Is An Air Cooled Chiller a Good Solution?

It is impossible to imagine our life during the summer months without machines designed for cooling our working and home environments. Different types of air chillers have been invented and many companies are still honing ideas in order to make more efficient and expedient refrigeration devices. When speaking about air-cooled devices it should be noted that they are considered to be less energy efficient than those operating by water, however they are not as costly as water cooled units and less expensive to maintain. On the other hand air-cooled units are more energy efficient than traditional freon-powered refrigerator devices, thus, all these advantages make them as the common choice in many businesses and industries. What is it and how it operates? The main objective of such chillers is to cool the surrounding air thus typically these refrigeration devices serve the larger scale industrial and commercial purposes. As point of interest, In spite of the fact that air-cooled chillers function by air it is absolutely incorrect to think that they do not use water. In most cases water is a part of the integral system but it is not used to absorb superfluous heat from the unit`s closed system. The structure of a chiller that works by air is the following way: it includes an evaporator with a certain liquid substance used for refrigeration, tubes filled with water surround the items meant to be chilled, then a compressor increases the pressure and the apparatus forms a condensing vapour that in turn, connects back to the evaporator. The process of cooling starts in the evaporator, its liquid refrigerant spreads out cold to the tubes filled with water. These pipes surround area that is to be cooled. The chilled water is pumped through a the area where it absorbs heat from this area thus chilling them. After that the water in the tubes finally reaches a high temperature that becomes enough to radiate the heat back into the evaporator, where the refrigerant causes the heated water to turn into vapour. It the passes through a special pipe into the compressor where the vapour is compressed into a smaller space, thus, put under even higher pressure. Then the condenser picks up the baton and lets the pumped vaporized refrigerant through. The condenser has a set of special parts of the whole device called air-cooled vanes, just similar to those of a car's radiator. The vapour condenses back into a liquid giving off its heat into the surrounding air. The liquid goes back into the evaporator where the production cycle is restarted again. The importance of air-cooled chillers is self-evident. They are powerful enough to work for domestic, commercial, and industrial purposes cooling huge machines and air conditioning. If you choose a good and applicable one for your personal or business needs please make sure to maintain it properly and it will serve up a good and durable work.

About the Author

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