



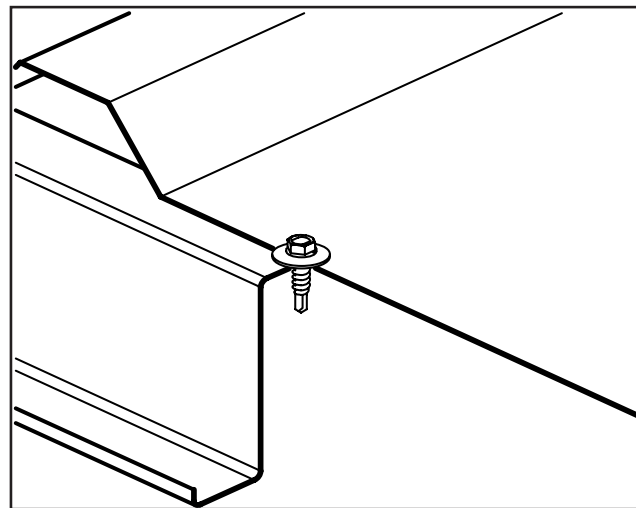
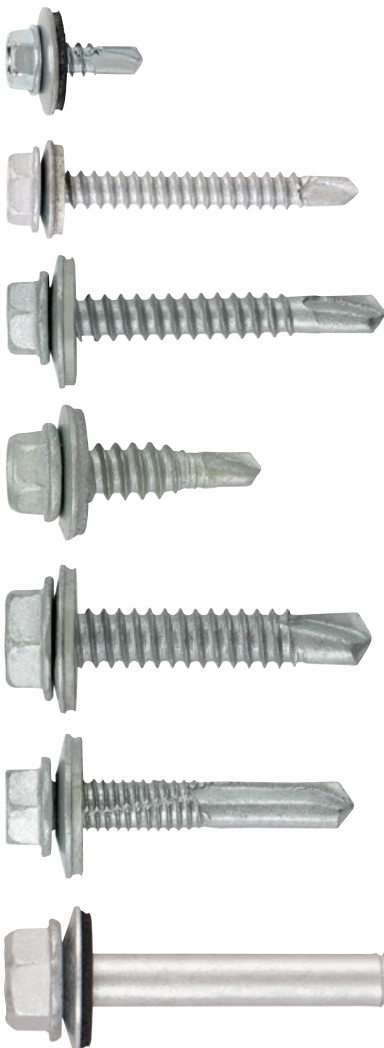
**METAL FASTENING**

**S y s t e m s , I n c**

***www.metalfasteningssystem.com***

# Dril-Quik

***Hex Washer Head Self-Drilling Screws For Metal Applications***



**TYPICAL APPLICATION**

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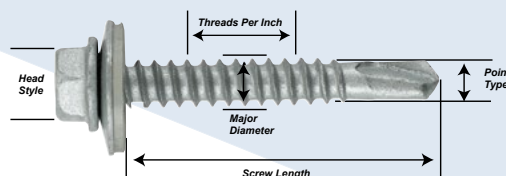
**THE NEXT GENERATION OF HIGH PERFORMANCE FASTENERS AND ACCESSORIES**

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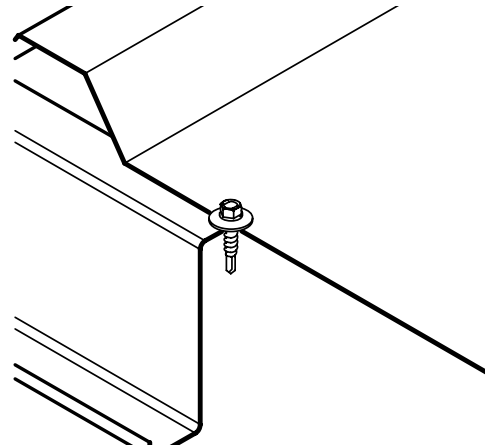
## Screw Terminology

Description: #12-14 X 1-1/4" Cupped Hex Washer Head SD2.5 with EPDM Sealing Washer. 1000 hour salt spary coating



Major Diameter	Threads Per Inch	Screw Length	Point Type	Head Style
<b>#12-14 X 1-1/4" SD2.5 HWH</b>				

## #8-18 HWH SD2 W/W Metal to Metal Fastener



### Features and Benefits

- Precision cold forged point assuring superior strength and the fastest drilling time performance
- Designed to have low driving and thread engagement torque and provide maximum clamp load
- Available with or without EPDM bond seal washer
- 1,000 hour coated or zinc plated

### Application

Metal panel to light gauge metal application

### Product Selection

Material No.	Fastener Length	Thread Length*	Description	Carton Wt. (lbs.)	Carton Qty.
HA808	1/2"	Full	8-18 X 1/2" HWH Dril-Quik SD2 W/W	28	5,000
HA810	5/8"	Full	8-18 X 5/8" HWH Dril-Quik SD2 W/W	30	5,000
HA812	3/4"	Full	8-18 X 3/4" HWH Dril-Quik SD2 W/W	33	5,000
HA816	1"	Full	8-18 X 1" HWH Dril-Quik SD2 W/W	30	4,000
HA820	1-1/4"	Full	8-18 X 1-1/4" HWH Dril-Quik SD2 W/W	26	3,000
HA824	1-1/2"	Full	8-18 X 1-1/2" HWH Dril-Quik SD2 W/W	24	2,500
HA832	2"	Full	8-18 X 2" HWH Dril-Quik SD2 W/W	29	2,500

\*Note – Thread length measured from end of pilot length to end of the threads.

### Product Specifications

Diameter:	#8	Drill Point:	SD2
Threads Per Inch:	18	Drill Capacity:	0.035"–0.100"
Head Style:	1/4" dia. HWH AF	Thread Major Dia:	0.163"
Washer:	1/2" galvanized and EPDM bond seal	Thread Minor Dia:	0.120"

### Performance Data

Material Strength		Pull Out Strength Steel		Pull Over Strength Steel	
Tensile	1575 lbf	16 Ga	389 lbf	26 Ga	481 lbf
Shear	1035 lbf	14 Ga	783 lbf	24 Ga	668 lbf
Torsional	42 lbf-in	12 Ga	1084 lbf	22 Ga	924 lbf

### Installation and Application Considerations

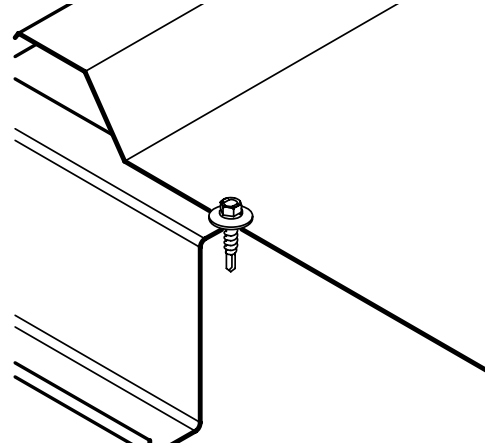
Tools: 0–2000 rpm screw gun equipped with depth sensing nose piece.

