

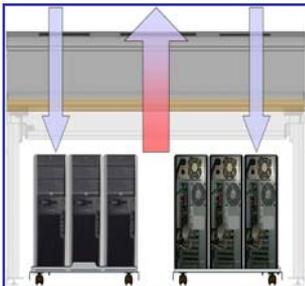


In-desk cooling



If your base build Air Conditioning system needs some help you should consider

In-desk cooling



The desk cooling system that neutralises heat load

The SBFI 'Dual Cool®' desk — A fan coil system sits on the spine of a back to back desk where it delivers chilled air to the PC's inside the cage guaranteeing optimum PC running temperatures.

The warm air rejected from the PC can either be re-chilled within the desk and re-supplied to the PC's or it can be exhausted to the room space to provide credit cooling to offset monitor load.

Temperature sensors within the desk detect variations in load and adjust fan speed/air volume accordingly.

Desk control signals can be connected to BMS to monitor in desk temperatures.

Sources of trading desk heat loads

A typical 1500mm wide trading desk can accommodate 7 HP XW6400 PC's each producing 190W of heat, accumulated load 1330W.

Next generation PC's such as the HP XW8400 produce 210W of heat load, 6 x 8400 & 1 x 6400 will fit in to a 1500 wide desk. Accumulated load 1450W.

19" flat panel monitors typically generate 45W each.

Operating data and benefits

- User thermal comfort to comply with CIBSE Guide A.
- Air velocities at user position to be below 0.15m/s, air temperature variations not to exceed 2 degrees C per/m.
- Extra SBFI criteria, seated ankle to knee air temperature differential not to exceed 1 degrees C, seated knee to head air temperature differential not to exceed 1 degrees C.
- PC's to operate at close to room ambient temperatures.
- No heat energy to be conducted through the desk casework or structure.
- All air to enter and exit the desk at central spine behind monitor display.
- Fan noise levels to comply with BS 8233 'reasonable conditions for study and work requiring concentration' (library, executive office) 40db.
- Water supply temperatures at 16-17 degrees C to avoid dew point.
- Variable duty to match variable load.
- Energy efficient EC fans to reduce running cost.