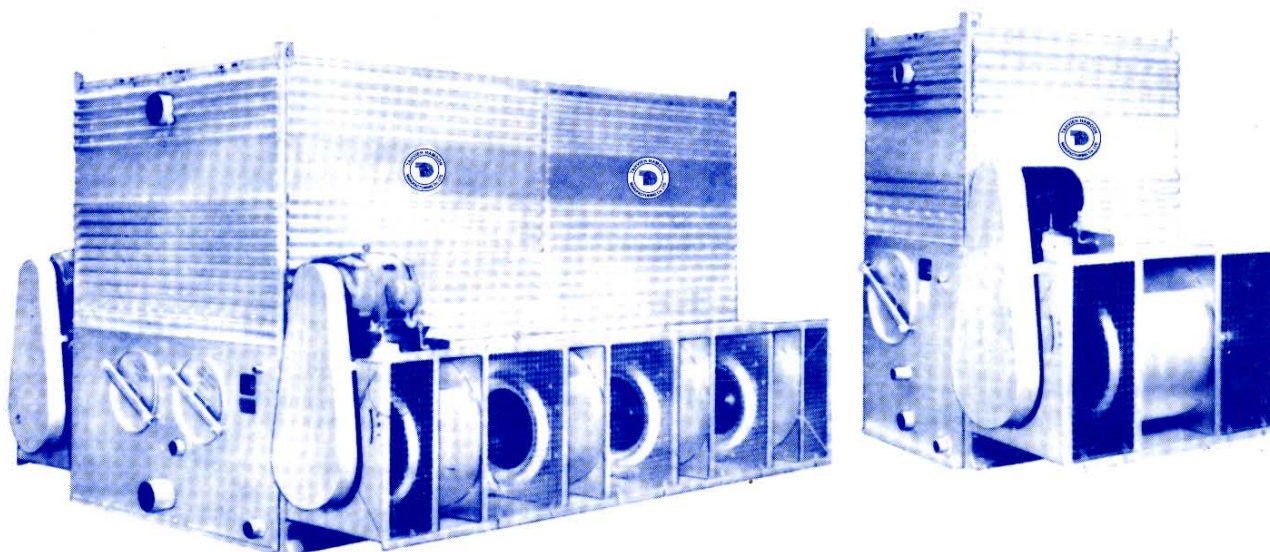


10 to 250 tons

TAHVIEH HAMOON
COOLING TOWERS



10 TO 250 TONS



Recognizing the need for an efficient and economical cooling tower that will meet the design requirements of today's modern buildings, TAHVIEH HAMOON has developed the T-Line. These units, embodying proven, design and construction features, bring the premium advantages of centrifugal fan blow – thru towers to the price level of the ordinary propeller fan unit.

Now any installation can have the quality benefits which this design offers:

because of the centrifugal fans which can handle the static pressure because of their compact ductwork, T Line towers can be design, T Line units have located any where and hidden extremely low operating architecturally indoors or outdoors.

Weight. They can be readily installed in areas of light roof These towers can be located without loading.

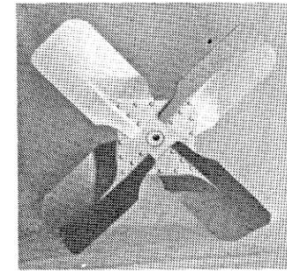
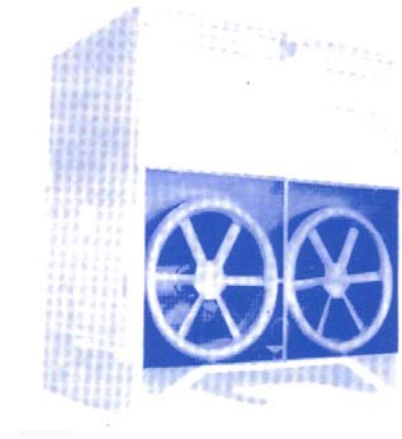
regard to fire hazard because of their Because of their vertical steel casing and steel wave-formed discharge, wind direction wet deck surface. Does not affect the operation

The fans and all moving parts are located of T line towers. They can in the dry entering air rather than in the be located in any type of saturated discharge air, greatly extending their life.

Enclosure or at ground level Next to a building

The external position of the fans and moving parts at a low level makes them readily accessible for inspection and service.

An access door permits easy entrance to the unit interior and removable lightweight eliminators provide simple access to the sprays.



