



AirFixture[®]
Dual Airway[™] System
Simplifies design, speeds
construction, and reduces costs

 **YORK[®]**

Leading air distribution into the 21st Century

Difficulties with ductwork

Traditional overhead air-distribution systems depend on ductwork that is designed and built according to the building-load requirements and configuration. This requires time-consuming design and installation of branch ductwork. Often, adjustments are required and ductwork must be cut-to-fit in the field. Fitting ductwork along with the other utilities often causes space conflicts and delays. These hassles add to the first cost of the building. And even after the job is done, the difficulties don't end. As building plans and occupants change, it's expensive to change branch ductwork to adapt to new demands.

Introducing the AirFixture® system: The simpler alternative

Now there's an alternative to ducted air-distribution systems—the AirFixture® system. Since 1997, YORK® has installed millions of square feet of low-pressure underfloor-air-distribution with the FlexSys™ system. Now, the overhead AirFixture technology is leading air-distribution into the 21st century. Designed to keep pace with

today's changing building demands, it replaces traditional branch ductwork with a Dual Airway™ ceiling. Consequently, building owners and mechanical-system designers are seeing that the AirFixture system:

- Simplifies the design of the air-distribution system
- Speeds building construction
- Reduces costs, including first, operating, and future expenses

Advanced technology that works at a higher level

The AirFixture system replaces branch ductwork with a two-level ceiling—an aesthetic ceiling and a median ceiling—using a familiar drop-ceiling design. The supply airway is formed between the aesthetic and median ceiling levels. A return airway is formed in the space between the median ceiling and the slab above. To supply the occupied space, air is discharged through specialized, variable-air-volume (VAV) diffusers, which can be located anywhere in the ceiling grid. Air is carried through the supply airway to the return airway by return grilles, which can be integrated into the supply diffusers within the ceiling panel, or a traditional return-air system may be used.

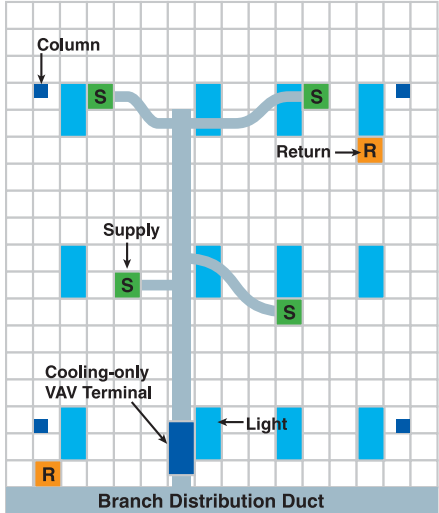


Typical congestion found in an overhead air-distribution system using ductwork

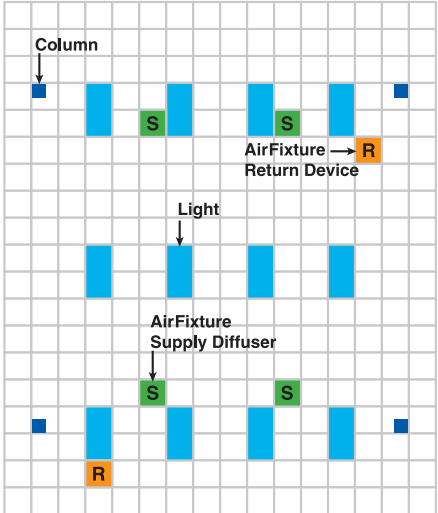


Supply airway of AirFixture® system eliminates congestion and compromises

Simplifies design



Ducted design



AirFixture system design

Faster

No branch ducts: Thanks to AirFixture airways, the hassles and time spent to design, size, and locate branch ductwork are eliminated.

Easier zoning: With the AirFixture system, zoning limitations imposed by ductwork are a thing of the past. AirFixture terminals can be placed anywhere in the ceiling grid. For economy and flexibility, up to 14 devices can be connected to one power supply.

Thermostats can be added anywhere—they are powered by the diffusers they control. Perimeter zones can be designed in different ways to meet various conditions.

Convenient rooftop-unit placement: With branch ducts eliminated, rooftop units can be located near the center of the roof for easier screening. Plus, redundant design is easily accomplished by using multiple units that can provide supply air into one supply airway.

Less custom wiring: AirFixture components are “plug-and-play,” which minimizes the need for custom power and control wiring, and lowers installed cost.

