

Photo bioreactors, the next best thing to sunlight

The Applikon "PhotoBio" photobioreactor range is based on the standard Applikon re-usable and single-use bioreactors. Special light panels are added to these systems to allow the growth of photosynthesizing organisms (plants, algae, bacteria).

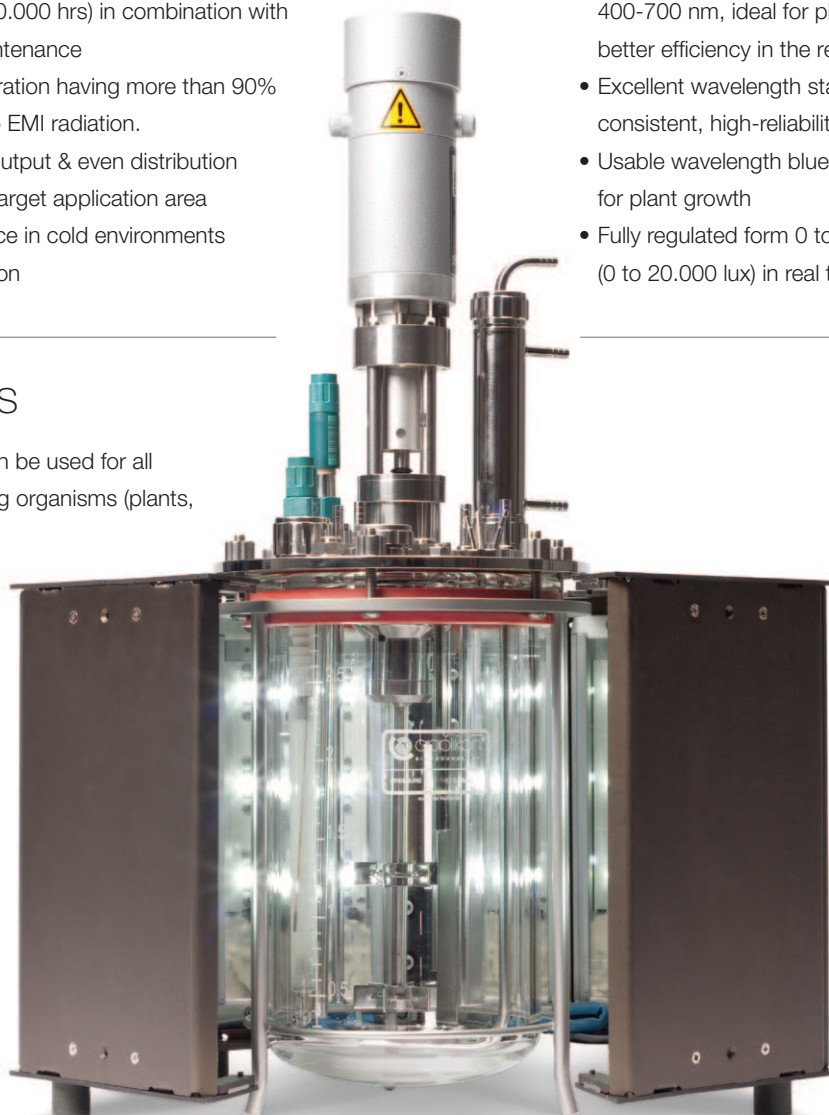
The well proven design of the bioreactors in combination with the state-of-the-art LED light panels guarantee the best performance of the PhotoBio for any application. The light panels can be retrofitted to the Applikon bioreactors to turn your standard bioreactor into a photobioreactor with no downtime and minimal investment.