Fastener length should provide for a minimum of 3/16" penetration of fully developed threads into metal substrate.

Use of impact guns or hammer drills is not recommended.

The details stated are results of tests and/or calculations and therefore are non-binding and do not represent guaranties or warranted characteristics for not specified applications. All calculations therefore have to be checked and approved by the responsible planner ahead of execution. The user is responsible to assure compliance with all applicable laws and regulations.

## #8-18 HWH SD2 W/W 410 S.S. Metal to Metal Fastener



### Features and Benefits

- 410SS provides resistance to corrosion in mild to light industrial environments
- Precision cold forged point assuring superior strength and the fastest drilling time performance
- Designed to have low driving and thread engagement torque and provide maximum clamp load
- Available with or without stainless steel EPDM bond seal washer

### Application

Metal panel to light gauge metal application

### Product Selection

Material No.	Fastener Length	Thread Length*	Description	Carton Wt. (lbs.)	Carton Qty.
4HA808	1/2"	Full	8-18 X 1/2" HWH Dril-Quik SD2 W/W 410 S.S.	32	5,000
4HA812	3/4"	Full	8-18 X 3/4" HWH Dril-Quik SD2 W/W 410 S.S.	35	5,000
4HA816	1"	Full	8-18 X 1" HWH Dril-Quik SD3 W/W 410 S.S.	30	4,000

\*Note - Thread length measured from end of pilot length to end of the threads.

### Product Specifications

Diameter:	#8	Drill Point:	SD2
Threads Per Inch:	18	Drill Capacity:	0.035"–0.100"
Head Style:	1/4" dia. HWH AF	Thread Major Dia:	0.163"
Washer:	1/2" Stainless steel EPDM bond seal	Thread Minor Dia:	0.120"

### Performance Data

Material Strength		Pull Out Strength Steel		Pull Over Strength Steel	
Tensile	1575 lbf	16 Ga	389 lbf	26 Ga	481 lbf
Shear	1035 lbf	14 Ga	783 lbf	24 Ga	668 lbf
Torsional	42 lbf-in	12 Ga	1084 lbf	22 Ga	924 lbf

### Installation and Application Considerations

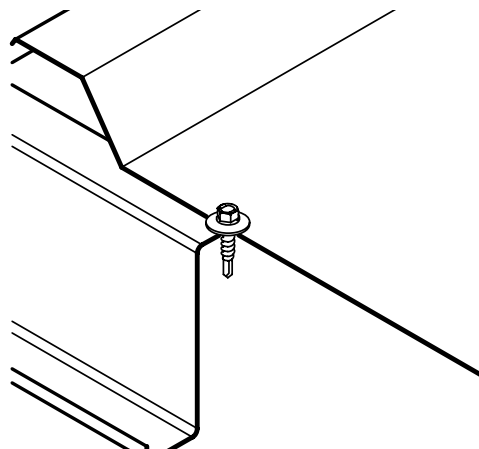
Tools: 0–2000 rpm screw gun equipped with depth sensing nose piece.

Fastener length should provide for a minimum of 3/16" penetration of fully developed threads into metal substrate.

Use of impact guns or hammer drills is not recommended.

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## #10-16 HWH SD2/3 W/W Metal to Metal Fastener



### Features and Benefits

- Precision cold forged point assuring superior strength and the fastest drilling time performance
- Designed to have low driving and thread engagement torque and provide maximum clamp load
- Available with or without EPDM bond seal washer
- 1,000 hour coated or zinc plated

### Application

Metal panel to light gauge metal application

### Product Selection

Material No.	Fastener Length	Thread Length*	Description	Carton Wt. (lbs.)	Carton Qty.
HA1008	1/2"	Full	10-16 X 1/2" HWH Dril-Quik SD2 W/W	30	4,000
HA1010	5/8"	Full	10-16 X 5/8" HWH Dril-Quik SD2 W/W	32	4,000
HA1012	3/4"	Full	10-16 X 3/4" HWH Dril-Quik SD3 W/W	35	4,000
HA1016	1"	Full	10-16 X 1" HWH Dril-Quik SD3 W/W	32	3,000
HA1020	1-1/4"	Full	10-16 X 1-1/4" HWH Dril-Quik SD3 W/W	30	2,500
HA1024	1-1/2"	Full	10-16 X 1-1/2" HWH Dril-Quik SD3 W/W	26	2,000
HA1032	2"	Full	10-16 X 2" HWH Dril-Quik SD3 W/W	23	1,500
HA1040	2-1/2"	Full	10-16 X 2-1/2" HWH Dril-Quik SD3 W/W	18	1,000
HA1048	3"	Full	10-16 X 3" HWH Dril-Quik SD3 W/W	21	1,000

\*Note - Thread length measured from end of pilot length to end of the threads.

### Product Specifications

Diameter:	#10	Drill Point:	SD2/3
Threads Per Inch:	16	Drill Capacity:	#2 0.035"-0.110"
Head Style:	5/16" dia. HWH AF	Drill Capacity:	#3 0.035"-0.176"
Washer:	1/2" galvanized and EPDM bond seal	Thread Major Dia:	0.186"
		Thread Minor Dia:	0.138"

### Performance Data

Material Strength		Pull Out Strength Steel		Pull Over Strength Steel	
Tensile	1825 lbf	16 Ga	494 lbf	29 Ga	577 lbf
Shear	1535 lbf	14 Ga	740 lbf	26 Ga	637 lbf
Torsional	61 lbf-in	12 Ga	1287 lbf	24 Ga	800 lbf

### Installation and Application Considerations

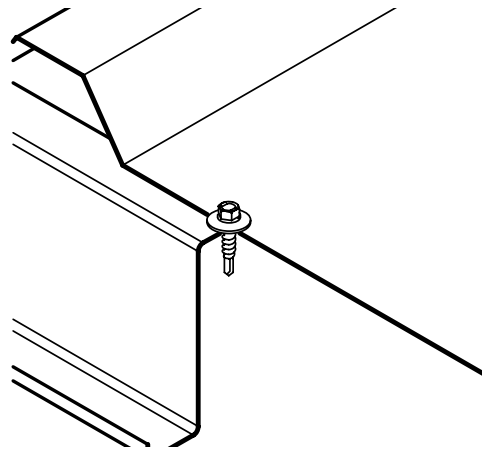
Tools: 0-2000 rpm screw gun equipped with depth sensing nose piece.

Fastener length should provide for a minimum of 3/16" penetration of fully developed threads into metal substrate.

Use of impact guns or hammer drills is not recommended.

The details stated are results of tests and/or calculations and therefore are non-binding and do not represent warranties or warranted characteristics for not specified applications. All calculations therefore have to be checked and approved by the responsible planner ahead of execution. The user is responsible to assure compliance with all applicable laws and regulations.

