# STRUCTURAL SOLUTIONS, P.A.

Structural Engineering ▪ Investigations ▪ Consulting


## GARAGE DOOR EVALUATION REPORT

| | | | | | |
|---|---|---|---|---|---|
| Garage Door No.: | **IRC-5309-120-15** | Model # | 500 | Report Date: | 9/25/2023 |
| Design Pressures: | **+22.8 psf, -26.9 psf** | Test Pressures: | **+34.2 psf, -40.4 psf** | | Project No. 13-113 |
| Test Date: | **8/20/2020** | Test Location: | Amarr, 165 Carriage Ct., Winston-Salem, NC | | |
| ASCE 7-22 Criteria: | **Up to 5 Feet of Door Width in Zone 5; Any Roof Slope; Enclosed Building** | | | | |
| | **Exp. B, 30' MRH** | **Exp. C, 15' MRH** | **Exp. C, 25' MRH** | **Exp. D, 15' MRH** | **Exp. D, 25' MRH** |
| | **156 mph** | **141 mph** | **134 mph** | **128 mph** | **123 mph** |

**Reference Drawing and Test Report(s):**

- Amarr Drawing number IRC-5309-120-15 dated 01/04/2021
- Structural Solutions, P.A. report for IRC-5309-120-15 dated 09/25/2023
  - Static Air Pressure Test witnessed by Thomas L. Shelmerdine, PE

**Description of Test Specimen:**

A 9'-0" wide x 8'-0" high x 2" thick sectional garage door, Model # 500. All sections were made of 24 ga galvanized steel sheet. The test unit is further described on Drawing IRC-5309-120-15.

**Test Standards and Report Conclusions:**

The above referenced Test Report states the following:

- The tests were conducted in accordance with ANSI/DASMA 108-17; ASTM E330-14
- The tests were witnessed and certified by: Thomas L. Shelmerdine, PE
- All tests passed the referenced Test Standards.
- The Amarr test facility is accredited by the American Association for Laboratory Accreditation, Cert. #2595.01.

**Summary:**

The 9'-0"x8'-0" Model # 500 door as described on drawing IRC-5309-120-15 meets or exceeds the testing criteria as described above. By comparison to the construction of the 9'-0"x8'-0" Model # 500, the following doors also meet or exceed the above testing criteria, when constructed in accordance with drawing IRC-5309-120-15:

- 9' x 8' Amarr Classica 1000 doors (which is an alternate name for the Model 500)
- 9' x 8' Amarr Classica 2000 doors (which is the Model 500 with drop-in insulation)
- Model 500, Amarr Classica 1000 and Amarr Classica 2000 doors with widths of up to 9'-0" and heights of up to 14'-0"
- 2 windows may be installed in 1 section (39.054" x 21.625" x 1/8" tempered glass - meets ASTM E1300-04)
- 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=A01410D000001856487A7B100125CE2, cn=Thomas L Shelmerdine
Date: 2023.09.25 10:16:00 -04'00'

THOMAS L. SHELMERDINE
LICENSE
No. 48579
STATE OF FLORIDA
PROFESSIONAL ENGINEER
See Digital Signature

This document has been digitally signed & sealed by Thomas L. Shelmerdine, PE on the date shown. Printed copies of this document are not considered signed & sealed, and the signature must be verified on any electronic copies.

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**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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