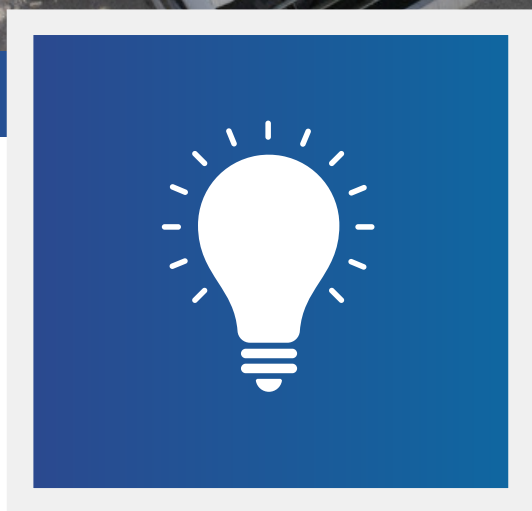




Cooling Tower Design Software

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StartPage

COOLING TOWER Software

Revision 1.0 2022

About us

The system of units

☒ IMP ☐ SI

Next Exit

Input Data

INPUT DATA		OUTPUT DATA	
Altitude	0 ft	Capacity	Btuh
Water In Temp.	104 °F	Fill Area	ft ²
Water Out Temp.	89 °F	Cooling Tower Range	°F
On Coil Dry Bulb Temp.	95 °F	Cooling Tower Demand Characteristic	
☐ On Coil Wet Bulb Temp.	0 °F	Fill Length	ft
☒ Relative Humidity	50 %	Air Pressure Drop through Cooling Tower	inch H ₂ O
Structure Material	Steel	Fan Motor Power	hp
Fan Stack Material	FRP	Pump Head	ft
Fill Type	wood	Pump Power	kW
Louvers Type	☒ Without Louvers ☐ With Louvers	Maximum Fan Blade Qty.	
Square edge beams and square columns		Water Evaporation Rate	lb/min
Fan Qty.	1	Water Consumption Rate	ft ³ /min
Fan Diameter	6 ft	Minimum Blades Qty.	
Fan Total Efficiency	90 %	Trouble Free	BHP/Blade
Motor Efficiency	90 %	Maximum BHP/Blade	
Air Flow Rate	1300000 CFM		
Water Flow Rate	12500 gpm		
Fan Stack Inlet Zone Radius	3 inch		
Fan Stack Diameter	15 inch		
Fan Stack Height	120 inch		
Loading Factor	1.45 gpm/ft ²		
Spray Nozzles #	196		
Center to Center Distance of Nozzles	7 ft		
Cell Length	42 ft		
Cell Width	42 ft		
Extra Dimension from the Trailing Edge of Blade	5.73 inch		
Vertical Dimension of Blade Tip Qmax. Pitch Angle	14 inch		
Maximum Deflection of Blade Tip	6 inch		
Calculate Print			
Back Exit			

Output Data

INPUT DATA

Altitude	0	ft
Water In Temp.	104	°F
Water Out Temp.	89	°F
On Coil Dry Bulb Temp.	95	°F

☐ On Coil Wet Bulb Temp. 0 °F
 ☒ Relative Humidity 50 %

Structure Material Steel
 Fan Stack Material FRP
 Fill Type wood

Louvers Type ☒ Without Louvers
☐ With Louvers
Square edge beams and square columns

Fan Qty.	1
Fan Diameter	6 ft
Fan Total Efficiency	90 %
Motor Efficiency	90 %
Air Flow Rate	1300000 CFM
Water Flow Rate	12500 gpm

Fan Stack Inlet Zone Radius	3	inch
Fan Stack Diameter	15	inch
Fan Stack Height	120	inch
Loading Factor	1.45	gpm/ft2
Spray Nozzles #	196	
Center to Center Distance of Nozzles	7	ft
Cell Length	42	ft
Cell Width	42	ft
Extra Dimension from the Trailing Edge of Blade	5.73	inch
Vertical Dimension of Blade Tip Qmax. Pitch Angle	14	inch
Maximum Deflection of Blade Tip	6	inch

