LORDERAN

TECHNICAL DATASHEET
DS-L580R-EN · REV. B · NOV 2026

LABORATORY CENTRIFUGE

Tabletop **Large-Capacity Refrigerated Centrifuge**

Big volumes on a bench — swing rotors up to **4 × 750 ml**, conical buckets and microplate carriers, on **110 V or 220 V**.

MODEL **L580R**





FRONT



LID OPEN

5800 rpm MAX SPEED	**5060** × g MAX RCF	**4 × 750 ml** MAX CAPACITY	**−20…+40** °C TEMPERATURE RANGE
±1 °C TEMPERATURE ACCURACY	**±10** rpm SPEED ACCURACY	**9** ROTORS IN 3 TYPES	**1** year WARRANTY

01 **Up to 4 × 750 ml**
Bottles, multi-tube holders and conical buckets for 50–500 ml.

02 **CFC-free cooling**
Tecumseh compressor with R404A, −20 to +40 °C.

03 **110 V or 220 V**
Runs on AC 110 V or 220 V, 50–60 Hz.

APPLICATIONS
Clinical diagnostics · Cell culture · Immunology & ELISA · Sample preparation

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.

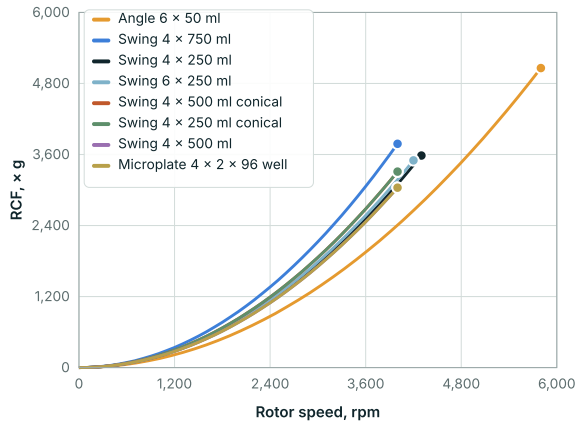
PRODUCT OVERVIEW

Large-volume separation without a floor model

L580R brings floor-model capacity to the bench: swing rotors up to 4 × 750 ml, dedicated conical-bottle buckets and microplate carriers, plus a 6 × 50 ml angle rotor that reaches 5800 rpm and 5060 × g. A Tecumseh compressor holds −20 to +40 °C, and the unit runs on AC 110 V or 220 V.

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
9 up / 10 down: Plus free coast-down

04 Controller
LCD touch screen. 6 quick programs: Selected straight from the panel

05 Lid and protection
The lid stays locked while the rotor turns, and the protection system stops the run and alarms if anything goes outside safe limits.

MAX SPEED
5800 rpm
±10 rpm speed accuracy

MAX RCF
5060 × g
6 × 50 ml rotor, r ≈ 135 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 6 × 50 ml rotor at 5800 rpm, r ≈ 135 mm, gives **5060 × 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

High torque, CFC-free cooling, four safety alarms



Control panel
LCD touch screen



Chamber and rotor
Chamber -20 to +40 °C



Outer size
734 × 620 × 445 mm (L × W × H), 100 kg without rotor net

01 Operation & programs

- **LCD touch screen** — Clear status and set-up
- **6 quick programs** — Selected straight from the panel
- **9 up / 10 down** — Plus free coast-down

02 Drive & refrigeration

- **AC variable-frequency motor** — High torque, electronic lid lock
- **Tecumseh R404A cooling** — CFC-free refrigeration
- **Silicone seal ring** — Meets GMP requirements

03 Safety

- The lid stays locked while the rotor turns, and the protection system stops the run and alarms if anything goes outside safe limits.
- **4 safety alarms** — Lock, overspeed, over-temperature, imbalance
- **Rotor recognition** — Automatic, for every rotor

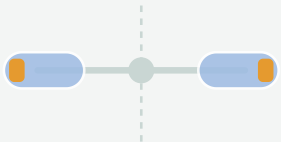
04 Rotors & capacity

- **9 rotors in 3 types** — angle, microplate, swing
- Max capacity **4 × 750 ml**
- Highest force: **angle 6 × 50 ml**, 5800 rpm / 5060 × 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.



Swing rotor
Buckets swing out level. A flat pellet at the bottom; best for blood, layers and large volumes.

Microplate rotor
Carries 96-well plates flat for plate washing and assay prep.

