

# Case Study

CHANGE IS IN THE AIR

INGENIOUS AIR



## Key Benefits

- ✓ Achieves required laboratory testing temperature and relative humidity conditions.
- ✓ Comfortable, virtually draught-free heating, cooling & humidity control in one system.
- ✓ Discreet white air outlets free up floor and wall space.
- ✓ Planned maintenance is carried out away from the working area, reducing disruption and downtime.

## Perfect Humidity Control for Safety Equipment Testing Laboratory

### The Problem:

Design Blue Ltd, the supplier of high impact safety equipment, needed comfort cooling and heating for their new D30 laboratory. They had to achieve specified temperature and relative humidity conditions to ensure the accuracy of their testing procedures. Relative humidity is the ratio of moisture in the air to the maximum possible saturation of air at a given temperature.

### The Solution:

One Ingenious Air® Small Duct System, paired with a Mitsubishi sustainable technology heat pump was installed. A humidity control system was integrated into the ducted Ingenious Air System. The de-humidification mode option acts as a dehumidifier. This allows the system to run in a reduced cooling mode when there is no cooling requirement.

The Ingenious Air® Small Duct System provides energy efficient heating and cooling. The fan motor is configured to run continuously during the laboratory's working hours (or 24/7 if preferred) to maintain specified conditions.

In addition, the core air handling unit of the system was installed outside of the laboratory area. This allows planned, preventative maintenance to be completed away from the working area. This saves time and money as there is no downtime. It also prevents the risk of maintenance works affecting laboratory conditions.

### Follow Up:

The Ingenious Air® Small Duct System provides energy efficient and comfortable heating and cooling. It achieves the specified required temperatures and relative humidity conditions.

The Ingenious Air® Company carries out planned preventative maintenance every 6 months. As the air handling unit was installed outside of the laboratory, maintenance can take place during normal working hours without disruption.