

Furnish and install Anemostat EZTS Single Duct Variable Air Volume Terminals, EZTA Single Duct Variable Air Volume Terminals with integral sound attenuator, or EZTE Single Duct Variable Air Volume Terminals with integral electric heating coil as shown on the plans. The performance of all Single Duct Terminals shall be certified under ARI Standard 880 and must display the required ARI 880 Certification Seal. Discharge and radiated sound power levels shall not exceed the values as shown on the terminal unit schedule.

Casing Construction:

The unit casing shall be fabricated from zinc coated steel and use mechanical locking seams to form a leak resistant assembly. Any sealant used in the unit's construction must be approved for duct use and conform to NFPA 90A. Leakage through the Air Terminal casing shall be less than 1% of the maximum rated air flow @ 3" w.g. static pressure. (Optional Lo-Leak casing spec: Leakage through the Air Terminal casing shall be no more than 3 CFM @ 1" w.g. static pressure). The terminal discharge connection shall be Slip & Drive type integral to the casing.

The casing shall be:

- 22 gauge (standard)
- 20 gauge

The casing shall be provided with:

- 6"x6" bottom access plate
- 6"x6" bottom access door with hinge and camlock
- 6"x6" bottom removable access door with two camlocks
- 6"x6" side access plate
- 6"x6" side access door with hinge and camlock
- 6"x6" side removable access door with two camlocks
- Unit mounting brackets
- Manual damper locking quadrant
- Standard control enclosure
- Universal (larger) control enclosure
- Hinged front cover for control enclosure

Insulation and Treatment:

The unit casing shall be internally lined with:

- 1/2" thick matte-faced dual density glass fiber insulation that conforms to NFPA-90A and UL 181.
- 1" thick matte-faced dual density glass fiber insulation that conforms to NFPA-90A and UL 181.
- 1/2" thick aluminum foil-faced dual density glass fiber insulation. The edges of the insulation shall be sealed with aluminum tape. The insulation shall conform to NFPA 90A, UL 181, and ASTM C665.
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- 1" thick aluminum foil-faced dual density glass fiber Fibre-Lok insulation. The edges of the insulation shall be sealed by zinc-coated steel that locks the adjacent edges of the insulation. The insulation shall conform to NFPA 90A, UL 181, and ASTM C665.
- 1/2" thick dual density glass fiber insulation with a 22 gauge non-perforated sheet metal liner, covering all fiber insulation surfaces. The construction shall conform to NFPA 90A, UL 181, and ASTM C665.
- 3/8" thick (fiber-less) smooth skin surface closed cell foam insulation. The insulation shall conform to NFPA 255 and UL 181.
- No Insulation

Air Valve:

The damper assembly shall consist of a round blade that requires nominal 90-degree rotation from fully opened to fully closed positions on sizes 05 through 16. The damper blade shall be mechanically attached to the die-cast metal damper shaft with through the shaft machine-applied rivets. The low leakage damper shall be constructed of a gasket material sandwiched between two 22-gauge zinc coated steel plates. Leakage through the damper shall be less than 1% of the maximum rated airflow at 3" w.g. inlet static pressure. The damper gasket material is securely fastened between the two damper plates using machine applied rivets. The damper assembly shall rotate freely in self-lubricating bearings. Damper position shall be indicated on the end of the shaft on the outside of the casing. Inlet connection and damper on size 24 x 16 shall be rectangular.

Airflow Sensor:

A multi-point airflow sensor (Velocity Wing) of the center averaging type shall be located in the terminal inlet. The airflow sensor shall be aerodynamically designed to provide low pressure loss, quiet operation and have not less than 20 sensing points on any given size unit. The sensor shall amplify the velocity pressure signal and provide feedback of actual flow to the controller.

An identification label with piping/wiring diagram and airflow calibration chart shall be affixed to each unit. Flow taps with caps, separate from the airflow sensor or controller taps shall be provided for flow readjustment.

Pneumatic Controls:

The pneumatic controls shall be suitable for a 20-psi control system. The sequence of operation is based on Anemostat Control Package (as listed on page B-26 of this catalog). The pneumatic actuator shall be furnished and mounted by the terminal manufacturer to move the damper from fully open to fully closed positions. The actuator shall be directly coupled to the damper shaft with no linkages. The actuator shall develop a minimum of 42 inch-pounds of torque at 5 psi.

