

Benchtop Fermentation Bioreactor - Model 3030








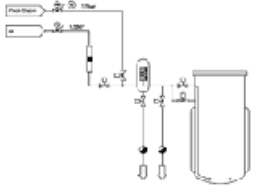
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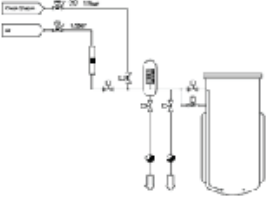


Analytical Technologies Limited

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COMPOSITION	DETAILS	QTY
<ul style="list-style-type: none"> ● MAIN CONTROL SYSTEM   	<ul style="list-style-type: none"> ● LG SCADA PLC CONTROLLER. ● Control Cabinet : Body case with touch screen display ● 17" Resistive touch color LCD panel for, data input and display/Touch Screen Industrial PC unit ● On/Off diaphragm valves with air solenoid valves ● Automation program & software ● Functions: pH, DO, Foam, Temperature, Agitation, Peristaltic pump control, Calibration & Recalibration, Etc. ● Real time data as a graphs for rpm, temp, DO, pH, and foam ● Existing data will be graphed with its own real-time system ● Displays and saves date, time, rpm, temperature, DO, pH, and foam ● Data logging software for PC: Spread sheet format & Graph type of parameters ● View Excel: Accumulated data in Excel format ● Fed Batch ● pH stat, DO stat, user feeding profile, and exponential feed -ing On/Off & Auto Mode setting ● Automatic DO control ● Feed pump ● Alarm Function ● All measured and control parameters: alarm low/high limits ● Screen display ● Automatic/Manual sterilization system ● Operation mode: Stop/Sterilization/ Cooling/Culture ● Set cooling temp ● User setting and programmable / Security: password protected ● SCADA functionality can be added(optional) (Remote monitor -ing the system operation via Internet) 	<p>1</p>
<ul style="list-style-type: none"> ● VESSEL 	<ul style="list-style-type: none"> ● Total 30L, Working 21L ● H/D = 2:1 ● No Stamp ● Surface finish inside / outside: 0.8°C / 1.2°C ● Design temp.: 150°C ● Inner Vessel design pressure : -1~ 4 bar(g) ● Inner Vessel working pressure : 2 bar(g) ● Inner Vessel Material: SUS 316 L ● Jacket design pressure : Max. 6 bar(g) ● Jacket working pressure : Max. 4bar(g) ● Jacket Material : SUS 304 ● Sight glass 1 ea / Circle Light ● Port : Harvest / Sampling / pH / DO / Temp. / Spare / ● Inoculum / Septum 4ea / Exhaust ● Stand alone on legs 	<p>1</p>
<ul style="list-style-type: none"> ● AGITATION SYSTEM 	<ul style="list-style-type: none"> ● Top driving ● For total 30L (working 21L) ● AC motor / Inverter ● Direct coupling ● mechanical seal / Standard Supply system ● Shaft ● 380V, 50/60Hz, 3Phase 	

<ul style="list-style-type: none"> ● AGITATION SYSTEM 	<ul style="list-style-type: none"> ● RPM: 100 ~ 800 (in water) ● Impeller 1: SUS 316L Rushton impeller(33%), 2 stage ● Impeller 2: SUS 316L impeller for anti-foam, 1 stage ● 316L Removable vertical baffle plates - 3 wings 	1
<ul style="list-style-type: none"> ● RUPTURE DISK 	<ul style="list-style-type: none"> ● Diameter - 25mm ● EBP(effective burst pressure) in bar at 20°C - 2 or 3 bar ● Tolerance on EBP - ± 10% ● Seating Configuration : Standard Sanitary Ferrule 	1
<ul style="list-style-type: none"> ● PH CONTROL 	<ul style="list-style-type: none"> ▪ Measuring range: pH 0 ~ 14.00, Accuracy: +/-0.01 ▪ pH electrode: Type- Gel type electrode, Hamilton ▪ Insertion length: 120mm ▪ Electrode holder: 25Ø mm, 316L ▪ DN25 Ingold port for pH sensor at the lower part of the vessel 	1
<ul style="list-style-type: none"> ● DO CONTROL 	<ul style="list-style-type: none"> ▪ Measuring range: 0.00 ~ 20.00 ppm or 0.0 ~ 100.0% ▪ DO sensor Measuring range: 0.0 ~ 250% ▪ Resolution: 0.1ppm or 1% ▪ Accuracy: FS +/-0.5% ▪ DO electrode: Type- Polarographic, Hamilton ▪ Insertion length: 120mm ▪ Electrode holder: 25Ø mm, SUS 316L ▪ DN25 Ingold port DO sensor at the lower part of the vessel 	1
<ul style="list-style-type: none"> ● ANTI-FOAM 	<ul style="list-style-type: none"> ▪ Measuring range : 0 - 4000 cnt ▪ Interrupter on/off time : 0 - 999.9 sec ▪ On-off control function ▪ Conductivity type foam detecting and control unit ▪ Sensitivity adjusting kit ▪ Alarm : High/Low foam ▪ Foam electrode : Measurement - conductivity ▪ Material : SUS 316L/Teflon coating 	1
<ul style="list-style-type: none"> ● AGITATION SYSTEM 	<ul style="list-style-type: none"> ● Input : pt100 ● Transmitter range : 0~150 °C ● Output : 4-20mA ● Material : Stainless steel316 ● Process connection : Sanitary clamp 1.5S ● Protection tube diameter : 6.35 x 50L ● Maker : Oriental temp. sensor ● Accomodate flow rate quantity: 1VVM ● Inlet air filter- filter element: PTFE, 0.2 micron ● Inlet airfilter housing: design-sanitary, material- 316L ● Downstream from the Air Filter Housing of surface roughness (RA) is RA <0.8 °C ● Sterilization: 121C, 30min ● Air flow control: Manual ● Diaphragm Valve : 6ea ● Steam Trap : 2ea ● 316L Ring type sparger 	1

