

SEE-Tech Solutions Pvt. Ltd.

Solution Providers for Energy Conservation & Plant Safety Improvement

“LetsConserve”, 11/5, MIDC Infotech Park, Near VRCE Telephone Exchange,
South Ambazari Road, NAGPUR - 440 022, (INDIA)

Tel: +91-712-2222177, Fax: +91-712-2225293, E-mail: seemil_ngp@sancharnet.in



www.letsconserve.org

Area: Vapor Compression Refrigeration & Air-Conditioning

Topic: Saving in Electrical Power consumption for Air Conditioning by reducing heat load in a setup involving many computers

Problem: In a hall containing a large number of computers (PC), the hot air from the exhaust fan of computer put an additional load on air conditioning (AC) system. Suggest innovative measures to minimize this additional load on AC to save extra power consumption by AC. This can be carried out by designing a duct collecting hot air exhaust from each of the PCs and throwing exhaust out. You can also think any innovative approach for minimizing this load.

Need: As the power consumption requirement for AC is high, energy conservation in AC needs to be carried out by all possible measures; once efficient AC system is installed, then reduction in AC power consumption can be achieved by reducing heat load. The hot air from PC is major contributor of AC load; hence if this can minimized with some application of hot air removal, it will leads to saving in energy.

Expected result:

1. Think out of the box and innovate to come out with your design for hot air removal
2. Assume two identical systems, in first, hot-air exhaust is within the AC room and in second its outside the room; then quantify savings in electrical energy by avoiding hot air load in to AC system