

# *INDUSTRIAL*<sup>TM</sup> *PLANKTON*

## Algae Bioreactor Technical Catalog



PBR 1250L (Pages 2-4)

PBR 2500L (Pages 5-7)

PBR 100L (Pages 8-9)

[www.industrialplankton.com](http://www.industrialplankton.com)

# PBR 1250L Components

# Industrial Plankton™

## PBR 1250L

- Custom 1250 L high surface area vessel, lid & stand
- Algal spectrum LED lights (2160 W)
- Touchscreen control system with PLC & software
- Real-time density sensor

## Nutrient Dosing

- 3 dosing pumps (1mL/s)
- Magnetic stir plates
- 2 nutrient filters (0.2 µm)

## Header Tank

- 250 L Header tank
- UV filter
- Water supply pump
- Ultrafilter



## Clean in Place (CIP)

- Spray Pump Trolley (not shown)
- Internal spray cleaning system

## Air & pH Control

- Air pump
- Air inlet filter (0.2 µm)
- Air vent filter (0.2 µm)
- Needle valve flowmeter
- pH probe & transmitter
- Automated CO<sub>2</sub> valve
- CO<sub>2</sub> regulator

## Flow Control

- Water filter (0.1 µm)
- In-tank volume sensor
- Harvest pump (6 L/min)
- Actuated water inlet valve
- Manual water inlet needle valve

## Temperature Control

- Temperature probe
- Heat exchanger
- 5,000 BTU chiller, or 10,000 BTU for High Ambient Temperature Option
- 300 W heater

[www.industrialplankton.com](http://www.industrialplankton.com)

