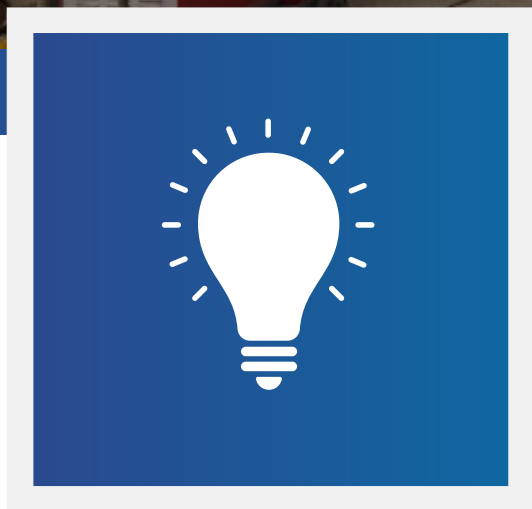
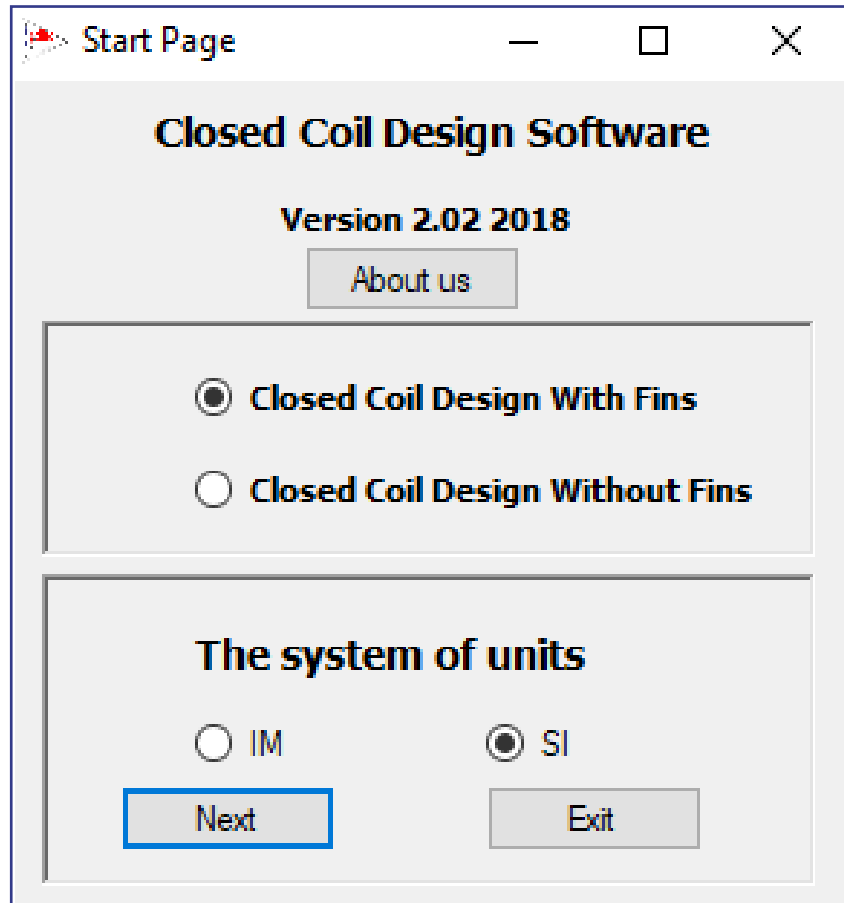




Closed Coil for Cooling Tower

Start Page



A screenshot of a software window titled "Start Page". The window has a standard Windows-style title bar with minimize, maximize, and close buttons. The main content area is light gray and contains the following elements:

- Closed Coil Design Software** (Section Header)
- Version 2.02 2018** (Text)
- About us** (Button)
- A group box containing two radio button options:
 - ☒ **Closed Coil Design With Fins**
 - ☐ **Closed Coil Design Without Fins**
- The system of units** (Section Header)
- Two radio button options for units:
 - ☐ **IM**
 - ☒ **SI**
- Next** (Button, highlighted with a blue border)
- Exit** (Button)

