

MODEL LABS

# Laboratory Automation & Robotic System Enclosures & Cabinets

for operator and sample/process protection



FEATURES

- Audible and visual alarm indication of low airflow and door open warning
- Large range of options, ventilated transfer ports and waste management systems
- Great ergonomics with access and visibility to four sides of the robotic platform

▶ PERFORMANCE AND STANDARDS

Meeting recognised Standards worldwide including: NSF Standard 49, Category A2 and EN 12469: 2000.

**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.

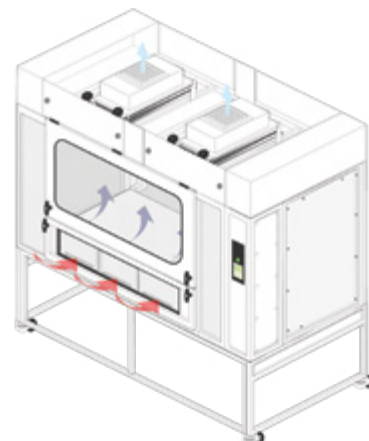
▶ PERFORMANCE TO CLASS II LEVELS OF PROTECTION FOR OPERATOR AND SAMPLE / PROCESS

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

- Operator protection is of paramount importance in the LABS model with automatic fan speed control maintaining a minimum face velocity which complies to worldwide recognised standards
- Programmable control system - displays enclosure status and controls airflow system balance, hour counter
- Display show status of enclosed robotic system is mounted to enclosure exterior



# IMPROVE RELIABILITY, IMPROVE PRODUCTIVITY, IMPROVE SAFETY.

## 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).

## FILTRATION USED IN LAC2 ENCLOSURES

**Pre-filtration** eliminates particles at  $5.0\mu\text{m}$  or larger to an efficiency of 92% as defined in BS EN ISO 779.

**Exhaust air** HEPA filtration (H14 Standard) eliminates particles  $0.3\mu\text{m}$  or larger to an efficiency of 99.995%.

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

## 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.

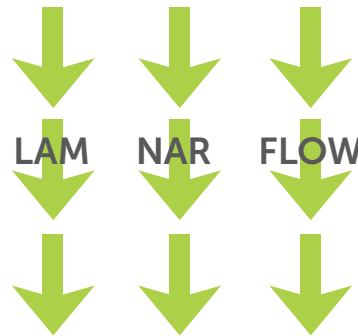
Turbulence within the enclosure will not compromise personnel protection due to high inflow velocities.

## ESSENTIALS

- **High quality construction**
- **Largest component of enclosure for on-site assembly will fit through standard laboratory doorway**
- **Self-levelling/lockable castors ensure full mobility**

## OPTIONS AND EXTRAS

- **Computer shelf on flexible arm**
- **Additional electrical sockets to suit robotic system**
- **Integrated robot system safety switches**
- **Under-bench storage, shelving and cupboards to suit**
- **Universal control panel**
- **UV lighting, linked to timed on/off facility in control system**
- **Ventilated waste tips and plates container**



| Model     | External dims mm (WxDxH) | Internal dims mm (WxDxH) | Inflow air velocity min m/s | Downflow air changes per hr |
|-----------|--------------------------|--------------------------|-----------------------------|-----------------------------|
| RB1500/01 | 1500 x 1400 x 2570       | 1420 x 1060 x 1144       | >0.4                        | 0.25 to 0.5                 |
| RB1800/01 | 1800 x 1400 x 2570       | 1720 x 1060 x 1144       | >0.4                        | 0.25 to 0.5                 |
| RB2200/01 | 2200 x 1400 x 2570       | 2120 x 1060 x 1144       | >0.4                        | 0.25 to 0.5                 |
| RB2600/01 | 2600 x 1400 x 2570       | 2520 x 1060 x 1144       | >0.4                        | 0.25 to 0.5                 |
| RB3200/01 | 3200 x 1400 x 2570       | 3120 x 1060 x 1144       | >0.4                        | 0.25 to 0.5                 |

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

## Bigneat Limited

4 & 5 Piper's Wood Industrial Park, Waterberry Drive, Waterlooville, Hampshire PO7 7XU UK  
 t: +44 (0)23 92 266400 f: +44 (0)23 92 263373 e: info@bigneat.com w: www.bigneat.com

