Consume Least Energy to Operate AHU to Maintain Air Quality of Space

Air handling units (AHUs) are essential components of heating, ventilation, and air conditioning (HVAC) systems. They are responsible for circulating air throughout a building, and they can consume a significant amount of energy. However, there are a number of measures that can be taken to minimize the energy consumption of AHUs while still maintaining the desired air quality in a space.

Optimize Operation of Air Handler Unit(AHU): Consume least energy to operate AHU to maintain air quality of space by United States Government US Army

4 out of 5

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Screen Reader	: Supported
Enhanced typesetting	: Enabled
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1. Optimize AHU airflow

One of the most important factors in minimizing the energy consumption of an AHU is to optimize its airflow. The airflow rate should be set to the lowest level that can provide the desired air quality in the space. This can be done by using a variable frequency drive (VFD) to control the speed of

the AHU fan. VFDs can save a significant amount of energy by reducing the fan speed when the airflow rate is not needed.

2. Use energy-efficient filters

The filters in an AHU can also have a significant impact on its energy consumption. Filters that are too restrictive can cause the AHU to work harder to push air through them, which can lead to increased energy consumption. However, filters that are too porous can allow contaminants to pass through them, which can compromise the air quality in the space. It is important to select filters that are the right size and efficiency for the AHU and the application.

3. Schedule AHU operation

Another way to minimize the energy consumption of an AHU is to schedule its operation. AHUs can be programmed to turn on and off at specific times of day, or they can be set to run at different speeds during different times of day. This can help to reduce energy consumption during periods when the AHU is not needed, such as at night or on weekends.

4. Perform regular maintenance

Regular maintenance is essential for keeping an AHU operating efficiently. This includes tasks such as cleaning the coils, filters, and fan blades; checking the belts and bearings; and calibrating the controls. Regular maintenance can help to prevent problems that can lead to increased energy consumption, such as airflow restrictions, fan imbalances, and control problems.

5. Upgrade to a more efficient AHU

If an AHU is old or inefficient, it may be worthwhile to upgrade to a newer, more efficient model. Newer AHUs are typically more energy-efficient than older models, and they can also be equipped with features that can help to further reduce energy consumption, such as variable speed fans and energy recovery wheels.

By following these tips, you can minimize the energy consumption of your AHU while still maintaining the desired air quality in your space. This can lead to significant energy savings over time, and it can also help to extend the life of your AHU.

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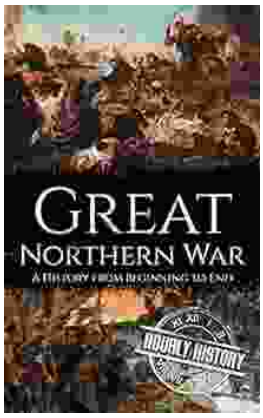

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