LORDERAN

TECHNICAL DATASHEET
DS-BH2200R-EN · REV. B · NOV 2026

LABORATORY CENTRIFUGE

Floor-Standing **High-Speed Refrigerated Centrifuge**

High force and large capacity for research and bioprocess labs — up to **22,000 rpm**, **52,000 × g** and **6 × 600 ml**, with USB data records.

MODELS BH2200R BH2100R




FRONT


LID OPEN

22,000 rpm MAX SPEED	**52,000** × g MAX RCF	**6 × 600 ml** MAX CAPACITY	**−20…+40** °C TEMPERATURE RANGE
±1 °C TEMPERATURE ACCURACY	**±10** rpm SPEED ACCURACY	**9** ROTORS IN 2 TYPES	**1** year WARRANTY

01 Front touch screen
100 multi-step programs, easy to reach in any position.

02 USB data records
Store and print runs and faults for traceability.

03 Continuous-flow rotors
Harvest cells and particles from litres of culture.

APPLICATIONS
Protein purification · Nucleic acids · Subcellular fractionation · Cell harvest

1 year warranty
Major defects: full refund or replacement.

Free DDP shipping
Duties paid, no surprise import charges.

30-day returns
Most new, unopened items.

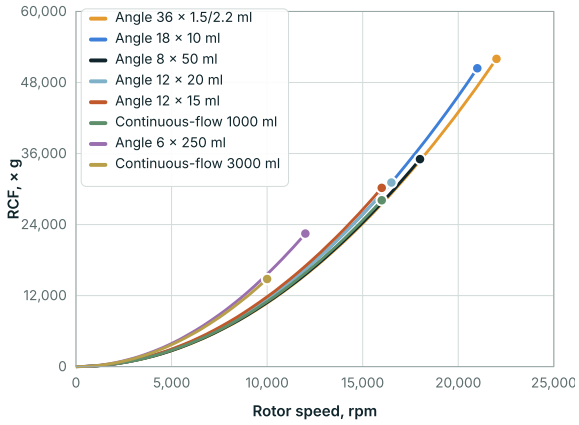
PRODUCT OVERVIEW

High force for purification, fractionation and harvest

BH2200R and BH2100R are floor-standing high-speed refrigerated centrifuges for research and bioprocess laboratories: up to 22,000 rpm and 52,000 × g, capacity to 6 × 600 ml, and continuous-flow rotors for large culture volumes. A Tecumseh compressor with CFC-free R404A holds temperature even at full speed.

Protocols are written in × g because force, not speed, does the separating — and the same rpm gives more force in a larger rotor. Set **speed or force** directly, and a method moves between rotors and laboratories without conversion.

Speed vs. force. RCF rises with the square of speed. Each curve ends at that rotor's rated maximum.



HOW IT WORKS

01 Rotor recognition
Automatic, for every rotor.

02 Refrigeration
Tecumseh (France), R404A refrigerant (CFC-free); holds −20 to +40 °C through the run.

03 Drive control
10 up / 11 down: Plus free coast-down

04 Controller
Front LCD touch screen. 100 programs: Multi-step methods

05 Lid and protection
Electronic lid lock plus overspeed, over-temperature and imbalance detection, each with an automatic alarm, for safe running at high force.

MAX SPEED
22,000 rpm
±10 rpm speed accuracy

MAX RCF
52,000 × g
36 × 1.5/2.2 ml rotor, r ≈ 96 mm

TEMPERATURE
−20…+40 °C
±1 °C accuracy

NOISE
< 65 dB(A)
measured at the instrument

RELATIVE CENTRIFUGAL FORCE

$$RCF = 1.118 \times 10^{-6} \times r \times n^2$$

r = radius in mm · n = speed in rpm. Example: the 36 × 1.5/2.2 ml rotor at 22,000 / 21,000 rpm, r ≈ 96 mm, gives **52,000 / 50,400 × g**.

