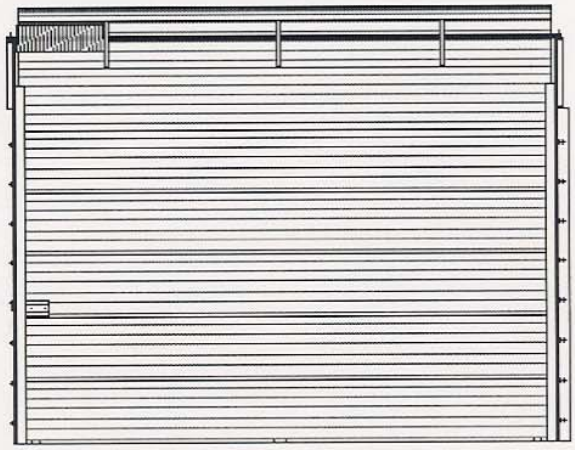
HURRICANE ENGINEERING & TESTING INC.

Computer Controlled Product Testing & Design,
.....Wind Load Analysis

Uniform Static Air Pressure Test

November 29th, 2001.

REPORT NUMBER:	**HETI-01-1117**
MANUFACTURER:	Wayne-Dalton Door Systems Division. 2589 Country Road 168, Dundee, OH 44624
TEST LOCATION:	Hurricane Engineering & Testing Inc. 8532 NW 64 Street Miami, FL 33166
SBCCI LISTING No.:	TL - 9596A
LAB. CERTIFICATION NUMBER:	01-0417.03 (MIAMI-DADE COUNTY, FLORIDA)
PRODUCT:	**Rolling Door**
MODEL:	Mini DS-75
PRODUCT DESCRIPTION:	0.018" thick steel *(Tensile Test Report No. HETI-01-T111)*
PRODUCT SIZE:	120" w x 96"h (size of opening)
DRAWING NUMBERS:	701-0542-2, 701-0543-2 and 701-0544-2 by Wayne-Dalton Rolling Door Division. Dated 12-10-01.
NOTE:	*HETI stamped drawing is an integral part of this report.*
DESIGN LOADS (psf):	**+30, -34**
TEST WITNESSED BY:	(full or partial) Syed Waqar Ali, Ph. D. (HETI) Mr. Leonardo D. Savini, E.I. (HETI) Mr. Eddy Philippe (HETI)



Inrolled interior elevation, not to scale.

Construction Details

PRODUCT **Rolling Door**
MODEL Mini DS-75

PRODUCT SIZE(S) 126 3/4"w x 110 3/8" (excluding roll).
120" w x 96"h (size of opening).

SPECIAL NOTE Inrolled. The panels were located @ 19" O.C. vertically and joined with a continuous horizontal seam that consisted of a 1/4" to 3/8" fold in the top and bottom of every panel.

TABLE OF COMPONENTS (EXCLUDING INSTALLATION)

COMPONENT	QUANTITY PER SAMPLE	SIZE	FASTENING PER COMPONENT
(5/16" BOLT & FLANGE NUT)	SEE COMPONENT	5/16"-18 X 5/8" TRUSS HEAD	----
(CARRIAGE BOLT)	SEE COMPONENT	1/4-20 x 5/8" CARRIAGE BOLT	----
PANELS	SIX	19.38" H X 124" X 0.63" D X 26 GA	SEE END WIND LOCKS AND SPECIAL NOTE
WIND LOCKS (GUIDES)	THREE PER SECTION END @ 6 1/2" O.C.	2.20" X 1.30" X 1.1" X 0.33" TO 0.21" THICKNESS	TWO 1/8" X 0.42" STEEL RIVETS
GALV. STEEL BOTTOM BAR SHEET	ONE	3.26" H X 0.53" W X 124" L X 26 GA	CONNECTED TO BOTTOM SEAM DESCRIBED IN SPECIAL NOTE
BOTTOM ANGLE	ONE	1 1/2" X 1 1/2" X 124" X 12 GA	(2) (CARRIAGE BOLT) AND NUT PER END. SPACING = 5 1/2" O.C. EDGE DISTANCE= 4 7/8". SEE HANDLE FOR CENTER.
TRACK	TWO	2.44" W X 1.41" D X 98 3/4" H X 13 GA. ONE SIDE 1" DOUBLED	(8) (5/16" BOLT & FLANGE NUT) @ 12" O.C. START 6" FROM BOTTOM CONNECTED TO TRACK ADAPTER ANGLE.
TRACK ADAPTER ANGLE	ONE PER TRACK	2" X 2" X 103 1/2" H x 12 GA	SEE INSTALLATION

All steel components unless specified otherwise.

HARDWARE

Locks (1) The lock was located @ 38" from the bottom of the door and was engaged but not secured with any lock or pin. The lock consisted of two 13 GA steel parts. The acting part (throw) was 9 3/8" long x 1 7/8" h. The part fixed to the section was 9 1/2" wide x 3.16" h and was fastened with two (carriage bolts) and nuts @ 6 1/2" O.C.

Handle (1) Located at midspan of the bottom angle and fastened with two (carriage bolts) which were inserted through the bottom angle, the bottom angle galv. steel sheet and the handle. Then, one flange nut per bolt was installed.

Counterbalance The door was mounted with a wound spring mechanism.

INSTALLATION

JAMB SUBSTRATUM One side 1/8" thick steel and one side grout filled masonry blocks.

Connection	*Fastener Type*	*Quantity*	*Spacing*
track adapter angle - masonry substratum	3/8" x 5" Kingpin Wedge Anchor	8 per angle	12" O.C. starting 6" from bottom
track adapter angle - steel substratum	5/16"-12 x 1" Tek	8 per angle	12" O.C. starting 6" from bottom

The track angle was connected to the substratum prior to connecting it to the track.
The track adapter angle fasteners were located behind the track.

Test Results

Uniform Static Air Pressure Test

	Pressure (psf)	Deflection (inches)	Set (inches)	Recovery (%)	Duration (seconds)
Positive Load					
Half test load	**+23**	6.24	0.00	100	60
Design Load	**+30**	7.12	0.07	99	60
Test Load	**+45**	8.61	0.36	96	10
Negative Load					
Half Test Load	**-26**	8.14	0.07	99	60
Design Load	**-34**	8.80	0.22	98	60
Test Load	**-51**	9.64	0.29	97	10

Tested in accordance with ASTM E330-90 and Standard Building Code section 1707.4 requirements

Conclusion

The sample was tested as indicated along with the test results. At the end of the tests, the door was operational, all components were securely in place with no openings, ruptures or structural damage.

NOTE: The above results were obtained using the designated test methods which indicates compliance with the performance requirements of the referenced specifications. This report does not constitute certification of the specimens tested.

Syed Waqar Ali, Ph. D.
President

4/24/02

Arshad Viqar, P.E.
Engineer of Record