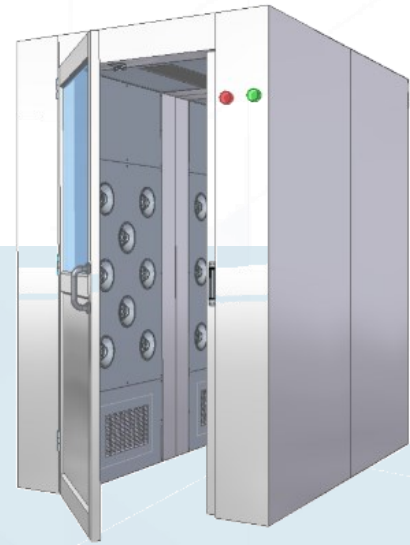


CLEANROOM AIR SHOWER

AS-SERIES



Fine particulates are often tracked into a cleanroom via clothing and footwear, making cleanroom personnel one of the major sources of cleanroom contaminants.

To mitigate this, air showers are frequently integrated into cleanroom entrances, where high-velocity airflow from HEPA/ULPA filters is directed onto personnel and/or object surfaces, removing surface lint, dust and other contaminants.

FEATURES

- + Electrogalvanized Steel construction
- + Emergency Stop Switch
- + Touchscreen for easy configuration of parameters
- + Self-closing swing door
- + Door Lock Indicator Light

SPECIFICATIONS

Model

[see last page for model configuration]

Size

External (mm): 1280W x 1000L x 2110H
Internal (mm): 680W x 940L x 1950H

Jet Nozzles

Double sides jetting

Jet Speed

Approx: 18m/s and above

HEPA Filter Efficiency

99.99% or more at 0.3µm particle (EN 1822)

Pre-Filter

Non-Woven

Casing

Steel Sheet Metal

Door

Aluminium half-glass manual/auto door

Finishing

Powder Coating

No. of Jet Nozzles

16

REQUIREMENTS

- + High-speed air nozzle
- + Interlock
- + HEPA / ULPA filters

No. of Blowers

2

Operation

Air Jet (Auto/Manual), SW, Lighting Switch, Jetting Timer

Power Supply

1Ø, 220V, 50Hz

Lighting Fitting (T5)

18W x 1pc

Power Consumption

Approx: 1kW



FEATURES

With the entire design to fabrication process done in-house, we provide the flexibility to customize nearly every aspect of each air shower to suit the requirements of the user and limitations of the site. Below are some of the key features of our air showers.

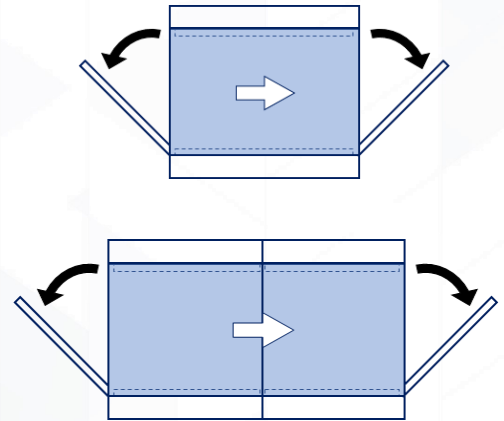
If there is a particular feature required or limitation to build around, please reach out to us to discuss further.

MODULAR, SCALABLE CONFIGURATION

AS-series air showers are designed as individual modules, additional modules increase the internal capacity of the air shower, allowing more concurrent users in one cycle.

Single-module air showers are suitable for the majority of cleanrooms settings, from R&D cleanrooms, small production, QC cleanrooms etc.

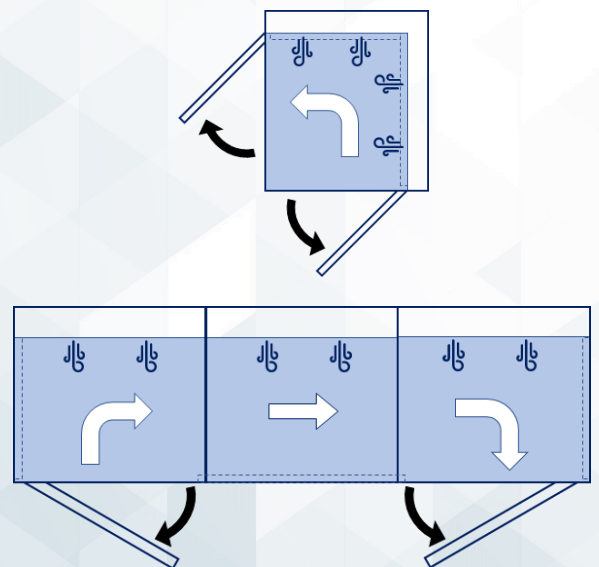
Multi-module air showers may be considered in large production cleanrooms with high operator traffic or where machine movement and trolley/carts traffic is expected.



