

SPECIFICATION

DSV

GENERAL

Furnish and install Tuttle & Bailey model DSV, dual single duct terminal units, to provide air at variable volume or constant volume for cooling of sizes and capacities scheduled or as shown on the plans. Dual single duct terminal units shall be factory assembled with a primary air damper assembly contained in a single unit housing.

CONSTRUCTION

Casing

Unit casing shall be constructed of not less than 22 gauge galvanized sheet metal, with round inlet collars of the proper diameter and Slip and Drive connection on discharge opening..

Insulation

1. 1/2" Dual Density - Interior surface of unit casing is to be thermally and acoustically lined with a 1/2" thick fibrous glass blanket with a black top layer and a green core. The insulation is to comply with NFPA 90A, NFPA 90B, UL 181, ASTM C 1071 and have a 1.9 R value. This insulation is glued to the terminal unit, and all exposed edges are to be sealed.
2. 1" Dual Density - Interior surface of unit casing is to be thermally and acoustically lined with a 1" thick fibrous glass blanket with a black top layer and a green core. Complies with NFPA 90A, NFPA 90B, UL 181 and ASTM C 1071. The R value is 3.8. This insulation is glued to the terminal unit, and all exposed edges are to be sealed.
3. Insul-Guard™ - Interior surface of unit casing is to be thermally and acoustically lined with a 13/16" rigid duct board, resin bonded fibrous glass board, with a tough, damage- resistant, flame retardant and a reinforced aluminum foil facing. Complies with NFPA 90A, NFPA 90B, UL 181 and UL723. The R value is 3.5. This insulation is to be glued to the terminal unit, and all exposed edges are to be sealed with foil tape or metal strips.
4. No Lining - The terminal unit is to be supplied with no acoustical or thermal insulation.
5. Galvanized Sheet metal Lining - Double wall, 1/2" dual density lining covered by sheet metal to prevent insulation fibers from entering the air stream. The R value is 1.9.

6. Enviroseal™ - Interior surface of unit casing is to be thermally and acoustically lined with a 3/8" engineered polymer foam, fiber free insulation. Complies with NFPA 90A, NFPA 90B, UL 181 and ASTM C 534. The R value is 1.5 at 75 °F. This insulation is glued and riveted to the terminal unit.

Sensor

The unit shall be equipped with a sensor that samples duct differential pressure with no less than 24 points strategically located to represent equal duct areas. The sensor shall be the Tuttle & Bailey Flo-Cross® and will provide a differential pressure signal amplified to equal 3 times the duct velocity pressure that represents actual air flow with an accuracy of +/- 5% throughout the catalogued operating range of the unit. A length of one-half of one diameter of straight inlet duct is required before the Flo-Cross® sensor.

Damper Assembly

The round damper assembly shall be constructed of two 22 gauge galvanized steel blades sandwiched around an integral elastomeric seal to provide minimum leakage. Damper blade will have a maximum angular travel of 90° to provide improved linearity and flow characteristics. Damper bearings shall be Delrin type for noise free operation requiring no lubrication. Two piece cast aluminum shaft shall have an integral marker to indicate the damper position. Stickers and other removable position markers are not acceptable.



Connections

Units shall incorporate a single point electrical connection. All electrical components shall be UL/ETL recognized and installed in accordance with the National Electric Code. All electrical components are to be mounted in a NEMA 1 control enclosure.

Controls

Controls for the unit are to be supplied by the controls contractor and are to be mounted, calibrated, and tested in the field.

OPTIONS

Discharge Options

1. Unit shall have a round outlet.
2. The terminal unit shall have an access door.

Unit Accessories

1. The unit shall be built to comply with the Chicago Code. All control enclosures will include dust tight gasketing and toggle switch.
2. The unit shall be supplied with controls toggle disconnect switch. This switch will disconnect all power to the terminal unit.
3. All control enclosures shall be supplied with dust tight gasketing.
4. The unit shall be supplied with a transformer of voltage defined on schedule.
5. The unit shall be supplied with hanger brackets to allow for a 1/2" threaded rod.

