SPAX® ENGINEERED FASTENERS

PRODUCT GUIDE

— VOL. 3 —



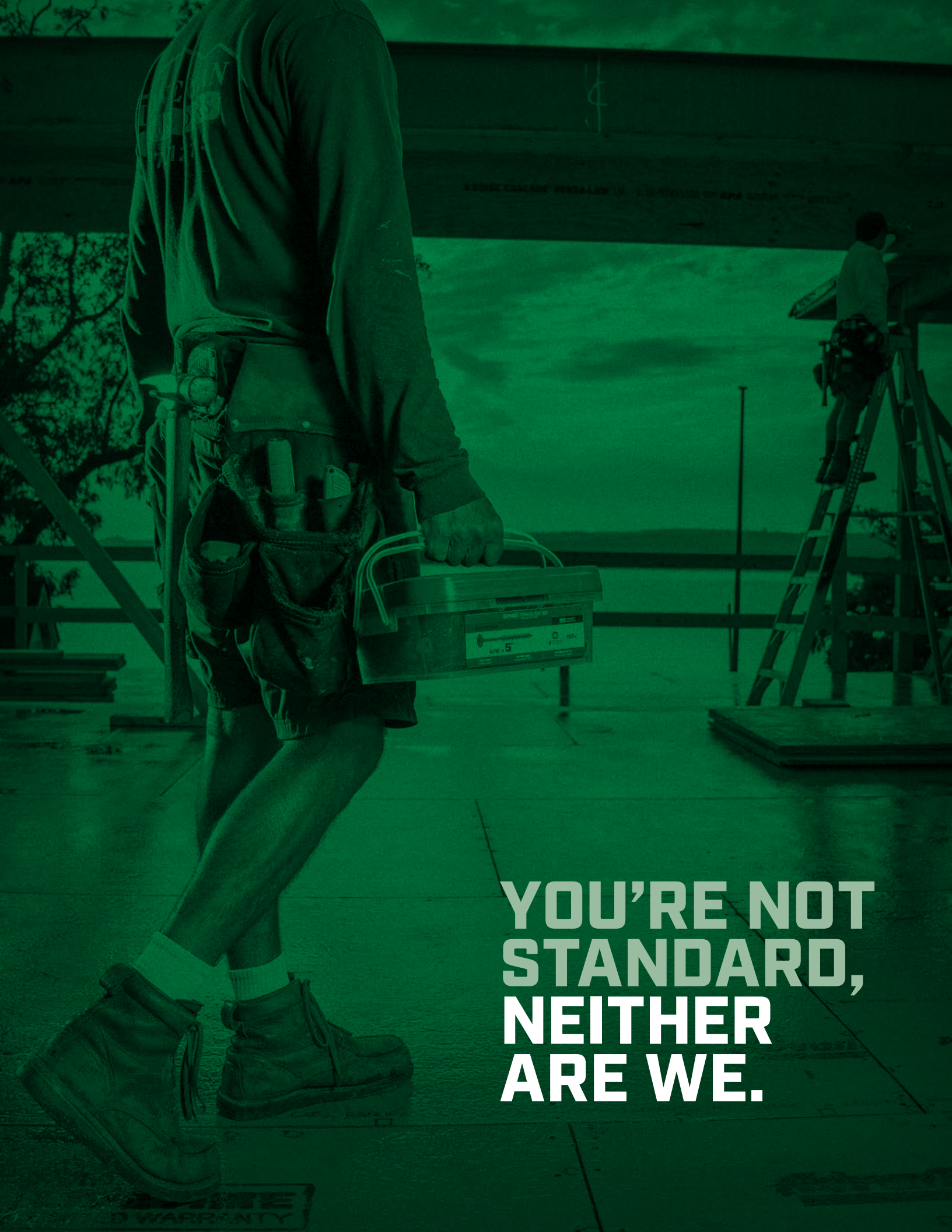

YOU'RE NOT
STANDARD,
NEITHER
ARE WE.

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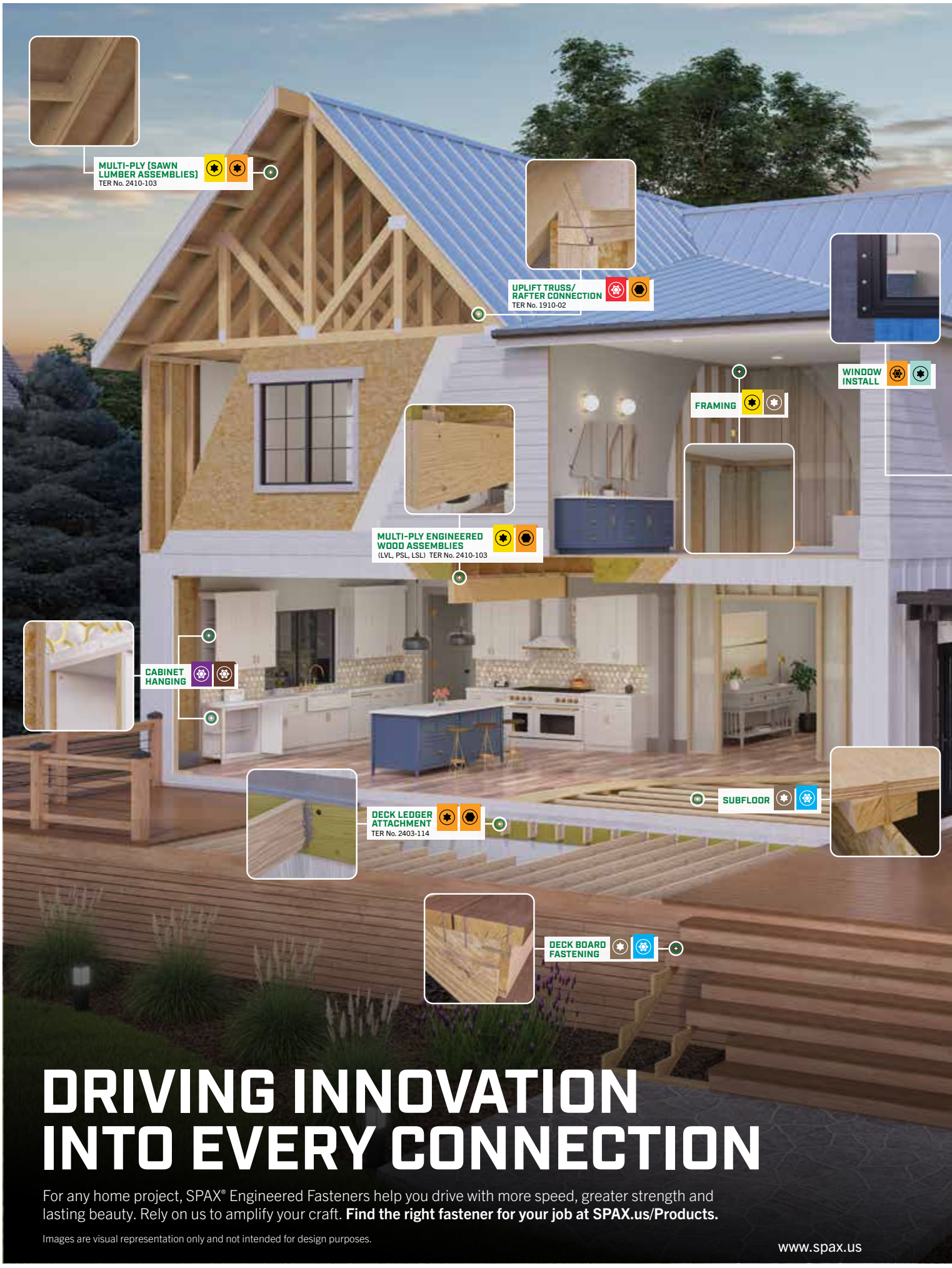
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DRIVING INNOVATION INTO EVERY CONNECTION

For any home project, SPAX® Engineered Fasteners help you drive with more speed, greater strength and lasting beauty. Rely on us to amplify your craft. **Find the right fastener for your job at SPAX.us/Products.**

Images are visual representation only and not intended for design purposes.

www.spax.us

SPAX® ENGINEERED FASTENERS



STRUCTURAL LAGS

EXTERIOR

- **POWERLAGS® XF** PANCAKE HEAD, HCR® — NEW!
- **POWERLAGS® XF** HEX WASHER HEAD, HCR® — NEW!

