

8 Technical data

8.1 Specifications



Use of baffled flasks significantly reduces maximum speed for any shaker.

These specifications assume a maximum load of 15.5 kg (34 lb), including platforms, clamps, glassware and contents.

8.1.1 Agitation

Speed	25 rpm – 500 rpm
Control accuracy	±1 rpm
Stroke	1.9 cm (3/4 in) or 2.5 cm (1 in)
Indication	Displayed in 1 rpm increments
Alarm signal with speed deviation	±5 rpm
Drive mechanism	Triple-eccentric counterbalanced drive with 9 permanently lubricated ball bearings. Driven by a solid-state brushless motor
Heaters	Low watt-density, resistance heaters with high-temperature safety thermostat cut-out.

The following table shows the maximum achievable speed depending on the load. The load example values are composed of flask clamps, flasks filled with water and other accessories.

Load (examples)	Achievable speed
4,5 kg (10 lb)	500 rpm
5,6 kg (12,3 lb)	500 rpm
6,9 kg (15,2 lb)	425 rpm
9,3 kg (20,4 lb)	400 rpm

8.1.2 Temperature system

40 temperature range	5 °C above ambient temperature to 80 °C
40R temperature range	15 °C below ambient temperature (minimum 4 °C) to 80 °C
Control accuracy	±0.1 °C at 37 °C
Indication	Displayed in 0.1 °C increments
Alarm signal with temperature deviation	±1 °C
Altitude limit	2000 m

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New Brunswick™ Innova®40/40R Shaker
English (EN)

8.1.3 Power supply

Mains/power supply	100 V ±10 %, 50 – 60 Hz 120 V ±10 %, 60 Hz 230 V ±10 %, 50 Hz	40: 800 VA 40R: 1500 VA
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8.1.4 Ambient conditions

Ambience	Only for use indoors.
Ambient temperature	10 °C – 35 °C
Relative humidity	20 % – 80 %, non-condensing

8.1.5 Dimensions and weight

Dimensions	Width: 55.9 cm (22 in) Depth: 76.2 cm (30 in) Height: 61 cm (24 in) Lid open height: 102 cm (40 in)
Chamber dimensions	Width: 51.4 cm (20.3 in) Depth: 54.4 cm (21.5 in) Height: 35.6 cm (14 in)
Platform dimensions	Width: 46 cm (18 in) Depth: 46 cm (18 in) (Select universal or dedicated styles.)
Space requirements	Width: 68.6 cm (27 in) Depth: 83.2 cm (33 in) Height: 106.7 cm (42 in)
Weight	40 net weight: 60 kg (133 lb) 40R net weight: 79 kg (175 lb)

8.1.6 Alarms

There is a visible and audible warning indication when:

- Speed deviates more than ±1 rpm from setpoints.
- Temperature deviates more than ±1 °C from setpoints.
- When timer has expired.

Audible alarm can be muted.

8.1.7 Display

- 240 cm × 128 cm backlit LCD

8.1.8 RS-232

- Remote control.
- Remote monitoring.
- Remote data logging.

8.1.9 ETL regulatory standards

- UL 61010A-1
- UL 61010A-2-010
- CAN/CSA-C22.2 No. 1010.1
- CAN/CSA-C22.2 No. 1010.2.010

8.1.10 CE regulatory standards

For CE regulatory standards:

8.2 Certifications

The 40/40R has been tested to ETL standards, to comply with UL and CAN/CSA electrical safety standards.

As attested in the CE Declaration of Conformity, the 40/40R also conform to the appropriate CE standards.