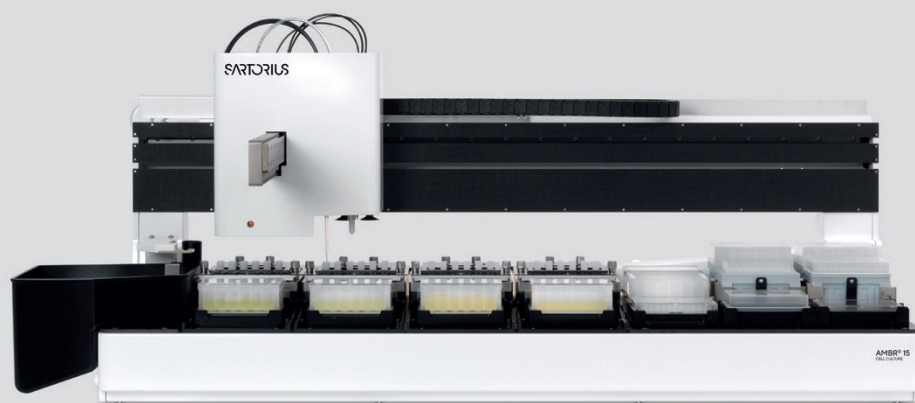


## Ambr<sup>®</sup> 15 Cell Culture Generation 2



### Technical Specification

#### Scope

Automated high throughput microscale bioreactor system for cell culture applications.

Monitoring and control of 24 or 48 cultures in parallel at 10 - 15 mL working volumes.

Comprising single-use microreactor vessels, automated workstation, laptop and software.

### Recommended Working Space

System dimensions include the full range of movement of the liquid handler robot. Recommended working space includes additional clearance space around the workstation. Please note that the laptop computer and system options are not included in the dimensions shown below. Refer to Building Services Specification for detailed drawings.

	24 microreactor system Width (small   large tip bin)	48 microreactor system Width (small   large tip bin)	All systems Depth   Height
<b>System Dimensions</b>	921 mm   980 mm	1407 mm   1466 mm	528 mm   649 mm
<b>With added clearance</b>	941 mm   1000 mm	1427 mm   1486 mm	534 mm   666 mm

## System operating parameters

Number of microbioreactors	24 or 48 (2 or 4 stations of 12)
Agitation speed	150 – 2500 rpm
Culture temperature (standard)	33 – 40°C ± 0.5°C (+ 8°C above ambient)
Culture temperature (cooled)	20 – 40°C ± 0.5°C
Temperature shift rate	≥ 5°C per 30 mins
pH set point range	6.5 – 7.5
pH monitoring range	6.0 – 8.0
pH monitoring accuracy	± 0.1 pH units
DO (% air saturation) monitoring range	0 – 200%
DO monitoring accuracy	±2% @ 100%
Maximum air or total gas flow	1 mL/min
Disposable tip sizes	1 mL and 5 mL tips

## Pipette based liquid handling:

1 mL tip working volumes (min.   max.)	20 µL	900 µL
1 mL tip accuracy	± 5% at <50 µL	± 2% at ≥50 µL
5 mL tip working volumes (min.   max.)	0.5 mL	4.0 mL
5 mL tip accuracy	± 2% at <1.0 mL	± 1% at ≥1.0 mL
Pipette based microbioreactor filling accuracy	± 1% at 12.0 mL	

## Rapid Vessel Drain (RVD) operating parameters

RVD minimum volume remaining	0 mL
Passage culture minimum volume remaining	2.5 mL
RVD and passage culture accuracy	± 10% at ≥2.5 mL

## Labware deck positions

	Flexible	Plate	Cooled plate
Ambr <sup>®</sup> 15 Cell Culture 24 microbioreactor system	6	2	0
Ambr <sup>®</sup> 15 Cell Culture 24 microbioreactor system cooled	6	1	1
Ambr <sup>®</sup> 15 Cell Culture 48 microbioreactor system	9	4	0
Ambr <sup>®</sup> 15 Cell Culture 48 microbioreactor system cooled	9	2	2

### Deck positions for maximum plates

	24	24C	48	48C
Plate locations	5	4	10	8
Chilled plate locations	0	1	0	2
Plate lids (multiple locations can be defined)	1	1	1	1
1 or 5 mL pipette tip box (5 mL tip box cannot be defined in front of a 1 mL tip box)	1	1	1	1
Tip box lid (multiple locations can be defined)	1	1	1	1

