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ICC-ES Evaluation Report
ESR-4462

Reissued August 2023

This report is subject to renewal August 2025.

DIVISION: 05 00 00—METALS
Section: 05 05 23—Metal Fastenings

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

DIVISION: 09 00 00—FINISHES
Section: 09 22 16.23—Fasteners

REPORT HOLDER:

LORD & SONS, INC.

EVALUATION SUBJECT:

TALON SCREWS

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2018, 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2018, 2015, 2012 and 2009 *International Residential Code*® (IRC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)†

†The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

Properties evaluated:

Structural

2.0 USES

The Talon screws described in this report are used to attach lath, gypsum board and gypsum panel products to cold-formed steel (CFS) framing, as prescribed in the code.

3.0 DESCRIPTION

3.1 General:

The Talon screws are self-drilling or self-piercing tapping screws that are manufactured from carbon steel wire conforming to ASTM A510, Grade 1022 and are case hardened. Tables 1A and 1B provide screw descriptions, including sizes, head styles, point styles, coatings, drilling or piercing ranges and minimum required protrusion length, for Talon self-drilling and self-piercing screws, respectively.

3.2 Talon Self-drilling Tapping Screws:

3.2.1 DWSRT: The DWSRT screw is a fully threaded, #8 coarse threaded screw with a Phillips Modified Truss head style. See Figure 1.

3.2.2 DWST: The DWST screw is a fully threaded, #6 coarse threaded screw with a Phillips Bugle head style. See Figure 2.

3.3 Talon Self-piercing Tapping Screws:

3.3.1 DWSR: The DWSR screw is a fully threaded, #8 coarse threaded screw with a Phillips Modified Truss head style. See Figure 3.

3.3.2 DWS: The DWS screw is a partially threaded, #6 coarse threaded screw with a Phillips Bugle head style. See Figure 4.

3.3.3 DWSC: The DWSC screw is a partially threaded, #6 coarse threaded screw with a Phillips Bugle head style. See Figure 5.

4.0 DESIGN AND INSTALLATION

4.1 Design:

4.1.1 General: Screw thread length and point style must be selected to suit the thickness of the fastened materials and the thickness of the supporting steel, respectively, based on the minimum required protrusion length and the drilling or piercing capacity given in Table 1A or 1B, as applicable.

When tested for corrosion resistance in accordance with ASTM B117, the screws met the minimum requirement listed in ASTM F1941, with no white corrosion after three hours and no red rust after 12 hours.

4.1.2 Screws for Attaching Lath to CFS: The DWSRT screws described in Section 3.2.1 are recognized for use in attaching metal plaster bases (lath) to CFS where screws complying with ASTM C954 are prescribed in the code. The DWSR screws described in Section 3.3.1 are recognized for use in attaching lath to CFS where self-piercing tapping screws complying with ASTM C1002 are prescribed in the code.

4.1.3 Screws for Attaching Gypsum Board Materials to CFS: The DWST screws described in Section 3.2.2 are recognized for use in attaching gypsum board materials to

CFS where screws complying with ASTM C954 are prescribed in the code. The DWS and DWSC screws described in Sections 3.3.2 and 3.3.3, respectively, are recognized for use in attaching gypsum board materials to CFS where self-piercing tapping screws complying with ASTM C1002 are prescribed in the code.

4.2 Installation:

Installation of the Talon tapping screws must be in accordance with the manufacturer's published installation instructions and this report. The manufacturer's published installation instructions must be available at the jobsite at all times during installation.

The screws must be installed perpendicular to the work surface using a variable speed screw driving tool set to not exceed 2,500 rpm. The screw must penetrate through the supporting steel with a minimum of three threads protruding past the back side of the supporting steel.

5.0 CONDITIONS OF USE

The Talon Screws 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 Fasteners must be installed in accordance with the manufacturer's published installation instructions and this report. In the event of a conflict between this report and the manufacturer's published installation instructions, this report governs.

5.2 The Talon Screws are manufactured under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

6.1 Data in accordance with ASTM C954.

6.2 Data in accordance with ASTM C1002.

6.3 Quality documentation in accordance with the ICC-ES Acceptance Criteria for Quality Documentation (AC10).

7.0 IDENTIFICATION

7.1 The Talon Screws are marked with a "t" on the top surface of the screw heads, as shown in Figures 1 through 5. Boxes of Talon screws are labeled with the report holder's name (Talon Screws, A Division of Lord & Sons, Inc.), type, nominal screw size, nominal screw length, point type, and the evaluation report number (ESR-4462).

