TST HEPA MODULE
Disposable HEPA/ULPA Module

Description

The T-Bar Suspension Type (TST) disposable ducted HEPA/ULPA module with mini pleat filter pack is an ideal terminal filter hood for pharmaceutical and biotech cleanrooms, or wherever hoods are regularly validated for performance and leak-free operation. Lightweight and low profile, the TST module is available in HEPA (99.99% to 0.3 µm) and ULPA (99.9995% to 12 µm) grade efficiencies.

Typically installed into tee-bar ceilings, the TST module is well suited to Class 100 "spot" applications and may also be used to create Class 10,000 to Class 100,000 areas by locating the appropriate number of units in the ceiling. Units may also be installed for 100% ceiling coverage to achieve cleanliness levels to Class 10.

TST modules typically operate at velocities of 0.51m/sec making them an ideal solution for either laminar or non-laminar flow applications in gasketed tee-bar systems.

Construction

TST housings are manufactured from extruded anodised aluminium. The HEPA and ULPA Filter media are manufactured from moisture resistant non-woven glass micro fibres, and are produced with a wet laid process similar to those used for the production of paper. The HEPA media is then formed into closely-spaced pleats held firmly in place with polyurethane sealant bead separators.

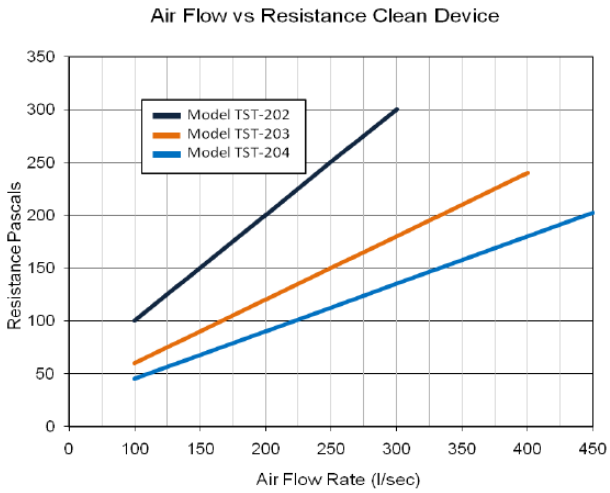
Features

- Minipleat separatorless filter pack
- Thin, light-weighted design
- Fully disposable
- HEPA/ULPA paper tested to MIL-STD-282
- Optional adjustable damper
- Optional DOP and static pressure ports
- Optional 12mm PE Insulation material on outer casing
- Available in a range of standard and non-standard sizes

TST-204 MODULE
Top View of Module with Spigot Attachment

TST-204 MODULE
Bottom View of Mini Pleat Filter Pack

Design



TST HEPA MODULE PRODUCT INFORMATION					
Model No.	Nominal Size (mm)	Capacity l/sec[1]	Mini-Pleat Pack Depth	Particle Size Efficiency	Resistance (Pa)
TST-202	600 x 600	215	50mm	99.99% @ 0.30 micron	153
				99.9995% @ 0.12 micron	185
			100mm	99.99% @ 0.30 micron	103
				99.9995% @ 0.12 micron	118
TST-203	600 x 905	325	50mm	99.99% @ 0.30 micron	153
				99.9995% @ 0.12 micron	185
			100mm	99.99% @ 0.30 micron	103
				99.9995% @ 0.12 micron	118
TST-204	600 x 1210	430	50mm	99.99% @ 0.30 micron	153
				99.9995% @ 0.12 micron	185
			100mm	99.99% @ 0.30 micron	103
				99.9995% @ 0.12 micron	118

Note:[1] L/sec based on a maximum face velocity of 0.6m/sec as per AS1386.3-1989. Cleanrooms & Clean Workstations Part:3 – Non Laminar Flow Cleanrooms – Class 350 & Cleaner.

HEPA Filter Coverage Required to Achieve Various Cleanroom Levels

AS 1386 Cleanroom Cleanliness Level	ISO 14644-1* Cleanroom Cleanliness Level	Coverage Required in Ceiling	Number of Air Changes per Hour
3.5	ISO-5 (0.5µm)	100% HEPA Filters	635
35	ISO-6 (0.5 µm)	20-60% HEPA Filters	125-380
350	ISO-7 (0.5 µm)	5-40% HEPA Filters	30-60
3,500	ISO-8 (0.5 µm)	5% in AHU Filter Bank	30

*__ISO 14644-1, Cleanrooms and associated controlled environments—Part 1: Classification of air cleanliness__ was the first ISO 14644 International Standard prepared by ISO Technical Committee 209 (ISO/TC 209). The document was submitted as an American National Standard and has been adopted as ANSI/IEST/ISO 14644-1:1999 in the United States following the cancellation of FED-STD-209E.
Many factors besides airborne particulate cleanliness must be considered in the design, specifications, operations and control of cleanrooms and other controlled environments. These are covered in some detail in other parts of the International Standards prepared by ISO/TC 209. ISO 14644-1 covers the classification of air cleanliness in cleanrooms and associated controlled environments. Classification in accordance with this standard is specified and accomplished exclusively in terms of concentration of airborne particles.

The table above is intended as a general guide only and is based on a ceiling height of 2.60 metres. Levels of cleanliness are also dependent upon variables other than HEPA filter coverage, such as airflow velocity, internal particle generating activity, HEPA filter distribution, turbulent areas, and dead spots caused by lighting, sprinkler systems, filter modules and other obstacles.

Airepure Australia Pty Ltd
A.B.N. 16 085 671 129
Email: info@airepure.com.au Web: www.airepure.com.au

The information provided in this brochure is accurate at the time of printing to the best of Airepure Australia' knowledge, however, it should not be relied upon. Circumstances differ with every installation and location therefore suitability of all Airepure products should be confirmed with a qualified Airepure Technical Representative. ©Airepure Australia 2012