APPLICATION

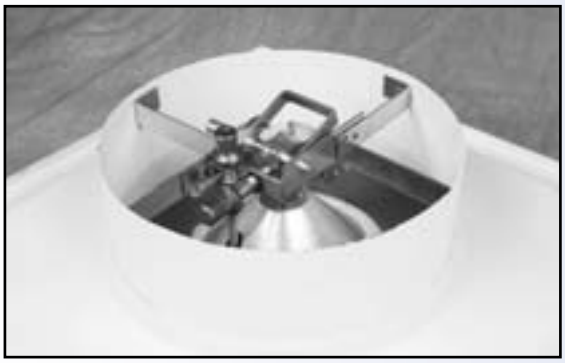
- Intelligent VAV Plaque style diffuser with integral room thermostat and VAV damper
- Cooling (Model ATC) or Auto Heating-Cooling Changeover (Model ATHC) configurations
- Independent VAV zone control – easily retrofit existing, problematic multi-zone systems
- Eliminates comfort complaints associated with multi-zone applications due to non-uniform loading and lack of personal comfort control
- Architecturally preferred diffuser appearance without sacrificing performance
- For surface mounting or use with suspended grid systems

PRODUCT FEATURES

- Model ATC for cooling only applications
- Model ATHC for automatic VAV cooling (<68° F supply air temperature) and VAV heating (>78° F supply air temperature) applications.
- No special installation requirements
- VAV damper is spun, corrosion resistant aluminum with perimeter seal
- "Easy Adjust" thermostat located behind removable plaque. Adjustment range is 72-78° F. No tools required. Factory set at 74° F.
- 360° air pattern delivery at high discharge velocity maintains coanda effect even at low air flow rates
- Center plaque has smooth, hemmed edges for rigidity and flat appearance
- Steel construction
- Plaque is assembled without welding or heat – no blemishes
- Smooth outer cone is die stamped (no mitered corners) and contoured to minimize sound and pressure loss
- Removable plaque assembly without use of tools. 4 posts interlock into outer cone.
- Arctic White baked-on finish
- 10 year warranty

DIFFUSER OPTIONS

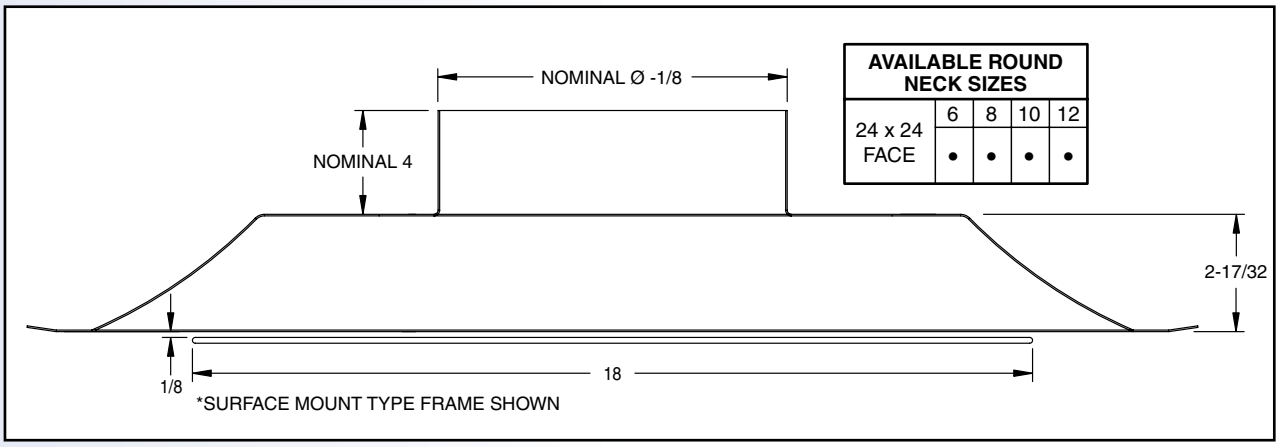
- Aluminum, or stainless steel construction (VAV mechanism is constructed from coated steel components)
- Pressure control collar reduces system pressure by relief of supply air directly into the ceiling plenum
- Blank-off baffles for directional control from 4-way to 3, 2, or 1 way blow
- Custom or optional paint colors



