ICC-ES Evaluation Report

ESR-2442

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Subject to renewal October 2027

This report also contains:

- **City of LA Supplement**
- **FL Supplement w/HVHZ**

DIVISION: 06 00 00—WOOD, PLASTICS, AND COMPOSITES Section: 06 05 23—Wood, Plastic, and Composite Fastenings	REPORT HOLDER: GRK FASTENERS™, A DIVISION OF ILLINOIS TOOL WORKS, INC.	EVALUATION SUBJECT: RSS™ RUGGED STRUCTURAL SCREWS, RSS PHEinox™ STAINLESS STEEL SCREWS, AND RSS JTS™ TRUSS SCREWS AND CLIMATEK™ COATING	

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2024, 2021, 2018, 2015 and 2012 *International Building Code*® (IBC)
- 2024, 2021, 2018, 2015 and 2012 *International Residential Code* (IRC)

Properties evaluated:

- Structural
- Corrosion resistance

2.0 USES

The RSS screws are used in wood-to-wood connections that are designed in accordance with the IBC. Climatek coated RSS screws are intended for use in Exposure Conditions shown in Table 6. For structures regulated under the IRC, the screws may be used when an engineered design is submitted in accordance with IRC Section R301.1.3.

3.0 DESCRIPTION

3.1 Notation and Symbols:

a	=	Connection geometry parameter (See Table 5 and Figures 3 and 4.)
C_M	=	Wet-service factor
D	=	Outside thread diameter
D_H	=	Diameter of fastener head or integral washer
D_{nom}	=	Fastener size designation used by the applicant
D_r	=	Minor thread (root) diameter
D_s	=	Unthreaded shank diameter
$F_{yb,spec}$	=	Minimum specified bending yield strength, determined in accordance with ASTM F1575 using D_r.

L = Fastener length measured from bottom of screw head to tip. See Figures 1 and 2.]

$L_{emb,l}$ = Minimum required embedded thread length in holding member, including tip, applicable to tabulated lateral design values

$L_{emb,w}$ = Minimum required embedded thread length in holding member, including tip, applicable to tabulated withdrawal design values

L_{thread} = Length of thread including tip

N_a = Allowable tension strength of the fastener for use in ASD

SG_{NDS} = Assigned specific gravity (See Section 3.4.)

$t_{s,w}$ = Thickness of wood side member

V_a = Allowable shear strength of the fastener for use in ASD

W = Reference unit withdrawal design value for fasteners installed perpendicular to face of the wood

W_H = Reference head pull-through design value

Z = Reference lateral design value

$Z_{//}$ = Reference lateral design value for fasteners loaded parallel to the wood grain

$Z_{\perp}$ = Reference lateral design value for fasteners loaded perpendicular to the wood grain

3.2 RSS Screws:

RSS screws are dowel-type threaded fasteners designed to be installed in wood without drilling a lead hole. The RSS screws that have been evaluated are partially-threaded screws which have a star shaped driving recess in the head. The screws have rolled threads with W-Cut™ threads towards the point, and a Type 17 point (Zip-Tip™). The carbon steel screws have a proprietary finish (Climatek). The RSS and RSS PHEinox screws have 7 threads per inch, while the RSS JTS screws have 8 threads per inch. See Table 1 for the screw dimensions.

3.2.1 RSS Rugged Structural Screws (RSS): The RSS screws are case-hardened carbon steel screws. The screws have a flat washer head style with teeth under the washer. Screws with a length of $3^1/_8$ inches (79 mm) or greater have a CEE Thread™ (reamer knurl) between the smooth portion of the shank and the threads. See Figure 1 for a depiction of the screw.

3.2.2 RSS PHEinox Stainless Steel Screws (RSS PHEinox): The RSS PHEinox screws are formed from Type 305 or 316 stainless steel. The screws have the same design as the RSS screws described in Section 3.1.1. See Figure 1 for a depiction of the screw.

3.2.3 RSS JTS Truss Screws (RSS JTS): The RSS JTS screws are case-hardened carbon steel screws. The screws have a flat washer head style and a CEE Thread (reamer knurl) between the smooth portion of the shank and the threads. See Figure 2 for a depiction of the screw.

3.3 Climatek Coating:

The proprietary Climatek coating consists of multiple layers of various materials, including layers of zinc and polymer. Climatek coating is offered in gold and black finishes.