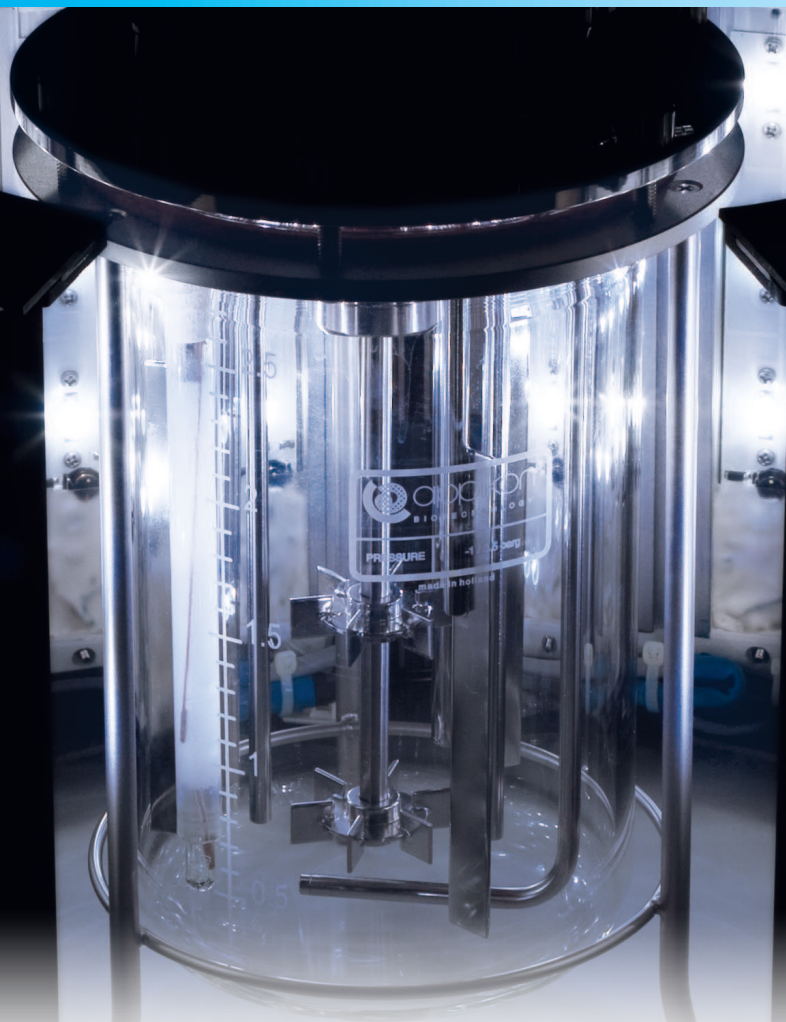
Features

- Proven bioreactor design
- Long lifetime (100.000 hrs) in combination with good lumen maintenance
- Low voltage operation having more than 90% efficiency with no EMI radiation.
- Directional light output & even distribution of light over the target application area
- Great performance in cold environments
- No heat generation
- Photo-synthetically Active Radiation (PAR) 400-700 nm, ideal for plant growth, to achieve better efficiency in the response of plants
- Excellent wavelength stability over time, consistent, high-reliability
- Usable wavelength blue (470 nm) and red (660 nm) for plant growth
- Fully regulated from 0 to 100% light intensities (0 to 20.000 lux) in real time

Applications

- The PhotoBio can be used for all photosynthesizing organisms (plants, algae, bacteria).





Specifications

Maximum driving capacity	140 watt of power or 24 light bank of 6 watt
Programmable zones	8
Intensity control	0 to 100% PWM
Time base	Built in Real time clock
Time range	99:59 hours: minutes per step (maximum 9 time/intensity steps in one cycle)
Light driving	Constant current source
Housing & Protection Class	IP-30 and IP-65 for Control Panel and IP67 for Light bank
User interface	16 x 2 Backlit LCD, Feather touch keys
Serial Communication port	Full duplex RS232 or RS485 interface(optional)
Ambient temperature	0 °C up to 60 °C
Power supply	115 / 230 V AC, 50-60 Hz
Power consumption	Maximum 150 W

The PhotoBio range of bioreactors consist of the following products:

PhotoBioSTR2	2 liter stirred tank bioreactors (single wall, non jacketed),	40 Watt panel
PhotoBioSTR3	3 liter stirred tank bioreactors (single wall, non jacketed)	40 Watt panel
PhotoBioSTR5	5 liter stirred tank bioreactors (single wall, non jacketed)	60 Watt panel
PhotoBioSTR7	7 liter stirred tank bioreactors (single wall, non jacketed)	60 Watt panel
PhotoBioSTR15	15 liter stirred tank bioreactors (single wall, non jacketed)	120 Watt panel
PhotoBioSTR20	20 liter stirred tank bioreactors (single wall, non jacketed)	120 Watt panel
PhotoBioSU10	10 liter single use AppliFlex rocking bioreactors	40 Watt panel
PhotoBioSU20	20 liter single use AppliFlex rocking bioreactors	60 Watt panel
PhotoBioSU50	50 liter single use AppliFlex rocking bioreactors	120 Watt panel