

# ICC-ES Evaluation Report

**ESR-5028**

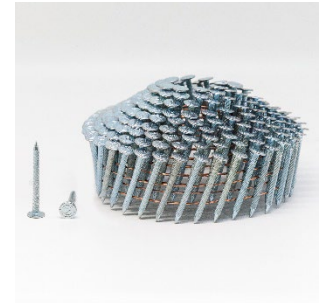
Reissued June 2024

This report also contains:



- FBC Supplement

Subject to renewal June 2025

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|                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                              |                                                                                                                                                                                             |                                                                                     |
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| <p><b>DIVISION: 05 00 00—<br/>METALS</b></p> <p><b>Section: 05 05 23—<br/>Metal Fastenings</b></p> <p><b>DIVISION: 06 00 00—<br/>WOOD, PLASTICS AND<br/>COMPOSITES</b></p> <p><b>Section: 06 16 00—<br/>Sheathing</b></p> <p><b>DIVISION: 07 00 00—<br/>THERMAL AND<br/>MOISTURE<br/>PROTECTION</b></p> <p><b>Section: 07 46 46—<br/>Fiber-Cement Siding</b></p> | <p><b>REPORT HOLDER:</b></p> <p><b>AEROSMITH<br/>FASTENING SYSTEMS</b></p>  | <p><b>EVALUATION SUBJECT:</b></p> <p><b>VERSAPIN GRIPSHANK<br/>AND HELICAL<br/>PNEUMATIC<br/>FASTENERS FOR<br/>ATTACHMENT OF<br/>SIDING, WALL<br/>SHEATHING AND<br/>FLOOR SHEATHING</b></p> |  |
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## 1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2021, 2018, 2015 and 2012 [International Building Code® \(IBC\)](#)
- 2021, 2018, 2015 and 2012 [International Residential Code® \(IRC\)](#)

Property evaluated:

- Structural

## 2.0 USES

The VersaPin Gripshank and Helical Fasteners are pneumatically driven steel fasteners used to attach siding and wall sheathing to steel framing. The threaded portion of the shank must penetrate completely through the steel thickness.

The fasteners may be used in structures regulated by the IRC when an engineered design is submitted in accordance with IRC Section R301.1.3.

## 3.0 DESCRIPTION

### 3.1 Fasteners:

The VersaPin Gripshank Fasteners are manufactured from AISI C1060 steel, heat treated to a Rockwell C hardness between 52 and 55, with a minimum tensile strength of 240 ksi and a bending yield strength of 250 ksi (1724 MPa). The fasteners are zinc electro-plated with a chromate rinse, mechanically zinc plated

ASTM B633 Type 1 SC, ASTM B695 Type 1 Class 5 or a nickel metal alloy. The plating is a minimum thickness of 0.0002 inch (0.0051 mm) thick. See [Tables 2, 3](#) and [4](#).

The VersaPin Helical Fasteners are manufactured from AISI C1060 steel, heat treated to a Rockwell C hardness between 52 and 55, with a minimum tensile strength of 240 ksi (1655 MPa) and a bending yield strength of 250 ksi (1724 MPa). The fasteners are zinc electro-plated with a chromate rinse, mechanically zinc plated per ASTM B633 Type 1 SC, ASTM B695 Type 1 Class 5 or a nickel metal alloy. The plating is a minimum thickness of 0.0002 inch (0.0051 mm) thick. See [Table 1](#).

The fasteners are manufactured with a nominal finished shank diameter of 0.100 inch (2.54 mm) and a nominal head diameter of 0.250 inch (6.35 mm) or 0.312 inch (7.92 mm). The shank has a proprietary thread and the point is ballistic shaped. The fasteners are collated for powered installation tools. See [Figures 1](#) and [2](#), [Tables 1](#) and [2](#).

**3.2 Siding:** VersaPin fasteners may be used for installation of James Hardie Building Products 5/16 inch (23.8 mm) HardiPanel Vertical Siding or 5/16 inch (23.8 mm) HardiPlank Lap Siding.

