

VAV Electronic Smart Zone Diffuser

Available in 6" to 14" neck sizes for nominal 24"x24" face sizes

Available in 6" and 8" neck sizes for nominal 12"x12" face sizes

OPERATION:

Diffusers incorporate an internal modulating disk that continually regulates the volume of supply air in response to a wall-mounted thermostat. The Smart Zone VAV diffuser is designed to maintain coanda effect (draft free) of discharge air along the ceiling, providing a sustained velocity throughout the volume range. Operating the diffuser from an individual wall-mounted thermostat enables users to choose their own desired comfort.

FEATURES:

Wall-mounted thermostatic control

Temperature is controlled within an individual zone from a wall mounted thermostat.

Powerful, low voltage actuator

Floating-point actuators are standard.

True variable air volume in heating and cooling modes

The diffuser effectively regulates the amount of supply air into the space and uses a wall mounted thermostat to achieve true VAV control in heating mode, as well as cooling mode. Automatic change over from heating to cooling is standard.

If a single Smart Zone system or multiple Smart Zone systems are used to zone more than 30% of the total CFM served by the HVAC system, a bypass damper may be required to maintain constant system static pressure.

Maximum air volume range is from 118 to 710 CFM

Adjust minimum and maximum air flows.

1-40 VA transformer will power a single Smart zone system=1 Master 1 Thermostat and up to 19 /drone actuator/diffusers.

1-75 VA transformer will power a single Smart zone system=1 Master 1 Thermostat and up to 36 /done actuator/diffusers.

18-8 GA wire shall be supplied by others or we can supply 250ft per roll.



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APPLICATIONS:

There are many applications that fit the Smart Zone VAV Diffuser with wall mount T-stat. Some of the best/most common applications are listed below.

All cases listed are for overheating or overcooling problem areas.

Receptionist Areas & Entry Ways

Typically exposed or open – often have cooling “dumped” in this area which causes overcooling problems

Cooling is needed for interior sections of the building, but the receptionist/entry area is too cold.

Offices

People inhabiting offices have different levels of comfort based on the individual.

The rest of the office is fine, but one person has a different level than others (president’s, vp’s, etc.)

Conference Room

Often times cooling is needed for larger meetings, but not at other times. They don’t want to pay to cool during unoccupied times, but don’t need a full-blown zoning system either. Perfect candidate for the (Smart Zone) Diffuser with a wall mount T-stat.

East/West Exposure

East side building exposure is too hot in the morning, then cold in the afternoon. Then vice-versa, the West side building exposure is cold in the morning and too hot in the afternoon.

ECONOMICS:

The VAV diffusers are a very economical solution to overcooling or overheating issues in a building that does not warrant a full-blown zoning or BAS system. These are often installed to solve a specific problem area. However, after installation and a little time passes, the end user often requests more diffusers to be installed to fix other areas and can lead to zoning system sales as well. The advantage here is that none of the previous needs to be uninstalled or ripped out. We merely run 4 additional wires back to the zoning panel and wire the panel to the equipment to implement a full system.



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Smart Zone Advantages

HOW WE COMPARE:

The SE-HC diffuser effectively regulates the amount of supply air into the space and uses a wall-mounted thermostat to achieve true VAV control in the heating mode, as well as the cooling mode. Automatic changeover from heating to cooling is standard. We sense the actual supply temperature coming down the ductwork with our automatic changeover sensor located in the diffuser itself. This allows us to sense the actual temperature of conditioned air being supplied.

We do not have to waste energy to add cost by supplying additional heat to a zone or “diffuser actuators” to adjust the temperature in the space. Since we use an actual thermostat, we can sense the actual room temperature without having to artificially adjust heat sources to simulate actual room temperature. We know exactly what the occupant is experiencing and how to adjust the supply to maintain his/her comfort level. All of this is done without having to add additional heat, thus not adding cost or wasting energy.

How “green” can a building be while adding an additional heat source to every zone just to sense the “actual temperature in the space”, then adding additional heat/energy to alter the set point?

Also, we do provide an actual working thermostat that can be re-purposed and used with our “Smart” zoning system if your customer decides to upgrade to a zoning system in the future.

We offer a quality product, full technical support and a 5 year warranty at a very competitive price.



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