

CO2 Control in Lossnay RVX2

MESCA – Energy Recovery and Ventilation

HOW IT WORKS



Demand control ventilation (DCV) strategies are an important function in running an OA unit for added energy efficiency measures.

With DCV, the amount of ventilation delivered in a space is continually varied by a measured variable, in this case carbon dioxide (CO₂). More sophisticated DCV applications vary ventilation to each individual zone according to each zone's CO₂ sensors. We will look at how the CO₂ control works on a Lossnay RVX2 model.

The PZ-70CSW-E (wall mounted), PZ-70CSD-E (duct mounted), and PZ-70CSB-E (built-in) CO₂ sensor is a Mitsubishi Electric in-house built controller that modulates the fan speed of a Lossnay RVX2 depending on CO₂ levels in a zone, measured in parts per million. These sensors can also be conveniently powered by the ERV unit. Configurable levels of Low/Medium/High CO₂ are shown as light indicators on the wall mounted type shown below.



PZ-70CSW-E model shown

The upper and lower limit range can be set on the PZ-62DR-EA local controller. For example, it can be set as the following:

”LOW”: < 450 ppm.

”MID”: >1600 ppm for less than 20 min.

”HIGH”: >1600 ppm for more than 20 min.

The fan speed will then automatically modulate from 25% to 100% of rated air flow depending on CO₂ concentration level in the space. The fan will ramp up in 5% increments for every 50 ppm of CO₂ allowing 16 steps of air flow range.

