



Building Analysis Both Offices LoadCalcs

Job: Project
Date: Date
By: Designer
Plan: XX-XXXX

Lancaster, KY40444 Phone: 813-539-5118 Email: info@lcalcs.com Web: www.lcalcs.com

Project Information

For: Project
Address, City, State Zip

Design Conditions

Location:

Dallas Executive, TX, US
Elevation: 658 ft
Latitude: 33°N

Outdoor:

Dry bulb (°F)
Daily range (°F)
Wet bulb (°F)
Wind speed (mph)

Heating

25
-
-
15.0

Cooling

100
20 (M)
74
7.5

Indoor:

Indoor temperature (°F)
Design TD (°F)
Relative humidity (%)
Moisture difference (gr/lb)

Heating

70
45
40
40.6

Cooling

75
25
50
20.4

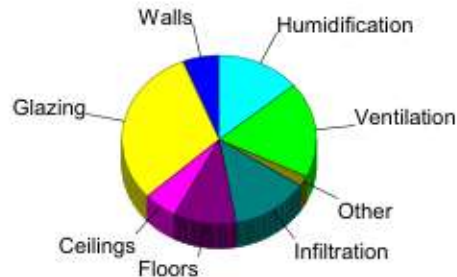
Infiltration:

Method
Construction quality

Simplified
Average

Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.4	2259	6.1
Glazing	31.6	11281	30.6
Doors	0	0	0
Ceilings	1.3	2074	5.6
Floors	2.3	3822	10.4
Infiltration	13.4	4773	13.0
Ducts		726	2.0
Piping		0	0
Humidification		5118	13.9
Ventilation		6762	18.4
Adjustments		0	0
Total		36814	100.0



Cooling

Aug 1700 LDT

Component	Btuh/ft²	Btuh	% of load
Walls	2.0	1343	3.1
Glazing	59.3	21137	49.5
Doors	0	0	0
Ceilings	1.8	2904	6.8
Floors	0	0	0
Infiltration	0	0	0
Ducts		1141	2.7
Ventilation		3547	8.3
Internal gains		12651	29.6
Blower		0	0
Adjustments		0	0
Total		42723	100.0



Latent Cooling Load = 3524 Btuh

Overall U-value = 0.100 Btuh/ft²-°F, Window / Floor Area = 21.8 %

Data entries checked.



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Right-Suite® Universal 2026 26.0.02 RSU58644

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Component Constructions Both Offices LoadCalcs

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Design Conditions

	Htg	Clg		Htg	Clg
Outside db (°F)	25	100	Inside db (°F)	70	75
Outside RH (%)	80	29	Inside RH (%)	40	50
Outside wb (°F)	23	74	Inside wb (°F)	56	62
Daily range (°F)	-	20	Design TD (°F)	45	25
Moisture diff. (gr/lb)	40.6	20.4			

Construction descriptions

	Or	Area ft²	U-value (Btu/h·ft²·°F)	UA (Btu/h·°F)	Loss (Btu/h)	Gain (Btu/h)
Walls Frm wall, brk 4" ext, 3/8" wood shth, r-13 cav ins, 5/8" gypsum board int fnsh, 2"x6" wood frm, 16" o.c. stud	ne	205	0.07	15.3	693	512
	nw	464	0.07	34.6	1566	831
	all	669	0.07	50.0	2259	1343

Partitions (none)

			htg	clg	htg	clg		
Windows 2 glazing, clr outr, air gas, mtl /w brk frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.50); 50% blinds 45°, medium; foreground = green grass (0.23); 1.5 ft overhang (6.29 ft window ht, 2 ft sep.); 7 ft head ht	ne	143	0.70	0.70	99.8	99.8	4512	4562
	nw	214	0.70	0.70	150	150	6768	16575
	all	357	0.70	0.70	250	250	11281	21137

Doors (none)

Ceilings Flat ceiling, membrane roof mat, mtl deck, r-30 deck ins, suspended, acoustical int fnsh, dead air plnm	1638	0.03	45.9	2074	2904
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Floors Bg floor, light dry soil, on grade depth, tile fir fnsh	86	0.99	84.6	3822	0
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Right-Suite® Universal 2026 Short Form

