

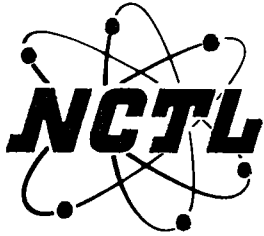
**SECURE DOOR**

**STRUCTURAL PERFORMANCE TEST REPORT**

Series "180" Vertical Bracing System

NCTL-210-2064-1 (S)

**NATIONAL CERTIFIED TESTING LABORATORIES**



## **NATIONAL CERTIFIED TESTING LABORATORIES**

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### **STRUCTURAL PERFORMANCE TEST REPORT**

Report No: NCTL-210-2064-1 (S)  
Test Date: 06/18/98  
Report Date: 02/03/04  
Expiration Date: 06/30/08

**Client:** Secure Door  
1540 NW 101<sup>st</sup> Avenue  
Plantation, FL 33322

**Test Specimen:** Secure Door Series "180" Vertical Bracing System.

**Test Method:** ASTM E330-90, "The Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference."

#### **GARAGE DOOR DESCRIPTION**

**General:** The door tested was a standard embossed raised panel steel door 16' 0" wide opening by 7' 0" high. The door was assembled in the wood test buck in accordance with the manufacturer's installation instructions. Guide sections were attached with five track brackets to No. 2 Southern Yellow Pine pressure treated 2 x 6 wood jambs in the test chamber. The door was fabricated with 3 center stiles plus an additional stile was placed between the glazing in the top section only. There were eight glazed openings in the top section, each approximately 12" x 17". The sections were fabricated from a nominal 0.0175" thick sheet steel.

#### **TEST SPECIMEN DESCRIPTION**

**Model/Series:** "180"

**Overall Size:** 8' 3 1/4"

**Configuration:** Telescope type reinforcing brace

**Number & Size of Braces:** Two (2) outer braces 4'9 1/8" high by 0'21/4" wide.  
Inner brace 4'9 1/8" high by 0'21/4" wide.

**Brace Material:** Extruded aluminum

**Hardware:**

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Retainer brace	Four (4)	At each door
	Twelve (12) total	Pivot hinge
Anchor Plate	Two (2)	Top and bottom of each vertical brace.

**Installation:** Each aluminum vertical brace was anchored at the bottom using a 10 gauge thick galvanized steel floor plate. Three (3) 1/2" wedge and anchor secured the floor plate to the concrete floor section. A 10 gauge thick galvanized steel top plate component was fastened to the test buck using four (4) (# 14 x 2 1/2") Hex head screws. A 3/8" x 2 1/2" x 6" "U" bolt secured the top portion of the brace to the top plate component. Four (4) 12 gauge thick galvanized steel deflection brackets were used to secure the vertical brace to garage door pivot hinges.

**Glazing:** The fixed lite was exterior glazed 1/4" thick annealed glass with a silicone back-bedding and exterior extruded aluminum glazing bead.

**Weatherseals:** No weatherseals employed.

**Weeps:** No apparent weeps employed.

**Interior & Exterior Surface Finish:** White painted aluminum

**Sealant:** The frame corners were sealed with a silicone sealant.

**Test Results**

**Note:** Uniform structural loads were performed on a standard 16'0" wide by 7'0" high garage door. The following results were obtained.

<u>Test Method</u>	<u>Title of Test</u>	<u>Measured</u>	<u>Allowed</u>
ASTM E330-90	Uniform Load Structural		
	12.74 psf interior	See Note No. 1	
	12.74 psf = (70) mph velocity		

**Note No. 1:** Deflection at the door bottom was so excessive that successful recovery of the product could not be obtained.

**Note No. 2:** At this point in testing, an identical test specimen was tested using Secure Door's vertical bracing system. The following results were obtained.

**Structural Test Results**

<u>Test Method</u>	<u>Title of Test</u>	<u>Measured</u>	<u>Deflection</u>	<u>Allowed</u>
ASTM E330-90	Uniform Load Structural			
	Design Pressure 55.3 psf exterior	0.540"		0.548"
	Design Pressure 55.3 psf interior	0.539"		0.548"
	Uniform Load Structural		<u>Set</u>	
	Full Load 83.0 psf exterior	0.336"		0.384"
	Full Load 83.0 psf interior	0.301"		0.384"
	83.0 psf = (180.0) mph velocity			

At the conclusion of testing normal operation of the door was observed.

Detailed drawings were available for laboratory records and compared to the test specimen at the time of this report.

A copy of this report will be retained by NCTL for a period of four (4) years. The results obtained apply only to the specimens tested.

**NATIONAL CERTIFIED TESTING LABORATORIES, INC.**

Michael E. Lane *(amb)*

**MICHAEL E. LANE  
Division Manager**

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*Bangor Partners  
8/5/98*