



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

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

REPORT HOLDER:

HILTI, INC.

EVALUATION SUBJECT:

HILTI SELF-DRILLING AND SELF-PIERCING INTERIOR FINISHING/DRYWALL SCREWS

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)

For evaluation for compliance with codes adopted by Los Angeles Department of Building and Safety (LADBS), see [ESR-3891 LABC and LARC Supplement](#).

Property evaluated:

Compliance with referenced standard

2.0 USES

The Hilti Self-drilling and Self-piercing Interior Finishing/Drywall Screws are used to connect gypsum board materials to cold-formed steel base material.

3.0 DESCRIPTION

3.1 General:

The Hilti Self-drilling and Self-piercing Interior Finishing/Drywall Screws are tapping screws, case-hardened from carbon steel conforming to ASTM A510, Grades 1018 to 1022. Table 1 provides screw designations, sizes and descriptions of head styles, point styles, drilling/piercing ranges, length of load bearing area and coatings. Screws are supplied in boxes of individual screws, or in collated plastic strips. See Figures 1 through 3 for depictions of the screws described in Sections 3.2 through 3.4, respectively.

3.2 PBH SD Self-drilling Drywall Screws:

The #6 PBH SD and #8 PBH SD self-drilling screws comply with the material and performance requirements of ASTM C954. The screws have a flat or slightly concave Phillips

Bugle head style and have an electroplated zinc coating or a proprietary phosphate coating, as indicated in Table 1.

3.3 PBH S Self-piercing Drywall Screws:

The #6 PBH S self-piercing screws comply with the material and performance requirements of ASTM C1002, Type S. The screws have a flat or slightly concave Phillips Bugle head style and have an electroplated zinc coating or a proprietary phosphate coating, as indicated in Table 1.

3.4 PWH SD CMT BD Self-drilling Drywall Screws:

The #8 PWH SD CMT BD self-drilling screws comply with ASTM C954. The screws have a Phillips Wafer head style and have a proprietary coating as indicated in Table 1.

4.0 DESIGN AND INSTALLATION

4.1 General:

Screw length and point style must be selected on the basis of thickness of the fastened material and thickness of the supporting steel, respectively, based on the length of load bearing area (see Figure 4) and drilling/piercing capacity given in Table 1.

When tested for corrosion resistance in accordance with ASTM B117, screws with coatings described in Table 1 showed no white corrosion after three hours and no red rust after 12 hours.

4.1.1 Hilti PBH SD and PWH SD CMT BD Screws (Sections 3.2 and 3.4, respectively): These screws may be used for fastening gypsum board to cold-formed steel framing 0.033 inch to 0.112 inch (0.8 mm to 2.84 mm) thick, in accordance with IBC Section 2506 and IRC Section R702.3.5.1 (2012 IRC Section R702.3.6). They may also be used for attaching gypsum board sheathing to cold-formed steel framing as prescribed in Section B5.2.2.3.4 of AISI S240 and Sections E5 and E6 of AISI S400, which are referenced in IBC Section 2211.1 (Section C2.2.3 of AISI S213, which is referenced in 2015 and 2012 IBC Section 2211.6).

4.1.2 Hilti PBH S Screws (Section 3.3): These screws may be used for fastening gypsum board to cold-formed steel framing less than 0.033 inch (0.8 mm) thick, in accordance with IBC Section 2506 and IRC Section R702.3.5.1 (2012 IRC Section R702.3.6).

4.2 Installation:

Installation of the Hilti Self-drilling and Self-piercing Interior Finishing/ Drywall Screws must be in accordance with the report holder's published installation instructions and this report. The report holder'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. 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 Hilti Self-drilling and Self-piercing Interior Finishing/Drywall 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 report holder’s published installation instructions and this report. If there is a conflict between the report holder’s published installation instructions and this report, this more restrictive requirements govern.
- 5.2 The rust-inhibitive (corrosion-resistant) coating on the screws must be suitable for the intended use, as determined by the registered design professional.
- 5.3 The 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 Acceptance Criteria for Quality Documentation (AC10).

7.0 IDENTIFICATION

7.1 Hilti Self-drilling and Self-piercing Interior Finishing/Drywall Screws are marked with one or two H marks on the top of the heads, as shown in Figures 1 through 3. Packages of Hilti Self-drilling and Self-piercing Interior Finishing/Drywall Screws are labeled with the report holder’s name (Hilti, Inc.), the fastener type and size, and the evaluation report number (ESR-3891).

