

## Quiet Efficient Design

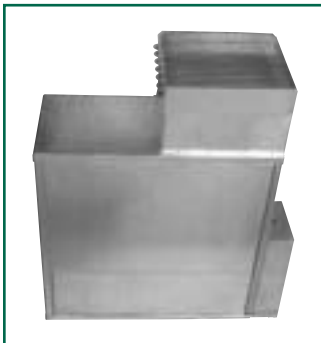
Models **QST** & **EST** series flow and Model **QPT** parallel flow fan powered terminals are designed to meet today's increasing demands for quiet operation. In typical series flow applications, the fan operates continuously to provide constant air motion to the occupied space in both cooling and heating modes. Models **QST** and **EST** have been specifically designed to minimize radiated sound levels which are often the dominant source determining room sound levels. The **QPT** parallel unit utilizes the same construction features as the series flow for low sound levels as well.

Eliminating intruding fasteners, tabs and other obstructions in the air stream in conjunction with the Velocity wing airflow sensor provides for lower internal pressure losses and enhanced acoustical performance.

### Flexibility

The **QST Quiet Series Terminals** are available in five motor horsepower sizes, each with as many as three different primary airflow sensor sizes to provide optimal fan and inlet combinations to meet specific design requirements. **QST** fan terminals are capable of handling total airflow capacities from 200 to 2600 cfm.

The **EST Energy Smart Terminals** are available in four motor horsepower sizes in combination with many inlet sizes to capitalize on the huge energy savings of ECM technology, particularly at reduce fan speed. **EST** fan terminals are capable of handling total airflow capacities from 175 to 2400 cfm.



Unit Mounted Hot Water Coil

The **QPT Quiet Parallel Terminals** are configured with 3 basic cabinet sizes in combination with five motor horsepower sizes and various inlets sizes from 5" to 16" diameter to provide optimal fan and inlet combinations to meet both primary cooling and fan heating design requirements.

### Controls

A wide array of factory installed control packages is offered including pneumatic, electronic analog and direct digital (DDC) electronic controls.

### Heating Coil Options

Often used for perimeter zone temperature control requiring supplementary heat, all fan terminals are available with a choice of hot water or electric heating coils factory mounted at the unit discharge. Hot water coils are available in one and two row and electric heat is available in various voltages with stepped heat or proportional control.

#### Series Fan Terminal Sequencing - IMPORTANT!

When Stop-Start Sequencing is used with series type fan terminals, the terminal fan should be started ***BEFORE*** starting the central AHU system. This will prevent the terminal fan from running backwards.



## Motors

The **QST** and **QPT** direct-drive fan motors are three tap, permanent split capacitor type, efficiently minimizing power consumption while running quietly. The multi-tap feature allows operation at higher efficiency during reduced fan capacity by providing the capability of selecting three distinct horsepower outputs. Motor leads include quick disconnects to permit easy conversion between taps. Leads are wired to the control enclosure. Each unit includes a variable speed SCR fan control for field air balance.

The **EST Energy Smart Terminals** provide exceptional energy savings utilizing Electronically Commutated Motors (ECM's). With a potential payback period of less than 2 years, the EST series flow air terminal should be considered a first choice in this product class. Four different fan speed controllers are available from simple manual adjustment, or to interface with the BMS via a DDC controller.



*Electronically Commutated Motor*

All fan motors are mounted with rubber vibration isolators.

## Construction

The unit casing is constructed of premium grade 18 & 20 gauge zinc coated steel for long life and is internally lined with a wide variety of insulation options that conform to NFPA and UL requirements, including standard matte-faced glass fiber, dual wall, foil faced, and low temperature configurations. Each casing is assembled with a mechanical lock construction that insures a tight seam for leak tight integrity. Insulation edges are protected from erosion.

Other accessories include throwaway filters, discharge collars and mounting brackets.

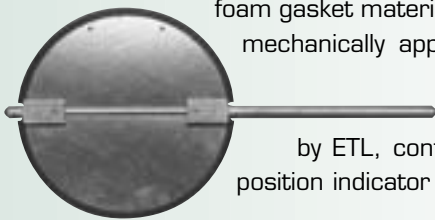
## Performance

All of our fan terminals are tested in accordance with ARI Standard 880 and are ARI Certified. All units are listed with ETL conforming to UL1995 and CAN/CSA-C22.2 No. 236-95.

