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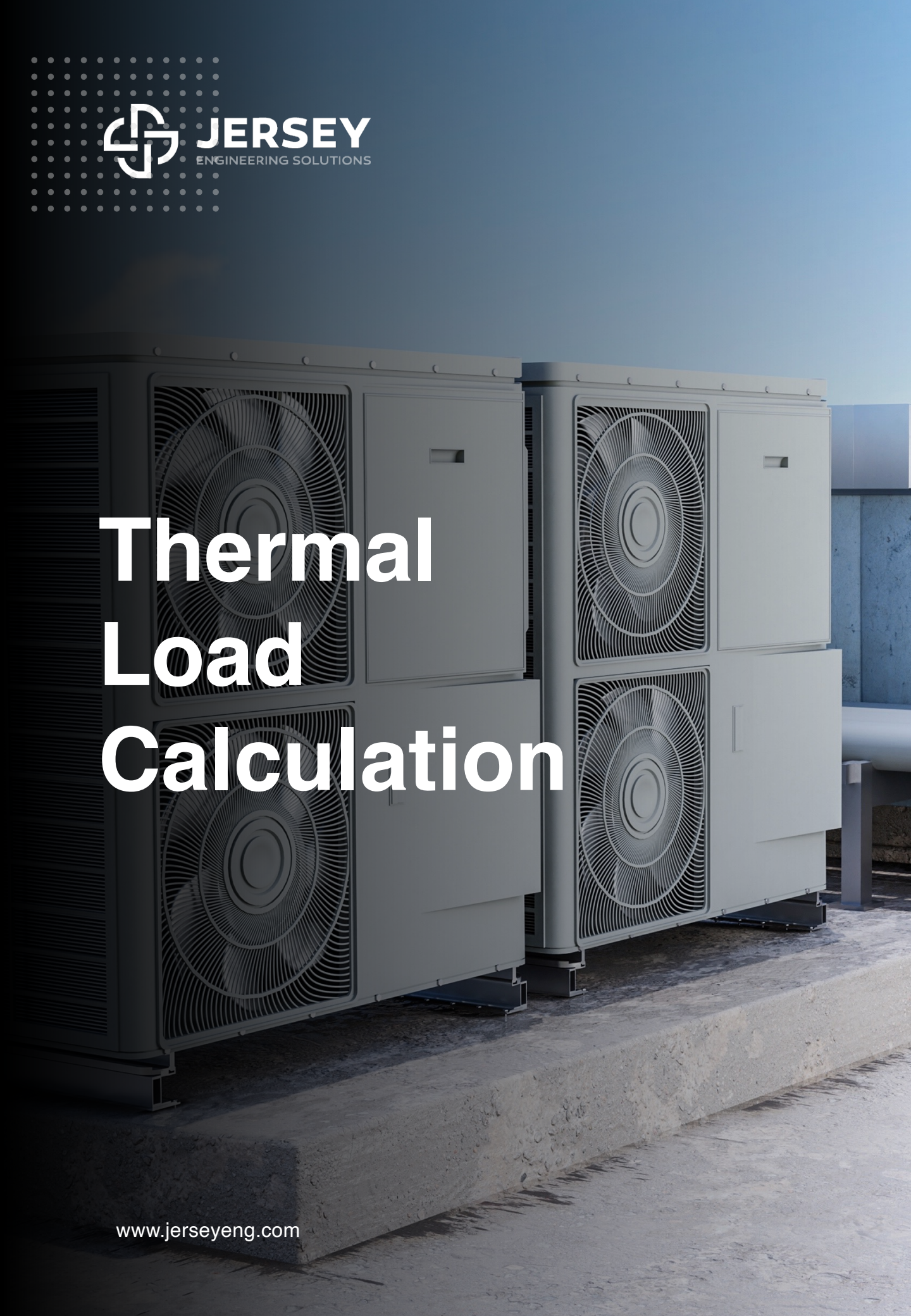
Thermal Load Calculation



www.jerseyeng.com

Unlocking Engineering Possibilities

JERSEY
ENGINEERING SOLUTIONS

Helping the MEP industry, mechanical reps & design build contractors, by freeing them to be their best

We've combined US based engineering expertise and industry specific experience with our 200 plus professional team of engineers in India and Qatar who skillfully manage your engineering design related workload so that your organization can cherish the much needed freedom to explore a new world of possibilities.

