



ATTENTION: All Total Door Distributors/Sales Reps

DATE: April 17, 2013

REGARDING: UL 1784 Testing

There has been quite a bit of confusion regarding the UL 1784 testing requirements.

What is causing all of the confusion? IBC 2012 Section 713.14.1. Exception #3.

“Enclosed elevator lobbies are not required when additional doors are provided at the hoistway opening in accordance with section 3002.6. Such doors shall comply with the smoke and draft control door assembly requirements in section 716.5.3.1 when tested in accordance with UL 1784 without an artificial bottom seal.”

What is an artificial bottom seal?

During the UL 1784 test, tape is used across the bottom of the door to seal off the undercut. This allows the jambs and header to be tested for air leakage. The tape used across the bottom of the door is referred to as an artificial seal.

Code officials want to know that the doors have been tested without an artificial bottom seal (tape) to ensure that the door assemblage will not exceed the 3 CFM per square foot of door opening at .10 in. of water for both the ambient temperature as well as elevated temperature tests as required by IBC smoke and draft control fire door assemblies.

In order to ensure that total Door complies with these new requirements, we decided to test our system without an artificial bottom seal and tested three options:

1. No sweep used. Failed the test due to the fact that the chamber could not even get up to pressure.
2. Approved Brush sweep. Failed due to the fact that the chamber could not even get up to pressure.
3. Mortised sweep. Passed with flying colors.

Conclusion:

All doors being ordered for elevator hoistway enclosures must be ordered with a 3/8” undercut and a mortised sweep.

Please note: Bottom caps are not available on doors with mortised sweeps.

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IT IS THE DISTRIBUTOR’S RESPONSIBILITY TO IDENTIFY THESE DOORS ON THEIR ORDERS – PLEASE INPUT THIS INFORMATION IN THE COMMENTS SECTION OF THE ORDER.



Client Openings DBA Total Door
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5 Testing and Evaluation Results

5.1. RESULTS AND OBSERVATIONS

Closing Force = 8 lbs. Area = 42 ft²

Configuration	Test Pressure (”H ₂ O)	Chamber Temp (°F)	Sample Leakage (SCFM)	Leakage Rate (SCFM/ft ²)
Inswing	0.05	69	35.66	0.85
	0.10	70	52.98	1.26
	0.20	71	74.93	1.78
	0.30	72	95.51	2.27
Outswing	0.05	69	42.09	1.00
	0.10	70	62.21	1.48
	0.20	71	91.85	2.19
	0.30	72	115.23	2.74
Outswing Elevated Temp.	0.05	394	21.47	0.51
	0.10	397	32.95	0.78
	0.20	396	46.04	1.10
	0.30	396	58.99	1.40

Note: All tests were conducted without an artificial bottom seal.

5.1.1. Statement of Measurement Uncertainty

All measurements were taken with 95% confidence level. Pressure measurements were taken with an inclined manometer (WHI #173) with an accuracy of +/- 0.02” w.c. Air flow measurements were taken with a laminar flow element (WHI #562) with an accuracy of +/- 1% of reading. Temperature measurements were taken with a thermocouple meter (WHI #95) with an accuracy of +/- 2 degrees.