

AIR SHOWER ESSENTIALS

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AIR SHOWERS

ARE SPECIALIZED "ANTECHAMBERS" (SMALL ROOM LEADING TO A LARGER ONE) USED IN CLEANROOM SETTINGS TO BLOW OFF EXCESS PARTICULATE MATTER FROM PERSONNEL OR EQUIPMENT BEFORE THEY ENTER A CLEANROOM.

PERSONNEL STAND (OR EQUIPMENT IS POSITIONED) INSIDE THE AIR SHOWER WHILE NOZZLES BLOW HIGH-VELOCITY, HEPA OR ULPA-FILTERED AIR OVER THEM TO REMOVE CONTAMINANTS.

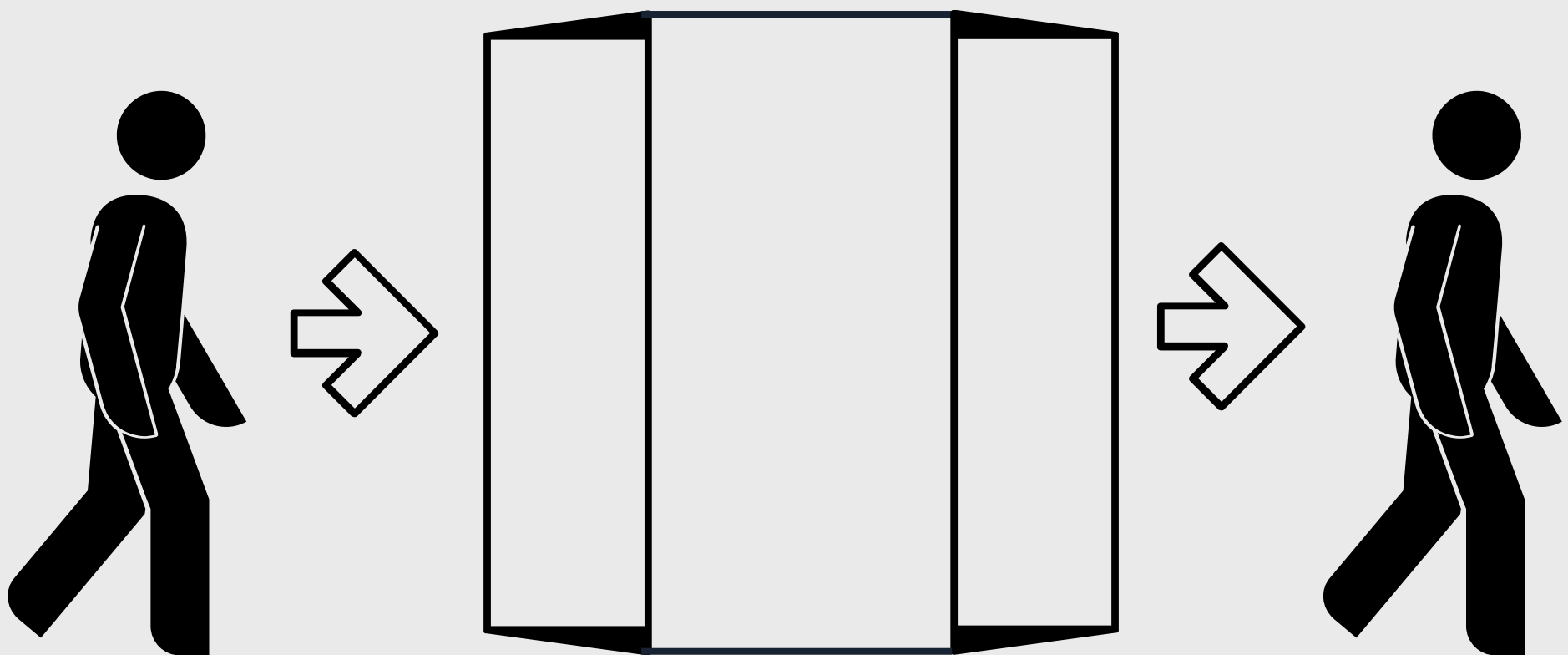
ESSENTIAL COMPONENTS OF AN AIR SHOWER

INCLUDE ENTRANCE & EXIT DOORS, AIR CIRCULATION SYSTEMS, HEPA FILTERS, NOZZLES, CONTROL SYSTEMS, FLOOR GRATES, LIGHTING, PRESSURE DIFFERENTIAL MONITORING & EMERGENCY BUTTONS.