Closed Coil Design With Fins

INPUT DATA

Capacity	15000	W
Air Flow	11043.47	m ³ /h
Fluid Type	Water	10 %
Coil Size	3/8	
Outer Diameter	0.00952	m
Inner Diameter	0.00856	m
Altitude	0	m

On Coil Dry Bulb Temp.	26.7	°C
☒ On Coil Wet Bulb Temp.	19.4	°C
☐ Relative Humidity	50	%

Water In Temp.	50	°C
☒ Water Out Temp.	40	°C
☐ Flow Rate	0.3	l/s

Coil Length	1.6256	m
	0.7112	m

Tube Shape	Smooth
Tube Material	Steel
Riffled Tube Affect Percentage	10 %

Fins Type	Flat
Fins Material	Aluminum

OUTPUT DATA

Specifications

Vertical Pitch	0.0254	m
Horizontal Pitch	0.022	m
Rows No.	1	
Tube No. per Row	28	
Circuit No.	7	
Fins per Length	630	

Performance

Capacity	11352.19	W
Off Coil Temp.	20.46	°C
Water Flow Rate	0.27	l/s
Fluid Pressure Drop	5.6	kPa
Static Pressure	25.66	Pa
Header Size	16	mm
Connection Size	15	mm

Calculate	Print	Save
Back	Exit	New Calculation
Retreive Data		

ID	Capacity	RowsNo	FinsperLengt	TubeNo	Circuits	VerticalPitch	Horizor
21	10747.34	1	551	28	7	0.0254	0.022
26	11352.19	1	630	28	7	0.0254	0.022
27	11088.52	1	630	28	14	0.0254	0.022
28	10712.7	1	630	28	28	0.0254	0.022

Closed Coil Design Without Fins

INPUT DATA

Capacity	200000	W
Air Flow	50000	m ³ /h
Fluid Type	Water	10 %
Coil Size	3/4	
Outer Diameter	0.0269	m
Inner Diameter	0.0219	m
Altitude	0	m

On Coil Dry Bulb Temp.	27	°C
☒ On Coil Wet Bulb Temp.	24	°C
☐ Relative Humidity	78.37	%

Water In Temp.	50	°C
☒ Water Out Temp.	40	°C
☐ Flow Rate	0.3	l/s

Coil Length	3	m
Coil Width	1.5	m
Tube Shape	Smooth	
Tube Material	Steel	
Riffled Tube Affect Percentage	10	%

OUTPUT DATA

Specifications

Vertical Pitch	0.032	m
Horizontal Pitch	0.115	m
Rows No.	3	
Tube No. per Row	94	
Circuit No.	47	

Performance

Capacity	428287.76	W
Off Coil Temp.	29.78	°C
Water Flow Rate	10.25	l/s
Fluid Pressure Drop	4.06	kPa
Header Size	89	mm
Connection Size	76	mm

Calculate

Print

Save

Back

Exit

New Calculation

Retreive Data

ID	Capacity	RowsNo	FinsperLengt	TubeNo	Circuits	VerticalPitch	HorizontalPitch
1	428287.76	3	0	94	47	0.032	0.115
2	558608.22	4	0	94	47	0.032	0.115

Closed Coil for Cooling Tower Report

Units: SI

Project Name: test

Input Data :

Capacity:	50000	W		
Air Flow:	8000	m3/h	Hot Water In Temp.:	40 °C
Fluid Type:	Water		Cold Water Out Temp.:	32 °C
Coil Size:	5/8		Coil Length (L):	1.6 m
Outer Diameter:	0.015875	m	Coil Width (W):	1.5 m
Inner Diameter:	0.014875	m	Tube Shape:	Smooth
Altitude:	0	m		
Ambient Dry Bulb Temp.:	35	°C		
Ambient Wet Bulb Temp.:	28	°C		

Output Data :

