

FAN POWERED VARIABLE TERMINAL UNIT-LOW PROFILE

LPV



LPV

BASIC FEATURES

The LPV, variable volume fan powered air terminal unit is essentially a single duct terminal with an integral fan chamber mounted on the side (in parallel) to the primary air stream. The integral fan chamber contains a fan and induction port. The fan does not continuously operate; therefore the primary air chamber and the fan chamber are separated by a back-draft damper to prevent flow of conditioned air into the fan chamber, plenum space and backward rotation of the fan motor. The LPV is lined with insulation to provide sound absorption and thermal resistance.

OPERATING PRINCIPLE

The basic operating principle of the LPV is that as the space cooling load is satisfied and the primary damper closes to a pre-set minimum air flow, the terminal fan is energized to deliver warm plenum or return air to the primary air chamber, mixing it with the reduced cold supply air, thereby reducing (or eliminating) the need for reheat. Because the terminal fan does not operate until the primary air is reduced to a minimum level, less energy is used on a continuous basis as compared to a constant volume fan powered air terminal.

SOUND

The fan in an LPV generally operates at 50 to 65 percent of the maximum primary airflow, resulting in lower sound levels. However, the intermittent operation of the terminal may cause occupants to notice the sound more so than if it was continuous.

APPLICATIONS

The LPV has a very low casing height of 10 ½ inches, allowing for installation where the FPV would otherwise be too large. Functionally the FPV and LPV operate the same way. The fan is designed to run intermittently during occupied hours or during off-hours when only heating is required. The LPV is therefore ideal for reheat applications. If more reheat is needed, hot water or electric reheat coils are offered as options.

FEATURES

- Patented Flo-Cross Sensor which features 24 point upstream and downstream sensing with center averaging chambers and exclusive amplification wings (Patent # 4,453,419)
- Two casing sizes allowing a total flow range of 200 to 1600 CFM
- ARI certified performance data (refer to www.ari.org for a free copy for the ARI Applied Directory)
- Listed by ETL for safety in accordance with standard UL 1995
- Heavy duty 20 gauge casing construction
- Industry standard round and rectangular inlet collars sized to accept either flexible or rigid duct
- Internally lined casing utilizing ½ inch thick dual density fiberglass insulation meeting or exceeding NFPA 90A and UL 181 for air erosion and safety.
- Round damper blade constructed of elastomeric gasket sandwiched between two heavy gauge galvanized steel plates, resulting in low air leakage
- Two piece damper shaft with Delrin self-lubricating bearings. Shaft features a position indicator for easy identification of damper angle
- Large access panel for complete access to fan and internal chamber of the unit.
- Single speed, 60 Hz motor (120, 208, 240 & 277 Volt) with SCR motor control