05 +

LOCATIONS

Our services are distributed across 5 countries making us truly international.

08 +

EXPERIENCE

Leadership team with a solid five decade plus HVAC market experience & eight plus years in the service industry.

200 +

STRENGTH

Our team comprises of over 200+ skilled professionals from different engineering fields.

13,000 +

SERVICES

We have completed more than 13,000+ projects across the World.

THERMAL LOAD CALCULATIONS

JERSEY
ENGINEERING SOLUTIONS

We specialize in delivering comprehensive KPO services tailored specifically for accurate and detailed thermal load calculations. Our expertise lies in providing precise assessments crucial for efficient HVAC system design and optimization.

HEAT LOAD ANALYSIS

We conduct meticulous heat load analysis considering factors such as building materials, occupancy, equipment, and climate conditions to determine accurate thermal loads.

HVAC SYSTEM DESIGN SUPPORT

Our experts provide support in designing HVAC systems by delivering detailed calculations essential for selecting appropriately sized heating and cooling equipment.

ENERGY EFFICIENCY OPTIMIZATION

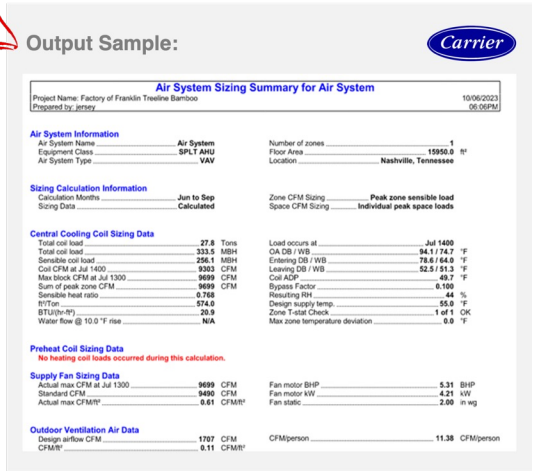
We optimize thermal load calculations to ensure the selection of HVAC equipment that meets required loads while minimizing energy consumption.

TROUBLESHOOTING & ASSESSMENT

In cases of inefficient heating or cooling, we offer troubleshooting services to assess and rectify thermal load-related issues.

Output Sample:

Carrier



Air System Sizing Summary for Air System

Project Name: Factory of Franklin Treeline Bamboo — 10/06/2023 06:06PM
Prepared by: jersey

Air System Information

Air System Name	Air System	Number of zones	1
Equipment Class	SPLT AHU	Floor Area	15950.0 ft²
Air System Type	VAV	Location	Nashville, Tennessee

Sizing Calculation Information

Calculation Months	Jun to Sep	Zone CFM Sizing	Peak zone sensible load
Sizing Data	Calculated	Space CFM Sizing	Individual peak space loads

Central Cooling Coil Sizing Data

Total coil load	27.8	Tons	Load occurs at	Jul 1400	
Total coil load	333.5	MBH	OA DB / WB	94.1 / 74.7	°F
Sensible coil load	256.1	MBH	Entering DB / WB	78.6 / 64.0	°F
Coil CFM at Jul 1400	9303	CFM	Leaving DB / WB	52.5 / 51.3	°F
Max block CFM at Jul 1300	9699	CFM	Coil ADP	49.7	°F
Sum of peak zone CFM	9699	CFM	Bypass Factor	0.100	
Sensible heat ratio	0.768		Resulting RH	44	%
ft²/Ton	574.0		Design supply temp.	55.0	°F
BTU/(hr-ft²)	20.9		Zone T-stat Check	1 of 1	OK
Water flow @ 10.0 °F rise	N/A		Max zone temperature deviation	0.0	°F

Preheat Coil Sizing Data

No heating coil loads occurred during this calculation.

Supply Fan Sizing Data

Actual max CFM at Jul 1300	9699	CFM	Fan motor BHP	5.31	BHP
Standard CFM	9490	CFM	Fan motor kW	4.21	kW
Actual max CFM/ft²	0.61	CFM/ft²	Fan static	2.00	in wg

Outdoor Ventilation Air Data

Design airflow CFM	1707	CFM	CFM/person	11.38	CFM/person
CFM/ft²	0.11	CFM/ft²			

HAP v6

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