## Damper

All models incorporate full 90-degree rotation round dampers mounted on self lubricating bearings, and are available with pressure independent controls for precise control of the primary airflow. Each unit with these controls is factory calibrated for minimum and maximum primary airflow settings prior to shipment and permits easy field adjustment.

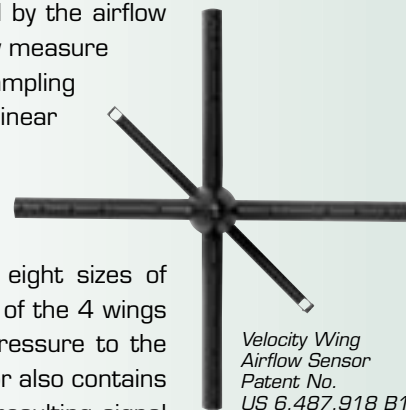
The low leakage primary airflow damper blade is constructed of two circular steel plates sandwiched over closed cell foam gasket material. The die-cast metal shaft is affixed to the damper blade using through the shaft mechanically applied rivets and rotates on self-lubricating bearings for easy turning and long operating life. The damper's flexible gasket seats tightly on the cylinder's internal stiffening rib for leak resistant closure. The entire damper assembly is certified by ETL, conforming to UL429 mandated cycle tests assuring long operating life. A helpful position indicator is located on the end of the damper shaft.



*Primary Airflow Damper Blade*

### Velocity Wing Airflow Sensor

The accuracy of any VAV control is related to the strength of the signal provided by the airflow sensor. Anemostat's patented Velocity Wing airflow sensor is designed to precisely measure the airflow regardless of the upstream velocity profile. It does this by taking a sampling of air across the cross section of the air stream at points determined by the log-linear rule, which has been adopted by ASHRAE (Standard 111) and AMCA (Standard 201). This feature compensates for the frictional drag along the duct walls to obtain a more accurate measurement of airflow.



Velocity Wing Airflow Sensor  
Patent No. US 6,487,918 B1



Our sensor uses 20 measurement points on all eight sizes of sensors used with our fan terminal products. Each of the 4 wings contains an internal passage to direct the total pressure to the center averaging chamber. The Velocity Wing sensor also contains two enhanced amplifying static pick-up tubes. The resulting signal is amplified up to 3 times the actual velocity pressure providing more control accuracy during low flow conditions.

The Velocity Wing sensor has a sleek aerodynamic design providing for low pressure loss, quiet operation and accurate control. Low pressure drop means the system fan operates on less brake horsepower for improved efficiency. The Velocity Wing is made of lightweight ABS plastic for durability and strength, meeting UL 94-5VA for flame retardant construction.

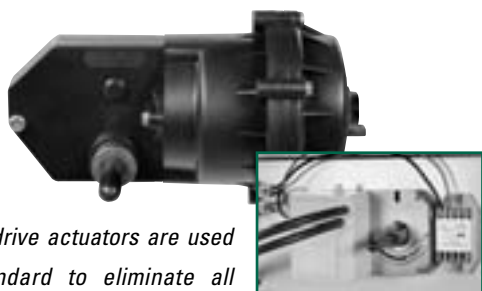
### Ease of Installation and Reliability

Anemostat's line of quiet fan terminals are compact and incorporate round primary airflow inlet collars that exceed 5 inches in length to facilitate easy attachment of both rigid and flexible duct. The Velocity Wing airflow sensor is recessed into the air valve providing excellent protection from damage in handling. Each fan terminal also has a rectangular flanged discharge connection for easy installation. Hot water and electric coils are factory mounted as an integral part of the fan terminal.



Swing Down Bottom Access Panel

The blower assembly is easily accessed through an easily removable, full width, swing down bottom access panel. Top interlocking tabs and bottom threaded fasteners allow the entire fan/motor assembly to be easily removed from the cabinet to facilitate service.



Direct drive actuators are used as standard to eliminate all linkages, and the actuator and controls are attached to the side of the casing allowing for easy accessibility.

