



UNDERWRITERS LABORATORIES INC.

1655 SCOTT BOULEVARD · SANTA CLARA, CALIFORNIA 95050-4169

an independent, not-for-profit organization testing for public safety

E92690, 88SC00771

February 26, 1988

Won-Door Corporation
1865 South 3480 West
Salt Lake City, UT 84104

Attention: Mr. Carl Goodman - Chief Engineer

Subject: Special Services Project for Compliance to
NFPA 80, Chapter 7, as Requested per your
December 11, 1987 Letter

Dear Carl:

This letter is to advise you of the results of our visit to your facility the week of January 18, 1988, to determine compliance to NFPA 80, Chapter 7, requirements. This information was requested by the Southern Building Code Congress International (SBCCI). This information is only to be used for your company and is to be furnished to the SBCCI for their use only.

In no event shall UL be responsible to anyone for whatever use or non use is made of the information contained in this report and in no event shall UL, its employees, or its agents incur any obligations or liability for damage, including, but not limited to consequential damages arising out of or in connection with the use, or inability to use, information contained in this report.

The issuance of this report in no way implies Listing, Classification, or other recommendation by UL and does not authorize the use of UL Listing or Classification Marks or other reference to UL on or in connection with the product or system.

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The horizontally sliding accordion or folding door manufactured by Won-Door Corp. complies with NFPA 80, Chapter 7, except as noted below.

Look For The ® Listing or Classification Mark On The Product

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Paragraphs 7-1.1 through 7-1.5, Section 7-1.7, paragraphs 7-2.1, 7-2.3, 7-7.1 and 7-7.2 relate to specific installation criteria which the installers of the product need to know. Won-Door Corporation plans to update their instructions (Fireguard Frame Installation Guide and Owner's Guide, Fire Detector Section) with a reference that the frame assembly must be installed per NFPA 80, 1986 Edition, Chapter 7, for Installation of Special Purpose Horizontally Sliding Accordion or Folding Doors.

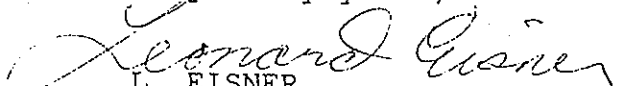
With regards to paragraph 7-5.2, it was determined that once the smoke detector connected to the system tripped into alarm state the relay changes state causing the system to close the doors automatically with no delay time involved.

With regards to paragraphs 7-5.4, 7-5.5, and 7-6, please refer to the attached appendix for results of the following tests: 50 Cycle Test, 500°F test, and Closing Speed Test.

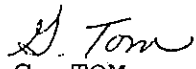
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This completes our work under Project 88SC00771, and we have instructed our Accounting Dept to render our final billing for engineering charges.

Very truly yours,


L. EISNER
Associate Project Engineer
Burglary, Protection and
Signaling Department
Extension: 2250

Reviewed by:


G. TOM
Engineering Group Leader
Fire Protection Department
Extension 2438

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Encl.

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A P P E N D I X50 CYCLE TEST:

METHOD

The fire door sample was subjected to 50 cycles of opening and closing while primary power was disconnected. One cycle consists of the door opening and closing completely. (Reference NFPA 80, paragraph 7-5.4.)

RESULTS

The fire door sample operated as intended after the 50 cycles of operation with the primary AC power disconnected.

500°F TEST:

METHOD

Calibrated thermocouples were placed inside the fire door sample just above and below the thermostat. The outside of the door was heated until the power operation discontinued to operate the fire door. The fire door was heated by a MAPP Gas Cylinder (torch). Five trials were conducted on this door and the results were recorded as follows.

RESULTS

The following table records when thermolock-out occurred. Thermolock-out is when the power operation discontinues. (Reference NFPA 80, paragraph 7-5.5.)

<u>Trial Numbers</u>	<u>Thermolock-Out Occurred At</u>
1	620°F (reason; extremely fast temperature rise, approximately 100°F for 20 seconds)
2	420°F
3	430°F
4	425°F
5	420°F

CLOSING SPEED TEST:

METHOD I

A 10 ft. (120 in.) length of fire door was measured out. The fire door was opened and closed over this measure of length to determine its speed in inches per second. (Reference NFPA 80, paragraph 7-6.)

RESULTS I

Lead Post Drive System

<u>Test No.</u>	<u>Door Status</u>	<u>Time (Seconds)</u>	<u>Rate of Closing/Opening (Calculated in./sec)</u>
1	Closing	19.4	6.19
2	Opening	18.3	6.55
3	Closing	18.5	6.49

METHOD II

Same as Method I except measured out a 6 ft. (72 in.) length of fire door.

RESULTS II

Model 7500

<u>Test No.</u>	<u>Door Status</u>	<u>Time (Seconds)</u>	<u>Rate of Closing/Opening (Calculated in./sec)</u>
1	Closing	7.3	9.86
2	Closing	6.9	10.43
3	Opening	7.6	9.47