

NIAGARA BLOWER SOLUTIONS

What is WSAC®?

The Wet Surface Air Cooler is a closed-loop, evaporative cooling system.

Wet Surface Air Coolers are optimized for industrial applications where rugged design/fabrication and cost effective efficient closed-loop cooling/condensing are required.

Applications:

Liquid Cooling
Gas Cooling
Vapor Condensing

Industries:

Refining
Power
Wastewater
Pulp & Paper
Metals
Mining
Food/Beverage

WATER SAVING BENEFITS OF THE WET SURFACE AIR COOLER—WSAC®

Run higher cycles of concentration

- Purchase less water
- Dispose/treat less water

Use poor quality water

- Reuse plant water
- Brackish water, seawater
- Agricultural runoff
- FGD water

Co-current spray system design

- Lower discharge height
- Lower PM10

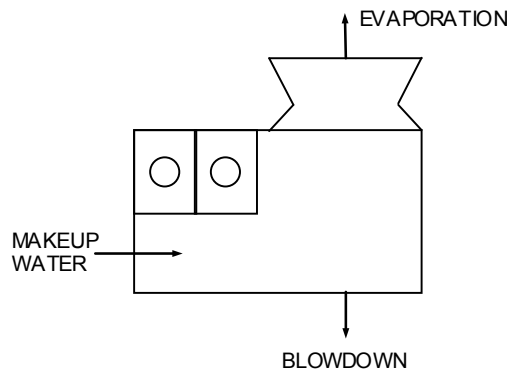
Pump less water

- Lower horsepower
- Reduced installation costs
- More available power for sale
- Lower carbon footprint

Evaporate blowdown

- Smaller evaporation ponds
- Less ZLD system capacity
- Cost savings—Less expensive to own and operate

CYCLES OF CONCENTRATION IN A WSAC



EVAPORATION (GPM) = HEAT LOAD (Btu/hr)/~500000 (same as CT)
BLOWDOWN = EVAPORATION / CYCLES -1
TOTAL MAKEUP = EVAPORATION + BLOWDOWN

MAKEUP	EVAPORATION	BLOWDOWN	CYCLES
400	100	300	1.33
200	100	100	2
125	100	25	5
111	100	11	10

For more information about this as well as other WSAC applications, please contact our factory office.



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