INTERIOR

- **POWERLAGS® XF** WASHER HEAD, YELLOW ZINC — NEW!
- **TRUSS SCREW** CYLINDRIC HEAD

MULTI-MATERIAL FASTENERS

EXTERIOR

- **POWERDRIVE™** FLAT HEAD, HCR® — NEW!
- **CONSTRUCTION** WAFER HEAD, HCR-X™

INTERIOR

- **POWERDRIVE™** FLAT HEAD, YELLOW ZINC — NEW!
- **CONSTRUCTION** WAFER HEAD, YELLOW ZINC
- **CONSTRUCTION** FLAT HEAD, ZINC

SPECIALTY FASTENERS

STAINLESS STEEL

- **POWERDECK®** TRIM HEAD
- **MULTI-MATERIAL** FLAT HEAD 304 SERIES

FINISHING TRIM

- **HARDWOOD/MDF** TRIM HEAD
- **POWERTRIM®** TRIM HEAD, BLACK HCR® — NEW!

CODE COMPLIANT — INDEPENDENTLY TESTED — ICC ES No. ESR-5358 — IRC / IBC — CODE COMPLIANT

A PARTNERSHIP DESIGNED TO GROW YOUR BUSINESS

Our comprehensive offering allows us to be your single source for engineered fasteners.

- Our experienced reps will create a custom solution built around your fastener needs
- Secure faster deliveries and fewer inventory issues thanks to local stock, American manufacturing and agile production lines
- Increase your profit margins when you use our suggested retail prices
- Sell a product that contractors want
- Retail and bulk packaging



DEALER SUPPORT BUILT WITH A PURPOSE

We've developed training, marketing collateral and point-of-sale displays that can help educate on our product offering and raise awareness to increase turn with minimal effort from your team.

CASE STUDY: DRIVING A DEALER'S PROFITABILITY

We analyzed our dealer partner's fastener category and utilized our comprehensive product offering to help them minimize the number of brands they carry. The final result: the dealer consolidated the category, while still maintaining a complete offering. The consolidation allowed the dealer to take back six feet of shelf space.



INNOVATION IN EVERY INCH

Our engineered fasteners are skillfully and deliberately designed and tested to increase productivity and keep connections held together stronger for longer.

That means fewer callbacks for your customers and faster turns for your business.



T-STAR Pancake Head
PowerLags® XF

LOW PROFILE PANCAKE HEAD
FLUSH FINISH
HIGH CLAMPING FORCE

T-STAR
SUPERIOR
BIT ENGAGEMENT

SERRATED THREADS
REDUCED
TORQUE & FATIGUE

HCR® DOUBLE BARRIER COATING
TREATED LUMBER APPROVED

HEAT TREATED
FOR STRENGTH AND DURABILITY

***4CUT™* POINT**
PREVENTS
SPLITTING

ZERO PRE-DRILL
FAST START

ICC ES
No. ESR-5358



WE HELP YOUR CUSTOMERS AMPLIFY THEIR CRAFT

- Eliminate pre-drilling to increase jobsite productivity by up to 30%
- Decrease driving torque by 40% without the risk of stripping
- SPAX PowerLags XF offer a connection that's building code compliant

WE CHOOSE SPAX BECAUSE IT'S **THE BEST STRUCTURAL SCREW** WE'VE USED.

JASON LONERGAN
Lonergan Builders

ENHANCED PRODUCTIVITY
STRONGER RESULTS
SATISFIED CUSTOMERS

HISTORY OF ABC US

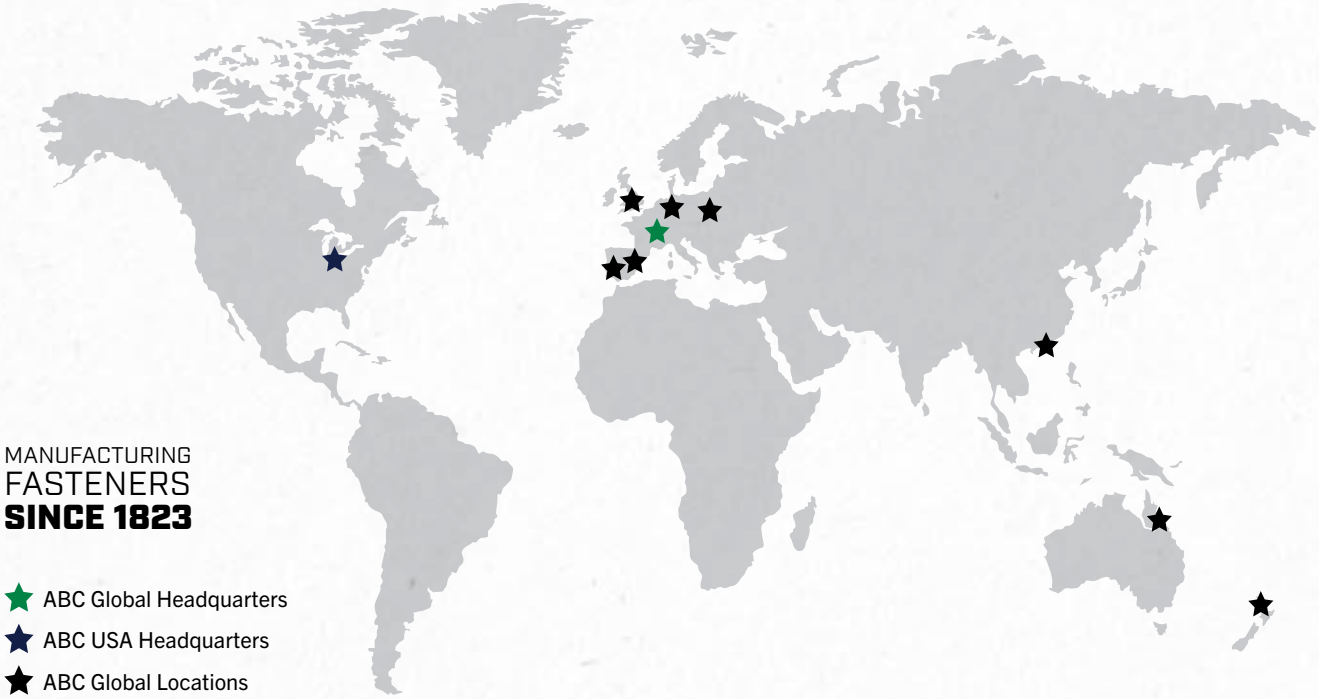
SPAX® ENGINEERED FASTENERS

SPAX® is a brand of Altenloh, Brinck & Co. of Ennepetal, Germany, founded in 1823 and first introduced to the European market in 1967 as a revolutionary line of multi-material construction fasteners. Today, the SPAX brand represents a broad selection of engineered fasteners for the construction industries and symbolizes the highest quality of fastening solutions. It is one of the most recognized brands in Europe.

Altenloh, Brinck & Co. US is proud to manufacture and distribute engineered fasteners under the SPAX brand for the residential construction market and the TRUFAST® brand for commercial roofing and exterior building envelopes and facades.



ABC Headquarters in Ennepetal, Germany



MANUFACTURING
FASTENERS
SINCE 1823

- ABC Global Headquarters
- ABC USA Headquarters
- ABC Global Locations

ONE COMPANY — TWO BRANDS

SPAX® TRUFAST®

HISTORY OF ABC US

1981

TRUFAST® began selling commercial roofing screws.

1992

SPAX® started distributing products in the U.S.

2004

TRUFAST began heat treating product in Pioneer, focusing on long parts production.

2006

Altenloh, Brinck & Co purchased TRUFAST.

2010

U.S. companies merged into Altenloh, Brinck & Co US, Inc.

2011

Completion of a 33,000 sq. ft. expansion and modernization of the Bryan, OH, manufacturing facility.

ABC US heat treat operations expanded with a 45,000 sq. ft. building addition and introduction to short parts processing which allows all ABC produced parts to be heat treated internally.

2013

Acquisition of ES Products Company, manufacturer of specialty fastening solutions for low density, low slope roof decks.



2015

Completion of a 50,000 sq. ft. expansion at the Pioneer, OH, heat treat facility

2017

ABC US acquired Rodenhouse innovative fastening solutions.

2021

Rodenhouse rebranded to TRUFAST Walls.

64,000 sq. ft. was added to the heat treat facility in Pioneer for a state-of-the-art packaging facility.

2022

Completion of a 12,000 sq. ft. training center in Bryan.

2023

200th year anniversary celebration for Altenloh, Brinck & Co.