Both Offices

LoadCalcs

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Outside db	(°F)	Htg	Clg
Outside RH	(%)	25	100
Outside wb	(°F)	-	29
Daily range	(°F)	-	74
Moisture diff.	(gr/lb)	-	20
		-	20

Inside db	(°F)	Htg	Clg
Inside RH	(%)	70	75
Inside wb	(°F)	-	50
Design TD	(°F)	-	62
		45	25

Heating Equipment

Make	
Model	
AHRI ref.	
Type	Pkg gas furnace
Efficiency	81 AFUE
Heating Input	80.0 MBtuh
Heating Output	64.8 MBtuh
Humidifier	13.8 gpd
Leaving Air Temp	103.1 °F
Actual Heating Fan	1824 cfm

Cooling Equipment

Make	Trane
Cond	YSC048G3
Coil	
AHRI ref.	
Type	Pkg AC
Efficiency	12.0 EER, 14 SEER
Sensible Cooling	39.2 MBtuh
Latent Cooling	9.8 MBtuh
Total Cooling	49.0 MBtuh
Leaving Air Temp	55.0 °F
Actual Cooling Fan	1600 cfm

System Type	PEAKCV
Fan Motor Heat Type	PACKAGE
Fan & Motor Combined Efficiency	95.0 %
Static Pressure Across Fan	0.7 in H2O

NAME	Area ft²	Heat Loss	Sensible Gain	Latent Gain	Htg cfm	Clg cfm	Time
Office 1a	754	20804	22415	1622	1122	879	Aug 1700 LDT
Office 1b	884	16010	18276	1902	702	721	Aug 1700 LDT
Both Offices	1638	36814	40691	3524	1824	1600	Aug 1700 LDT



Right-Suite® Universal 2026 Load Summary
Both Offices
LoadCalcs

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Zone: Both Offices

COOLING LOAD

1. DESIGN CONDITIONS		at Aug 1700 LDT	Peak load at Aug 1800 LDT		
Inside:	75 °F	Outside:	100 °F	TD:	25 °F
OutRH:	29 %	MoistDiff:	20.4 gr/lb	Mult:	1.0
				Ins.wb	62 °F
				Sensible	Latent
2. SOLAR RADIATION THROUGH GLASS				12964	-
3. TRANSMISSION GAINS		Sensible		10366	-
Walls:		1244		-	-
Glass:		5831		-	-
Doors:		0		-	-
Partitions:		0		-	-
Floors:		0		-	-
Ceilings:		3291		-	-
4. INTERNAL HEAT GAIN		Sensible	Latent	12500	1638
Occupants:		1903	1638	-	-
Lights:		7368	-	-	-
Motors:		0	-	-	-
Appliances:		3229	0	-	-
5. INFILTRATION:		Outside air cfm:	0	0	0
6. SUBTOTAL:		Space load	Sensible	Latent	
Envelope			35830	1638	-
Less external			0	-	-
Redistribution			0	0	-
7. SUPPLY DUCT				1075	-
8. SUBTOTAL:		Space load + supply duct		36905	-
Actual cfm:		1600	at supply TD:	20	-
9. VENTILATION:		Make-up air cfm:	139	3786	1885
10. RETURN AIR LOAD:		Lighting + plenum (net)		0	-
11. RETURN DUCT				0	-
12. TOTAL LOADS ON EQUIPMENT				40691	3524

HEATING LOAD

13. DESIGN CONDITIONS		Inside:	70 °F	Outside:	25 °F	Mult:	1.0
14. TRANSMISSION LOSSES						TD:	45 °F
Walls:							19435
Glass:							-
Doors:							-
Partitions:							-
Floors:							-
Ceilings:							-
15. INFILTRATION:		Outside air cfm:				98	4773
16. SUBTOTAL:		Space load					24208
Envelope			24208				-
Less external			0				-
Less transfer			0				-
Redistribution			0				-
17. SUPPLY DUCT:							726
18. VENTILATION:		Make-up air cfm:				139	6762
19. HUMIDIFICATION							5118
Piping							0
20. RETURN DUCT							0
21. TOTAL HEATING LOAD ON EQUIPMENT							36814