"HVAC TECHNOLOGY IN GREEN BUILDING"

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Climate change is a rising global issue. To avoid such problems growth should be sustainable. To achieve sustainable growth, green buildings can perform an important function by creating an eco-friendly infrastructure. Green buildings refer to eco-friendly buildings which consume less energy while providing a comfortable and healthy life to the members. The main motive of green building is to achieve net zero consumption.

Heating, ventilating, and air-conditioning (HVAC) consumes around 50-60 percent of the energy in buildings; It is a vital factor in a green building to net zero energy consumption and provides a quality life by delivering fresh air, controlling the temperature, humidity and the environment of the building.

Green Building Requirements - HVAC

- The building envelope shall be as per ECBC.
- Chiller COP and IPLV shall be as per ECBC.
- Cooling Towers shall be as per CTI with Approach 2.78Deg.C.
- Mechanical efficiency of AHUs, Pumps, and Fans as per ECBC.
- Minimum Motor efficiency shall be IE3.
- Variable air volume boxes for individual temperature, and air distribution control.
- outdoor air as per ASHRAE 62.1 Standards.
- Eco-friendly Refrigerant (CFC and HCFC free).
- Treated wastewater as make-up for the cooling towers.
- Minimum 4-star rated split units.

Building Management system for Control and monitoring.

Green buildings and HVAC are new emerging technologies and designs which will increase employment and it will create a lot of scope in the secondary sector, as the secondary sector increases increase in the economy (a step towards 5 trillion economies), which will lead our nation towards a developed one. It will become an important step in self–reliant India.

It will directly play an important role in achieving net zero carbon emission. This will helps us in quality of life so that we can reduce the index of India in pollution and health problems and hence we can achieve sustainable growth and UNESCO sustainable development goals.