**3.3 Wall Sheathing:** VersaPin fasteners may be used for installation of the following types of wall sheathing.

- DensGlass Gold Exterior Sheathing 1/2 inch (12.7 mm) and 5/8 inch (15.9 mm) Fireguard Gold Type X,
- 5/8 inch (15.9 mm) USG Securerock Firecode Glass-mat Type X Sheathing,
- 5/8 inch (15.9 mm) USG Sheetrock Type X Gypsum Sheathing
- 1/2 inch (12.7 mm) and 5/8 inch (15.9 mm) GlasRock Sheathing Panels,
- 5/8 inch (15.9 mm) National Gypsum eXP Sheathing
- SureBoard Series 200 with 1/4 inch (6.35 mm) Magnesium Board or with 5/8 inch (15.9 mm) Densglass Gold

#### **3.4 Cold Formed Steel:**

The cold-formed steel shall comply with AISI S100 and have a minimum base metal thickness of 20 gage (33 mils).

## **4.0 DESIGN AND INSTALLATION**

### **4.1 Design:**

**4.1.1 Single Fastener Connections:** Ultimate withdrawal values for single fasteners into CFS framing member are given in [Table 5](#). Ultimate shear values for single fasteners into CFS framing members are given in [Table 6](#).

**4.1.2 Walls:** The maximum allowable wind speeds for negative transverse load resistance of the various types of siding and sheathing fastened with VersaPin Gripshank fasteners are presented in [Tables 7a](#) and [7b](#).

The allowable design pressure of various types of sheathing fastened with VersaPin Gripshank Fasteners are presented in [Table 8](#).

The ultimate racking loads of Sureboard Series 200 structural panels fastened with VersaPin Gripshank fasteners are presented in [Table 9](#).

### **4.2 Installation:**

**4.2.1 General:** Installation must comply with this report, and a copy of this report must be available at all times on the jobsite during installation. Unless otherwise noted in this report, the fasteners, siding and wall sheathing, must be installed in accordance with 2021 and 2018 IBC Section 1404.16 and 1404.17 (2015, 2012, and 2009 IBC Section 1405.16 and 1405.17; 2006 IBC Sections 1405.15, 1405.16, and 1405.17), 2021, 2018 and 2015 IRC Section R703.10 and Table R703.3 (2012, 2009, and 2006 IRC Section R703.10 and Table R703.4), as applicable.

## **5.0 CONDITIONS OF USE:**

The VersaPin Gripshank Fasteners described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** VersaPin Gripshank Fasteners listed in this report must be installed in accordance with this report and the manufacturer's published installation instructions. In the event of a conflict between this report and the manufacturer's instructions, this report governs.
- 5.2** All wall siding and sheathing must be installed in accordance with the wall siding and sheathing manufacturer's installation instructions on exterior walls braced in accordance the applicable code.
- 5.3** Design wind speeds applied wall siding and sheathing described in this report must be determined by the registered design professional in accordance with the applicable code and must be less than those shown in the wind speed tables in this report.

- 5.4 The siding must be installed over a code-complying water-resistive barrier and as noted in this report.
- 5.5 Use in fire-resistance-rated construction is outside the scope of this evaluation report.
- 5.6 Flashing must be installed at all penetrations and terminations in accordance with the applicable code.
- 5.7 Under the 2021 and 2018 IBC Section 1402.5 (2015 or 2012 IBC, Section 1403.5), installation on exterior walls of buildings of Type I, II, III, and IV construction is limited to buildings that are not greater than 40 feet in height above grade plane and that feature a combustible water-resistive barrier, except as permitted under Exception 2 of the 2021 and 2018 IBC Section 1402.5 (2015 IBC Section 1403.5).
- 5.8 The products are manufactured under a quality control program with inspections by ICC-ES.

**6.0 EVIDENCE SUBMITTED**

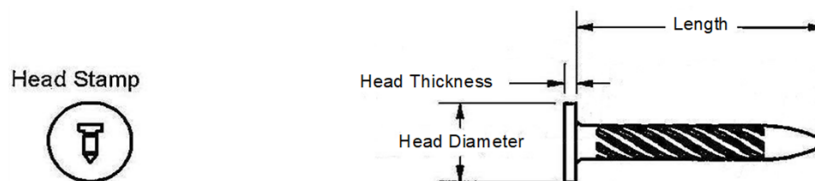
- 6.1 Air pressure test data in accordance with ASTM E330.
- 6.2 192 hour salt spray test data in accordance with ASTM B117.
- 6.3 Fastener withdrawal test data in accordance with ASTM D1037.
- 6.4 Wall racking test data in accordance with ASTM E72.
- 6.5 Quality documentation in accordance with [ICC-ES Acceptance Criteria for Quality Documentation \(AC10\)](#).