## #10-16 HWH SD3 W/W 410 S.S. Metal to Metal Fastener



### Features and Benefits

- 410SS provides resistance to corrosion in mild to light industrial environments
- Precision cold forged point assuring superior strength and the fastest drilling time performance
- Designed to have low driving and thread engagement torque and provide maximum clamp load
- Available with or without stainless steel EPDM bond seal washer

### Application

Metal panel to light gauge metal application

### Product Selection

Material No.	Fastener Length	Thread Length*	Description	Carton Wt. (lbs.)	Carton Qty.
4HA1012	3/4"	Full	10-16 X 3/4" HWH Dril-Quik SD3 W/W 410 S.S.	35	4,000
4HA1016	1"	Full	10-16 X 1" HWH Dril-Quik SD3 W/W 410 S.S.	31	3,000
4HA1020	1-1/4"	Full	10-16 X 1-1/4" HWH Dril-Quik SD3 W/W 410 S.S.	30	2,500
4HA1024	1-1/2"	Full	10-16 X 1-1/2" HWH Dril-Quik SD3 W/W 410 S.S.	26	2,000
4HA1032	2"	Full	10-16 X 2" HWH Dril-Quik SD3 W/W 410 S.S.	22	1,500

\*Note – Thread length measured from end of pilot length to end of the threads.

### Product Specifications

Diameter:	#10	Drill Point:	SD2/3
Threads Per Inch:	16	Drill Capacity:	#3 0.035"–0.176"
Head Style:	5/16" dia. HWH AF	Thread Major Dia:	0.186"
Washer:	1/2" Stainless steel EPDM bond seal	Thread Minor Dia:	0.138"

### Performance Data

Material Strength		Pull Out Strength Steel		Pull Over Strength Steel	
Tensile	1825 lbf	16 Ga	494 lbf	29 Ga	577 lbf
Shear	1535 lbf	14 Ga	740 lbf	26 Ga	637 lbf
Torsional	61 lbf.in	12 Ga	1287 lbf	24 Ga	800 lbf

### Installation and Application Considerations

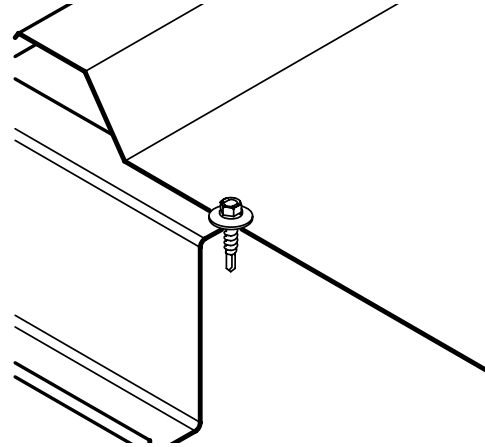
Tools: 0–2000 rpm screw gun equipped with depth sensing nose piece.

Fastener length should provide for a minimum of 3/16" penetration of fully developed threads into metal substrate.

Use of impact guns or hammer drills is not recommended.

The details stated are results of tests and/or calculations and therefore are non-binding and do not represent guaranties or warranted characteristics for not specified applications. All calculations therefore have to be checked and approved by the responsible planner ahead of execution. The user is responsible to assure compliance with all applicable laws and regulations.

## #12-14 HWH SD3 W/W Metal to Metal Fastener



### Features and Benefits

- Precision cold forged point assuring superior strength and the fastest drilling time performance
- Designed to have low driving and thread engagement torque and provide maximum clamp load
- Fasteners 1" and longer have special long pilot lengths to accommodate nested purlins
- Available with or without EPDM bond seal washer
- 1,000 hour coated or zinc plated

### Application

Metal to metal or Metal panel to light and medium gauge metal application

### Product Selection

Material No.	Fastener Length	Thread Length*	Description	Carton Wt. (lbs.)	Carton Qty.
1302885	3/4"	Full	12-14 X 3/4" HWH Dril-Quik SD3 W/W	29	2,500
1303353	1"	Full	12-14 X 1" HWH Dril-Quik SD3 W/W	34	2,500
1303633	1-1/4"	Full	12-14 X 1-1/4" HWH Dril-Quik SD3 W/W	38	2,500
1303919	1-1/2"	Full	12-14 X 1-1/2" HWH Dril-Quik SD3 W/W	33	2,000
1304186	2"	Full	12-14 X 2" HWH Dril-Quik SD3 W/W	32	1,500
796942	2-1/2"	Full	12-14 X 2-1/2" HWH Dril-Quik SD3 W/W	31	1,250
797019	3"	Full	12-14 X 3" HWH Dril-Quik SD3 W/W	43	1,500
797074	4"	Full	12-14 X 4" HWH Dril-Quik SD3 W/W	34	500

Plain product bagged 250 pieces, unless otherwise noted.

\*Note - Thread length measured from end of pilot length to end of the threads.

### Product Specifications

Diameter: #12  
 Threads Per Inch: 14  
 Head Style: 5/16" dia. HWH AF  
 Washer: 19/32" galvanized and EPDM bond seal

Drill Point: SD3  
 Drill Capacity: 0.035"–0.210"  
 Thread Major Dia: 0.212"  
 Thread Minor Dia: 0.160"

### Performance Data

Material Strength		Pull Out Strength Steel		
		ICC protocol 45 ksi	Testing 56 ksi	Pull Over Strength Steel
Tensile	2900 lbf	16 Ga 516 lbf	665 lbf	26 Ga 654 lbf
Shear	2050 lbf	14 Ga 782 lbf	901 lbf	24 Ga 1056 lbf
Torsional	92 lbf-in	12 Ga 1315 lbf	1524 lbf	22 Ga 1249 lbf

### Installation and Application Considerations

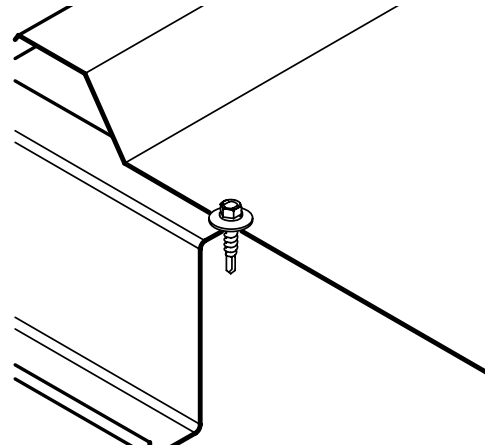
Tools: 0–2000 rpm screw gun equipped with depth sensing nose piece.

Fastener length should provide for a minimum of 3/16" penetration of fully developed threads into metal substrate.

Use of impact guns or hammer drills is not recommended.

The details stated are results of tests and/or calculations and therefore are non-binding and do not represent guaranties or warranted characteristics for not specified applications. All calculations therefore have to be checked and approved by the responsible planner ahead of execution. The user is responsible to assure compliance with all applicable laws and regulations.