1823 - 2023

2024

TRUFAST Walls rebranded to TRUFAST.

2026

Launch of PowerLags® XF and PowerDrive™.



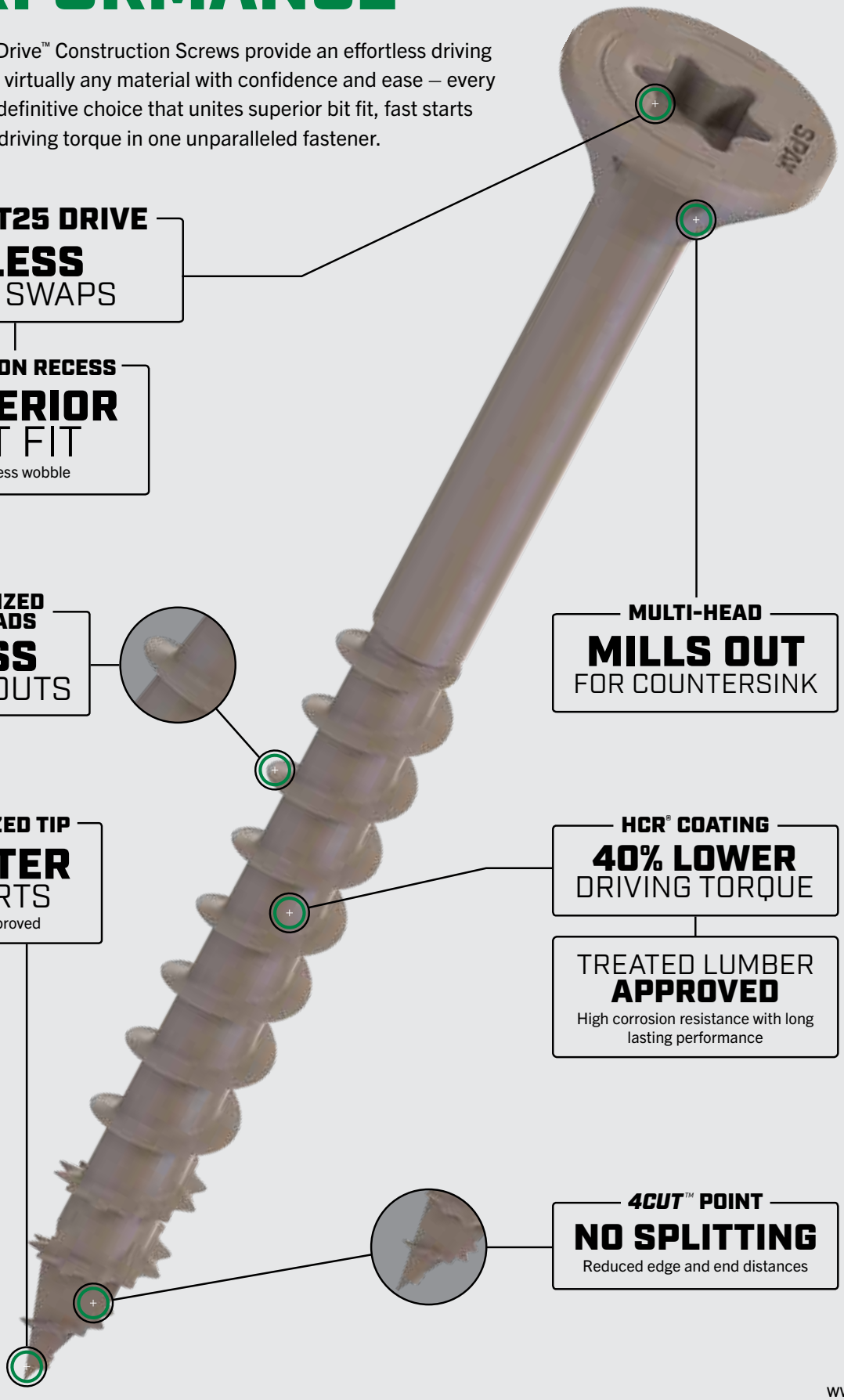



NEW! SPAX® POWERDRIVE™

ENGINEERED FOR PERFORMANCE

NEW! T25 DRIVE

SPAX® PowerDrive™ Construction Screws provide an effortless driving experience in virtually any material with confidence and ease – every time. It's the definitive choice that unites superior bit fit, fast starts and reduced driving torque in one unparalleled fastener.



NEW T25 DRIVE
LESS
BIT SWAPS

PRECISION RECESS
SUPERIOR
BIT FIT
50% less wobble

OPTIMIZED THREADS
LESS
SPIN-OUTS

MULTI-HEAD
MILLS OUT
FOR COUNTERSINK

OPTIMIZED TIP
FASTER
STARTS
33% improved

HCR® COATING
40% LOWER
DRIVING TORQUE

TREATED LUMBER
APPROVED
High corrosion resistance with long lasting performance

***4CUT™* POINT**
NO SPLITTING
Reduced edge and end distances

PRODUCT BENEFITS

BEST IN CLASS BIT FIT

Match-made, impact-rated T25 bit included in every box is designed for ultimate fit and superior grip with every drive, even at difficult angles.

ADVANCED THREADS

A proprietary thread pattern enhances driving power and efficiency, making projects come together seamlessly. These advanced threads pull boards tightly together, ensuring a secure, stable connection.

QUICK BITE. PULLS TIGHT.

Precision tip drives quick in virtually any material. Minimize time spent on task with quick, hassle-free starts and effortless installation with remarkable speed on every turn.

UNMATCHED DURABILITY

Constructed from high-grade, heat-treated steel, it's exceptional tensile and shear strength reduces the risk of breaking or bending under pressure. Whether framing a wall, constructing a deck, count on unrivaled performance.

NEW TAN HCR® COATING

A premium, high-corrosion-resistant coating delivering long-lasting performance and easier driving.



DRILL CONFIDENCE IN VIRTUALLY EVERY APPLICATION

Made to excel in a wide range of applications. Whether you're fastening sawn lumber, engineered wood, concrete, masonry, or poly-lumber, expect nothing less than exceptional hold.

EXTERIOR



DECKING



FENCING



FRAMING



OUTDOOR LIVING

INTERIOR



CABINETRY



WOODWORKING



MULTI-PURPOSE



BUY IN BULK

SPAX® PowerDrive™ Construction Screws are available in Ready Pax, Mini Pails, Mini Bulk Pails, and Bulk Pails.

T-STAR FLAT HEAD YELLOW ZINC

POWERDRIVE™

SPAX® ENGINEERED FASTENERS



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® PowerDrive™ screws provide up to 33% faster starts, 40% less torque, and reliable holding power in wood, composite, and treated lumber. The *4CUT*™ Point and thread serrations allow no pre-drilling, reduced splitting, and clean finishes. Yellow zinc coating provides smooth driving, clean appearance, and reliable corrosion protection for interior framing, cabinetry, woodworking, and indoor construction.

MATERIALS & COATING

Cold-rolled “carbon steel” wire, heat treated and plated with a yellow zinc finish to prevent red rust. “Yellow zinc” is tested and recognized for use in above ground contact pressure treated lumber for interior dry/damp general construction applications (e.g., AWPA UC1-UC2).



MULTI-HEAD DESIGN

Countersinks screw head flush with material.



UNIQUE *4CUT*™ POINT

Prevents splitting and requires no pre-drilling in wood.



SERRATED THREADS

Allow for quicker, easier fastening.



