



ADVANCED LIQUID DESSICANT DEHUMIDIFIER

The skid mounted dehumidification system is specially developed to serve the changing needs of industrial, institutional and commercial users.

The new design incorporates advances in sizing, reliability, life, space and construction materials.

The HumiVex LDDS operates with a liquid hygroscopic salt and is, therefore, completely manufactured of corrosion-proof plastic. Its simplicity and choice of materials of construction make the HumiVex LDDS a reliable air dehumidifier with a long life span. Besides the drying of the air, the system also functions as an air washer for dust gases and in additionally kills almost all airborne bacteria. Air temperature and humidity are simultaneously controlled in the HumiVex LDDS process. Pre-cooling, after cooling and after heating are usually not required. The unit is available in capacities ranging from 5,000 CMH to 25,000 CMH.

The conditioner and regenerator are built on one sump. Together with the pumps, plate and frame heat exchangers and VexSol piping, these are built on one frame with fixed dimensions. It means that this skid mounted system is easy to install. Any manufacturing or processing operation which is humidity, temperature or micro-organism sensitive, is a natural application for the HumiVex LDDS. Additionally customised units can be supplied to address space constraints.



Pharmaceutical, food, meat, gelatin, electronic, steel are ideal application areas where the HumiVex LDDS can provide a precise humidity and temperature condition.

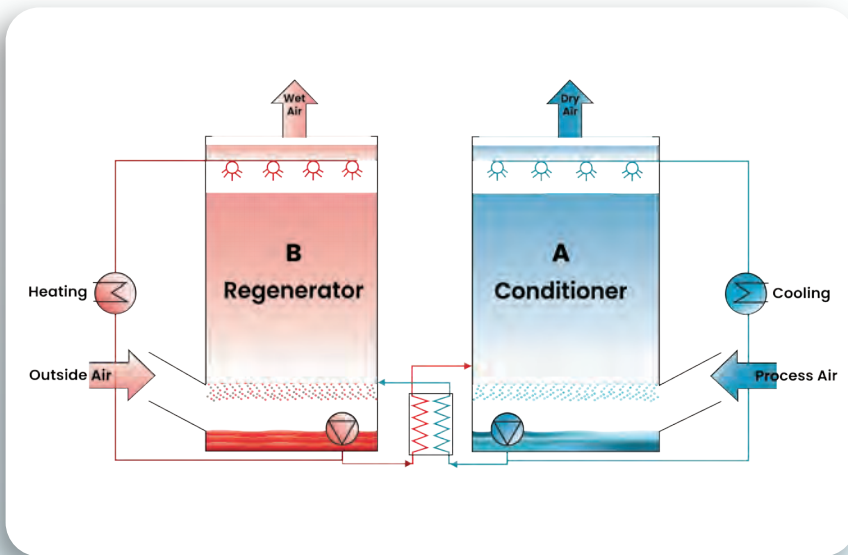
Principle

The dehumidifying system of HumiVex LDDS is based on the drying properties of a liquid hygroscopic solution called VexSol. The HumiVex LDDS concept is the simplicity itself, 100% of the air to be dehumidified is exposed to highly stable, non-toxic VexSol. The amount of moisture the VexSol will take out, is directly related to the concentration and temperature of the Vexsol solution.

Operation

Conditioner

In the conditioner the packing absorbs the cool sprayed VexSol. The air to be conditioned passes through this packing where it comes in intimate contact with the hygroscopic VexSol. The moisture in the air is absorbed by the VexSol (the lower the temperature of the VexSol, the higher the water absorbing capacity).



The circulation system

The circulation system transfers a small amount of the VexSol (with moisture) to the regenerator.

Regenerator

The regenerator also contains a packing over which the VexSol (with moisture) is sprayed. The heated VexSol comes in contact with outside air. This air gets heated and the moisture in the VexSol will evaporate. The regenerator discharges this warm humid air to the atmosphere. To maintain a constant VexSol concentration VexSol will be transferred back to the conditioner.

Working Principle Of HumiVex LDDS.

Advantages Humivex LDDS

- Cooling and heating takes place outside the unit;
- Corrosion-proof, units mainly made of polypropylene/HDPE
- Microbiological decontamination;
- Compactly built;
- One unit can service multiple rooms with different T & RH setpoints.
- Easy to engineer;
- Operates as a humidifier too;
- Minimal maintenance;
- Easy to relocate;
- Very long life span;
- Standard system, available from 5,000 CMH to 25,000 CMH.
- Low running costs;
- Easy to integrate;
- Moisture removal 57- 216 kg/h.