Fans

A highly efficient vane axial fan system is used for minimum horsepower requirements. Cast from a light – weight galvanized alloy, the propeller fans are statically and dynamically balanced and operate in the dry air on the entering air side of the unit. The fans are installed in close – fitting cowls with discharge vanes which provide maximum fan efficiency.

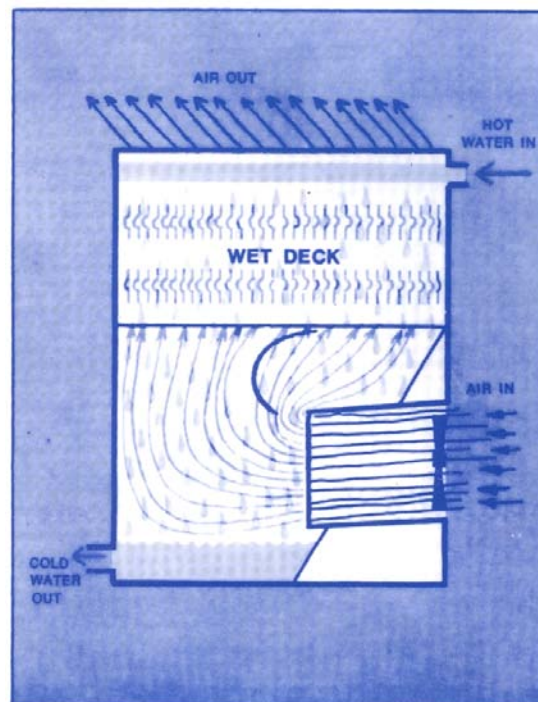
HOW A COOLING TOWER SAVES WATER

The basic function of a cooling tower is to reject heat from a system to the atmosphere using water as the circulating coolant. This is accomplished through the process of evaporation and permits reuse of the cooling water.

A cooling tower cools water by spraying hot water over a wet deck surface while air also passes over the surface. In the illustration, heated water enters the top of the cooling tower and is brought into contact with moving air as it passes over the wet deck and falls to the collecting sump. During this period of contact a small portion of the water is evaporated, liberating the latent heat of vaporization of the water to the air. The moist warm air is discharged to the atmosphere and the cooled water collects in the sump to be recirculated to the heat exchangers to repeat the cycle.

Other types of cooling systems depend on the circulation of city, river or well water directly through the heat exchanger on a once – through basis, wasting the heated water to the sewer or river. By this method, the heat extraction depends entirely upon the sensible heat gain or temperature rise of the water.

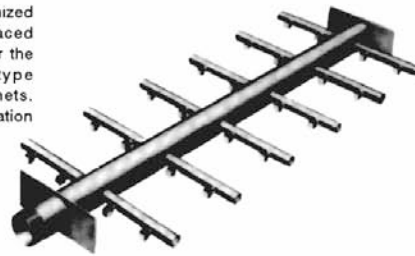
With an average temperature rise of 20°F, through the heat exchanger, there is an equivalent pick –up in heat content of 20 BTU's per pound of water. However, in evaporative cooling equipment, each pound of water evaporated removes 1,000 BTU's so that one pound of water in a cooling tower can theoretically do the work of 50 pounds of water in a once through type of system. Allowing for waste water bleed – off to minimize impurity concentration, a cooling tower save approximately 95% of the water normally required for cooling.



ELIMINATORS Moisture eliminators are made of galvanized steel and have three breaks with a hooked leaving edge. They are spaced on 1" centers, assuring no water carryover.

