Specifications for Langmuir Trough

Dimensions of liquid footprint (without barrier)
Length 42.0 cm
Width 8.9 cm
Area 374 cm²
Depth (no meniscus) 0.7 cm

With barrier
Usable area range (no x-rays) 35-335 cm²
Usable area range (x-rays) 120-335 cm²

Volume (no meniscus) 260 cm³
Volume (2.4 mm meniscus) 350 cm³ (Max value - recommended for measurements)

Weight

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spacer blocks (4)</td>
<td>28</td>
</tr>
<tr>
<td>Slotted base plate</td>
<td>21</td>
</tr>
<tr>
<td>Trough</td>
<td>55</td>
</tr>
<tr>
<td>Box (walls only)</td>
<td>23</td>
</tr>
<tr>
<td>Lid</td>
<td>8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>135</strong></td>
</tr>
</tbody>
</table>

Barrier Drive
- Barrier speed range: <0.1 mm/s - 1.0 mm/s
- Lead screw pitch: 1.25 mm per rotation
- Position given by closed-loop readback of potentiometer
- Both flat and notched barriers are available

Control Software
Control software is Nima 5.16.
This controls all functions relating to the barrier drive and pressure sensor.

Temperature Control of Sample
Two-stage temperature control. A Neslab circulator maintains base block temperature. A Lakeshore unit controls subphase temperature by active heating. The Lakeshore control loop uses the measured subphase temperature as its input.

Typical temperature range 25 - 40 Celsius
Temperature stability ±0.1 Celsius