



Legacy report on the 1997 *Uniform Building Code*™

**DIVISION: 09—FINISHES**

**Section: 09270—Gypsum Board Accessories**

**POWER BULL DRYWALL SCREWS AND SELF-DRILLING TAPPING SCREWS**

**CHUN YU WORKS (U.S.A.), INC. WESTERN STATES FASTENING SYSTEMS**  
**1037 WALNUT AVENUE**  
**POMONA, CALIFORNIA 91766**

**1.0 SUBJECT**

Power Bull Drywall Screws and Self-drilling Tapping Screws.

**2.0 DESCRIPTION**

**2.1 Drywall Screws:**

The screws are used to connect gypsum wallboards complying with the code to light-gage cold-formed steel framing members complying with Chapter 22, Division VII, of the UBC. The screws are manufactured from steel wire having a grey or black phosphate coating, and are available in various nominal shank diameters, ranging from No. 6 to No. 10, with nominal shank lengths of 1<sup>1</sup>/<sub>4</sub> to 4 inches. The screws are Phillips bugle-head screws, complying with ASTM C 1002-93 as Type S.

**2.2 Self-drilling Tapping Screws:**

Power Bull self-drilling tapping screws are used for connection of light-gage, cold-formed steel members or structural members complying with Chapter 22, Division VII, of the UBC. The screws are manufactured from heat-treated steel with zinc plating. Screws are available in various nominal shank diameters, ranging from No. 7 to No. 14, with nominal shank lengths of <sup>7</sup>/<sub>16</sub> to 1<sup>1</sup>/<sub>4</sub> inches. The screws are available in Phillips pan and hexagonal head styles. The screws comply with SAE Standard J78.

**2.3 Installation:**

**2.3.1 Self-drilling Tapping Screws:** The self-drilling tapping screws are installed without predrilled holes, and must be installed using a variable speed screw gun, set to not exceed 2,500 rpm. The screws must protrude through and beyond the steel member at least three full threads. The minimum screw placement end or edge distance within the steel member is three times the screw diameter. The minimum edge and end distance from connections subjected to shear force in one direction only may be reduced to 1.5 times the screw diameter in the direction perpendicular to the force.

**2.3.2 Drywall Screws:** Drywall screws are installed without predrilled holes, and must be installed using a variable speed screw gun, set to not exceed 2,500 rpm. The screws must protrude through and beyond the steel member at least three full threads. The minimum screw placement end or edge distance from gypsum wallboard is <sup>3</sup>/<sub>8</sub> inch (9.5 mm).

**2.4 Allowable Load Capacity:**

Allowable shear and tension pullout values for the drywall screws and self-drilling tapping screws are listed in Table 1. The shear values are for a single shear connection consisting of two sheets of material of the same type and thickness. The tension pullout values are for withdrawal of a screw from a single sheet of steel. For the values listed, steel sheets must comply with the following:

- ASTM A 653 or A 570, Grade 33, for gages 25 through 18 [0.019 through 0.044 inch (0.48 through 1.12 mm)]
- ASTM A 653 or A 570, Grade 50, for gages 16, 14, and 12 [0.055 through 0.099 inch (1.40 through 2.51 mm)]

**2.5 Identification:**

Each fastener container bears a label noting the company name [Chun Yu Works (U.S.A.), Inc. Western States Fastening Systems] and address, type of fastener, size, length, and evaluation report number (ER-5623). The head of each screw is marked with the letter “L”.

**3.0 EVIDENCE SUBMITTED**

Data in compliance with the Acceptance Criteria for Tapping Screw Fasteners (AC118), dated July 1996.

**4.0 FINDINGS**

**That the Power Bull Drywall Screws and Self-drilling Tapping Screws described in this report comply with the 1997 *Uniform Building Code*™, subject to the following conditions:**

- 4.1 Fasteners are installed in accordance with the manufacturer’s instructions and this report.**
- 4.2 Allowable shear and tension values comply with Table 1.**
- 4.3 Allowable loads may be increased for duration of load, such as wind or earthquake forces, in accordance with Section 1612.3 of the code.**

**This report is subject to re-examination in one year.**