LORDERAN

TECHNICAL DATASHEET
DS-200B-EN · REV. B · NOV 2026

LABORATORY SHAKER

Benchtop 80 L **Refrigerated Incubator Shaker**

Incubation, refrigeration and orbital shaking in one benchtop chamber — **4–60 °C** and **30–400 rpm**, quietly and without splashing.

MODEL 200B





LID CLOSED AND OPEN

80 L BENCHTOP CHAMBER	**4–60** °C INCUBATE OR REFRIGERATE	**±0.1** °C TEMPERATURE ACCURACY	**±0.5** °C UNIFORMITY
30–400 rpm SPEED RANGE	**±1** rpm SPEED ACCURACY	**Ø 25** mm ORBIT	**420 × 400** SHAKING PLATE, MM

01 One steady orbit
Single balanced shaft; every flask traces the same 25 mm circle.

02 Soft start
Speed ramps up so flasks never slosh over.

03 Made to run unattended
Stops when the cover opens; resumes after a power cut.

APPLICATIONS
Cell culture · Bacteria and yeast · Cold storage · Assay preparation

Warranty
Major defects: full refund or replacement.

Free DDP shipping
Duties paid, no surprise import charges.

30-day returns
Most new, unopened items.

PRODUCT OVERVIEW

Incubate or refrigerate in the same chamber

The 200B combines incubation, refrigeration and orbital shaking in one benchtop chamber. It holds 80 L anywhere from **4 °C to 60 °C** to ±0.1 °C, while a single balanced shaft turns the platform from 30 to 400 rpm.

A 400 W heater and a 118 W CFC-free cooler work under microprocessor control, with an adjustable circulation fan spreading air evenly around every flask. The cooler pulls down to 15 °C below room temperature, so 4 °C is reached when the lab is at 19 °C or cooler.

HOW IT WORKS

01 Single-shaft drive
Brushless motor, maintenance-free, with soft start; 25 mm orbit at ±1 rpm.

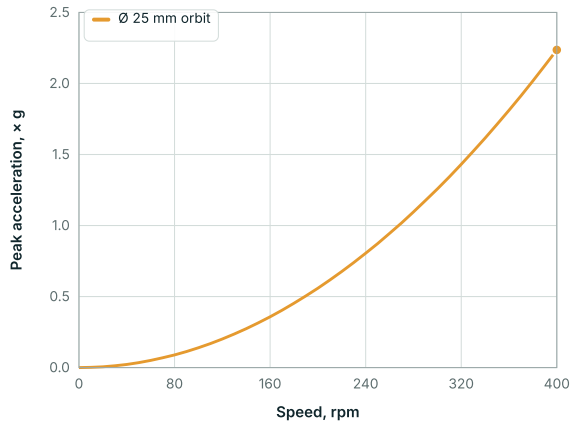
02 Heating and cooling
400 W heater and 118 W cooler with CFC-free 134A under microprocessor control.

03 Air circulation
Adjustable circulation fan for even temperature across the plate.

04 Controller
LCD with set and actual values; repetition, steps and eight curves; timer to 999 h 59 min.

05 Protection
High and low temperature alarm; shaking stops when the cover opens; resumes after power loss.

Orbit and speed. Centripetal acceleration on the 25 mm orbit, to about 2.2 g at the 400 rpm maximum.



TEMPERATURE
4–60 °C
lowest point RT − 15 °C

SPEED
30–400 rpm
±1 rpm accuracy

PLATE
420 × 400 mm
50 ml to 2000 ml flasks

POWER
580 W
400 W heater · 118 W cooler

MIXING INTENSITY

$$a / g = 1.118 \times 10^{-6} \times r \times n^2$$

r = orbit radius in mm (half the orbit diameter) · n = speed in rpm. The same relation as centrifugal force: a larger orbit mixes harder at the same speed.

Quote orbit and speed together
Mixing depends on both. A 50 mm orbit at 150 rpm is not the same as 25 mm at 150 rpm.

Keep fill volumes low
Oxygen transfer falls as fill rises. For aerobic cultures, fill flasks to 10–25 % of nominal volume.

Balance the platform
Spread flasks evenly over the plate. A balanced load runs quieter and protects the drive.