3.4 Wood Members:

Wood members may be sawn lumber or structural glued laminated timber (glulam). The screws may also be used in the face of cross-laminated timber (CLT) panels. Use of the screws in engineered wood products (EWP) other than those addressed above is outside the scope of this report.

For the purposes of connection design, sawn lumber, glulam and CLT members must have SG_{NDS} as indicated in the tables in this report and the moisture content must be less than or equal to 19 percent at the time of screw installation and while in service, unless otherwise noted. SG_{NDS} for sawn lumber is the assigned specific gravity for the applicable grade mark, which must be determined in accordance with ANSI/AWC National Design Specification for Wood Construction® (NDS) Table 12.3.3A of the (Table 11.3.3 of NDS-12 for the 2012 IBC) or the latest NDS Supplement. SG_{NDS} for glulam members is the Specific Gravity for Fastener Design addressed in Tables 5A through 5D of the NDS Supplement. When designing connections with screws installed into CLT panels, all of the laminations must have a minimum SG_{NDS} as indicated in the tables in this report.The tabulated side member thickness is an absolute value (not a minimum or maximum value). The thickness of the wood main member, t_m, must be sufficient to ensure that the tip of the screw is fully embedded in the wood.

4.0 DESIGN AND INSTALLATION

4.1 Engineered Design:

4.1.1 General: The design values in this report are intended to aid the designer in meeting the requirements of IBC Section 1604.2. For connections not completely described in this report, determination of the suitability of the screws for the specific application is the responsibility of the designer and is outside the scope of this report. The designer is responsible for determining the available strengths for the connection, considering all applicable limit states, and for considering serviceability issues. The designer is responsible for determining the required spacing, edge distance and end distance for the screws, based on the characteristics of the connected building materials.

4.1.2 Screw Strength: Allowable screw tension and shear strength and minimum specified bending yield strength for the screws are shown in Table 1.

4.1.3 Reference Withdrawal Design Values (*W*) and Reference Head Pull-through Design Values (W_H): Reference withdrawal (*W*) design values in pounds per inch of thread penetration, for screws installed perpendicular to the face of the wood member are given in Table 2. Select reference head pull-through (W_H) design values are also given in Table 2. Reference head pull-through design values for other member thicknesses and SG_{NDS} values may be determined in accordance with Equations 12.2-6a and 12.2-6b of the 2024 and 2018 NDS.

4.1.4 Reference Lateral Design Values (*Z*) Determined in Accordance with the NDS: Reference lateral design values (*Z*) for single shear, wood-to-wood connections with the RSS™, RSS PHEinox™ and RSS JTS™ screws loaded parallel or perpendicular to grain may be determined in accordance with the NDS subject to the following conditions:

1. $F_{yb,spec}$ from Table 1 must be used for design.
2. D_r, must be used where 'D' is referenced in Tables 12.3.1A, 12.3.1B and 12.3.3 of the NDS (Tables 11.3.1A, 11.3.1B and 11.3.3 of the 2012 NDS for the 2012 IBC). For partially-threaded screws, when determining if Footnote 1 to Table 12.3.1B applies, D_s must be considered the nominal diameter.
3. Wood must have SG_{NDS} of 0.50 or less.
4. The wood side member thickness must be a minimum of $^3/_4$ inches (19.1 mm).
5. The minimum fastener penetration into the main member, excluding tip length, must be 6*D*.
6. Dowel bearing length must be determined in accordance with Section 12.3.5.3 of the NDS (Section 11.3.5.2 of the NDS for the 2012 IBC), using 2*D_r as the tapered tip length, *E*.
7. Spacing, edge and end distance must be in accordance with Table 5, and as needed to prevent splitting of the wood.

4.1.5 Reference Lateral Design Values (*Z*) for Connections Based on Testing: Reference lateral design values based on testing are given in Table 3.

4.1.6 Adjustments to Reference Design Values: Reference design values must be adjusted in accordance with the NDS provisions for dowel-type fasteners to determine allowable strengths for use in ASD and the design strengths for use in LRFD, except the wet service factor, C_M, must be as shown in Tables 2 and 3, as applicable.

4.1.7 Connections with Multiple Screws: See Sections 11.1.2, 11.2.2 and 12.6 of the NDS (Sections 10.1.2, 10.2.2 and 11.6 of the NDS for the 2012 IBC) regarding multiple fastener connections and consideration of local stresses in the wood members.

