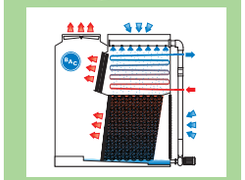
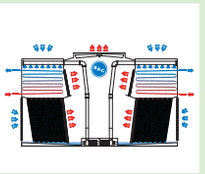
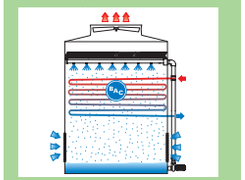
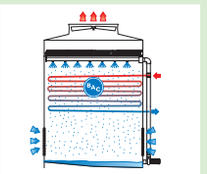
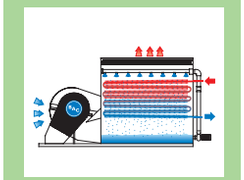
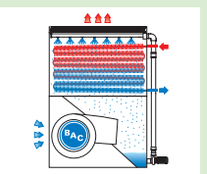
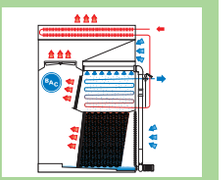
G A Best

www.BaltimoreAircoil.co.za	FXVE	FXV-D	FCI	RCF	VFL	VXI	HXI
Principle of operation							
Capacity	157 - 1770 kW	1425 - 2290 kW	40 - 1043 kW	45 - 905 kW	70 - 575 kW	19 - 2615 kW	130 - 1275 kW
Configuration	combined flow	combined flow	counterflow	counterflow	counterflow	counterflow	combined flow
Air entry	axial fan induced draft	axial fan induced draft	axial fan induced draft	axial fan induced draft	centifugal fan forced draft	centrifugal fan forced draft	axial fan induced draft
Maximum entering fluid temperature	82°C	82°C	82°C	82°C	82°C	82°C	82°C
Low sound	C	C	F	F	A	A	C
Energy efficiency	A	A	A	A	F	F	A
Easy maintenance	A	A	D	D	D	D	B
Operational safety (hygiene)	A	A	D	C	E	E	B
Water saving	E	E	D	D	D	D	C

© 2018 Baltimore Aircoil International nv

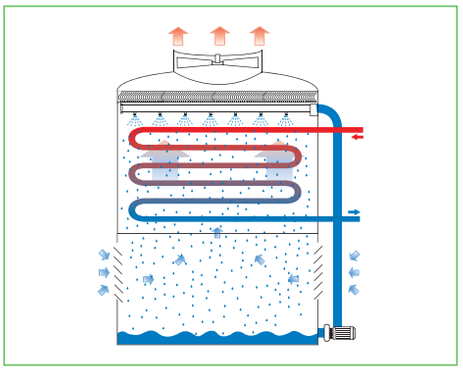
Closed circuit cooling towers

Principle of operation

Closed circuit cooling towers or fluid coolers operate just like the open type, but dissipate the process fluid heat load into the ambient air via a heat exchange coil. This isolates the process fluid from the outside air, keeping it clean and free of contamination in a closed loop and creating 2 separate fluid circuits:

- An external circuit, in which spray water circulates over the coil and mixes with the outside air.
- An internal circuit, in which the process fluid circulates inside the coil.

During the evaporative cooling operation, heat goes from the internal circuit, via the coil to the spray water, and then to the open air as a portion of the evaporating water.



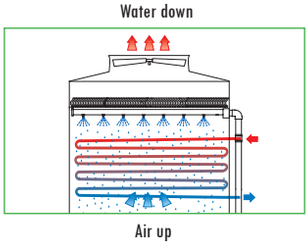
Benefits

- Contaminant-free cooling circuit
- Dry operation in winter
- Reduced system maintenance
- Lower overall system costs thanks to year-round savings on maintenance, water, energy and water treatment

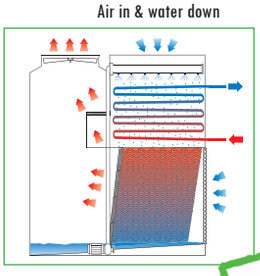
A **unique benefit** for all BAC closed circuit cooling tower customers:

- the patented Baltibond hybrid coating

Configurations



Counterflow configuration



Combined flow configuration
Parallel flow of air and water over the coil, crossflow configuration of the fill

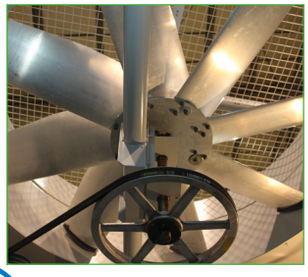
BAC PATENTED DESIGN

Pressurized spray system

Fan systems

Centrifugal fan

- can overcome external static pressure, suitable for indoor installations
- inherently quiet



Axial fan

- low energy usage

Forced draft

- rotating air handling components are located on the air inlet face at the base of the tower
- easy access for maintenance
- located in dry entering air stream

Induced draft

- rotating air handling components are mounted in the top deck of the unit
- minimal impact of fan noise
- maximum protection from fan icing
- located in the corrosive saturated discharge air stream