## #12-14 HWH SD3 W/W 410 S.S. Metal to Metal Fastener



### Features and Benefits

- 410SS provides resistance to corrosion in mild to light industrial environments
- Precision cold forged point assuring superior strength and the fastest drilling time performance
- Designed to have low driving and thread engagement torque and provide maximum clamp load
- Available with or without aluminum or stainless steel EPDM bond seal washer

### Application

Metal to metal or Metal panel to light and medium gauge metal application

### Product Selection

Material No.	Fastener Length	Thread Length*	Description	Carton Wt. (lbs.)	Carton Qty.
4HA1212	3/4"	Full	12-14 X 3/4" HWH Dril-Quik SD3 W/W 410 S.S.	32	3,000
1303353	1"	Full	12-14 X 1" HWH Dril-Quik SD3 W/W 410 S.S.	34	2,500
1303633	1-1/4"	Full	12-14 X 1-1/4" HWH Dril-Quik SD3 W/W 410 S.S.	38	2,500
1303919	1-1/2"	Full	12-14 X 1-1/2" HWH Dril-Quik SD3 W/W 410 S.S.	33	2,000
4HA1232	2"	Full	12-14 X 2" HWH Dril-Quik SD3 W/W 410 S.S.	28	1,500
4HA1240	2-1/2"	Full	12-14 X 2-1/2" HWH Dril-Quik SD3 W/W 410 S.S.	22	1,000
12143000HW3B4S	3"	Full	12-14 X 3" HWH Dril-Quik SD3 W/W 410 S.S.	28	1,000

Plain product bagged 250 pieces, unless otherwise noted.

\*Note - Thread length measured from end of pilot length to end of the threads.

### Product Specifications

Diameter:	#12	Drill Point:	SD3
Threads Per Inch:	14	Drill Capacity:	0.035"–0.210"
Head Style:	5/16" dia. HWH AF	Thread Major Dia:	0.212"
Washer:	19/32" Aluminum or stainless steel EPDM bond seal	Thread Minor Dia:	0.160"

### Performance Data

Material Strength		Pull Out Strength Steel			
		ICC protocol 45 ksi	Testing 56 ksi	Pull Over Strength Steel	
Tensile	2900 lbf	16 Ga	516 lbf	26 Ga	654 lbf
Shear	2050 lbf	14 Ga	782 lbf	24 Ga	1056 lbf
Torsional	92 lbf-in	12 Ga	1315 lbf	22 Ga	1249 lbf

### Installation and Application Considerations

Tools: 0–2000 rpm screw gun equipped with depth sensing nose piece.

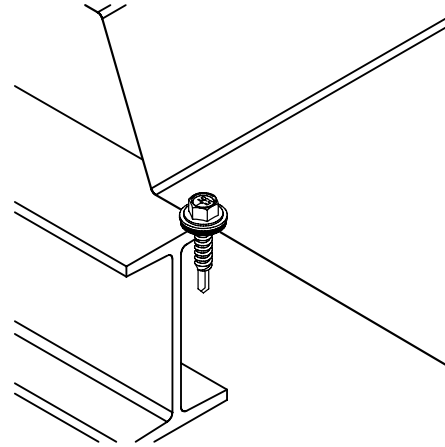
Fastener length should provide for a minimum of 3/16" penetration of fully developed threads into metal substrate.

Use of impact guns or hammer drills is not recommended.

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## #12-24 HWH SD5 W/W Heavy Gauge Metal to Metal Fastener



### Features and Benefits

- Precision cold forged point assuring superior strength and the fastest drilling time performance
- Designed to have low driving and thread engagement torque and provide maximum clamp load
- Available with or without EPDM bond seal washer
- 1,000 hour coated or zinc plated

### Application

Metal panel to medium and heavy gauge metal application

### Product Selection

Material No.	Fastener Length	Thread Length*	Description	Carton Wt. (lbs.)	Carton Qty.
795718	1-1/4"	0.52"	12-24 X 1-1/4" HWH Dril-Quik SD5 W/W	40	2,500
796507	1-1/2"	0.77"	12-24 X 1-1/2" HWH Dril-Quik SD5 W/W	43	2,500
783097	2"	1.27"	12-24 X 2" HWH Dril-Quik SD5 W/W	44	2,000
HA54C	3"	2.27"	12-24 X 3" HWH Dril-Quik SD5 W/W	38	2,000

Plain product bagged 250 pieces, unless otherwise noted.

\*Note - Thread length measured from underneath head to end of fully developed threads.

### Product Specifications

Diameter:	#12	Drill Point:	SD5
Threads Per Inch:	24	Drill Capacity:	0.075" - 0.500"
Head Style:	5/16" dia. HWH AF	Thread Major Dia:	0.212"
Washer:	19/32" galvanized and EPDM bond seal	Thread Minor Dia:	0.184"

### Performance Data

Material Strength		Pull Out Strength Steel			
		ICC protocol	Testing 56 ksi	Pull Over Strength Steel	
Tensile	3450 lbf	12 Ga	1260 lbf <sup>A</sup>	26 Ga	584 lbf
Shear	2420 lbf	3/16"	2989 lbf <sup>B</sup>	24 Ga	861 lbf
Torsional	100 lbf-in	1/4"	Exceeds tensile <sup>B</sup>	22 Ga	1049 lbf

Note A: 45 ksi. Note B: 58 ksi.

### Installation and Application Considerations

Tools: 0-2000 rpm screw gun equipped with depth sensing nose piece.

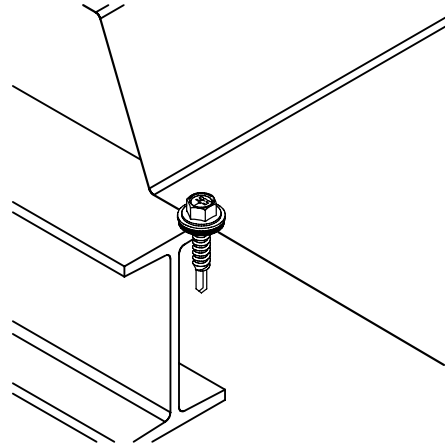
Fastener length should provide for a minimum of 3/16" penetration of fully developed threads into metal substrate.

Use of impact guns or hammer drills is not recommended.

The details stated are results of tests and/or calculations and therefore are non-binding and do not represent guaranties or warranted characteristics for not specified applications. All calculations therefore have to be checked and approved by the responsible planner ahead of execution. The user is responsible to assure compliance with all applicable laws and regulations.



## #12-24 HWH SD5 W/W 410 S.S. Heavy Gauge Metal to Metal Fastener



### Features and Benefits

- 410SS provides resistance to corrosion in mild to light industrial environments
- Precision cold forged point assuring superior strength and the fastest drilling time performance
- Designed to have low driving and thread engagement torque and provide maximum clamp load
- Available with or without stainless steel EPDM bond seal washer

### Application

Metal panel to medium and heavy gauge metal application

### Product Selection

Material No.	Fastener Length	Thread Length*	Description	Carton Wt. (lbs.)	Carton Qty.
4HA5	1-1/4"	0.52"	12-24 X 1-1/4" HWH Dril-Quik SD5 W/W 410 S.S.	42	3,000
4HA52	1-1/2"	0.77"	12-24 X 1-1/2" HWH Dril-Quik SD5 W/W 410 S.S.	33	2,000
4HA53	2"	1.27"	12-24 X 2" HWH Dril-Quik SD5 W/W 410 S.S.	29	1,500

\*Note – Thread length measured from underneath head to end of fully developed threads.

