

# CARNES®

Your Single Source For All Your HVAC Needs

## LINECARD: TERMINAL UNITS

### ▶ Externally Powered Throttling Unit

Model AV



Carnes standard air terminals are designed to accurately control airflow and temperature in today's VAV systems. These units are built to provide very low pressure drops and sound levels which are certified by AHRI. All units are thermally lined with insulation meeting UL Test 181 and NFPA 90A requirements. Control options include pneumatic, electric, electronic and factory mounted digital. Optional hot water or electric reheat is available. Air capacity range from 0 to 7300 CFM.

### ▶ Clean Air Terminal Unit

The Carnes clean air terminal line of externally powered VAV products are designed specifically to address indoor air quality (IAQ) concerns that engineers may have regarding a sensitive air stream application. All factory installed insulation is mounted externally, to ensure that the integrity of the internal airstream cannot be compromised. Sound attenuation is not compromised with this design. Although this product was designed specifically for the Hospital and Laboratory markets, this product is also ideal for Schools and Government buildings that are concerned about IAQ issues.



Model AV  
Patent No. 5,486,140

### ▶ Clean Air Silencer

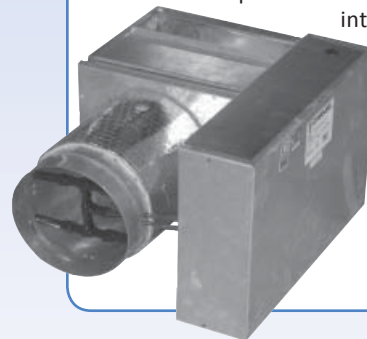


Model AXPA  
Patent No. 5,663,535

The Carnes model AXPA clean air silencer has been designed and engineered to reduce discharge sound levels of air terminal units. The model AXPA is a "reactive type" silencer which attenuates discharge noise levels from air terminals and other devices without the use of sound absorptive materials such as fiberglass, mineral wool, etc. This eliminates indoor air quality concerns when using the model AXPA silencer.

### ▶ By-Pass Unit

Carnes VAV by-pass units provide variable air volumes to individual zones while by-passing the unneeded air to the ceiling plenum for recirculation. Although zone air volumes in small buildings may vary greatly, the cost of central fan controls many times cannot be justified. Zone variable air volumes are realized with the by-pass unit while the supply fan delivers a constant CFM. Zone thermostats directly controlling the by-pass damper assures that only the air that is needed is delivered to the zones. Downstream duct work pressure losses can be matched by adjusting an integral balancing damper. Hot water reheat available.



Model AB

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## LINECARD: TERMINAL UNITS

### ► Round-to-Round Retrofit

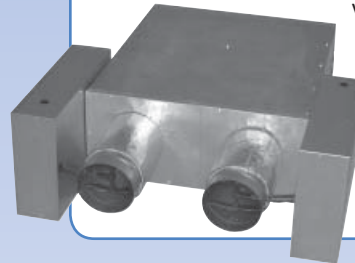
Model ARR



This duct mounted retrofit unit automatically controls the air volume in high velocity air streams. The unit is installed between duct sections and will accommodate circular duct work at the inlet and discharge. The volume control unit also reduces high velocities and pressures to low velocity values. Eight unit sizes are available for duct mounting, with air capacities ranging from 0 to 4200 CFM. This design is also available with stainless steel construction.

### ► Dual Duct VAV Unit

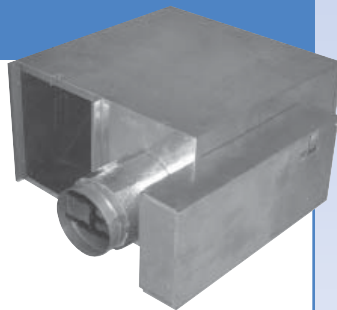
Carnes dual duct VAV unit contains two low pressure drop throttling valves. Hot and cold duct valves are independently controlled. Pressure independent reset constant volume controllers accurately control the hot and cold duct air flows to keep energy wasteful mixing to a minimum. Return air ducted to the hot inlet allows significant energy savings when outside air is ducted to the cold air supply. Hot and cold airstream mixing assures a constant temperature at the discharge of the unit. A wide variety of available control sequences makes the Carnes dual duct VAV adaptable to most energy saving system designs. Model ADCD is used for constant volume applications. Model ADCC is used for variable volume hot and cold duct applications.



Model ADCC and ADCD

### ► Constant Volume Fan Terminal Unit

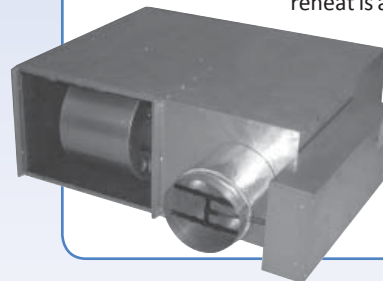
Model AC



The Carnes constant volume fan terminal unit provides constant volume to the space while retaining the advantages of a variable air volume system. The primary air control assembly operates in the same manner as a standard throttling control valve when cooling loads are high. As cooling loads diminish, an integral blower induces warm ceiling plenum air to maintain constant volume to the zone. Optional hot water or electric reheat available. Also available is a comprehensive line of low profile, underfloor and quiet design units.

### ► Intermittent Volume Fan Terminal Unit

The Carnes intermittent volume fan terminal unit allows the use of recirculated air when true VAV cannot fulfill heating requirements. The intermittent fan terminal unit operates in the same manner as the throttling unit when cooling loads are high. As cooling loads diminish, an integral blower is energized and supplies recirculated air to the zone. Intermittent fan terminal units can be used to provide heat to perimeter zones with the central system fan turned off. A wide variety of control sequences makes the fan terminal unit compatible with most energy efficient system designs. Optional hot water or electric reheat is available. Also available in a low profile design.



Model AS