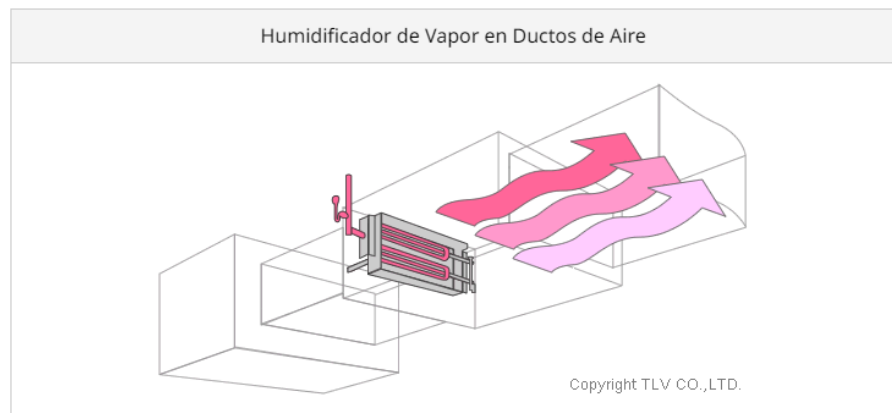


CASE HISTORY HUMIDIFICATION STEAM

Many large industrial and commercial facilities, especially in colder climates, use low-pressure saturated steam as the predominant heat source for seasonal indoor heating. HVAC coils, usually combined with steam humidifiers, are the equipment used for air conditioning, internal comfort, record and book preservation, and infection control. When the cold air is heated by the steam coils, the relative humidity of the air drops, and must then be adjusted to normal levels by adding a controlled injection of saturated dry steam into the lower line of the airflow.



Steam used to humidify the air inside an air duct before it is distributed to other areas of a building

What is a humidifier?

Let's start talking about the humidifier, what is it for? Simply put, what a humidifier does is bring moisture back into the air. When humidity levels are low, the air dries out, which can dry out and irritate your skin and eyes. When humidity levels rise to a healthy percentage, the air causes less discomfort.

When you know how to measure and monitor humidity levels and adjust accordingly, you can ensure that the perfect balance is maintained.

A humidifier improves the environmental quality in an enclosed space by adding cool or warm moisture to the air. They come in different sizes for different

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Humidification equipment is divided into two large families, depending on the source that provides the energy to vaporize the water, and each one affects the air temperature in a different way. Using adiabatics, the air is cooled. With isothermics, the air temperature remains constant. The former use the heat of the air being humidified, while the latter use the heat that is added to the water intended for humidification.

For humidification to occur, the water needs to absorb enough energy to evaporate. To achieve this, 1,000 BTUs (British Thermal Unit) are required per pound of water or 540 calories per gram of water. This is true regardless of whether the water is in a reservoir, on a surface, or in the form of tiny droplets suspended in the air. This essential heat is

called latent heat of vaporization.

Isothermal humidifiers are frequently used in family and commercial buildings, as well as in 100 percent of hospital facilities. These are mainly composed of a unit that generates the steam and the device that distributes it in the air stream. They are also distinguished by using heat added to water that will be evaporated. It works by boiling water and the resulting steam is delivered to the air completely sterile, as all the impurities and minerals contained in the water do not evaporate; therefore, they are deposited in the cylinders. This is one of the most important reasons why it is used in hospitals.

This type of equipment delivers steam to the environment, i.e., water in a gaseous state, and is distinguished by the fact that this transformation occurs inside the equipment. Applications, from small rooms to hospital buildings. Know its operating principle and variety

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5555.8651.00

ventas@clayton.com.mx

Manuel L. Stampa No.54

Col. Nueva Industrial Vallejo

Ciudad de México

www.clayton.com.mx