

## Automate & Control:

- light intensity
- pH via CO<sub>2</sub> delivery
- temperature
- motor speed
- harvest schedule
- nutrient delivery
- replace evaporated water
- 4 peristaltic pumps
- reactor rotation speed

## Sensors included:

- pH
- temperature
- light intensity (lux)
- available on request
  - dissolved O<sub>2</sub>
  - dissolved CO<sub>2</sub>
  - ORP
  - turbidity
  - PNO<sub>3</sub>

Efficient mixing

Minimizes fouling

Minimize culture crashes

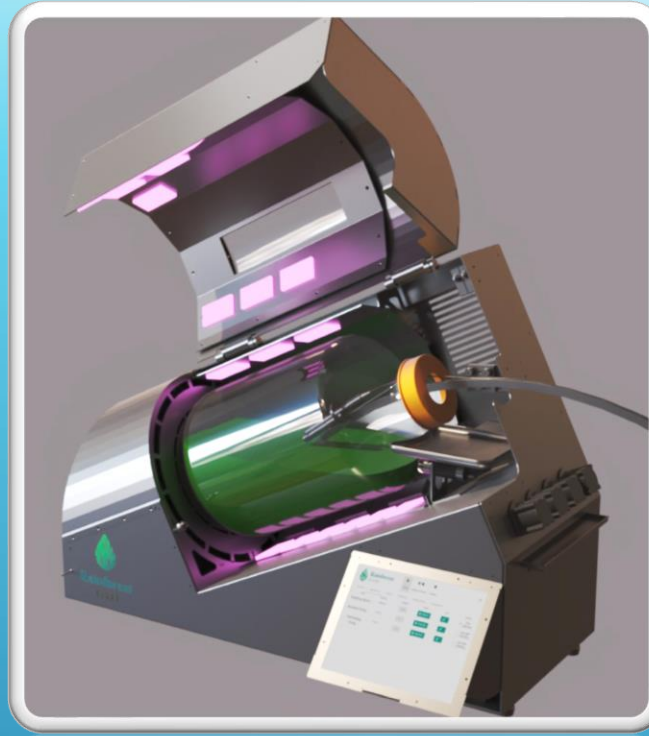
Real-time graphing of sensor data

Withdraw / insert sensors with ease

Design allows for ease of access to remove or install culture carboy

Efficient mass gas transfer between head space and media, (CO<sub>2</sub> in – O<sub>2</sub> out)

## Sophisticated photobioreactor (PBR) to optimize algae culture growth.

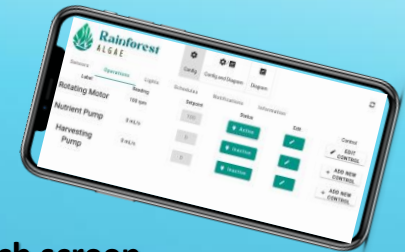


### MODEL RF-010

- 10L reactor capacity
- 110V power required
- Wi-Fi / ethernet connectivity
- LED grow lighting



**Rainforest**  
ALGAE



- Touch screen
  - Full monitor / control functionality
  - Sensor data logging and secure cloud data storage
- Access / monitor / control data from your computer or smartphone device

*“This system has in large measure enabled us to more than double the density and yield of spirulina from published values.”*

*Stan Pankratz*



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## Model RF-010 Specifications

- 110-120V AC with 2m power cord
- On-board 12V power supply
- External on/off power switch
- Emergency power OFF switch
- External Cat5 ethernet connection
- On-board Wi-Fi connectivity
- Digital touch screen (8") to monitor / control PBR functions / real-time data graphing. Flush mounted but tilts to 45° for ease of viewing.
- Web-based app enables connecting to PBR to monitor /control / graph system functions in real-time from remote computer and smart phones.
- Collaborate with other researchers
- Secure, cloud-based data-logging
- 4 on-board controllable peristaltic pumps
- 10L cultivation capacity carboy
- 2 cooling fans
- Radiant heating element
- CO<sub>2</sub> control valve
- LED grow lighting

### ***Rainforest Algae Corp.***

*Calgary, Alberta*

*Canada*

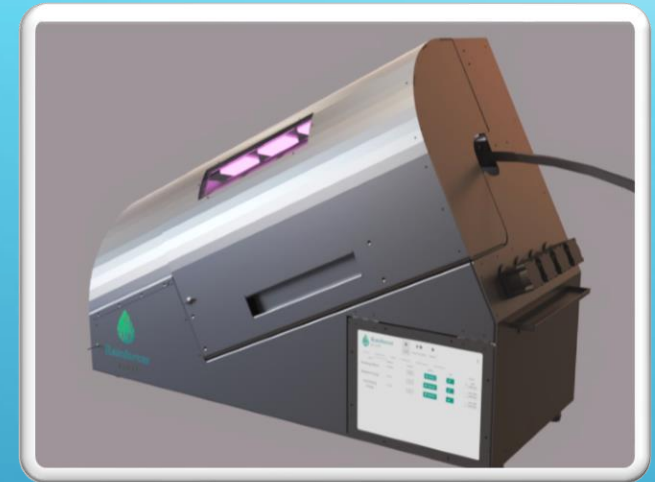
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## **Like No Other Photobioreactor (PBR)**



### **Model: RF-010**

**Research 10L Photobioreactor**

***“Making the improbable possible!”***