01

ENTRANCE/EXIT DOORS

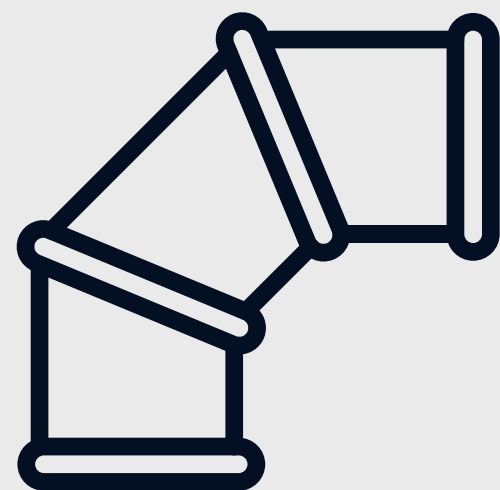
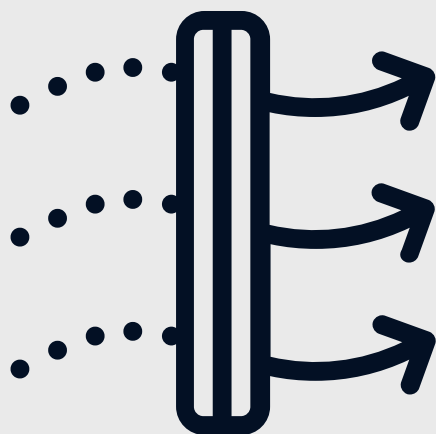
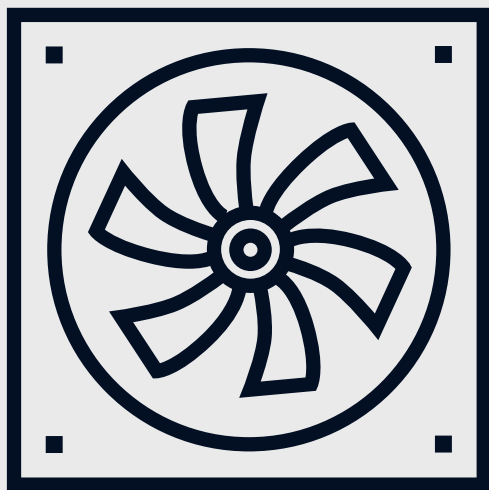
AIR SHOWERS HAVE TWO SETS OF DOORS – ONE FOR ENTRY AND ANOTHER FOR EXIT. THESE DOORS ARE INTERLOCKED TO PREVENT BOTH SETS FROM BEING OPEN SIMULTANEOUSLY, ENSURING THAT THE CONTROLLED ENVIRONMENT IS NOT COMPROMISED.



