

Individual Comfort Control Systems



Eliminate the age-old problem of people being either too hot or too cold in their space.

Typical Variable Air Volume (VAV) zoning systems modulate airflow to a group of rooms or offices in response to a temperature set point from a thermostat. The limitation of this approach is that all spaces within the zone are controlled by the room containing the thermostat. The typical result is that one or more room occupants are either too hot or too cold.

Now you can provide thermal comfort control to all occupants.

MAT's new Individual Comfort Control System provides individual temperature control to all spaces within a VAV system, allowing individuals to set their zone to their comfort level.

Individual Comfort Control System benefits:

- Low cost solution to a common problem
- New or existing construction
- No static pressure constraints
- System energy savings
- Satisfies LEED® Credit 6.2
- Configurable for 110V, 24V, or battery operation



Here's how MAT's new Individual Comfort Control System works

With MAT's new Individual Comfort Control System each office is provided its own programmable thermostat and the existing air outlet balancing damper is replaced with an MAT Electro-Balance® damper. The thermostat and Electro-Balance® damper are wired together and the thermostat opens and closes the damper to modulate air flow into the space to achieve the desired temperature. To ensure that proper air flow balance is maintained across all spaces, the VAV box controls are reset so that the VAV damper modulates air flow into the zone to maintain a target pressure set point.

To satisfy the needs of a typical commercial building space, the programmable thermostat control unit allows balancing technicians and facilities managers set-up mode access to establish balancing damper profiles, and set occupancy schedules, setback periods, and temperature adjustment limits. In operation, the LCD display communicates actual and set temperatures and time of day information. Push button control allows occupants to adjust room temperature settings to their liking.

Individual thermostat controls allow occupants to “own their zone”.

- 1 Temperature setting adjusted on your thermostat.
- 2 Thermostat control signals the Electro-Balance® damper to supply more air into your space.
- 3 Pressure sensor in the ductwork zone detects a slight pressure drop and instructs the VAV box damper to increase air flow into the zone.
- 4 Pressure increases in the ductwork zone so it once again reaches equilibrium assuring proper air flow balancing.

This sequence of events is repeated as all dampers in the zone modulate to maintain the temperature settings in the other rooms.

