

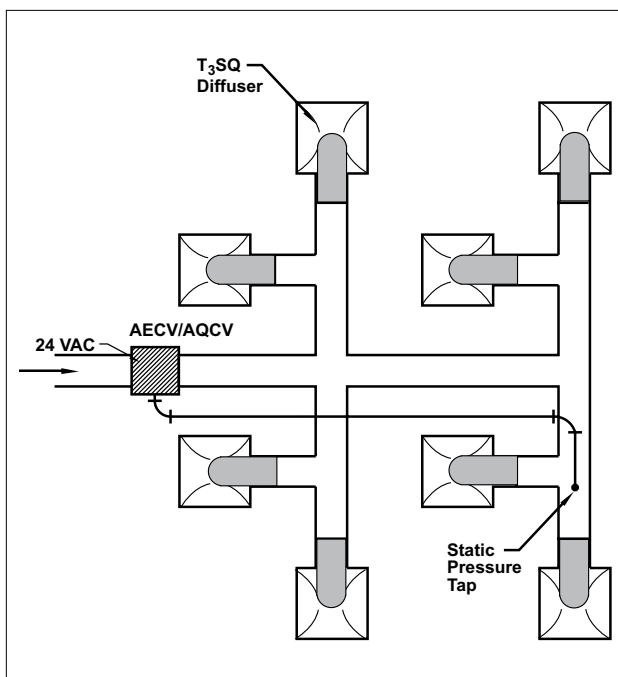
CONSTANT VOLUME SYSTEM APPLICATION OPTION

The Titus T₃SQ system is ideal for use with a constant volume system. The T₃SQ gives all the advantages of a VAV system at low pressure conditions and reduced installation cost. The T₃SQ is a low pressure, pressure dependent, variable air volume (VAV) system. The T₃SQ is designed to operate around 0.15" - 0.20" inlet pressure. This system provides zoned comfort, which is not always possible with a typical constant volume system.

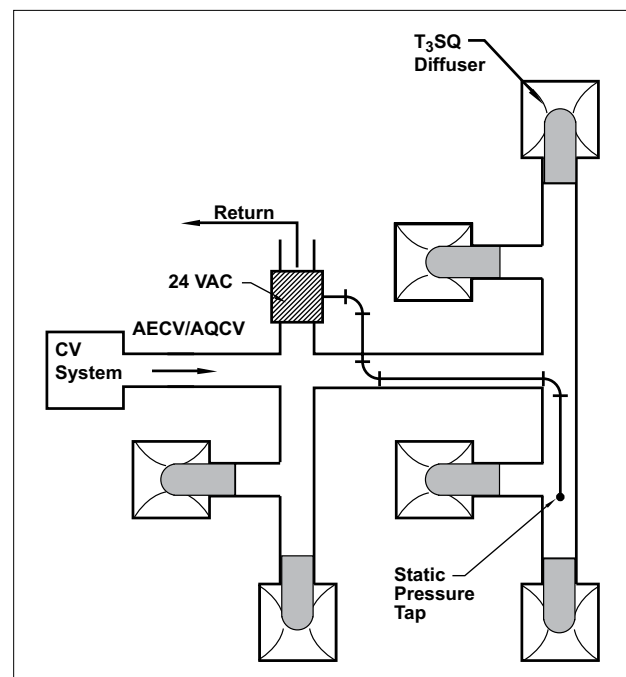
1. It is recommended that a static pressure controller such as the Titus AECV/AQCV (Control Codes PR01, PD01) be installed into a constant volume system when more than 30 percent of the system airflow is

put under the control of T₃SQ diffusers. This minimizes the possibility of delivering excess air when a portion of the T₃SQ are operating at part load conditions.

2. When an entire constant volume system uses T₃SQ zone control, a AECV/AQCV box should be implemented. The Titus AECV/AQCV pressure control terminal should be sized for 80 percent of the total supply flow, less the airflow of the smallest zone.
3. Care must be taken when sizing and installing a AECV/AQCV. The unit should be installed as far downstream from the fan as is practical to maximize supply and return air mixing. This reduces the risk of the unit cycling on high or low.



Typical static pressure control by throttling supply air using a AECV/AQCV (Control Code PD01) terminal



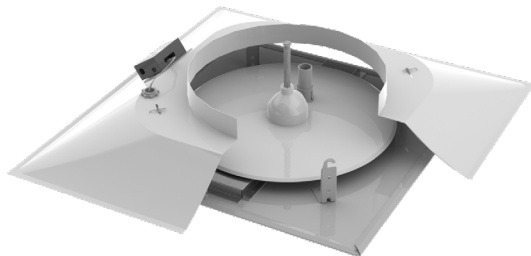
Typical static pressure control by bypassing supply air using a AECV/AQCV (Control Code PR01) terminal

VARIABLE AIR VOLUME SYSTEM APPLICATION OPTION

The Titus T₃SQ system is ideal for use in buildings where the advantages of zoned variable air volume (VAV) systems normally cannot be used due to budget issues or plenum space constraints.

Special care should be taken when determining the static pressure of a VAV system with T₃SQ units.

Digital VAV Diffuser



PRIMARY / SECONDARY

T₃SQ-2 diffusers are all shipped as secondary units. Determination of primary units is made through plug and play cable connections to the thermostat. The units connected to the thermostat are the primary units. All units daisy chained from the primary are secondaries. Secondary diffusers must be connected to a primary diffuser in order to operate. One power module is required for every 15 diffusers with or without optional electric reheat. Power module requires 120 or 208 VAC line voltage input.

The 4-pin mini-fit cables provide 24VAC power and communication between diffusers. This cable should be used between the power module and the first diffuser and also to connect a primary unit to a secondary unit.

The 4-pin mini-fit cables provide 24VAC power and control signal between diffusers. This cable should be used between diffuser and primary controller/thermostat and between primary and secondary units.

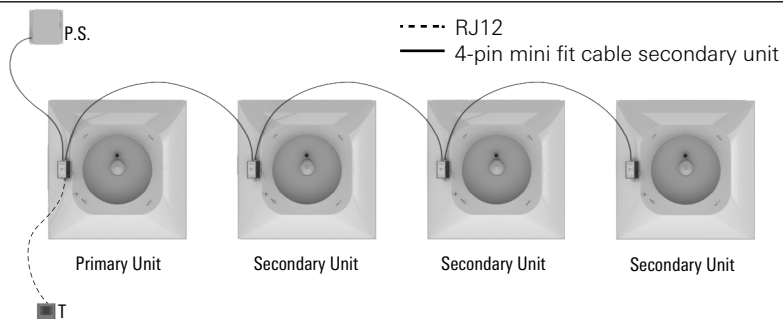
The Primary Communications Module is a central data collection and distribution point for up to 60 VAV field diffusers. The device features four diffuser channel inputs, which can accommodate up to 15 diffusers each. This allows the users to interface with 60 diffusers per communication module through a building management system. The interface software also has a server application which allows all communication modules on site to be accessed through the building management system from the IP address of each module. Primary communication modules are available in the following communication protocols:

- Primary Communications module with BACnet gateway (MS/TP)
- Primary Communications module with BACnet gateway (TCP/IP)

Primary/Secondary Wiring

One primary unit can control up to 14 secondary units.

P.S. = Power Supply
T = Room Sensor



Primary/Secondary Wiring With MCM (Primary Communication Module)

P.S. = Power Supply
T = Room Sensor
MCM = Primary Communication Module

