STRATYX™

STRATYX™ 250

Stratyx™ 250 mL Bioreactor Technical Specifications

Bay Cart Space Requirements

Specification	Detail
Min. access width*	36"
System Dimensions	44” x 21” x 54”
Required front clearance**	24"
Overall footprint depth	46"
Overall footprint width	44"
Cart weight	150 lbs
Single bay weight	45 lbs
Full assembly weight	331 lbs

*Minimum door width along the path from the loading dock to the final installation location
** Ensure there is enough space left in front of the instrument for the swinging doors.

Culture BIOSCIENCES

Utility Cart Space Requirements

Specification	Detail
System Dimensions	23″ x 21″ x 29″
Gas inlets*	4x push-to-connect
Power inlet	NEMA 5-20 plug
Network inlet	CAT-6 wired ethernet
Chiller inlet**	½″ OD x 0.32″ ID
Weight	100 lbs

* 1/4" tube OD, semi-firm tubing, rated 120 psi or greater

**Tubing must be fitted by installer, no quick-disconnects. Chiller must be within 4ft of the utility cart.

Autofiller Specifications

Specification	Detail
System Dimensions	11″ x 6.5″ x 11.5″
Network connection	WIFI 6E 802.11ax
Power	Standard NEMA 5-15, 120V receptacle
Weight	18 lbs

Temperature Control Specifications

Specification	Detail
Temperature range	15 - 45 °C
Sensor accuracy	0.15 °C
Control accuracy	± 0.2°C at 37 °C
Heating rate*	~ 0.5 °C / min
Cooling rate*	~ 0.5 °C / min

*Temperature dependent

Gas Control Specifications

Specification	Detail
Gas Types	Air, N_2, O_2, CO_2
MFC Types	0 - 100 sccm
Primary Sparge Mix	O_2 + CO_2 + (Air or NN_2)
Secondary Sparge Mix	Air or N_2
Overlay	Air or N_2
DO sensor type	Optical patch
DO range	0-200% saturation
DO accuracy	±5%

Agitation Specifications

Specification	Detail
Agitation Speed	0 - 1000 rpm

pH Control Specifications

Specification	Detail
pH sensor type	Optical patch (optional single-use glass)
pH range	6-8
pH accuracy	~0.05 at 7.0 pH
Control strategies	Acid, base, and CO2.One-sided or two-sided with adjustable deadbands

Fluid Delivery Specifications

Specification	Detail
Pump type	Syringe / positive displacement
Syringe capacity (mL)	100, 50, 10, 50, 100
Flow rate range	5 µL/min - 50 mL/min
Bolus volume accuracy	±5% at >1mL

Expansion Port

The expansion port on the front face of the bay is a M12 connection designed to support a broad array of compatible PAT (Process Analytical Technology) solutions. The Culture vessel supports a standard 120mm long probe with PG13.5 threading. Please contact your product specialist to find out more about supported probes and new probe development options.

Electrical Requirements

Specification	Detail
Circuit capacity*	20A x 2
Continuous power (Bay Cart (s))	500W / 1000W / 1500W (1 cart/ 2 carts/ 3 carts)
Continuous power (Chiller)	2000W
Line frequency	60 Hz
Line voltage	120 VAC
Plug format	NEMA 5-20

* Dedicated 120V 20A circuit/ breaker for the reactor system, separate circuit for standalone chiller*

Environmental Requirements

Specification	Detail
Laboratory temperature	15-35°C recommended
Humidity	< 75% RH, non-condensing
Elevation	<2000 m

Gas Requirements

Specification	Detail
Air inlet pressure	30-100 psig 300 sccm/reactor 2.4 SLPM per system max flow
Nitrogen inlet pressure	30-100 psig 300 sccm/reactor 2.4 SLPM per system max flow
O_2 inlet pressure	30-100 psig 100 sccm/reactor 1.2 SLPM per system max flow
CO_2 inlet pressure	30-100 psig 100 sccm/reactor 1.2 SLPM per system max flow
Connections at utility cart*	1/4” push-to-connect
Gas sources**	Connection to tank

*Recommend 1/4" OD semi-flexible gas tubing with inline cutoff valve

**Gas sources must be within 10' of utlility cart

Networking Requirements

Specification	Detail
Bandwidth	100 Kbps per reactor
Main system connection	Wired ethernet
Autofiller connection	WiFi (optional, ethernet)
Physical network connection	RJ-45, CAT5/5e/6
Network switches	Managed (recommended)

Networking Requirements (cont.)

Specification	Detail
Inbound ports	None
Outbound ports	Wired ethernet
Autofiller connection	80, 443