

STRUCTURAL SOLUTIONS, P.A.

Structural Engineering ■ Investigations ■ Consulting

GARAGE DOOR EVALUATION REPORT

Garage Door No.:	IBC-1012-130-15-I		Amarr	2432	Report Date:	2/1/2024
Design Pressures:	+23.8 psf, -27.3 psf		Test Pressures:	+35.7 psf, -41 psf		Project No. 16-081
Static Test Date:	12/15/2022	Static Test Location:		Amarr, 165 Carriage Ct., Winston-Salem, NC		
Impact Test Date:	4/17-4/19/2023	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	
	168 mph	153 mph	145 mph	139 mph	133 mph	

Reference Drawing and Test Report(s):

- Amarr Drawing number IBC-1012-130-15-I dated 01/09/2024
- Structural Solutions, P.A. report for IBC-1012-130-15-I dated 02/01/2024
 - Static Air Pressure Test witnessed by Thomas L. Shelmerdine, PE
- American Test Lab, Inc. report number ATLNC 0417.01-23 dated 01/31/2024
 - 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 12'-4" wide x 8'-0" high x 2" thick sectional garage door, Amarr 2432. All sections were made of 24 ga exterior / 27 ga interior galvanized steel sheet. The test unit is further described on Drawing IBC-1012-130-15-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 9.3 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 12'-4"x8'-0" Amarr 2432 door as described on drawing IBC-1012-130-15-I meets or exceeds the testing criteria as described above. By comparison to the construction of the 12'-4"x8'-0" Amarr 2432, the following doors also meet or exceed the above testing criteria, when constructed in accordance with drawing IBC-1012-130-15-I:

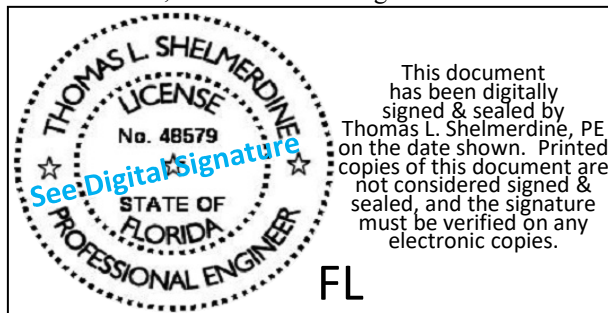
- Amarr 2732 doors with widths up to 12'-4" and heights up to 24'-0"
- Up to 3 windows (38-1/16" x 10-5/8" x 1/4" polycarbonate) may be installed in one section.
- Windows are not required to be installed in any section.

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=North Carolina,
dnQualifier=A01410D000001856487A7B
100125CE2, cn=Thomas L Shelmerdine
Date: 2024.02.01 10:23:10 -05'00'



STRUCTURAL SOLUTIONS, P.A.

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

5921-G West Friendly Avenue ■ Greensboro, North Carolina 27410 ■ (336) 856-2686 ■ www.sspa.biz ■ NC Firm #C-1096