

D-FUSER

A COMBINATION DAMPER AND DIFFUSER

from
California Economizer
The Zoning Systems Company

As room load varies the D-FUSER modulates to control the flow of supply air, maintaining the smoothest possible flow of air coupled with the greatest ceiling attachment.

- ✓ REDUCE VAV SYSTEM COSTS BY 25% OR MORE
- ✓ DELIVERS AIR AT CONSTANT VELOCITY
- ✓ AUTOCHANGEOVER OPERATION
- ✓ INDIVIDUAL HEAT & COOL SET POINTS
- ✓ MAINTAINS TEMPERATURE +/- 1 DEGREE SET POINT
- ✓ ELIMINATES AIR DUMPING
- ✓ INSTALLS IN A 2' X 2' CEILING GRID
- ✓ SUBSTITUTE D-FUSERS FOR VAV BOXES
- ✓ UPGRADE SYSTEMS WITHOUT REPLACING DUCTWORK
- ✓ EASY INSTALLATION
- ✓ SIMPLE OPERATION
- ✓ REPLACE OLD PNEUMATIC OR ELECTRONIC VAV SYSTEMS
- ✓ The D-FUSER will operate with any California Economizer Commercial Bypass VAV system!

The D-FUSER inlet collar sizes range from 6" to 10"

The D-FUSER is designed for .10" S.P. at the damper, noise at .10" will not exceed 30 N.C.

(Use a bypass damper where statics exceed design criteria)

This fully modulating diffuser provides room by room auto changeover operation, which controls both heating and cooling in each VAV zone.

This combination damper/diffuser incorporates a fluidic nozzle which provides each zone with exceptional temperature control and maximum comfort.

✓ **The D-FUSER will operate with any California Economizer Commercial Bypass VAV system!**
The D-FUSER UTILIZES FLUIDIC PRINCIPLES TO MAXIMIZE THE COANDA EFFECT

The ideal ceiling diffuser must provide a turbulent free transition between the air coming out of the diffuser and the ceiling, to generate a Coanda Effect.

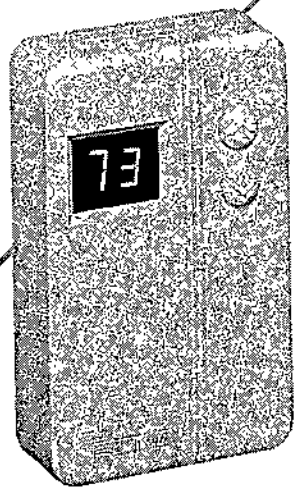
The Coanda effect requires a smooth transition. This allows the air leaving the diffuser to form a ceiling attachment. This achieves maximum mixing and air distribution in the zone.

Turbulence leaving a standard ceiling diffuser severely limits ceiling attachment. During the heating season utilizing a standard diffuser, the air is poorly mixed causing an uncomfortable hot zone in the top half of the room and cold floors. In summer reduced air volume from a standard diffuser allows the air to drop as the volume is reduced making it uncomfortable for anyone sitting under the diffuser.

Designing the D-FUSER with a fluidic nozzle creates the smoothest possible flow which generates the greatest ceiling attachment. This design also optimizes mixing and aspirates the room air providing maximum comfort in the heating or cooling mode.

HOW IT ALL WORKS: The Coanda Effect is the reason why air will attach to a surface while retaining relatively high velocity. Every diffuser manufacturer tries to take advantage of this Coanda Effect. As many diffuser manufacturers have learned, poor design and varying air volume will destroy the Coanda Effect.

The D-FUSER is designed to overcome these problems. The design includes a variable slot which maintains constant velocity regardless of the quantity of air being introduced into the zone. As a result of this constant velocity, the zone experiences good air distribution and mixing, even at low air volumes.



The 24 volt SAMOD thermostat displays room temperature using a large LED display. The display is illuminated and easy to read. Control up to 4 D-Fusers with each thermostat.




This dual set point thermostat is equipped with separate heat and cool set points. Each set point is adjustable using the two push buttons located on the cover of the thermostat. The duct temperature and damper position can be displayed at the thermostat. These important readings help the installing or service contractor identify the duct temperature, systems mode of operation and damper position.

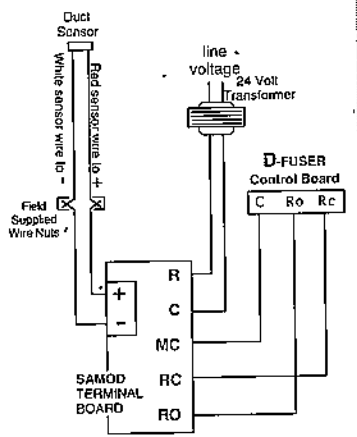
The D-FUSER can also be controlled by California Economizer's SAMOD (Stand Alone Modulating Damper Control)

SAMOD

Modulating Damper Control

*Customize every tenants space
 Eliminate over heated and over cooled rooms
 Put temperature control in the hands of every tenant
 Avoid thermostat wars*

 Displays Room Temperature	 Displays Damper Position in % Open	 Displays Supply Duct Air Temperature
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Part # DFSELL