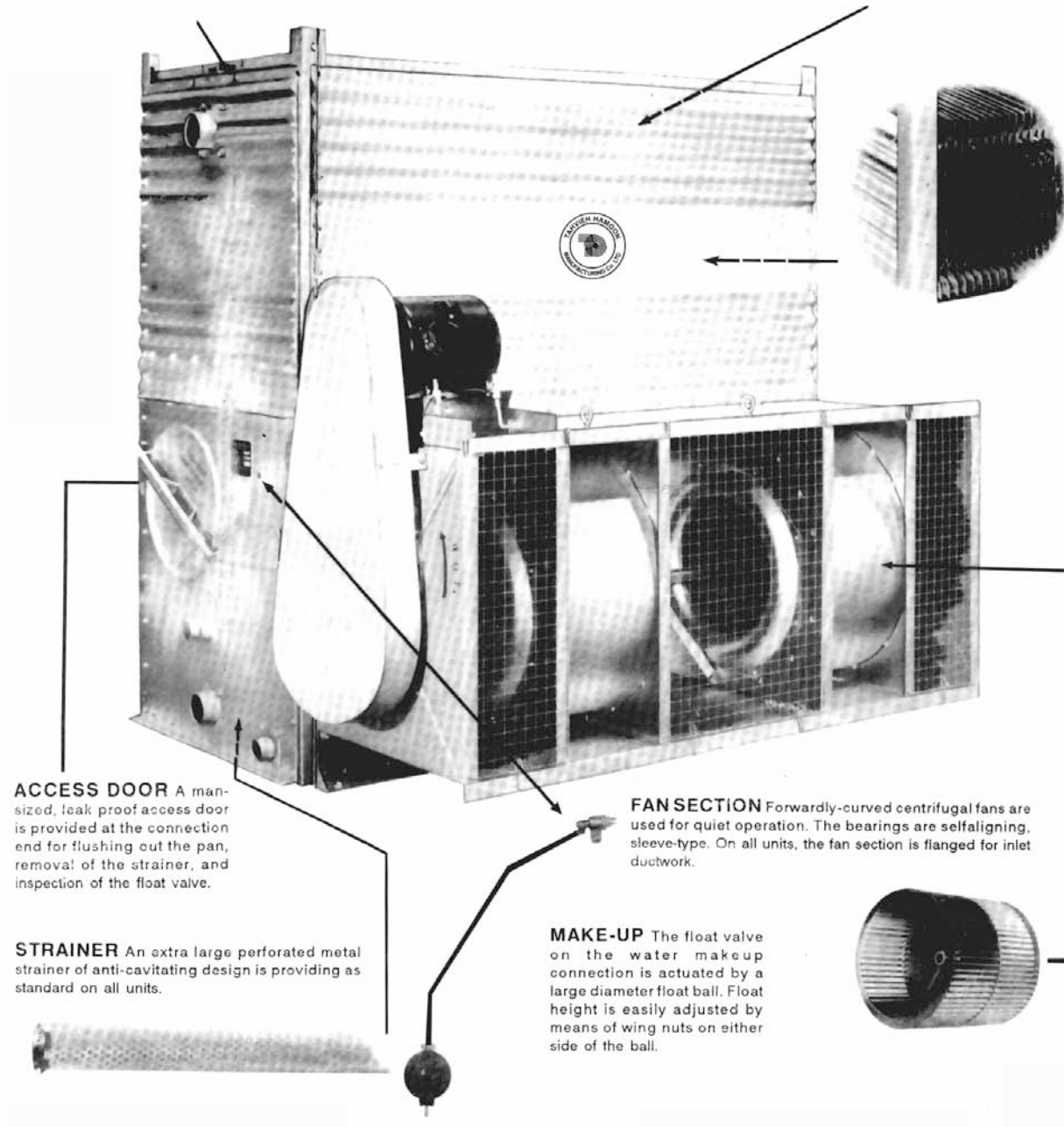


SPRAY TREE The spray tree consists of a galvanized steel header with plastic pipe branches. Closely-spaced nozzles assure complete and full water coverage over the entire wet deck area. The centrifugal non-clog type nozzles are held in place by snap-in rubber grommets. The grommets permit quick removal and easy installation of the nozzles for cleaning.



WET DECK SURFACE

The wet-deck surface is special wave-formed galvanized steel sheets designed to give maximum contact between the water and air.



ACCESS DOOR A man-sized, leak proof access door is provided at the connection end for flushing out the pan, removal of the strainer, and inspection of the float valve.

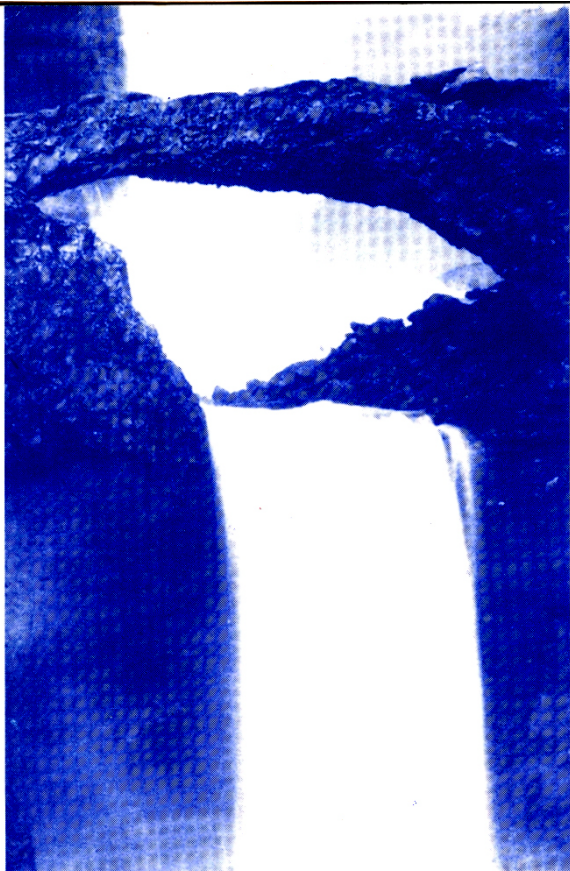
STRAINER An extra large perforated metal strainer of anti-cavitating design is provided as standard on all units.