**7.0 IDENTIFICATION**

- 7.1 Cartons of the pneumatic fasteners must be labeled with the Aerosmith Fastening Systems company (name, address or website), catalog number, lot number and manufacturing plant identification, and evaluation report number (ESR-5028). The head of each fastener must feature a logo symbol as shown in Figures 1 and 2.
- 7.2 The report holder’s contact information is the following:

**AEROSMITH FASTENING SYSTEMS**  
**5621 DIVIDEND ROAD**  
**INDIANAPOLIS, INDIANA 46241**  
**(800) 528-8183**  
[www.aerosmithfastening.com](http://www.aerosmithfastening.com)

**TABLE 1—VERSAPIN HELICAL FASTENERS NOMINAL DIMENSIONS<sup>1,2</sup>**



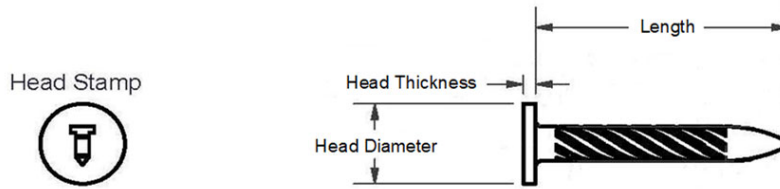
| PRODUCT                      | HEAD DIAMETER (IN.) | HEAD THICKNESS (IN.) | LENGTH (IN.) |
|------------------------------|---------------------|----------------------|--------------|
| 2191 Z or AG <sup>2</sup>    | 0.025               | 0.035                | 0.750        |
| 2351 Z or AG/SG <sup>2</sup> | 0.025               | 0.035                | 1.375        |
| 2501 Z or AG <sup>2</sup>    | 0.025               | 0.035                | 2.000        |
| 2631 Z or AG <sup>2</sup>    | 0.025               | 0.035                | 2.500        |

For SI: 1 inch = 25.4 mm, 1 ft = 305 mm.

<sup>1</sup> Z - Zinc coated pin

<sup>2</sup> G - Aerosmith alloy plating PT2000™ coated fastener

**TABLE 2—VERSAPIN GRIPSHANK FASTENERS NOMINAL DIMENSIONS<sup>1,2</sup>**



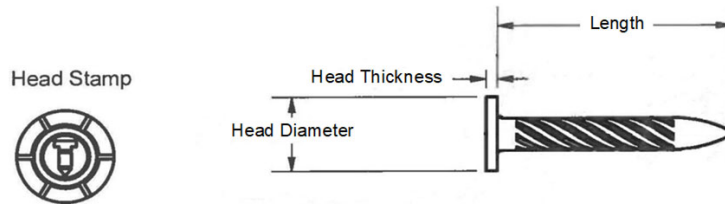
| PRODUCT         | HEAD DIAMETER (IN.) | HEAD THICKNESS (IN.) | LENGTH (IN.) |
|-----------------|---------------------|----------------------|--------------|
| 2192 Z or AG/SG | 0.025               | 0.035                | 0.75         |
| 2352 Z or AG/SG | 0.025               | 0.035                | 1.375        |
| 2502 Z or SG    | 0.025               | 0.035                | 2.000        |

For SI: 1 inch = 25.4 mm, 1 ft = 305 mm.

<sup>1</sup> Z - Zinc coated fastener

<sup>2</sup> G - Aerosmith alloy plating PT2000™ coated fastener

**TABLE 3—VERSAPIN GRIPSHANK FASTENERS NOMINAL DIMENSIONS<sup>1,2</sup>**



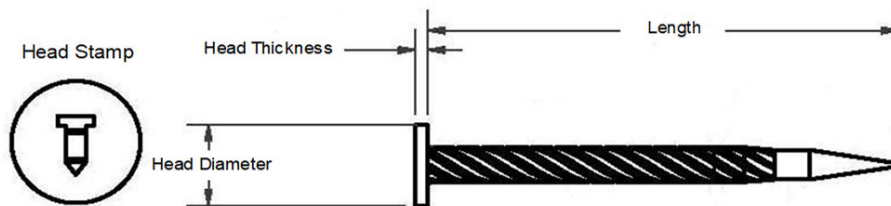
| PRODUCT       | HEAD DIAMETER (IN.) | HEAD THICKNESS (IN.) | LENGTH (IN.) |
|---------------|---------------------|----------------------|--------------|
| 2255 AG       | 0.312               | 0.035                | 1.000        |
| 2325 Z or AG  | 0.312               | 0.035                | 1.250        |
| 2385 Z or AG  | 0.312               | 0.035                | 1.500        |
| 2505 Z or SBG | 0.312               | 0.035                | 2.000        |
| 2635 Z or SBG | 0.312               | 0.035                | 2.500        |

For SI: 1 inch = 25.4 mm, 1 ft = 305 mm.