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

LORD & SONS, INC.
430 EAST TRIMBLE ROAD
SAN JOSE, CALIFORNIA 95131
(408) 817-8900
www.talonscrews.com

TABLE 1A—TALON SELF-DRILLING SCREWS

SCREW TYPE	DESCRIPTION[1] (Nominal size-tpi)	BASIC/ NOMINAL SCREW DIAMETER (inch)	HEAD DIAMETER (inch)	HEAD STYLE	POINT TYPE	COATING[2]	DRILLING CAPACITY (inch)		MINIMUM REQUIRED PROTRUSION LENGTH (inch)
							Min.	Max.	
DWSRT	8-18	0.164	0.437	Modified Truss	3	Zinc	0.110	0.175	0.33
DWST	6-20	0.138	0.343	Bugle	3	Phosphate, Zinc	0.035	0.075	0.32

For **SI:** 1 inch = 25.4 mm.

[1]tpi = threads per inch
[2]Zinc = Electroplated zinc in accordance with the manufacturer's specifications; Phosphate = Gray Phosphate in accordance with the manufacturer's specifications.

TABLE 1B—TALON SELF-PIERCING SCREWS

SCREW TYPE	DESCRIPTION[1] (Nominal size-tpi)	BASIC/ NOMINAL SCREW DIAMETER (inch)	HEAD DIAMETER (inch)	HEAD STYLE	POINT ANGLE (Degrees)	COATING[2]	MAXIMUM PIERCING CAPACITY (mils)	MINIMUM REQUIRED PROTRUSION LENGTH (inch)
DWSR	8-15	0.164	0.437	Modified Truss	23	Zinc	33	0.21
DWS	6-17	0.138	0.326	Bugle	23	Phosphate	33	0.24
DWSC	6-9	0.138	0.321	Bugle	23	Phosphate	33	0.30

For **SI:** 1 inch = 25.4 mm, 1 mil = 0.001 inch.

[1]tpi = threads per inch
[2]Zinc = Electroplated zinc in accordance with the manufacturer's specifications; Phosphate = Gray Phosphate in accordance with the manufacturer's specifications.

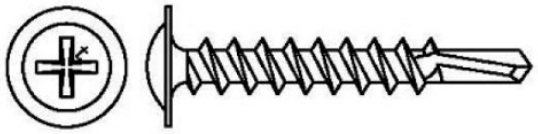

FIGURE 1—DWSRT SELF-DRILLING MODIFIED TRUSS HEAD SCREW

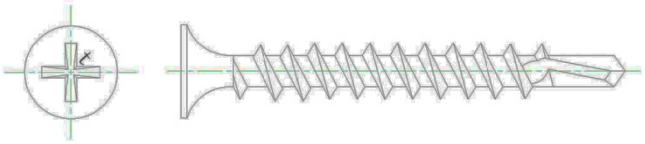

FIGURE 2—DWST SELF-DRILLING BUGLE HEAD SCREW

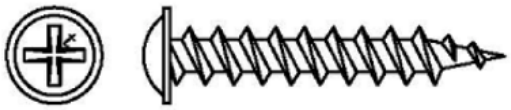

FIGURE 3—DWSR SELF-PIERCING MODIFIED TRUSS HEAD SCREW

FIGURE 4—DWS SELF-PIERCING BUGLE HEAD SCREW

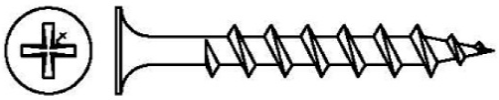

FIGURE 5—DWSC SELF-PIERCING BUGLE HEAD SCREW

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EVALUATION SUBJECT:

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1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that Talon screws, described in the ICC-ES evaluation report ESR-4462, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2019 *California Building Code* (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

- 2019 *California Residential Code* (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The Talon screws, described in Sections 2.0 through 7.0 of the evaluation report ESR-4462, comply with CBC Chapter 22, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report ESR-4462 and the additional requirements of the CBC Chapters 16 and 22, as applicable.

2.1.1 OSHPD: The applicable OSHPD Sections of the CBC are beyond the scope of this supplement.

2.1.2 DSA: The applicable DSA Sections of the CBC are beyond the scope of this supplement.

2.2 CRC:

The Talon screws, described in Sections 2.0 through 7.0 of the evaluation report ESR-4462, comply with the CRC, provided the design and installation are in accordance with the 2018 *International Residential Code*® (IRC) provisions noted in the evaluation report ESR-4462.

This supplement expires concurrently with the evaluation report, reissued August 2023.