BYPASS TERMINAL UNIT

BPS

BPS

BASIC FEATURES

The BPS, bypass air terminal, features a primary inlet, a discharge outlet, a bypass outlet, and an internal diverting damper. BPS bypass air terminals are lined with insulation to provide sound absorption and thermal resistance.

OPERATING PRINCIPLE

The BPS bypass air terminal operates on the principle that as the space cooling load is satisfied, the internal damper diverts air flow from the discharge outlet to the bypass outlet to achieve a constant space temperature. The bypass outlet is typically connected to the return system so that the diverted conditioned air is not wasted. As the space cooling load is further satisfied, the BPS controls the primary air to preset minimum flow determined by the minimum level of ventilation required in the space. In addition, the BPS can be used in full bypass mode for applications where minimum ventilation requirements are not necessary.

SOUND

The goal in designing VAV systems is to operate air terminals at low pressures and air flows, while still satisfying the design conditions. The BPS bypass air terminal is designed to minimize sound generation.

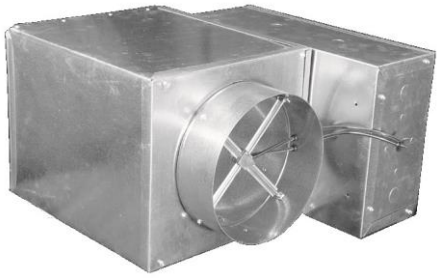
APPLICATIONS

The basic BPS bypass air terminal is designed for interior zones where no reheat is required.

- A wide variety of sizes (7) result in a total flow range from 0 to 4400 CFM
- 20 gauge galvanized steel casing construction.
- Industry standard round inlet, discharge, and bypass collars sized to accept either flexible or rigid duct connections
- Internal lining meets or exceeds the safety and erosion requirements of standard UL 181 and NFPA 90A.
- Damper blade is made with heavy gauge galvanized steel, resulting in a heavy-duty construction for stable operation
- 1/2” dual density fiberglass insulation
- BPS bypass air terminals can be furnished without controls, with electronic analog controls, or with pneumatic controls
- Multi-outlet Plenum
- Manual Inlet Damper
- Multi-outlet Damper
- Manual Bypass Damper
- Manual Outlet Damper
- Hanger brackets

SINGLE DUCT TERMINAL UNIT

S



S

BASIC FEATURES

The SDV, single duct air terminal, features a primary inlet with an integral damper and a discharge plenum sized to fit standard Tuttle & Bailey hot water coils. The SDV is lined with insulation to provide sound absorption and thermal resistance.

OPERATING PRINCIPLE

The SDV is the most common air terminal unit offered by Tuttle & Bailey. It operates on the principle that as the space cooling load is satisfied, the primary damper modulates closed to restrict air flow to the space so that a constant space temperature is maintained. As the space cooling load is further satisfied, the SDV closes to a pre-set minimum flow, which is usually determined by the minimum level of ventilation required in the space. In addition, the SDV can also be used at full shut-off for those applications where minimum ventilation requirements are not necessary. Upon call for heat the damper shuts down to minimum. If more heat is required, a reheat coil (hot water or electric) can be energized to provide further heating.

SOUND

The goal in designing VAV systems is to operate air terminals at low pressures and air flows, while still satisfying the design conditions. The SDV is designed for quiet performance at typical operating conditions. However, for those critical sound applications, an integral sound attenuator is offered as an option for the SDV.

APPLICATIONS

The basic SDV is designed for interior zones where no reheat is required. However, reheat coils can be added to the discharge plenum for perimeter zone applications or other applications where supplemental reheat may be required.

- Patented Flo-Cross® Sensor which features 24 point upstream and downstream sensing with center averaging chambers and exclusive amplification wings (Patent # 4,453,419)
- A wide variety of sizes (10) results in a total flow range of 45 to 7100 CFM
- ARI certified performance data (refer to www.ari.org for a free copy of the ARI Applied Directory)
- Heavy duty 22 gauge casing construction
- Industry standard round inlet collars sized to accept either flexible or rigid duct
- Internally lined casing utilizing 1/2" thick dual density fiberglass insulation. Insulation meets or exceeds the safety and erosion requirements of standard UL-181 and NFPA 90A
- Round damper blade constructed of elastomeric gasket sandwiched between two heavy-duty 22 gauge galvanized steel plates, resulting in low air leakage
- Shaft with Delrin bearings. Shaft features a position indicator for easy identification of damper angle
- Slip and Drive connection on the discharge plenum
- SDV terminals can be furnished without controls, with electronic analog controls, with factory-mounted direct digital controls (supplied by others) or with four function pneumatic controls
- Tuttle & Bailey offers the following liners:
- 1" Dual Density
- Insul-Guard™ (13/16" rigid Duct Board)
- Galvanized Sheet Metal (double wall)
- Enviroseal™ (fiber free)
- Integral discharge sound attenuator
- Hot Water (ARI certified) or Electric Reheat Coils factory installed
- Hanger brackets for 1/2" threaded rod support

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The First Name In Air Distribution