Laboratory Automation & Robotic System Enclosures & Cabinets
for operator and sample/process protection

MODEL LAC2

PERFORMANCE TO CLASS II LEVELS OF PROTECTION
FOR OPERATOR AND SAMPLE / PROCESS

Bigneat’s LAC2 Class II type enclosure is constructed following years of experience. LAC2 provides operator and sample/process protection in closed or open conditions. The enclosure interior is accessible through sliding windows in the lower door (access 300mm high) through which high velocity inflow air enters (minimum 0.4m/s) providing operator protection and sample/process protection. This laboratory air then flows into a profiled grille extending the full width across the front of the enclosure.

Custom designs for this model of enclosure provide for front and side access, front and back access (plenums in side walls for airflow – ‘split innovation’ in the fan housing is unique to Bigneat).

FEATURES
• Providing in-process operator and product protection (sterility) with access via 300mm high sliding windows
• Programmable control system - displays enclosure status and controls airflow system balance, hour counter
• Display mounted on enclosure exterior shows status of enclosed robotic system
• Bigneat enclosures provide excellent visibility of the enclosed system
• Audible and visual alarm indication of low airflow and door open warning
• Hydrogen peroxide (or alternative sterilisation) connections (night doors, removed for normal operation and access)

PERFORMANCE AND STANDARDS

For use with Class II biohazards.

LAC2 provides for operator protection from hazardous aerosols and particles and providing product protection from contaminants entering the enclosure whilst in operation.

BESPOKE AND CUSTOM FINISHED CABINETS
Bigneat is highly flexible and we offer enclosure options and finishing to suit your robotics system and the contained process.

IT’S YOUR CHOICE!
Choose access options.
Specify cable/tubing connections required.
Choose the colour of your enclosure.
Have your robotic system integrated into your enclosure.
DESCRIPTION

The downflow sterile airflow is produced by a percentage air flow system. Air is drawn from within the cabinet, through the lower door and via the inlet grille and flows up a common plenum or plenums to be filtered by HEPA filters. A percentage of the circulated air is exhausted via double HEPA filters back into the laboratory.

The high performance airflow system is continuously monitored and automatically compensates for airflow changes by a 'closed-loop' feedback to ensure a minimum level of operator and product protection at all times.

Interlocking upper and lower access doors are locked down with ‘T’ handles during operation integrated safety alarm system (see options).

LAMINAR AIR FLOW

Compromising of the laminar airflow within the enclosure is unavoidable because of the presence of the robot and the regular movement of the arms; careful airflow design and control ensures that this turbulence is kept to a minimum.

Turbulence within the enclosure will not compromise personnel protection due to high inflow velocities.

FILTRATION USED IN LAC2 ENCLOSURES

Pre-filtration eliminates particles at 5.0μm or larger to an efficiency of 92% as defined in BS EN ISO 779.

Exhaust air HEPA filtration (H14 Standard) eliminates particles 0.3μm or larger to an efficiency of 99.995%.

Downflow laminar air flow SINGLE HEPA filtration (H14 Standard).

<table>
<thead>
<tr>
<th>Model</th>
<th>External dims (WxDxH) mm</th>
<th>Internal dims (WxDxH) mm</th>
<th>Inflow air velocity min m/s</th>
<th>Downflow air changes per hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>RB1500/01</td>
<td>1500 x 1400 x 2570</td>
<td>1420 x 1060 x 1144</td>
<td>&gt;0.4</td>
<td>0.25 to 0.5</td>
</tr>
<tr>
<td>RB1800/01</td>
<td>1800 x 1400 x 2570</td>
<td>1720 x 1060 x 1144</td>
<td>&gt;0.4</td>
<td>0.25 to 0.5</td>
</tr>
<tr>
<td>RB2200/01</td>
<td>2200 x 1400 x 2570</td>
<td>2120 x 1060 x 1144</td>
<td>&gt;0.4</td>
<td>0.25 to 0.5</td>
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<tr>
<td>RB2600/01</td>
<td>2600 x 1400 x 2570</td>
<td>2520 x 1060 x 1144</td>
<td>&gt;0.4</td>
<td>0.25 to 0.5</td>
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<tr>
<td>RB3200/01</td>
<td>3200 x 1400 x 2570</td>
<td>3120 x 1060 x 1144</td>
<td>&gt;0.4</td>
<td>0.25 to 0.5</td>
</tr>
</tbody>
</table>

Sound level: <65dBA. Lighting: 2 x 18W sealed fluorescent amps >480lux. Cabinets available for power supply: 230V, AC, 50Hz, 13Amp, 1Ø and 110V, AC, 60Hz, 20Amp, 1Ø.

QUALITY ASSURED

Bigneat is accredited to BS EN ISO 9001: 2008

Bigneat systems are CE marked

Bigneat manufactures from UL approved components