

## Case Study

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Our company was tasked with providing a Dust and Oil Mist Extraction System to enable the client to start a new CNC operation.

The extraction unit is designed to serve a lathe cutting operation handling an air volume of approximately 1300m<sup>3</sup>/hr. The material used by the client is a Carbon fiber-reinforced polymer and the dust is collected at source via 3 proven 80mm magnetically mounted hose assemblies.

An acoustic diffuser section was provided to enclose the fan discharge point which is located on top of the filter unit casing. The acoustic diffuser is designed to deflect the exhausted air through an extended path which is lined with an acoustic foam media.

Dust laden air enters the filter through the air inlet connection, the heavier particles being immediately deposited into the unit bin. Fine particles of dust travel with the airstream and are retained on the inside surfaces of the filter fabric until dislodged by the operation of the filter shaker.

The cleaned air would be drawn through the filter element into a low velocity chamber which would have a heavy duty plate mounted fan set located above. The cleaned air would be discharged from the fan outlet via an acoustic top chamber.



After installation the customer was pleased with the installation and the low noise levels produced by the extraction system.