Calculate

Print

Back

Exit

OUTPUT DATA

Capacity	93750000	Btuh
Fill Area	1764	ft2
Cooling Tower Range	15	°F
Cooling Tower Demand Characteristic	1.53	
Fill Length	1.48	ft
Air Pressure Drop through Cooling Tower	0.21	inch H2O
Fan Motor Power	423.83	hp
Pump Head	11.48	ft
Pump Power	4.71	kW
Maximum Fan Blade Qty.		
Water Evaporation Rate	13447.62	lb/min
Water Consumption Rate	2140654.74	ft3/min
Minimum Blades Qty.	5 each	
Trouble Free	4	BHP/Blade
Maximum BHP/Blade	8	

Project

INPUT DATA

Altitude	0	ft
Water In Temp.	104	°F
Water Out Temp.	89	°F
On Coil Dry Bulb Temp.	95	°F

☐ On Coil Wet Bulb Temp. 0 °F
 ☒ Relative Humidity 50 %

Structure Material Steel
 Fan Stack Material FRP
 Fill Type wood

Louvers Type ☒ Without Louvers
☐ With Louvers
Square edge beams and square columns

Fan Qty.	1
Fan Diameter	6
Fan Total Efficiency	90 %
Motor Efficiency	90 %
Air Flow Rate	1300000 CFM
Water Flow Rate	12500 gpm

Fan Stack Inlet Zone Radius	3	inch
Fan Stack Diameter	15	inch

OUTPUT DATA

Capacity	93750000	Btuh
Fill Area	1764	ft2
Cooling Tower Range	15	°F
Cooling Tower Demand Characteristic	1.53	
Fill Length	1.48	ft
Air Pressure Drop through Cooling Tower	0.21	inch H2O
Fan Motor Power	423.83	hp
Pump Head	11.48	ft
Pump Power	4.71	kW
Maximum Fan Blade Qty.		
Water Evaporation Rate	13447.62	lb/min
Water Consumption Rate	2140654.74	ft3/min
Minimum Blades Qty.	5 each	
Trouble Free	4	BHP/Blade
Maximum BHP/Blade	8	

Project Information

Project Name		Date	7/14/2025 12:38:3
Prepared By			
Checked By			
Approved By			

Close

Structure material

Cooling Tower

INPUT DATA

Altitude	0	ft
Water In Temp.	104	°F
Water Out Temp.	89	°F
On Coil Dry Bulb Temp.	95	°F
☐ On Coil Wet Bulb Temp. 0 °F ☒ Relative Humidity 50 %		
Structure Material	Steel	
Fan Stack Material	Concrete	
Fill Type	Steel	
Louvers Type ☒ Without Louvers ☐ With Louvers Square edge beams and square columns		
Fan Qty.	1	
Fan Diameter	6	ft
Fan Total Efficiency	90	%
Motor Efficiency	90	%
Air Flow Rate	1300000	CFM
Water Flow Rate	12500	gpm

Fan Stack Inlet Zone Radius	3	inch
Fan Stack Diameter	15	inch
Fan Stack Height	120	inch
Loading Factor	1.45	gpm/ft2
Spray Nozzles #	196	
Center to Center Distance of Nozzles	7	ft
Cell Length	42	ft
Cell Width	42	ft
Extra Dimension from the Trailing Edge of Blade	5.73	inch
Vertical Dimension of Blade Tip Qmax. Pitch Angle	14	inch
Maximum Deflection of Blade Tip	6	inch

Calculate Print
Back Exit

OUTPUT DATA

Capacity	93750000	Btuh
Fill Area	1764	ft2
Cooling Tower Range	15	°F
Cooling Tower Demand Characteristic	1.53	
Fill Length	1.48	ft
Air Pressure Drop through Cooling Tower	0.21	inch H2O
Fan Motor Power	423.83	hp
Pump Head	11.48	ft
Pump Power	4.71	kW
Maximum Fan Blade Qty.		
Water Evaporation Rate	13447.62	lb/min
Water Consumption Rate	2140654.74	ft3/min
Minimum Blades Qty.	5 each	
Trouble Free	4	BHP/Blade
Maximum BHP/Blade	8	