FAN SECTION Forwardly-curved centrifugal fans are used for quiet operation. The bearings are self-aligning, sleeve-type. On all units, the fan section is flanged for inlet ductwork.

MAKE-UP The float valve on the water makeup connection is actuated by a large diameter float ball. Float height is easily adjusted by means of wing nuts on either side of the ball.

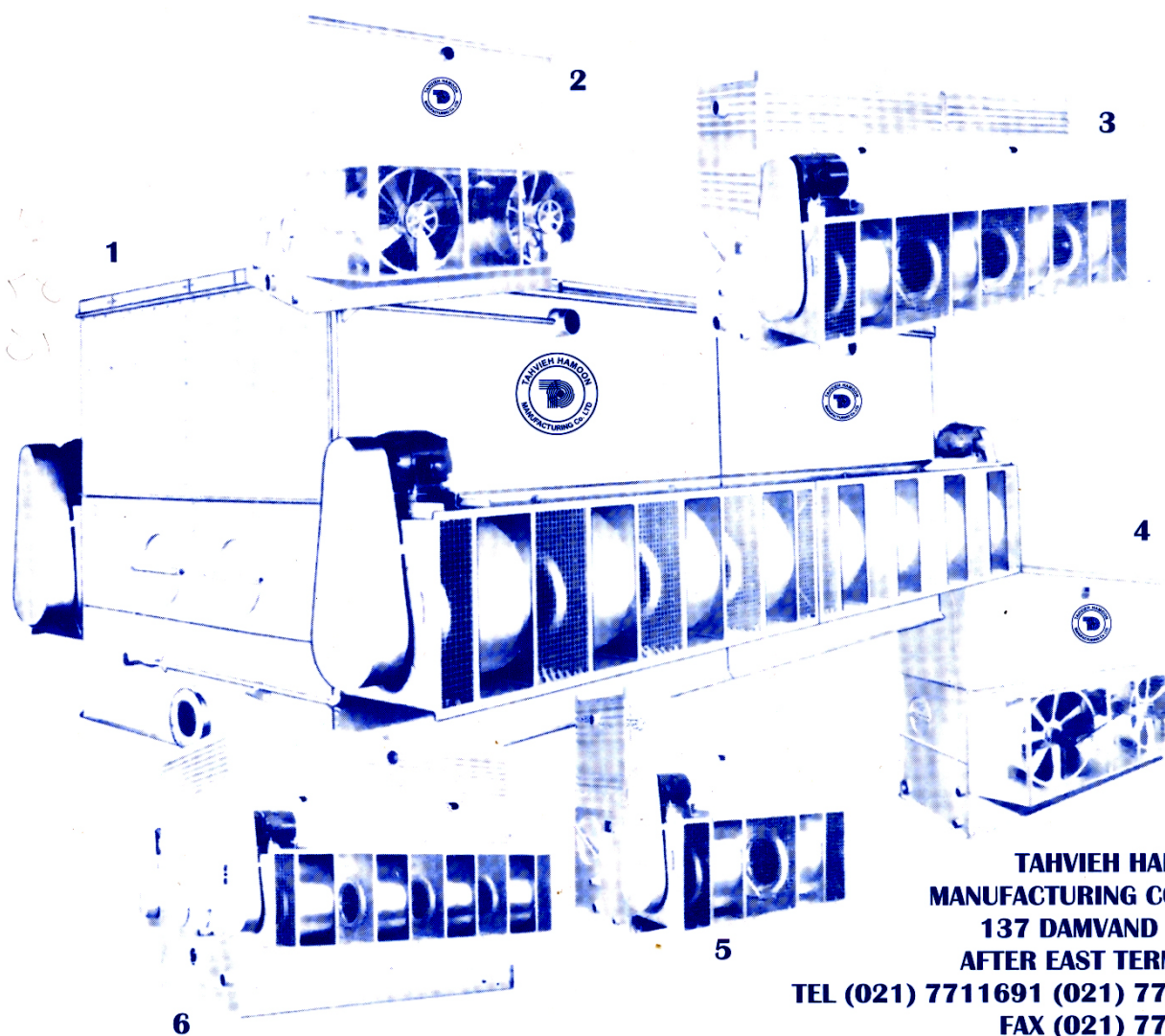




TAHVIEH HAMOON

Here are several of the various size and models of cooling towers manufactured by