<sup>1</sup> Z - Zinc coated fastener

<sup>2</sup> G - Aerosmith alloy plating PT2000™ coated fastener

**TABLE 4—VERSAPIN GRIPSHANK FASTENERS WITH SUPER SHARP POINT NOMINAL DIMENSIONS<sup>1,2</sup>**



| PRODUCT | HEAD DIAMETER (IN.) | HEAD THICKNESS (IN.) | LENGTH (IN.) |
|---------|---------------------|----------------------|--------------|
| 2229 G  | 0.025               | 0.035                | 0.875        |
| 2359 G  | 0.025               | 0.035                | 1.375        |
| 2389 G  | 0.025               | 0.035                | 1.500        |
| 2509 G  | 0.025               | 0.035                | 2.000        |
| 2639 G  | 0.025               | 0.035                | 2.500        |

For SI: 1 inch = 25.4 mm, 1 ft = 305 mm.

<sup>1</sup> Z - Zinc coated fastener

<sup>2</sup> G - Aerosmith alloy plating PT2000™ coated fastener

**TABLE 5—ULTIMATE WITHDRAWAL LOADS FOR GAGE STEEL FRAMING<sup>1</sup>**

| STEEL GAGE (MILS) | MINIMUM CFS THICKNESS (IN) | ULTIMATE WITHDRAWAL LOAD (LBS.) |                   |
|-------------------|----------------------------|---------------------------------|-------------------|
|                   |                            | GRIPSHANK FASTENERS             | HELICAL FASTENERS |
| 14 (68)           | 0.071                      | 596                             | 351               |
| 16 (54)           | 0.055                      | 449                             | 330               |
| 18 (43)           | 0.045                      | 337                             | 235               |
| 20 (33)           | 0.037                      | 284                             | -                 |

For **SI**: 1 inch = 25.4 mm, 1 ft = 305 mm.

<sup>1</sup> Steel framing shall comply with ASTM A653 SS (33 ksi).

**TABLE 6—ULTIMATE SHEAR LOAD FOR GAGE STEEL FRAMING<sup>1,2</sup>**

| BASE LAYER CFS GAGE <sup>1</sup> (MILS) | TOP LAYER CFS GAGE <sup>1</sup> (MILS) | FASTENER TYPE | FASTENER POINT | ULTIMATE SHEAR LOAD (LBS.) |
|-----------------------------------------|----------------------------------------|---------------|----------------|----------------------------|
| 15                                      | 15                                     | Helical       | Ballistic      | 1345                       |
| 15                                      | 16 (54)                                | Helical       | Ballistic      | 1130                       |
| 16 (54)                                 | 14 (68)                                | Helical       | Ballistic      | 778                        |
| 16 (54)                                 | 15                                     | Helical       | Ballistic      | 1079                       |
| 16 (54)                                 | 16 (54)                                | Helical       | Ballistic      | 828                        |
| 16 (54)                                 | 18 (43)                                | Helical       | Ballistic      | 921                        |
| 16 (54)                                 | 19                                     | Helical       | Ballistic      | 509                        |
| 18 (43)                                 | 18 (43)                                | Helical       | Ballistic      | 331                        |
| 19                                      | 19                                     | Helical       | Ballistic      | 203                        |

For **SI**: 1 inch = 25.4 mm, 1 ft = 305 mm.

<sup>1</sup> All CFS framing members have a yield strength of 50 ksi except for 18 GA members which have a yield strength of 33 ksi.

<sup>2</sup> Applications include, but are not limited to, stud-to-track, pack studs, built-up headers, and walls with straps.

