



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.

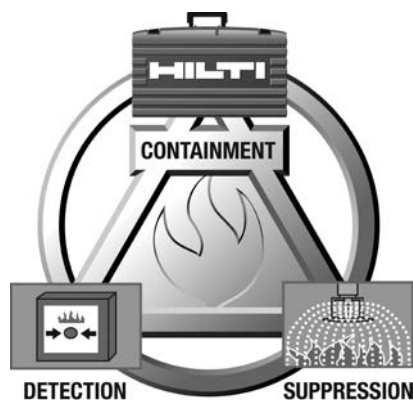


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## Hilti Diaphragm Deck Design

The Hilti Diaphragm Deck Design Program allows designers to quickly and accurately design roof deck and composite floor deck diaphragms.

- Ability to design with innovative Hilti fasteners for frame and sidelap connection
- Creates easy to use load tables with span ranges based on user input
- Allows for different safety factors depending on load type, building code and field quality control
- Direct link to Hilti website



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## MI - Industrial Pipe Support Technical Guide

A guide to specifying the Hilti modular pipe support system for medium to heavy loads without welding.

- MI System is the ideal solution for pipes up to 24 in. diameter
- 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

3.5.2.1 Product Description

3.5.2.2 Material Specifications

3.5.2.3 Technical Data

3.5.2.4 Installation Instructions

3.5.2.5 Ordering Information



### 3.5.2.2 Material Specifications

<b>Material</b>	ASTM A 510 Grade 1018-1022
<b>Heat Treatment</b>	Case hardened and tempered <ul style="list-style-type: none"> <li>• Sizes 8, 10 and 12: 0.004" to 0.009" case depth</li> <li>• Size 1/4": 0.005" to 0.011" case depth</li> </ul>
<b>Plating</b>	<ul style="list-style-type: none"> <li>• 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)</li> <li>• 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.</li> <li>• 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 Section 3.5.2.5 for screw coating information.</li> </ul>

**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  $\Phi$  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 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)
<b>Hex Washer Head (HWH)</b>									
#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)
<b>Phillips Pan Head (PPH)</b>									
#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)
<b>Phillips Truss Head (PTH)</b>									
#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)
<b>Phillips Pancake Head (PPCH)</b>									
#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)
<b>Phillips Flat Truss Head (PFTH)</b>									
#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  $\Phi$  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) <sup>1</sup>	Shear, $P_{ss}$ lb (kN) <sup>2,3,4</sup>
#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  $\Phi$  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  $\Phi$  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](http://www.us.hilti.com) (US), or [www.hilti.ca](http://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.

### 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 to 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.

### Example:

Total area: . . . . . 50,000 square feet

Sheet width: . . . . . 36" = 3 ft

Joist spacing: . . . . . 5 ft

No. of sidelap fasteners per span: 5

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

### 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.

## Kwik-Pro Self-Drilling Screws 3.5.2

### 3.5.2.5 Ordering Information



#### Collated Self-Drilling Screws

##### Light/Medium Gauge Metal Applications (Sidelap)

Description	Thread Length	Drilling Capacity		Maximum Total Thickness (MT) <sup>1</sup>		Recess	Coating <sup>2</sup>	Box Qty
		Min	Max					
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		Maximum Total Thickness (MT) <sup>1</sup>		Recess	Coating <sup>2</sup>	Box Qty
		Min	Max					
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.



#### Single Self-Drilling Screws

##### Sidelap (unsupported metal sheets)

Description	Thread Length	Drilling Capacity		Maximum Total Thickness (MT) <sup>1</sup>		Recess	Coating <sup>2</sup>	Box Qty
		Min	Max					
<b>Unexposed to Weather</b>								
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
<b>Exposed to Weather</b>								
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		Maximum Total Thickness (MT) <sup>1</sup>		Recess	Coating <sup>2</sup>	Box Qty
		Min	Max					
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		Maximum Total Thickness (MT) <sup>1</sup>		Recess	Coating <sup>2</sup>	Box Qty
		Min	Max					
<b>Unexposed to Weather</b>								
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
<b>Exposed to Weather</b>								
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		Maximum Total Thickness (MT) <sup>1</sup>		Recess	Coating <sup>2</sup>	Box Qty
		Min	Max					
<b>Unexposed to Weather</b>								
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
<b>Exposed to Weather</b>								
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		Maximum Total Thickness (MT) <sup>1</sup>		Recess	Coating <sup>2</sup>	Box Qty
		Min	Max					
<b>Decking Screws (Plywood to Framing)</b>								
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
<b>Wafer Head (Plywood &lt;1/2" to Framing)</b>								
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
<b>Small Wing Screws (3/4" Plywood to Framing)</b>								
S-WW 10-24x1 7/16 PWH #3 wings	1"	0.050"	0.175"	3/4"	0.750"	PHL #2	Zinc-1	4000
<b>Flooring Screws ≤ 1 3/4" Wood to Steel Member</b>								
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
<b>Wood ≤ 2"</b>								
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		Maximum Total Thickness (MT) <sup>1</sup>		Recess	Coating <sup>2</sup>	Box Qty
		Min	Max					
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 <sup>1</sup>	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 Framers	BP	10,000	Fastening stud to track from 14 ga to 20 ga
7 x 7/16 PPFH SD Framers Zinc	Zinc-2	10,000	
8 x 1/2 PPH SD Framers Zinc	Zinc-2	10,000	
10 x 5/8 PPCH SD Framers	Zinc-1	7,500	
10 x 3/4 PPTH SD Framers 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	

<sup>1</sup> 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.

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