

## 8 SPECIFICATIONS

*This chapter provides technical details of interest, but not necessarily essential for operation of the instrument.*

<b>INNOVA 2180</b>	
<b>SHAKING</b>	
<b>Speed</b>	25-800 RPM
<b>Motion</b>	0.180 inch (4.6 mm) diameter circular orbit
<b>Indication</b>	LED digital electric display, 1 RPM increments
<b>Setpoint &amp; Control</b>	Digital adjustment with PI microprocessor control and instantaneous visual feedback
<b>Accuracy</b>	± 1 RPM (see <b>NOTE</b> at bottom of page)
<b>DRIVE</b>	
Triple eccentric counterbalanced ball bearing drive.	
<b>TIMER</b>	
<ul style="list-style-type: none"> <li>• Programmable shaking periods from 0.1 hour to 99.9 hours by a digital timer that shuts off at the end of period and energizes status light.</li> <li>• Timer counts down and digital display indicates remaining time. Can be deactivated for continuous operation.</li> <li>• Additionally, unit will display total accumulated running time for service information.</li> </ul>	
<b>AMBIENT OPERATING ENVIRONMENT</b>	
0° - 60°C, 90% humidity, non-condensing	
<b>SELF-DIAGNOSTIC STATUS</b>	
Warning signal (audible and visible) indicates when shaking speed deviates more than 5 RPM and when timer operation has expired. The audible alarm can be deactivated/activated by the operator.	
<b>REMOTE SPEED MONITORING (optional)</b>	
<ul style="list-style-type: none"> <li>• Chart recorder output for speed 0.5V, 1V per 100 RPM.</li> <li>• Accuracy ± 25mV.</li> </ul>	
<b>TEMPERATURE MONITORING (optional)</b>	
<ul style="list-style-type: none"> <li>• RTD digital temperature monitor displays individual flask or ambient temperature in 0.1°C increments.</li> <li>• Chart recorder output provided.</li> </ul>	
<b>AUTOMATIC RESTART</b>	
<ul style="list-style-type: none"> <li>• Unit will automatically restart after undesired power interruption.</li> <li>• Setpoints are maintained by non-volatile memory.</li> <li>• Interruption is indicated by a flashing LED display.</li> </ul>	



### **NOTE:**

**At 25-400 RPM, the unit will perform to specifications with up to ±10% line voltage fluctuation. To attain speed accuracy at 401-800, the line voltage cannot be lower than 5% of the rated voltage.**

<b>MOTOR</b>		
1/15 HP, 3-phase brushless ball bearing DC motor.		
<b>ELECTRICAL SERVICE</b>		
<ul style="list-style-type: none"> <li>• 100V, 120V, 220V, 240V</li> <li>• All voltages 50/60 Hz, 80VA.</li> <li>• Universal power entry system adapts to U.S. or international requirements.</li> </ul>		
<b>ELECTRICAL PROTECTION</b>		
<ul style="list-style-type: none"> <li>• Main fuse(s) in power entry module.</li> <li>• Control circuits provided with separate fuse.</li> </ul>		
<b>DIMENSIONS</b>		
<b>Width</b>	19 inches	48 cm
<b>Depth</b>	21 $\frac{7}{8}$ inches	55.5 cm
<b>Height (to platform surface)</b>	6 $\frac{3}{8}$ inches	17 cm
<b>PLATFORM DIMENSIONS</b>		
	18 inches x 18 inches	46 cm x 46 cm
<b>CONSTRUCTION</b>		
<ul style="list-style-type: none"> <li>• Heavy gauge steel, phosphate-coated and texture-painted cabinet.</li> </ul>		
<b>WEIGHT</b>		
<b>Net</b>	76 lbs	34.5 kg
<b>Gross</b>	120 lbs	54.5 kg