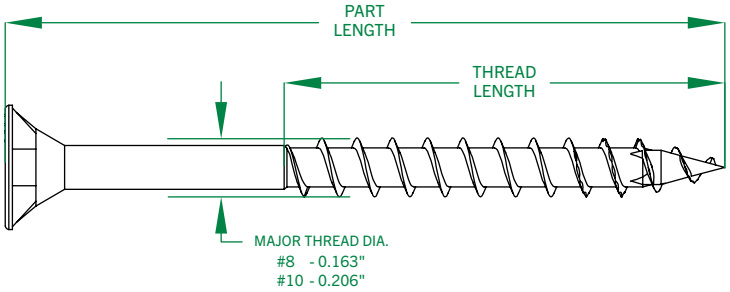
TYPICAL INTERIOR APPLICATIONS

- 2-by framing connections
- Furring strips to concrete
- Cabinet frames
- Stair treads
- Subflooring attachments
- Hinge installation
- Indoor furniture
- Installing plumbing supports

T-STAR FLAT HEAD YELLOW ZINC

POWERDRIVE™

SPAX® ENGINEERED FASTENERS





NEW!
T25 DRIVE

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
#8 x 1¼"	0.830"	0.338"	T25	120	Ready Pax	5	XFF08P114Y120
				420	Mini Pail	3	XFF08P114Y420
				1320	Mini Bulk Pail	N/A	XFF08P114Y1320
				3000	Bulk Pail	N/A	XFF08P114Y3000
#8 x 1⅝"	1.085"	0.338"	T25	110	Ready Pax	5	XFF08P158Y110
				380	Mini Pail	3	XFF08P158Y380
				1210	Mini Bulk Pail	N/A	XFF08P158Y1210
				2750	Bulk Pail	N/A	XFF08P158Y2750
#8 x 2"	1.280"	0.338"	T25	100	Ready Pax	5	XFF08P200Y100
				350	Mini Pail	3	XFF08P200Y350
				1100	Mini Bulk Pail	N/A	XFF08P200Y1100
				2500	Bulk Pail	N/A	XFF08P200Y2500
#8 x 2½"	1.380"	0.338"	T25	90	Ready Pax	5	XFF08P212Y90
				310	Mini Pail	3	XFF08P212Y310
				990	Mini Bulk Pail	N/A	XFF08P212Y990
				2250	Bulk Pail	N/A	XFF08P212Y2250
#10 x 2½"	1.595"	0.386"	T25	70	Ready Pax	5	XFF10P212Y70
				240	Mini Pail	3	XFF10P212Y240
				770	Mini Bulk Pail	N/A	XFF10P212Y770
				1750	Bulk Pail	N/A	XFF10P212Y1750
#10 x 3"	1.595"	0.386"	T25	60	Ready Pax	5	XFF10P300Y60
				210	Mini Pail	3	XFF10P300Y210
				660	Mini Bulk Pail	N/A	XFF10P300Y660
				1500	Bulk Pail	N/A	XFF10P300Y1500
#10 x 3½"	2.385"	0.386"	T25	50	Ready Pax	5	XFF10P312Y50
				170	Mini Pail	3	XFF10P312Y170
				550	Mini Bulk Pail	N/A	XFF10P312Y550
				1250	Bulk Pail	N/A	XFF10P312Y1250

NOTE: Only sold in master cartons.

T-STAR FLAT HEAD YELLOW ZINC

SPAX® ENGINEERED FASTENERS

POWERDRIVE™



Ready Pax



Mini Pail



Mini Bulk Pail



Bulk Pail

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#8 x 1¼"			#10 x 2½"		
#8 x 1⅝"			#10 x 3"		
#8 x 2"			#10 x 3½"		
#8 x 2½"					

T-STAR FLAT HEAD HCR®

POWERDRIVE™

SPAX® ENGINEERED FASTENERS



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® PowerDrive™ screws provide up to 33% faster starts, 40% less torque, and reliable holding power in wood, composite, and treated lumber. The *4CUT*™ Point and thread serrations allow no pre-drilling, reduced splitting, and clean finishes. For exterior use, PowerDrive features a wood-tone HCR® exterior coating with a low-friction layer for easier driving and long-lasting corrosion resistance in pressure-treated wood. Perfect for decking, fencing, framing, woodworking, and general construction.

MATERIALS & COATING

Cold-rolled carbon steel wire heat treated and plated with an HCR® (High Corrosion Resistance) double barrier coating. HCR is tested and recognized for use in ground contact pressure treated lumber for exterior, freshwater general construction applications (e.g., AWPA UC1-UC4A, UCFA).



MULTI-HEAD DESIGN

Countersinks screw head flush with material.



UNIQUE *4CUT*™ POINT

Prevents splitting and requires no pre-drilling in wood.



SERRATED THREADS

Allow for quicker, easier fastening.



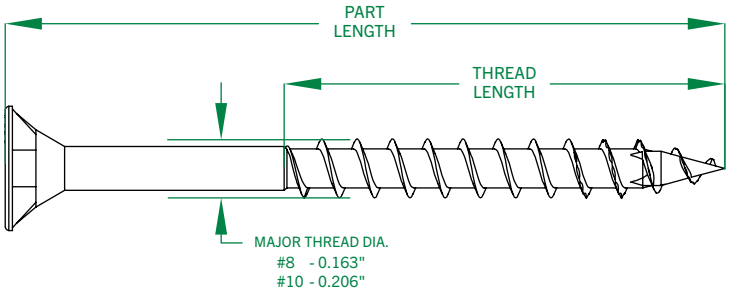
TYPICAL EXTERIOR APPLICATIONS

- 2-by framing connections - treated lumber
- Deck board finishing installation
- Deck railing 2x2 baluster
- Stair treads - treated lumber deck
- Exterior fencing
- Shed construction
- Outdoor furniture

T-STAR FLAT HEAD HCR®

POWERDRIVE™

SPAX® ENGINEERED FASTENERS





NEW!
T25 DRIVE

EXTERIOR

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
#8 x 1¼"	0.830"	0.338"	T25	120	Ready Pax	5	XFF08P114T120
				420	Mini Pail	3	XFF08P114T420
				1320	Mini Bulk Pail	N/A	XFF08P114T1320
				3000	Bulk Pail	N/A	XFF08P114T3000
#8 x 1⅝"	1.085"	0.338"	T25	110	Ready Pax	5	XFF08P158T110
				380	Mini Pail	3	XFF08P158T380
				1210	Mini Bulk Pail	N/A	XFF08P158T1210
				2750	Bulk Pail	N/A	XFF08P158T2750
#8 x 2"	1.280"	0.338"	T25	100	Ready Pax	5	XFF08P200T100
				350	Mini Pail	3	XFF08P200T350
				1100	Mini Bulk Pail	N/A	XFF08P200T1100
				2500	Bulk Pail	N/A	XFF08P200T2500
#10 x 2½"	1.595"	0.386"	T25	70	Ready Pax	5	XFF10P212T70
				240	Mini Pail	3	XFF10P212T240
				770	Mini Bulk Pail	N/A	XFF10P212T770
				1750	Bulk Pail	N/A	XFF10P212T1750
#10 x 3"	1.595"	0.386"	T25	60	Ready Pax	5	XFF10P300T60
				210	Mini Pail	3	XFF10P300T210
				660	Mini Bulk Pail	N/A	XFF10P300T660
				1500	Bulk Pail	N/A	XFF10P300T1500
#10 x 3½"	2.385"	0.386"	T25	50	Ready Pax	5	XFF10P312T50
				170	Mini Pail	3	XFF10P312T170
				550	Mini Bulk Pail	N/A	XFF10P312T550
				1250	Bulk Pail	N/A	XFF10P312T1250
#10 x 4"	2.385"	0.386"	T25	40	Ready Pax	5	XFF10P400T40
				140	Mini Pail	3	XFF10P400T140
				440	Mini Bulk Pail	N/A	XFF10P400T440
				1000	Bulk Pail	N/A	XFF10P400T1000

NOTE: Only sold in master cartons.