# PBR 1250L Tech-Specs

# Industrial PLANKTON™

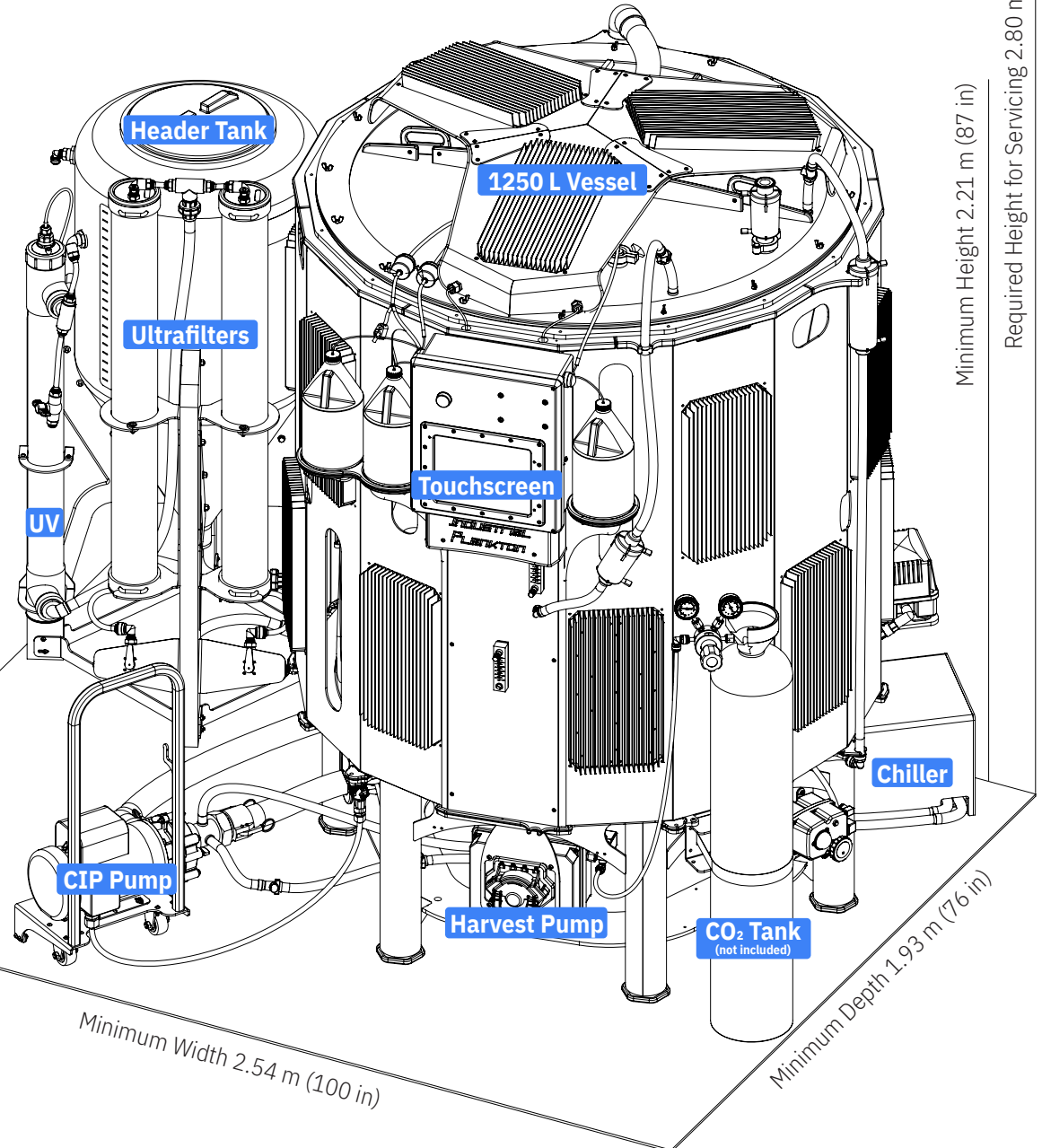
## Specifications

|                                |  |
|--------------------------------|--|
| Volume                         | 1250 L / 330 gal   |
| Working Volume                 | 1200 L / 317 gal   |
| Minimum Volume                 | 160 L / 42 gal   |
| Max Power Consumption          | 4,170 W  |
| Max Heat Energy                | 14,200 BTU / hr  |
| Avg. Steady State Power Req.   | 3,160 W  |
| Avg. Heat Energy               | 10,780 BTU / hr  |
| Available Voltages (AC)        | 110-120 / 220-240 V  |
| Available Frequencies          | 60 / 50 Hz   |
| Ideal Working Space (LxWxH)    | 3.05 m x 2.44 m x 2.79 m<br>120 in x 96 in x 110 in                                      |
| Operational Weight             | 2,130 kg / 4,700 lb  |
| Doorway Clearance (WxH)        | 1.51 m x 2.02 m<br>59 <sup>1</sup> / <sub>2</sub> in x 79 <sup>7</sup> / <sub>8</sub> in |
| PBR 1250L as shipped (LxWxH)   | 1.93 m x 2.03 m x 2.18 m<br>76 in x 80 in x 86 in  |
| (Wt)                           | 910 kg / 2,000 lbs   |
| Header Tank as shipped (LxWxH) | 1.19 m x 1.19 m x 1.80 m<br>47 in x 47 in x 71 in  |
| (Wt)                           | 140 kg / 300 lbs   |

Specifications subject to change without notice

The standard chiller can maintain a temperature drop of 3°C below ambient temperatures up to 28°C, yielding a 25°C culture. If ambient temperatures are above 28°C ask about the High Ambient Temperature Option