Model ATHC

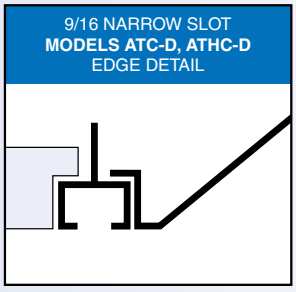
Model ATHC Thermo-Powered Sensors

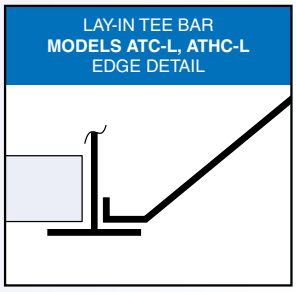
Optional Stainless Steel Construction

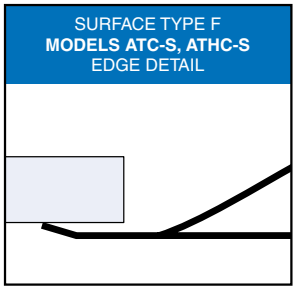


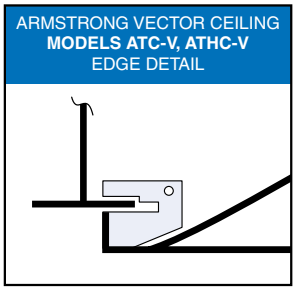
AVAILABLE ROUND NECK SIZES				
	6	8	10	12
24 x 24 FACE	•	•	•	•

EDGE DETAILS

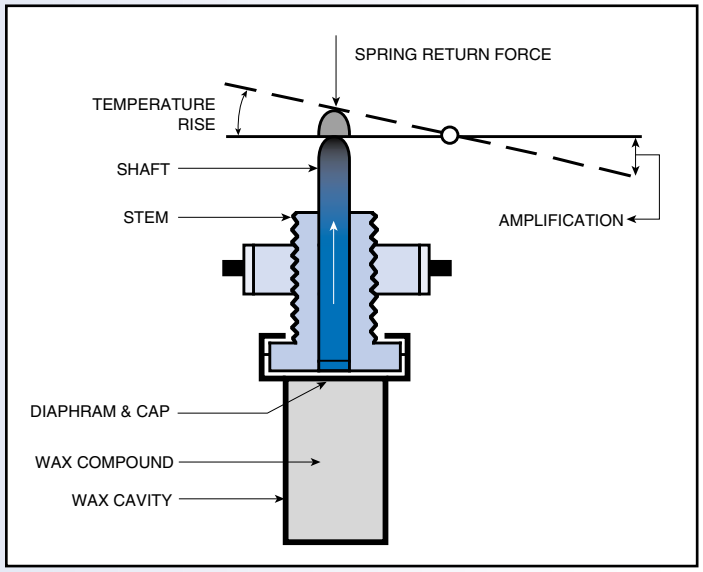








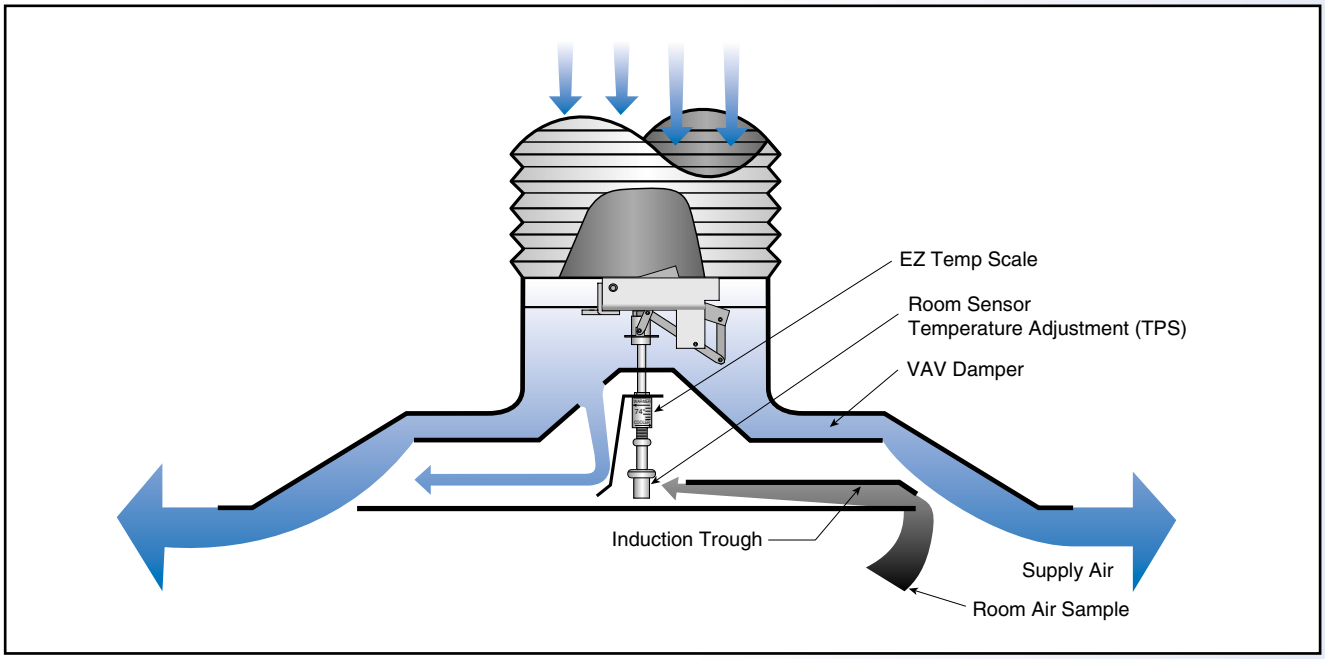
THERMO-POWERED SENSOR (TPS)



