



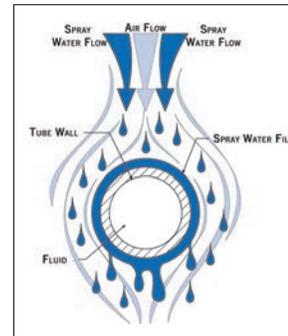
PRODUCT SPOTLIGHT:

Combined Flow Technology for the FXV

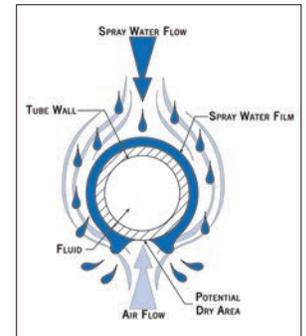


Reduces fouling and scale - sustains thermal performance and maximum coil life.

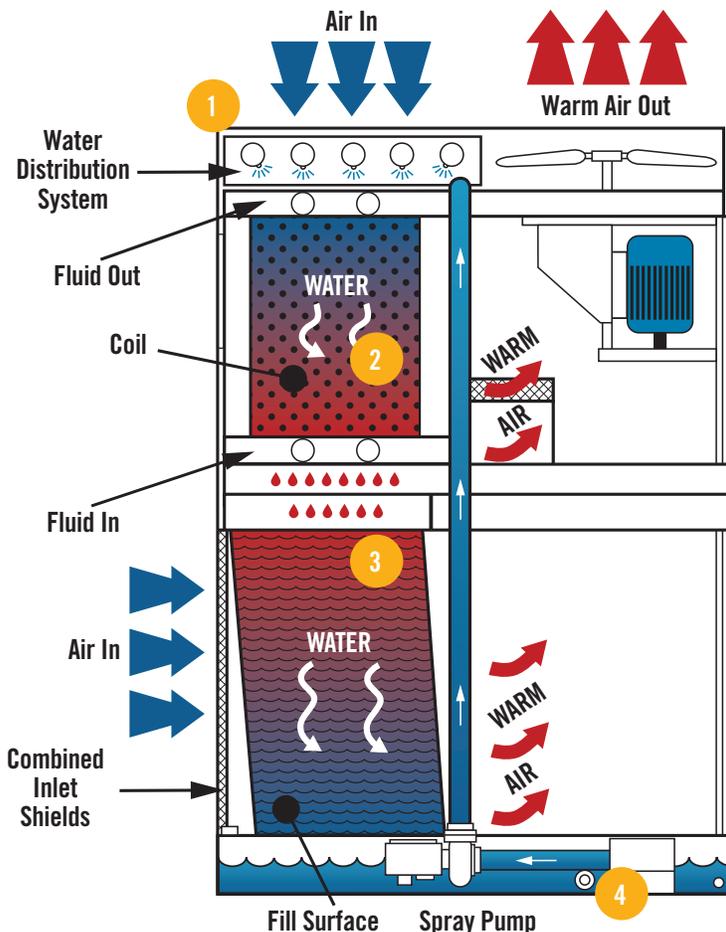
FXV Closed Circuit Cooling Towers use BAC's patented Combined Flow Technology which reduces the tendency to accumulate scale on the coil surface. By reducing scale tendency, the FXV is able to sustain peak heat transfer capability and the benefit of maximizing coil life. FXV units are specifically designed to save customers time, money, and energy in the installation, operation, and maintenance of closed circuit cooling towers.



Combined Flow Technology



Conventional Coil Technology



FXV Closed Circuit Cooling Tower

- 1 Water is sprayed in parallel with the fresh ambient air flowing over the outside of the closed circuit coil. Parallel air and water paths minimize scale-producing dry spots that may be found on the bottom of the tubes in other, closed circuit cooling towers.
- 2 The coil rejects heat through both evaporative cooling using the fresh air stream and, more significantly, through sensible cooling of the pre-cooled recirculating spray water. Reducing this evaporative cooling component from the coil section helps to minimize the propensity to form scale on the coil surface.
- 3 The recirculating spray water falls from the coil to the fill section where it is cooled by a second fresh air stream using evaporative heat transfer.
- 4 Water is pumped over the coil at a rate greater than 10 USGPM/ft² of coil plan area to ensure continuous wetting of the primary heat transfer surface, which enhances heat transfer efficiency and minimizes scale formation.

PRODUCT SPOTLIGHT:

Combined Flow Technology for the FXV CONTINUED

Effect of Scale on Closed Circuit Cooling Tower Performance

Even minimal amounts of scale on the coil surface will affect the performance of closed circuit cooling towers. Figure 1 illustrates the impact of scale build-up on closed circuit cooling tower performance. With only 1/32" thick scale, the tower performance is robbed of 27% of its heat transfer capability. As scale thickness increases, capacity decreases significantly.

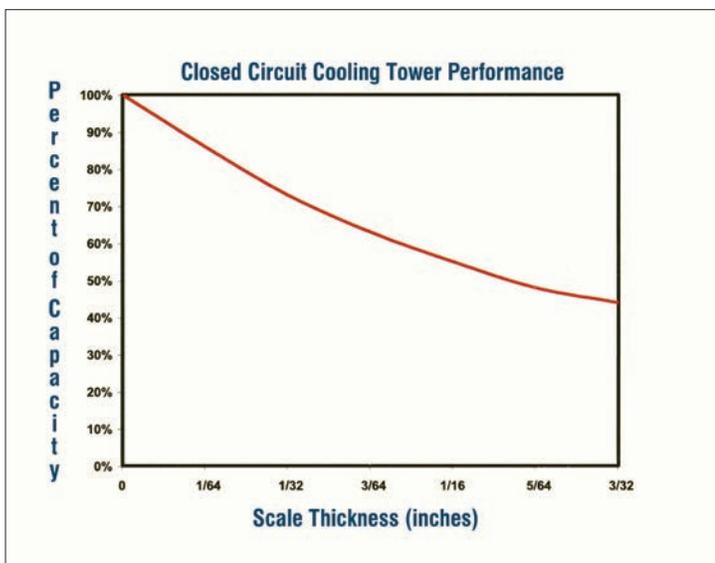


Figure 1

The Cost of Scale

Although the formation of scale is not always noticed by the system operator, a closed circuit cooling tower with a scaled-up coil must operate at higher fan speeds and forces other system components to work harder to make up for its shortcomings. In a cooling system, the burden is placed on the chiller. With scale build-up on the coil, the chiller consumes greater energy and system capacity is reduced. This will increase system-operating costs year-round, although it may go unnoticed until the system operates on the hottest days. In addition to lost throughput, the energy costs of 1/32" of scale on the coil are significant.



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