LORDERAN

PRECISION MOTION, PURE GROWTH

Stackable CO_2 Cell Culture Incubator Shaker

Active humidity control, infrared CO_2 control and a wear-free servo orbital drive in one stackable instrument — for suspension cell culture and protein expression.



4 – 60 °C
TEMPERATURE

0.1 – 20 %
CO_2 CONTROL

0 – 300 rpm
SHAKING SPEED

to 95 % RH
ACTIVE HUMIDITY

Models: JX 2021R · JX 2022R · JX 2023R

www.lorderan.com

PRODUCT OVERVIEW

Where an incubator meets an orbital shaker

The LORDERAN Stackable CO_2 Incubator Shaker is a hybrid life-science instrument that combines CO_2 incubator environmental control — gas, humidity and temperature — with orbital shaking. It is built for suspension cell culture, recombinant antibody and protein expression, and cell line screening, in microplates, deep-well plates or Erlenmeyer flasks.

1 · 2 · 3	±0.3 %	±0.1 °C	15 M+
STACKABLE DECKS	CO_2 ACCURACY	TEMPERATURE ACCURACY	DATA POINTS VIA USB

Stack it your way



Schematic illustration. Single, double or triple vertical stacking saves laboratory floor space.

Typical applications

- **High-throughput antibody screening**
- **Mammalian suspension culture**
- **Vaccine & bioprocess development**
- **Cell line screening**

FLAWLESS CELL GROWTH

Engineered for stable, healthy cultures

Active humidification — ambient to 95 % RH

A capacitive RH sensor with PID control drives automated, steam-based moisture injection instead of a passive evaporation tray. Sterile vapour means no standing water reservoir; low-water alarms and auto-refill from an external sterile reservoir keep cultures protected, and humidity recovers quickly after door opening.

Anti-evaporation, zero-edge-effect architecture

Limits medium evaporation and edge effects in microplates for consistent results across every well.

Infrared CO_2 control — 0.1 to 20 %

High-temperature-resistant infrared sensor with ±0.3 % accuracy and ±0.1 % stability; concentration recovers in ≤ 5 min after a 30 s door opening.

PID refrigeration — 4 to 60 °C

±0.1 °C accuracy, ±0.5 °C uniformity at 37 °C and ≤ 10 min temperature recovery, with forced convection and UV sterilization.

Patented single-axis balanced servo drive

A 5-point dynamic-balance design — central eccentric shaft with four support points — stays quiet under uneven loads. The belt-free, wear-free drive lowers energy use and noise; the hermetically sealed drive housing isolates motors and electronics from humidity and contamination; the bidirectional servo motor gives precise speed control.

7-inch colour touchscreen & data integrity

Chinese / English interface, 3-level user access, audit trails, parameter lock-out and power-failure memory; USB export of data and alarm logs with capacity for over 15 million data points.

Built for the lab

Electroplated 304 stainless-steel interior with rounded corners, a pull-down load-bearing double glass door, waterproof design, heavy-duty casters and adjustable levelling feet.

SPECIFICATIONS

Technical specifications

Parameter	JX 2021R	JX 2022R	JX 2023R
CAPACITY & SIZE			
Test space volume	**208 L**	**170 L**	**282 L**
Shaking plate size	**780 × 500 mm**	**480 × 440 mm**	**940 × 530 mm**
Inner size (W × D × H)	**850 × 570 × 430 mm**	**580 × 520 × 560 mm**	**1030 × 590 × 450 mm**
External size (W × D × H)	**1200 × 800 × 640 mm**	**710 × 900 × 810 mm**	**1410 × 830 × 660 mm**
Net weight	**325 kg**	**235 kg**	**370 kg**
SHAKING			
Speed range	0 ~ 300 rpm	0 ~ 300 rpm	0 ~ 300 rpm
Speed accuracy	±1 rpm	±1 rpm	±1 rpm
Orbit / stroke	Ø 25 mm (50 mm optional)	Ø 25 mm (50 mm optional); orbital / reciprocating switchable	Ø 25 mm (50 mm optional)
Timing range	0 ~ 999 h 59 min / continuous	0 ~ 999 h 59 min / continuous	0 ~ 999 h 59 min / continuous
Programming	Repetition, steps and eight curves	Repetition, steps and eight curves	Repetition, steps and eight curves
TEMPERATURE			
Temperature range	4 ~ 60 °C (RT - 18 °C, min. 4 °C)	4 ~ 60 °C (RT - 18 °C, min. 4 °C)	4 ~ 60 °C (RT - 18 °C, min. 4 °C)
Temperature accuracy	±0.1 °C (constant)	±0.1 °C (constant)	±0.1 °C (constant)
Temperature uniformity	±0.5 °C at 37 °C	±0.5 °C at 37 °C	±0.5 °C at 37 °C
Temperature recovery	≤ 10 min	≤ 10 min	≤ 10 min
Ambient temperature range	18 ~ 34 °C	18 ~ 34 °C	18 ~ 34 °C
HUMIDITY			
Humidity control range	Ambient ~ 95 % RH	Ambient ~ 95 % RH	Ambient ~ 95 % RH