## Dimensions



# PBR 1250L High Ambient Temperature Option

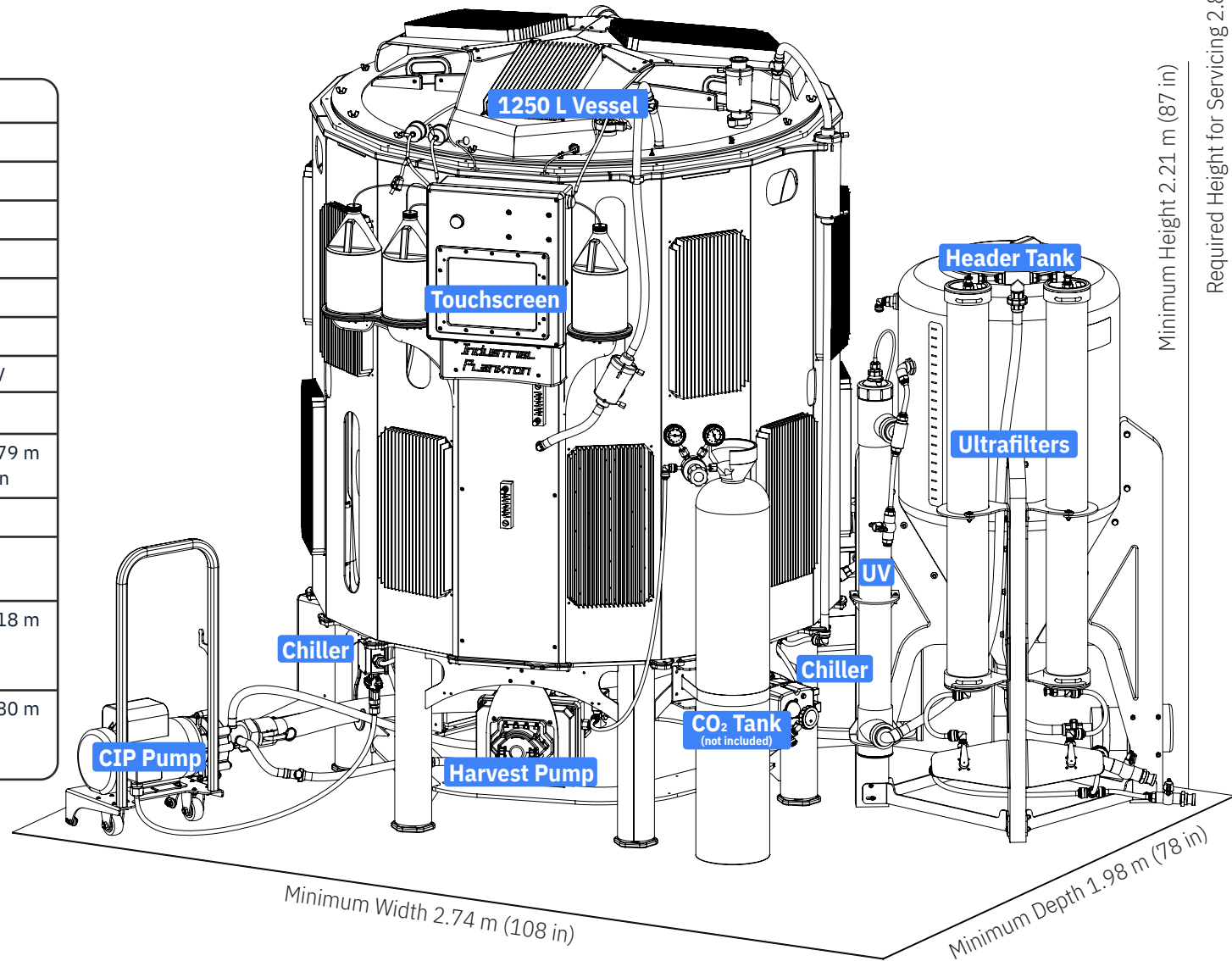
# Industrial™ PLANKTON

## Dimensions

## Specifications

|                                     |   |
|-------------------------------------|---|
| Volume                              | 1250 L / 330 gal  |
| Working Volume                      | 1200 L / 317 gal  |
| Minimum Volume                      | 160 L / 42 gal  |
| Max Power Consumption               | 5,200 W   |
| Max Heat Energy                     | 17,700 BTU / hr   |
| Avg. Steady State Power Req.        | 4,130 W   |
| Avg. Heat Energy                    | 14,100 BTU / hr   |
| Available Voltages (AC)             | 110-120 / 220-240 V   |
| Available Frequencies               | 60 / 50 Hz  |
| Ideal Working Space (LxWxH)         | 3.05 m x 2.44 m x 2.79 m<br>120 in x 96 in x 110 in                       |
| Operational Weight                  | 2,220 kg / 4,900 lb   |
| Doorway Clearance (WxH)             | 1.70 m x 2.02 m<br>67 in x 79 <sup>7</sup> / <sub>8</sub> in              |
| PBR 1250L as shipped (LxWxH) (Wt)   | 1.93 m x 2.29 m x 2.18 m<br>76 in x 90 in x 86 in<br>1,000 kg / 2,200 lbs |
| Header Tank as shipped (LxWxH) (Wt) | 1.19 m x 1.19 m x 1.80 m<br>47 in x 47 in x 71 in<br>140 kg / 300 lbs     |

