

AEROFIN CORPORATION850 Frelinghuysen Avenue
Newark, N.J.

Manufacturers of

AEROFIN

Standardized, Light-Weight, Fan System Heat-Surface

39 Cortlandt Street
NEW YORKBurnham Building
CHICAGOPaul Brown Building
ST. LOUISLand Title Building
PHILADELPHIAOliver Building
PITTSBURGHUnited Artists Building
DETROIT**AEROFIN**

AEROFIN is the modern standardized, light-weight Fan System Heat-Surface developed by Fan Engineers to meet the present-day requirements of this highly specialized field and to afford an adaptability which permits the new and advanced applications of tomorrow.

AEROFIN, AEROFIN, AEROFIN

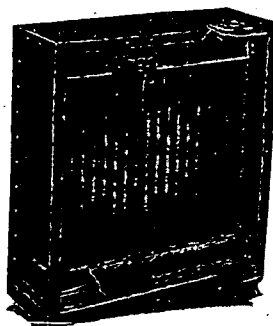
AEROFIN is built in three distinct types: **AEROFIN**, tube-plate construction, for pressures up to 50 lbs. gauge; **AEROFIN**, continuous seamless tubes, multiple-coil construction, for pressures from 2½ to 150 lbs., gauge; and **AEROFIN**, continuous seamless tubes, for pressures from 25 to 350 lbs. gauge (Temp. 500° F.)

Design and Construction

The heat-transfer surface, in **AEROFIN**, is a plurality of seamless copper tubes about which is wound a helix of copper ribbon, crimped on its inner edge to permit winding and to afford maximum contact between tube and fin. The extended fin surface is applied, and tinned while held in position, by highly-developed automatic machines, being accurately crimped and spaced. The tinning of the tube and the extended surface

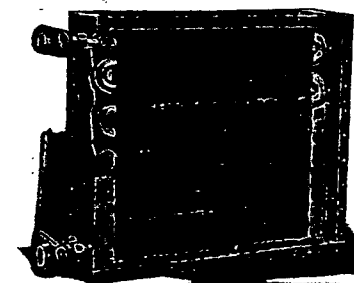
makes them metallicly integral, affording maximum heat transmission and permanent effectiveness. The thickness and width (height) of the extended surface, the crimping and the pitch of the helix were determined by careful experiment, to afford maximum heat transfer, uniform air flow and minimum resistance thereto. The copper tubes and fins of **AEROFIN** transmit heat eight times as effectively as iron. So scientifically is **AEROFIN** designed that air is heated more in passage through a single row of its tubes, a travel of 1½ in., than in passage through an entire section of cast iron surface, a travel of 9 in.

In **AEROFIN** the tubes are set into flexible tube-plates by means of a highly developed joint which is tight and permanent. See Fig. 1.

Fig. 1. **AEROFIN**

In **AEROFIN** and **AEROFIN** the seamless tubes, with their extended fin surface, are continuous. See Figs. 2 and 3.

Both **AEROFIN**, **AEROFIN** and **AEROFIN** are furnished as completely encased units, ready for pipe and duct connections. The casings are built of pressed steel and are exceptionally strong and rigid, protecting the unit from all the strains of pipe connection and expansion or contraction in service. The casings are flanged on both faces, top and bottom, and template punched for bolting together adjacent units, or for duct connection.

Fig. 2. **AEROFIN****Standard Casings**

The casings of all **AEROFIN** Units, whether comprising one, two or three rows of tubes, are 29 in. wide, across tubes, from outer edge one flange to outer edge opposite flange, and 10 in. deep in direction of air flow. Length of casing is nominal tube length plus 8½ in.

Sizes of AEROFIN

AEROFIN is made in fifteen standard tube lengths, either one, two or three staggered rows of tubes per Unit. There are thus forty-five standard Units available, a range which adequately meets all requirements.

Tubes are furnished of any length between 2 ft. 0 in. and 6 ft. 0 in., in increments of 6 in., and between 6 ft. 0 in. and 12 ft. 0 in. in increments of 1 ft.

Complete Tables of Sizes and Capacities are shown in our Bulletin G8, mailed gratis upon request.

Sizes of AEROFIN

AEROFIN is designed for installation with tubes horizontal only. It is available in one- or two-row Units, in seventeen standard nominal tube lengths (distance between end baffle plates, or between 180° bends,) between 2 ft. 0 in., and 10 ft. 0 in., inclusive, in increments of 6 in. Batteries of double width are easily assembled by setting Units end-to-end, leaving space for pipe connections.

In **AEROFIN** the seamless tubes are bent into a 3-pass coil, one end attached to the Supply Header, the other to the Drip Header, as indicated in Fig. 3. The connections to the welded Headers are made by means of special brass compression unions, insuring absolutely tight, dependable connections. (Tubes may be disconnected at unions and removed if, for any reason, this should become desirable.)

Complete Tables of Sizes and Capacities at various Pressures are shown in Bulletin GU-8.

Sizes of AEROFIN

AEROFIN is made in five standard tube lengths (i.e. length of straight section of tube, between the 180 deg. bends), 2 ft. 0 in., 2 ft. 6 in., 3 ft. 0 in., 3 ft. 6 in., 4 ft. 0 in., either one, two or three staggered rows of tubes per Unit. There are thus fifteen standard Units now available, meeting practically all requirements. Since the Supply and Drip Connections of **AEROFIN** are located on the same end, Fig. 2, Units may be placed end-to-end thus affording battery widths of twice the Standard tube-lengths. Complete Tables of Sizes and Capacities are shown in our Bulletin GHP-2, mailed gratis upon request.