At a glance

JX 2021R

208 L

Inner size	**850 × 570 × 430 mm**
External size	**1200 × 800 × 640 mm**
Net weight	**325 kg**
Max. power	**2880 W**
Current	**26 A (110 V)** **13 A (220 V)**

JX 2022R

170 L

Inner size	**580 × 520 × 560 mm**
External size	**710 × 900 × 810 mm**
Net weight	**235 kg**
Max. power	**2550 W**
Current	**23 A (110 V)** **11.6 A (220 V)**

JX 2023R

282 L

Inner size	**1030 × 590 × 450 mm**
External size	**1410 × 830 × 660 mm**
Net weight	**370 kg**
Max. power	**3130 W**
Current	**28.5 A (110 V)** **14 A (220 V)**

SPECIFICATIONS

Technical specifications (continued)

Parameter	JX 2021R	JX 2022R	JX 2023R
CO_2 CONTROL			
CO_2 control range	0.1 ~ 20 %	0.1 ~ 20 %	0.1 ~ 20 %
CO_2 control accuracy (resolution)	0.001	0.001	0.001
CO_2 stability	±0.1 %	±0.1 %	±0.1 %
CO_2 accuracy	±0.3 %	±0.3 %	±0.3 %
CO_2 sensor	Infrared, high-temperature resistant	Infrared, high-temperature resistant	Infrared, high-temperature resistant
CO_2 concentration recovery	≤ 5 min after 30 s door opening	≤ 5 min after 30 s door opening	≤ 5 min after 30 s door opening
SYSTEM			
Sterilization method	UV	UV	UV
Convection method	Forced	Forced	Forced
ELECTRICAL			
Voltage	110 V or 220 V	110 V or 220 V	110 V or 220 V
Max. power	**2880 W**	**2550 W**	**3130 W**
Rated current	**26 A (110 V) 13 A (220 V)**	**23 A (110 V) 11.6 A (220 V)**	**28.5 A (110 V) 14 A (220 V)**
SAFETY & ADDITIONAL FUNCTIONS			
Safety functions	Speed storage · automatic shutdown · temperature and speed correction · monitoring timer · clock · call recovery · parameter memory and encryption · one-key reset	Speed storage · automatic shutdown · temperature and speed correction · monitoring timer · clock · call recovery · parameter memory and encryption · one-key reset	Speed storage · automatic shutdown · temperature and speed correction · monitoring timer · clock · call recovery · parameter memory and encryption · one-key reset
Additional functions	Watchdog timer · independent over-speed sound / light alarm · independent leakage protection · leakage / surge protection	Watchdog timer · independent over-speed sound / light alarm · independent leakage protection · leakage / surge protection	Watchdog timer · independent over-speed sound / light alarm · independent leakage protection · leakage / surge protection

Available in 110 V and 220 V versions; rated current is listed for both voltages. Dimensions are in millimetres.

Service & policies

- Free door-to-door shipping; DDP terms available
- 30-day money-back guarantee on most new, unopened items
- Full refund or replacement for major non-repairable defects under warranty

Request a quotation

Contact LORDERAN for pricing, configuration and shipping details.

www.lorderan.com