T-STAR FLAT HEAD HCR®

POWERDRIVE™

SPAX® ENGINEERED FASTENERS



Ready Pax



Mini Pail



Mini Bulk Pail



Bulk Pail

FASTENER LENGTHS

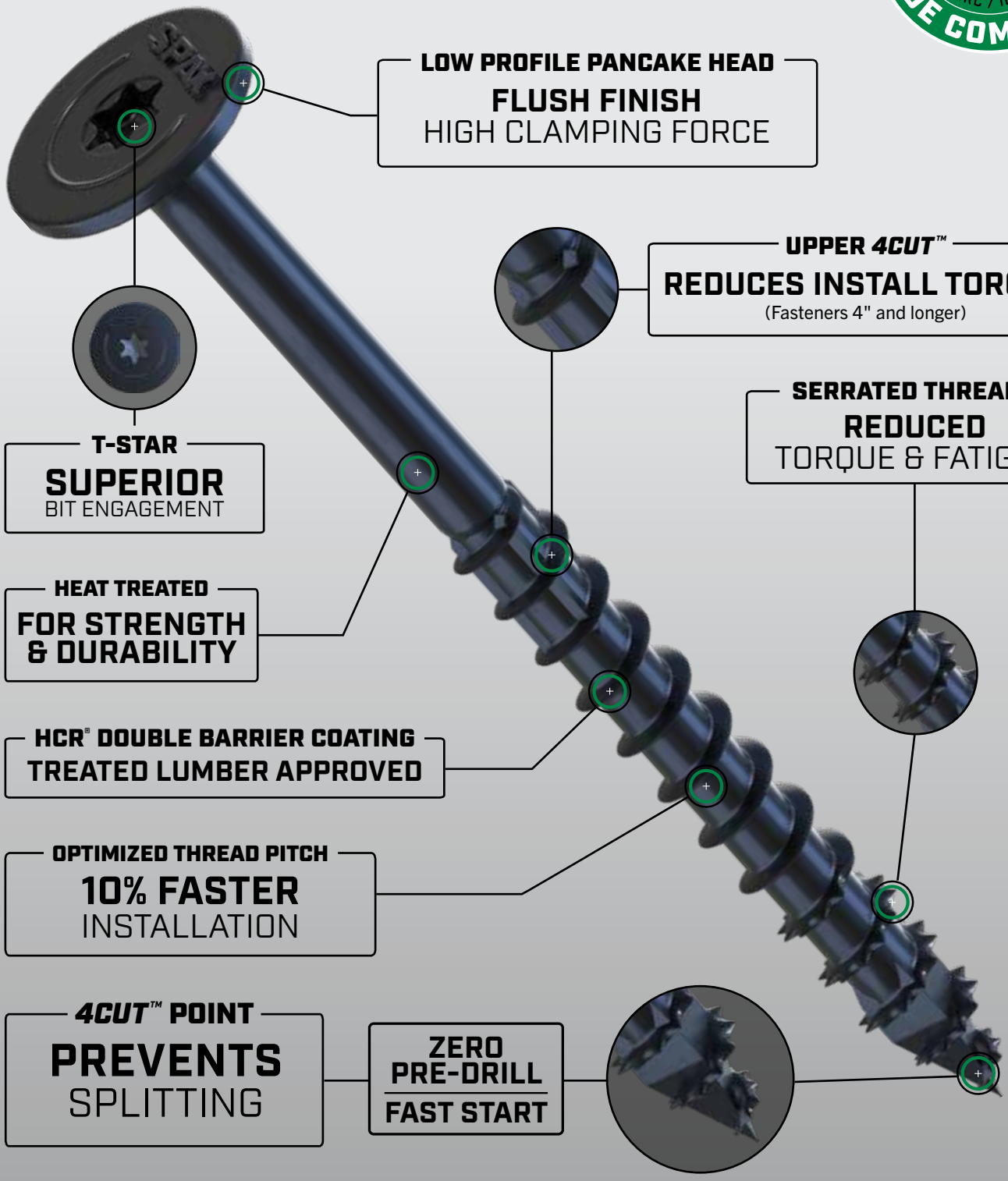
PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#8 x 1¼"			#10 x 3"		
#8 x 1⅝"			#10 x 3½"		
#8 x 2"			#10 x 4"		
#10 x 2½"					

NEW!

MEET THE NEXT GENERATION IN STRUCTURAL FASTENERS

PowerLags® XF excels with ease in structural wood-to-wood connections. From innovative *4CUT*™ technology to proprietary thread serrations to superior bit fit on a low-profile pancake head, every inch is optimized to deliver category-defining performance.

CODE COMPLIANT
INDEPENDENTLY TESTED
ICC ES
No. ESR-5358
IRC / IBC
CODE COMPLIANT



LOW PROFILE PANCAKE HEAD
FLUSH FINISH
HIGH CLAMPING FORCE

UPPER *4CUT*™
REDUCES INSTALL TORQUE
(Fasteners 4" and longer)

T-STAR
SUPERIOR
BIT ENGAGEMENT

SERRATED THREADS
REDUCED
TORQUE & FATIGUE

HEAT TREATED
FOR STRENGTH & DURABILITY

HCR® DOUBLE BARRIER COATING
TREATED LUMBER APPROVED

OPTIMIZED THREAD PITCH
10% FASTER
INSTALLATION

***4CUT*™ POINT**
PREVENTS
SPLITTING

ZERO PRE-DRILL
FAST START

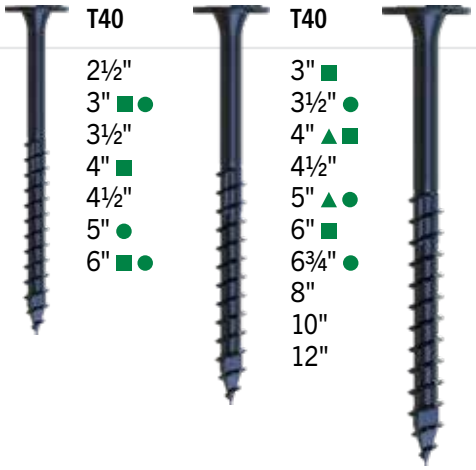
THE ULTIMATE FUSION OF DRIVING EASE AND STRUCTURAL STRENGTH

Backed by third-party testing and IRC/IBC code approvals, PowerLags® XF deliver confidence and peace of mind. They're an excellent choice for projects involving dimensional lumber, heavy-duty timbers, and engineered wood products. Whether you're building a new deck, adding a pergola, or working on other demanding outdoor structures, SPAX PowerLags® XF offer a superior alternative to traditional lag bolts.

EXTERIOR & TREATED LUMBER

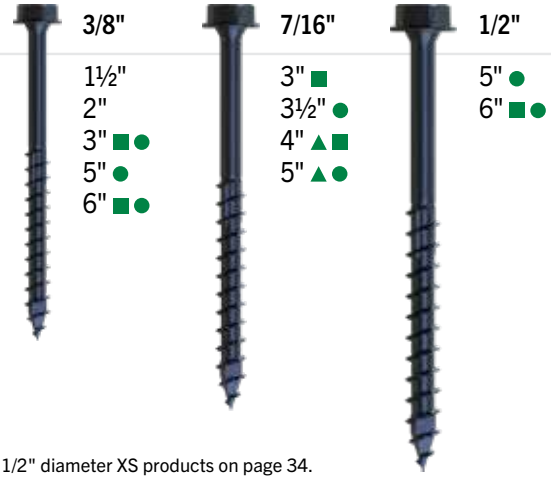
T-STAR , Partial Thread
LOW PROFILE PANCAKE HEAD

DIA.	1/4"	5/16"	3/8"
DRIVE	T40	T40	T50
	2½"	3" ■	5" ●
	3" ■ ●	3½" ●	6" ■ ●
	3½"	4" ▲ ■	8"
	4" ■	4½"	10"
	4½"	5" ▲ ●	
	5" ●	6" ■	
	6" ■ ●	6¾" ●	
		8"	
		10"	
		12"	



SOCKET, Partial Thread
HEX WASHER HEAD

1/4"	5/16"	3/8"
3/8"	7/16"	1/2"
1½"	3" ■	5" ●
2"	3½" ●	6" ■ ●
3" ■ ●	4" ▲ ■	
5" ●	5" ▲ ●	
6" ■ ●		

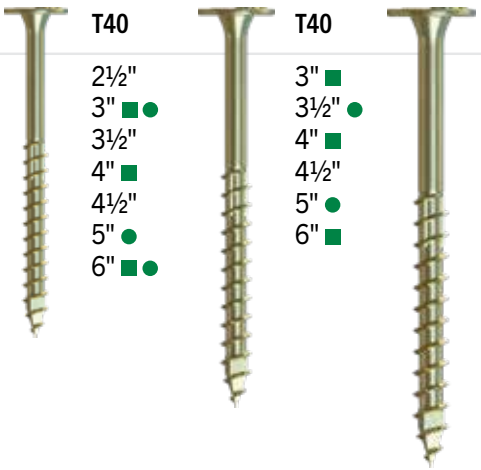


1/2" diameter XS products on page 34.

INTERIOR

T-STAR, Partial Thread
LOW PROFILE PANCAKE HEAD

DIA.	1/4"	5/16"	3/8"
DRIVE	T40	T40	T50
	2½"	3" ■	5" ●
	3" ■ ●	3½" ●	6" ■ ●
	3½"	4" ■	
	4" ■	4½"	
	4½"	5" ●	
	5" ●	6" ■	
	6" ■ ●		



Dr J

▲ TER No. 2403-114 Deck Ledger Attachment

■ TER No. 2410-103 Multi-ply Sawn Lumber Assemblies

● TER No. 2410-103 Multi-ply Engineered Wood (SCL) Assemblies

T-STAR PANCAKE HEAD YELLOW ZINC

POWERLAGS® XF

SPAX® ENGINEERED FASTENERS



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® PowerLags® XF T-STAR Pancake Head structural fasteners with yellow zinc coating create strong, reliable wood-to-wood connections. They deliver a superior drive experience highlighted by a fast start and 10% faster installation times than other structural fasteners. This fastener's large diameter low profile pancake head with T-STAR recess has been paired with an optimized thread design to provide noticeable clamping and holding power. Ideal for framing attachment, multi-ply beams/trusses and other interior structural applications.