Specifications subject to change without notice



Minimum Height 2.21 m (87 in)  
Required Height for Servicing 2.80 m (110 in)

Minimum Width 2.74 m (108 in)

Minimum Depth 1.98 m (78 in)

# PBR 2500L Components

# Industrial Plankton™

## PBR 2500L

- 2 independent 1250 L high surface area closed vessels
- Algal spectrum LED lights (4320 W)
- 2 independent touchscreen control systems with PLCs & software
- Real-time density sensors

## Temperature (per vessel)

- Temperature probe
- Heat exchanger
- 5,000 BTU chiller, or 10,000 BTU for High Ambient Temperature Option
- 300 W heater

## Header Tank

- 1 Header tank (250 L)
- Water supply pump
- Ultrafilter
- UV filter

## Clean in Place (CIP)

- 1 Spray Pump Trolley
- 2 internal spray cleaning systems (1 per vessel)

## Flow Control (per vessel)

- Water filter (0.1 µm)
- In-tank volume sensor
- Harvest pump (6 L/min)
- Actuated water inlet valve
- Manual flow valve

## Air & pH Control (per vessel)

- Air pump
- Air inlet filter (0.2 µm)
- Air vent filter (0.2 µm)
- Needle valve flowmeter
- pH probe & transmitter
- Automated CO<sub>2</sub> valve
- CO<sub>2</sub> regulator

## Nutrient Dosing (per vessel)

- 3 dosing pumps (1mL/s)
- Magnetic stir plates
- 2 nutrient filters (0.2 µm)



