

# Get the balance right

Good humidity control essential in assuring IAQ, says **Alice Barker** of Humidity Solutions

**W**hether your driver is pollution or Covid-19, the reasoning behind the need for IAQ is the same: as humans we are affected

mentally and physically by the air that we breathe. We spend a lot of time inside and therefore we should consider our air quality. Good IAQ is a balance of oxygenation, temperature and humidity. The latter – humidity control – is our focus here.

It is well-documented that maintaining Relative Humidity levels of between 40-60 per cent RH reduces the transmission of viruses and bacteria (including Covid-19) and alleviates sore eyes, headaches and respiratory issues, while keeping our natural defences high against all manner of airborne particulates.

In most indoor environments, RH levels will fluctuate according to several, frequently uncontrollable, variants such as: outdoor

weather; ventilation; number of occupants in a space; and levels of machinery or processes taking place. Humidification systems are therefore required to maintain a more stable relative humidity to ensure human comfort and health, as well as enabling many manufacturing and industrial processes to run smoothly.

There are several humidifiers to choose from, depending on the application, from low-energy ultrasonics to evaporative versions providing free cooling to efficient gas-fired steam units. All are valid and have applications where they are perfect choices.

However, let's not forget Electrode Boiler humidifiers, which are still the most widely used. This is in part to benefits such as:

- Versatility - can be used in-duct or directly in a space;
- Straightforward to size, install and maintain;
- Production of sterile steam;
- Cost-effectiveness.

They do require consumables – namely replacement of steam cylinders if they become scaled – but this maintenance is straightforward and the system does not require chlorination or disinfecting like a cold-water system does.

And yes, they use more electrical power than other methods. However, like an electric car they are clean at the point of use. They also do not affect the temperature of the air that they are humidifying, thus eliminating the need for additional pre-heat. If, by using a low-energy humidifier, you need to reheat the air to overcome this effect, the steam humidifier has the same system power requirements as the other low-energy humidifiers.

Electrode boilers require no great system energy; are no more expensive to maintain; and are low-cost and easy to install with a sterile end product. They are thus still the go-to humidifier for providing that critical part in achieving the ideal indoor air quality.

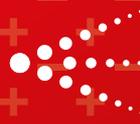
## Control humidity to improve Indoor Air Quality



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