TABLE 7A—MAXIMUM WIND SPEED FOR EXPOSURE CATEGORY FOR SIDING<sup>1,2,3,4,5</sup>

| SIDING TYPE                                                        | SIDING THICKNESS (IN.) | NOMINAL HEAD DIAMETER (IN.) | FASTENING METHOD | STUD SPACING (IN.) | ZONE | 2021 IBC/IRC (Basic Design Wind Speed, V, mph) |     |     |     |     |
|--------------------------------------------------------------------|------------------------|-----------------------------|------------------|--------------------|------|------------------------------------------------|-----|-----|-----|-----|
|                                                                    |                        |                             |                  |                    |      | EXPOSURE CATEGORY AND BUILDING HEIGHT          |     |     |     |     |
|                                                                    |                        |                             |                  |                    |      | B                                              | C   |     | D   |     |
| < 30'                                                              | 15'                    | 30'                         | 15'              | 30'                |      |                                                |     |     |     |     |
| 48" x 96" HardiPanel Vertical Siding                               | 5/16                   | 0.250                       | Face             | 16                 | 4    | 120                                            | 110 | 100 | 100 | 100 |
|                                                                    |                        |                             |                  |                    | 5    | 110                                            | 100 | 90  | 90  | 90  |
| 48" x 96" HardiPanel Vertical Siding                               | 5/16                   | 0.250                       | Face             | 24                 | 4    | 110                                            | 100 | 90  | 90  | 90  |
|                                                                    |                        |                             |                  |                    | 5    | 100                                            | 90  | 85  | 85  | -   |
| 6 1/4" Wide HardiPlank Lap Siding                                  | 5/16                   | 0.250                       | Face             | 24                 | 4    | 170                                            | 150 | 150 | 140 | 130 |
|                                                                    |                        |                             |                  |                    | 5    | 150                                            | 140 | 130 | 130 | 120 |
| 7 1/4" Wide HardiPlank Lap Siding                                  | 5/16                   | 0.250                       | Face             | 24                 | 4    | 150                                            | 140 | 130 | 120 | 120 |
|                                                                    |                        |                             |                  |                    | 5    | 130                                            | 120 | 110 | 110 | 100 |
| 8 1/4" Wide HardiPlank Lap Siding                                  | 5/16                   | 0.250                       | Face             | 24                 | 4    | 130                                            | 120 | 110 | 110 | 100 |
|                                                                    |                        |                             |                  |                    | 5    | 120                                            | 110 | 100 | 100 | 90  |
| 5 1/4" Wide HardiPlank Lap Siding                                  | 5/16                   | 0.312                       | Blind            | 24                 | 4    | 140                                            | -   | -   | -   | -   |
|                                                                    |                        |                             |                  |                    | 5    | 125                                            | -   | -   | -   | -   |
| 6 1/4" Wide HardiPlank Lap Siding                                  | 5/16                   | 0.312                       | Blind            | 24                 | 4    | 120                                            | 110 | 100 | 100 | 90  |
|                                                                    |                        |                             |                  |                    | 5    | 110                                            | 100 | 90  | 90  | 85  |
| 7 1/4" Wide HardiPlank Lap Siding                                  | 5/16                   | 0.312                       | Blind            | 24                 | 4    | 90                                             | 85  | -   | -   | -   |
|                                                                    |                        |                             |                  |                    | 5    | 85                                             | -   | -   | -   | -   |
| 8 1/4" Wide HardiPlank Lap Siding                                  | 5/16                   | 0.312                       | Blind            | 24                 | 4    | 85                                             | -   | -   | -   | -   |
|                                                                    |                        |                             |                  |                    | 5    | -                                              | -   | -   | -   | -   |
| 6 1/4" Wide HardiPlank Lap Siding with 15/32" Plywood Underlayment | 5/16                   | 0.312                       | Blind            | 24                 | 4    | 120                                            | 110 | 100 | 100 | 100 |
|                                                                    |                        |                             |                  |                    | 5    | 110                                            | 100 | 90  | 90  | 90  |
| 6 1/4" Wide HardiPlank Lap Siding                                  | 5/16                   | 0.312                       | Face             | 24                 | 4    | 128                                            | 116 | 108 | 105 | 99  |
|                                                                    |                        |                             |                  |                    | 5    | 115                                            | 105 | 97  | 95  | 89  |
| 7 1/4" Wide HardiPlank Lap Siding                                  | 5/16                   | 0.312                       | Face             | 24                 | 4    | 86                                             | 78  | 72  | 71  | 66  |
|                                                                    |                        |                             |                  |                    | 5    | 77                                             | 70  | 65  | 64  | 60  |
| 8 1/4" Wide HardiPlank Lap Siding                                  | 5/16                   | 0.312                       | Face             | 24                 | 4    | 86                                             | 78  | 72  | 71  | 66  |
|                                                                    |                        |                             |                  |                    | 5    | 77                                             | 70  | 65  | 64  | 60  |

For SI: 1 foot = 305 mm, 1 inch = 25.4 mm, 1 mph = 0.44 m/s.