FEATURES

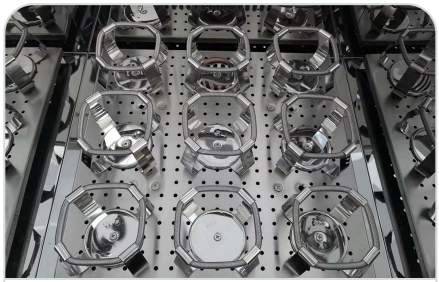
Made to run unattended



Flasks on the platform



Loading flasks



Shaking platform

01 Control

- Microprocessor control of temperature and shaking speed
- Programs with **repetition, steps and eight curves**
- Timer **0–999 h 59 min**, or continuous
- LCD shows set and actual values
- Adjustable circulation fan speed

02 Protection

- High and low temperature alarm
- Shaking stops automatically when the cover opens
- Run resumes automatically after power is restored
- Sealed digital panel keeps spilled liquid out
- Soft start prevents samples from splashing

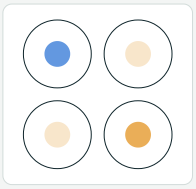
03 Everyday use

- Compact benchtop design with low running noise
- Tempered glass window to check samples without opening
- Cover opens wide for easy loading
- Maintenance-free brushless motor

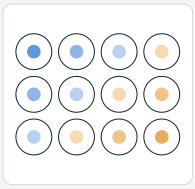
04 Temperature

- **4–60 °C**, accuracy **±0.1 °C**, uniformity **±0.5 °C**
- CFC-free **134A** coolant
- Lowest temperature RT − 15 °C
- 580 W total power

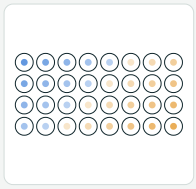
PLAN YOUR PLATE · MAXIMUM LOAD FOR ONE FLASK SIZE



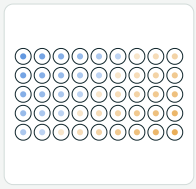
2000 ml × 4
maximum



500 ml × 12
maximum



100 ml × 32
maximum



50 ml × 45
maximum

TECHNICAL SPECIFICATIONS

Technical specifications

Specification	
TEMPERATURE RANGE	
Temperature Range	4°C*-60°C (*RT.-15°C)
Accuracy of Temperature	±0.1°C
Temperature Uniformity	±0.5°C
Coolant	CFC-Free (134A)
Cooler	118W
Heater	400W
Speed Range	30~400rpm
Speed Accuracy	±1rpm
Orbit	Dia. 25mm
Programming Function	Programming of repetition, steps and eight curves settings
Size of Shaking Plate	420×400 mm
Maximum Capacity	2000ml×4 or 1000ml×8 or 500ml×12 or 250ml×18 or 100ml×32 or 50ml×45
Standard Configuration	500ml×3, 250ml×4, 100ml×5, 50ml×5
Size of Chamber	460×500×350 mm
External Size	780×690×600 mm
Net Weight	100kg
Gross Weight	132kg
Power	580W

Specification

Specifications from the LORDERAN product documentation. Subject to change without notice for product improvement.

AT A GLANCE

MODEL

200B

Chamber
80 L · 460 × 500 × 350 mm

External size
780 × 690 × 600 mm

Net / gross weight
100 kg / 132 kg

Power
580 W

SUPPLIED

Standard set

Flask clamps
500 ml × 3, 250 ml × 4

100 ml × 5, 50 ml × 5

APPLICATIONS & SERVICE

Where it works, and what comes with it

Cell culture
Warm, gently shaken incubation on the bench.

Bacteria and yeast
Microbial cultures from 50 ml to 2000 ml flasks.

Cold storage
Refrigerated holding with shaking down to 4 °C.

Assay preparation
Steady temperature and motion for repeatable results.

INSTALLATION

Power
580 W total; confirm the supply voltage when ordering.

Environment
Rigid bench for 100 kg; keep the room at 19 °C or cooler to reach 4 °C.

Footprint
780 × 690 mm, 600 mm high.

WARRANTY & SERVICE

Warranty
Major defects under warranty: full refund or replacement.

30-day returns
Return most new, unopened items within 30 days.

Free DDP shipping
Delivered duty paid, no surprise import charges.

Formal quotation
PDF quote on request, with a confirmed ship date.

Request a quotation

Send your application, model and quantity through www.lorderan.com and we will reply with a formal PDF quotation.

DS-200B-EN · Rev. B · Nov 2026 · Calculated values are reference figures. Specifications may change without notice for product improvement.

LORDERAN

www.lorderan.com

Laboratory and environmental test equipment