# PBR 2500L Tech-Specs

# Industrial PLANKTON™

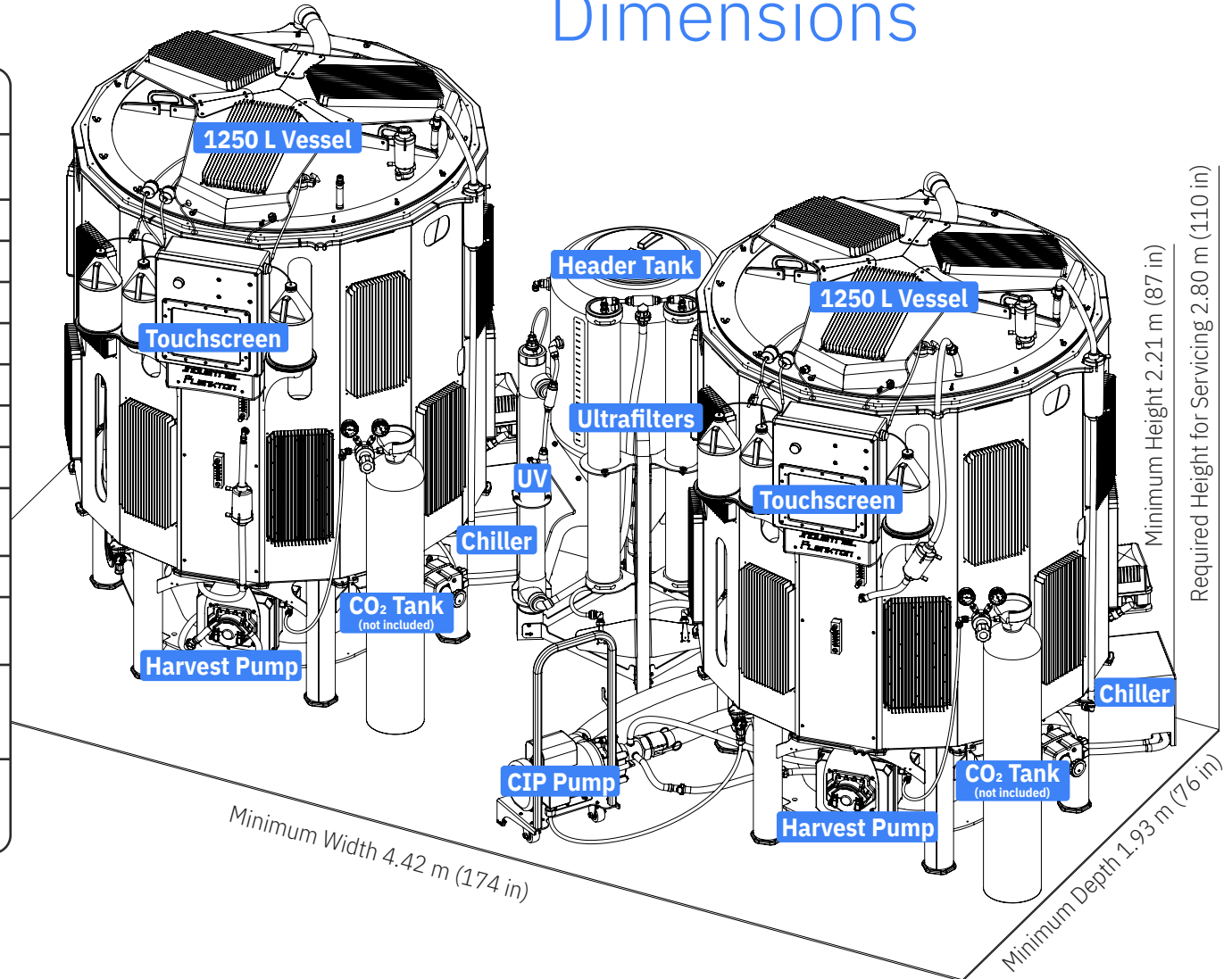
## Specifications

|                              |  |
|------------------------------|--|
| Volume                       | 2500 L / 660 gal<br>(2 x 1250 L / 2 x 330 gal)                               |
| Working Volume               | 2400 L / 634 gal<br>(2 x 1200L / 2 x 317 gal)                                |
| Minimum Volume (per vessel)  | 160 L / 42 gal   |
| Max Power Consumption        | 7,900 W  |
| Max Heat Energy              | 26,950BTU / hr   |
| Avg. Steady State Power Req. | 6,070 W  |
| Avg. Heat Energy             | 20,700 BTU / hr  |
| Available Voltages (AC)      | 110-120 / 220-240 V  |
| Available Frequencies        | 60 / 50 Hz   |
| Ideal Working Space (LxWxH)  | 5.33 m x 2.44 m x 2.79 m<br>210 in x 96 in x 110 in                          |
| Operational Weight           | 4,260 kg / 9,400 lb  |
| Doorway Clearance (WxH)      | 1.51 m x 2.02 m<br>59½ in x 79⅞ in   |
| PBR 1250L as shipped (2x)    | 1.93 m x 2.03 m x 2.18 m<br>76 in x 80 in x 86 in<br>(Wt) 910 kg / 2,000 lbs |
| Header Tank as shipped (1x)  | 1.19 m x 1.19 m x 1.80 m<br>47 in x 47 in x 71 in<br>(Wt) 140 kg / 300 lbs   |

Specifications subject to change without notice

The standard chillers can maintain a temperature drop of 3°C below ambient temperatures up to 28°C, yielding a 25°C culture. If ambient temperatures are above 28°C ask about the High Ambient Temperature Option

