



CASE STUDY

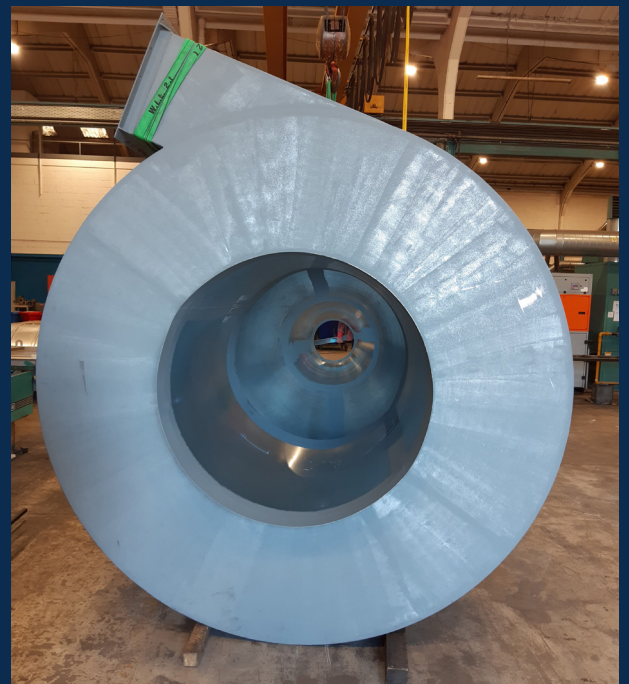
# HIGH PERFORMANCE CYCLONE SEPARATOR FOR SAWMILL



## THE CHALLENGE

Our work comes in all shapes and sizes. This large cyclone is destined for a sawmill in central Scotland. It is designed to remove massive quantities of sawdust from the air and protect workers from breathing in hazardous dust and sawdust. Capturing these particles also removes the threat of combustion as sawdust is highly inflammable.

Built to cyclonic principles, the final assembly will reduce waste by separating sawdust from other particles, which can then be added to composite wood products used widely in the building industry.





## THE SOLUTION

It took 260-man hours to create this impressive structure. From our fabrication and machining workshops, our engineering team formed the cylindrical container, flat on one end and cone shaped on the other, using 3mm galvanised mild steel, cut with our high-definition plasma machine and CNC guillotine. The cone shape was then formed using our pinch rollers and fully welded by our team of highly skilled coded welders.

In addition, we supplied circular pipework along with a ninety-degree segmented bend. The cylinder was designed to connect to a high velocity blower and a trap or container at the bottom to collect the separated materials. The cyclone was subject to a load test and a DPI (Dye Penetrant Inspection) test to confirm there were no flaws on the surface area prior to delivery, where it was then assembled on-site.

## THE RESULTS

The new cyclone is in place providing safe extraction of potentially harmful particles from the sawmill and allowing the customer to maximise output by reducing waste through utilising excess sawdust for building materials.

James Aiken Engineering Solutions has the skills and know-how to build cyclones for sawmills, food processing plants, the oil and gas industry or to filter and purify wastewater at sewage treatment plants. Next time you need to apply the laws of physics to a dust and fume extraction project summon the power of James Aiken's Engineering team.

Call 01224 704842 for assistance.



**JAMES AIKEN ENGINEERING SOLUTIONS IS A LEADING SUB-CONTRACTOR OF FABRICATED METAL AND PRECISION MACHINED COMPONENTS WITH EXTENSIVE FABRICATION AND MACHINE SHOP FACILITIES UNDER ONE ROOF.**



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