4.1.8 Combined Loading: When the screws are subjected to combined lateral and withdrawal loads, connections must be designed in accordance with Section 12.4.1 of the NDS (Section 11.4.1 of the NDS for the 2012 IBC).

4.2 Prescriptive Design:

GRK screws may be substituted for nails prescribed in the IBC and IRC on a one-to-one basis, as described in Table 4. Use of the GRK screws as substitutes for nails used in lateral-force resisting assemblies (diaphragms, shear walls and braced walls) is outside the scope of this report.

4.3 Corrosion Resistance: The Climatek™ coated RSS and RSS JTS screws may be used in treated wood, as alternates to hot-dip galvanized fasteners prescribed in IBC Section 2304.10.6 (2018 and 2015 IBC Section 2304.10.5; 2012 IBC Section 2304.9.5). The screws have been evaluated for the Exposure Conditions shown in Table 6. Climatek coated screws have been evaluated for use in wood treated with copper azole (CA-C) preservatives with a maximum retention of 0.15 pcf (2.4 kg/m^3). Applicable wood species are Southern Pine and other species commercially available in the United States.

The RSS PHEinox screws may be used in treated wood in accordance with IBC Section 2304.10.6 (2018 and 2015 IBC Section 2304.10.5; 2012 IBC Section 2304.9.5).

4.4 Installation:

Screws must be installed in accordance with the GRK Fasteners published installation instructions and this report. The screws must be installed perpendicular to the plane of the wood side member. The underside of the washer head must be flush with the surface of the wood side member. Screws must not be overdriven. Screws must be installed with the minimum spacing, end distances, and edge distances to prevent splitting of the wood or as noted in Table 5, whichever is more restrictive. For screws installed into wood with a specific gravity of more than 0.55, use of lead holes complying with Section 12.1.5 of the NDS (Section 11.1.5 of the NDS for the 2012 IBC) is recommended. The screws must be installed by turning with Star Drive (Torx) bits, not by driving with a hammer.

5.0 CONDITIONS OF USE:

The RSS screws and Climatek coatings 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 Installation must comply with this report, the report holder's published instructions and the applicable code. A copy of the report holder's published installation instructions must be available at the jobsite at all times during installation. In the event of a conflict between the report holder's published installation instructions and this report, this report governs.

5.2 Design loads for the screws must not exceed the available strengths described in Section 4.1.

5.3 Calculations and details demonstrating compliance with this report must be submitted to the code official. The calculations and details must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

5.4 Connection design for lateral loading applications using inclined fasteners is outside the scope of this report.

5.5 Use of the screws in locations exposed to saltwater or saltwater spray is outside the scope of this evaluation report.

5.6 The screws are manufactured under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

6.1 Data in accordance with the ICC-ES Acceptance Criteria for Dowel-type Threaded Fasteners Used in Wood (AC233), dated June 2023 (editorially revised July 2024).

6.2 Data in accordance with the ICC-ES Acceptance Criteria for Corrosion-resistant Fasteners and Evaluation of Corrosion Effects of Wood Treatments (AC257), dated June 2023 (editorially revised April 2024).

7.0 IDENTIFICATION

7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-2442) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.

7.2 In addition, the RSS™ screws are identified by the designation "RSS" or "JTS" on the head of each screw, along with the diameter and length in millimeters, as shown in Figures 1 and 2. In addition, the letters "GRK" may be marked on the head of each screw, as shown in Figures 1 and 2. Packaging labels for the RSS screws include the fastener designation (RSS™ or JTS™), the fastener size and length, and the finish or coating designation (PHEinox™ or Climatek™). Screws with black Climatek coating are described on the packaging as "Black Structural Screws".

7.3 The report holder's contact information is the following:

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TABLE 1—RSS™ FASTENER SPECIFICATIONS