## Dimensions



# PBR 2500L High Ambient Temperature Option

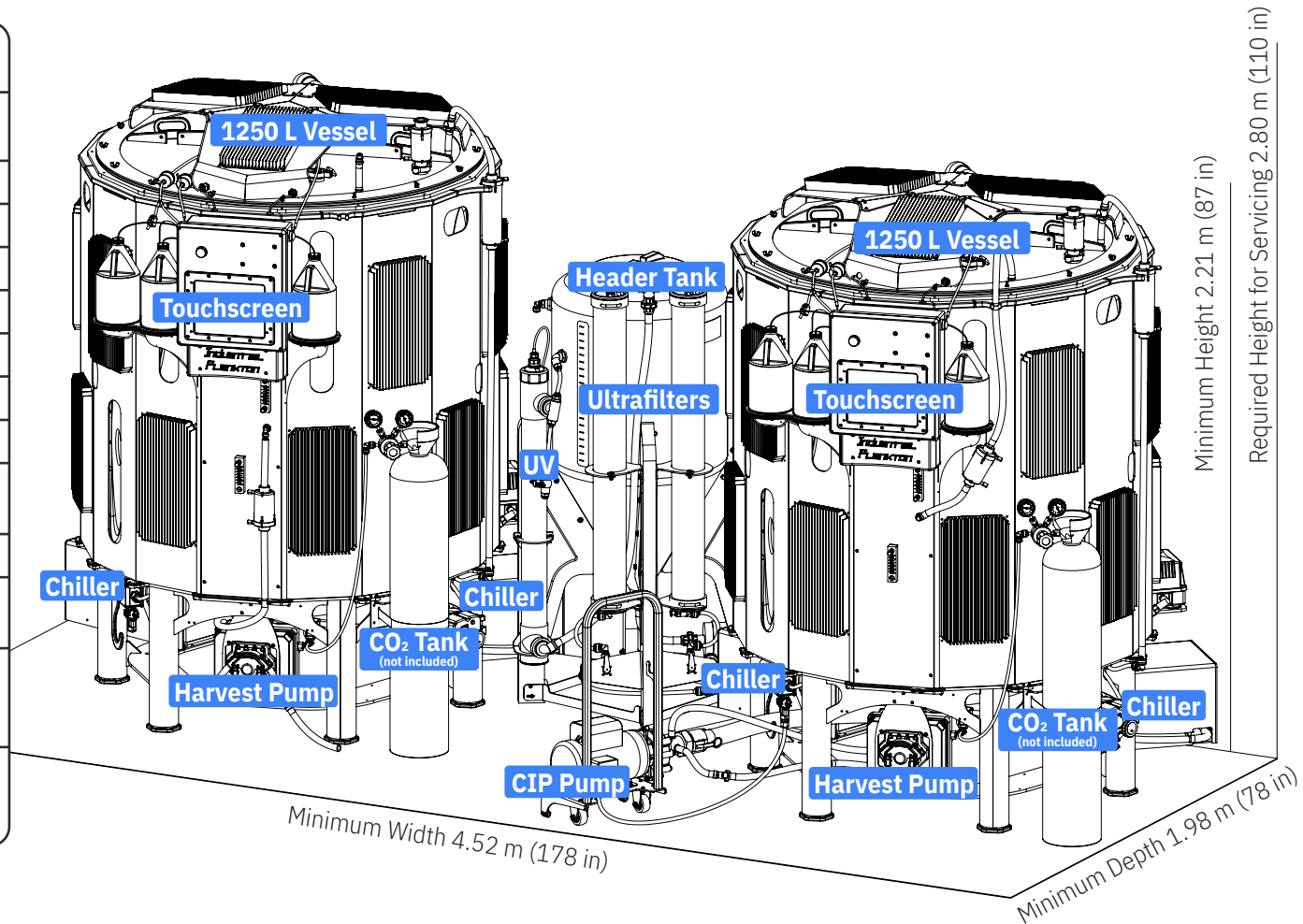


## Specifications

|  |   |
|--|---|
| Volume   | 2500 L / 660 gal<br>(2 x 1250 L / 2 x 330 gal)                            |
| Working Volume                                 | 2400 L / 634 gal<br>(2 x 1200L / 2 x 317 gal)                             |
| Minimum Volume (per vessel)                    | 160 L / 42 gal  |
| Max Power Consumption                          | 9,950 W   |
| Max Heat Energy                                | 33,950 BTU / hr   |
| Avg. Steady State Power Req.                   | 7,800 W   |
| Avg. Heat Energy                               | 26,600 BTU / hr   |
| Available Voltages (AC)                        | 110-120 / 220-240 V   |
| Available Frequencies                          | 60 / 50 Hz  |
| Ideal Working Space (LxWxH)                    | 5.33 m x 2.44 m x 2.79 m<br>210 in x 96 in x 110 in                       |
| Operational Weight                             | 4,260 kg / 9,400 lb   |
| Doorway Clearance (WxH)                        | 1.70 m x 2.02 m<br>67 in x 79 <sup>7</sup> / <sub>8</sub> in              |
| PBR 1250L as shipped (2x)<br>(LxWxH)<br>(Wt)   | 1.93 m x 2.29 m x 2.18 m<br>76 in x 90 in x 86 in<br>1,000 kg / 2,200 lbs |
| Header Tank as shipped (1x)<br>(LxWxH)<br>(Wt) | 1.19 m x 1.19 m x 1.80 m<br>47 in x 47 in x 71 in<br>140 kg / 300 lbs     |

Specifications subject to change without notice

## Dimensions



# PBR 100L Components

# Industrial PLANKTON™

## Clean in Place (CIP)

- Spray Pump Trolley (not shown)
- Internal spray cleaning system

## Air & pH Control

- Air pump
- Air inlet filter (0.2 µm)
- Air vent filter (0.2 µm)
- Needle valve flowmeter
- pH probe & transmitter
- Automated CO<sub>2</sub> valve
- CO<sub>2</sub> regulator

## Flow Control

- Water filter (0.1 µm)