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

HILTI, INC.
7250 DALLAS PARKWAY, SUITE 1000
PLANO, TEXAS 75024
(800) 879-8000
www.hilti.com

TABLE 1—HILTI SELF-DRILLING (ASTM C954) AND SELF-PIERCING (ASTM C1002) DRYWALL SCREWS FOR INSTALLATION INTO STEEL BASE MATERIAL

DESIGNATION	SCREW COLLATION	DESCRIPTION (Size - TPI) ³	NOMINAL DIAMETER (inch)	NOMINAL SCREW LENGTH ⁴ (inch)	HEAD STYLE ¹	NOMINAL HEAD DIAMETER	DRILL POINT (Number)	DRILLING / PIERCING CAPACITY (inch)		LENGTH OF LOAD BEARING AREA ⁴ (inch)	COATING ²
								Min.	Max.		
6 x 1 PBH S	Single	#6-9S	0.138	1	PBH	0.322	Self-piercing	0.023	0.033	0.625	DGP
6 x 1 PBH S M1	Collated	#6-9S	0.138	1	PBH	0.322		0.023	0.033	0.625	DGP
6 x 1 PBH SD	Single	#6-19	0.138	1	PBH	0.322	1	0.033	0.088	0.625	GP
	Single	#6-20	0.138	1	PBH	0.322	1	0.033	0.088	0.625	DGP
6 x 1 PBH SD Z	Single	#6-19, #6-20	0.138	1	PBH	0.322	1	0.033	0.088	0.625	Zinc
6 x 1 PBH SD M1	Collated	#6-20	0.138	1	PBH	0.322	1	0.033	0.088	0.625	DGP
6 x 1 PBH SD Z M1	Collated	#6-20	0.138	1	PBH	0.322	1	0.033	0.088	0.625	Zinc
6 x 1 1/8 PBH S	Single	#6-9S	0.138	1 1/8	PBH	0.322	Self-piercing	0.023	0.033	0.750	DGP
6 x 1 1/8 PBH S M1	Collated	#6-9S	0.138	1 1/8	PBH	0.322		0.023	0.033	0.750	DGP
6 x 1 1/8 PBH SD	Single	#6-19	0.138	1 1/8	PBH	0.322	1	0.033	0.088	0.750	GP
	Single	#6-20	0.138	1 1/8	PBH	0.322	1	0.033	0.088	0.750	DGP
6 x 1 1/8 PBH SD Z	Single	#6-19, #6-20	0.138	1 1/8	PBH	0.322	1	0.033	0.088	0.750	Zinc
6 x 1 1/8 PBH SD M1	Collated	#6-20	0.138	1 1/8	PBH	0.322	1	0.033	0.088	0.750	DGP
6 x 1 1/8 PBH SD Z M1	Collated	#6-20	0.138	1 1/8	PBH	0.322	1	0.033	0.088	0.750	Zinc
6 x 1 1/4 PBH S	Single	#6-9S	0.138	1 1/4	PBH	0.322	Self-piercing	0.023	0.033	0.875	DGP
6 x 1 1/4 PBH S M1	Collated	#6-9S	0.138	1 1/4	PBH	0.322		0.023	0.033	0.875	DGP
6 x 1 1/4 PBH SD	Single	#6-19	0.138	1 1/4	PBH	0.322	1	0.033	0.088	0.875	GP
	Single	#6-20	0.138	1 1/4	PBH	0.322	1	0.033	0.088	0.875	DGP
6 x 1 1/4 PBH SD Z	Single	#6-19, #6-20	0.138	1 1/4	PBH	0.322	1	0.033	0.088	0.875	Zinc
6 x 1 1/4 PBH SD CRC	Single	#6-19, #6-20	0.138	1 1/4	PBH	0.322	1	0.033	0.088	0.875	CRC
6 x 1 1/4 PBH SD M1	Collated	#6-20	0.138	1 1/4	PBH	0.322	1	0.033	0.088	0.875	DGP
6 x 1 1/4 PBH SD Z M1	Collated	#6-20	0.138	1 1/4	PBH	0.322	1	0.033	0.088	0.875	Zinc
6 x 1 1/4 PBH SD CRC M1	Collated	#6-19, #6-20	0.138	1 1/4	PBH	0.322	1	0.033	0.088	0.875	CRC
6 x 1 5/8 PBH S	Single	#6-9S	0.138	1 5/8	PBH	0.322	Self-piercing	0.023	0.033	1.250	DGP
6 x 1 5/8 PBH S M1	Collated	#6-9S	0.138	1 5/8	PBH	0.322		0.023	0.033	1.250	DGP
6 x 1 5/8 PBH SD	Single	#6-19	0.138	1 5/8	PBH	0.322	1	0.033	0.088	1.250	GP
	Single	#6-20	0.138	1 5/8	PBH	0.322	1	0.033	0.088	1.250	DGP
6 x 1 5/8 PBH SD Z	Single	#6-19, #6-20	0.138	1 5/8	PBH	0.322	1	0.033	0.088	1.250	Zinc
6 x 1 5/8 PBH SD M1	Collated	#6-20	0.138	1 5/8	PBH	0.322	1	0.033	0.088	1.250	DGP
6 x 1 5/8 PBH SD Z M1	Collated	#6-20	0.138	1 5/8	PBH	0.322	1	0.033	0.088	1.250	Zinc

