



## BLOW FILL SEAL (BFS) FILLING ROOM AIR CHANGE RATE REDUCTION

### CLIENT | LOCATION

Sterile pharmaceutical manufacturer, Australia

### SECTOR

Pharmaceutical manufacturing (aseptic)

### PROJECT BRIEF

Existing HVAC system designed to provide Grade A room conditions at high energy cost. Process changes resulted in requiring a Grade C room as background for a BFS filling line.

### METHODOLOGY

Phase 1 brief was a trial for 4 out of 8 rooms to reduce air change rate and therefore energy demand while maintaining the required airflow patterns for product protection.

Phase 2 brief was to deliver air change rate reductions on all 8 rooms based on Phase 1 lessons learnt.

### SOLUTION

- Carry out as found testing for airflow measurements, room balance, 'as found' airflow visualisation to ISO 14644 methodology
- Reduce existing air change rates and re-commission and balance each filling room
- Validate new air change rates and airflow distribution using airflow visualisation to ISO 14644 methodology
- Validate new cleanroom classification to ISO 14644 methodology
- Identify and carry out remediation work on an additional AHU resulting in energy savings and potential future breakdown avoidance
- Completed to Planned Change Control, FRS, IOQ documentation
- Reduced annual maintenance costs on fans, motors and filters
- Reduced noise levels with positive impact on operator working conditions.

### RESULTS



**455,000 kWh**

Energy savings identified (per year)

**\$63,000 USD**

Energy cost savings identified (per year)

**387 tonnes of CO<sub>2</sub>**

Emissions reduction (per year)

Eeco2 delivered the HVAC design review, re-commissioned the HVAC system and carried out the validation testing to protocol.

We then delivered the additional savings on the remaining rooms based on findings and lessons learned during phase 1.

**“ This project delivered 30% of the site’s annual carbon reduction target.**

Client

### FOR FURTHER INFO

T: +44 (0) 1625 660 717 E: info@eeco2.com