### Product Specifications

Diameter:	#12	Drill Point:	SD5
Threads Per Inch:	24	Drill Capacity:	0.075" – 0.500"
Head Style:	5/16" dia. HWH AF	Thread Major Dia:	0.212"
Washer:	9/16" stainless steel EPDM bond seal	Thread Minor Dia:	0.184"

### Performance Data

Material Strength		Pull Out Strength Steel		Pull Over Strength Steel	
Tensile	3450 lbf				
Shear	2420 lbf	1/8"	2269 lbf	26 Ga	584 lbf
Torsional	100 lbf-in	3/16"	3593 lbf	24 Ga	861 lbf
		1/4"	3882 lbf	22 Ga	1049 lbf

### Installation and Application Considerations

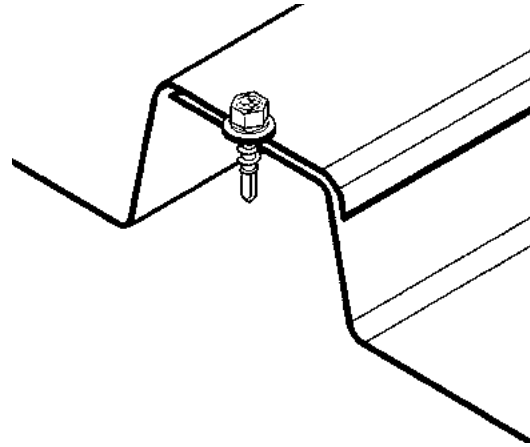
Tools: 0–2000 rpm screw gun equipped with depth sensing nose piece.

Fastener length should provide for a minimum of 3/16" penetration of fully developed threads into metal substrate.

Use of impact guns or hammer drills is not recommended.

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## 1/4-14 HWH Lap/Stitch SD1 Panel to Panel Fastener



### Features and Benefits

- High hex washer head provides driving stability
- Self-drill point for fast installation
- Available with or without EPDM bond seal washer
- VistaCoat<sup>®</sup> premium coating system
- VistaCoat<sup>®</sup> limited warranty

### Application

Panel to panel side lap, end lap, and other stitch applications

### Product Selection

Material No.	Fastener Length	Thread Length*	Description	Carton Wt. (lbs.)	Carton Qty.
1304321	7/8"	Full	1/4-14 X 7/8" HWH Dril-Quik SD1 W/W	38	2,500

Plain product bagged 250 pieces, unless otherwise noted.

\*Note - Thread length measured from end of pilot length to end of the threads.

### Product Specifications

Diameter:	1/4"	Drill Point:	SD1
Threads Per Inch:	14	Drill Capacity:	0.030-0.095"
Head Style:	5/16" dia. HWH AF	Thread Major Dia:	0.246"
Washer:	9/16" Galvanized and EPDM bond seal	Thread Minor Dia:	0.189"

### Performance Data

#### Material Strength

Tensile	3600 lbf
Shear	2700 lbf
Torsional	150 lbf.in

#### Pull Out Strength Steel

26 Ga	204 lbf
24 Ga	304 lbf
22 Ga	379 lbf

### Installation and Application Considerations

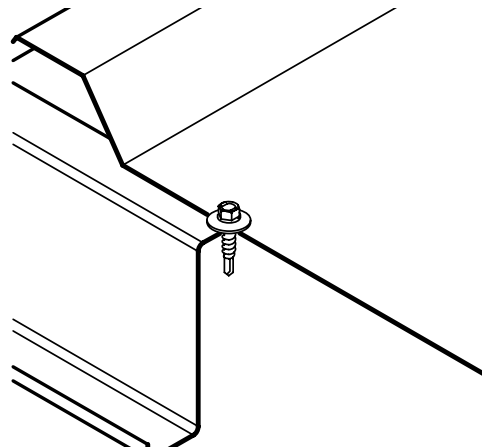
Tools: 0-2000 rpm screw gun equipped with depth sensing nose piece.

Composite thickness should not exceed 0.095".

Use of impact guns or hammer drills is not recommended.

The details stated are results of tests and/or calculations and therefore are non-binding and do not represent guaranties or warranted characteristics for not specified applications. All calculations therefore have to be checked and approved by the responsible planner ahead of execution. The user is responsible to assure compliance with all applicable laws and regulations.

## #1/4-14 HWH SD2 W/W 5/16" Head Metal to Metal Fastener



### Features and Benefits

- Precision cold forged point assuring superior strength and the fastest drilling time performance
- Designed to have low driving and thread engagement torque and provide maximum clamp load
- Reduced drill point diameter provides higher pull out in single purlin attachment
- Available with or without EPDM bond seal washer
- 1,000 hour coated or zinc plated

### Application

Metal to metal or Metal panel to light and medium gauge metal application

### Product Selection

Material No.	Fastener Length	Thread Length*	Description	Carton Wt. (lbs.)	Carton Qty.
798606	1-1/4"	Full	1/4-14 X 1-1/4" HWH Dril-Quik SD2 W/W 5/16" HD	37	2,000
799007	1-1/2"	Full	1/4-14 X 1-1/2" HWH Dril-Quik SD2 W/W 5/16" HD	40	2,000

Plain product bagged 250 pieces, unless otherwise noted.

\*Note - Thread length measured from end of pilot length to top of the threads.

### Product Specifications

Diameter:	1/4"	Drill Point:	SD2
Threads Per Inch:	14	Drill Capacity:	0.050" - 0.150"
Head Style:	5/16" dia. HWH AF	Thread Major Dia:	0.243"
Washer:	19/32" galvanized and EPDM bond seal	Thread Minor Dia:	0.188"

### Performance Data

Material Strength		Pull Out Strength Steel				
		ICC protocol 45 ksi	Testing 56 ksi	Pull Over Strength Steel		
Tensile	3600 lbf	16 Ga	642 lbf	903 lbf	26 Ga	616 lbf
Shear	2700 lbf	14 Ga	940 lbf	1312 lbf	24 Ga	884 lbf
Torsional	150 lbf-in	12 Ga	1538 lbf	2088 lbf	22 Ga	1079 lbf

### Installation and Application Considerations

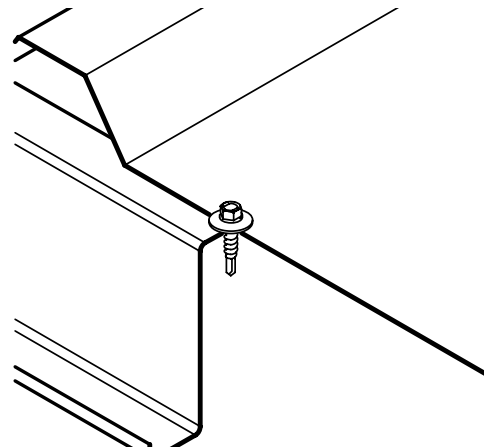
Tools: 0-2000 rpm screw gun equipped with depth sensing nose piece.