TABLE 1—HILTI SELF-DRILLING (ASTM C954) AND SELF-PIERCING (ASTM C1002) DRYWALL SCREWS FOR INSTALLATION INTO STEEL BASE MATERIAL (Continued)

DESIGNATION	SCREW COLLATION	DESCRIPTION (Size - TPI) ³	NOMINAL DIAMETER (inch)	NOMINAL SCREW LENGTH ⁴ (inch)	HEAD STYLE ¹	NOMINAL HEAD DIAMETER	DRILL POINT (Number)	DRILLING / PIERCING CAPACITY (inch)		LENGTH OF LOAD BEARING AREA ⁴ (inch)	COATING ²
								Min.	Max.		
6 x 1 ⁷ / ₈ PBH S	Single	#6-9S	0.138	1 ⁷ / ₈	PBH	0.322	Self-piercing	0.023	0.033	1.500	DGP
6 x 1 ⁷ / ₈ PBH S M1	Collated	#6-9S	0.138	1 ⁷ / ₈	PBH	0.322		0.023	0.033	1.500	DGP
6 x 1 ⁷ / ₈ PBH SD	Single	#6-19	0.138	1 ⁷ / ₈	PBH	0.322	1	0.033	0.088	1.500	GP
	Single	#6-20	0.138	1 ⁷ / ₈	PBH	0.322	1	0.033	0.088	1.500	DGP
6 x 1 ⁷ / ₈ PBH SD Z	Single	#6-19, #6-20	0.138	1 ⁷ / ₈	PBH	0.322	1	0.033	0.088	1.500	Zinc
6 x 1 ⁷ / ₈ PBH SD CRC	Single	#6-19, #6-20	0.138	1 ⁷ / ₈	PBH	0.322	1	0.033	0.088	1.500	CRC
6 x 1 ⁷ / ₈ PBH SD M1	Collated	#6-20	0.138	1 ⁷ / ₈	PBH	0.322	1	0.033	0.088	1.500	DGP
6 x 1 ⁷ / ₈ PBH SD Z M1	Collated	#6-20	0.138	1 ⁷ / ₈	PBH	0.322	1	0.033	0.088	1.500	Zinc
6 x 1 ⁷ / ₈ PBH SD CRC M1	Collated	#6-19, #6-20	0.138	1 ⁷ / ₈	PBH	0.322	1	0.033	0.088	1.500	CRC
6 x 2 PBH S	Single	#6-9S	0.138	2	PBH	0.322	Self-piercing	0.023	0.033	1.625	DGP
6 x 2 PBH S M1	Collated	#6-9S	0.138	2	PBH	0.322		0.023	0.033	1.625	DGP
6 x 2 PBH SD	Single	#6-19	0.138	2	PBH	0.322	1	0.033	0.088	1.625	GP
	Single	#6-20	0.138	2	PBH	0.322	1	0.033	0.088	1.625	DGP
6 x 2 PBH SD Z	Single	#6-19, #6-20	0.138	2	PBH	0.322	1	0.033	0.088	1.625	Zinc
6 x 2 PBH SD M1	Collated	#6-20	0.138	2	PBH	0.322	1	0.033	0.088	1.625	DGP
6 x 2 PBH SD Z M1	Collated	#6-20	0.138	2	PBH	0.322	1	0.033	0.088	1.625	Zinc
6 x 2 ¹ / ₄ PBH S	Single	#6-9S	0.138	2 ¹ / ₄	PBH	0.322	Self-piercing	0.023	0.033	1.875	DGP
8 x 2 ³ / ₈ PBH SD ⁵	Single	#8-18	0.164	2 ³ / ₈	PBH	0.330	1	0.033	0.112	2.000	GP
8 x 2 ³ / ₈ PBH SD zinc ⁵	Single	#8-18	0.164	2 ³ / ₈	PBH	0.330	1	0.033	0.112	2.000	Zinc
8 x 2 ⁵ / ₈ PBH SD ⁵	Single	#8-18	0.164	2 ⁵ / ₈	PBH	0.330	1	0.033	0.112	2.250	GP
8 x 2 ⁵ / ₈ PBH SD zinc ⁵	Single	#8-18	0.164	2 ⁵ / ₈	PBH	0.330	1	0.033	0.112	2.250	Zinc
8 x 3 PBH SD ⁵	Single	#8-18	0.164	3	PBH	0.330	1	0.033	0.112	2.625	GP
8 x 3 PBH SD zinc ⁵	Single	#8-18	0.164	3	PBH	0.330	1	0.033	0.112	2.625	Zinc
8 x 1 ¹ / ₄ PWH SD CMT BD	Single	#8-18	0.164	1 ¹ / ₄	PWH	0.421	1	0.033	0.112	0.875	Kaitex
8 x 1 ⁵ / ₈ PWH SD CMT BD	Single	#8-18	0.164	1 ⁵ / ₈	PWH	0.421	1	0.033	0.112	1.250	Kaitex

For SI: 1 inch = 25.4 mm.