02

AIR CIRCULATION SYSTEMS

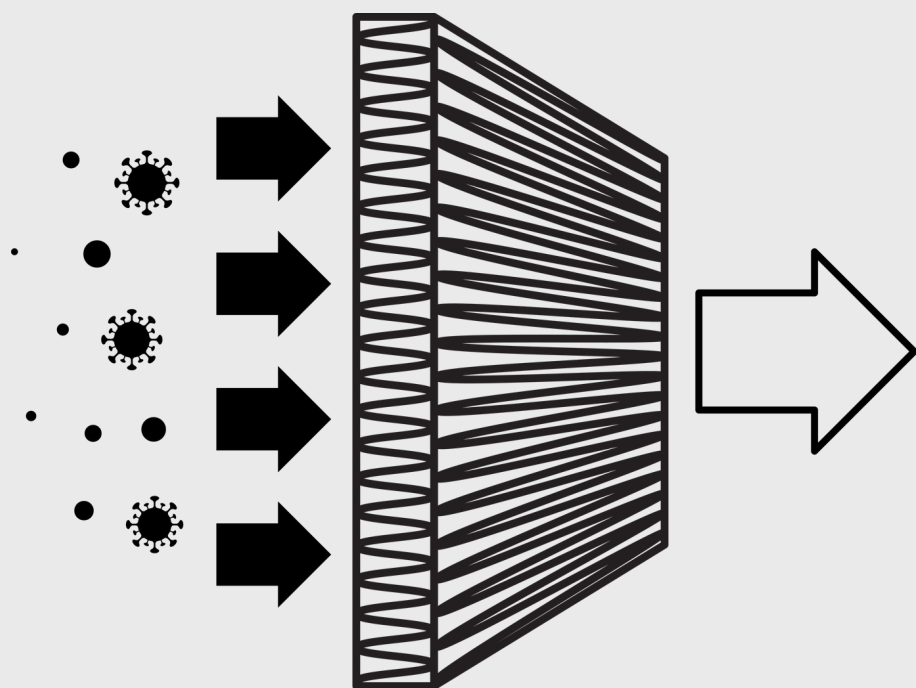
THE HEART OF AN AIR SHOWER IS ITS AIR CIRCULATION SYSTEM, WHICH CONSISTS OF POWERFUL FANS, FILTERS, AND DUCTWORK. THE AIR CIRCULATION SYSTEM GENERATES HIGH-VELOCITY, FILTERED AIR THAT IS DIRECTED TOWARDS THE INDIVIDUAL FROM ALL SIDES, EFFECTIVELY BLOWING OFF LOOSE PARTICLES.



03

HIGH-EFFICIENCY PARTICULATE AIR (HEPA) FILTERS

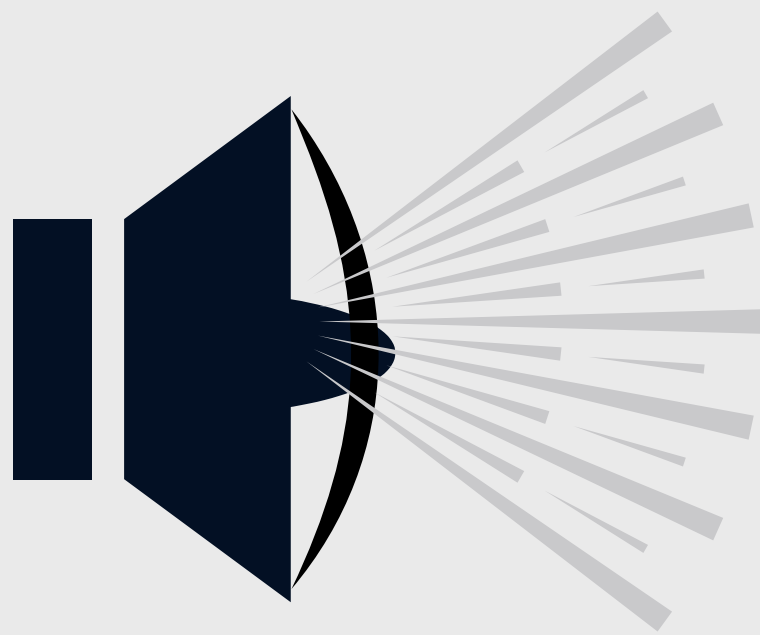
HEPA FILTERS ARE HIGH-PERFORMANCE AIR FILTERS CAPABLE OF CAPTURING PARTICLES AS SMALL AS 0.3 MICROMETERS IN DIAMETER WITH A HIGH EFFICIENCY. THE AIR SHOWER EMPLOYS THESE FILTERS TO CLEAN THE AIR BEFORE IT ENTERS THE CHAMBER.



04

NOZZLES/VENTS

STRATEGICALLY POSITIONED NOZZLES OR VENTS IN THE WALLS, CEILING, AND FLOOR OF THE AIR SHOWER DIRECT THE FILTERED AIR TOWARDS THE PERSON FROM ALL DIRECTIONS. THIS HELPS DISLODGE AND REMOVE PARTICLES ADHERING TO THE PERSON'S CLOTHING AND BODY.



