

INTELLIGENT SOLUTIONS TO DUST CONTROL

Controlling airflow according to demand is being addressed by the Intellair solution

Western Air Ducts' (WAD) programmable logic controlled (PLC) intelligent air control system – Intellair – continually monitors demand and regulates the extraction or supply of air in accordance with demand.

An off-the-shelf solution designed to cut energy costs by in excess of 40% and have an investment payback of about two years, Intellair is being targeted at both new and existing extraction or ventilation systems.

Operations director Scott Lintern told TTJ that many woodworking companies either didn't appreciate that inefficient extraction was costing them money, or the cost and complexity of sourcing/building a control system put them off.

"The Intellair control unit can handle 62 dampers at once," he said. "It's as close to a



Intellair damper control unit

plug and play system as you can get."

Intellair was recently installed at AJ Charlton & Sons Ltd's gate manufacturing facility in Somerset.

Ducting was modified on the system, which has 27 points connecting to an existing cyclone filter, and Intellair was fitted. Charltons needed to increase material throughput, achieve higher productivity and reduce energy consumption.

The cost of energy usage can be ascertained by graph displays on Intellair's user interface – accessed by computer system, laptop or remote access from WAD.

It is designed to operate automatically and can be configured to undertake scheduled clean operations and allocate booster points to maintain duct velocities.

When a machine is turned on or a room is occupied, a remote switch (either automatic or manual) signals Intellair to indicate the demand. The system then calculates the optimum motor speed required.

When a machine is turned off or a room is no longer occupied it reduces the motor speed accordingly.

Air "zoning" is also possible, allowing different sections of the system to receive more/less air.

"The biggest saving is not having the downtime on the machine and not having the health and safety risk [from the dust]," Mr Compton added.

English Woodlands specialises in English hardwoods and supplies flooring, oak beams, boards, boules, cladding, plus joinery and furniture components.



The extraction system at English Woodlands Timber