



## V TYPE COOLING TOWER FILL PRODUCT SPECIFICATION

The fill is to be manufactured by LATINO Environmental or equal and will meet the following specifications:

1. Scope:

LTN-V-500mm (V-Shape-Fluted) high-density film fill designed for cooling of power plant, petrochemical, HVAC and other process cooling waters.

2. Material of Construction:

A. General

The fill shall be fabricated from rigid, corrugated PVC sheets that are conducive to cooling water and UV protected. The fill modules shall be resistant to rot, fungi, bacteria and inorganic/organic acids and alkalies as commonly found in cooling towers.

B. PVC SHEETS

The PVC sheet shall be prime, rigid PVC conforming to commercial standard ASTM D1784:12454B with the following properties:

PROPERTY	TEST METHOD	UNIT	TYPICAL VALUE
Specific Gravity	ISO 1183	gm./cu.cm.	1.45 max.
Tensile Strength	ISO 527	Kg/cm <sup>2</sup>	313 min.
Compressive Strength	ISO 8256	Kg/cm <sup>2</sup>	0.332 min.
Shrinkage (lengthways)	EN 743	%	8% max.
VICAT SOFTENING POINT	ISO 306	°C	68 min.
Flame Spread Rating	ASTM E-84		Class A

The PVC sheets shall be of uniform thickness and free from holes, air bubbles, foreign matter, undispersed raw material or other manufacturing defects which may adversely affect their performance.



**C. Media Modules**

The media modules shall be fabricated from PVC sheets of quality stated above and completely corrugated at an angle of 30degrees from the horizontal to form a V-corrugated pattern between adjacent sheets providing a continuous and horizontal redistribution of air and water. The flute height for each corrugation shall be 19mm.

The media shall measure up to 305 mm wide, 610mm high and up to 2100mm long and provide a minimum surface area of  $\sim 157\text{m}^2/\text{m}^3$ .

The self-supporting media modules shall be made from corrugated sheets of above configuration and have a specific number of glue points formed on each corrugated sheet. These corrugated sheets shall be bonded together to give a S-corrugated pattern by application of glue only to these "dedicated glue joints" to provide a finite number of contact points and to form strong and homogenous media modules. Media modules shall have edge bonding. Media modules made from random application of glue over the corrugated sheets or with 'double fold' shall not be acceptable.

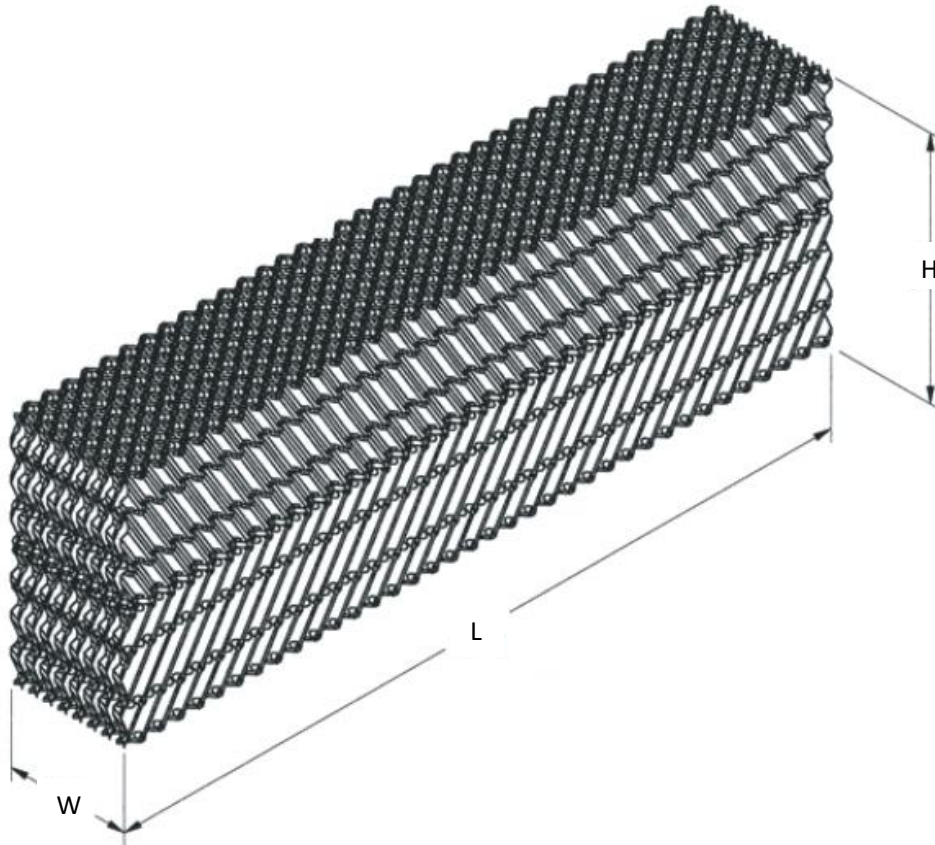
Each module shall have a minimum bearing capacity of 500 lbs./sq.ft. Modules in the top layer shall have a minimum bearing capacity of 1000 lbs./sq.ft. In addition, media modules shall be capable of withstanding a minimum loading of 100 lbs./sq.ft. per foot of media height above the module as placed in the tower. Media modules on the bottom layer shall meet the designed load bearing capacity when placed on the support beams.



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No.2-2104, ZOVIE Plaza, CBD of Tianjin Free Trade Zone, Binhai New Area, Tianjin, P.R.C.

SURFACE AREA	SHEET SPACING	FLUTE ANGLE	THICKNESS	MEDIA PACK SIZES: Length (L), Width (W), Height (H)		
				L	W	H
~157.2 m <sup>2</sup> /m <sup>3</sup>	19 mm	30°	0.30mm before forming	2100mm	305mm	610mm





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### 3. Installation:

The media shall be installed as per the recommendation of the media manufacturer and in accordance with the engineer's specification, which shall include the following:

- A. The media modules shall be carefully cut or trimmed to fit within 1/4 inch (or less) of any obstruction or sidewall to prevent air bypass.
- B. The media shall be conveyed to the top of the tower by mechanical conveyor or crane. Cranes shall be used or conveyors shall be constructed as necessary to transport the media to the working level inside the tower, and the media modules shall be moved by hand for final placement.
- C. The shaping, cutting and trimming of the media modules may be done in the tower provided that precaution is taken by the Contractor to prevent any chips, broken pieces, or debris from falling into the media by using canvas tarpaulins or similar working materials to cover the media modules. All media modules shall be cleared of any such fallen material before a new layer of media is added. The top layer of media should also be completely protected from damage and such falling material due to any subsequent work until the "start up" of the system.
- D. The media module edges should be protected from damage due to workmen walking on them. To prevent such damage, the Contractor shall use plywood, pegboard or other suitable temporary planking.
- E. The media modules shall be placed in the tower to provide the closest possible fit with adjacent modules without damaging the modules. The module packing arrangement shall be as recommended by the cooling tower manufacturer and shown on the installation drawings. Media modules within each layer shall be installed such that the sheets of all modules are parallel to each other. Modules in respective layers shall be installed at right angles to the layer immediately below and above.
- F. The media modules in the bottom layer shall be centered over the media support system.