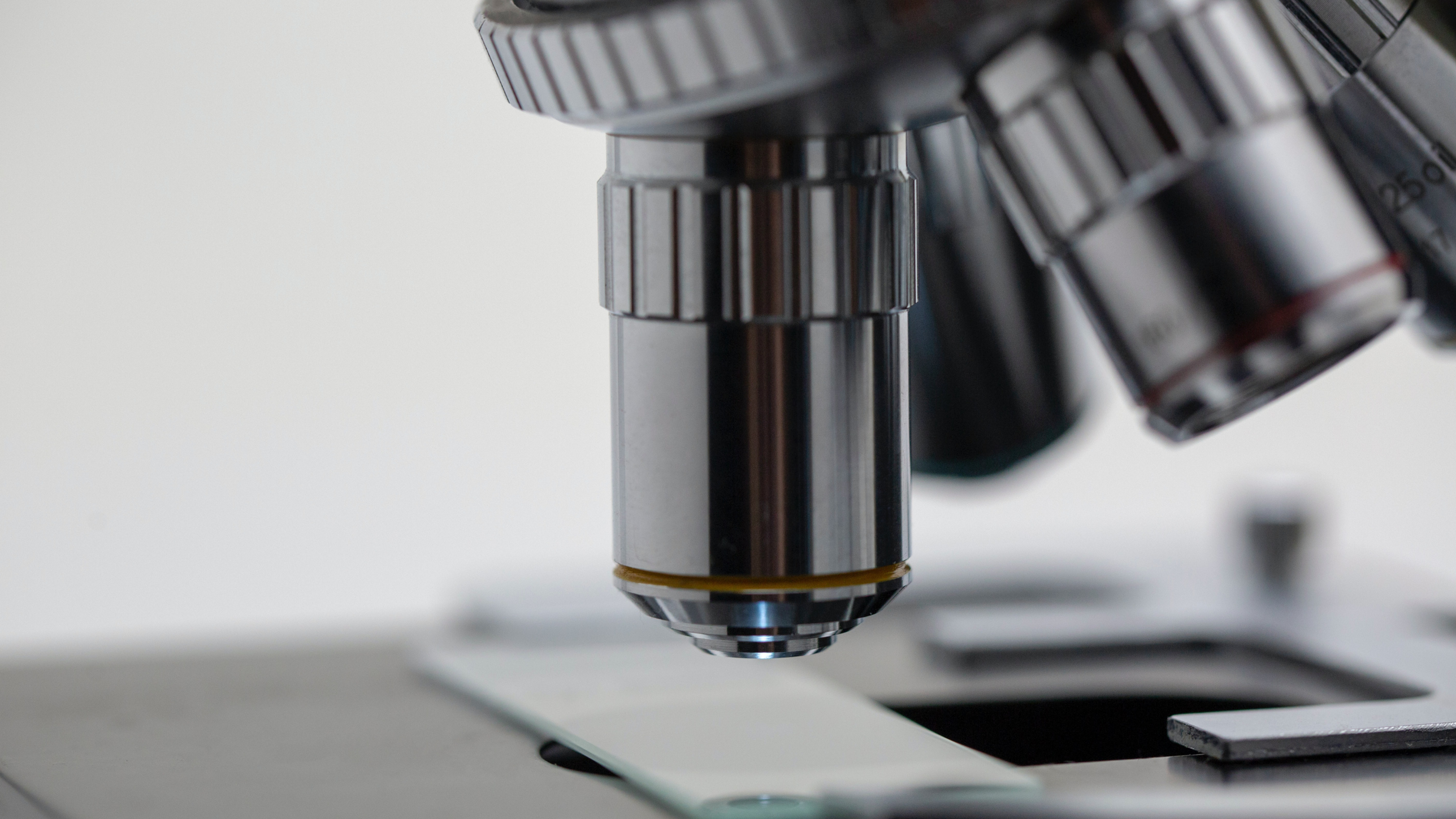

“ Improving energy efficiency is more about the smaller changes that drive the big results ”

The Customer

Orthocell - Regenerative Medicine

By making sure no detail in any system or plant is overlooked, our team is always able to propose technical solutions to improve the client's results and it wasn't different with our client Orthocell, a pharmaceutical company located in WA, Australia.

Orthocell Ltd is a regenerative medicine company dedicated to the development of novel collagen medical devices and cellular therapies for the repair and regeneration of human tendons, bone, nerve and cartilage defects. As such, it is crucial for Orthocell to have their labs and clean rooms maintained at state-of-art standards.

The Challenge

In order to maintain the high standard of air cleanness in its labs, Orthocell would require regular servicing in their AHU - Air Handling Unit, an equipment used to regulate and circulate air as part of the heating, ventilating, and air-conditioning system.

Due the clean room requirements, there is a recommended multi-staged air filtration process in the AHU required to ensure all contaminants are removed: Pre-Filters > Bag Filters > Hepa Filters.

However, when engaged to carry on the servicing for the company's clean rooms, our team went above and beyond to investigate how their current system could be improved. After close analysis, the team then identified that, although the filters and bag filters were working well to ensure room cleanliness, they were required premature replacement due to contaminants being introduced through the fresh make up air stream.

The current filters in the Orthocell's AHU were having to be replaced every three months, which wasn't very efficient for the company.

The Solution

The existing cooling plant Orthocell had in place was suitable for their operations, however the filters used in the AHU – Air Handling Unit weren't as efficient as it could be, requiring servicing and replacement every three months.

The fresh air make up was filtered with a standard Merv8 V form filter, which did not appear to filter some of the finer airborne contaminants that where present around the fresh air inlets.

To solve the problem, our team suggested to increase their current filter density from Merv 8 (10 Microns) to Merv 11 (1 Microns), and by doing this simple change, we were able to improve the cleanliness inside the ductwork and prolong life span of the other system filters.

A quick, easy and stress-free solution with no additional upfront cost, since the current filters would need to be replaced either way.

The Results

By paying attention to the details, our team was able to provide Orthocell not only with a AHU servicing but also with a solution to bring both immediate and long-lasting results.

The change of filter density on their system allowed the company to reduce the cost of servicing requirements to one quarter of what was required before. Instead of having to replace the filters every three months, the new filters are only required to be replaced once a year, which is more of a precaution to ensure maximum cleanliness rather than a requirement itself. The Hepa filter lifespan was also prolonged to the maximum permitted by company policy.

On top of the considerable instant impacts and reduction of maintenance costs, the company was also able to lower their ground fill wastage by not throwing out as many filters as often, and improved their system cleanliness which is the ultimate goal for laboratory clean rooms.

The client is now a continued servicing client that continues to invest in plant performance and efficiency upgrades.

"...we were able to improve the cleanliness inside the ductwork and prolong life span of the other system filters. A quick, easy and stress-free solution with no additional upfront cost, since the current filters would need to be replaced either way".