

Advanced Ergonomic Technologies

Underfloor air conditioning can assure huge benefits when designing commercial office space and AET are well placed to advise in its use. Being leading experts in the application of underfloor air conditioning systems across 65 million square feet throughout the world, AET has supplied the Flexible Space Systems in a wide variety of cultures and climatic conditions.

The use of underfloor air systems, when combined in a fit-out with other well-established products such as raised access floors and demountable, relocatable partitioning, can render a work space "future-proof". Testament to this are the excellent BREEAM and LEED scores which it can attract. Add the new genre of alternative energy solutions such as those which utilise ground-source heat, solar or wind power and they will form the beating heart of a truly 21st Century building.

What is Underfloor Air Conditioning?

- Sometimes called underfloor air distribution, the Flexible Space Systems utilise the space beneath raised access flooring (plenum), to deliver (& sometimes return) cooled &/or warmed air
- Air is supplied at floor level through discreet grilles & may return either back down through the same floor or at high level
- Underfloor air conditioning is most definitely not a displacement system

Why Choose Underfloor Air Conditioning?

- Underfloor Air Conditioning is sustainable
- Architectural freedom at high level is guaranteed if there is no need for ceiling ducting
- Existing overhead architectural features may be preserved
- One of the main financial benefits is a decreased height requirement in new build construction because of the reduced need or even abolition of ceiling ducting
- In refurbishments, only a very small increase in the space for the distribution of power, data & telephones beneath the raised access floor is necessary for inclusion of air distribution, so making more efficient use of the building's volume & perhaps giving improved rental income where otherwise it may not be physically possible to fit an overhead system
- Floor-based components are easy to fit retrospectively in Shell & Core scenarios, so saving initial capital expenditure
- Comfort levels are high with easy resolution of any draught or overheating issues
- Flexibility is assured as air delivery is made through easily relocatable raised access floor panels
- Tax advantages are realised as the floor system may be classed as Plant & Equipment, so attracting improved Capital Allowances

How do the Flexible Space Systems Work?

- Pressurised air may be supplied to the plenum by central plant or local air handling units
- Treated warmed or cooled air is delivered into the supply plenum
- Fan-assisted or passive terminals supply air from the plenum into the workspace above
- A wide variety of grille configurations, colours & shapes is available
- Fresh air is introduced into the return plenum
- Spent air is drawn back into the system through floor grilles to the return plenum or optional ceiling-based grilles
- Riser requirements may be minimised
- The system facilitates central monitoring & control or may be controlled remotely
- Air-delivery is managed by data cabling only – there is no need for ducting or dampers
- Local control may be tempered by centrally set parameters
- Adjacent users may control both airflow & temperature
- 100% free cooling is possible using central station air handling units

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Parkview's Prestigious Mixed-use Development in Beijing is on Track for LEED Platinum Certification



REFURBISHMENT at The Center - Gain this Headroom by Removing the Ceiling Ducting



DURING refurbishment at The Center - Note the 100mm Ceiling Void & 300mm Floor Void



AFTER Refurbishment at The Center - A Comfortable Environment with a Spacious Feel