Attached are page(s) from the 2008 Hilti North American Product Technical Guide. For complete details on this product, including data development, product specifications, general suitability, installation, corrosion, and spacing & edge distance guidelines, please refer to the Technical Guide, or contact Hilti.

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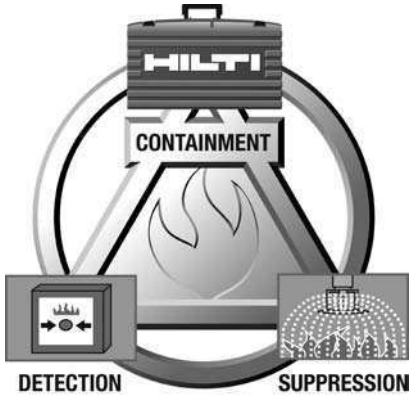

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- Reliable fastenings without welds
- Easily installed

Kwik-Pro Self-Drilling Screws 3.5.2

3.5.2.1 Product Description

The Hilti Kwik-Pro Self-Drilling Screws are designed to drill their own hole in steel base materials up to 1/2" thick. These screws are available in a variety of head styles, thread lengths and drill-flute lengths for screw diameters #6 through 1/4". Hilti Kwik-Pro self-drilling screws meet ASTM C 1513, ASTM C 954 and SAE J78 standards.

Product Features

- Hex head for metal-to-metal applications
- Flush head for wood-to-metal applications
- For metal from 0.035" to 0.500" thick
- Winged reamers for wood over 1/2" thick
- Stitch screws for light gauge metal-to-metal
- Sealing screws for water resistant fastenings

3.5.2.2 Material Specifications

Material	ASTM A 510 Grade 1018-1022
Heat Treatment	Case hardened and tempered • Sizes 8, 10 and 12: 0.004" to 0.009" case depth • Size 1/4": 0.005" to 0.011" case depth
Plating	• Wood decking screws: Black Phosphate (8-18 x 1 5/16" PFH #3 and 8-18 x 1 15/16" and 5/16" PFH #3) • Kwik-Cote and Kwik-Seal screws: 0.0007" to 0.0015" Kwik-Cote Treatment Note: Due to environmental considerations, Hilti does not plate with cadmium. • Most Hilti zinc plated screws conform to ASTM F 1941 (which replaces ASTM B 633), as tested in accordance with ASTM B 117. The minimum zinc thickness is 5 microns. Refer to Secton 3.5.2.5 for screw coating information.
Kwik-Cote Treatment	Kwik-Cote is a unique copolymer coating that provides greater corrosion resistance than zinc or cadmium plating.

Listings/Approvals

ICC-ES (International Code Council)
ESR-2196 (HWH screws only)

COLA (City of Los Angeles)
RR 25678 (HWH screws only)

FM (Factory Mutual)
S-MD 12-14 x 1 stitch and S-MD 10-16 x 7/8 pilot point fasteners for securing Class 1 Steel Roof Deck sidelaps with 1-60 and 1-90 wind uplift ratings. Listed for higher wind uplift ratings with FM Approved Lightweight Insulating Concrete Roof Deck Assemblies. Refer to FM RoofNav for specific assembly listings.

3.5.2.3 Technical Data

Ultimate Tensile Strengths – Pullout (Tension), lb (kN) **1, 2, 3, 4, 5, 6, 7**

Screw Designation	Nominal Diameter in.	Thickness of member not in contact with the screw head, GA (in.)						
		20 (0.036)	**18** (0.048)	**16** (0.060)	**14** (0.075)	**12** (0.090)	**10** (0.105)	**8** (0.135)
#6	**0.138**	**190** (0.85)	**250** (1.11)	**320** (1.42)	**395** (1.76)	**475** (2.11)	**555** (2.47)	**715** (3.18)
#7	**0.151**	**210** (0.93)	**275** (1.22)	**345** (1.53)	**435** (1.93)	**520** (2.31)	**605** (2.69)	**780** (3.47)
#8	**0.164**	**225** (1.00)	**300** (1.33)	**375** (1.67)	**470** (2.09)	**565** (2.51)	**660** (2.94)	**845** (3.76)
#10	**0.190**	**260** (1.16)	**350** (1.56)	**435** (1.93)	**545** (2.42)	**655** (2.91)	**765** (3.40)	**980** (4.36)
#12	**0.216**	**295** (1.31)	**395** (1.76)	**495** (2.20)	**620** (2.76)	**745** (3.31)	**870** (3.87)	**1120** (4.98)
1/4 in.	**0.250**	**345** (1.53)	**460** (2.05)	**575** (2.56)	**715** (3.18)	**860** (3.83)	**1000** (4.45)	**1290** (5.74)

1 The lower of the ultimate pull-out, pullover, and tension fastener strength of screw should be used for design.
2 Load values based upon calculations done in accordance with Section E4 of the AISI North American Specification for the Design of Cold-Formed Steel Structural Members (NASPEC) 2001 edition with 2004 Supplement.
3 The NASPEC recommends a safety factor of 3.0 be applied for allowable strength design and a Φ factor of 0.5 be applied for LRFD design.
4 ANSI/ASME standard screw diameters were used in the calculations and are listed in the tables.
5 The screw diameters in the table above are available in head styles of pan, hex washer head, pancake, flat, wafer and bugle.
6 The load data in the table is based upon sheet steel with F_u = 45 ksi. For F_u = 55 ksi steel, multiply values by 1.22. For F_u = 65 ksi steel, multiply values by 1.44.
7 Refer to Section 3.5.2.5 to ensure drilling capacities.

