

MIST AIR SHOWER



By GroyneTech
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Air shower

Why air shower?

Air showers use jets of filtered air to clean particle contamination from personnel and equipment during entry into a cleanroom environment. Removal may include dust particles or other excess contaminants residing on the person. Sprayed air is designed to blow in multiple directions.

Ideal for removal of
dander and particulate
Prior to entry into Clean
Facility

**Not recommended for
removal of occupational
exposure**



Mist shower

What is MIST?

Mist is a phenomenon caused by small droplets of water suspended in air.

- Integrated with exit airlock system in the production area, Mist Showers reduce cross-contamination within the facility. The mist formed during operation ensures removal of loose particles sticking to clothing which is discarded in a customised container.



Mist air shower

- Automatic mist air shower, fully developed by our company, is a new photo-electric interlocking automatic mist air shower with PLC control. It is widely applied to pharmaceutical, biochemical production sectors and hospital isolation wards.
- The working principle of this mist air shower is to wet the dust first and then blow the dust off, then the operator can take off the working outwear and leave the production sector to avoid the spread of potent substance outside clean room. This mist air shower is effective in decontamination of operators and preventing the outside air being polluted by the untreated potent dust.

Main Features

- High velocity Air shower jets in excess of 20 m/s ensure efficient scrubbing action to remove particulate matter.
- Operating modes can be programmed in the field.
- PLC controller supervises all functions.
- Mini-pleated HEPA filtration achieves > 99.99% typical efficiency at 0.3 micron particles.
- A disposable pre-filter with 85% resistance extends the life of the main filter.
- An emergency stop button is mounted on both sides of the MIST/AIR shower.
- Indicator lights mounted on both sides of the air shower exterior regulate traffic flow in and out of the cleanroom.
- Permanently lubricated direct drive centrifugal blowers are used in conjunction with stainless steel air nozzles.

Structure

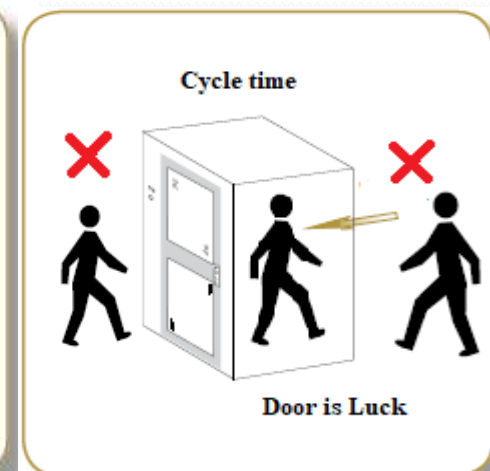
Automatic mist air shower uses SS304 steel plate, air shower nozzles, mist shower nozzles, and assembled HEPA filter mist/air blowing & filtration system. It is characterized by well formed & compact structure, easy maintenance, simple operation, etc. This machine adopts PLC controlled infrared probe, automatic mist spray/air blow and electric interlock.



Specification

- | | | |
|-----------------------------|----|---|
| 1. Filtration efficiency | :- | $\geq 99.99\%$ @ $0.5\mu\text{m}$ (sodium flame method) |
| 2. Air shower time | :- | 1~99seconds adjustable(default 20s) |
| 3. Mist shower time | :- | 1~99seconds adjustable(default 20s) |
| 4. Mist particle size | :- | 10~50um |
| 5. Spray nozzle air speed | :- | $\geq 20\text{m/s}$ |
| 6. Mist shower nozzle no. | :- | 6 |
| 7. Air shower nozzle no. | :- | 6 |
| 8. Air shower area | :- | 800W×900D×1950H |
| 9. Power | :- | 3N 380V – 415V 50Hz |
| 10. Max power consumption:- | | 1KW |
| 11. HEPA filter size | :- | 610×610×70×1pc (* Customize Also) |

Operating Sequences



<p>During entry time of person to mist/air room the shower is activated.</p>	<p>During exit time of person to mist/air room the shower is not activated.</p>	<p>At a time both door can't opened.</p>	<p>During mist/air shower cycle time, the both doors are powered on and locked, can't force opening.</p>
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Maintenance

1. Check each technical index of the air shower at regular intervals, it needs to be taken care timely.
2. Regularly wash the primary filter cartridge (normally 3 months) according to actual usage.
3. When the air gets slower, user should first check the primary filter. Too much dust on the filter surface will increase air flow.
4. If air speed is not improved after changing or washing primary filter, then the HEPA filter must be blocked and needs change.
5. Before replacing the used HEPA filter, nozzle plate needs to be disassembled first and the new HEPA filter should be the same.
6. After changing the HEPA filter, user should check and make sure there is no leakage around the filter frame and use particle.
7. Check the electrical circuit regularly. If there is a failure, repair according to the electrical schematic diagram.
8. Conduct maintenance to the two doors regularly.
9. This mist air shower room must not be operated in the temperature higher than 50°C, and open flames are prohibited.



**THANKS FOR
YOUR ATTENTION**

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