Write methods in × g

RCF = 1.118 × 10^{-6} × r × n^2. Quote force, and any rotor can reproduce the run.

Balance every load

Fill opposite positions with equal mass. Good balance protects the drive and the run.

Pre-cool for sensitive samples

Run the empty chamber and rotor down to temperature before loading heat-sensitive material.

FEATURES

Traceable, programmable, cold at full speed



Control panel
Front LCD touch screen



Chamber and rotor
Chamber -20 to +40 °C



Outer size
900 × 760 × 1005 mm (L × W × H), 350 kg without rotor net

01 Operation & programs

- **Front touch screen** — Easy to reach in any position
- **100 programs** — Multi-step methods
- **10 up / 11 down** — Plus free coast-down
- **USB data records** — Store and print runs and faults

02 Drive & refrigeration

- A high-torque AC variable-frequency motor and a Tecumseh compressor with CFC-free R404A refrigerant hold temperature even at full speed.
- **Tecumseh R404A cooling** — CFC-free refrigeration
- **Autoclavable PC bottles** — For high-temperature sterilization

03 Safety

- Electronic lid lock plus overspeed, over-temperature and imbalance detection, each with an automatic alarm, for safe running at high force.
- **4 safety alarms** — Lock, overspeed, over-temperature, imbalance
- **Rotor recognition** — Automatic, for every rotor

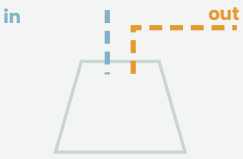
04 Rotors & capacity

- **9 rotors in 2 types** — angle, continuous-flow
- Max capacity **6 × 600 ml**
- Highest force: **angle 36 × 1.5/2.2 ml**, 22,000 / 21,000 rpm / 52,000 / 50,400 × g
- Every bucket, holder and adapter listed in the rotor table

ROTOR TYPES



Angle rotor
Tubes sit at a fixed angle. The fastest option; the pellet forms on the tube wall.



Continuous-flow rotor
Sample flows through the spinning rotor. For harvesting from litres of culture.

TECHNICAL SPECIFICATIONS

Technical specifications

Parameter	BH2200R	BH2100R
Max speed	22,000 rpm	21,000 rpm
Max RCF	52,000 × g	50,400 × g
Max capacity	6 × 600 ml	6 × 500 ml
Speed accuracy	±10 rpm	
Time setting	1 s – 99 h 59 min 59 s	
Temperature range	−20 to +40 °C	
Temperature accuracy	±1 °C	
Display	Front LCD touch screen	
Compressor	Tecumseh (France), R404A refrigerant (CFC-free)	
Noise	< 65 dB(A)	
Power supply	AC 220 V, 50–60 Hz	
Power	5 kW	
SIZE AND WEIGHT		
Outer size	900 × 760 × 1005 mm (L × W × H)	
Crate size	1020 × 880 × 1105 mm (L × W × H)	
Net weight	350 kg without rotor	

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

ROTORS AND ACCESSORIES

9 rotors, every bucket and adapter

Type	Rotor	Max rpm	Max × g	r, mm*	Buckets, holders and adapters
ANGLE	**36 × 1.5/2.2 ml**	22,000 / 21,000	52,000 / 50,400	—	Adapters 0.2, 0.5 ml
ANGLE	**18 × 10 ml**	21,000	50,400	102	Adapters 1.5, 5 ml
ANGLE	**12 × 20 ml**	16,500	31,100	102	Adapters 5, 10 ml
ANGLE	**12 × 15 ml**	16,000	30,194	105	
ANGLE	**8 × 50 ml**	18,000	35,047	97	Adapters 10, 20 ml
ANGLE	**6 × 250 ml**	12,000	22,470	140	Adapters 50, 100 ml
ANGLE	**6 × 500 ml**	9000	14,400	159	Adapters 50, 100, 250 ml
CONTINUOUS-FLOW	**1000 ml** Flow 200–600 ml/min · aluminium alloy	16,000	28,100	98	

Type	Rotor	Max rpm	Max × g	r, mm*	Buckets, holders and adapters
CONTINUOUS-FLOW	**3000 ml** Flow 200–800 ml/min · aluminium alloy	10,000	14,800	132	

* Effective radius calculated from the rated values, r = RCF / (1.118 × 10^{-6} × n^2). Reference figure for converting between rpm and × g; not measured rotor geometry.