Fastener length should provide for a minimum of 3/16" penetration of fully developed threads into metal substrate.

Use of impact guns or hammer drills is not recommended.

The details stated are results of tests and/or calculations and therefore are non-binding and do not represent warranties or warranted characteristics for not specified applications. All calculations therefore have to be checked and approved by the responsible planner ahead of execution. The user is responsible to assure compliance with all applicable laws and regulations.

## #1/4-14 HWH SD3 W/W Metal to Metal Fastener



### Features and Benefits

- Precision cold forged point assuring superior strength and the fastest drilling time performance
- Designed to have low driving and thread engagement torque and provide maximum clamp load
- Reduced drill point diameter provides higher pull out in single purlin attachment
- Available with or without EPDM bond seal washer
- 1,000 hour coated or zinc plated

### Application

Metal to metal or Metal panel to light and medium gauge metal application

### Product Selection

Material No.	Fastener Length	Thread Length*	Description	Carton Wt. (lbs.)	Carton Qty.
797143	3/4"	Full	1/4-14 X 3/4" HWH Dril-Quik SD3 W/W	37	2,500
798515	1"	Full	1/4-14 X 1" HWH Dril-Quik SD3 W/W	36	2,000
798777	1-1/4"	Full	1/4-14 X 1-1/4" HWH Dril-Quik SD3 W/W	40	2,000
798957	1-1/2"	Full	1/4-14 X 1-1/2" HWH Dril-Quik SD3 W/W	44	2,000
799066	2"	Full	1/4-14 X 2" HWH Dril-Quik SD3 W/W	41	1,500
799092	2-1/2"	Full	1/4-14 X 2-1/2" HWH Dril-Quik SD3 W/W	33	1,000
799104	3"	Full	1/4-14 X 3" HWH Dril-Quik SD3 W/W	29	750
799119	4"	Full	1/4-14 X 4" HWH Dril-Quik SD3 W/W	42	1,000
HA1480 *	5"	Full	1/4-14 X 5" HWH Dril-Quik SD3 W/W	27	500
HA1496 *	6"	Full	1/4-14 X 6" HWH Dril-Quik SD3 W/W	32	500

Plain product bagged 250 pieces, unless otherwise noted. \*= Zinc plated

\*Note – Thread length measured from end of pilot length to top of the threads.

### Product Specifications

Diameter:	1/4"	Drill Point:	SD3
Threads Per Inch:	14	Drill Capacity:	0.050"–0.210"
Head Style:	3/8" dia. HWH AF	Thread Major Dia:	0.243"
Washer:	19/32" galvanized and EPDM bond seal	Thread Minor Dia:	0.188"

### Performance Data

Material Strength		Pull Out Strength Steel				
		ICC protocol 45 ksi	Testing 56 ksi	Pull Over Strength Steel		
Tensile	3600 lbf	16 Ga	482 lbf	687 lbf	26 Ga	616 lbf
Shear	2700 lbf	14 Ga	741 lbf	1151 lbf	24 Ga	884 lbf
Torsional	150 lbf-in	12 Ga	1234 lbf	1697 lbf	22 Ga	1079 lbf

### Installation and Application Considerations

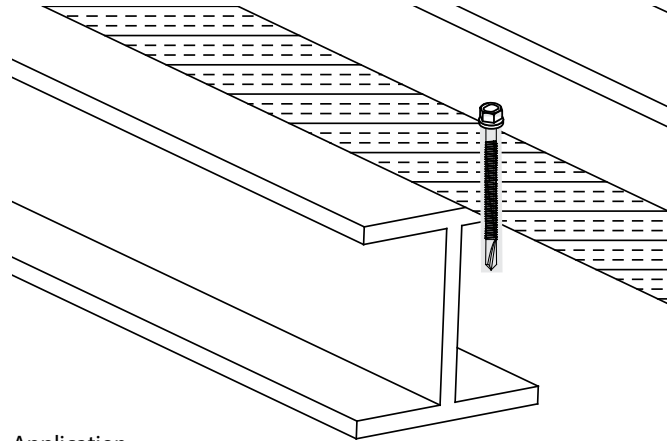
Tools: 0–2000 rpm screw gun equipped with depth sensing nose piece.

Use of impact guns or hammer drills is not recommended.

Fastener length should provide for a minimum of 3/16" penetration of fully developed threads into metal substrate.

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## 1/4-20 HWH SD5 Heavy Gauge Metal to Metal Fastener



### Features and Benefits

- Precision cold forged point assuring superior strength and the fastest drilling time performance
- Designed to have low driving and thread engagement torque and provide maximum clamp load
- Available with or without EPDM bond seal washer
- Corrosion resistant coating system

### Application

Insulated metal panel to medium and heavy gauge metal application

### Product Selection

Material No.	Fastener Length	Thread Length*	Description	Carton Wt. (lbs.)	Carton Qty.
1356420	3"	Full	1/4-20 X 3" HWH Dril-Quik SD5	38	1,000
1356421	4"	3.63"	1/4-20 X 4" HWH Dril-Quik SD5	48	1,000
1356422	5"	3.63"	1/4-20 X 5" HWH Drill-Quik SD5	35	600
1356423	6"	3.63"	1/4-20 X 6" HWH Drill-Quik SD5	35	500
1356424	7"	3.63"	1/4-20 X 7" HWH Dril-Quik SD5	40	500
1356425	8"	3.63"	1/4-20 X 8" HWH Dril-Quik SD5	45	500

Plain product bulk carton packed.

\*Note – Thread length measured from end of pilot length to end of the threads.

### Product Specifications

Diameter:	1/4"	Drill Point:	SD5
Threads Per Inch:	20	Drill Capacity:	0.105"–0.500"
Head Style:	3/8" dia. HWH AF	Thread Major Dia:	0.245"
Washer:	19/32" galvanized and EPDM bond seal	Thread Minor Dia:	0.192"

### Performance Data

Material Strength		Pull Out Strength Steel			Pull Over Strength Steel	
			ICC protocol	Testing 56 ksi		
Tensile	4200 lbf	12 Ga (2.7 mm)	1133 lbf <sup>A</sup>	1532 lbf	26 Ga	629 lbf
Shear	2920 lbf	1/4" (6.3 mm)	Exceeds tensile <sup>B</sup>	Exceeds tensile	24 Ga	988 lbf
Torsional	156 lbf-in	3/8" (9.5 mm)	Exceeds tensile <sup>B</sup>	Exceeds tensile	22 Ga	1117 lbf
		1/2 (12.7 mm)	Exceeds tensile <sup>B</sup>	Exceeds tensile		

Note A: 45 ksi. Note B: 58 ksi.

