



Series **ES** & Series **ESP** COOLING TOWERS

**SINGLE & MULTI-CELL FIELD ERECTED,
FIRE-RETARDANT COUNTERFLOW**





EvapTech® is a premier cooling tower designer, manufacturer and contractor providing Innovative Cooling Solutions for customer needs in the power generation, industrial, refrigeration and HVAC evaporative cooling markets. EvapTech offers new and replacement field erected cooling towers and a variety of cooling tower aftermarket services.

EvapTech is a wholly owned subsidiary of Evapco, Inc. The combined capabilities of EvapTech and Evapco provide field erected and factory assembled products that satisfy nearly all markets.



Since its founding in 1976, Evapco has become an industry leader in the engineering and manufacturing of quality heat transfer products around the world. Evapco's powerful combination of financial strength and technical expertise has established the company as a global manufacturer of market-leading products.

Evapco is an employee owned company with a strong emphasis on research and development and modern manufacturing facilities. With an ongoing commitment to research and development programs, Evapco provides the most advanced products and components in the industry.

Research Powered Solutions

EvapTech is continually seeking new evaporative cooling technologies and unique solutions to improve the performance and quality of its products and components.

Cooling tower products are challenged by a variety of thermal, hydraulic, chemical, mechanical and structural demands. To satisfy these demands, EvapTech employs a strategy involving extensive laboratory research, rigorous thermal and physical testing, and validation by field testing installed products.

EvapTech's products and components such as the fill, eliminators, and nozzles, are created and verified in the Wilson E. Bradley Research & Development Center in Maryland. This R & D Center features customized laboratories designed to perform tests through a wide range of environmental conditions. EvapTech's products are also tested in third-party laboratories such as the Natural Hazards Laboratory in Rhode Island operated by FM Global.

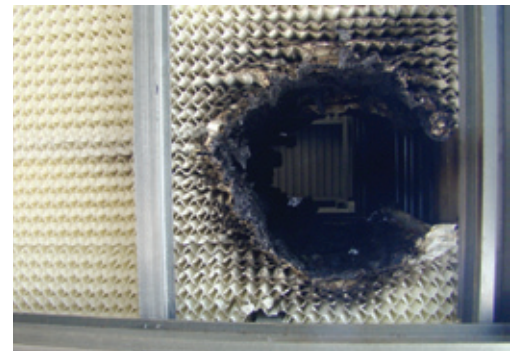
As a result of these commitments, EvapTech cooling tower products and components are well-prepared to deliver guaranteed and reliable performance throughout their service life.



Heptane ignition source for full-scale fire testing

Successful Series ES full-scale fire test in progress. Fire contained within the cell

Minimal damage from successful ESP full-scale fire test. Franklin Fill™ material chars inhibiting the spread of fire



SafeWall™ cyclic wind pressure testing



Airborne debris (missile) testing



FM Approval – Based on Rigorous Testing and Analysis



FM Approval is a third-party certification issued by FM Approvals, a subsidiary of FM Global, the largest industrial and commercial insurance company in the world. Products are certified according to Approval Standard for Cooling Towers, Class 4930 (May, 2009). Approval certifies compliance with fire performance, natural hazards testing, seismic analysis, and quality audits of combustible components.

FM Approved cooling towers do not require a fire protection system. However, Approved towers are required to provide a minimum post-fire design capacity of 75%. This means the owner may need to invest in extra or over-sized cells.