FASTENER DESIGNATION		L^1 (inches)	L_{thread}^2 (inches)	D_H (inch)	HEAD RECESS TYPE AND SIZE	HEAD HEIGHT (inch)	SHOULDER ø (inch)	D_s (inch)	D (inch)	D_r (inch)	$F_{yb,spec}$ (psi)	ALLOWABLE STEEL STRENGTHS	
												N_a (lbf)	V_a (lbf)
RSS™	1/4 x 2 1/2"	2 1/2	1 1/2	0.533	T-25	0.110	0.244	0.169	0.236	0.152	153,400	1001	679
	1/4 x 2 3/4"	2 3/4	1 3/4										
	1/4 x 3 1/8"	3 1/8	2										
	1/4 x 3 1/2"	3 1/2	2 3/8										
	5/16 x 2 1/2"	2 1/2	1 1/2	0.620	T-30	0.157	0.301	0.195	0.276	0.167	171,800	1274	884
	5/16 x 2 3/4"	2 3/4	1 3/4										
	5/16 x 3 1/8"	3 1/8	2										
	5/16 x 3 1/2"	3 1/2	2 3/8										
	5/16 x 4"	3 7/8	2 1/2										
	5/16 x 5 1/8"	5	3 3/8										
	5/16 x 6"	5 7/8	3 7/8										
	3/8 x 3 1/8"	3 1/8	2	0.689	T-40	0.181	0.364	0.219	0.313	0.191	160,200	1747	1108
	3/8 x 4"	3 7/8	2 1/2										
	3/8 x 5 1/8"	5	3 3/8										
	3/8 x 6"	5 7/8	3 7/8										
	3/8 x 7 1/4"	7	4 3/8										
	3/8 x 8"	7 3/4	4 3/8										
	3/8 x 10"	9 3/4	5										
	3/8 x 12"	11 3/4	5 7/8										
	3/8 x 14 1/8"	14 1/8	5 7/8										
	3/8 x 16"	15 5/8	5 7/8										
RSS PHEinox™	1/4 x 2 1/2"	2 1/2	1 1/2	0.533	T-25	0.110	0.244	0.169	0.236	0.152	100,300	628	546
	1/4 x 3 1/8"	3 1/8	2										
	5/16 x 2 1/2"	2 1/2	1 1/2	0.620	T-30	0.157	0.301	0.195	0.276	.167	106,500	806	668
	5/16 x 3 1/8"	3 1/8	2										
	5/16 x 4"	3 7/8	2 1/2										
	5/16 x 5 1/8"	5	3 3/8										
	5/16 x 6"	5 7/8	3 7/8										
RSS JTS™	1/4 x 5"	5	1 3/8	0.534	T-25	0.090	0.244	0.171	0.240	0.152	203,700	994	892
	1/4 x 6 3/4"	6 5/8	1 3/8										

For **SI:** 1 inch = 25.4 mm; 1 psi =6.89 kPa; 1 lbf = 4.45 N.

[1]The length of fasteners is measured from the underside of the head to bottom of the tip. See Figure 1.
[2]Length of thread includes tip. See Figure 1.

TABLE 2—RSS™ REFERENCE WITHDRAWAL (W) AND PULL-THROUGH (W_H) DESIGN VALUES FOR INSTALLATION INTO THE FACE OF WOOD MEMBERS[1,2]

FASTENER SIZE, D_{nom} (inch)	$L_{emb,w}$ (inches)	W FOR SELECTED SG_{NDS} VALUES (lbf/inch):[1,2]		W_H FOR SELECTED SG_{NDS} VALUES (lbf):[1]						WET SERVICE FACTOR, C_M
		0.42	0.55	0.42		0.50		0.55		
				Side Member Thickness						
				3/4 inch	1 1/2 inch	3/4 inch	1 1/2 inch	3/4 inch	1 1/2 inch	
RSS™										
1/4	1 1/2	151	186	153	272	217	385	262	466	0.70
5/16	1 1/2	165	227	178	356	252	504	305	610	
3/8	2	180	259	198	395	280	560	339	678	
RSS PHEinox ™										
1/4	1 1/2	134	187	153	272	217	385	262	466	0.70
5/16	1 1/2	136	202	178	356	252	504	305	610	
RSS JTS™										
1/4	1 3/8	152	191	153	273	217	386	263	467	0.68

For **SI:** 1 inch = 25.4 mm; 1 lbf = 4.45 N, 1 lbf/in = 175 N/mm.

[1]Tabulated values are applicable to screws installed perpendicular to the faces of the wood members.
[2]Tabulated reference withdrawal design values are in pounds per inch of thread penetration into the main member, and must be multiplied by the thread length embedded in the member, including the tip, in order to get the total withdrawal design value in pounds.