MATERIALS & COATING

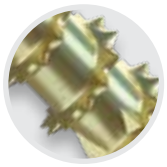
Cold-rolled carbon steel wire, heat treated and plated with a yellow zinc finish to prevent red rust. Yellow zinc is tested and recognized for use in above ground contact pressure treated lumber for interior dry/damp general construction applications (e.g., AWPA UC1-UC2).

INTERIOR



LOW PROFILE PANCAKE HEAD

Provides a flush finish with high clamping force.



SERRATED THREADS

Allows for quicker, easier fastening.



UPPER *4CUT*™ (4" AND UP)

Bores out the hole in wood for faster speed and lower tool torque.



UNIQUE *4CUT*™ POINT

Prevents splitting and requires no pre-drilling in wood.



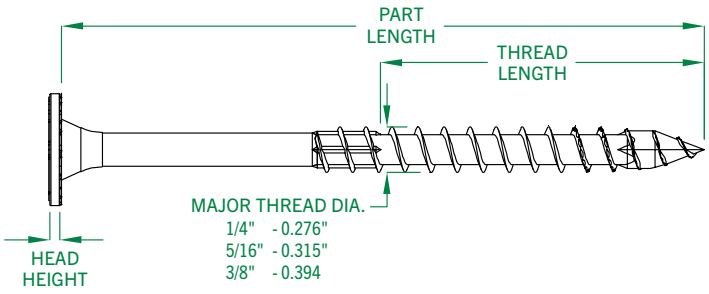
TYPICAL INTERIOR APPLICATIONS

- Multi-ply sawn lumber assemblies
- Multi-ply structural composite lumber assemblies
- Interior framing applications
- Shelving applications – interior buildings
- Indoor furniture

T-STAR PANCAKE HEAD YELLOW ZINC

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SPAX® ENGINEERED FASTENERS





Dr J

■ TER No. 2410-103 Multi-ply Sawn Lumber Assemblies

● TER No. 2410-103 Multi-ply Engineered Wood (SCL) Assemblies

INTERIOR

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
1/4" x 2½"	1.535"	0.675" 0.055"	T40	1	Individual*	50	XFP250P212Y1
				12	Project Pax	5	XFP250P212Y12
				50	Contractor Pax	4	XFP250P212Y50
				500	Bulk Pail	N/A	XFP250P212Y500
1/4" x 3" ■●	1.535"	0.675" 0.055"	T40	1	Individual*	50	XFP250P300Y1
				12	Project Pax	5	XFP250P300Y12
				50	Contractor Pax	4	XFP250P300Y50
				500	Bulk Pail	N/A	XFP250P300Y500
1/4" x 3½"	2.010"	0.675" 0.055"	T40	1	Individual*	50	XFP250P312Y1
				12	Project Pax	5	XFP250P312Y12
				50	Contractor Pax	4	XFP250P312Y50
				500	Bulk Pail	N/A	XFP250P312Y500
1/4" x 4" ■	2.125"	0.675" 0.055"	T40	1	Individual*	50	XFP250P400Y1
				12	Project Pax	5	XFP250P400Y12
				50	Contractor Pax	4	XFP250P400Y50
				500	Bulk Pail	N/A	XFP250P400Y500
1/4" x 4½"	2.125"	0.675" 0.055"	T40	1	Individual*	50	XFP250P412Y1
				12	Project Pax	5	XFP250P412Y12
				50	Contractor Pax	4	XFP250P412Y50
				500	Bulk Pail	N/A	XFP250P412Y500
1/4" x 5" ●	2.755"	0.675" 0.055"	T40	1	Individual*	50	XFP250P500Y1
				12	Project Pax	5	XFP250P500Y12
				50	Contractor Pax	4	XFP250P500Y50
				500	Bulk Pail	N/A	XFP250P500Y500
1/4" x 6" ■●	2.755"	0.675" 0.055"	T40	1	Individual*	50	XFP250P600Y1
				12	Project Pax	5	XFP250P600Y12
				50	Contractor Pax	4	XFP250P600Y50
				500	Bulk Pail	N/A	XFP250P600Y500
5/16" x 3" ■	1.535"	0.765" 0.060"	T40	1	Individual*	25	XFP312P300Y1
				12	Project Pax	5	XFP312P300Y12
				50	Contractor Pax	4	XFP312P300Y50
				250	Bulk Pail	N/A	XFP312P300Y250

NOTE: 2" bit included in 1/4" and 5/16" diameter packages. 1" bit included in 3/8" diameter packages.
*Bit not included.

T-STAR PANCAKE HEAD YELLOW ZINC

POWERLAGS® XF

SPAX® ENGINEERED FASTENERS

DrJ

■ TER No. 2410-103 Multi-ply Sawn Lumber Assemblies

● TER No. 2410-103 Multi-ply Engineered Wood (SCL) Assemblies

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
5/16" x 3½" ●	2.010"	0.765" 0.060"	T40	1	Individual*	25	XFP312P312Y1
				50	Contractor Pax	4	XFP312P312Y50
				250	Bulk Pail	N/A	XFP312P312Y250
5/16" x 4" ■	2.045"	0.765" 0.060"	T40	1	Individual*	25	XFP312P400Y1
				12	Project Pax	5	XFP312P400Y12
				50	Contractor Pax	4	XFP312P400Y50
				250	Bulk Pail	N/A	XFP312P400Y250
5/16" x 4½"	2.045"	0.765" 0.060"	T40	1	Individual*	25	XFP312P412Y1
				50	Contractor Pax	4	XFP312P412Y50
				250	Bulk Pail	N/A	XFP312P412Y250
5/16" x 5" ●	2.675"	0.765" 0.060"	T40	1	Individual*	25	XFP312P500Y1
5/16" x 6" ■	2.675"	0.765" 0.060"	T40	1	Individual*	25	XFP312P600Y1
3/8" x 5" ●	3.190"	0.980" 0.070"	T50	1	Individual*	15	XFP375P500Y1
				25	Contractor Pax	4	XFP375P500Y25
				150	Bulk Pail	N/A	XFP375P500Y150
3/8" x 6" ■●	3.150"	0.980" 0.070"	T50	1	Individual*	15	XFP375P600Y1
				12	Project Pax	5	XFP375P600Y12
				25	Contractor Pax	4	XFP375P600Y25
				150	Bulk Pail	N/A	XFP375P600Y150

NOTE: 2" bit included in 1/4" and 5/16" diameter packages. 1" bit included in 3/8" diameter packages.
*Bit not included.



Individual



Project Pax®



Contractor Pax®



Bulk Pail



T-STAR Bit

BIT SELECTION

DRIVE BIT	BIT SIZE	MASTER QTY.	PART NO.
T40	1"	10	5000002016409
T50	1"	10	5000002016509



NOTE: Only sold in master cartons. Made in Taiwan.