3.5.2 Kwik-Pro Self-Drilling Screws

Ultimate Tensile Strengths – Pullover (Tension) lb (kN) [1, 2, 3, 4, 5, 6, 7]

Screw Designation	Washer or Head Diameter in.	Thickness of member not in contact with the screw head, ga (in.)							
		22 (0.030)	20 (0.036)	18 (0.048)	16 (0.060)	14 (0.075)	12 (0.090)	10 (0.105)	8 (0.135)
Hex Washer Head (HWH)									
#8	0.335	675 (3.00)	815 (3.63)	1000 (4.45)	1000 (4.45)	1000 (4.45)	1000 (4.45)	1000 (4.45)	1000 (4.45)
#10	0.399	805 (3.58)	970 (4.31)	1290 (5.74)	1370 (6.09)	1370 (6.09)	1370 (6.09)	1370 (6.09)	1370 (6.09)
#12-14	0.415	835 (3.71)	1010 (4.49)	1340 (5.96)	1680 (7.47)	2100 (9.34)	2325 (10.34)	2325 (10.34)	2325 (10.34)
#12-24	0.415	835 (3.71)	1010 (4.49)	1340 (5.96)	1680 (7.47)	2100 (9.34)	2520 (11.21)	2940 (13.08)	3780 (16.81)
1/4 in.	0.500	1010 (4.49)	1220 (5.43)	1620 (7.21)	2030 (9.03)	2530 (11.25)	3040 (13.52)	3540 (13.75)	4560 (20.28)
Phillips Pan Head (PPH)									
#7	0.303	615 (2.74)	735 (3.27)	980 (4.36)	1000 (4.45)	1000 (4.45)	1000 (4.45)	1000 (4.45)	1000 (4.45)
#8	0.311	630 (2.80)	755 (3.36)	1000 (4.45)	1000 (4.45)	1000 (4.45)	1000 (4.45)	1000 (4.45)	1000 (4.45)
#10	0.364	740 (3.29)	885 (3.94)	1180 (5.25)	1370 (6.09)	1370 (6.09)	1370 (6.09)	1370 (6.09)	1370 (6.09)
Phillips Truss Head (PTH)									
#8	0.433	875 (3.89)	1000 (4.45)	1000 (4.45)	1000 (4.45)	1000 (4.45)	1000 (4.45)	1000 (4.45)	1000 (4.45)
Phillips Pancake Head (PPCH)									
#10	0.409	830 (3.69)	995 (4.43)	1325 (5.89)	1370 (6.09)	1370 (6.09)	1370 (6.09)	1370 (6.09)	1370 (6.09)
Phillips Flat Truss Head (PFTH)									
#10	0.364	740 (3.29)	885 (3.94)	1180 (5.25)	1475 (6.56)	1840 (8.18)	2170 (9.65)	2170 (9.65)	2170 (9.65)

1. The lower of the ultimate pull-out, pullover, and tension fastener strength of screw should be used for design.
2. Load values based upon calculations done in accordance with Section E4 of the AISI North American Specification for the Design of Cold-Formed Steel Structural Members (NASPEC) 2001 edition with 2004 Supplement.
3. The NASPEC recommends a safety factor of 3.0 be applied for allowable strength design and a Φ factor of 0.5 be applied for LRFD design.
4. ANSI/ASME standard screw head diameters were used in the calculations and are listed in the tables.
5. Phillips Bugle Head (PBH) and Phillips Wafer Head (PWH) styles are not covered by this table because they are not used for attachment of steel to steel.
6. The load data in the table is based upon sheet steel with F_u = 45 ksi. For F_u = 55 ksi steel, multiply values by 1.22. For F_u = 65 ksi steel, multiply values by 1.44.
7. Refer to Section 3.5.2.5 for drilling capacities.

Nominal Fastener Strength of Screw

Screw Designation	Nominal Diameter (in.)	Nominal Fastener Strength	
		Tension, P_{ts} lb (kN)[1]	Shear, P_{ss} lb (kN)[2,3,4]
#6-20	0.138	1000 (4.45)	890 (3.96)
#7-18	0.151	1000 (4.45)	890 (3.96)
#8-18	0.164	1000 (4.45)	1170 (5.20)
#10-16	0.190	1370 (6.09)	1215 (5.40)
#10-12	0.190	2170 (9.65)	1645 (7.32)
#12-14	0.216	2325 (10.34)	1880 (8.36)
#12-24	0.216	3900 (17.35)	2285 (10.16)
1/4 in.	0.250	4580 (20.37)	2440 (10.85)

1 The lower of the ultimate pull-out, pullover, and tension fastener strength of screw should be used for design. The Pullout and Pullover tables in this section have already been adjusted where screw strength governs.

2 The lower of the ultimate shear fastener strength and shear bearing should be used for design. The Shear Bearing table in this section has already been adjusted where screw strength governs.

3 The NASPEC recommends a safety factor of 3.0 be applied for allowable strength design and a Φ factor of 0.5 be applied for LRFD design.

4 When the distance to the end of the connected part is parallel to the line of the applied force the allowable shear fastener strength must be reduced for end distance, when necessary, in accordance with E4.3.2 of Appendix A of the AISI North American Specifications for the Design of Cold Formed Steel Structural Membrane (NASPEC) 2001 edition with 2004 Supplement.