TABLE 3—RSS™ REFERENCE LATERAL DESIGN VALUES (Z) FOR SINGLE SHEAR (TWO-MEMBER) WOOD-TO-WOOD CONNECTIONS[1,2,3]

FASTENER SIZE, D_{nom} (inch)		$t_{s,w}$ (inches)	$L_{emb,l}$ (inches)	REFERENCE LATERAL DESIGN VALUE (Z) FOR SELECTED SG_{NDS} VALUES (lbf):						WET SERVICE FACTOR, C_M
				0.42		0.50		0.55		
				$Z_\parallel$	$Z_\perp$	$Z_\parallel$	$Z_\perp$	$Z_\parallel$	$Z_\perp$	
RSS™										
1/4		3/4	1 3/4	153	137	153	175	175	175	0.70
		3/4	2 3/8	183	137	183	175	183	175	
5/16		3/4	1 3/4	168	133	168	133	214	178	
		1 1/2	2 3/8	239	236	333	236	333	257	
		2	3 7/8	265	289	472	289	472	289	
3/8		1 1/2	2 3/8	224	205	274	205	274	264	
		2	3 7/8	270	296	325	288	325	288	
		2 3/4	4 1/4	423	291	593	304	593	304	
RSS PHEinox ™										
1/4		3/4	1 3/4	162	134	162	185	215	185	0.70
5/16		3/4	1 3/4	151	149	151	149	181	175	
		3/4	2 3/8	205	149	205	149	181	175	
		1 1/2	2 3/8	249	229	377	229	377	272	
		2	3 7/8	302	340	302	358	449	358	
RSS JTS™										
1/4		1 3/4	3 1/4	168	221	241	237	241	237	0.70

For **SI:** 1 inch = 25.4 mm ; 1 lbf = 4.45 N.

[1]Tabulated values are applicable to screws installed perpendicular to the faces of the wood members.
[2]The wood main member thickness must be equal to or greater than the screw length less the thickness of the wood side member so that the screw is fully embedded in the wood.
[3]The tabulated lateral design values are based on both wood members having the same specific gravity.

TABLE 4—PRESCRIPTIVE SUBSTITUTIONS FOR FRAMING CONNECTIONS[1,2,3,4]

CODE PRESCRIBED NAIL	MINIMUM DIAMETER AND RSS™ SCREW TYPE	APPLICABLE LENGTHS OF RSS™ SCREWS (inches)
8d box ($2^1/_2$ x 0.113)	$^1/_4$ inch RSS, RSS PHEinox™	$2^1/_2$, $2^3/_4$
8d common ($2^1/_2$ x 0.131)	$^1/_4$ inch RSS, RSS PHEinox	$2^1/_2$, $2^3/_4$
3 x 0.131	$^1/_4$ inch RSS, RSS PHEinox	$3^1/_8$, $3^1/_2$
10d common (3 x 0.148)	$^1/_4$ inch RSS, RSS PHEinox	$3^1/_8$, $3^1/_2$
16d common ($3^1/_2$ x 0.162)	$^5/_{16}$ inch RSS, RSS PHEinox	$3^1/_2$, 4
20d common (4 x 0.192)	$^3/_8$ inch RSS	4

For SI: 1 inch = 25.4 mm

[1]Use of RSS screws in diaphragms, shear walls and braced walls is outside the scope of this report.
[2]Substitutions are based on RSS screws have a minor diameter that is larger than the diameter or the prescribed nail, having a length equal to or longer than that of the prescribed nail, and having a bending yield strength greater than that required for the prescribed nail.
[3]RSS™ screws must be fully embedded in the wood member.
[4]Connection geometry requirements in Table 5 apply.

TABLE 5—CONNECTION GEOMETRY REQUIREMENTS FOR SCREWS INSTALLED PERPENDICULAR TO THE FACE OF WOOD MEMBERS[1,2,3]

CONDITION		MINIMUM DISTANCE OR SPACING		
		Self-drilled		Predrilled Hole[4]
		$SG_{NDS} < 0.50$	$0.50 \le SG_{NDS}$	
End distance (see Figure 3)	Loading toward end, $a_{end,1}$	15D	20D	12D
	Loading perpendicular to grain or away from end, $a_{end,2}$	10D	15D	7D
	Axial loading, $a_{end,2}$	10D	10D	7D
Edge distance (see Figure 3)	Loading toward edge, $a_{edge,1}$	10D	12D	7D
	Loading parallel to grain or away from edge, $a_{edge,2}$	5D	7D	3D
	Axial Loading, $a_{edge,2}$	4D	4D	3D
Spacing between fasteners, parallel to grain (see Figure 4)	Loading parallel to grain, a_1	15D	15D	10D
	Loading perpendicular to grain, a_1	10D	10D	5D
	Axial loading, a_1	7D	7D	7D
Spacing between fasteners, perpendicular to grain (see Figure 4)	Loading parallel to grain, a_2	5D	7D	4D
	Loading perpendicular to grain, a_2	5D	7D	4D
	Axial loading, a_2	4D	4D	3D