<sup>1</sup>For Vertical Siding, pins were set at 8" o.c. in the field, 4" o.c. around the perimeter, 3/8" from panel edges and 2" from corners.

<sup>2</sup>For Lap Siding, butt joints were placed at 1/3 and 2/3 of wall height, siding was overlapped 1-1/4", and pins were set at 3/8" from siding end and 3/4" up from bottom edge.

<sup>3</sup>All siding used Gripshank fasteners, 20ga x 33ksi CWN C-studs (depth = 1-3/8", flange = 3-5/8", and return = 3/8"). The wall heights for the above values = 30ft or less.

<sup>4</sup>Zone 4 is the interior section of the wall between Zone 5, and Zone 5 is the section within a minimum of 3 ft. of all corners. Refer to ASCE 7 for actual width.

<sup>5</sup>Maximum allowable wind speed (mph-3 section gust) is based on 2021 IBC Section 1609.1.1 (ASCE 7-16). Wind speed design assumptions per Section 30.3, of ASCE 7-16: Kzt = 1.0, Kd = 1.0, GCpi = 0.18.

TABLE 7B—MAXIMUM WIND SPEED FOR EXPOSURE CATEGORY FOR SHEATHING<sup>1,2,3,4</sup>

| SHEATHING TYPE                         | SIDING THICKNESS (IN.) | NOMINAL HEAD DIAMETER (IN.) | FASTENER SPACING (EDGE: FIELD) | STEEL STUD |                        |                    | ZONE | 2021 IBC/IRC (Basic Design Wind Speed, V, mph) |     |     |     |     |
|----------------------------------------|------------------------|-----------------------------|--------------------------------|------------|------------------------|--------------------|------|------------------------------------------------|-----|-----|-----|-----|
|                                        |                        |                             |                                | GAGE       | TENSILE STRENGTH (KSI) | STUD SPACING (IN.) |      | EXPOSURE CATEGORY AND BUILDING HEIGHT          |     |     |     |     |
|                                        |                        |                             |                                |            |                        |                    |      | B                                              | C   |     | D   |     |
| < 30'                                  | 15'                    | 30'                         | 15'                            | 30'        |                        |                    |      |                                                |     |     |     |     |
| Densglass Fireguard Gold Type X        | 5/8"                   | 0.312                       | 8:8                            | 16         | 50                     | 16                 | 4    | 140                                            | 128 | 118 | 115 | 109 |
|                                        |                        |                             |                                |            |                        |                    | 5    | 126                                            | 115 | 106 | 104 | 98  |
| Densglass Fireguard Gold Type X        | 5/8"                   | 0.312                       | 8:8                            | 16         | 33                     | 24                 | 4    | 144                                            | 131 | 121 | 118 | 112 |
|                                        |                        |                             |                                |            |                        |                    | 5    | 129                                            | 118 | 109 | 107 | 100 |
| USG Securock Firecode Glass-Mat Type X | 5/8"                   | 0.312                       | 6:4                            | 18         | 46                     | 24                 | 4    | 130                                            | 118 | 109 | 107 | 101 |
|                                        |                        |                             |                                |            |                        |                    | 5    | 117                                            | 106 | 99  | 96  | 91  |
| USG Securock Firecode Glass-Mat Type X | 5/8"                   | 0.312                       | 6:4                            | 16         | 58                     | 24                 | 4    | 135                                            | 123 | 114 | 111 | 104 |
|                                        |                        |                             |                                |            |                        |                    | 5    | 121                                            | 111 | 102 | 100 | 94  |

For SI: 1 foot = 305 mm, 1 inch = 25.4 mm, 1 mph = 0.44 m/s.

<sup>1</sup>Fasteners were installed 3/8" from panel edges and 2" from corners.

<sup>2</sup>The values in this table are based on testing per ASTM E330, and represent the capacity of the sheathing to resist flexural failure or fastener pull-through using a 3.0 Safety Factor. Framing design is the responsibility of the Designer of record.

<sup>3</sup>Zone 4 is the interior section of the wall between Zone 5, and Zone 5 is the section within a minimum of 3 ft. of all corners. Refer to ASCE 7 for actual width.