AT A GLANCE

INSTRUMENT

BH2200R / BH2100R

Outer size, L × W × H
900 × 760 × 1005 mm

Net weight
350 kg without rotor

Power
AC 220 V, 50–60 Hz · 5 kW

SHIPPING

Crate

Crate size, L × W × H
1020 × 880 × 1105 mm

Delivery
Duty paid (DDP)

Ship date
Confirmed on order

PERFORMANCE

At full speed

Max speed / RCF
22,000 rpm · 52,000 × g

Max capacity
6 × 600 ml

Temperature
−20 to +40 °C

THE LORDERAN CENTRIFUGE RANGE · THIS MODEL HIGHLIGHTED

Model	Format	Max rpm	Max × g	Max capacity	Cooling
DL-5M	Floor	5000	4100	4 × 1000 ml	Refrigerated
D5B	Floor	5000	4640	4 × 1000 ml	Ambient
DL-5B	Floor	5000	3780	4 × 750 ml	Refrigerated
D5M	Floor	5000	3780	4 × 750 ml	Ambient
TDL-5A	Bench	5000	4390	4 × 2 × 100 ml	Refrigerated
TDL-8A	Bench	8000	9100	4 × 500 ml	Refrigerated
L580R	Bench	5800	5060	4 × 750 ml	Refrigerated
TGL-21M	Bench	21,000	30,642	4 × 750 ml	Refrigerated
H2500R	Floor	25,000	64,983	4 × 1000 ml	Refrigerated
H2100R	Floor	21,000	50,400	6 × 500 ml	Refrigerated
GL-25M	Floor	25,000	64,983	4 × 1000 ml	Refrigerated
GL-21M	Floor	21,000	50,400	6 × 500 ml	Refrigerated
BH2500R	Floor	25,000	64,983	4 × 1000 ml	Refrigerated
BH2300R	Floor	23,000	60,900	4 × 1000 ml	Refrigerated
BH2200R	**Floor**	**22,000**	**52,000**	**6 × 600 ml**	**Refrigerated**
BH2100R	**Floor**	**21,000**	**50,400**	**6 × 500 ml**	**Refrigerated**

APPLICATIONS & SERVICE

Where it works, and what comes with it

Protein purification

Clarify large lysate volumes at high force before chromatography.

Nucleic acids

Plasmid and genomic DNA preparation, from micro tubes to 500 ml bottles.

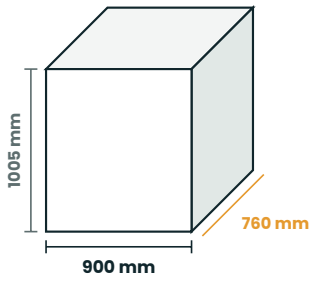
Subcellular fractionation

Differential centrifugation to separate nuclei, mitochondria and membranes under steady cooling.

Cell harvest

Collect cells or particles from litres of culture with high-capacity and continuous-flow rotors.

Footprint. Outer dimensions drawn from the specifications.



INSTALLATION

Floor or bench
Level, rigid surface rated for the 350 kg instrument plus rotor and load.

Power
AC 220 V, 50–60 Hz; 5 kW.

Clearance
Keep the air vents free so the refrigeration can reject heat.

Footprint
900 × 760 × 1005 mm (L × W × H)

WARRANTY & SERVICE

1 year 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-BH2200R-EN · Rev. B · Nov 2026 · Calculated values are reference figures. Specifications may change without notice for product improvement.

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www.lorderan.com

Laboratory and environmental test equipment