### Installation and Application Considerations

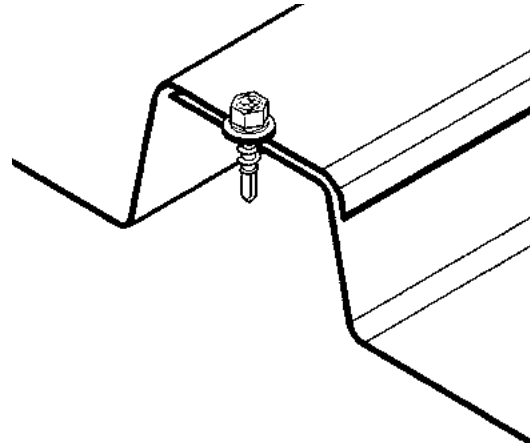
Tools: 0–2000 rpm screw gun equipped with depth sensing nose piece.

Fastener length should provide for a minimum of 3/16" penetration of fully developed threads into metal substrate.

Use of impact guns or hammer drills is not recommended.

The details stated are results of tests and/or calculations and therefore are non-binding and do not represent guaranties or warranted characteristics for not specified applications. All calculations therefore have to be checked and approved by the responsible planner ahead of execution. The user is responsible to assure compliance with all applicable laws and regulations.

## 1/4-14 HWH Lap/Stitch SD1 410 S.S. Panel to Panel Fastener



### Features and Benefits

- 410SS provides resistance to corrosion in mild to light industrial environments
- High hex washer head provides driving stability
- Self-drill point for fast installation
- Available with or without aluminum or stainless steel EPDM bond seal washer

### Application

Panel to panel side lap, end lap, and other stitch applications

### Product Selection

Material No.	Fastener Length	Thread Length*	Description	Carton Wt. (lbs.)	Carton Qty.
791283	7/8"	Full	1/4-14 X 7/8" HWH Dril-Quik SD1 W/W 410 S.S.	38	2,500

Plain product bagged 250 pieces, unless otherwise noted.

\*Note - Thread length measured from end of pilot length to end of the threads.

### Product Specifications

Diameter:	1/4"	Drill Point:	SD1
Threads Per Inch:	14	Drill Capacity:	0.030-0.095"
Head Style:	5/16" dia. HWH AF	Thread Major Dia:	0.246"
Washer:	9/16" Aluminum or stainless steel EPDM bond seal	Thread Minor Dia:	0.189"

### Performance Data

Material Strength		Pull Out Strength Steel	
Tensile	3600 lbf	26 Ga	204 lbf
Shear	2700 lbf	24 Ga	304 lbf
Torsional	150 lbf.in	22 Ga	379 lbf

### Installation and Application Considerations

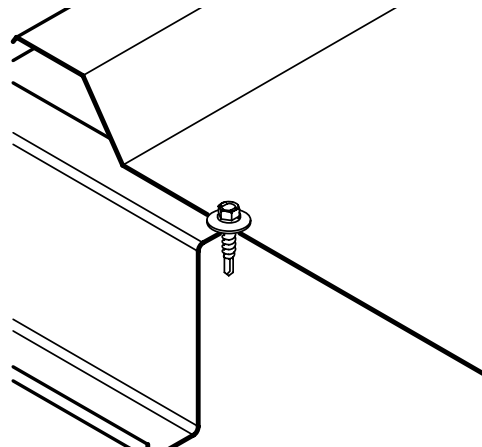
Tools: 0-2000 rpm screw gun equipped with depth sensing nose piece.

Composite thickness should not exceed 0.095".

Use of impact guns or hammer drills is not recommended.

The details stated are results of tests and/or calculations and therefore are non-binding and do not represent guaranties or warranted characteristics for not specified applications. All calculations therefore have to be checked and approved by the responsible planner ahead of execution. The user is responsible to assure compliance with all applicable laws and regulations.

## #1/4-14 HWH SD3 W/W 410 S.S. Metal to Metal Fastener



### Features and Benefits

- 410SS provides resistance to corrosion in mild to light industrial environments
- Precision cold forged point assuring superior strength and the fastest drilling time performance
- Designed to have low driving and thread engagement torque and provide maximum clamp load
- Available with or without stainless steel EPDM bond seal washer

### Application

Metal to metal or Metal panel to light and medium gauge metal application

### Product Selection

Material No.	Fastener Length	Thread Length*	Description	Carton Wt. (lbs.)	Carton Qty.
4HA1412	3/4"	Full	1/4-14 X 3/4" HWH Dril-Quik SD3 W/W 410 S.S.	45	3,000
4HA1416	1"	Full	1/4-14 X 1" HWH Dril-Quik SD3 W/W 410 S.S.	44	2,500
4HA1420	1-1/4"	Full	1/4-14 X 1-1/4" HWH Dril-Quik SD3 W/W 410 S.S.	40	2,000
4HA1424	1-1/2"	Full	1/4-14 X 1-1/2" HWH Dril-Quik SD3 W/W 410 S.S.	34	1,500
4HA1432	2"	Full	1/4-14 X 2" HWH Dril-Quik SD3 W/W 410 S.S.	28	1,000
4HA1440	2-1/2"	Full	1/4-14 X 2-1/2" HWH Dril-Quik SD3 W/W 410 S.S.	26	800
4HA1448	3"	Full	1/4-14 X 3" HWH Dril-Quik SD3 W/W 410 S.S.	18	500
4HA1464	4"	Full	1/4-14 X 4" HWH Dril-Quik SD3 W/W 410 S.S.	22	500
4HA1480	5"	Full	1/4-14 X 5" HWH Dril-Quik SD3 W/W 410 S.S.	14	250

\*Note – Thread length measured from end of pilot length to top of the threads.

### Product Specifications

Diameter:	1/4"	Drill Point:	SD3
Threads Per Inch:	14	Drill Capacity:	0.050"–0.210"
Head Style:	3/8" dia. HWH AF	Thread Major Dia:	0.243"
Washer:	19/32" Stainless steel EPDM bond seal	Thread Minor Dia:	0.188"

### Performance Data

Material Strength		Pull Out Strength Steel				
		ICC protocol 45 ksi	Testing 56 ksi	Pull Over Strength Steel		
Tensile	3600 lbf	16 Ga	482 lbf	687 lbf	26 Ga	616 lbf
Shear	2700 lbf	14 Ga	741 lbf	1151 lbf	24 Ga	884 lbf
Torsional	150 lbf-in	12 Ga	1234 lbf	1697 lbf	22 Ga	1079 lbf

### Installation and Application Considerations

Tools: 0–2000 rpm screw gun equipped with depth sensing nose piece.

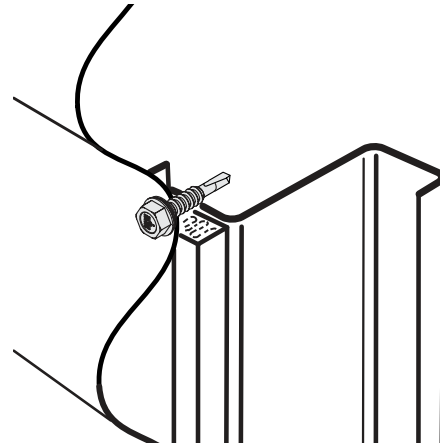
Use of impact guns or hammer drills is not recommended.

