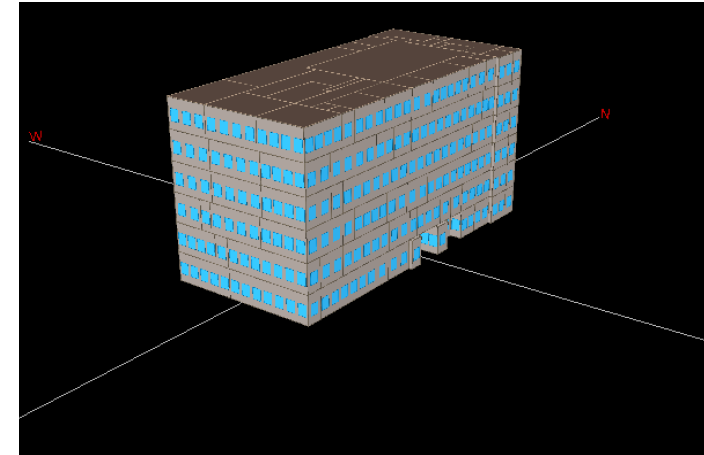


# vPanel Lightweight Insulation Panel ETTV Performance

Wall Material	9-in HW Concrete + Plaster	9-in Brick + Plaster	Hollow Core	vPanel 50	vPanel 100	vPanel 150	vPanel 200	vPanel 250	vPanel 300
<b>Thickness/Conductivity</b>									
Thickness, (mm)	225	225	100	50	100	150	200	250	300
For 100 mm thickness (W/m <sup>2</sup> K)	2.64	2.11	1.74	2.50	1.25	0.83	0.63	0.50	0.42
For 100 mm thickness (Btu/h-ft <sup>2</sup> -°F)	0.464	0.372	0.306	0.440	0.220	0.147	0.110	0.088	0.073

Wall Properties - [Brick Wall Assembly]					
Wall Assembly Name: <b>Brick Wall Assembly</b>					
Outside Surface Color: Dark					Absorptivity: 0.900
Layers: Inside to Outside	Thickness mm	Density kg/m <sup>3</sup>	Specific Ht. kJ/kg/K	R-Value m <sup>2</sup> -K/W	Weight kg/m <sup>2</sup>
Inside surface resistance	0.000	0.0	0.00	0.12064	0.0
1/2-in plaster	12.700	278.0	0.10	0.01050	3.5
9-in common brick	228.600	1922.2	0.84	0.31448	439.4
1/2-in plaster	12.700	278.0	0.10	0.01747	3.5
Outside surface resistance	0.000	0.0	0.00	0.01050	0.0
Totals	254.000			0.47	446.5
Overall U-Value: 2.111 W/m <sup>2</sup> K					

Wall Properties - [Concrete Wall Assembly]					
Wall Assembly Name: <b>Concrete Wall Assembly</b>					
Outside Surface Color: Dark					Absorptivity: 0.900
Layers: Inside to Outside	Thickness mm	Density kg/m <sup>3</sup>	Specific Ht. kJ/kg/K	R-Value m <sup>2</sup> -K/W	Weight kg/m <sup>2</sup>
Inside surface resistance	0.000	0.0	0.00	0.12064	0.0
1/2-in plaster	12.700	278.0	0.10	0.01050	3.5
9-in HW concrete block	228.600	977.1	0.84	0.22014	223.4
1/2-in plaster	12.700	278.0	0.10	0.01747	3.5
Outside surface resistance	0.000	0.0	0.00	0.01050	0.0
Totals	254.000			0.38	230.4
Overall U-Value: 2.637 W/m <sup>2</sup> K					



Input Parameters	Value	Units
Software Used	eQuest	
Total Area	51887	ft <sup>2</sup>
Conditioned Area	40835	ft <sup>2</sup>
Unconditioned Area	11052	ft <sup>2</sup>
Building Type	Office	
Bidling Levels	6	Nos.
Wall Area	21008	ft <sup>2</sup>
Window Area	8580	ft <sup>2</sup>
WWR	29	%
Roof Area	8673	ft <sup>2</sup>
Space Cooling Setpoint	22	°C
HVAC System	Water Cooled-Screw Chiller	
Chiller Capacity	155	TR
Chiller COP	4.5	
Electricity Rate	23.65	cents per kWh

	vPanel 50	vPanel 100	vPanel 150	vPanel 200	vPanel 250	vPanel 300
Weight, kg	35	55	83	110	138	165
Thickness, mm	50	100	150	200	250	300
U-value, W/m <sup>2</sup> K	2.5	1.25	0.83	0.63	0.5	0.42