Fan stack material

Cooling Tower

INPUT DATA

Altitude	0	ft
Water In Temp.	104	°F
Water Out Temp.	89	°F
On Coil Dry Bulb Temp.	95	°F
☐ On Coil Wet Bulb Temp. 0 °F ☒ Relative Humidity 50 %		
Structure Material	Steel	
Fan Stack Material	FRP	
Fill Type	Concrete	
Louvers Type ☒ Without Louvers ☐ With Louvers Square edge beams and square columns		
Fan Qty.	1	
Fan Diameter	6	ft
Fan Total Efficiency	90	%
Motor Efficiency	90	%
Air Flow Rate	1300000	CFM
Water Flow Rate	12500	gpm

Fan Stack Inlet Zone Radius	3	inch
Fan Stack Diameter	15	inch
Fan Stack Height	120	inch
Loading Factor	1.45	gpm/ft2
Spray Nozzles #	196	
Center to Center Distance of Nozzles	7	ft
Cell Length	42	ft
Cell Width	42	ft
Extra Dimension from the Trailing Edge of Blade	5.73	inch
Vertical Dimension of Blade Tip Qmax. Pitch Angle	14	inch
Maximum Deflection of Blade Tip	6	inch

Calculate Print
Back Exit

OUTPUT DATA

Capacity	93750000	Btuh
Fill Area	1764	ft2
Cooling Tower Range	15	°F
Cooling Tower Demand Characteristic	1.53	
Fill Length	1.48	ft
Air Pressure Drop through Cooling Tower	0.21	inch H2O
Fan Motor Power	423.83	hp
Pump Head	11.48	ft
Pump Power	4.71	kW
Maximum Fan Blade Qty.		
Water Evaporation Rate	13447.62	lb/min
Water Consumption Rate	2140654.74	ft3/min
Minimum Blades Qty.	5 each	
Trouble Free	4	BHP/Blade
Maximum BHP/Blade	8	

Fill material

Cooling Tower

INPUT DATA

Altitude	0	ft
Water In Temp.	104	°F
Water Out Temp.	89	°F
On Coil Dry Bulb Temp.	95	°F
☐ On Coil Wet Bulb Temp. 0 °F ☒ Relative Humidity 50 %		
Structure Material	Steel	▼
Fan Stack Material	FRP	▼
Fill Type	wood	▼
Louvers Type	concrete wood steel	▼
Square edge beams and square columns ▼		
Fan Qty.	1	
Fan Diameter	6	ft
Fan Total Efficiency	90	%
Motor Efficiency	90	%
Air Flow Rate	1300000	CFM
Water Flow Rate	12500	gpm

Fan Stack Inlet Zone Radius	3	inch
Fan Stack Diameter	15	inch
Fan Stack Height	120	inch
Loading Factor	1.45	gpm/ft ²
Spray Nozzles #	196	
Center to Center Distance of Nozzles	7	ft
Cell Length	42	ft
Cell Width	42	ft
Extra Dimension from the Trailing Edge of Blade	5.73	inch
Vertical Dimension of Blade Tip Qmax: Pitch Angle	14	inch
Maximum Deflection of Blade Tip	6	inch

Calculate Print
Back Exit

OUTPUT DATA

Capacity	93750000	Btuh
Fill Area	1764	ft ²
Cooling Tower Range	15	°F
Cooling Tower Demand Characteristic	1.53	
Fill Length	1.48	ft
Air Pressure Drop through Cooling Tower	0.21	inch H ₂ O
Fan Motor Power	423.83	hp
Pump Head	11.48	ft
Pump Power	4.71	kW
Maximum Fan Blade Qty.		
Water Evaporation Rate	13447.62	lb/min
Water Consumption Rate	2140654.74	ft ³ /min
Minimum Blades Qty.	5 each	
Trouble Free	4	BHP/Blade
Maximum BHP/Blade	8	

