

Why bamboo isn't ideal:

- **Durability & rot:** Constant warm, wet conditions (plus biocides like chlorine or bromine) quickly degrade lignocellulosic materials. Expect cracking, swelling, fungal decay, and insect attack unless heavily treated.
- **Biofouling risk:** Organic surfaces foster slime/biofilms, which reduce heat transfer, raise pressure drop, and can increase **Legionella** risk if hygiene isn't tightly managed.
- **Inconsistent geometry:** Natural variability makes it hard to achieve the uniform thin water films and controlled air/water pressure drops that modern **PVC/PP film fills** provide.
- **Chemical compatibility:** Many cooling-water chemistries (oxidizing/non-oxidizing biocides, scale/corrosion inhibitors) shorten service life or stain the media.
- **Fire performance:** Requires fire-retardant treatment to meet many codes.