

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).

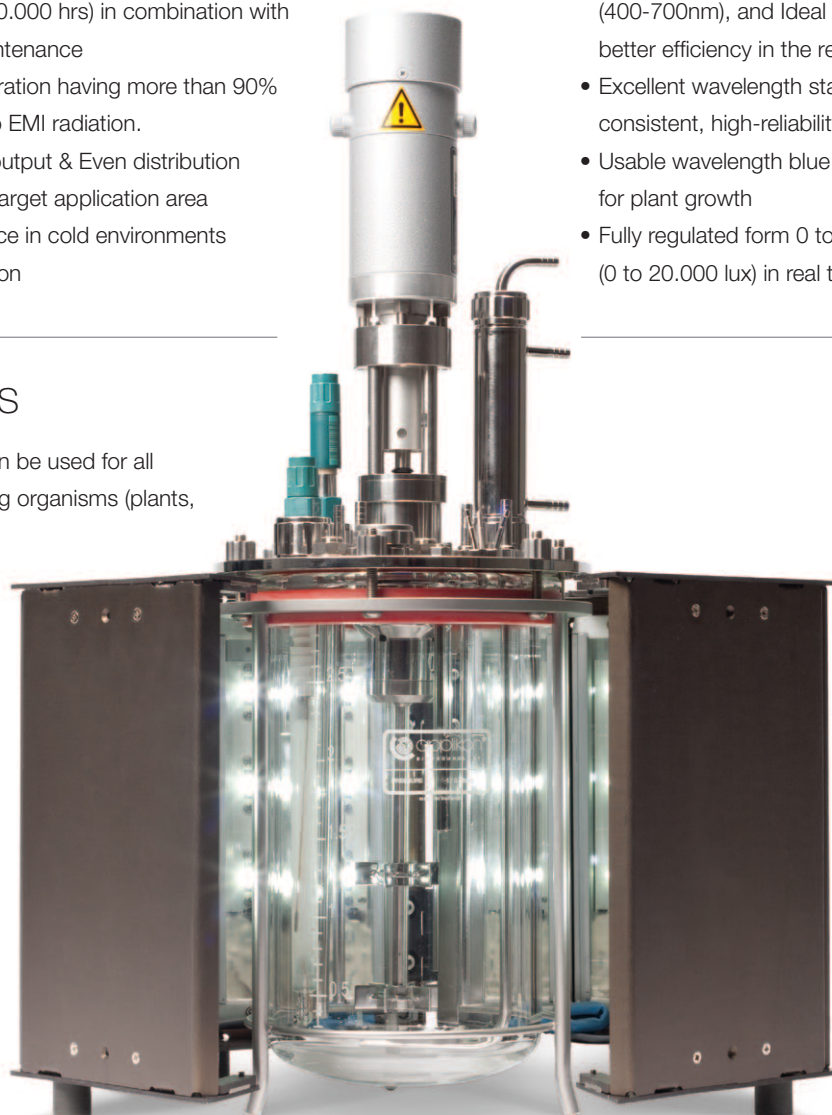
The well proven design of the bioreactors in combination with the state-of-the-art LED light panels guarantee the best performance of the PhotoBio for any application. The light panels can be retrofitted to the Applikon bioreactors to turn your standard bioreactor into a photobioreactor with no downtime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

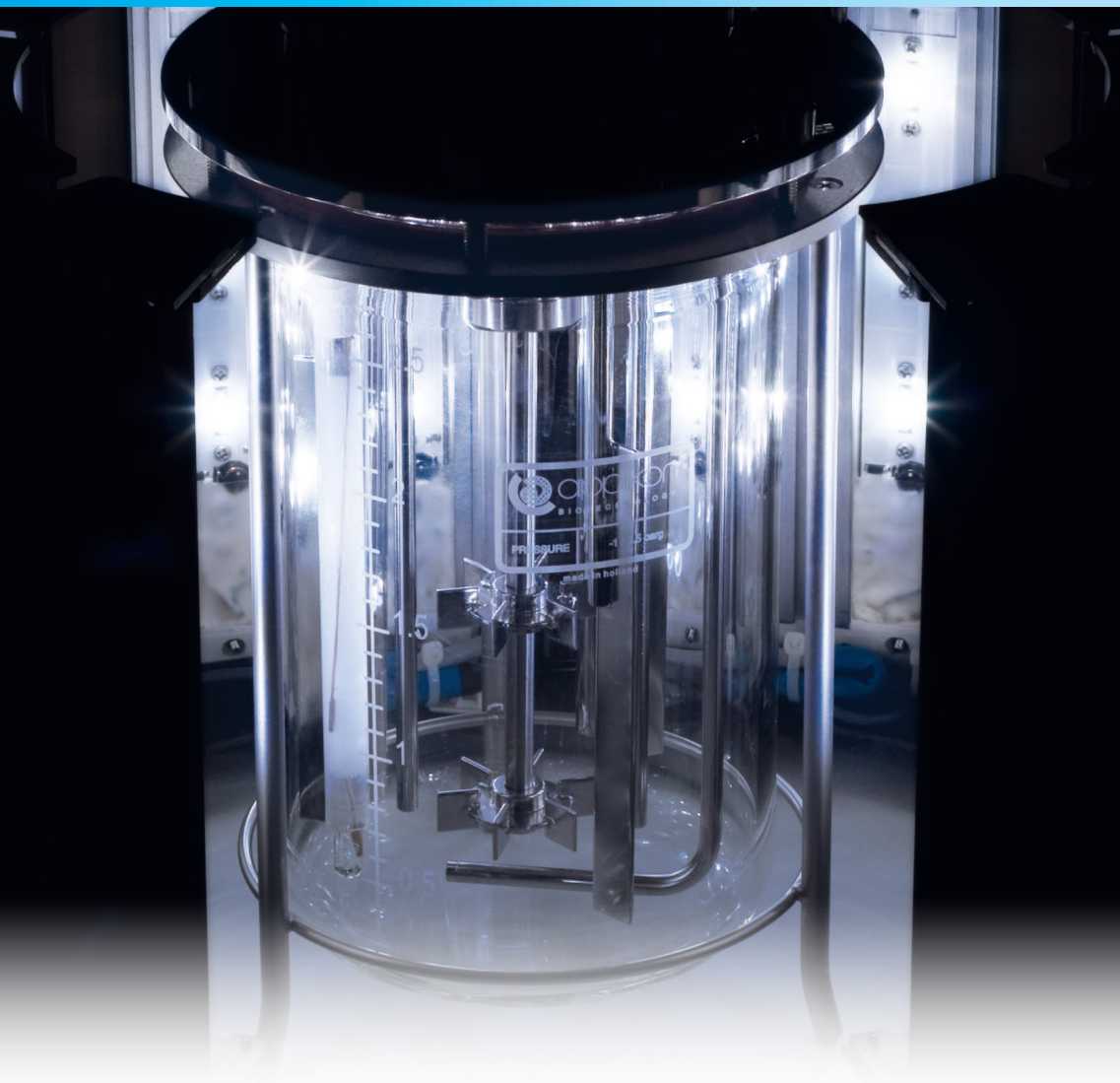
Features

- 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, (400-700nm), and Ideal for plant growth, to achieve better efficiency in the response of plants
- Excellent wavelength stability over time, consistent, high-reliability
- Usable wavelength blue (470nm) and red (660nm) 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

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|---------------------------------------|--|
| 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 | 16x2 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:

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|----------------------|---|----------------|
| 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 |