[1]End distances, edge distances and fastener spacing must be sufficient to prevent splitting of the wood, or as required by this table, whichever is the more restrictive.
[2]Wood member stresses must be checked in accordance with Section 11.1.2 and Appendix E of the NDS, and end distances, edge distances and fastener spacing may need to be increased accordingly.
[3]For CLT products, parallel and perpendicular-to-grain descriptions apply to the grain orientation at the shear plane for lateral loading and to the face grain orientation for withdrawal loading.
[4]Tabulated geometry is applicable to fasteners installed in predrilled holes that meet the following requirements:

- For installation in Douglas Fir and other species of similar or greater density, the hole must have a diameter between $0.60D_s$ and $0.75D_s$.
- For installation in SPF and other species of similar density, the hole must have a diameter between $0.40D_s$ and $0.70D_s$.
- The hole diameter must not exceed $0.9D_r$.

TABLE 6—APPLICABLE EXPOSURE CONDITIONS FOR GRK SCREWS WITH CLIMATEK COATING[1]

EXPOSURE CONDITION	TYPICAL APPLICATIONS	EVALUATION LIMITATIONS
1	Treated wood in dry use applications	Limited to use where equilibrium moisture content of the chemically treated wood meets the dry service conditions as described in the NDS with occasional exposure to high humidity.
3	General construction	Limited to freshwater and chemically treated wood exposure, without saltwater exposure.

[1]Treated wood refers to the specific wood treatments and retention levels described in Section 4.3.

