

# Case Study

For Your Perfect Indoor Climate



## Key Benefits

- ✓ 100% outside air ventilation and 45 air changes per hour.
- ✓ Stable environment for accurate test results – even temperatures without draughts.
- ✓ Discreet air outlets free up floor & wall space.
- ✓ Maintenance can be carried out away from sensitive and working areas, without disruption.
- ✓ Option for future upgrade to add high specification air purification.

## Stable Climate Control for Accurate Test Results

**The problem:** Sharp Laboratories were looking for a ventilation solution for three separate laboratories. Two smaller laboratories needed outside air ventilation to match the extract of the fume cupboard at slightly negative pressure; one larger laboratory needed a complete change of room air every ninety seconds.

**The solution:** Three Ingenious Air Small Duct Systems were specified to provide 100% outside air ventilation. Room pressure sensors were installed to control the inverter speed of the fan motor in the air handling unit. This ensures the fan speed perfectly matches the varying speed of the extract rates of the fume cupboards.

In the two smaller laboratories, the system keeps the room at slightly negative pressure compared with the corridor outside. Air is discharged into an open grid ceiling. The induction method of air delivery ensures that air distribution is even. It guarantees that the laboratory technicians and measuring equipment are not subject to draughts or hot and cold spots.

The system in the larger laboratory reliably and continually delivers on the specified 45 air changes per hour. The induction method of air delivery ensures that the air changes happen evenly throughout the area. No area is left vulnerable to polluted air.

The air handling unit of two of the systems were installed outside of the laboratories. This reduces disruption as engineers can carry out maintenance away from sensitive and working areas.

**Follow up:** The Ingenious Air Small Duct System gave Sharp Laboratories the solution they needed. The systems are straightforward to install and hassle-free to maintain. They provide all the required functions.

Sharp has the option to easily add high specification air purification in the future. This optional module eliminates the three main causes of indoor pollution. This would be useful if use of the laboratory changes or if increased air purification is needed for new testing procedures.



**The Ingenious Air Small Duct System - WINNER of UK 'Air Conditioning Product of the Year' RAC Industry Cooling Awards 2015**

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