05

CONTROL SYSTEM

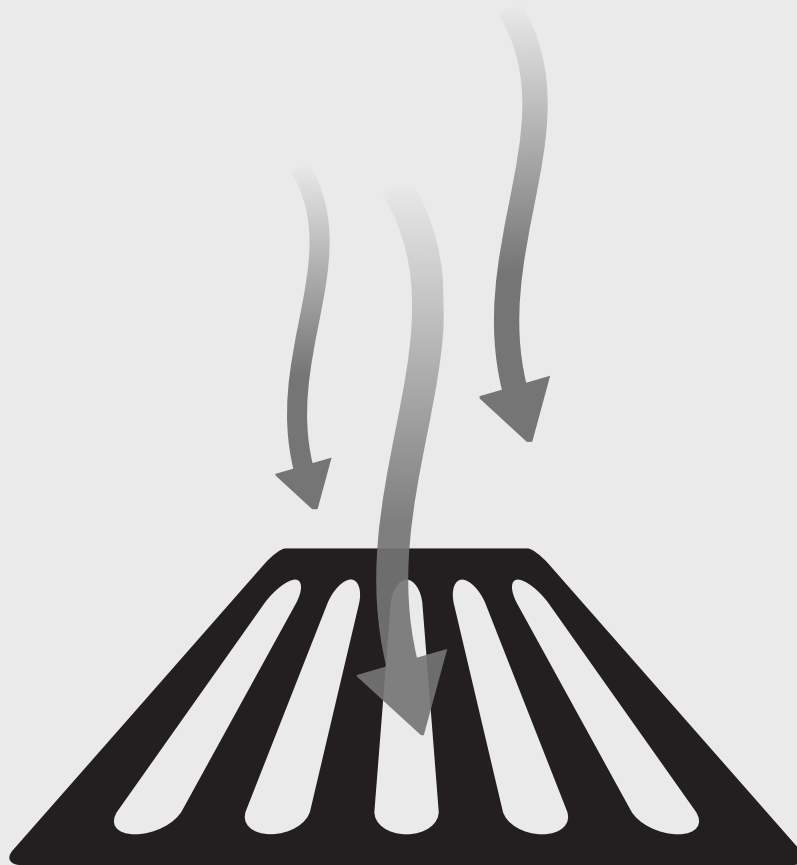
THE CONTROL SYSTEM MANAGES THE OPERATION OF THE AIR SHOWER, INCLUDING DOOR INTERLOCKING, FAN ACTIVATION, TIMER SETTINGS, AND OVERALL SYSTEM MONITORING. IT ENSURES THAT THE AIR SHOWER FUNCTIONS PROPERLY AND EFFICIENTLY.



06

FLOOR GRATES/GRILLS

THE FLOOR OF THE AIR SHOWER OFTEN FEATURES GRATES OR GRILLS THROUGH WHICH AIR IS EXPELLED. THIS AIR HELPS MAINTAIN A CONTROLLED DOWNWARD AIRFLOW THAT PREVENTS PARTICLES FROM BEING RE-ENTRAINED INTO THE AIR AND KEEPS THE AREA CLEAN.



07

LIGHTING

ADEQUATE LIGHTING IS ESSENTIAL INSIDE THE AIR SHOWER TO ENSURE VISIBILITY AND SAFETY FOR INDIVIDUALS USING THE FACILITY.



08

PRESSURE DIFFERENTIAL MONITORING

IN SOME ADVANCED AIR SHOWER SYSTEMS, PRESSURE DIFFERENTIAL SENSORS ARE INSTALLED TO MONITOR THE PRESSURE DIFFERENCE BETWEEN THE AIR SHOWER AND THE CLEANROOM OR CONTROLLED ENVIRONMENT. THIS HELPS ENSURE THAT THE AIR SHOWER IS FUNCTIONING CORRECTLY AND MAINTAINING THE DESIRED AIR CLEANLINESS.



09

EMERGENCY EXIT BUTTON

AN EMERGENCY BYPASS BUTTON IMMEDIATELY WILL SHUT DOWN THE AIR SHOWER AND RELEASE THE DOORS WHEN DEPRESSED. ADDITIONALLY, ENTRANCE/EXIT DOORS RELEASE WHEN A POWER OUTAGE OCCURS TO ENSURE OPERATOR SAFETY.

EXIT



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