The damper shall be:

- Normally open
- Normally closed
- A pneumatic pressure independent controller shall be furnished and mounted by the terminal manufacturer, and shall control flow within +/-5% of the design air flow regardless of changes in system static pressure. The controller shall reset the flow as required by the thermostat. The maximum and minimum airflow set points shall be set at the factory.

The pneumatic thermostats shall be provided and installed by the temperature control contractor. It shall be the responsibility of the temperature control contractor to coordinate their requirements with those of the terminal manufacturer.

Electronic analog controls:

The electronic analog controls shall be suitable for a 24-volt control system. The sequence of operation is based on Anemostat Control Package (as listed on page B-27 of this catalog). The electronic actuator shall be furnished and mounted by the terminal manufacturer to move the damper from fully open to fully closed positions. The actuator shall be directly coupled to the damper shaft with no linkages.

- The electronic pressure independent controller shall control flow within +/-5% of the design airflow regardless of changes in system static pressure. The controller shall reset the flow as required by the thermostat. The maximum and minimum airflow set points shall be set at the factory.

The electronic actuator and controller shall be combined in a single compact housing. The electronic actuator shall be designed for permanent stall without damage and develop a minimum of 50 inch-pounds of torque.

The terminal shall also be provided with:

- Transformer to step down incoming line voltage to 24 volts (standard on EZTE units with electric heating coils)
- Service disconnect switch for 24 volt controls (pilot duty)
- Low voltage fuse and fuse block
- Line voltage disconnect switch
- Line voltage fusing and fuse block

The wall thermostat shall be furnished by the terminal manufacturer for installation by the temperature control contractor. Flow adjustments shall be made at the wall thermostat utilizing a digital voltmeter.

It shall be the responsibility of the temperature control contractor to coordinate these requirements with those of the terminal manufacturer.

DDC Controls

Terminal manufacturer shall mount DDC controls provided by others. All mounting hardware should be provided by the DDC control supplier. It shall be the responsibility of the DDC supplier to coordinate and provide job specific wiring diagrams to the terminal manufacturer.

Hot Water Coils:

Where shown on the plans, hot water heating coils shall be provided and mounted by the terminal manufacturer. The hot water coils shall be mounted at the discharge of the terminal unit, and the coil shall have a Slip & Drive type connection for attachment to the downstream ductwork. Coils shall be 1/2" copper tubing mechanically expanded in aluminum fins. Coils shall be leak tested with dry nitrogen to 400 psi with a minimum burst pressure of 2500 psi. The performance of all hot water coils shall be rated in accordance with ARI standard 410. Refer to the terminal schedule on the plans for capacities and performance requirements. The sequencing of the airflow and water valve shall be controlled as defined by the Anemostat control package (as listed on page B-26 and 27 of this catalog). The water control valves shall be furnished and installed by others and not by the terminal manufacturer.

Electric Heating Coils:

Where shown on the plans, electric resistance type heating coils and coil controls shall be provided and mounted by the terminal manufacturer. The electric coils shall be located a sufficient distance downstream of the primary air damper to prevent hot spots and nuisance tripping.

The heating elements shall be installed as an integral part of the terminal unit. All terminals with electric heat shall be ETL listed, and include high grade nickel-chrome elements, a transformer, air proving switch, primary disc type automatic reset hi-limit, secondary hi-limit manual reset cutout, magnetic contactors and/or PE switches per step, grounding terminal, and circuit fusing on heaters exceeding 48 amps. Coil panel and frame shall be constructed from aluminized or galvanized steel. A wiring diagram shall be permanently affixed to the coil control enclosure panel. Refer to the terminal schedule on the plans for capacity and performance requirements.

- In Pneumatic control systems, the temperature control contractor shall be responsible for connecting pneumatic signal lines to the coil for proper sequencing
- In Electronic analog control systems, the terminal manufacturer shall interconnect the electronic controls with the electric coil for proper staging of heat. Power connection for the coil and associated flow controls shall be made at a single point.

The coils shall also be provided with:

- Door interlocking disconnect switch – non-fused
- Power-fusing (Fuses and fuse blocks)
- SSR/SCR proportional modulating controller
- Class 2 Transformer (inherently limiting)

Low Temperature Units:

Low temperature units shall be capable of handling 40 degree F air without condensation forming on the terminal casing at ambient conditions of 80 degrees F and 60 percent relative humidity. The unit casing shall be lined with 1" dual density glass fiber insulation. The air valve shall be thermally isolated from the unit casing.

