The Air-Maze Corporation

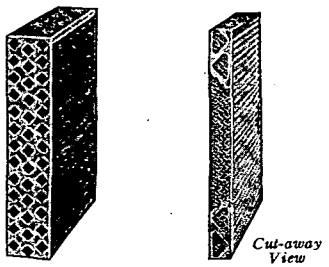
5202 Harvard Avenue, **Cleveland, Ohio**

ENGINEERS AND MANUFACTURERS OF AIR FILTERS EXCLUSIVELY

DIRECT FACTORY REPRESENTATIVES IN ALL INDUSTRIAL AREAS.

DISTRIBUTORS IN PRINCIPAL CITIES AND TOWNS THROUGHOUT THE UNITED STATES.

During more than a decade devoted exclusively to air filter engineering and manufacturing, a great deal about the control and elimination of dust, pollens and grit has been learned by AIR-MAZE engineers. Their design and development of a unique type of filter element construction, embodying distinctive advantages, has been considered a worthy contribution to the air filtering science and has resulted in wide acceptance of AIR-MAZE air filters in all fields of application.



4 in. Thick Panel *2 in. Thick Panel*

Views showing open end edge of AIR-MAZE Permanent Cleanable Panel Filters

Note Advantages Made Possible by Air-Maze Scientific Construction:

Costs Little to Clean—The separating layers and exact spacing of baffles permit free washing action between and around all baffles. Thus, cleaning and oil charging operations may be easily and economically performed.

Great Dust Capacity—On the face are coarse baffles exactly spaced, which evenly impinge bulky particles. Progressively inward are finer meshes. Instead of one or two progressions in density there are many; consequently, great dust capacity is possible enabling long operating periods before servicing is required.

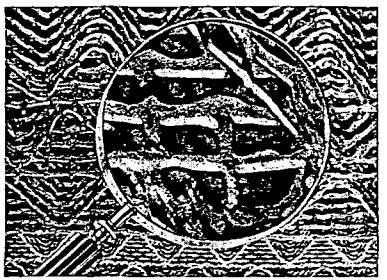
Vibration Proof—Vibrations in service cannot shake filter media out of position—the uniform density remains *permanently* perfect; **no replacements are necessary!**

No Special Oil Required—In AIR-MAZE *each square inch of the panel* handles the same amount of air. Properly drained, as directed, *no oil will be carried through*, since the air velocity is held evenly low and uniform in every square inch. For that reason no especially adhesive oil is needed.

Efficiency—Tests under varying conditions, both in laboratories and field operations, show air filtering efficiency of from 98.50 to 99.83 per cent.

No Clogging—Because AIR-MAZE panel filters are easy to *completely* clean and since the exact density enables uniform deposit of dust, no clogging can occur.

Adaptability—In addition to air conditioning and power equipment installations AIR-MAZE panel filters are effectively used in humidifiers, water eliminator units, paint spray-booths, oil separators, and other applications where specific problems and unusual requirements are easily handled by adaptations of the panels. AIR-MAZE panels will be made to fit frames of existing installations and can be furnished with locking handles and latches, or with flanged edges and lift handles.



Magnified Section of "Loaded" AIR-MAZE Air Filter Element. Note that dust has been quite evenly impinged on the wires. No obstructed spaces can be seen. This feature accounts for the Low Pressure Drop and Non-clogging characteristics of AIR-MAZE

TECHNICAL INFORMATION

Sizes—All sizes and thicknesses are available; two and four inch thick panels are the accepted standard. Installations using large sizes of these permanent panels are surprisingly low in cost.

Capacity—Recommended air capacity is 1½ to 2½ cfm per square inch. Thus, the capacity of a 20 x 20 in. panel is 600 to 1000 cfm. Normally, 2 cfm per square inch should be used.

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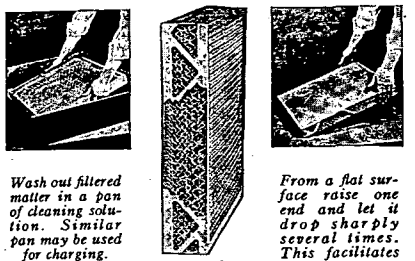
Resistance—For 2 in. thick panels the resistance varies from 0.089 in. to 0.10 in. H_2O when handling 2 cfm per square inch of filter area (288 fpm velocity); and for 4 in. thick filters the resistance varies from 0.121 in. to 0.140 in. H_2O at 2 cfm per square inch (288 fpm velocity); the variation being in accordance with the different types of filter media construction available. To obtain specific restriction data write for graph RE-2A.

Construction—AIR-MAZE filters are of patented construction consisting of a maze of alternately placed and exactly spaced flat and crimped galvanized wire screens of selected meshes; these are arranged with precision so as to create graduated and progressive density, and to positively embody the baffle impingement principle. The filter element is enclosed in a heavy gauge metalescent enameled steel frame having an open end to simplify servicing.

EASY TO CLEAN AND CHARGE



Wash out filtered matter in a pan of cleaning solution. Similar pan may be used for charging.

Cut-away View

From a flat surface raise one end and let it drop sharply several times. This facilitates drainage.

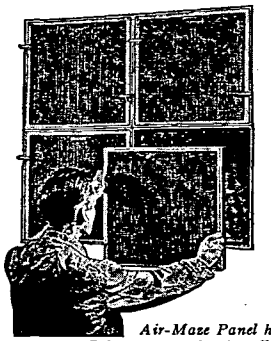
After cleaning and also after charging, set panel on edge, with open end down, to drain.

Cleaning—Wash panels in a tank of any suitable solvent which will cut oil and accumulated matter, yet will not affect the galvanizing. Kerosene may be used or a non-inflammable solution prepared with AIR-MAZE cleaning powder and water. *Important! Be sure that panels are thoroughly drained before charging!*

Charging—Immerse in oil; or spray with oil. Any inexpensive oil of *S.A.E.* 20 viscosity or heavier is suitable.

If using the immersion method, panel should be removed from charging tank, placed on open end edge, and drained thoroughly. Filter is then ready for service, *having the performance and characteristics of a new unit.*

AIR-MAZE INSTALLATION FRAMES



Air-Maze Panel holding frames assure efficient, attractive installations.

AIR-MAZE panel holding frames are constructed of metalescent enameled heavy gage channel formed steel having rolled front edge and ¾ in. flanged back edge. A thick felt lining on inside of flange insures against air leakage when panels are in place. One frame may be used alone in single panel installations, or a group of many frames may be supplied, fixed to gether with felt seals between edges; thus a large bank of filter panels may be provided. Every unit is fitted with latches for the locking handles supplied on panels.

In determining frame sizes, ⅝ in. is allowed over both width and length dimensions of the panel filters. This ⅝ in. includes frame edge, clearance and felt seals between edges.

Specify AIR-MAZE—for all air filter installations and you will be assured of *efficient, economical* **performance.**

Engineering Service Available—The Air-Maze Engineering Department will gladly offer installation suggestions for special air filter applications.

Other AIR-MAZE Products—In addition to the panel types, Air-Maze Corporation also manufactures a complete line of circular shaped air filters for use in various Railroad, Industrial and Automotive applications.

Literature Available—Bulletins GPB-97, PPS-38, and PI-107R: covering complete panel filter details. Graphs G-11 and G-12A: showing results of tests made with A.S.H.V.E. Code Test Apparatus. Folder RR-18: describing railroad air filters; and complete catalogs covering the entire AIR-MAZE line.