<sup>4</sup>Maximum allowable wind speed (mph-3 section gust) is based on 2021 IBC Section 1609.1.1 (ASCE 7-16). Wind speed design assumptions per Section 30.3, of ASCE 7-16: Kzt = 1.0, Kd = 1.0, GCpi = 0.18.

**TABLE 8—NEGATIVE ALLOWABLE TRANSVERSE WIND LOAD<sup>1,2,3</sup>**

| SIDING OR SHEATHING                         | SIDING THICKNESS (IN.) | NOMINAL HEAD DIAMETER (IN.) | FASTENER SPACING (EDGE : FIELD) | STEEL STUD |                        |                 |                   | ALLOWABLE LOAD (PSF) |
|---------------------------------------------|------------------------|-----------------------------|---------------------------------|------------|------------------------|-----------------|-------------------|----------------------|
|                                             |                        |                             |                                 | GAGE (MIL) | TENSILE STRENGTH (KSI) | STUD SIZE       | STUD SPACING (IN) |                      |
| Densglass Fireguard Gold Type X             | 5/8                    | 0.312                       | 8:8                             | 16 (54)    | 50                     | 1-3/8" x 3-5/8" | 16                | 38.1                 |
| Densglass Fireguard Gold Type X             | 5/8                    | 0.312                       | 8:8                             | 16 (54)    | 33                     | 1-3/8" x 3-5/8" | 24                | 40.3                 |
| Densglass Fireguard Gold Type X             | 5/8                    | 0.312                       | 8:8                             | 18 (43)    | 33                     | 1-3/8" x 3-5/8" | 24                | 25.5                 |
| Densglass Fireguard Gold Type X             | 5/8                    | 0.312                       | 8:8                             | 22 (27)    | 33                     | 1-3/8" x 3-5/8" | 24                | 24.7                 |
| Densglass Gold Sheathing                    | 1/2                    | 0.312                       | 8:8                             | 22 (27)    | 33                     | 1-3/8" x 3-5/8" | 16                | 23.3                 |
| GlasRoc Sheathing Panels                    | 1/2                    | 0.312                       | 8:8                             | 22 (27)    | 33                     | See Footnote 2  | 16                | 21.7                 |
| GlasRoc Sheathing Panels                    | 5/8                    | 0.312                       | 8:8                             | 22 (27)    | 33                     | See Footnote 2  | 24                | 21.6                 |
| GlasRoc Sheathing Panels                    | 5/8                    | 0.312                       | 8:8                             | 18 (43)    | 33                     | See Footnote 2  | 24                | 21.8                 |
| GlasRoc Sheathing Panels                    | 5/8                    | 0.312                       | 8:8                             | 16 (54)    | 33                     | See Footnote 2  | 24                | 21.5                 |
| GlasRoc Sheathing Panels                    | 5/8                    | 0.312                       | 8:8                             | 16 (54)    | 33                     | See Footnote 2  | 16                | 34.2                 |
| GlasRoc Sheathing Panels                    | 5/8                    | 0.312                       | 6:6                             | 16 (54)    | 33                     | See Footnote 2  | 24                | 25.6                 |
| USG Sheetrock Type X Gypsum                 | 5/8                    | 0.312                       | 8:8                             | 22 (27)    | 33                     | 1-3/8" x 3-5/8" | 24                | 22.9                 |
| USG Securock Firecode X Glass-Mat Sheathing | 5/8                    | 0.312                       | 6:4                             | 18 (43)    | 33                     | 1-5/8" x 6"     | 24                | 32.7                 |
| USG Securock Firecode X Glass-Mat Sheathing | 5/8                    | 0.312                       | 6:4                             | 16 (54)    | 33                     | 1-5/8" x 6"     | 24                | 35.3                 |
| National Gypsum eXP Sheathing               | 5/8                    | 0.312                       | 8:8                             | 18 (43)    | 33                     | 1-5/8" x 6"     | 16                | 34.8                 |

For **SI**: 1 foot = 305 mm, 1 inch = 25.4 mm, 1 pound = 4.45 N.

<sup>1</sup>Pins were installed 3/8" from panel edge & 2" from corners.