<ul style="list-style-type: none"> ● PRESSURE & EXHAUST SYSTEM 	<ul style="list-style-type: none"> ● PRESSURE CONTROL SYSTEM ● Measuring range: 0.00 ~ 3.00 kg/cm² ● Accuracy: FS +/-0.3% ● Pressure transmitter: Measuring type- Piezo cells ● Range: 0.00 ~ 3.00kg/cm² ● Output signal : 4 - 20 mA ● Positioning valve for automatic control of vessel pressure at the exhaust line ● AIR EXHAUST UNIT ● Condensor: Design- Sanitary and efficient cooling ● Sterilization: automatically during vessel sterilization / 120°C, 30min ● Diaphragm Valve ● Ball Valve 	1
<ul style="list-style-type: none"> ● FEEDING 	<ul style="list-style-type: none"> ● Autoclavable Reagent bottle: 250ml x 4ea ● Borosilicate glass ● Peristaltic pump (Boxer pump) ● Acid, Base, Antifoam and Substrate feeding ● 15QQ 4ea : Fixed 60RPM 	1
<ul style="list-style-type: none"> ● TEMP. 	<ul style="list-style-type: none"> ● Measuring range : 0 - 150 °C ● Steam sterilizable ● Measuring principle: linear resistance type, Control range: 10 ~ 65°C ● Vessel jacket with close loops for temp control: ● Secondary loop- valves for steam and cool water ● On/Off Angle seat globe valves for water and steam supply ● Circulation pump for hot and cool water supply ● Control Range : 5 °C ~ 80 °C ● Control accuracy : 0.1°C ● Circulation Pump ● Angle Seat Globe Valve ● Heat Exchanger : Stainless Steel 304 ● Safety Valve ● Pressure Gauge ● Steam Trap ● Check Valve 	1
<ul style="list-style-type: none"> ● SAMPLING SYSTEM 	<ul style="list-style-type: none"> ● Manual Diaphragm Valve / Manual sterilization / Non contamination structure 	1
<ul style="list-style-type: none"> ● HARVEST SYSTEM. 	<ul style="list-style-type: none"> ● Manual Diaphragm Valve / Manual sterilization / Non contamination structure ● The material where the surface roughness (RA) is RA <0.8 °C ● Port Size : DN25 	1
<ul style="list-style-type: none"> ● BASE FRAME & Controller& UTILITY PIPING LINE 	<ul style="list-style-type: none"> ● Compact sanitary design stainless steel ● Surface: Mechanically polished and electropolished ● Frame: open frame type 	1

<ul style="list-style-type: none"> ● Air Compressor <p>Order No. UT01</p> 	<ul style="list-style-type: none"> ● 2 HP ● Tank Capacity : 30L ● Discharge Rate : 240 L/min ● max Pressure : 6bar~8bar ● Dimension : 580 (L) x 450 (D) x 840 (H) ● Noise : 60 dB ● Voltage : 380V, 50Hz, 1.5Kw ● Air Filter Dryer 	<p>1</p>
<ul style="list-style-type: none"> ● Steam Generator <p>Order No. UT02</p> 	<ul style="list-style-type: none"> ● Rated evaporation : 12,900 kcal/hr ● Electrical capacity : 15 KW ● Voltage : 380 V, 3 PH, 50 Hz ● Max. Pressure : 5~7 KG/cm² ● Work. Pressure : 5 KG/cm² ● Weight : 57 KG ● Dimension : 350 (L) x 700 (W) x 740 (H) 	<p>1</p>
<ul style="list-style-type: none"> ● Chiller <p>Order No. UT03</p> 	<ul style="list-style-type: none"> ● Compressor rated output : 1.6~2.6 Kw ● Circulating pump capacity : 0.74 kW ● Tank capacity : 40 ℓ ● Cooling capacity : 4,990 Kcal/h (at 20 °C) ● Voltage : AC 380V, 3PH, 50Hz ● Electric power consumption : 2.8~3.8 kW ● Dimensio : 580(L) x 960(W) x 1,225(H) 	<p>1</p>

Note: The above equipment specifications may change depending on the manufacturer's situation

▶▶ Regulatory compliances



▶▶ Corporate Social Responsibility

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