### Deck positions for maximum pipette tips

	24	24C	48	48C
Plate locations	1	1	2	2
Chilled plate locations	0	1	0	2
Plate lids (multiple locations can be defined)	1	1	1	1
1 or 5 mL pipette tip box (5 mL tip box cannot be defined in front of a 1 mL tip box)	5	4	9	7
Tip box lid	1	1	1	1

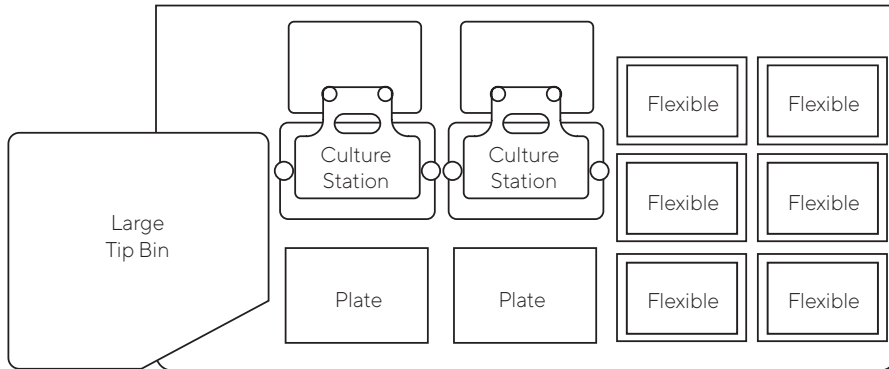
### Microbioreactor vessel

Construction material	Polycarbonate, polyethylene
Internal dimensions (L x W x H)	28.0 x 14.6 x 59.7 mm
Total volume	18 mL
Working volume	10 – 15 mL
pH monitoring technology	Fluorescence based spot
DO monitoring technology	Fluorescence based spot
Impeller type	Pitched blade
Diameter	11.4 mm
Power number	2.15
KLa (sparged vessels, 13 mL DI water, 1500 rpm, gassing @ 1 mL/min)	17.6 per hour

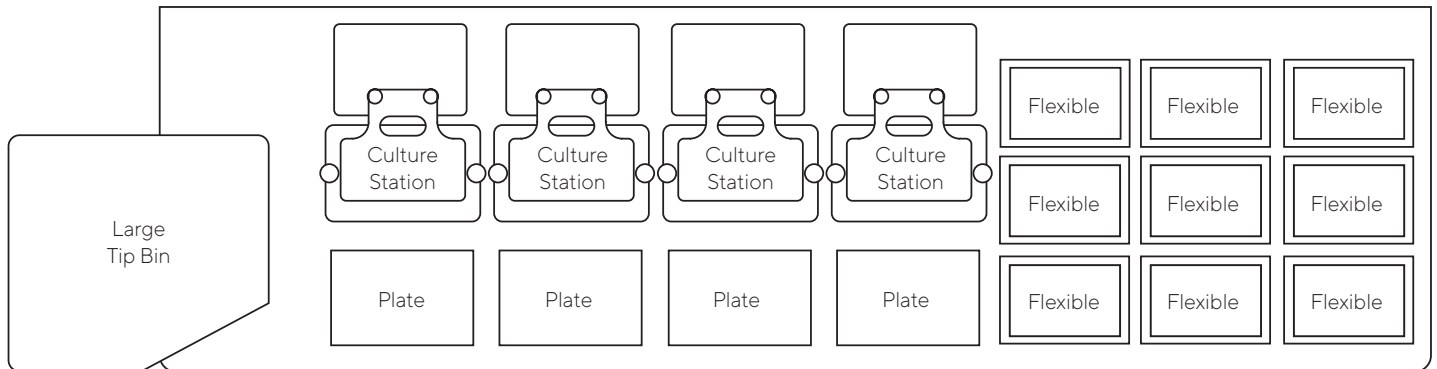
Note: All information is correct at time of publication, but Sartorius reserves the right to make alterations due to technical enhancements or other changes.

# Ambr® 15 Cell Culture Generation 2 Deck Layouts

## Ambr® 15 Cell Culture 24 microbioreactor system



## Ambr® 15 Cell Culture 48 microbioreactor system



## Sales and Service Contacts

For further contacts, visit  
[sartorius.com](http://sartorius.com)

### Germany

Sartorius Stedim Biotech GmbH  
August-Spindler-Strasse 11  
37079 Goettingen  
Phone +49 551 308 0

### USA

Sartorius Stedim  
North America Inc.  
565 Johnson Avenue  
Bohemia, NY 11716  
Toll-Free +1 800 368 7178