

# SPIG™ Air Fin Coolers

Specialized dry cooling technology



RENEWABLE | ENVIRONMENTAL | THERMAL

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## Global Cooling Competencies

Babcock & Wilcox Environmental (B&W) is a global supplier of an extensive range of SPIG™ turnkey cooling systems and solutions. Since 1936, we have designed, engineered and installed many state-of-the-art cooling system projects for a wide range of industries including oil and gas, petrochemical, power generation, waste-to-energy, cogeneration and combined cycle, and district heating and cooling, to name a few.

Our experience includes wet, dry and wet/dry hybrid cooling solutions as dictated by site specific requirements. We can supply both mechanical and natural draft systems and design for a wide range of project specifications such as high seismic loads, vibration control, corrosion, noise control, sub-freezing operation, and sea water use.

## SPIG Air Fin Cooler

As water preservation increasingly becomes a priority for plant owners and operators, dry cooling technologies offer a viable alternative to wet cooling systems in many applications. B&W is an expert in the supply of specialized direct dry cooling technology, or air fin coolers, for closed loop cooling applications.



## Design and Engineering

Qualified thermal engineers use advanced technologies to provide cost-effective designs to meet the required thermal performances and mechanical design of pressure parts (per ASME Code), steel structure and noise management.

A modularized design concept is commonly used for small air fin coolers which can be scaled to larger units without changing the related thermo-hydraulic design criteria.

Our capabilities include complex three-dimensional plant design, piping, controls, instrumentation, installation, commissioning and testing.

## Quality and Safety

B&W has implemented and maintains a comprehensive quality control system regulated by a Quality Manual and internal procedures based on ISO 9001 standards. The air coolers are installed according to the provisions of the International Safety System and with EEC directives on safety standards for machinery. We have obtained the SCC safety certification (Safety Checklist Contractors) for the disassembly, construction, restoration and upgrading of cooling systems, maintenance and global service activities.



## Finned Tubes

B&W provides a range of proven tube designs for a variety of applications.

**G-Fin (embedded)** This high-efficiency finned tube is designed for high thermal or mechanical stress, with an upper temperature limit of about 400C (752F).

The fin material is aluminum and the tube material can be made from any readily machinable metal.

**L-Fin (wrapped)** This finned tube is designed for low temperature applications where protection from tube corrosion is required. The upper temperature limit is about 130C (266F).

The fin material is aluminum and the tube material can be made from any readily machinable metal.

Standard offerings of both designs are available in the following dimensions:

- Tube Diameter; mm (in.): 25.4 (1.0), 31.8 (1.25), 38.1 (1.5), 44.5 (1.75), 50.8 (2.0)
- Fin Pitch: 8, 9, 10, 11 fins per in.
- Fin Height: 15.88 mm (0.625 in.)

Other finned tube types such as galvanized fin tubes and extruded fin tubes are also available. Galvanized fin tubes (F-Fin), with a completely external galvanized surface, provide excellent protection against corrosion, good heat transfer rate, and the ability to simply clean using high pressure water.

Extruded fin tubes have fins that are extruded from an aluminum sleeve that covers the tube. These tubes are used under high operating temperature (250C [482F]) and provide full protection of the tube against atmospheric corrosion.



## Headers

We offer the following types of headers based on project specifications and applications:

- Plug type headers
- Welded type headers
- Studded headers with cover
- Screw bolted headers with cover

## Expert Service

To help avoid unscheduled downtime and achieve optimal plant performance, B&W offers a wide range of services for air fin coolers such as maintenance, inspections, structural and thermal repairs, upgrades, and spare or replacement parts supply.

In addition, our customized UNICO™ online continuous monitoring system is available to record, store and analyze critical operating performance data, helping to optimize cooling plant efficiency, reduce maintenance costs, and avoid unscheduled outages.

We provide flexible, customized technical solutions to satisfy any customer requirement.



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Established in 1867, B&W is a global leader in renewable, environmental and thermal technologies and services for power and industrial applications.

For more information or to contact us, visit our website at [www.babcock.com](http://www.babcock.com).