

SPECIFICATION

Models: TK-HC Separate set points for VAV heating and VAV cooling
TK-C Separate set point for VAV cooling only

GUIDE SPECIFICATION

(Suitable for Section 23 36 16 Variable-Air-Volume Units of the CSI Master Format)
Material in italics applies only to model ST-HC. Delete the italics for model TK-C.

Thermally Powered VAV Diffusers

- A. Thermally powered variable air volume diffusers shall be Therma-Fuser™ model TK manufactured by Acutherm, Hayward CA.
- B. Thermally powered VAV diffusers shall be a complete VAV terminal and thermostat self-contained in nominal 12 5/8" / 320mm square diffuser. They shall be thermally powered with one cooling thermostat/actuator, one heating thermostat/actuator and one changeover thermostat/actuator. External wiring or pneumatics shall not be allowed.
- C. The VAV diffusers shall have a micrometer type temperature set point adjustment with an indicator and temperature scale to adjust the cooling set point and a separate micrometer type temperature set point adjustment with an indicator and temperature scale to adjust the heating set point. The adjustment shall be right above the hinged appearance panel and shall not require tools. Each set point shall be separately adjustable between 70°F/21°C and 78°F/26°C. The initial set point shall be factory set at 74°F/23°C.
- D. In the cooling mode the VAV diffusers shall open on a rise in room temperature and in the heating mode they shall close on a rise in room temperature. The changeover thermostat shall be factory installed and adjusted to engage the heating mode when the supply air temperature rises above 80°F/27°C and return to the cooling mode when the supply air temperature falls below 68°F/20°C. During changeover the diffuser shall close or, if a minimum flow is set, go to the minimum. Nothing including the changeover mechanism shall extend above the inlet of the diffuser.
- E. The VAV diffusers shall have four perimeter dampers to provide 40 linear inches/1015 mm. of variable discharge area at the perimeter of the diffuser for maximum Coanda effect and to avoid dumping. The housing shall be aerodynamically contoured for increased capacity and have an offset ridge on each of the four edges to provide better air flow in lay in installations.
- F. All VAV diffusers shall have a solid (no holes or slots), hinged appearance panel that can be unlatched and folded down to hang allowing hands to be free for adjusting temperature set points. Instructions for the VAV diffuser shall be on the inside of the appearance panel.
- G. The VAV diffusers shall have positive induction of secondary room air over the room thermostats/actuators at all flows from fully closed to fully open.
- H. The VAV diffusers shall have a built-in damper opening cam adjustable from a minimum of 0 to 100% air flow. The damper opening cam shall also open the diffuser for balancing. VAV diffusers requiring tools, adjustment of set points or adjustment of supply air temperature to open for balancing shall not be allowed.

THERMA-FUSER™

Thermally Powered VAV Diffuser



- I. The manufacturer shall warrant that all VAV diffusers shall be free from defects in materials and workmanship for a period of ten years from date of shipment.

- J. Supply air to the VAV diffuser shall be constant temperature (may be reset to another constant temperature). Supply air shall be limited to no lower than 50°F/10°C on cooling and no higher than 120°F/49°C on heating. The heating high limit shall be as low as possible but no lower than 80°F/27°C.