench to support the glass vessel, surface polished. Accommodate motor and cooling water pipeline