

Energy Conservation and Management

Air Handling Unit optimization

We are specialized in providing energy saving solutions and services for existing buildings. Using both the building management systems and room automation systems, and for both new and existing installations, we offer a range of services for conservation and management of energy in buildings.

We would like to highlight on our energy saving solution through Air Handling Unit optimization that can reduce up to 40% and more of their electricity consumption

Throughout the GCC region, the air conditioning consumes more than 50% of building total electricity consumption.

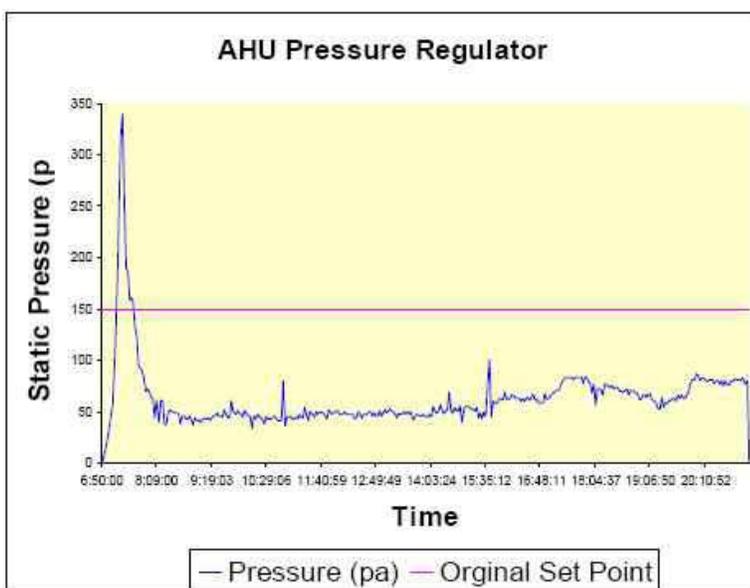
In buildings having large air handling units (AHU), considerable savings can be made by optimizing their operation, where up to 40% of electricity spent by these units can be reduced.

Based on building type and AHU served area, an optimized sequence of operation for the Air Handling Unit is implemented, based on actual demand and conditions in the served area, that ensures its minimum energy consumption, without compromising on occupants' comfort.

Solution:

Our services include:

- System study and proposal for energy saving AHU Optimization.
- Implementation of AHU control solution
- Ensuring the most efficient control of Air Handling Units, without compromising on the comfort and eliminating wasting of energy.



An example of implementing AHU optimization in a VAV system:

Purple line corresponds to 'standard' AHU control (before optimization), while the blue one shows the optimized one (after optimization).

During most of the time, the optimized duct pressure curve is well below the standard one. This results in huge energy saving for the supply air fan power consumption.

In addition, the optimized control also gives faster response to sudden changes of served area cooling demand – providing higher comfort for the occupants.

Savings:

Actual savings achieved by optimization of AHU depend on many factors (served area, occupancy, AHU type and configuration, building type etc.), but can be generally estimated to be at least 25% of the unit electricity consumption.

The estimated amount of savings will vary for each building and is determined during building inspection. Previous electricity consumption records (Electricity bills) are required.

Investment

The investment is low and ensures quick return. Actual required investment is determined during the building inspection.

Eligibility:

All types of buildings having larger Air Handling Units.

Saving potential is considerably higher in non-residential buildings such as schools, office buildings, commercial buildings, shopping malls, hospitals, hotels etc.

Implementation

Quick and easy and does not disturb the building occupants.

Return of Investment:

Return of Investment period is typically between eight months and two years, after which the savings will continue.

For more details on our solutions, please refer to information available on our website:

Company profile (PDF):

http://www.bms-technology.com/pdf/BMS_Company_Profile_G.pdf

Green Building Solutions:

<http://www.bms-technology.com/greenbuildings.html>

Green Building Solutions brochure in PDF:

<http://www.bms-technology.com/pdf/GreenBuildings.pdf>

Energy Conservation & Management brochure (PDF):

http://www.bms-technology.com/pdf/B_V1_ECM.pdf

You can also visit the Downloads section on our website where more documents such as case studies, specifications etc. are available:

<http://www.bms-technology.com/downloads.html>