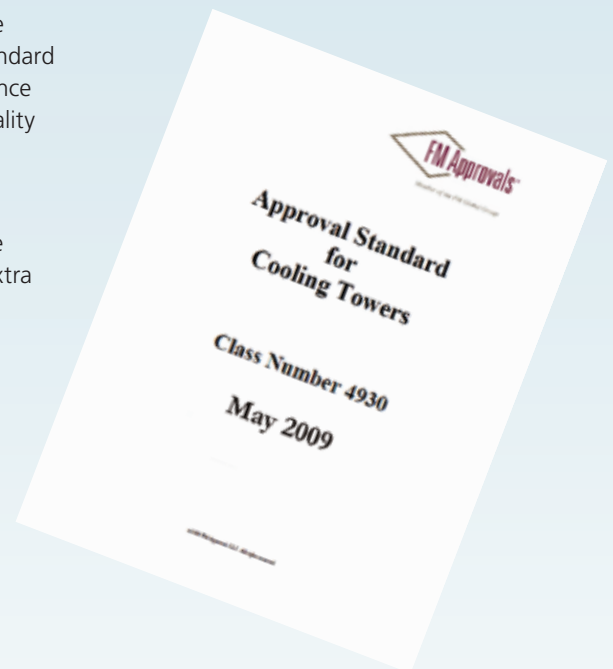
FM Approved towers are identified by the FM Approved mark



and are listed in the online FM Approvals Guide at <http://www.approvalguide.com>.

An FM Approved cooling tower may be the right choice for you if...

- you are insured by FM Global and require or prefer FM Approved products
- you are not insured by FM Global, but you can benefit from your insurer if you use third-party certified products
- you do not want to invest in and maintain a fire protection system
- you are concerned about damage, recovery, and losses caused by fire and natural hazards
- you seek uninterrupted operations and assured productivity



Series **ES** & Series **ESP**

Meeting the FM Challenge; Loss Prevention Through Engineering

The FM Approved Series ES and ESP evolved from the proven EvapTech Series EC product line. These products share high quality fire-retardant fiberglass pultrusions with proven structural integrity and a design methodology confirmed by FM Approvals Standard Class 4930 for resistance to the most extreme natural hazards.

EvapTech is a participating manufacturer to CTI Standard STD-202 (Publication of Test Results). The EC, ES and ESP product lines share the same functional heat transfer and drift eliminator component designs, although the ESP component materials are customized. The use of these heat transfer and eliminator designs assures owners reliable thermal performance and low drift rates.

Series **ESP**

- Unique premium product Line intended for both single and multi-cell FM Approved applications.
- Eliminates the FM requirement for any redundant thermal capacity.
- Provides a greater degree of protection from fire and natural hazards to reduce the recovery time and cost when compared with other A pproved products.
- Franklin Fill™ and Franklin Eliminators™ are made of custom formulated PVC with a limited combustibility rating. The self-extinguishing characteristics of these materials create a charring effect to choke off airflow and inhibit the spread of fire – *If a fire cannot spread; it is by definition contained.*
- ESP incorporates the hardened SafeWall™ custom fiberglass casing technology to resist natural hazards.

Series **ES**

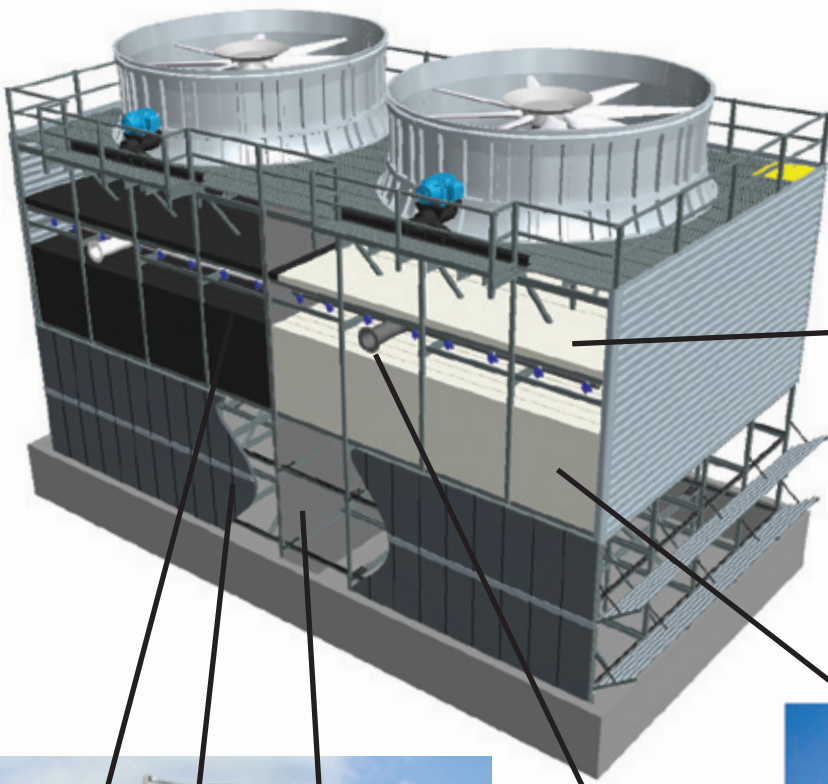
- Intended for multi-cell FM Approved applications, typically when four or more cells are required.
- Comparable fire protection to towers previously approved by older FM protocols requiring only containment of a fire.
- Employs FireStop™ structural concrete panel technology to contain a fire within the cell of origin by preventing the fire from spreading over, under, around or through the cell walls and partitions to adjacent cells.
- Incorporates the hardened SafeWall™ custom fiberglass casing technology.

