

**VODALUFT ENERGY TECHNIKS**

**HIGH PRESSURE HUMIDIFIER FOG SYSTEM**

VODALUFT ENERGY TECHNIKS  
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# VODALUFT ENERGY TECHNOLOGIES

## HIGH PRESSURE HUMIDIFICATION FOG SYSTEM

### Operating Principle

The **VODALUFT SYSTEM** works with treated water - atomized & nebulized at a very high pressure with a specially designed pump. The atomization so fine that FOG mist is created.

Since the water in the fog state behaves like a vapor, it readily evaporates into the air, resulting in adiabatic cooling.

Due to this reason, the quantity of water sprayed is 100 times lower as compared to conventional air washer system.

Specially designed **VODALUFT** high pressure atomising nozzles made of Stainless Steel are operated between 30 ~ 70 Bars.

Most of the problems associated with conventional air washers is due to poor quality of water. This results in choking & fouling of all the air washer components like Pump Filter, Main Header, Spray Banks, Spray Nozzles, Eliminators as well as air distribution ducts & diffusers. This necessitates regular maintenance to maintain the Humidification plant efficiency.

Therefore **VODALUFT** designed the system to use treated water - Reverse Osmosis (RO) water /De-mineralised Water. In some cases Soft water mixed with RO water can be used. This treated water passes through a 2 stage filter before entering the specially designed SS fog nozzles.

# VODALUFT ENERGY TECHNIQUES

## Advantages

1. High degree of evaporation & humidifier efficiency
2. Air Washer Tank can be totally eliminated.
3. Only 1 to 1.5 m<sup>3</sup> of Syntex tank in place of 12 to 14 m<sup>3</sup> of air washer tank.
4. Due to spraying only exactly dosed water (approximately 100 times less than conventional system) minimum pump power requirement. Approximately 65 ~ 80% Power Saving.
5. Due to optimised Adiabatic Cooling, reduction in chiller load.
6. Due to lower system resistance - 10 to 15% reduction in fan power consumption.
7. 75% Maintenance cost saving in respect of water related issues of conventional Air Washers (Labour, Water & spares)
8. No Touch System due to high quality water usage.
9. Automatic Pump Control System linked to RH sensor placed in the department.

Overall the extra cost for water treatment pays off very quickly.

## APPLICATION:

- # Preparatory, Spinning, Winding, Weaving & Yarn Conditioning Departments.
- # Any Humidification System can be converted to **VODALUFT SYSTEM**



A. 2 STAGE WATER FILTER

# VODALUFT ENERGY TECHNIQUES



## **B. TREATED WATER STORAGE TANK**

(1000 ~ 1500 LITRE CAPACITY)

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**C. SPECIALLY DESIGNED HIGH PRESSURE PUMPS**

1.5 HP (min) to 5 HP (Max)



**D. FOG BANK WITH SS PIPES & FOG NOZZLES**



E. HIGH PRESSURE HUMIDIFIER FOG