Torsional Strength –

Screw Only. Does Not Consider Base Material Limitations

Size	Min. Torsional Strength in-lb (Nm)
6-20	24 (2.7)
7-18	38 (4.3)
8-18	42 (4.8)
10-16	61 (6.9)
10-24	65 (7.3)
12-14	92 (10.4)
12-24	100 (11.3)
1/4-14	150 (17.0)
1/4-20	156 (17.6)

Kwik-Pro Self-Drilling Screws 3.5.2

Ultimate Shear Strengths – Bearing (Shear), lb (kN) **1, 2, 3, 4, 5, 6, 7**

Screw Designation	Nominal Diameter in.	Thickness of member in contact with screw head, GA (in.)	Thickness of member not in contact with the screw head, GA (in.)				
			20 (0.036)	**18** (0.048)	**16** (0.060)	**14** (0.075)	≥ **12** (0.090)
#7	**0.151**	**20** (0.036)	**500** (2.22)	**660** (2.94)	**660** (2.94)	**660** (2.94)	**660** (2.94)
		18 (0.048)	**500** (2.22)	**660** (2.94)	**880** (3.91)	**880** (3.91)	**880** (3.91)
		≥ **16** (0.060)	**500** (2.22)	**660** (2.94)	**890** (3.96)	**890** (3.96)	**890** (3.96)
#8	**0.164**	**20** (0.036)	**525** (2.34)	**715** (3.18)	**715** (3.18)	**715** (3.18)	**715** (3.18)
		18 (0.048)	**525** (2.34)	**805** (3.58)	**955** (4.25)	**955** (4.25)	**955** (4.25)
		≥ **16** (0.060)	**525** (2.34)	**805** (3.58)	**1120** (4.98)	**1170** (5.20)	**1170** (5.20)
#10-16	**0.190**	**20** (0.036)	**565** (2.51)	**830** (3.69)	**830** (3.69)	**830** (3.69)	**830** (3.69)
		18 (0.048)	**565** (2.51)	**865** (3.85)	**1110** (4.94)	**1110** (4.94)	**1110** (4.94)
		≥ **16** (0.060)	**565** (2.51)	**865** (3.85)	**1210** (5.38)	**1215** (5.40)	**1215** (5.40)
#10-12	**0.190**	**20** (0.036)	**565** (2.51)	**830** (3.69)	**830** (3.69)	**830** (3.69)	**830** (3.69)
		18 (0.048)	**565** (2.51)	**865** (3.85)	**1110** (4.94)	**1110** (4.94)	**1110** (4.94)
		16 (0.060)	**565** (2.51)	**865** (3.85)	**1210** (5.38)	**1390** (6.18)	**1390** (6.18)
		≥ **14** (0.075)	**565** (2.51)	**865** (3.85)	**1210** (5.38)	**1645** (7.32)	**1645** (7.32)
#12-14	**0.216**	**20** (0.036)	**600** (2.67)	**930** (4.14)	**945** (4.20)	**945** (4.20)	**945** (4.20)
		18 (0.048)	**600** (2.67)	**925** (4.11)	**1260** (5.60)	**1260** (5.60)	**1260** (5.60)
		16 (0.060)	**600** (2.67)	**925** (4.11)	**1290** (5.74)	**1570** (6.98)	**1570** (6.98)
		≥ **14** (0.075)	**600** (2.67)	**925** (4.11)	**1290** (5.74)	**1800** (8.00)	**1800** (8.36)
#12-24	**0.216**	**20** (0.036)	**600** (2.67)	**930** (4.14)	**945** (4.20)	**945** (4.20)	**945** (4.20)
		18 (0.048)	**600** (2.67)	**925** (4.11)	**1260** (5.60)	**1260** (5.60)	**1260** (5.60)
		16 (0.060)	**600** (2.67)	**925** (4.11)	**1290** (5.74)	**1570** (6.98)	**1570** (6.98)
		14 (0.075)	**600** (2.67)	**925** (4.11)	**1290** (5.74)	**1800** (8.00)	**1970** (8.76)
		≥ **12** (0.090)	**600** (2.67)	**925** (4.11)	**1290** (5.74)	**1800** (8.00)	**2285** (10.16)
1/4 in.	**0.250**	**20** (0.036)	**645** (2.87)	**1020** (4.54)	**1090** (4.85)	**1090** (4.85)	**1090** (4.85)
		18 (0.048)	**645** (2.87)	**995** (4.43)	**1400** (6.23)	**1460** (6.49)	**1460** (6.49)
		16 (0.060)	**645** (2.87)	**995** (4.43)	**1390** (6.18)	**1820** (8.10)	**1820** (8.10)
		14 (0.075)	**645** (2.87)	**995** (4.43)	**1390** (6.18)	**1940** (8.63)	**2280** (10.14)
		≥ **12** (0.090)	**645** (2.87)	**995** (4.43)	**1390** (6.18)	**1940** (8.63)	**2440** (10.85)

1 The lower of the ultimate shear bearing and shear fastener strength of screw should be used for design.

2 Load values based upon calculations done in accordance with Section E4 of the AISI North American Specification for the Design of Cold-Formed Steel Structural Members (NASPEC) 2001 edition with 2004 Supplement.