Fastener length should provide for a minimum of 3/16" penetration of fully developed threads into metal substrate.

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## SX5 Hex Bi-Met 300 Metal to Metal



### Features and Benefits

- Corrosion resistant 300 series stainless
- Delivers ultimate performance in medium gauge applications
- Precision cold forged carbon steel point assures point strength and fast drilling performance through high strength steel and nested purlins
- Available with no sealing washer or stainless bond seal washer
- Color matched Vista spray available

### Application

- Light and medium gauge metal connections
- Dissimilar metal connections

Product Selection Material No.	Fastener Length		Load Bearing Length		Description	Carton Wt. (lbs.)	Carton Qty.
	(in)	(mm)	(in)	(mm)			
1122767	1-1/4	31	5/16	8	SX5/8-S16-5,5x31	8	500
1123168	1-1/2	35	15/32	12	SX 5/12-S16-5,5x35	9	500
1134477	1-5/8	41	45/64	18	SX 5/18-S16-5,5x41	10	500
1168765	2-1/2	61	1-1/2	38	SX 5/38-S16-5,5x61	3	100
1133330	3-1/8	78	2-3/16	55	SX 5/55-S16-5,5x78	14	250

Dimensions in inches are approximate conversions.

### Product Specifications

Diameter:	Nominal #12 (5.4 mm)	Drill Point:	SD3
Threads Per Inch:	11	Drill Capacity:	0.060"–0.157" (1.5 mm–4.0 mm)
Head Style:	5/16" dia HWH AFL (8.0 mm)	Thread Major Dia:	0.213" (5.4 mm)
Washer:	5/8" stainless and EPDM bond seal (16 mm)	Thread Minor Dia:	0.157" (4.0 mm)

### Performance Data <sup>1,2</sup>

Material Strength		Pull Out Strength Steel		Pull Over Strength Steel	
Tensile	2743 lbf / 12200 N	16 Ga (1.5 mm)	470 lbf / 2090 N	26 Ga (0.5 mm)	1141 lbf / 5075 N
Shear	2149 lbf / 9559 N	14 Ga (1.9 mm)	656 lbf / 2920 N	24 Ga (0.6 mm)	1420 lbf / 6316 N
Torsional	70 lbf-in / 79 N-m	12 Ga (2.7 mm)	1250 lbf / 5560 N		

<sup>1</sup> ETA-10/0198

<sup>2</sup> SFS 5625.19

### Installation and Application Considerations

Fasteners should provide for a minimum of 3 fully developed threads through the metal substrates.

Tools: 0–2000 rpm screw gun equipped with depth sensing nose piece

Use of impact guns or hammer drills is not recommended.

The details stated are results of tests and/or calculations and therefore are non-binding and do not represent warranties or warranted characteristics for not specified applications. All calculations therefore have to be checked and approved by the responsible planner ahead of execution. The user is responsible to assure compliance with all applicable laws and regulations.

### Inches to Decimal

Inches	Decimal	Inches	Decimal	Inches	Decimal	Inches	Decimal
1/32	.0312	9/32	.2812	17/32	.5312	25/32	.7812
1/16	.0625	5/16	.312	9/16	.5625	13/16	.8125
3/32	.0937	11/32	.3437	19/32	.5937	27/32	.8437
1/8	.125	3/8	.375	5/8	.625	7/8	.875
5/32	.1562	13/32	.4062	21/32	.6562	29/32	.9062
3/16	.1875	7/16	.4375	11/16	.687	15/16	.9375
7/32	.2187	15/32	.4687	23/32	.7187	31/32	.9687
1/4	.250	1/2	.500	3/4	.750	1	1.00

### Gauges to Decimal

Gauge	Decimal	Gauge	Decimal	Gauge	Decimal	Gauge	Decimal
3	.239	12	.105	21	.033	30	.0120
4	.224	13	.090	22	.030	31	.0105
5	.209	14	.075	23	.027	32	.0097
6	.194	15	.067	24	.024	33	.0090
7	.179	16	.060	25	.021	34	.0082
8	.164	17	.054	26	.018	35	.0075
9	.150	18	.048	27	.016	36	.0067
10	.135	19	.042	28	.015	37	.0064
11	.120	20	.036	29	.014	38	.0060

### Drill Capacity Guideline

Point	Diameter	.050	.100	.150	.200	.250	.300	.350	.400	.500	.600	Drill Speed
1	1/4	.018 -- .090										2000
2	6	.035 -- .090										2500
2	8	.035 ---- .100										2500
2	10	.035 ---- .110										2500
3	10	.035 ----- .176										2500
3	12	.035 ----- .210										2000
3	1/4	.060 ----- .220										1750
4	12	.125 ----- .250										1500
5	12	.125 ----- .500										1500

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Raleigh, NC.  
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 Suite 101  
 Raleigh, NC. 27603  
 (919) 33-7794

Richmond, VA.  
 8131 Virginia Pine Ct  
 North Chesterfield, VA. 23237  
 (804) 912-1851

## Coating Comparison

Coating	Salt Spray	Application
Clear Zinc	24 hrs.	Used indoors for dry, non-corrosive applications
*Ruspert	1,000 hrs.	Used indoors and outdoors for high corrosive applications
E-Coat	500 hrs.	Used outdoors for medium corrosive applications
*410 Stainless Steel	500 hrs.	Used outdoors for medium corrosive applications
*304 Stainless Steel	2,000+ hrs.	Used outdoors for high corrosive applications
*316 Stainless Steel	2,000+ hrs.	Used outdoors for severely corrosive applications

\*ACQ Compatible

## Coating Description

**Clear Zinc:** A coating that is applied electrically to fasteners that prevents oxidation of steel by forming a protective barrier.

**Ruspert:** A high-grade metal surface processing technology that prevents corrosion. The coating system consists of three layers: a metallic zinc layer, a high-grade anti-corrosion chemical conversion film, and a baked ceramic surface coating.

**E-Coat:** A electrical current to deposit the coating material and oven cured.

**410 Stainless Steel:** A low-carbon grade of hardenable stainless steel. Good corrosion in mild atmospheres.

**304 Stainless Steel:** A nickel-chromium austenitic grade of stainless steel that has a high resistance to corrosion.

**316 Stainless Steel:** A nickel-chromium austenitic grade of stainless steel that provides a level of corrosion protection suitable for severe environments.

\*(Tested in accordance with the American Society of Testing Materials - ASTM B 117)

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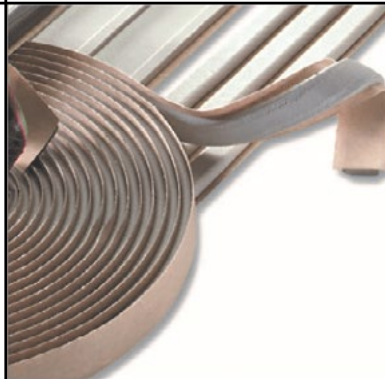


# METAL FASTENING

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