Simpler

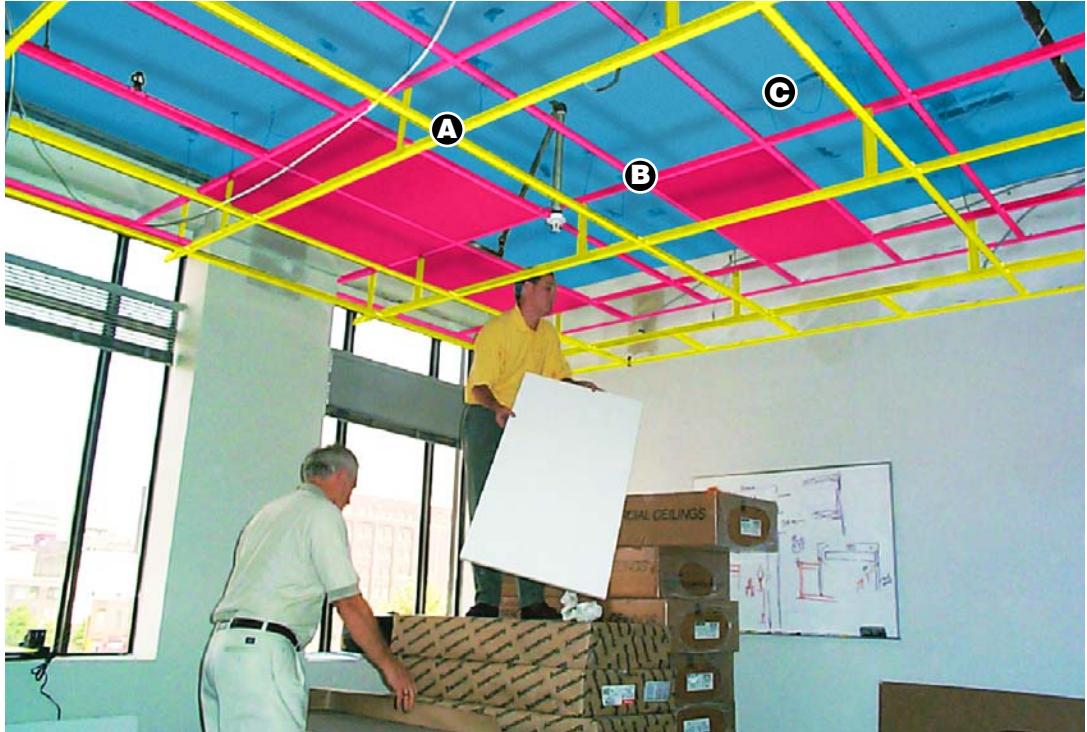
By dramatically reducing the air-distribution components between the ceiling and slab, access and layout for the other utilities are simpler. So there are fewer unforeseen utility-gridlock conflicts and, consequently, fewer expensive change-orders to fix problems not seen in the design stage. Plus, there is less risk of construction compromises causing poor system performance.

Greener

Designing a “green building” is easier with an AirFixture system. That’s because delivering supply air through low-pressure airways reduces fan energy. And because AirFixture diffusers can be placed at optimum locations, it’s less likely that occupants will adjust thermostats and waste energy. AirFixture devices and ceiling panels are also reusable during a renovation, while ductwork usually goes to the landfill. Add it all up, and the AirFixture system is the solution for a more comfortable, more environmentally friendly structure.

Speeds construction

AirFixture Dual Airway™ ceilings are created by: (A) the aesthetic ceiling grid, (B) the median ceiling grid, and (C) the upper slab surface



Eliminate a lot of custom construction and hand labor

With the AirFixture system, custom-construction of ductwork is replaced by the Dual Airway ceiling system. Because the ceiling panels create airways, difficult ceiling-level assembly of ductwork is eliminated. Instead of forming, connecting, and hanging ducts, AirFixture diffuser units simply drop into the suspended ceiling grid.

Construction proceeds in parallel, not in series

Another construction plus: with the AirFixture system, electrical and plumbing contractors do not have to wait for sheet-metal contractors to finish installing the branch ductwork. AirFixture units can simply be added after the electrical and plumbing work is done. Consequently, it is possible to save weeks of construction time per floorplate.

A standard ceiling panel is easily replaced by an AirFixture diffuser



Ceiling grid adds convenience and speeds construction

The strength of the AirFixture ceiling grid, which is designed to be rated structural cross framework, allows electrical and plumbing contractors to hang cables, conduit, and slack wires from the cross, which speeds and simplifies construction.

Late floorplan changes are no problem

There are always last-minute floorplan changes. The inherent limitations of ductwork, however, don't accommodate modifications without involving expensive and time-consuming change orders. But AirFixture units are easy to move at any time, which minimizes labor costs and improves occupant satisfaction.