3 The NASPEC recommends a safety factor of 3.0 be applied for allowable strength design and a Φ factor of 0.5 be applied for LRFD design.

4 ANSI/ASME standard screw head diameters were used in the calculations and are listed in the tables.

5 Load values in table are for Hex Washer Head (HWH and HHWH), Phillips Pan Head (PPH), Phillips Truss Head (PTH), Phillips Pancake Head (PPCH), and Phillips Flat Truss Head (PFTH) style screws. Phillips Bugle Head (PBH) and Phillips Wafer Head (PWH) styles are not covered by this table because they are not used for attachment of steel to steel.

6 The load data in the table is based upon sheet steel with F_u = 45 ksi. For F_u = 55 ksi steel, multiply values by 1.22. For F_u = 65 ksi steel, multiply values by 1.44.

7 Refer to Section 3.5.2.5 to ensure drilling capacities.

Warning: Because of the potential for delayed hydrogen assisted stress corrosion cracking, many hardened steel fasteners are not recommended for use with dissimilar metals or chemically treated wood when moisture may be present or in corrosive environments. For further information, contact Hilti Technical Support at 1-877-749-6337.

3.5.2 Kwik-Pro Self-Drilling Screws

Steel Deck Diaphragms

For allowable diaphragm loads and stiffness values for steel roof or floor deck utilizing Hilti self-drilling screws as frame or sidelap fasteners, download Hilti's Profis DF software at www.us.hilti.com (US), or www.hilti.ca (Canada).

Helpful Tip: To estimate the number of sidelap screws on a steel roof or floor deck project, multiply the total deck area in square feet times the number of required stitch screws per span and then divide by the sheet width times the joist spacing (both in feet). A 5% contingency is also recommended for waste and loss.

Example:

Total area: . . . . . 50,000 square feet
Sheet width: . . . . . 36" = 3 ft
Joist spacing: . . . . . 5 ft
No. of sidelap fasteners per span: 5

$$\text{\# of screws needed} = \frac{50{,}000\ \text{ft}^2}{3\ \text{ft} \times 5\ \text{ft}} \times 5 \times 1.05 = 17{,}500$$

3.5.2.4 Installation Instructions

It is essential that proper rpm, setting depth and torque be utilized when installing Hilti screws.

Install self-drilling screws perpendicular to the work surface. The self-drilling feature of the screw will drill a hole completely through the base material before tapping the threads. Do not apply excessive pressure. Too much pressure will slow the speed of the screwdriver, increasing the install time and possibly leading to drill tip failure. The variable speed motors of Hilti screwdrivers enable the operator to start the screw in a precise position and drive it at the speed best suited for the application.

The **Hilti ST 2500 Heavy Duty Screwdriver** features a 2,500 rpm motor for fastening self-drilling screws in steel up to ¼" (6mm) thick. There is a depth gauge on the front of the tool for correct depth setting of screws.

The **Hilti ST 1800 Heavy Duty Torque Adjustable Screwdriver** features a 1,800 rpm for fastening self-drilling screws in steel up ½" (13mm) thick. There is a depth gauge on the front of the tool for correct depth setting of screws. There is also an 18 position adjustable torque clutch for correct torque release setting of screws. By avoiding overdriving, proper torque adjustment will deliver consistent fastening quality.

The ST 1800 may also be operated with the SDT-25 for a stand-up decking system to fasten sidelaps.

Socket & Bit Sizes

Screw Size	Magnetic Nut Setter Size	Phillips Bit Size
#8	1/4"	2
#10	5/16"	2
#12	5/16"	3
1/4"	3/8"	3

Warning: Because of the potential for delayed hydrogen assisted stress corrosion cracking, many hardened steel fasteners are not recommended for use with dissimilar metals or chemically treated wood when moisture may be present or in corrosive environments. For further information, contact Hilti Technical Support at 1-877-749-6337.

3.5.2.5 Ordering Information

Collated Self-Drilling Screws

Light/Medium Gauge Metal Applications (Sidelap)

Description	Thread Length	Drilling Capacity Min	Drilling Capacity Max	Maximum Total Thickness (MT)[1]		Recess	Coating[2]	Box Qty
S-MD 10-16 x 7/8 HWH Collated	3/8"	0.028"	0.120"	3/16"	0.188"	5/16"	Zinc-1	250
S-MD 12-14 x 1 HWH Collated	3/4"	0.028"	0.120"	3/8"	0.375"	5/16"	Zinc-1	250

Medium/Heavy Gauge Metal Applications (Frame Fastener)

Description	Thread Length	Drilling Capacity Min	Drilling Capacity Max	Maximum Total Thickness (MT)[1]		Recess	Coating[2]	Box Qty
S-MD 10-16 x 3/4 HWH#3 Collated	1/2"	0.110"	0.175"	3/8"	0.375"	5/16"	Zinc-1	250
S-MD 12-24 x 7/8 HWH#4 Collated	1/2"	0.175"	0.312"	3/8"	0.375"	5/16"	Zinc-1	250

1 Refer to Figure in Section 3.5.1.5.

2 For coating abbreviations, Zinc-1 = ASTM F 1941.

PPH | HWH | #5 Point | Stitch | HWH Kwik-Seal | HWH with bonded washer | PFH with wings | PWH

Single Self-Drilling Screws

Sidelap (unsupported metal sheets)

