


## 8 Technical data

### 8.1 Specifications

 The use of baffled flasks will significantly reduce 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 Shaking

Speed	<ul style="list-style-type: none"> <li>• 25 – 400 rpm</li> </ul>
Control accuracy	<ul style="list-style-type: none"> <li>• <math>\pm 1</math> rpm</li> </ul>
Stroke	<ul style="list-style-type: none"> <li>• 1.9 cm (3/4 in)</li> <li>• 2.54 cm (1 in)</li> </ul>
Indication	<ul style="list-style-type: none"> <li>• Displayed in 1 rpm increments</li> </ul>
Alarm signal	<ul style="list-style-type: none"> <li>• Visible and audible alarm when speed deviates <math>\pm 5</math> rpm from setpoint</li> </ul>
Drive mechanism	Triple-eccentric counterbalanced drive with nine permanently lubricated ball bearings
Safety	Drive Interrupt shuts off power to Shaker when door opens. Acceleration/deceleration circuit prevents sudden starts and stops, minimizing both splashing and mechanical damage. Independent mechanical sensing switch also shuts the motor off in unbalanced condition.

#### 8.1.2 Temperature control

Heaters	Long-life, low-watt density resistance-type heater with high temperature thermostat
Control accuracy	<ul style="list-style-type: none"> <li>• <math>\pm 0.1</math> °C at 37°C</li> <li>• <math>\pm 0.5</math> °C over the remaining range</li> </ul>
Temperature range (42)	<ul style="list-style-type: none"> <li>• 10 °C above ambient temperature to 80 °C</li> </ul>
Temperature range (42R)	<ul style="list-style-type: none"> <li>• 20 °C below ambient temperature (minimum 4 °C) to 80 °C</li> </ul>
Alarm signal	<ul style="list-style-type: none"> <li>• Visible and audible alarm when temperature deviates <math>\pm 1</math> °C from setpoint</li> </ul>

**Technical data**

New Brunswick™ Innova®42/42R Shaker  
English (EN)

**8.1.3 Power supply**

<ul style="list-style-type: none"> <li>• 100 V ±10 %, 50/60 Hz</li> <li>• 120 V ±10 %, 60 Hz</li> <li>• 230 V ±10 %, 50 Hz</li> </ul>	1500 VA
Overvoltage category	II

**8.1.4 Dimensions**

	Width	Depth	Height
Space requirements	84 cm (33 in)	85 cm (33.5 in)	84 cm (33 in)
Dimensions	63.5 cm (25 in)	74.5 cm (29.3 in)	81.8 cm (32.2 in)
Chamber dimensions	51.7 cm (20.4 in)	51.5 cm (20.3 in)	47.7 cm (18.8 in)
Platform dimensions	46 cm (18 in)	46 cm (18 in)	

**8.1.5 Weight**

42	98 kg (216 lb)
42R	121 kg (266 lb)

**8.1.6 Ambient conditions**

Ambience	Only for use indoors
Ambient temperature	10 °C – 35 °C
Relative humidity	20 % – 80 % (non-condensing)
Altitude	Up to 2000 m
Pollution degree	2

**8.1.7 CE directives and standards**

See declaration of conformity.

**8.1.8 Compliance and certifications**

UL 61010-1; UL 61010-2-010; UL 61010-2-011; UL 61010-2-051.
CAN/CSA C22.2 No. 61010-1-12; CAN/CSA C22.2 No. 61010-2-010
CAN/CSA C22.2 No. 61010-2-011; CAN/CSA C22.2 No. 61010-2-051.

### 8.1.9 Features

Alarms	Visible and audible warning indication when speed deviates more than 5 rpm or temperature more than 1 °C from setpoints, and when timer has expired. Audible alarm can be muted.
Display	240 x 128 backlit
RS-232	Remote control, remote monitoring, remote data logging.
Setpoint retention	All setpoints and operating status are retained in non-volatile memory.
Automatic restart	Automatic restart after power is restored, indicated by flashing display.

### 8.1.10 Fuses

**Next to Outlet:**

- 0.5 A glass tube, slow-blowing, for 230 V operation only
- 0.75 A glass tube, slow-blowing, for 120 V operation only
- 1.0 A glass tube, slow-blowing, for 100 V operation only

## 8.2 Load/speed graphs

In the following graphs, 20 % and 50 % indicate level to which flasks were filled. These are sample load/speed runs provided for your information.