TECHNICAL SPECIFICATIONS

Technical specifications

Specification	
PERFORMANCE	
Max speed	5800 rpm
Max RCF	5060 × g
Max capacity	4 × 750 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	LCD touch screen

Specification	
POWER AND COOLING	
Compressor	Tecumseh (France), R404A refrigerant (CFC-free)
Noise	< 65 dB(A)
Power supply	AC 110 V / 220 V, 50–60 Hz
Power	1.5 kW
SIZE AND WEIGHT	
Outer size	734 × 620 × 445 mm (L × W × H)
Crate size	910 × 720 × 620 mm (L × W × H)
Net weight	100 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
SWING	**4 × 750 ml**	4000	3780	211	750 ml bucket · 750 ml PE bottle · 4 × 24 × 5/7 ml blood collection tubes · 4 × 37 × 5/7 ml RIA tubes · 4 × 14 × 15 ml · 4 × 12 × 20 ml · 4 × 5 × 50 ml · 4 × 3 × 100 ml · 4 × 250 ml · 4 × 500 ml
SWING	**4 × 500 ml** Round and square buckets	4000	3040	170	500 ml bucket · 500 ml PE bottle · Square bucket · 4 × 19 × 5/7 ml blood collection tubes · 4 × 9 × 15 ml · 4 × 7 × 20 ml · 4 × 3 × 50 ml · 4 × 100 ml · 4 × 250 ml · 4 × 14 × 5/7 ml aerosol-tight cover · 4 × 19 × 5/7 ml aerosol-tight cover · 4 × 24 × 5 ml blood collection tubes · 4 × 37 × 7 ml RIA tubes · 4 × 25 × 1.5 ml · 4 × 28 × 5 ml blood collection tubes · 4 × 20 × 10 ml internal thread · 4 × 10 × 15 ml · 4 × 4 × 50 ml · 4 × 250 ml, square
SWING	**6 × 250 ml**	4200	3500	177	250 ml bucket · 250 ml PE bottle · 6 × 9 × 1.5 ml · 6 × 7 × 5 ml · 6 × 9 × 5/7 ml blood collection tubes · 6 × 7 × 10 ml internal thread · 6 × 5 × 15 ml · 6 × 4 × 20 ml · 6 × 50 ml · 6 × 100 ml
SWING	**4 × 500 ml conical**	4000	3310	185	500 ml conical bucket · 4 × 500 ml · 4 × 250 ml · 4 × 4 × 50 ml · 4 × 7 × 15 ml
SWING	**4 × 250 ml conical**	4000	3310	185	250 ml conical bucket · 4 × 50 ml · 4 × 4 × 15 ml
ANGLE	**6 × 50 ml**	5800	5060	135	Adapters 15, 20 ml

Type	Rotor	Max rpm	Max × g	r, mm*	Buckets, holders and adapters
SWING	**4 × 250 ml** Uses the same 250 ml buckets and adapters	4300	3582	173	
MICROPLATE	**4 × 2 × 96 well**	4000	3040	170	Includes 4 × 2 × 96 microplate carrier
MICROPLATE	**2 × 2 × 96 well**	4000	2200	123	Includes 2 × 2 × 96 microplate carrier

* 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
L580R

Outer size, L × W × H
734 × 620 × 445 mm

Net weight
100 kg without rotor

Power
AC 110 V / 220 V, 50–60 Hz · 1.5 kW

SHIPPING
Crate

Crate size, L × W × H
910 × 720 × 620 mm

Delivery
Duty paid (DDP)

Ship date
Confirmed on order

PERFORMANCE
At full speed

Max speed / RCF
5800 rpm · 5060 × g

Max capacity
4 × 750 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

Clinical diagnostics

Separate serum and plasma from blood collection tubes in large batches, with cooling that protects temperature-sensitive analytes.

Cell culture

Pellet cells gently in 15 and 50 ml conical tubes. Soft acceleration and braking keep pellets intact and supernatants clear.

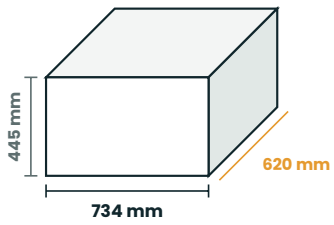
Immunology and ELISA

Spin 96-well microplates flat to remove bubbles and settle samples before reading or washing.

Sample preparation

Clarify extracts and suspensions in tubes and bottles, from 1.5 ml up to the largest bucket.

Footprint. Outer dimensions drawn from the specifications.



INSTALLATION

Floor or bench
Level, rigid surface rated for the 100 kg instrument plus rotor and load.

Power
AC 110 V / 220 V, 50–60 Hz; 1.5 kW.

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

Footprint
734 × 620 × 445 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.

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Laboratory and environmental test equipment