Louvers Type

Cooling Tower

INPUT DATA

Altitude	0	ft
Water In Temp.	104	°F
Water Out Temp.	89	°F
On Coil Dry Bulb Temp.	95	°F
☐ On Coil Wet Bulb Temp. 0 °F ☒ Relative Humidity 50 %		
Structure Material	Steel	▼
Fan Stack Material	FRP	▼
Fill Type	wood	▼
Louvers Type	☒ Without Louvers ☐ With Louvers	
Square edge beams and square columns ▼ Square edge beams and square columns Rounded beams (R=0.04"H) and columns (R=0.04"V) Tube red beams and columns, 30", H = 0.1"W		
Fan Total Efficiency	90	%
Motor Efficiency	90	%
Air Flow Rate	1300000	CFM
Water Flow Rate	12500	gpm

Fan Stack Inlet Zone Radius	3	inch
Fan Stack Diameter	15	inch
Fan Stack Height	120	inch
Loading Factor	1.45	gpm/ft ²
Spray Nozzles #	196	
Center to Center Distance of Nozzles	7	ft
Cell Length	42	ft
Cell Width	42	ft
Extra Dimension from the Trailing Edge of Blade	5.73	inch
Vertical Dimension of Blade Tip Qmax: Pitch Angle	14	inch
Maximum Deflection of Blade Tip	6	inch

Calculate Print
Back Exit

OUTPUT DATA

Capacity	93750000	Btuh
Fill Area	1764	ft ²
Cooling Tower Range	15	°F
Cooling Tower Demand Characteristic	1.53	
Fill Length	1.48	ft
Air Pressure Drop through Cooling Tower	0.21	inch H ₂ O
Fan Motor Power	423.83	hp
Pump Head	11.48	ft
Pump Power	4.71	kW
Maximum Fan Blade Qty.		
Water Evaporation Rate	13447.62	lb/min
Water Consumption Rate	2140654.74	ft ³ /min
Minimum Blades Qty.	5 each	
Trouble Free	4	BHP/Blade
Maximum BHP/Blade	8	

Report



COOLING TOWER SOFTWARE

Project Name :

Date : 7/14/2025

Input Data :

Altitude :	0		Air Flow Rate	1300000	CFM
Water In :	104	°F	Water Flow Rate	12500	gpm
Water Out :	89	°F	Fan Stack Inlet	3	inch
On Coil Dry Bulb Temp.	95	°F	Zone Radius		
Relative Humidity	50	%	Fan Stack Diameter	15	inch
Structure Material	Steel		Fan Stack Height	120	inch
Fan Stack Material	FRP		Loading Factor	1.45	gpm/ft2
Fill Type	wood		Spray Nozzles #	196	
Without Louvers			Center to Center	7	ft
Type: Square edge beams and square columns			Distance of Nozzles		
Fan Qty	1		Cell Length	42	ft
Fan Diameter	6	ft	Cell Width	42	ft
Fan Total Efficiency	90	%	Extra Dimension from the		
Motor Efficiency	90	%	Trailing Edge of Blade	5.73	inch
Maximum Deflection			Vertical Dimension of Blade	14	inch
of Blade Tip	6	inch	Tip Qmax. Pitch Angle		

Output Data :

Capacity :	93750000	Btuh	Maximum Fan Blade Qty		
Fill Area	1764	ft2	Water Evaporation Rate	13447.62	lb/min
Cooling Tower Range	15	°F	Water Consumption Rate	2140654.74	ft3/min
Cooling Tower demand	1.53		Minimum Blades Qty	5 each	
Characteristic			Trouble Free	4	BHP/Blade
Fill Length	1.48	ft	Maximum BHP/Blade	8	
Air P.Drop through	0.21	inch H2O			
coolingTower					
Fan Motor Power	423.83	hp			
Pump Head	11.48	ft			
Pump Power	4.71				

Prepared By

Checked By

Approved By



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