

Case studies

Printing

Process: Screen printing

Humidification with non-wetting fog in screen printing factory dramatically improves productivity

How to reduce screen printing machine downtime in dry season?

During its busy autumn and winter seasons, a company that prints personal organizers was suffering from production problems related with static electricity, such as double sheet feeding and printing machine stoppage itself, in its screen printing process with UV drying. Each time this happens, the entire machine needs to be shut down. In the worst month, the machine was stopped more than 50 times a day. Recovering the machine takes about 10 to 20 minutes resulting in a huge loss of time.

While knowing that installing a humidification system helps suppress static electricity, they were concerned about the negative impact that the machine and the paper got wet. Seeing and touching non-wetting Dry Fog in our showroom and in a demonstration dispelled their concerns. After understanding that the system could effectively humidify a room entirely or locally, they decided to install it.

Dry Fog Humidification brings dramatic effect, and investment pays off within one year.

Before installing the humidification system, the printing machine used to stop 20 times a day on average for a total of 3 hours. After the installation, the machine stops only once or twice a day, or sometimes it does not stop at all throughout a day.

| | Before installation | After installation |
|------------------|---------------------|--------------------|
| Machine stoppage | 20 times/day | Twice a day |
| Downtime | 3 hours/day | 0.3 hours/day |
| Loss | \$800/day | \$84/day |

Effect of the installation: \$756/day
 Daily production increase by \$800
 Annual production increase by \$190,000.
 Assuming that the company's gross margin is 20%, the amount of annual return comes to \$38,000. In other words, the investment was recovered in one winter.



Dry Fog Humidification System AirAKI®

Controlling humidity either in a large space or narrowly defined locations eliminates problems caused by static electricity. For use in gravure printing, localized humidification (spot humidification) is more effective and cost-saving than humidifying an entire space.