¹Refer to Section 3.0 and Figures 1 through 3 for explanation of head configuration abbreviations.

²For coating abbreviations, DGP = Dark Grey phosphate per EN ISO 3892; GP = Grey phosphate per EN ISO 3892; Zinc = electroplated zinc coating; CRC = Proprietary Duplex Coating; Kaitex = Proprietary Duplex Coating.

³An 'S' in the thread designation indicates a double thread. Listed thread pitch is for one thread only.

⁴Refer to Figure 4 for nominal screw length (L) and load bearing area (LBA) description.

⁵These screws are partially threaded for use in attaching gypsum board material of the following minimum thickness: 1/2 inch for 2³/₈-inch-long screws; 3/4 inch for 2⁵/₈-inch-long screws; 1 inch for 2-inch-long screws.

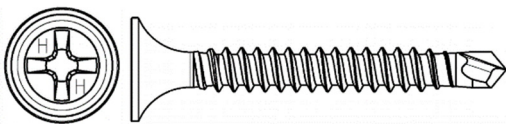


FIGURE 1—PHILLIPS BUGLE HEAD (PBH) SD SELF-DRILLING DRYWALL SCREW

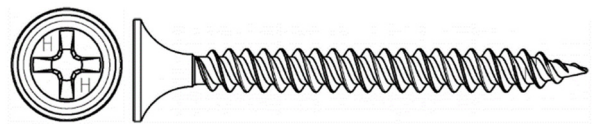


FIGURE 2—PHILLIPS BUGLE HEAD (PBH) S SELF-PIERCING DRYWALL SCREW

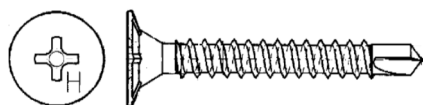


FIGURE 3—PHILLIPS WAFER HEAD (PWH) SD CMT BD SELF-DRILLING DRYWALL SCREW

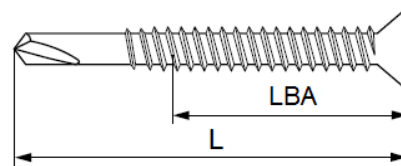


FIGURE 4—DESCRIPTION OF NOMINAL SCREW LENGTH (L) AND LOAD BEARING AREA (LBA)

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

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

REPORT HOLDER:

HILTI, INC.

EVALUATION SUBJECT:

HILTI SELF-DRILLING AND SELF-PIERCING INTERIOR FINISHING/DRYWALL SCREWS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the Hilti Self-drilling and Self-piercing Interior Finishing/Drywall Screws, described in ICC-ES evaluation report [ESR-3891](#), 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 Hilti Self-drilling and Self-piercing Interior Finishing/Drywall Screws, described in Sections 2.0 through 7.0 of the master evaluation report [ESR-3891](#), comply with the LABC Chapters 22 and 25, and the LARC, and are subject to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The Hilti Self-drilling and Self-piercing Interior Finishing/Drywall Screws described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report [ESR-3891](#).
- The design, installation, conditions of use and identification of the Hilti Self-drilling and Self-piercing Interior Finishing/Drywall Screws are in accordance with the 2021 *International Building Code*® (IBC) provisions noted in the evaluation report [ESR-3891](#).
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16 and 17, as applicable.
- 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 July 2023.

DIVISION: 05 00 00—METALS**Section: 05 05 23—Metal Fastenings****DIVISION: 09 00 00—FINISHES****Section: 09 22 16.23—Fasteners****REPORT HOLDER:**

HILTI, INC.

EVALUATION SUBJECT:

HILTI SELF-DRILLING AND SELF-PIERCING INTERIOR FINISHING/DRYWALL SCREWS

1.0 REPORT PURPOSE AND SCOPE**Purpose:**

The purpose of this evaluation report supplement is to indicate that Hilti Self-drilling and Self-piercing Interior Finishing/Drywall Screws, described in ICC-ES evaluation report ESR-3891, 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 Hilti Self-drilling and Self-piercing Interior Finishing/Drywall Screws, described in Sections 2.0 through 7.0 of the ICC-ES evaluation report ESR-3891, 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-3891 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 Hilti Self-drilling and Self-piercing Interior Finishing/Drywall Screws has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* and the *Florida Building Code—Residential*.

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).

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