TOC Equipment Rentals

UNIT PERFORMANCE & SPECIFICATIONS

300 TON CLOSED LOOP FLUID COOLER

General Information:

Model:	A4407SL
OEM:	Alfa Laval
Type:	Closed Loop Wet Surface Air Cooler
Code/Design:	ASME Certified with U-Stamp
Insurance Value:	$275,000

Main Connections:

Process Supply/Return:	6"-150# ANSI Flange
Circulation System:	4" Victaulic (On-Skid)
Makeup Water:	1.5" QC
Basin Drain:	2" QC

Package Dimensions (Less Frame, WSAC Only):

Length (Skid Base):	18'
Width:	7'
Height:	7'
Est. Shipping Weight:	13,000 lbs.
Lifting Provisions:	Forklift or Top Lifting Lugs
Est. Operating Weight	16,900 lbs. (With Water)

Electrical Detail:

Rating:	Mill & Chem Severe Duty
Incoming Power:	460/3/60 - Single Point
Connection Type:	Pin & Sleeve Twist Lock Plug
Package FLA:	24.6 Amps @ 460V/3/60
Package RLA:	13.0 Amps @ 460V/3/60
Cooling Fans:	(x3) 5HP TEFC, 460V/3/60 Ea.
Circulation Pump:	(x1) 3 HP TEFC, 460V/3/60

Performance:

Service:	Water / Water-Glycol Mix
Design Heat Load:	250 Ton / 3,000,000 BTU/hr
Inlet Air Wet Bulb:	86°F
Total Pressure Drop:	3.4 psig
Volumetric Flow Rate:	600 GPM

Coils:

Cooling Surface:	Serpentine
Design Pressure:	150 psig
Design Temperature:	250°F
Number of Bundles:	One (1)
Cooling Tube Material:	SA-214 Carbon Steel, HDGAF
Tube Diameter/Thickness:	1" x 0.06"
Header Material:	Carbon Steel, HDGAF
Tube Sheet Material:	Carbon Steel

Fan System:

Number of Fans:	Three (3)
Flow Type:	Induced Draft
Fan Type:	Propeller, Direct Drive
Fan Diameter:	30"
Fan Control:	On / Off (VFD Capable)
Fan Motor Nameplate:	5HP (15HP Total)
Operating Horsepower:	2.66BHP (7.98 BHP Total)
Fan Air Flow:	11,800cfm. (35,400 Total)

Spray System:

Number of Pumps:	One (1)
Spray Pump Type:	Centrifugal, Vertical Arranged
Spray Pump Size:	3HP TEFC, 208-230/460V
Operating Horsepower:	2.4 BHP
Spray Riser Material:	PVC
Spray Pipe Material:	304 Stainless Steel
Evaporation Rate, Est:	5.2 GPM
Blowdown Rate, Est:	0.9 GPM (7-Cycles of Conc.)
Drift Rate, Est:	0.0 GPM
Make Up Rate Total, Est:	6.1 GPM Estimated Only

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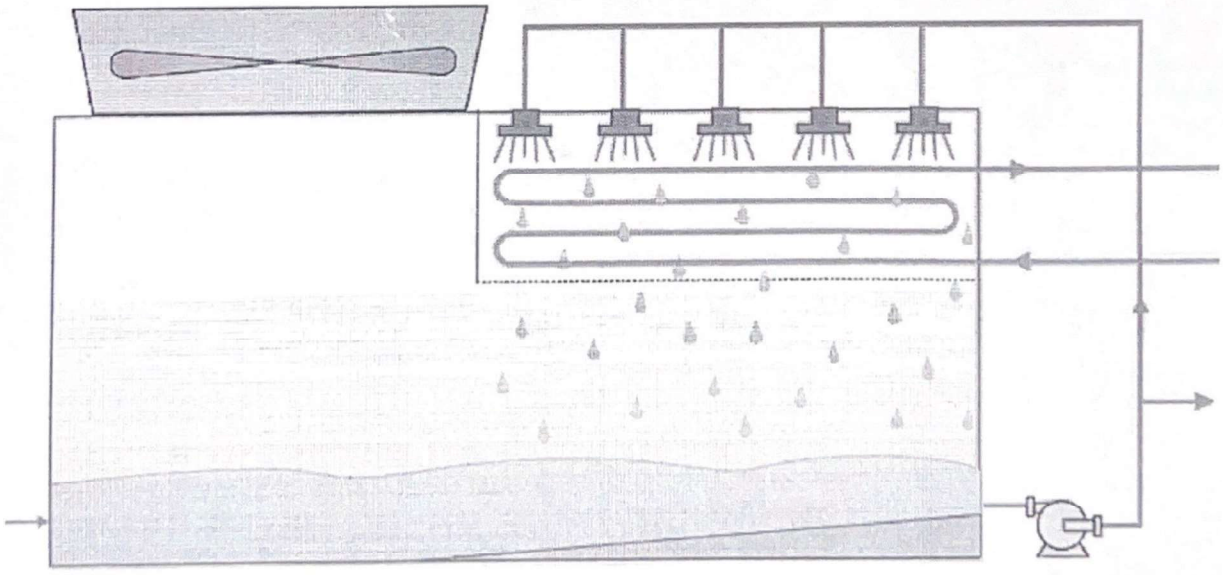
WSAC systems are an engineered-to-order, closed-loop cooling and condensing systems. They provide maximum cooling in a compact unit and use a minimum of water and electric power. Spray water can be taken from any available low quality water source, so no fresh-water is required. The closed-loop system eliminates any risk of contaminants entering the process stream. The robust and simple design brings stable thermal performance and low maintenance requirements.

* Lowest possible process fluid outlet temperature due to evaporative cooling and direct approach to the wet bulb temperature

* Minimal water consumption: cooling water can be re-circulated and the makeup water can be of low quality

* Low energy consumption

* Compact size and lowest lifecycle cost

* Well-proven technology and long service life