Description	Thread Length	Drilling Capacity Min	Drilling Capacity Max	Maximum Total Thickness (MT)[1]		Recess	Coating[2]	Box Qty
Unexposed to Weather								
S-MD 12-14x1 HHWH Stitch	3/4"	0.028"	0.120"	3/8"	0.375"	5/16"	Zinc-1	3000
S-MD 10-16x7/8 HHWH Pilot Point	3/8"	0.028"	0.120"	3/16"	0.188"	5/16"	Zinc-1	6000
Exposed to Weather								
S-MD 1/4-14x7/8 HWH Stitch Kwik-Seal	1/2"	0.028"	0.140"	5/16"	0.313"	5/16"	KwikCote	2500

Light Gauge Applications: Steel to Steel

Description	Thread Length	Drilling Capacity Min	Drilling Capacity Max	Maximum Total Thickness (MT)[1]		Recess	Coating[2]	Box Qty
S-MD 8-18x1/2 HWH #2	1/4"	0.035"	0.100"	1/8"	0.125"	1/4"	Zinc-1	1000
S-MD 8-18x3/4 HWH #2	1/2"	0.035"	0.100"	3/8"	0.375"	1/4"	Zinc-1	1000
S-MD 8-18x1/2 PPH #2	1/4"	0.035"	0.100"	1/8"	0.125"	PHL #2	Zinc-1	1000
S-MD 10-16x1/2 HWH #2	5/16"	0.035"	0.110"	3/16"	0.188"	5/16"	Zinc-1	85000
S-MD 10-16x3/4 HWH #2	1/2"	0.035"	0.110"	5/16"	0.313"	5/16"	Zinc-1	65000
S-MD 10-16x1 HWH #2	3/4"	0.035"	0.110"	1/2"	0.500"	5/16"	Zinc-1	5000

1 Refer to Figure in Section 3.5.1.5.

2 For coating abbreviations, Zinc-1 = ASTM F 1941; Kwik Cote = Proprietary Coating, Section 3.5.2.2.

3.5.2 Kwik-Pro Self-Drilling Screws

Light / Medium Gauge Metal Applications

Description	Thread Length	Drilling Capacity Min	Drilling Capacity Max	Maximum Total Thickness (MT)[1]		Recess	Coating[2]	Box Qty
Unexposed to Weather								
S-MD 10-16x5/8 HWH #3	5/16"	0.110"	0.175"	3/16"	0.187"	5/16"	Zinc-1	7500
S-MD 10-16x3/4 HWH #3	1/2"	0.110"	0.175"	3/8"	0.375"	5/16"	Zinc-1	6500
S-MD 10-16x1 HWH #3	3/4"	0.110"	0.175"	5/8"	0.625"	5/16"	Zinc-1	5000
S-MD 10-16x1 1/4 HWH #3	1"	0.110"	0.175"	7/8"	0.875"	5/16"	Zinc-1	4000
S-MD 10-16x1 1/2 HWH #3	1-1/4"	0.110"	0.175"	1-1/8"	1.125"	5/16"	Zinc-1	4000
S-MD 10-16x5/8 PPH #3	5/16"	0.110"	0.175"	5/16"	0.313"	PHL #2	Zinc-1	7500
S-MD 10-16x3/4 PPH #3	1/2"	0.110"	0.175"	3/8"	0.375"	PHL #2	Zinc-1	6500
S-MD 12-14x3/4 HWH #3	1/2"	0.110"	0.210"	5/16"	0.313"	5/16"	Zinc-1	5000
S-MD 12-14x1 HWH #3	3/4"	0.110"	0.210"	9/16"	0.562"	5/16"	Zinc-1	3000
S-MD 12-14x1 1/2 HWH #3	1-1/4"	0.110"	0.210"	1-1/16"	1.062"	5/16"	Zinc-1	2500
S-MD 12-14x2 HWH #3	1-5/8"	0.110"	0.210"	1-9/16"	1.562"	5/16"	Zinc-1	2000
S-MD 1/4-14x3/4 HWH #3	1/2"	0.110"	0.220"	5/16"	0.313"	3/8"	Zinc-1	4000
S-MD 1/4-14x1 HWH #3	3/4"	0.110"	0.220"	9/16"	0.562"	3/8"	Zinc-1	3000
S-MD 1/4-14x1 1/2 HWH #3	1-1/4"	0.110"	0.220"	1-1/16"	1.062"	3/8"	Zinc-1	2000
S-MD 1/4-14x2 HWH #3	1-5/8"	0.110"	0.220"	1-9/16"	1.562"	3/8"	Zinc-1	1000
Exposed to Weather								
S-MD 12-14x3/4 HWH #2 Kwik-Seal	1/4"	0.035"	0.140"	1/8"	0.125"	5/16"	Kwik-Cote	3000
S-MD 12-14x1 HWH #2 Kwik-Seal	5/8"	0.035"	0.140"	3/8"	0.375"	5/16"	Kwik-Cote	2500
S-MD 12-14x1 1/4 HWH #2 Kwik-Seal	1"	0.035"	0.140"	5/8"	0.625"	5/16"	Kwik-Cote	2000
S-MD 12-14x1 1/2 HWH #2 Kwik-Seal	1-1/4"	0.035"	0.140"	7/8"	0.875"	5/16"	Kwik-Cote	2000
S-MD 12-14x2 HWH #2 Kwik-Seal	1-1/2"	0.035"	0.140"	1-3/8"	1.375"	5/16"	Kwik-Cote	1500
S-MD 1/4-14x3/4 HWH #3 Kwik-Seal	1/4"	0.110"	0.220"	1/8"	0.125"	3/8"	Kwik-Cote	2500
S-MD 1/4-14x1 HWH #3 Kwik-Seal	5/8"	0.110"	0.220"	3/8"	0.375"	3/8"	Kwik-Cote	2000
S-MD 1/4-14x1 1/2 HWH #3 Kwik-Seal	1"	0.110"	0.220"	7/8"	0.875"	3/8"	Kwik-Cote	1500