THE DIFFUSER WITH "THERMO-POWER" TECHNOLOGY

AnemoTherm VAV diffusers regulate airflow into the space WITHOUT any external power source by utilizing Thermo-Powered Sensors (TPS's). These small, self-contained assemblies are filled with a special wax-copper compound that changes in volume related to a temperature range. Volume change (temperature change) is translated into linear motion by movement of the diaphragm and stem - used to position the VAV damper for airflow control. The linear motion is amplified utilizing a series of simple linkages. The wax formulation provides a specific temperature operating range vs. stroke and is calibrated to the position of the damper. This technology has a long, proven history of reliability and repeatability.

MODEL ATC DIFFUSER - VAV COOLING ONLY



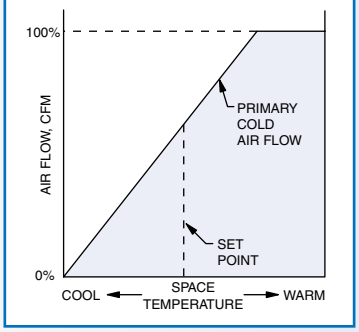
TEMPERATURE CONTROL LOOP

1. The space temperature is monitored by one Thermo-Powered Sensor (TPS) located immediately behind the face plaque. Room air is drawn in through the induction trough and across the TPS due to the negative pressure created by the supply air stream.
2. As the space temperature increases and is sensed by the TPS, the actuator shaft extends. Through a series of simple linkages, the integral VAV damper moves downward to increase the discharge area, effectively increasing the air flow rate to the space to meet the load demand.
3. As the space temperature decreases, the TPS shaft retracts under spring return force to move the VAV damper upward to decrease the discharge area and air flow rate.

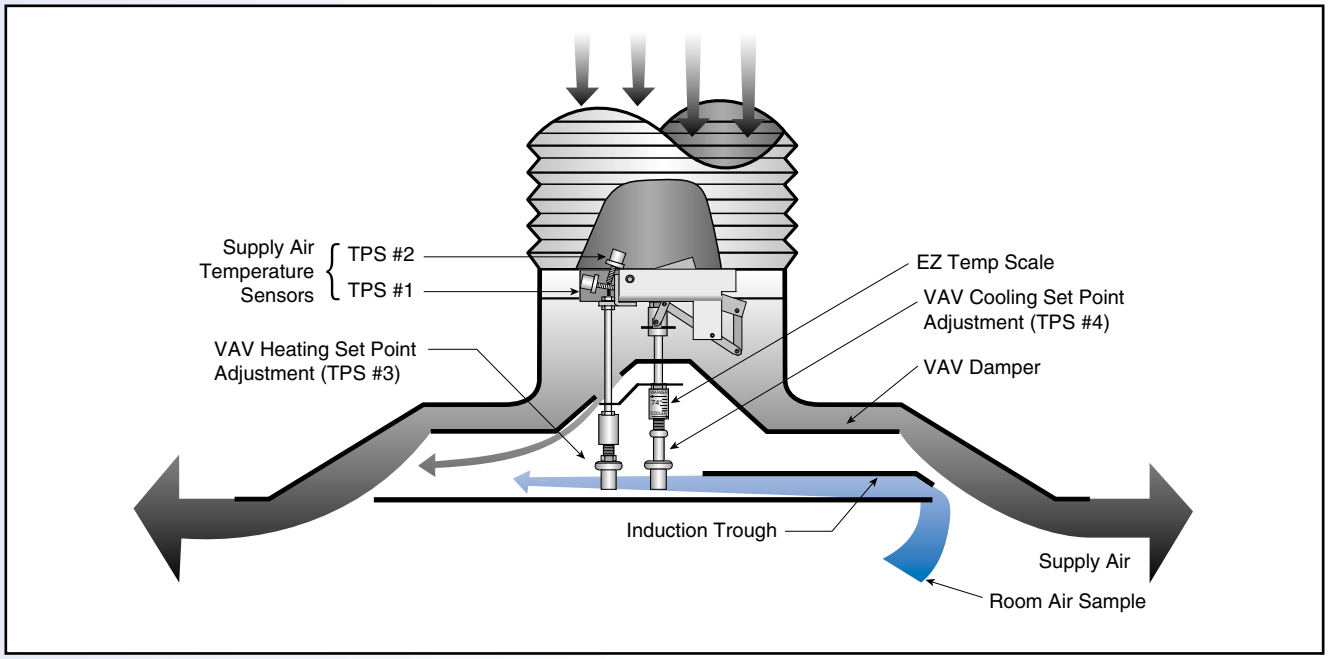
SPACE TEMP SETPOINT ADJUSTMENT (FACTORY SET FOR 74°F)

