

BLADE TYPE D. E. PRODUCT SPECIFICATION

The media is to be manufactured by Brentwood Industries, or equal and will meet the following specifications:

1. Scope:

ACCU-PAC[®] DE-120 blade type drift eliminator designed to remove entrained water droplets from the leaving air stream at minimum pressure losses in either counter-flow or cross-flow cooling towers.

2. Material of Construction:

A. General

The drift modules shall be fabricated from rigid, corrugated PVC sheets that are conducive to cooling water and UV protected. The drift 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 D1784:12344B to 12454B with the following properties:

PROPERTIES	ASTM TEST METHOD	UNIT		VALUE (min. unless otherwise noted)	
		IP	SI	IP	SI
Specific Gravity	D792	Dimensionless		1.45 max.	
Tensile Strength	D638/D882	psi	mPa	6,000	41.4
Flexural Modulus	D790	psi	mPa	425,000	2931
Flexural Strength	D790	psi	mPa	11,000	75.9
Elastic Modulus	D638/D882	psi	mPa	360,000	2,483
Izod Impact	D256	ft-lbs/in	j/cm	1.0	0.534
Impact Resistance	D4226	in-lbs/mil	j/mm	1.2	5.34
Heat Deflection	D648	°F	°C	160	71
Flame Spread Rating	E-84	Dimensionless		less than 20	
Flammability	D635			Self-extinguishing <5 sec.	

C. Chemical Resistance

Resistance to Grease Fats, & Oils	Excellent	ASTM D722-45
Resistance to Acids	Excellent	ASTM D543
Resistance to Alkalies	Excellent	ASTM D543

D. Temperature Resistance

Material of Construction	Max. Continuous Operating Temperature		Max. Peak Temp.*	
	F	C	F	C
PVC	140	60	155	68
HPVC	150	66	165	74

* Duration of peak temperatures not to exceed 2 hours

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.

E. Drift Modules

1. The eliminators shall be the blade multipass type with end caps to provide extra structural integrity for beam strength and durability.
2. The drift modules shall be able to span a minimum 6 ft. at design conditions with a minimum of deflection.
3. The eliminators shall be of the nesting type to insure a seamless installation and prevent bypass of the drift droplets.
4. Eliminators used in cross-flow applications must be designed with special drainage to insure the captured drift droplets are not reentrained into the air stream.
5. The eliminators shall be fitted into the interior of the tower to prevent drift in excess of 0.005% of the inlet water-flow rate and guaranteed for all operating conditions.
6. The mass drift quantity shall be determined by the CTI STD-140 HBIK drift test code or the EPA method 13 A system of analysis. Drift quantity shall not exceed the guarantee of .005%
7. Material used for the eliminators shall be suitable for continuous operation at the maximum discharge air temperature possible.

8. Eliminators shall be PVC or CPVC as required by the temperature of the environment, and shall be fire resistant with a maximum flame spread rate of 15 or less according to ASTM method E-84. A certified test report showing that the cellular eliminator will meet this flame spread rate is required.
9. The drift modules shall measure up to 24 inches wide, 5 3/4" in depth and up to 12 ft. long.

3. Installation:

The drift modules shall be installed as per the recommendation of the eliminator manufacturer and in accordance with the engineer's specification that shall include the following:

- A. The drift 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 drift modules 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 drift modules shall be moved by hand for final placement.
- C. The shaping, cutting and trimming of the drift 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 and caution that the cutting may weaken the structural integrity of the product.
- D. The drift modules are not intended to have workmen walking on them. To prevent damage or injury, the contractor shall use plywood or other suitable temporary planking.
- E. The drift 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. Drift modules shall be installed such that the sheets of all modules are perpendicular to the support beams.