

Imperial College London puts Reavell H5236 to the test

The aeronautics department at the Imperial College London (ICL) carries out a range of research projects at its state-of-the-art facility with the help of complex, sensitive technologies such as a supersonic wind tunnel, an autoclave and a WASP rig.



Benefits-at-a-glance

- Reliability - minimal disruption to the daily running of the facility
- Oil and moisture free air – eliminates the chance of contamination
- High air capacity – with quick charge times and guaranteed free air delivery

Application-at-a-glance

- Sealing of autoclave doors during composite/ component curing
- Flow condition simulation using WASP rig
- Powering supersonic wind tunnel

Application Details

Such equipment requires large volumes of high-pressure compressed air, up to 28 bar, to perform correctly.

To help meet this requirement, ICL selected a Reavell H5236 compressor to provide on-demand air, combining high reliability with cost-efficient operation.

Ian James, laboratory supervisor from Imperial College London explains, "Our laboratory staff are not available to continually monitor the performance of the

compressor during working hours and so we need the unit to operate without intervention.

Automatic switch on and off is essential to the daily running of the research facility, ensuring the compressor is always ready when required.

Reliability is also important in protecting long and complex research projects, as any disruption to the compressed air supply during testing can alter the end result.

Customer
Imperial College London

Location
London, UK

Application
High-pressure compressed air used to power supersonic wind tunnel, wasp rig and autoclave

Product
5236, H-Series water-cooled compressor

Customer Benefit
High reliability and large volume of air



Supersonic wind tunnel



WASP rig



Autoclave

Related Target Markets

- Automotive
- Aerospace
- Food & drink
- Glass and ceramics
- Healthcare
- Safety

Related Applications

- Component testing
- Gas recovery systems
- Research equipment

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Ian James, laboratory supervisor from Imperial College London

In addition, whilst one compressor unit is sufficient for our air demands, we need to have complete assurance that it will provide the durability and longevity required for constant use. We simply cannot afford for the compressor to be out of action, as without it, we cannot carry out much of our research.

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Air purity

Each application requires high-quality air as any contamination could potentially undermine the end test result. Reavell's H5236 was fitted with an oil adsorption filter that provides approximately 0.01pp residual oil carryover and a dryer that provides a dew point of -45°C.

Oil and water contamination can also affect the integrity of the component parts within the test equipment itself. Clean, dry air protects the equipment from rusting; reducing repair costs.

High volumes of air

The H5236 is equipped with six large air receivers, with total volume of 90m³.

The compressor automatically comes online when the pressure drops to 350 psi, increasing pressure in the air receiver to 410 psi, so that there is always sufficient free air delivery.