1 Refer to Figure in Section 3.5.1.5.

2 For coating abbreviations, Zinc-1 = ASTM F 1941, Kwik-Cote = Proprietary Coating, Section 3.5.2.2.

Single Self-Drilling Screws – Heavy Gauge Metal Applications

Description	Thread Length	Drilling Capacity Min	Drilling Capacity Max	Maximum Total Thickness (MT)[1]		Recess	Coating[2]	Box Qty
Unexposed to Weather								
S-MD 12-24x7/8 HWH #4	1/2"	0.175"	0.250"	3/8"	0.375"	5/16"	Zinc-1	4500
S-MD 12-24x1 1/4 HWH #4	3/4"	0.175"	0.250"	5/8"	0.625"	5/16"	Zinc-1	3500
S-MD 12-24x1 1/4 HWH #5	1/2"	0.250"	0.500"	7/16"	0.437"	5/16"	Zinc-1	4000
S-MD 12-24x2 HWH #5 Kwik-Cote	1-1/4"	0.250"	0.500"	1-3/16"	1.187"	5/16"	KwikCote	2000
S-MD 12-24x3 HWH #5 Kwik-Cote	2-1/4"	0.250"	0.500"	2-3/16"	2.187"	5/16"	KwikCote	1000
S-MD 12-24x1 1/4 HWH #5 Kwik-Cote	1/2"	0.250"	0.500"	5/16"	0.313"	5/16"	KwikCote	4000
Exposed to Weather								
S-MD 12-24x1 1/4 HWH #5 Kwik-Cote Bond Washer	1/2"	0.250"	0.500"	5/16"	0.313	5/16"	KwikCote	2500

1 Refer to Figure in Section 3.5.1.5.

2 For coating abbreviations, Zinc-1 = ASTM F 1941; Kwik Cote = Proprietary Coating, Section 3.5.2.2.

Warning: Because of the potential for delayed hydrogen assisted stress corrosion cracking, many hardened steel fasteners are not recommended for use with dissimilar metals or chemically treated wood when moisture may be present or in corrosive environments. For further information, contact Hilti Technical Support at 1-877-749-6337.

Kwik-Pro Self-Drilling Screws 3.5.2

Wood to Steel Applications

Description	Thread Length	Drilling Capacity Min	Drilling Capacity Max	Maximum Total Thickness (MT)[1]		Recess	Coating[2]	Box Qty
Decking Screws (Plywood to Framing)								
S-WD 8-18x1 5/16 PFH #3	1/2"	0.050"	0.140"	1/2"	0.500"	PHL #2	BP	6000
S-WD 8-18x1 15/16 PFH #3	5/8"	0.050"	0.140"	3/4"	0.750"	PHL #2	BP	4000
Wafer Head (Plywood <1/2" to Framing)								
S-WD 10-24x1 PWH #3	3/4"	0.050"	0.175"	5/8"	0.625"	PHL #2	Zinc-1	6000
S-WD 10-24x1 1/4 PWH #3	1"	0.050"	0.175"	7/8"	0.875"	PHL #2	Zinc-1	5000
S-WD 10-24x1 1/2PWH #3	1-1/4"	0.050"	0.175"	1-1/8"	1.125"	PHL #2	Zinc-1	3500
Small Wing Screws (3/4" Plywood to Framing)								
S-WW 10-24x1 7/16 PWH #3 wings	1"	0.050"	0.175"	3/4"	0.750"	PHL #2	Zinc-1	4000
Flooring Screws ≤ 1 3/4" Wood to Steel Member								
S-WW 12-24x2 PFH #4 wings	1-3/8"	0.050"	0.232"	1-1/4"	1.250"	PHL #2	Zinc-1	2000
S-WW 12-24x2 1/2 PFH #4 wings	2"	0.050"	0.232"	1-3/4"	1.750"	PHL #2	Zinc-1	1500
Wood ≤ 2"								
S-WW 14-20x2 3/4 PFH #4 wings	2-1/4"	0.050"	0.250"	2"	2.000"	PHL #2	Zinc-1	1000