<sup>2</sup>The values in this table are based on testing per ASTM E330, and represent the capacity of the sheathing to resist flexural failure or fastener pull-through using a 2.5 Safety Factor. The capacity of the framing must exceed the design load from the table above and must be designed by the registered design professional. <sup>3</sup> [Table 2](#) shows Seismic and Wind Shear Wall values using Aerosmith Brand Pin Fasteners in Cold Formed Steel Framing. The maximum aspect ratio considered is 2:1. A Simpson Strong-Tie model HTT4 Tension Tie (or equivalent) is required at both ends of the wall and must be installed per manufacturer's installation instructions. All steel must be a minimum of 50 ksi.

**TABLE 9—ULTIMATE RACKING LOADS FOR SURE-BOARD SERIES 200 STRUCTURAL PANELS WITH GRIPSHANK FASTENERS<sup>1</sup>**

| SHEATHING                                           | CFS FRAMING GAGE (MILS) | MAXIMUM STUD SPACING (IN.) | FASTENERS                                                                                 | HOLD DOWNS <sup>2</sup> | ULTIMATE LOAD (LBS.) | MEAN DRIFT (IN.) |
|-----------------------------------------------------|-------------------------|----------------------------|-------------------------------------------------------------------------------------------|-------------------------|----------------------|------------------|
| Sure-Board Series 200 with 1/4 inch Magnesium Board | 16 (54)                 | 16                         | #8 x 1.75 inch Grabber screws 0.250 inch (diameter head) x 1.375 inch Gripshank fasteners | S/HD15B                 | 9981                 | 1.238            |
| Sure-Board Series 200 with 1/4 inch Magnesium Board | 18 (43)                 | 16                         | #8 x 1.75 inch Grabber screws 0.250 inch (diameter head) x 1.375 inch Gripshank fasteners | S/HD15B                 | 8803                 | 1.196            |
| Sure-Board Series 200 with 5/8 inch Densglass Gold  | 16 (54)                 | 16                         | #8 x 1.5 inch Grabber screws 0.312 inch (diameter head) x 1.375 inch Gripshank fasteners  | (2)S/HD10<br>(1)S/HD15  | 11301                | 1.606            |
| Sure-Board Series 200 with 5/8 inch Densglass Gold  | 18 (43)                 | 16                         | #8 x 1.25 inch Grabber screws 0.312 inch (diameter head) x 1.25 inch Gripshank fasteners  | (2)S/HD10<br>(1)S/HD15  | 9797                 | 1.505            |

For **SI**: 1 foot = 305 mm, 1 inch = 25.4 mm, 1 pound = 4.45 N.

<sup>1</sup>The spacing for the Grabber Screws and Aerosmith pins are as follows: Vertical Perimeter Fasteners Screws are 12" on-center (o.c.); five(5) Aerosmith pins installed between screws at approximately 2" o.c. Vertical Field Fasteners Screws were 12" o.c.; Aerosmith Pins 12" o.c. (installed between self drilling screws) Horizontal Perimeter Fasteners Screws 2" o.c. in top and bottom plate members; no pins.

<sup>2</sup>Ultimate loads are based on panels tested with Simpson Strong-tie hold downs on each end of the panel as indicated in the table.

**DIVISION: 05 00 00—METALS**

Section: 05 05 23—Metal Fastenings

**DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES**

Section: 06 16 00—Sheathing

**DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION**

Section: 07 46 46—Fiber-Cement Siding

**REPORT HOLDER:**

AEROSMITH FASTENING SYSTEMS

**EVALUATION SUBJECT:**

VERSAPIN GRIPSHANK AND HELICAL PNEUMATIC FASTENERS FOR ATTACHMENT OF SIDING, WALL SHEATHING AND FLOOR SHEATHING

**1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that Aerosmith VersaPin Gripshank and Helical Fasteners, described in ICC-ES evaluation report ESR-5028, have also been evaluated for compliance with the codes noted below.

**Applicable code editions:**

- 2014 *Florida Building Code—Building*
- 2014 *Florida Building Code—Residential*

**2.0 CONCLUSIONS**

The Aerosmith VersaPin Gripshank and Helical Fasteners, described in Sections 2.0 through 7.0 of the evaluation report ESR-5028, comply with the *Florida Building Code—Building* and the *Florida Building Code—Residential*, provided the design and installation are in accordance with the 2015 *International Building Code*® provisions noted in the evaluation report.

Use of the Aerosmith VersaPin Gripshank and Helical Fasteners for compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* and the *Florida Building Code—Residential* has not been evaluated and is outside the scope of this supplemental report.

For products falling under Florida Rule 9N-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the evaluation report, reissued June 2024.