1. Rotating the threaded TPS changes the temperature setpoint for the space - no tools are required. A temperature scale is provided for reference.
2. The space temperature adjustment range is 72°-78° F.

Cooling



MODEL ATHC DIFFUSER – VAV HEATING AND VAV COOLING WITH AUTO CHANGEOVER



TEMPERATURE CONTROL LOOP

1. TPS #1 & #2 monitor the supply air temperature, TPS #3 monitors the space temperature for the heating setpoint, & TPS #4 monitors the space temperature for the cooling setpoint.
2. Room air is drawn in through the induction trough and across TPS #3 & #4 due to the negative pressure created by the supply air stream.

VAV HEATING MODE (SUPPLY AIR TEMPERATURE >78°F)

1. In the heating mode, TPS #1 & #2 sense the warm supply air in the diffuser neck and react by disengaging, through a series of linkages, cooling TPS #4, and simultaneously engaging heating TPS #3.
2. As the space temperature increases and is sensed by TPS #3, its' actuator shaft extends. Through a series of simple linkages, the integral VAV damper moves upward to decrease the discharge area, effectively decreasing the warm airflow rate to the space to meet the load demand.
3. As the space temperature decreases, TPS #3 shaft retracts under spring return force to move the VAV damper downward to increase the discharge area and warm airflow rate.

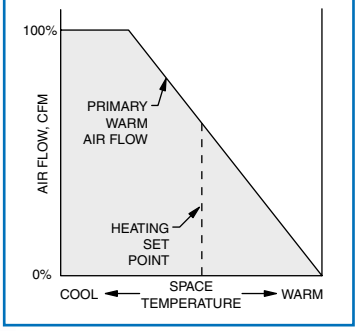
VAV COOLING MODE (SUPPLY AIR TEMPERATURE <68°F)

1. In the cooling mode, TPS #1 & #2 sense the cold supply air in the diffuser neck and react by engaging, through a series of linkages, cooling TPS #4, and simultaneously disengaging heating TPS #3.
2. As the space temperature increases and is sensed by TPS #4, its' actuator shaft extends. Through a series of simple linkages, the integral VAV damper moves downward to increase the discharge area, effectively increasing the cold airflow rate to the space to meet the load demand.
3. As the space temperature decreases, TPS #4 shaft retracts under spring return force to move the VAV damper upward to decrease the discharge area and cold airflow rate.

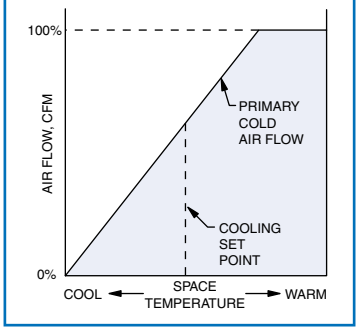
SPACE TEMP SETPOINT ADJUSTMENT (FACTORY SET FOR 74°F)

1. The heating and cooling setpoints are independent of each other. Rotating threaded TPS #3 (heating) or #4 (cooling) changes the temperature setpoint for the space - no tools are required. A temperature scale is provided for reference.
2. The space temperature adjustment range is 72°-78° F.