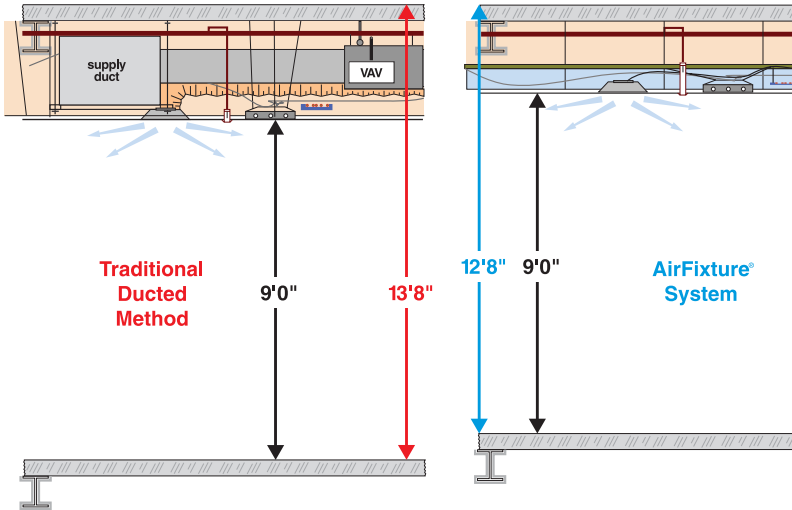
Balancing is a better, faster process

System balancing is critical to comfort; it's a necessary, and often time-consuming process, that requires manual adjustments of individual terminal units. But thanks to integral plug-and-play controls and sensors, the AirFixture system greatly reduces balancing time. Specially designed diffusers with electronically controlled air valves are designed to work at low pressure, .05 inches w.g., using time-modulation, which eliminates the need to balance the individual diffusers. With the airways working at the prescribed pressure, the system will work as designed. As a result, with an AirFixture system balancing time can be cut by an estimated 67 percent!



Finished construction is the familiar drop-ceiling design.

Reduces costs



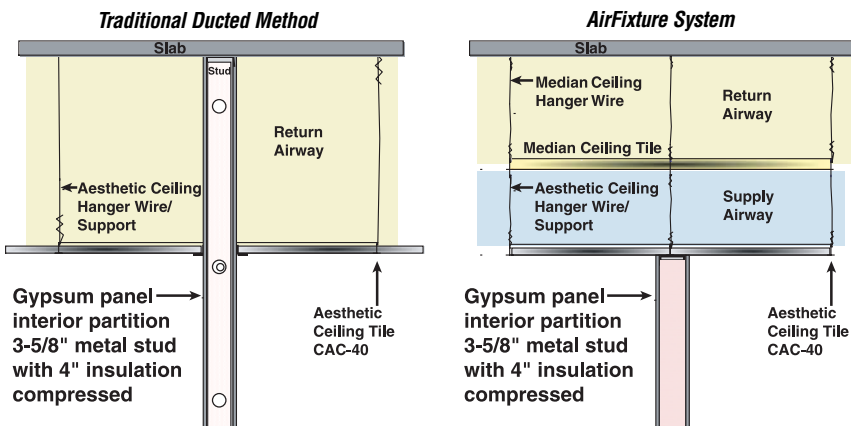
The AirFixture system can effect a 1'-0" height reduction per floor

First-cost reductions

Lower-cost air distribution: Most of the time, the costs for the extra ceiling of the AirFixture system are less than the substantial cost of the eliminated ductwork. And because sheet metal costs are rising, the cost differential is widening, making the AirFixture system an even more affordable choice.

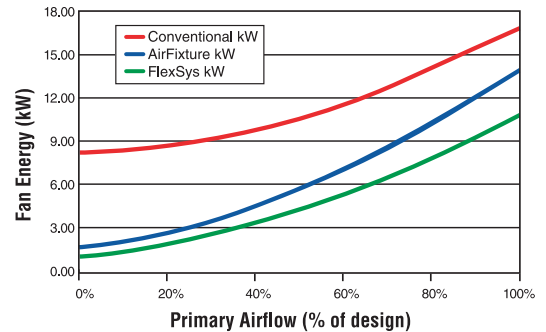
Interior partition savings: The Dual Airway ceiling on the AirFixture system allows cost savings of the labor and wall materials from the ceiling height to the bottom of the slab above. AirFixture construction offers sound insulation comparable to or better than

The AirFixture system Dual Airway wall and ceiling construction provide equal sound attenuation at less cost than traditional slab-to-slab interior partitions.



