

Required Values Needed Prior to Running Calculations	
13140.4	Allowable Leakage (CFM/ft <sup>2</sup> ) @ Reference pressure (inH <sub>2</sub> O)
32851	Building Enclosure (ft <sup>2</sup> )
0.4	Acceptable Leakage Rate (CFM/ft <sup>2</sup> )
13140	Acceptable CFM
902	E = Altitude Above Sea Level (Ft)

Required Field Measurements	
73	T <sub>in</sub> = Inside Temperature (F)
77	T <sub>out</sub> = Outside Temperature (F)
0.0012	P <sub>baseline1</sub> (Average of pre-test baseline readings)
0.0015	P <sub>baseline2</sub> (Average of post-test baseline readings)

Air Density	
0.0721	ρ <sub>in</sub> - Inside (lbm/ft <sup>3</sup> )
0.0716	ρ <sub>out</sub> - Outside (lbm/ft <sup>3</sup> )

Air Dynamic Viscosity	
0.0442	μ <sub>in</sub> (lbm/ft*hr)
0.0444	μ <sub>out</sub> (lbm/ft*hr)

Constants	
0.07517	ρ <sub>e</sub> (Standard Air Density) lbm/ft <sup>3</sup>
0.002629	b (lbm/(ft*hr)*F <sup>0.5</sup> )
198.7	s (F)
0.04359	μ <sub>e</sub> (Reference air viscosity)
1Pa = 0.00401" H <sub>2</sub> O	
1" H <sub>2</sub> O = 249 Pa	

Depressurization - Fan 1						
Reading #	Pressure	P <sub>avg</sub>	P <sub>enc</sub>	Airflow (CFM)	Q <sub>avg</sub>	Q <sub>enc</sub>
1	0.1000	0.0993	0.0980	3520	3371	3396
2	0.0982			3380		
3	0.1011			3335		
4	0.0990			3320		
5	0.0982			3300		
1	0.2987	0.2993	0.2980	6520	6389	6341
2	0.3003			6360		
3	0.2995			6285		
4	0.2991			6500		
5	0.2987			6280		
n = 0.56 0.45 ≤ n ≤ 0.80						
C (Flow Coefficient)		12266				
P <sub>ref</sub>	0.3					
Eff Leakage Area	409.73275					
Uncertainty Q <sub>ref</sub>	1.8%					
Bias of Q <sub>ref</sub>	2.1%					

Depressurization - Fan 2						
Reading #	Pressure	P <sub>avg</sub>	P <sub>enc</sub>	Airflow (CFM)	Q <sub>avg</sub>	Q <sub>enc</sub>
1	0.0918	0.0985	0.0971	3245	3303	3328
2	0.1015			3280		
3	0.1015			3315		
4	0.0974			3410		
5	0.1003			3265		
1	0.2995	0.2996	0.2983	6615	6591	6542
2	0.3016			6635		
3	0.2999			6590		
4	0.2991			6505		
5	0.2979			6610		
n = 0.60 0.45 ≤ n ≤ 0.80						
C (Flow Coefficient)		13333				
P <sub>ref</sub>	0.3					
Eff Leakage Area	423.84409					
Uncertainty Q <sub>ref</sub>	0.9%					
Bias of Q <sub>ref</sub>	2.1%					

Depressurization - Combined		
Reading #	Q <sub>avg</sub>	Q <sub>enc</sub>
1	6674	6724
2		
3		
4		
5		
1	12980	12883
2		
3		
4		
5		