T-STAR PANCAKE HEAD YELLOW ZINC

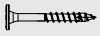
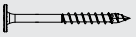
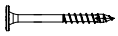
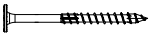
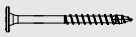
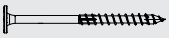
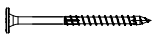
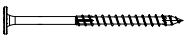
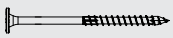
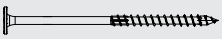
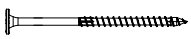
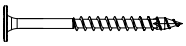
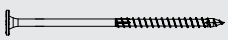
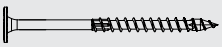
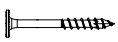
POWERLAGS® XF

SPAX® ENGINEERED FASTENERS

■ TER No. 2410-103 Multi-ply Sawn Lumber Assemblies

● TER No. 2410-103 Multi-ply Engineered Wood (SCL) Assemblies

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
1/4" x 2½"			5/16" x 3½"		
1/4" x 3"			5/16" x 4"		
1/4" x 3½"			5/16" x 4½"		
1/4" x 4"			5/16" x 5"		
1/4" x 4½"			5/16" x 6"		
1/4" x 5"			3/8" x 5"		
1/4" x 6"			3/8" x 6"		
5/16" x 3"					

ICC ES No. ESR-5358

PERFORMANCE SPECIFICATIONS

NOMINAL DIAMETER	ALLOWABLE[1] WITHDRAWAL[2], HEAD PULL-THROUGH[3], SHEAR LOADED PARALLEL TO THE GRAIN[4] ($Z_{||}$), AND SHEAR LOADED PERPENDICULAR TO THE GRAIN[4] ($Z_{\perp}$)														
	SOUTHERN PINE[5] (G=0.55)					DOUGLAS-FIR[5] (G=0.5)					HEM FIR & SPRUCE-PINE FIR[5] (G=0.42)				
	WITHDRAWAL[2]	HEAD PULL-THROUGH[3]		$Z_{||}$[4]	$Z_{\perp}$[4]	WITHDRAWAL[2]	HEAD PULL-THROUGH[3]		$Z_{||}$[4]	$Z_{\perp}$[4]	WITHDRAWAL[2]	HEAD PULL-THROUGH[3]		$Z_{||}$[4]	$Z_{\perp}$[4]
		PANCAKE	HEX				PANCAKE	HEX				PANCAKE	HEX		
	(LB/IN.)	(LB)	(LB)	(LB)	(LB)	(LB/IN.)	(LB)	(LB)	(LB)	(LB)	(LB/IN.)	(LB)	(LB)	(LB)	(LB)
1/4"	170	620	450	250	220	170	550	400	240	195	140	450	300	210	155
5/16"	167	630	500	280	215	170	530	460	260	190	140	520	360	220	145
3/8"	238	920	620	330	240	205	760	620	305	220	170	610	510	270	185
1/2"	292	-	720	400	280	280	-	660	375	260	210	-	580	330	220

1 Based upon ASD design loads. Values shall be multiplied by the applicable adjustment values provided in the 2024 National Design Specification (NDS) for Wood Construction.
2 Withdrawal values are pounds per inch of thread including the tip but excluding the length of the upper *4CUT*™. Minimum penetration into the main member is 1-1/2" for the 1/4" and 5/16" diameters, 2" for the 3/8" diameter, and 3" for the 1/2" diameter.
3 Head pull-through values are based upon a 1-1/2" side member.
4 Lateral shear capacity is based upon a 1-1/2" side member and at least 1-1/2" penetration into the main member for the 1/4" and 5/16" diameters or 3-1/2" for the 3/8" or 1/2" diameters.
5 Tabulated values are based upon the specific gravities in the NDS. For specific gravities not listed, use the next lower value. When the connection has two different species, use the lower specific gravity.

T-STAR PANCAKE HEAD HCR®

POWERLAGS® XF

SPAX® ENGINEERED FASTENERS



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® PowerLags® XF T-STAR Pancake Head structural fasteners with HCR® coating create strong, reliable wood-to-wood connections. They deliver a superior drive experience highlighted by a fast start and 10% faster installation times than other structural fasteners. This fastener's large diameter low profile pancake head with T-STAR recess has been paired with an optimized thread design to provide noticeable clamping and holding power. Ideal for deck ledger attachment, multi-ply beams and other exterior structural applications.

MATERIALS & COATING

Cold-rolled carbon steel wire heat treated and plated with an HCR® (High Corrosion Resistance) double barrier coating. HCR is tested and recognized for use in ground contact pressure treated lumber for exterior, freshwater general construction applications (e.g., AWPA UC1-UC4A, UCFA).



LOW PROFILE PANCAKE HEAD

Provides a flush finish with high clamping force.



SERRATED THREADS

Allows for quicker, easier fastening.



UPPER *4CUT*™ (4" AND UP)

Bores out the hole in wood for faster speed and lower tool torque.



UNIQUE *4CUT*™ POINT

Prevents splitting and requires no pre-drilling in wood.



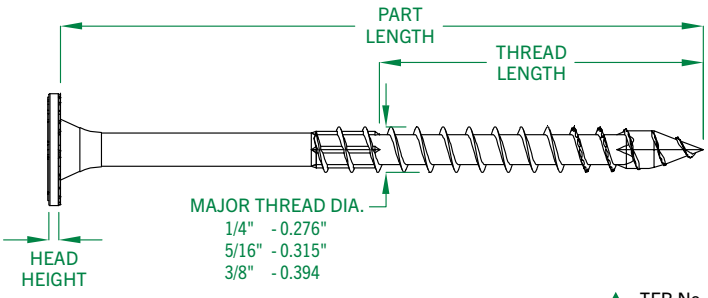
TYPICAL EXTERIOR APPLICATIONS

- Multi-ply structural composite lumber beam assembly
- Multi-ply sawn lumber assembly
- Exterior treated lumber pergolas & gazebos
- Landscaping timber
- Outdoor furniture
- Exterior fencing posts
- Exterior out buildings
- Deck ledger to residential band joist attachment

T-STAR PANCAKE HEAD HCR®

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SPAX® ENGINEERED FASTENERS





Dr J

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PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
1/4" x 2½"	1.535"	0.675" 0.055"	T40	1	Individual*	50	XFP250P212B1
				12	Project Pax	5	XFP250P212B12
				50	Contractor Pax	4	XFP250P212B50
				500	Bulk Pail	N/A	XFP250P212B500
1/4" x 3" ■●	1.535"	0.675" 0.055"	T40	1	Individual*	50	XFP250P300B1
				12	Project Pax	5	XFP250P300B12
				50	Contractor Pax	4	XFP250P300B50
				200	Mini Bulk Pail	N/A	XFP250P300B200
				500	Bulk Pail	N/A	XFP250P300B500
1/4" x 3½"	2.010"	0.675" 0.055"	T40	1	Individual*	50	XFP250P312B1
				12	Project Pax	5	XFP250P312B12
				50	Contractor Pax	4	XFP250P312B50
				500	Bulk Pail	N/A	XFP250P312B500
1/4" x 4" ■	2.125"	0.675" 0.055"	T40	1	Individual*	50	XFP250P400B1
				12	Project Pax	5	XFP250P400B12
				50	Contractor Pax	4	XFP250P400B50
				200	Mini Bulk Pail	N/A	XFP250P400B200
				500	Bulk Pail	N/A	XFP250P400B500
1/4" x 4½"	2.125"	0.675" 0.055"	T40	1	Individual*	50	XFP250P412B1
				12	Project Pax	5	XFP250P412B12
				50	Contractor Pax	4	XFP250P412B50
				500	Bulk Pail	N/A	XFP250P412B500
1/4" x 5" ●	2.755"	0.675" 0.055"	T40	1	Individual*	50	XFP250P500B1
				12	Project Pax	5	XFP250P500B12
				50	Contractor Pax	4	XFP250P500B50
				200	Mini Bulk Pail	N/A	XFP250P500B200
				500	Bulk Pail	N/A	XFP250P500B500
1/4" x 6" ■●	2.755"	0.675" 0.055"	T40	1	Individual*	50	XFP250P600B1
				12	Project Pax	5	XFP250P600B12
				50	Contractor Pax	4	XFP250P600B50
				200	Mini Bulk Pail	N/A	XFP250P600B200
				500	Bulk Pail	N/A	XFP250P600B500

NOTE: 2" bit included in 1/4" and 5/16" diameter packages. 1" bit included in 3/8" diameter packages.
*Bit not included.