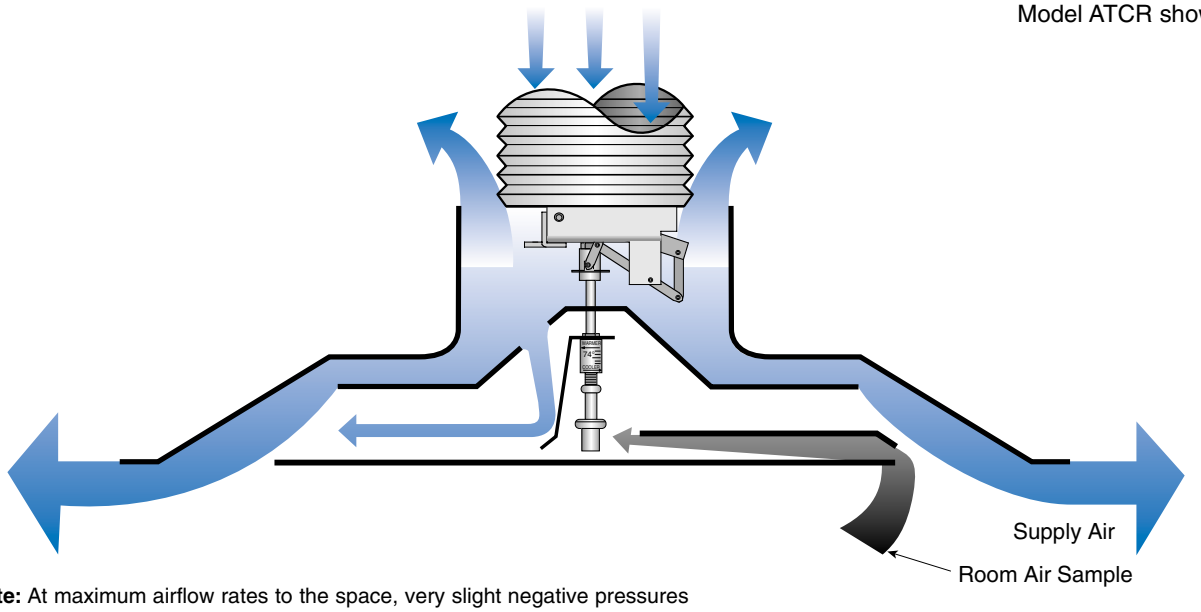
Heating Mode



Cooling Mode



MODELS ATCR AND ATHCR WITH RELIEF COLLAR



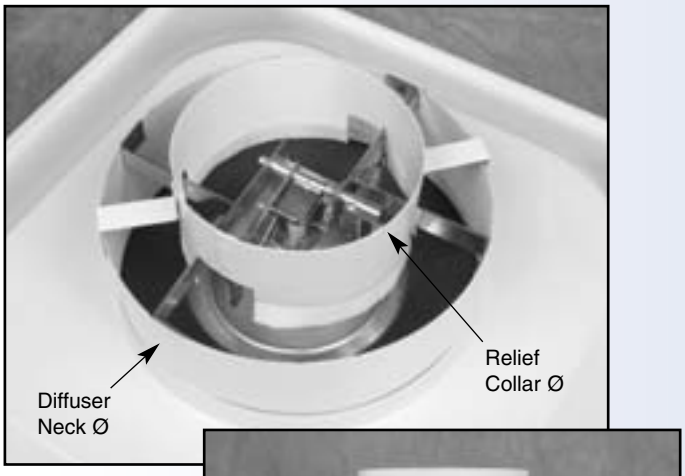
Note: At maximum airflow rates to the space, very slight negative pressures around the relief collar may induce ceiling plenum air.

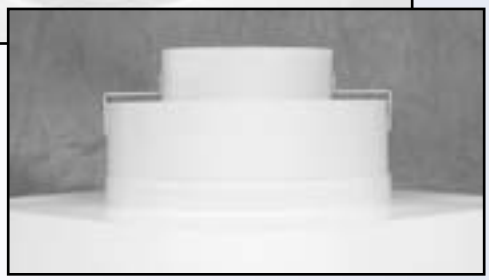
APPLICATION

- VAV Diffuser fitted with pressure relief collar
- As diffuser damper closes, increasing positive pressure in collar re-directs excess air into ceiling plenum
- Constant volume systems WITHOUT pressure regulating controls & dampers
- Ceiling plenum return system required
- Reduces sound levels caused by throttled diffuser dampers at higher static pressures

PRODUCT FEATURES

- Available for Model ATC and ATHC Diffusers
- Inlet duct connection sizes 6", 8", 10", 12" diameter
- Steel collar, white finish. Can be installed on steel, aluminum, or stainless steel AnemoTherm diffusers
- Relief collar is a field installed component





Relief Collar, side view

AVAILABLE ROUND NECK SIZES					
24 x 24 FACE	SUPPLY DUCT	6R	8R	10R	12R
	DIFFUSER NECK Ø	10	12	12	12

Neck size specified is supply duct connection to relief collar, and **NOT** diffuser neck size.