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Structural Engineering ■ Investigations ■ Consulting

GARAGE DOOR EVALUATION REPORT

Garage Door No.:	IBC-4816-140-15-I		Amarr	2448	Report Date:	8/21/2025
Design Pressures:	+27 psf, -30.5 psf		Test Pressures:	+40.5 psf, -45.8 psf		Project No. 24-069
Static Test Date:	8/6/2024	Static Test Location:		Amarr, 165 Carriage Ct., Winston-Salem, NC		
Impact Test Date:	5/19-5/21/2025	Impact Test Location:		American Test Lab, Inc., Brevard, NC		
ASCE 7-22 Criteria:	Up to 5 Feet of Door Width in Zone 5; Roof Slope ≤ 10°; Enclosed Building					
	Exp. B, 30' MRH	Exp. C, 15' MRH	Exp. C, 25' MRH	Exp. D, 15' MRH	Exp. D, 25' MRH	
	181 mph	164 mph	156 mph	149 mph	143 mph	

Reference Drawing and Test Report(s):

- Amarr Drawing number IBC-4816-140-15-I dated 07/28/2025
- Structural Solutions, P.A. report for IBC-4816-140-15-I dated 08/21/2025
 - Static Air Pressure Test witnessed by Thomas L. Shelmerdine, PE
- American Test Lab, Inc. report number ATLNC xxxx.xx-xx dated 08/20/2025
 - Tests witnessed and certified by David Johnson, PE (FL PE #61915) for:
 - Large Missile Impact Test • Forced Entry Test • Cyclical Test

Description of Test Specimen:

A 16'-2" wide x 8'-0" high x 1 3/4" thick sectional garage door, Amarr 2448. All sections were made of 24 ga exterior / 26 ga interior galvanized steel sheet. The test unit is further described on Drawing IBC-4816-140-15-I.

Test Standards and Report Conclusions:

The above referenced Test Reports state the following:

- The tests were conducted in accordance with ANSI/DASMA 108-17; ASTM E330-14; ASTM F588-07; ANSI/DASMA 115-17
- The tests were witnessed and certified by:
 - Static Test: Thomas L. Shelmerdine, PE
 - Other Tests: David Johnson, PE (FL PE #61915)
- The weight of the missile used for the Large Missile Impact Test was 9 lbs.
- The maximum cycle time noted in the report is less than the maximum permitted based on the formula:
(area of specimen -75) x (F) + 3, where F= 0.06 for sectional doors.
- All tests passed the referenced Test Standards.
- The Amarr test facility is accredited by the American Association for Laboratory Accreditation, Cert. #2595.01.
- The test facility at American Test Lab, Inc. is accredited by IAS, Certification #TL-423.

Summary:

The 16'-2"x8'-0" Amarr 2448 door as described on drawing IBC-4816-140-15-I meets or exceeds the testing criteria as described above. By comparison to the construction of the 16'-2"x8'-0" Amarr 2448, the following doors also meet or exceed the above testing criteria, when constructed in accordance with drawing IBC-4816-140-15-I:

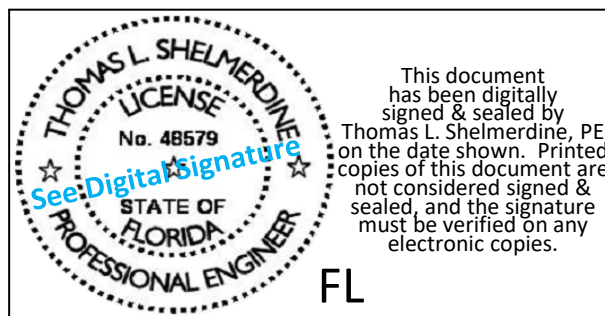
- Amarr Model 2448 doors with widths up to 16'-2" and heights up to 24'-0"

To the best of my knowledge, the above garage door conforms to the requirements of the Florida Building Code 8th Edition (2023). I certify that I have no financial interest in the testing lab(s) that performed the tests, nor in Amarr Garage Doors.

Submitted By:

Thomas L
Shelmerdine

Digitally signed by Thomas L Shelmerdine
DN: c=US, o=Unaffiliated,
dnQualifier=A01410D000001938E1ECCEA
0007AC7B, cn=Thomas L Shelmerdine
Date: 2025.08.21 15:09:44 -04'00'



STRUCTURAL SOLUTIONS, P.A.

Thomas L. Shelmerdine, PE (Florida PE #0048579) (dba Structural Solutions of North Carolina, Inc., Florida Firm #29412)

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