MULTIPLE ENTRY-EXIT DIRECTIONS

In typical scenarios, most air showers are built with the Clean and Dirty side doors directly across from each other. However, there are many cases where site restrictions or irregular room layouts require more flexible configurations.

AS-series air showers can be configured for Left-turns, Right-turns, even U or S-turns.



FLEXIBLE TRAFFIC FLOW CONFIGURATIONS

In addition to the airlock and air cleaning functions, the AS series air shower may also be configured as a traffic direction control device where strict cleanroom protocols are in effect.

By selectively locking the entry and exit doors accordingly, the direction from which users may enter or exit the air shower can be restricted in accordance with customer-developed cleanroom protocols

See overleaf for illustration.



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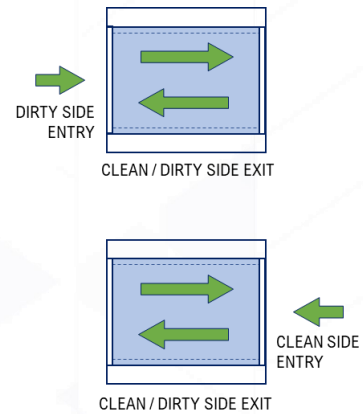
201 Woodlands Ave 9, #04-50 Woodlands Spectrum 2, Singapore 738955
Phone: +65-6254 1151 | Fax: +65 6254 1161 | Email: sales@cleantec.com.sg



TRAFFIC FLOW CONFIGURATIONS

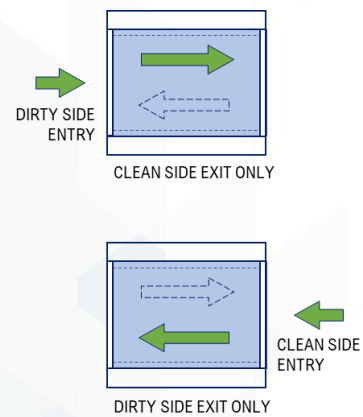
DOUBLE-ENTRY, DOUBLE-EXIT

- + Default traffic configuration
- + Maximum flexibility for users.
- + Enter air shower from Clean OR Dirty side.
- + After the blower cycle is completed, users may proceed to exit from either side too.



DOUBLE-ENTRY, SINGLE-EXIT

- + Enter air shower from Clean OR Dirty Side
- + User must exit through the opposite side.
- + No backtracking
- + Used to direct movement in a single direction after entry, preventing backtracking



SINGLE-ENTRY, DOUBLE-EXIT

- + Enter air shower from Dirty Side ONLY
- + Clean Side door normally locked
- + After blower cycle is completed, user has the option to backtrack and exit through the Dirty-side door.



SINGLE-ENTRY, SINGLE-EXIT

- + Enter air shower from Dirty side ONLY
- + Exit air shower from Clean side ONLY
- + No backtracking
- + No entry from Clean side door
- + Forces traffic flow in one direction only
- + Used in cleanrooms where Entry and Exit pathways are strictly separated



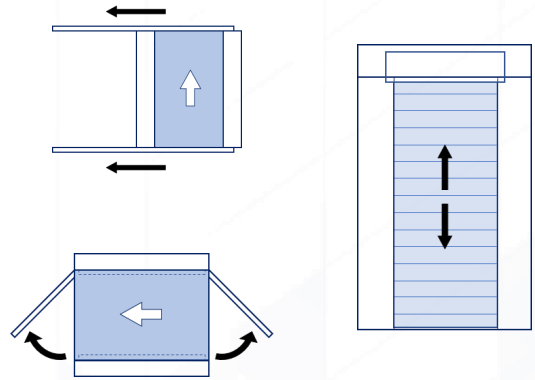
DOOR TYPES AND CONFIGURATIONS

Aluminium half-glass swing doors with a mechanical door closers are supplied as standard on all AS-series air showers.