PERFORMANCE

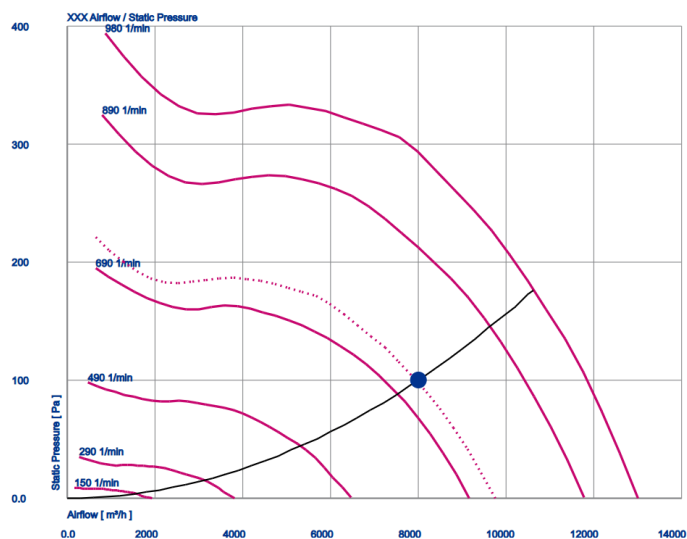
Coil Geometry :

Vertical Pitch:	0.038	m
Horizontal Pitch:	0.033	m
Row No.:	3	
Tube No. per Row:	2	
Circuit No.:	45	
Fill Area:	115	m ²
Total Number Of Tubes:	270	

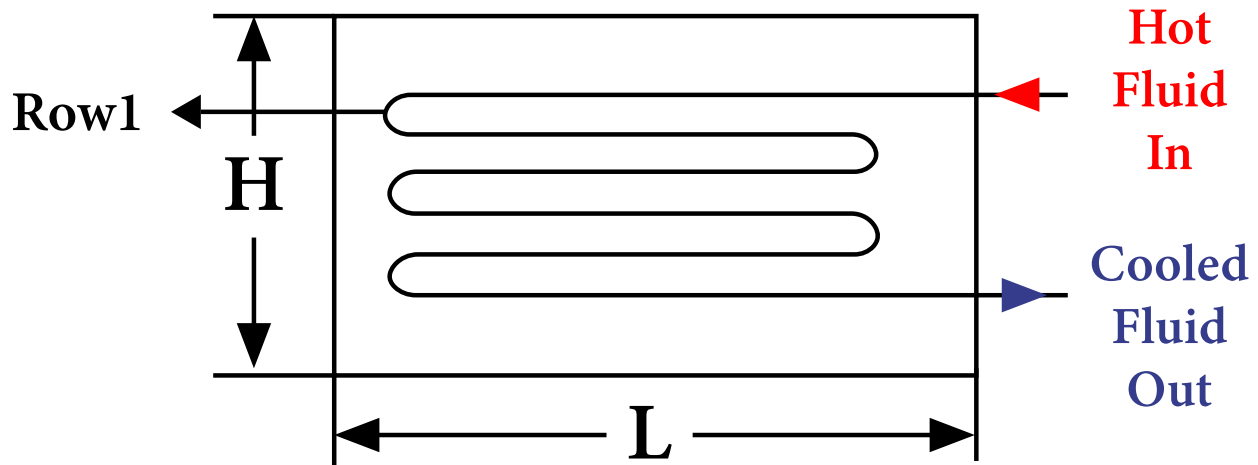
Capacity:	58463.2	W
Water Flow Rate:	1.75	l/s
Fluid Pressure Drop:	2.27	kPa
Header size:	42	mm
Connection Size:	35	mm
Fan Qty:	3	
Tube Bank Height (H):	0.228	m → [0.038 * 6]

SFP Class	1
SFP Value	WS/m ² 165
Motor Brand	ECblue
IE Class	IE5
Airflow	m ³ /h 8000
Static Pressure	Pa 100
Dynamic Pressure	Pa 10
Total Pressure	Pa 110
Air Velocity	m/s 4.2
Grille Influence	None
RPM	1/min 734
Max Rpm	980
RPM Percentage	% 75
Absorbed Power	W 368
Power	W 1000
Static Efficiency	% 60.5
Total Efficiency	% 66.7
Current	A 1.62
Nominal Current	A 3.60 - 5.00
Phases	~ 1
Voltage	V 230
Frequency	Hz 50
Kfactor	530

Measured in standard nozzle in installation type A according to ISO 5801



Closed Coil for Cooling Tower Report



Prepared By:

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