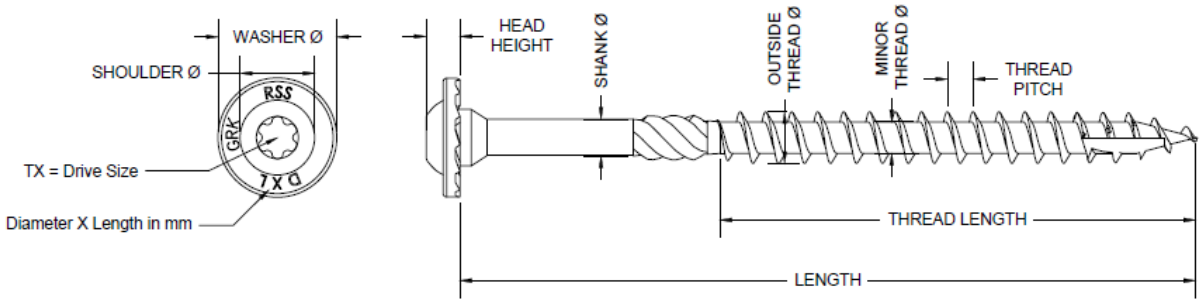

FIGURE 1—RSS™ AND RSS PHEINOX™ SCREWS

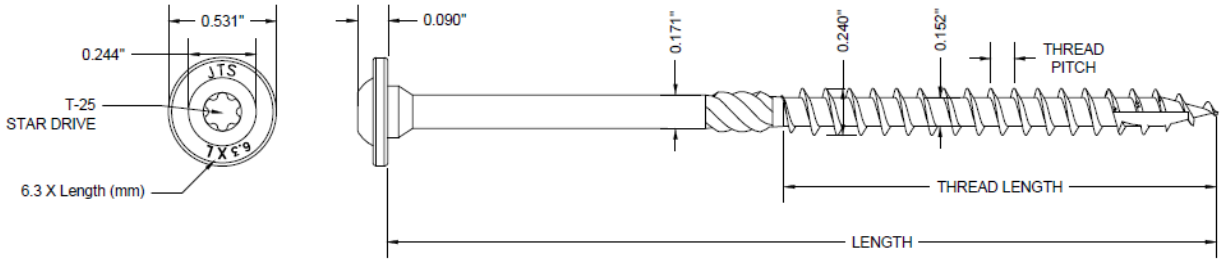

FIGURE 2—RSS JTS™ SCREWS

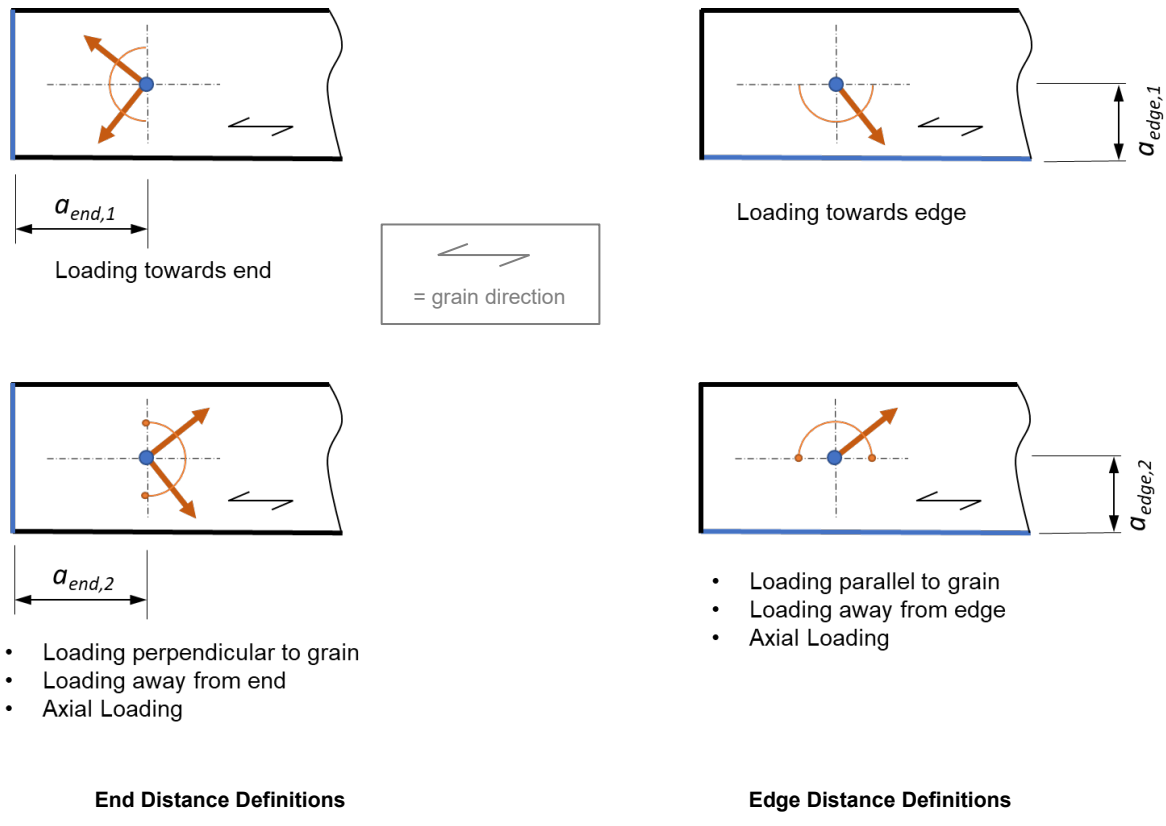

FIGURE 3—END AND EDGE DISTANCE DEFINITIONS FOR SCREWS INSTALLED PERPENDICULAR TO GRAIN

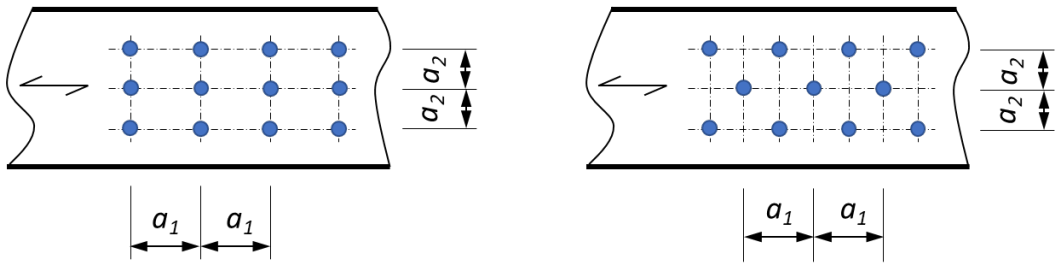

FIGURE 4—SPACING DEFINITIONS FOR SCREWS INSTALLED PERPENDICULAR TO GRAIN

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DIVISION: 06 00 00—WOOD, PLASTICS, AND COMPOSITES
Section: 06 05 23—Wood, Plastic, and Composite Fastenings

REPORT HOLDER:

GRK FASTENERS™, A DIVISION OF ILLINOIS TOOL WORKS, INC.

