



HEPA-ThermaGard[™]

high temperature filters

HEPA Corporation offers high temperature SHRAE, HEPA and ULPA filters in four temperature ranges for applications up to 750°F (399°C)*. Frames are constructed of extruded aluminum, galvanized steel, or stainless steel. Silicone or fiberglass gaskets are standard. A silicone gel seal with a maximum service temperature of 392°F (200°C) can also be provided.

filter media

All high temperature filters are manufactured using a microfiberglass media bonded together with acrylic binders. At temperatures exceeding 500°F (260°C) the binder burns off and may discharge smoke until the binder is completely incinerated. Products should not be introduced into the heated environment until all smoke is exhausted.

testing

Each high temperature filter is tested with thermally generated DOP for appropriate efficiency per MIL-STD 282. Filters are challenged with a virtually monodispersed aerosol of 0.30 micron in size. By measuring the upstream and downstream concentration of these particles with a Q107 penetrometer, the penetration is determined and the efficiency calculated.

* Successfully tested up to 870°F (466°C).

sealant methods

The integrity of high temperature filters is assured by either an adhesive or "glass pack" sealing method, depending upon the temperature rating of the filter.

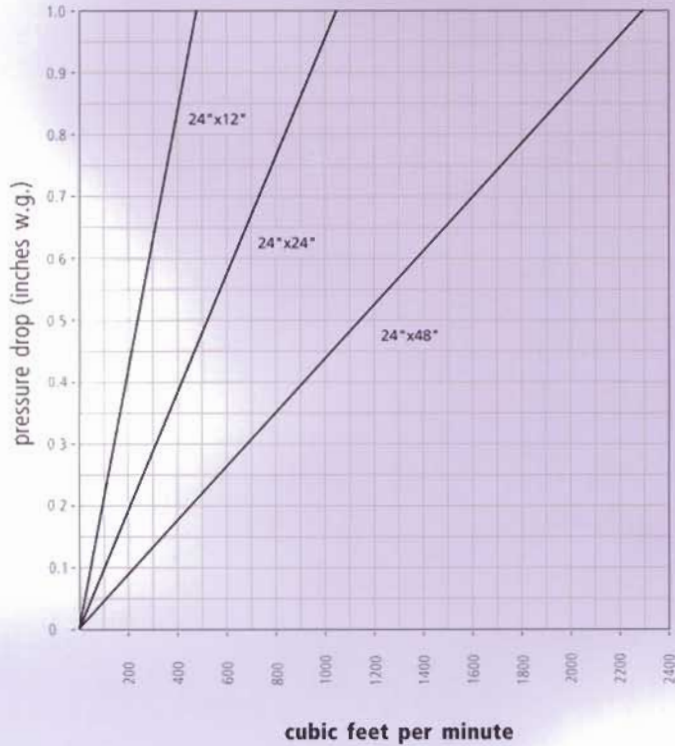
model	max temperature	sealant
ST2	230°F (110°C)	urethane
ST4	400°F (205°C)	clear silicone
ST5	500°F (260°C)	red silicone
ST7	750°F (399°C)	glass pack

Since silicone sealants crack and craze at temperatures exceeding 500°F (260°C), filters meant for continuous service up to 750°F (399°C) use a glass pack method in which a fiberglass mat is compressed between the filter pack and frame until a positive seal is achieved. While not an adhesive seal, the glass pack is a mechanical seal which causes the mat to function much like the medium of the filter itself. The fiberglass mat contains phenolic resins which burn off at temperatures above 300°F (149°C) and may discharge smoke until phenolic resins are completely incinerated. Products should not be introduced into the heated environment until all smoke is exhausted.

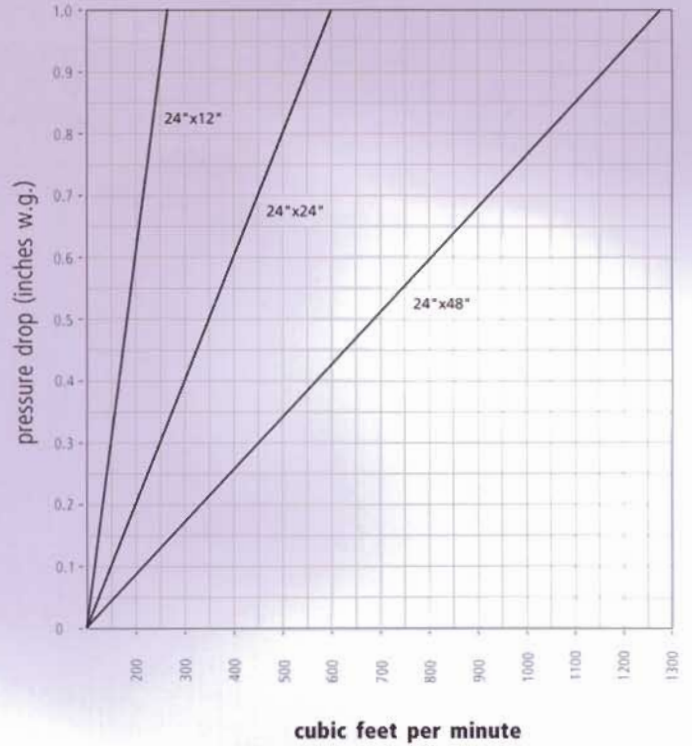
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standard high temperature filter performance characteristics

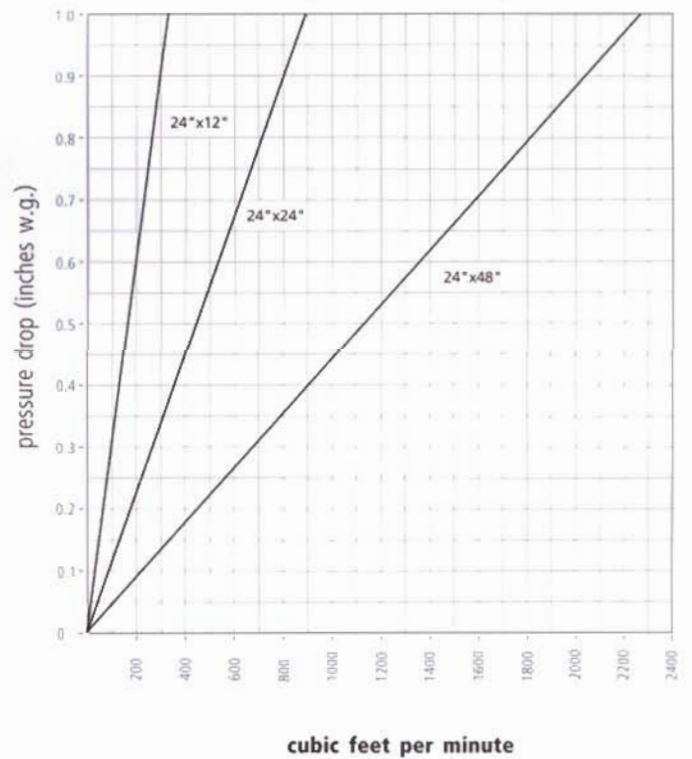
11-1/2" deep, 99.97% @ 0.3μ



5-7/8" deep, 99.97% @ 0.3μ



3" deep, 99.97% @ 0.3μ



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