These doors may also be specified in sliding versions for applications where there is restricted door opening clearance.

Both swing and sliding doors can be integrated with automatic door operators.

Special requests for roller shutters may also be incorporated into the airshower control system.



PREFILTER OPTIONS

Prefilters prolong the life of the main filter by straining out coarse particulates,

All AS-series air showers are supplied with G3 grade non-woven prefilters as standard.

Carbon-impregnated PU foam filters are also available for applications where the high adsorption properties of activated carbon are required



HEPA/ULPA FILTER OPTIONS

HEPA filters of H13 grade or better are fitted into every air shower module as standard.

This filters out more than 99.995% of particle @ 0.3 microns from the outlet air. Bringing the airborne particulate concentration down to cleanroom levels.

The filters are also available in optional ULPA grades for very high requirement facilities



UV STERILIZING OPTION

UVC lights can be integrated into the return plenums to sterilize the prefilters between operating cycles.

Short wavelength UV-C effectively deactivates most bacteria and viruses. The placement within the filter plenums provides the most consistent and reliable irradiation dose for decontamination

These can be set on an optional timer to self-decontaminate at a preset time interval



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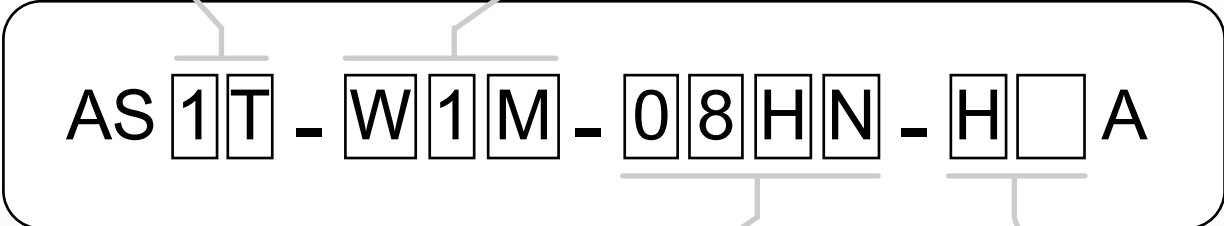
MODEL CONFIGURATION

CleanTec AS-series air showers are available in a wide variety of configurations to meet the most demanding of projects.

Below is a list of the commonly available options that are offered (standard configuration highlighted in bold).

Select your preferred configuration to determine your model code:

GENERAL CONFIGURATION		DOOR CONFIGURATION		
No. of Modules	Exit Direction(s)	Type	Leaf	Self-Close Mechanism
1 - 1 module 2 - 2 modules 3 - 3 modules <i>Additional modules increases user capacity.</i> <i>Recommended capacity of up to 2 users per module</i>	T - Straight Exit L - Left Exit R - Right Exit O - Others <i>Exit direction as seen from Dirty Side entry</i> <i>Specify up to 2 directions for multiple-exit configurations e.g. AS1TR (Straight + Right exit)</i>	W - Swing Door L - Sliding Door R - Roller Shutter H - Hi-speed Shutter	1 - Single Leaf 2 - Double Leaf 3 - Telescoping Leaf <i>Telescoping leaf available for sliding doors only</i> <i>Shutters only available in Single Leaf</i>	M - Mechanical closer A - Auto-door operator O - None
<i>Configuration applies to all doors by default. Specify this code twice if separate configurations are required. e.g. W1ML1A (Single-leaf swing door, mechanical closer + Single-leaf sliding doors, auto-door operator)</i>				



MECHANICAL CONFIGURATION				ELECTRICAL CONFIGURATION	
NOZZLES PER PANEL		AIR FILTERS		User Interface	Special Option
Top-Blow	Side-Blow	Primary	Secondary		
0 - No nozzles 4 - 4 Nozzles	8 - 8 Nozzles 6 - 6 Nozzles 0 - No nozzles	H - HEPA filter U - ULPA filter	N - Non-woven C - Carbon PU Filter	H - Touchscreen HMI R - Timer Relay O - No interface	Blank - None U - UVC self-decontaminating I - Built-in Air Ionizer

If a configuration you require is not listed above, contact us at +65-6254 1151 or sales@cleantec.com.sg for a consultation and custom design.



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