EVALUATION SUBJECT:

RSS™ RUGGED STRUCTURAL SCREWS, RSS PHEinox™ STAINLESS STEEL SCREWS, AND RSS JTS™ TRUSS SCREWS AND CLIMATEK™ COATING

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the RSS™ Rugged Structural Screws, RSS PHEinox™ Stainless Steel Screws, and RSS JTS™ Truss Screws and Climatek™ Coating, described in ICC-ES evaluation report ESR-2442, have also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

Applicable code editions:

- 2023 *City of Los Angeles Building Code* (LABC)
- 2023 *City of Los Angeles Residential Code* (LARC)

2.0 CONCLUSIONS

The RSS™ Rugged Structural Screws, RSS PHEinox™ Stainless Steel Screws, and RSS JTS™ Truss Screws and Climatek™ Coating, described in Sections 2.0 through 7.0 of the evaluation report ESR-2442, comply with the LABC Chapter 23, and the LARC, and are subject to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The RSS™ Rugged Structural Screws, RSS PHEinox™ Stainless Steel Screws, and RSS JTS™ Truss Screws and Climatek™ Coating described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report ESR-2442.
- The design, installation, conditions of use and identification of the product are in accordance with the 2021 *International Building Code®* (IBC) provisions noted in the evaluation report ESR-2442.
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16 and 17, as applicable.
- The screws are not approved for installations in contact with fire-retardant treated lumber in exterior applications.
- Under the LARC, an engineered design in accordance with LARC Section R301.1.3 must be submitted.

This supplement expires concurrently with the evaluation report, reissued October 2025 and revised February 2026.

ICC-ES Evaluation Report

ESR-2442 FL Supplement w/ HVHZ

Reissued October 2025
Revised February 2026
This report is subject to renewal October 2027.

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DIVISION: 06 00 00— WOOD, PLASTICS, AND COMPOSITES
Section: 06 05 23— Wood, Plastic, and Composite Fastenings

REPORT HOLDER:

GRK FASTENERS™, A DIVISION OF ILLINOIS TOOL WORKS, INC.

EVALUATION SUBJECT:

RSS™ RUGGED STRUCTURAL SCREWS, RSS PHEinox™ STAINLESS STEEL SCREWS, AND RSS JTS™ TRUSS SCREWS AND CLIMATEK™ COATING

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that RSS™ Rugged Structural Screws, RSS PHEinox™ Stainless Steel Screws, and RSS JTS™ Truss Screws and Climatek™ Coating, described in ICC-ES evaluation report ESR-2442, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2023 *Florida Building Code—Building*
- 2023 *Florida Building Code—Residential*

2.0 CONCLUSIONS

The RSS™ Rugged Structural Screws, RSS PHEinox™ Stainless Steel Screws, and RSS JTS™ Truss Screws and Climatek™ Coating, described in Sections 2.0 through 7.0 of ICC-ES evaluation report ESR-2442, comply with the *Florida Building Code—Building* and the *Florida Building Code—Residential*. The design requirements must be determined in accordance with the *Florida Building Code—Building* or the *Florida Building Code—Residential,* as applicable. The installation requirements noted in ICC-ES evaluation report ESR-2442 for the 2021 *International Building Code®* meet the requirements of the *Florida Building Code—Building* or the *Florida Building Code—Residential,* as applicable.

Use of the RSS™ Rugged Structural Screws, RSS PHEinox™ Stainless Steel Screws, and RSS JTS™ Truss Screws and Climatek™ Coating has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* or the *Florida Building Code—Residential* with the following condition:

- For connections subject to uplift, the connection must be designed for no less than 700 pounds (3114 N).

For products falling under Florida Rule 61G20-3, 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). Florida Rule 61G20-3 is applicable to products and/or systems which comprise the building envelope and structural frame for compliance with the structural requirements of the Florida Building Code.

This supplement expires concurrently with ICC-ES evaluation report ESR-2442, reissued October 2025 and revised February 2026.