1 Refer to Figure in Section 3.5.1.5.

2 For coating abbreviations, Zinc-1 = ASTM F 1941; BP = Black Phosphate

Ductwork and HVAC

Description	Thread Length	Drilling Capacity Min	Drilling Capacity Max	Maximum Total Thickness (MT)[1]		Recess	Coating[2]	Box Qty
S-MD 8-18x1/2 HWH #2	1/4"	0.035"	0.100"	1/8"	0.125"	1/4"	Zinc-1	10000
S-MD 8-18x3/4 HWH #2	1/2"	0.035"	0.100"	3/8"	0.325"	1/4"	Zinc-1	10000
S-MD 8-18x1 HWH #2	3/4"	0.035"	0.100"	1/2"	0.500"	1/4"	Zinc-1	8000
S-MD 8-18x1/2 PPH #2	1/4"	0.035"	0.100"	1/8"	0.125"	PHL #2	Zinc-1	10000
S-MD 8-18x3/4 PPH #2	1/2"	0.035"	0.100"	3/8"	0.325"	PHL #2	Zinc-1	10000
S-MD 8-18x1 PPH #2	3/4"	0.035"	0.100"	1/2"	0.500"	PHL #2	Zinc-1	8000
S-MD 8-18x1 1/2 PPH #2	1-1/4"	0.035"	0.100"	1"	1.000"	PHL #2	Zinc-1	5000
S-MD 10-16x1/2 HWH #2	5/16"	0.035"	0.110"	3/16"	0.187"	5/16"	Zinc-1	8500
S-MD 10-16x3/4 HWH #2	1/2"	0.035"	0.110"	7/16"	0.437"	5/16"	Zinc-1	6500
S-MD 10-16x1 HWH #2	3/4"	0.035"	0.110"	11/16"	0.687"	5/16"	Zinc-1	5000
S-MD 10-16x5/8 PPH #3	5/16"	0.110"	0.175"	3/16"	0.187"	PHL #2	Zinc-1	7500
S-MD 10-16x3/4 PPH #3	1/2"	0.110"	0.175"	3/8"	0.375"	PHL #2	Zinc-1	6500
S-MD 10-16x1 PPH #3	3/4"	0.110"	0.175"	5/8"	0.625"	PHL #2	Zinc-1	5000
S-MD 10-16x7/8 HHWH Pilot Point	1/2"	0.028"	0.120"	3/16"	0.188"	5/16"	Zinc-1	6000

1 Refer to Figure in Section 3.5.1.5.

2 For coating abbreviations, Zinc-1 = ASTM F 1941; BP = Black Phosphate

3.5.2 Kwik-Pro Self-Drilling Screws

Drywall Applications (Drywall to steel, framing and lathing screws)

Description	Coating[1]	Box Qty	Application
6 x 1 PBH SD	BP	10,000	Fastening Drywall, plywood, insulation, etc. to metal studs from 14 ga to 20 ga
6 x 1 PBH SD Zinc	Zinc-2	10,000	
6 x 1-1/8 PBH SD	BP	10,000	
6 x 1-1/8 PBH SD Zinc	Zinc-2	10,000	
6 x 1-1/4 PBH SD	BP	8,000	
6 x 1-1/4 PBH SD Zinc	Zinc-2	8,000	
6 x 1-5/8 PBH SD	BP	5,000	
6 x 1-5/8 PBH SD Zinc	Zinc-2	5,000	
6 x 1-7/8 PBH SD	BP	4,000	
6 x 1-7/8 PBH SD Zinc	Zinc-2	4,000	
8 x 2-3/8 PBH SD	BP	2,500	
8 x 2-3/8 PBH SD Zinc	Zinc-2	2,500	
8 x 2-5/8 PBH SD	BP	1,600	
8 x 2-5/8 PBH SD Zinc	Zinc-2	1,600	
8 x 3 PBH SD	BP	1,400	
8 x 3 PBH SD Zinc	Zinc-2	1,400	
7 x 7/16 PPFH SD Framer	BP	10,000	Fastening stud to track from 14 ga to 20 ga
7 x 7/16 PPFH SD Framer Zinc	Zinc-2	10,000	
8 x 1/2 PPH SD Framer Zinc	Zinc-2	10,000	
10 x 5/8 PPCH SD Framer	Zinc-1	7,500	
10 x 3/4 PFTH SD Framer Zinc	Zinc-1	7,500	
8 x 1/2 PTH SD Lathing Zinc	Zinc-2	10,000	Fastening wire lath to 14 ga to 20 ga
8 x 3/4 PTH SD Lathing Zinc	Zinc-2	10,000	
8 x 1 PTH SD Lathing Zinc	Zinc-2	8,000	
8 x 1-1/4 PTH SD Lathing Zinc	Zinc-2	8,000	
6 x 1-5/8 SFH SD	BP	5,000	Fastening wood trim and base to 14 ga to 20 ga studs
6 x 1-5/8 SFH SD Zinc	Zinc-2	5,000	
6 x 2-1/4 SFH SD	BP	3,000	
6 x 2-1/4 SFH SD Zinc	Zinc-2	3,000	

1 For coating abbreviations, Zinc-1 = ASTM F 1941; Zinc-2 = EN /ISO 4042 A/72/E; BP = Black Phosphate

Warning: Because of the potential for delayed hydrogen assisted stress corrosion cracking, many hardened steel fasteners are not recommended for use with dissimilar metals or chemically treated wood when moisture may be present or in corrosive environments. For further information, contact Hilti Technical Support at 1-877-749-6337.

In The United Sates

PAYMENT TERMS: Net 30 days from date of invoice. Customer agrees to pay all costs incurred by Hilti in collecting any delinquent amounts, including attorney's fees.

FREIGHT: All sales are F.O.B. Destination with transportation allowed via Hilti designated mode. Delivery dates are estimates only. Additional charges for expedited shipments, special handling requirements, and orders below certain dollar amounts shall be the responsibility of Customer. Fuel surcharges may apply depending on market conditions.

CREDIT: All orders sold on credit are subject to Credit Department approval.