- 1- Centrifugal Fan Blow-Thru
- 2- Multi-Stage Propeller Fan Tower,
- 3- Centrifugal Fan Unit,
- 4- Tubexial Fan Unit,
- 5- Centrifugal Fan Model,
- 6- Centrifugal Fan Tower.

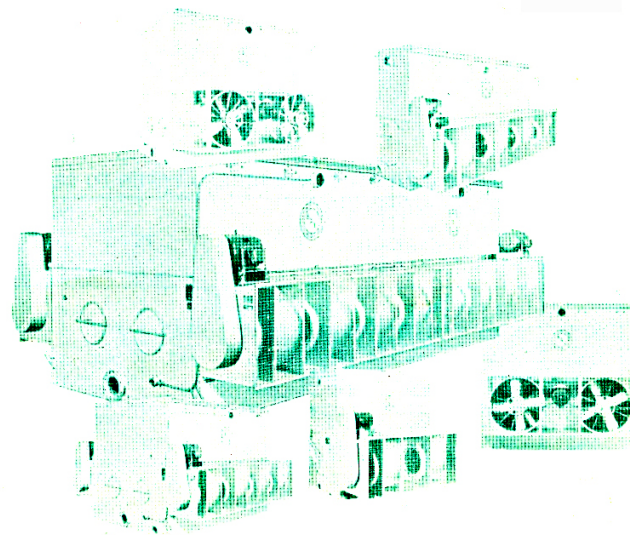


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200 to 800 tons

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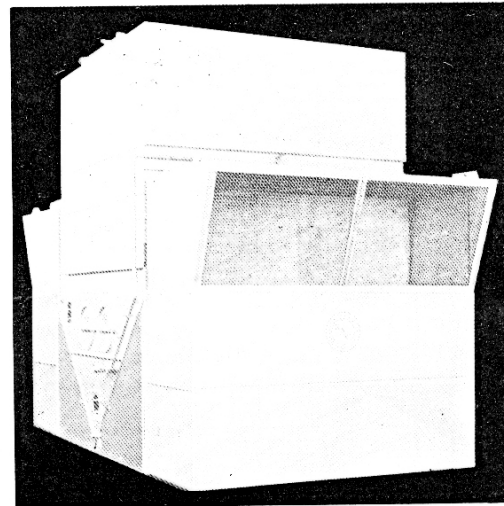
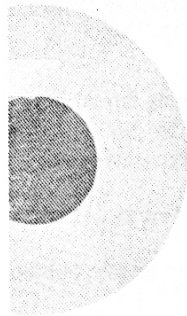
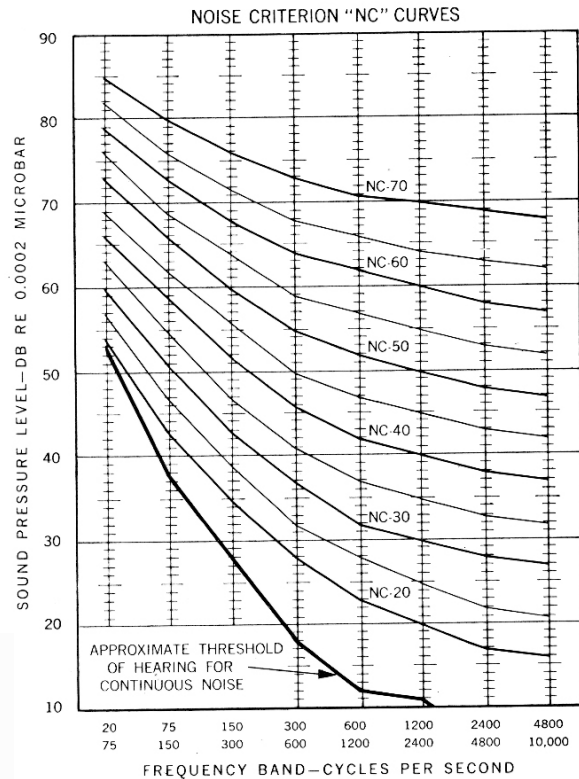
COOLING TOWERS



200 TO 800 TONS



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Sound Attenuation Equipment

FOR COOLING TOWER

Sound Attenuation is designed to provide an economical solution for most installations where cooling tower noise is a problem. Because it is available as a packaged accessory to T.H. cooling towers, the attenuation has the advantage of *known size, weight, and performance* which can be incorporated into building designs and construction specifications. The need for custom engineered acoustical treatment is virtually eliminated.