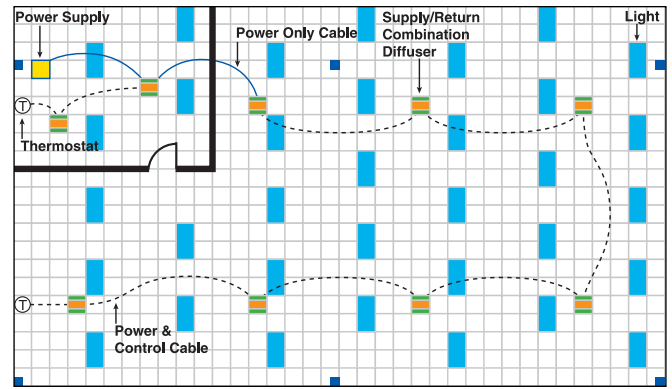
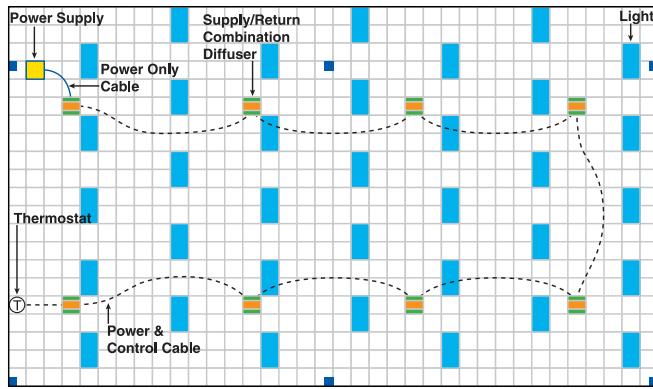
slab-to-slab partitions with standard drop ceilings. Two layers of acoustical ceiling tiles in the median and aesthetic ceilings act like a sound silencer, and with the gasket material on the grid system, an additional 3-6 db of sound attenuation is possible.

Lower building height: By eliminating space-consuming ductwork above the ceiling, an AirFixture system can reduce the slab-to-slab height, which in turn can reduce the building height as much as one foot per floor, which can save on the building costs.



Save daily operating costs

Fan savings: Overhead-ducted systems must be pressurized as much as 2.00 in. w.g. With the AirFixture system, external static pressure can be reduced to 0.05 in. w.g., which allows the use of smaller fan motors that can reduce fan-energy costs as much as 30 percent.



Save in the future, too

Even after the building is occupied, an AirFixture system keeps yielding savings over the life of the facility. Surveys from building-owner trade organizations show that every year many companies relocate 40% of their employees. If occupant relocation and churn necessitate HVAC system revisions, the modifications of a ducted system can cost as much as \$2.50/ft². Often, no changes are made to the HVAC system, so comfort suffers.

But with an AirFixture system, it's no hassle to make modifications. Revising the system layout is almost as easy as moving ceiling tiles. This convenient design not only cuts the costs of layout revisions, but also reduces the temptation for occupants to compensate for poor comfort by tampering with the thermostat and driving up energy costs.

Advanced air-distribution technology you can count on

YORK offers contractors, builders, and designers a choice of state-of-the-art low-pressure air-distribution systems—the FlexSys Underfloor Air Distribution system (UFAD), or the AirFixture Dual Airway system. Because both systems can work with the same static pressure, they can be installed in the same project with the same equipment supplying both.

Many UFAD projects require overhead air delivery systems in select areas of the building where frequent washdown of floor surfaces is required and underfloor air is not appropriate, such as cafeterias, bathrooms

or laboratories. With The AirFixture system, you now have a cost-effective alternative to traditional ducted-overhead (OH) systems that require different equipment and operating parameters.

Where cable-management-only raised access floors (RAF) are required, AirFixture offers a cost saving offset to the cost of the RAF not afforded by OH systems. Moreover, the AirFixture system can free up additional ceiling space typically occupied by ducted systems. This allows for additional daylighting opportunities and/or potential slab-to-slab height savings and the attendant cost savings of shorter overall building heights.

See how the AirFixture System or FlexSys Underfloor Air Distribution System will make a difference in your next project. Call your local YORK sales office at **1-800-861-1001**, or visit www.york.com

Creating an additional zone when rearranging the floor plan is as simple as adding a thermostat and power supply between two AirFixture devices.

The flexibility of these two systems allows configurations that could include FlexSys cable management access flooring with an AirFixture System.