RETURN POLICY: Products must be in saleable condition to qualify for return. Saleable condition is defined as unused items in original undamaged packaging and unbroken quantities and in as-new condition. All returns are subject to Hilti inspection and acceptance, and a $125 restocking charge if returned more than 90 days after invoice date. Proof of purchase is required for all returned materials. Special orders products and discontinued items are not eligible for return credit. Dated materials are only returnable in case quantity, and within 30 days after invoice date.

WARRANTY: Hilti warrants that for a period of 12 months from the date it sells a product it will, at its sole option and discretion, refund the purchase price, repair, or replace such product if it contains a defect in material or workmanship. Absence of Hilti's receipt of notification of any such defect within this 12-month period shall constitute a waiver of all claims with regard to such product.

THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Hilti shall in no event be liable for, and Customer hereby agrees to indemnify Hilti against all claims related to special, direct, indirect, incidental, consequential, or any other damages arising out of or related to the sale, use, or inability to use the product.

ACCEPTANCE OF ORDER: Acceptance is limited to the express terms contained herein, and terms are subject to change by Hilti without notice. Additional or different terms proposed by Customer are deemed material and are objected to and rejected, but such rejection shall not operate as a rejection of the offer unless it contains variances in the terms of the description, quantity, price or delivery schedule of the goods. Orders are not deemed "accepted" by Hilti unless and until it ships the associated items.

DOMESTIC ORIGIN: Any non-domestic Hilti product will be so identified on shipping documents and invoices for customers who properly identify themselves as a federal government entity. All other customers may obtain such information by written request to Hilti, Inc., Contract Compliance, P.O. Box 21148, Tulsa, Oklahoma 74121. Hilti's Quality Department personnel are the only individuals authorized to warrant the country of origin of Hilti products.

BUSINESS SIZE: Hilti is a large business.

PRICES: Prices are those stated on the order, and unless otherwise noted are based on purchasing all items on the order — pricing for individual products may vary for purchases of different quantities or item combinations. Hilti does not maintain most favored customer records, makes no representation with respect to same, and rejects any price warranty terms proposed by Customer. Hilti's published net price list is subject to change without notice.

CONSENT TO JURISDICTION: All transactions made pursuant hereto shall be deemed to have been made and entered into in Tulsa, Oklahoma. Any and all disputes arising directly or indirectly from such transactions shall be resolved in the courts of the County of Tulsa, State of Oklahoma, to the exclusion of any other court, and any resulting judgment may be enforced by any court having jurisdiction of such an action. All transactions shall be governed by and construed in accordance with the laws of the State of Oklahoma.

INDEMNIFICATION: Customer hereby agrees to indemnify Hilti for any costs, including attorney's fees, incurred by Hilti as a result, in whole or in part, of any violation by Customer of any Federal, State or Local statute or regulation, or of any nationally accepted standard. It shall be Customer's sole responsibility to comply with all applicable laws and regulations regarding the handling,use, transportation, or disposal of products upon taking possession of same.

AUTHORIZATION: HILTI LEGAL DEPARTMENT PERSONNEL ARE THE ONLY INDIVIDUALS AUTHORIZED TO MODIFY THESE TERMS AND CONDITIONS, WARRANT PRODUCT SUITABILITY FOR SPECIFIC APPLICATIONS, OR EXECUTE CUSTOMER DOCUMENTS, AND ANY SUCH ACTION IS NULL AND VOID UNLESS IN WRITTEN FORM SIGNED BY SUCH INDIVIDUAL.

In Canada

PAYMENT TERMS: Net 30 days from date of invoice. Customer agrees to pay all costs incurred by Hilti in collecting delinquent amounts, if any, including reasonable attorney's fees.

FREIGHT: Sales are F.O.B. Destination Point with transportation allowed via Hilti designated mode. Additional charges may apply for expedited delivery, special handling requirements, and order under certain limits. A fuel surcharge may apply depending on market conditions.

CREDIT: All orders sold on credit are subject to Credit Department approval.

RETURN POLICY: Product may be returned prepaid (unless otherwise authorized) to Hilti provided:

i) it is returned by the original purchaser

ii) it is not dated product returned more than 30 days after the original delivery date

iii) it is not discontinued, clearance or special order product

iv) it is unused, in original packaging and in unbroken quantities.

Hilti will inspect product and, if the above requirements are satisfied, will credit to customer the original purchase price. A 15% restocking fee may apply.

WARRANTY: Other than the manufacturer's published warranty, no warranties or conditions, express or implied, written or oral, statutory or otherwise are implied. Any and all conditions and warranties implied by law or by the Sale of Goods Act or any similar statutes of any Province are hereby expressly waived.

TITLE TO PRODUCT: Title to product remains with Hilti until the total purchase price of product is paid.

PRICES: Customer agrees to pay Hilti prices set out on invoice. Customer agrees to pay taxes as indicated on invoice unless Hilti receives acceptable exemption certificates.

INDEMNIFICATION: Customer agrees to use product at own risk and to indemnify Hilti against all liabilities, including legal fees, to third parties arising out of the use or possession thereof. Hilti shall in no event be liable for special, incidental or consequential damages.

CHANGES: Hilti sales personnel are not authorized to modify these Terms and Conditions or modify Customer's credit terms. Terms are subject to change by Hilti with reasonable notice to Customer.

CASH SALES: Payment in full is due prior to goods being released.

QUOTATIONS: All terms and conditions apply once customer agrees to purchase product. Quotations on special promotion products are only valid until end of promotion period.