



# Air Shower



## Introduction to VAF Air Shower

Air shower is a self-contained chamber which usually installed at the entrance of the cleanroom or control environment to minimize the particulate matters enter the clean space. The personnel and the items will be air washed by the high velocity HEPA filtered jet air from the nozzles at the air speed of 20 m/s before entering or exiting the clean environment.

## VAF's Air Shower

is being designed to suit the application of cleanroom for semiconductor industries, pharmaceutical, hospitals, food processing industry, spray booth and etc. Our design experts are able to customise special specification and requirement air showers in order to cater the needs of difference application demands in the market. Our air shower's designs vary from a simple single module for single person until the tunnel air shower for continuous and unlimited person usage application.

## How Air Shower Works

VAF's Air shower is controlled by the special controller by our R&D team. The microprocessor is to control the sequence of the actions taken during the entering and exiting process accordance to the requirements of the customers. The air shower's door at the grey area (dirty side) will be opened and the personnel who has changed his garment to cleanroom jump suit or smock will enter the room. Then, the door at grey side is closed and the blower will start to blow. The air will go through the HEPA filter placed after the blower and then go out at the speed of 20 m/s from the nozzles. The high speed air will then air wash the garment wore by the personnel. The air washing process usually takes 15 seconds (timer can be adjusted accordance to the requirement) and the count down time will be shown on the display installed at the above of the nozzles. During the air washing process, both grey side door and clean side door is locked by the magnetic lock.

This process is to ensure that all the personnel entering the cleanroom will be "clean up" by the air shower before they are allowed to enter the cleanroom. Once the timer is stop and the air washing process is finished, the personnel then able to open the clean side door of the air shower and enter the room. In VAF, we provide our customer different choices of models of air shower accordance to number of sides the air nozzles blow, the size of the air shower (number of persons are able to enter the air shower at one time), and the air shower operating sequences.

### • Model differentiate by the air of nozzles blow

In VAF, our air shower is categorised into single sided blow (only one side of the air shower has nozzles, double sided blow (both sides have air nozzles), and three sided blow (blow from double sided and from top)

### • Model differentiate by the size

In VAF, our air shower's size is determined by module(s). Each module has the depth of 1000mm and the width of 1500mm. A single module of air shower is able to accommodate 2 persons at one entry. Thus, by increasing the number of modules, the air shower will able to accommodate more persons for one entry.

### • Model differentiate by the operating sequence

a) Single Way - The Single Way model allows the personnel to go in the from dirty side into the cleanroom but the personnel is not allow to come out from the cleanroom through the air shower. This is use to control the traffic entering the cleanroom.

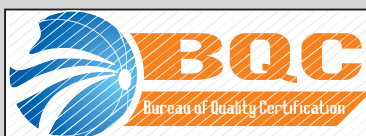
b) Double Way Single Blow - This model allows the user to enter and exit the cleanroom using the same air shower. However, the air shower will only blow when the personnel enter the cleanroom.



# Air Shower

MODEL	V-AS-11-SS-SL-E	V-AS-22-BS-SL-E	V-AS-44-BS-SL-E
Filter Element	Pre filter – Primary Filter (Disposable)		
	Main filter - Hepa Filter (99.99% @ 0.3 µm)		
Air volume (m <sup>3</sup> /min)	11 m <sup>3</sup> /min	22m <sup>3</sup> /min	44m <sup>3</sup> /min
Jet velocity (m/s)	20m/s and above		
Number of Jet Nozzles	8	16	32
Number of Blower Fan	1	2	4
Material Construction	Casing: 1.5mm (t) Electrogalvanised Steel Sheet Metal		
	Base: 304 SUS Stainless Steel Plate		
	Door: Viewing Glass Embedded into Steel Sandwich Door		
Finishing	Epoxy Powder Baked		
Showering Time	1 - 60 sec (Adjustable)		
Locking System (Interlock)	Electromagnetic Lock		
Operation	Main sw, Fan sw, Light sw, Blower Timer & Emergency push button (Located outside Air Shower)		
Lighting	20W x 2	20W x 2	20W x 4
Power Supply	AC 220-240V/1ϕ /50-60 Hz		
Running Amperw (Approx)	1.8A	3.6A	7.2A
External Dimension	1300(W)x1000(D)x2100(H)mm	1500(W)x1000(D)x2100(H)mm	1500(W)x2000(D)x2100(H)mm
Internal Dimension	800(W)x1000(D)x2000(H)mm	800(W)x1000(D)x2000(H)mm	800(W)x2000(D)x2000(H)mm
Weight (Approximate)	300kg	350kg	600kg

Note: Special size can be customize



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