

Functional Performance Test

[Project Name]

System: **Exterior Enclosures** Test: **ASTM-E779-2003** Service: **Building Envelope**

Functional Performance Test	Pass	Fail	Remarks
AMBIENT CONDITIONS			
Measure interior-exterior temperature			Inside = _____ °F
			Outside = _____ °F
Calculated temperature differential (exterior °F – interior °F)			$\Delta T =$ _____ °F
Stack pressure condition verified			$(\Delta T)(\text{Bldg. Height}) < 1180 \text{ft}^{\circ}\text{F}$
Measure approximate wind velocity < 4 MPH			North= _____ MPH
			West= _____ MPH
			South= _____ MPH
			East= _____ MPH
Interior doors open; closet doors closed			
Shut off HVAC and Supply Fans			
Shut off Exhaust Fans			
Average Bias ΔP for building baseline			DB ₁ _____ Pa
Average Bias ΔP for building baseline			DB ₂ _____ Pa
Measure Airflow ₁			Airflow DB ₁ = _____ CFM
Measure Airflow ₂			Airflow DB ₂ = _____ CFM
Total Measure Airflow			Airflow $\tau =$ _____ CFM
TEST SITE SEA LEVEL ELEVATION			1st Floor Elev. = _____ FEET

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<i>Functional Performance Test</i>	<i>Pass</i>	<i>Fail</i>	<i>Remarks</i>
DEPRESSURIZATION DOOR BLOWER TEST#1			
Tested ΔP for building			DB ₁ _____ Pa
Tested ΔP for building			DB ₂ _____ Pa
Measure Airflow DB ₁			Airflow DB ₁ = _____ CFM
Measure Airflow DB ₂			Airflow DB ₂ = _____ CFM
Total Measured Airflow			Airflow τ = _____ CFM
Turn Blower Off			
Average ΔP for building			_____ Pa
Adjusted average ΔP for building			_____ Pa
DEPRESSURIZATION DOOR BLOWER TEST#2			
Tested ΔP for building			DB ₁ _____ Pa
Tested ΔP for building			DB ₂ _____ Pa
Measure Airflow DB ₁			Airflow DB ₁ = _____ CFM
Measure Airflow DB ₂			Airflow DB ₂ = _____ CFM
Total Measured Airflow			Airflow τ = _____ CFM
Turn Blower Off			
Average ΔP for building			_____ Pa
Adjusted average ΔP for building			_____ Pa
DEPRESSURIZATION DOOR BLOWER TEST#3			
Tested ΔP for building			DB ₁ _____ Pa
Tested ΔP for building			DB ₂ _____ Pa
Measure Airflow DB ₁			Airflow DB ₁ = _____ CFM
Measure Airflow DB ₂			Airflow DB ₂ = _____ CFM
Total Measured Airflow			Airflow τ = _____ CFM
Turn Blower Off			
Average ΔP for building			_____ Pa
Adjusted average ΔP for building			_____ Pa
DEPRESSURIZATION DOOR BLOWER TEST#4			
Tested ΔP for building			DB ₁ _____ Pa
Tested ΔP for building			DB ₂ _____ Pa
Measure Airflow DB ₁			Airflow DB ₁ = _____ CFM
Measure Airflow DB ₂			Airflow DB ₂ = _____ CFM
Total Measured Airflow			Airflow τ = _____ CFM
Turn Blower Off			
Average ΔP for building			_____ Pa
Adjusted average ΔP for building			_____ Pa

