The VR4450 is one of the largest of the current family of Vibration Research shakers. The large diameter armature adapts to many test requirements with a minimal amount of fixturing. High lateral and axial stiffness decrease problems associated with off-center loads. Unsupported horizontal operation is possible on many loads. The cooling blower is direct coupled to the shaker to give the maximum performance. An optional slip table is available for horizontal testing. Optional load supports allow testing loads with a high center of gravity. The suspension stiffness is adjustable. Electronic load compensation allows heavier loads.

**VR4450 SYSTEM SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sine Force</td>
<td>450 F-lb pk</td>
</tr>
<tr>
<td>Random Force</td>
<td>225 F-lb rms</td>
</tr>
<tr>
<td>Shock Force</td>
<td>900 F-lb pk</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>DC to 4kHz</td>
</tr>
<tr>
<td>Max Acceleration</td>
<td>72/36/144</td>
</tr>
<tr>
<td>Max Velocity</td>
<td>59/59/79 ips</td>
</tr>
<tr>
<td>Max Displacement</td>
<td>1.77&quot; pk-pk</td>
</tr>
<tr>
<td>Power Requirements</td>
<td>2700VA @ 480VAC 3Ø, 50/60Hz</td>
</tr>
</tbody>
</table>

**SHAKER PARAMETERS**

**PHYSICAL**

- Armature weight: 6.6lb
- Suspension stiffness: Adjustable
- Dimensions: 20"H x 23.25"W x 23.62"D
- Shaker weight: 617.3lbs
- Rated armature current: 25 Amps
- Fundamental resonance\(^1\): >4000Hz

**LOAD DEPENDENT PERFORMANCE**

- Bare table: 72g
- .2lbs Load: 66g
- 1lbs Load: 59g
- Cooling: Cooling Blower

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**AMPLIFIER PARAMETERS**

Output voltage: 105V rms  
Output current: 25A rms  
Max. continuous dissipation: 2700VA  
Max voltage gain: 2.5/5/10 VRMS  
Cooling: Fan, automatic  
Input impedance: N/A  
Meters: VRMS, ARMS  
Interlock circuit: Overload, Temperature, Clipping and More  
Input power: 480 VAC  
Dimensions: 23.6"H x 70.9"W x 31.5"D  
Weight: 515.9lbs  

The system features a high quality, air cooled, direct coupled amplifier designed specifically for use with this vibration test system. The field supply is integrated into the amplifier. The amplifier features protection from both over an adjustable current limit and over temperature limit. A quick connect power port connects to the shaker. The amplifier has full interlock capabilities. A LCD display monitors peak voltage, RMS current, system status, and the level of the output. This amplifier is configured as either a wide bank, highly damped voltage source, or as a high impedance current source. DC and AC coupled signals are provided. The amplifier is designed for standard 19" rack mounted installation and requires 480V 48-60Hz power.