Key Advantages of Series ES & ESP

- **Reliability of Operations** – Minimal loss of performance and interruption to operations.
- **Hardened to Survive** - SafeWall™ technology resists damage and compromised thermal performance resulting from airborne debris and wind pressures created by severe storms and hurricanes. The durability that results will improve operation, maintenance, and reduce repair costs for the life of the product.
- **Cost Effective** – The Series ES & ESP products are cost comparable to towers with fire protection systems.
- **Customizable Fill Components** – A variety of high performance low-fouling fills with different sheet thicknesses for standard and extended service life.
- **Low Drift Rates** – The best available control technology (BACT) for drift rates as low as 0.0005% is standard.
- **Air Inlet Treatments** – The Series ES & ESP products can be customized for any application with a variety of air inlet treatments including no louvers, wide-spaced louvers, or cellular PVC louvers.
- **Product Quality is a Given** – Quality audits of all combustible components by FM Approvals assures the same FM Approved product is provided for every project.
- **Avoid Thermal Redundancy** – Extra or over-sized cells are not required.

Compare the Series ESP and ES

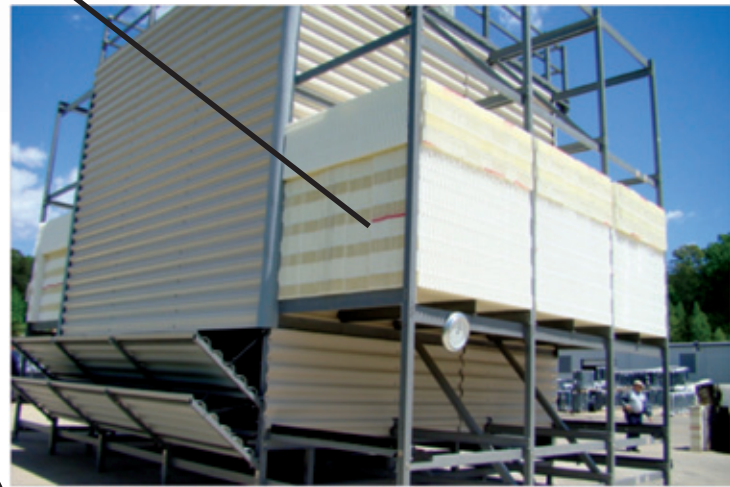
	Series ESP	Series ES
FM Approved Certification Type	Single Cell & Multi-Cell	Multi-Cell
PVC Components	Franklin PVC	Standard
Thermal Redundancy: Extra or Over-sized Cells	Not Required	Not Required for 4 or more Cells
Fire Containment & Protection from High Wind Pressures	SafeWall™ custom fiberglass casing and partitions	FireStop™ proprietary structural concrete liner SafeWall™



FM test cell with Franklin™ eliminators



Series ES test cell under construction with standard PVC fill, eliminators, and WST inlet louver panels



Series ESP FM test cell with white Franklin Fill™ and wide-spaced louvers



Series ES FireStop™ structural concrete liner installation for FM test



Fire-retardant water distribution system header and branch arms

Series **ES**



Series **ESP**



- World Headquarters/ Research and Development Center
- EVAPCO Facilities

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