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<i>Functional Performance Test</i>	<i>Pass</i>	<i>Fail</i>	<i>Remarks</i>
DEPRESSURIZATION DOOR BLOWER TEST#5			
Tested ΔP for building			DB ₁ _____ Pa
Tested ΔP for building			DB ₂ _____ Pa
Measure Airflow DB ₁			Airflow DB ₁ = _____ CFM
Measure Airflow DB ₂			Airflow DB ₂ = _____ CFM
Total Measured Airflow			Airflow τ = _____ CFM
Turn Blower Off			
Average ΔP for building			_____ Pa
Adjusted average ΔP for building			_____ Pa
DEPRESSURIZATION DOOR BLOWER TEST#6			
Tested ΔP for building			DB ₁ _____ Pa
Tested ΔP for building			DB ₂ _____ Pa
Measure Airflow DB ₁			Airflow DB ₁ = _____ CFM
Measure Airflow DB ₂			Airflow DB ₂ = _____ CFM
Total Measured Airflow			Airflow τ = _____ CFM
Turn Blower Off			
Average ΔP for building			_____ Pa
Adjusted average ΔP for building			_____ Pa
PRESSURIZATION DOOR BLOWER TEST#1			
Tested ΔP for building			DB ₁ _____ Pa
Tested ΔP for building			DB ₂ _____ Pa
Measure Airflow DB ₁			Airflow DB ₁ = _____ CFM
Measure Airflow DB ₂			Airflow DB ₂ = _____ CFM
Total Measured Airflow			Airflow τ = _____ CFM
Turn Blower Off			
Average ΔP for building			_____ Pa
Adjusted average ΔP for building			_____ Pa
PRESSURIZATION DOOR BLOWER TEST#2			
Tested ΔP for building			DB ₁ _____ Pa
Tested ΔP for building			DB ₂ _____ Pa
Measure Airflow DB ₁			Airflow DB ₁ = _____ CFM
Measure Airflow DB ₂			Airflow DB ₂ = _____ CFM
Total Measured Airflow			Airflow τ = _____ CFM
Turn Blower Off			
Average ΔP for building			_____ Pa
Adjusted average ΔP for building			_____ Pa

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<i>Functional Performance Test</i>	<i>Pass</i>	<i>Fail</i>	<i>Remarks</i>
PRESSURIZATION DOOR BLOWER TEST#3			
Tested ΔP for building			DB ₁ _____ Pa
Tested ΔP for building			DB ₂ _____ Pa
Measure Airflow DB ₁			Airflow DB ₁ = _____ CFM
Measure Airflow DB ₂			Airflow DB ₂ = _____ CFM
Total Measured Airflow			Airflow τ = _____ CFM
Turn Blower Off			
Average ΔP for building			_____ Pa
Adjusted average ΔP for building			_____ Pa
PRESSURIZATION DOOR BLOWER TEST#4			
Tested ΔP for building			DB ₁ _____ Pa
Tested ΔP for building			DB ₂ _____ Pa
Measure Airflow DB ₁			Airflow DB ₁ = _____ CFM
Measure Airflow DB ₂			Airflow DB ₂ = _____ CFM
Total Measured Airflow			Airflow τ = _____ CFM
Turn Blower Off			
Average ΔP for building			_____ Pa
Adjusted average ΔP for building			_____ Pa
PRESSURIZATION DOOR BLOWER TEST#5			
Tested ΔP for building			DB ₁ _____ Pa
Tested ΔP for building			DB ₂ _____ Pa
Measure Airflow DB ₁			Airflow DB ₁ = _____ CFM
Measure Airflow DB ₂			Airflow DB ₂ = _____ CFM
Total Measured Airflow			Airflow τ = _____ CFM
Turn Blower Off			
Average ΔP for building			_____ Pa
Adjusted average ΔP for building			_____ Pa
PRESSURIZATION DOOR BLOWER TEST#6			
Tested ΔP for building			DB ₁ _____ Pa
Tested ΔP for building			DB ₂ _____ Pa
Measure Airflow DB ₁			Airflow DB ₁ = _____ CFM
Measure Airflow DB ₂			Airflow DB ₂ = _____ CFM
Total Measured Airflow			Airflow τ = _____ CFM
Turn Blower Off			
Average ΔP for building			_____ Pa
Adjusted average ΔP for building			_____ Pa

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Functional Performance Test		Pass	Fail	Remarks
Number	Remarks			
SF	square feet			
Hz	Hertz of the variable frequency drive operating			
in. W.C.	inches Water Column			
MPH	Mile Per Hour			
CFM	Cubic Feet per Minute			
CFM _{ref}	Air Leakage at ASTM E779 reference ΔP = Total SF for building _____ x ≤ 0.25 CFM/SF @ 75 Pa = _____ CFM			
ft	feet			
Q	volumetric flow rate (CFM) of building air leakage			
	$Q = [CFM_{ref}^2 \times (\Delta P / .05)]^{1/2}$			
1	Building Floor Area = _____ SF			
2	Wall Perimeter = _____ FT			
3	Overall Wall Area = _____ SF			
4	Overall Roof Area = _____ SF			
5	Tested Building Enclosure – _____ SF + _____ SF + _____ SF = _____ SF			
6	Building Volume = _____ CF			
7	Bldg. Air Leakage = Q / _____			
8	Bldg. Air Leakage = _____ CFM/sf @ _____ Pa (ASTM E779 Reference ΔP)			
9	Bldg. Air Leakage = _____ CFM/sf @ _____ Pa (Typical ΔP Condition)			

Cx Agent:	Record Participants and Date