Where noise problems are marginal, centrifugal fan cooling towers can be installed without attenuation with the option of adding it later. This is possible because the attenuators are supported entirely from the tower; no external supporting structures are required.

The combination attenuator package consists of an acoustically lined sound trap for the air intake and an acoustically lined discharge containing parallel sound-absorbing baffles.

Although noise problems are more often associated with cooling towers than with evaporative condensers or closed circuit industrial coolers, the basic elements of fan noise and waterfall noise are the same, and T.H. attenuators are suitable for all three types of equipment.

DIMENSIONS AND WEIGHTS

Drawings giving dimensional data and weights for sound attenuators are available from the factory for individual unit sizes.

APPLICATION

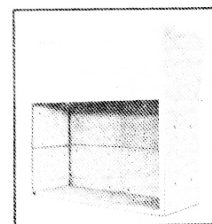
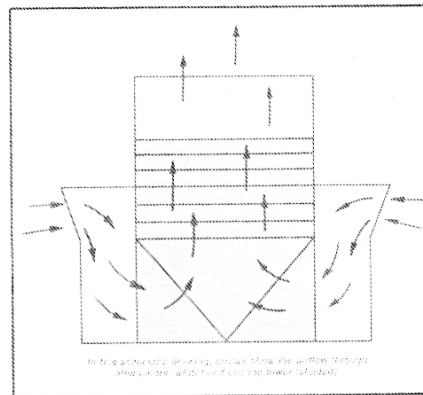
Tahviah Hamoon units with package attenuation can be applied to the majority of installations requiring noise control. Using the known attenuation ratings, the T.H. attenuators can be applied without guesswork for the solution of noise problems.

CONSTRUCTION

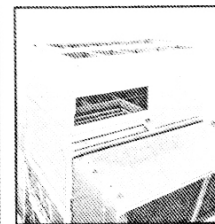
T.H. sound attenuators are constructed of galvanized steel panels lined with weather proof sound-absorbent fiberglass. The lining is held in place with galvanized steel screening. For added life, all exposed metal surfaces are finished with Aluminum paint.

The intake attenuators, which bolt directly to the cooling tower, have removable access doors at both ends for easy entry to the moving parts of the unit. The hooded inlets provide protection from the weather. The discharge attenuator has parallel fiberglass-lined baffles. It is mounted directly to the top of the tower and requires no additional structural support. Removable panels are provided for access to the eliminator sections and upper interior of the tower.

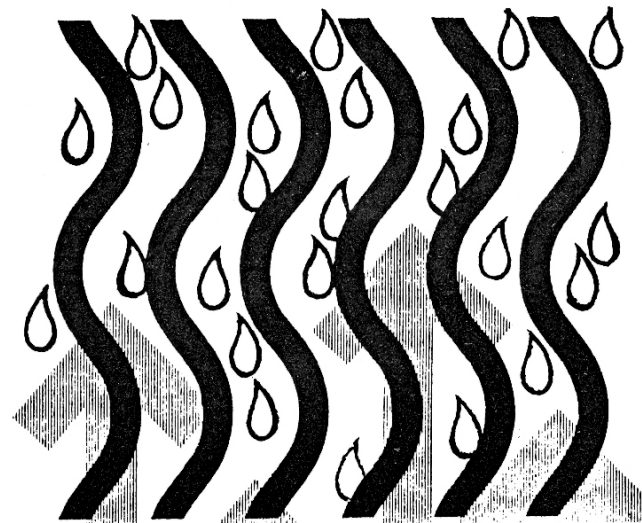
Intake and discharge attenuators can be shipped assembled, ready for mounting, or as separate panels for assembly at the job site.



Attenuators are lined with sound absorbent fiberglass held in place with galvanized screening.



The top discharge attenuator contains the tower eliminators. Removable front panels provide easy access to them and the water distribution system.



COOLING TOWER

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