- In-tank volume sensor
- Harvest pump (6 L/min)
- Actuated water inlet valve
- Manual flow valve

## PBR 100L

- Closed 100 L borosilicate glass tank
- Adjustable spectrum LED lights (600 W)
- Real-time density sensor
- Touchscreen, PLC and control software

## Temperature

- Temperature probe
- Heat exchanger
- 2,800 BTU chiller
- 300 W heater

## Nutrient Dosing

- 3 dosing pumps
- Magnetic stir plates
- 2 nutrient filters (0.2 µm)

## Header Tank

- Cone bottom tank
- UV filter
- Water supply pump
- Ultrafilter





## Specifications

|  |  |
|--|--|
| Volume   | 115 L / 30 gal   |
| Working Volume   | 100 L / 27 gal   |
| Minimum Volume   | 16 L / 4.2 gal   |
| Max Power Consumption  | 2,460 W  |
| Max Heat Energy  | 8,400 BTU / hr   |
| Avg. Steady State Power Req.   | 1,500 W  |
| Avg. Heat Energy   | 5,100 BTU / hr   |
| Available Voltages (AC)  | 110-120 / 220-240 V  |
| Available Frequencies  | 60 / 50 Hz   |
| Ideal Working Space (LxWxH)  | 2.03 m x 2.54 m x 1.98 m<br>80 in x 100 in x 78 in                                       |
| Operational Weight   | 500 kg / 1,100 lb  |
| Doorway Clearance (WxH)<br><small>*Some disassembly required</small> | 0.86 m x 1.79 m<br>33 <sup>3</sup> / <sub>4</sub> in x 70 <sup>1</sup> / <sub>2</sub> in |
| PBR 100L as shipped<br>(LxWxH)<br>(Wt)                               | 1.70 m x 1.22 m x 2.08 m<br>67 in x 48 in x 82 in<br>363 kg / 800 lbs                    |
| Header Tank as shipped<br>(LxWxH)<br>(Wt)                            | 1.19 m x 1.19 m x 1.80 m<br>47 in x 47 in x 71 in<br>140 kg / 300 lbs                    |

Specifications subject to change without notice

### Contact us

1-844-818-0304

sales@industrialplankton.com

Victoria • British Columbia • Canada

[www.industrialplankton.com](http://www.industrialplankton.com)

Copyright Industrial Plankton Inc. 2022 • Rev 7.2

## Dimensions