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5/16" x 3" ■	1.535"	0.765" 0.060"	T40	1	Individual*	25	XFP312P300B1
				12	Project Pax	5	XFP312P300B12
				50	Contractor Pax	4	XFP312P300B50
				250	Bulk Pail	N/A	XFP312P300B250
5/16" x 3½" ●	2.010"	0.765" 0.060"	T40	1	Individual*	25	XFP312P312B1
				12	Project Pax	5	XFP312P312B12
				50	Contractor Pax	4	XFP312P312B50
				250	Bulk Pail	N/A	XFP312P312B250
5/16" x 4" ▲■	2.045"	0.765" 0.060"	T40	1	Individual*	25	XFP312P400B1
				12	Project Pax	5	XFP312P400B12
				50	Contractor Pax	4	XFP312P400B50
				150	Mini Bulk Pail	N/A	XFP312P400B150
				250	Bulk Pail	N/A	XFP312P400B250
5/16" x 4½"	2.045"	0.765" 0.060"	T40	1	Individual*	25	XFP312P412B1
				12	Project Pax	5	XFP312P412B12
				50	Contractor Pax	4	XFP312P412B50
				250	Bulk Pail	N/A	XFP312P412B250
5/16" x 5" ▲●	2.675"	0.765" 0.060"	T40	1	Individual*	25	XFP312P500B1
				12	Project Pax	5	XFP312P500B12
				50	Contractor Pax	4	XFP312P500B50
				150	Mini Bulk Pail	N/A	XFP312P500B150
				250	Bulk Pail	N/A	XFP312P500B250
5/16" x 6" ■	2.675"	0.765" 0.060"	T40	1	Individual*	25	XFP312P600B1
				12	Project Pax	5	XFP312P600B12
				50	Contractor Pax	4	XFP312P600B50
				150	Mini Bulk Pail	N/A	XFP312P600B150
				250	Bulk Pail	N/A	XFP312P600B250
5/16" x 6¾" ●	2.675"	0.765" 0.060"	T40	50	Contractor Pax	4	XFP312P634B50
				250	Bulk Pail	N/A	XFP312P634B250
5/16" x 8"	2.675"	0.765" 0.060"	T40	1	Individual*	25	XFP312P800B1
				12	Project Pax	5	XFP312P800B12
				50	Contractor Pax	2	XFP312P800B50
				150	Bulk Pail	N/A	XFP312P800B150
5/16" x 10"	2.675"	0.765" 0.060"	T40	1	Individual*	25	XFP312P1000B1
				12	Project Pax	5	XFP312P1000B12
				50	Contractor Pax	2	XFP312P1000B50
				150	Bulk Pail	N/A	XFP312P1000B150

NOTE: 2" bit included in 1/4" and 5/16" diameter packages. 1" bit included in 3/8" diameter packages.
*Bit not included.

T-STAR PANCAKE HEAD HCR®

POWERLAGS® XF

SPAX® ENGINEERED FASTENERS

DrJ

▲ TER No. 2403-114 Deck Ledger Attachment

■ TER No. 2410-103 Multi-ply Sawn Lumber Assemblies

● TER No. 2410-103 Multi-ply Engineered Wood (SCL) Assemblies

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
5/16" x 12"	2.675"	0.765" 0.060"	T40	1	Individual*	25	XFP312P1200B1
				50	Contractor Pax	2	XFP312P1200B50
				150	Bulk Pail	N/A	XFP312P1200B150
3/8" x 5" ●	3.190"	0.980" 0.070"	T50	1	Individual*	15	XFP375P500B1
				12	Project Pax	5	XFP375P500B12
				25	Contractor Pax	4	XFP375P500B25
				150	Bulk Pail	N/A	XFP375P500B150
3/8" x 6" ■●	3.150"	0.980" 0.070"	T50	1	Individual*	15	XFP375P600B1
				12	Project Pax	5	XFP375P600B12
				25	Contractor Pax	4	XFP375P600B25
				150	Bulk Pail	N/A	XFP375P600B150
3/8" x 8"	3.150"	0.980" 0.070"	T50	1	Individual*	15	XFP375P800B1
				25	Contractor Pax	2	XFP375P800B25
				150	Bulk Pail	N/A	XFP375P800B150
3/8" x 10"	3.150"	0.980" 0.070"	T50	1	Individual*	15	XFP375P1000B1
				150	Bulk Pail	N/A	XFP375P1000B150

NOTE: 2" bit included in 1/4" and 5/16" diameter packages. 1" bit included in 3/8" diameter packages.
*Bit not included.


Individual


Project Pax®


Contractor Pax®


Mini Bulk Pail


Bulk Pail


T-STAR Bit

BIT SELECTION

DRIVE BIT	BIT SIZE	MASTER QTY.	PART NO.
T40	1"	10	5000002016409
T50	1"	10	5000002016509



NOTE: Only sold in master cartons. Made in Taiwan.

T-STAR PANCAKE HEAD HCR®

POWERLAGS® XF

SPAX® ENGINEERED FASTENERS

DrJ

▲ TER No. 2403-114 Deck Ledger Attachment

■ TER No. 2410-103 Multi-ply Sawn Lumber Assemblies

● TER No. 2410-103 Multi-ply Engineered Wood (SCL) Assemblies

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
1/4" x 2½"			5/16" x 5" ▲●		
1/4" x 3" ■●			5/16" x 6" ■		
1/4" x 3½"			5/16" x 6¾" ●		
1/4" x 4" ■			5/16" x 8"		
1/4" x 4½"			5/16" x 10"		
1/4" x 5" ●			5/16" x 12"		
1/4" x 6" ■●			3/8" x 5" ●		
5/16" x 3" ■			3/8" x 6" ■●		
5/16" x 3½" ●			3/8" x 8"		
5/16" x 4" ▲■			3/8" x 10"		
5/16" x 4½"					

EXTERIOR

ICC ES No. ESR-5358

PERFORMANCE SPECIFICATIONS

NOMINAL DIAMETER	ALLOWABLE[1] WITHDRAWAL[2], HEAD PULL-THROUGH[3], SHEAR LOADED PARALLEL TO THE GRAIN[4] ($Z_{||}$), AND SHEAR LOADED PERPENDICULAR TO THE GRAIN[4] ($Z_{\perp}$)														
	SOUTHERN PINE[5] (G=0.55)					DOUGLAS-FIR[5] (G=0.5)					HEM FIR & SPRUCE-PINE FIR[5] (G=0.42)				
	WITHDRAWAL[2]	HEAD PULL-THROUGH[3]		$Z_{||}$[4]	$Z_{\perp}$[4]	WITHDRAWAL[2]	HEAD PULL-THROUGH[3]		$Z_{||}$[4]	$Z_{\perp}$[4]	WITHDRAWAL[2]	HEAD PULL-THROUGH[3]		$Z_{||}$[4]	$Z_{\perp}$[4]
		PANCAKE	HEX				PANCAKE	HEX				PANCAKE	HEX		
	(LB/IN.)	(LB)	(LB)	(LB)	(LB)	(LB/IN.)	(LB)	(LB)	(LB)	(LB)	(LB/IN.)	(LB)	(LB)	(LB)	(LB)
1/4"	170	620	450	250	220	170	550	400	240	195	140	450	300	210	155
5/16"	167	630	500	280	215	170	530	460	260	190	140	520	360	220	145
3/8"	238	920	620	330	240	205	760	620	305	220	170	610	510	270	185
1/2"	292	-	720	400	280	280	-	660	375	260	210	-	580	330	220

1 Based upon ASD design loads. Values shall be multiplied by the applicable adjustment values provided in the 2024 National Design Specification (NDS) for Wood Construction.
2 Withdrawal values are pounds per inch of thread including the tip but excluding the length of the upper *4CUT*™. Minimum penetration into the main member is 1-1/2" for the 1/4" and 5/16" diameters, 2" for the 3/8" diameter, and 3" for the 1/2" diameter.
3 Head pull-through values are based upon a 1-1/2" side member.
4 Lateral shear capacity is based upon a 1-1/2" side member and at least 1-1/2" penetration into the main member for the 1/4" and 5/16" diameters or 3-1/2" for the 3/8" or 1/2" diameters.
5 Tabulated values are based upon the specific gravities in the NDS. For specific gravities not listed, use the next lower value. When the connection has two different species, use the lower specific gravity.

HEX WASHER HEAD HCR®

POWERLAGS® XF

SPAX® ENGINEERED FASTENERS



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® PowerLags® XF Hex Washer Head structural fasteners with HCR® coating create strong, reliable wood-to-wood connections. They deliver a superior drive experience highlighted by a fast start and 10% faster installation times than other structural fasteners. These fasteners are designed with a hex head conventional driver system along with a built-on washer for applications requiring additional surface area under the head for noticeable clamping and holding power. Ideal for deck ledger attachment. Often used for blind, high torque applications where you need additional engagement from socket to screw head.

MATERIALS & COATING

Cold-rolled carbon steel wire heat treated and plated with an HCR® (High Corrosion Resistance) double barrier coating. HCR is tested and recognized for use in ground contact pressure treated lumber for exterior, freshwater general construction applications (e.g., AWPA UC1-UC4A, UCFA).



BUILT-ON WASHER HEAD

Eliminates the need and cost of a separate washer.



SERRATED THREADS

Allows for quicker, easier fastening.



UPPER *4CUT*™ (4" AND UP)

Bores out the hole in wood for faster speed and lower tool torque.



UNIQUE *4CUT*™ POINT

Prevents splitting and requires no pre-drilling in wood.



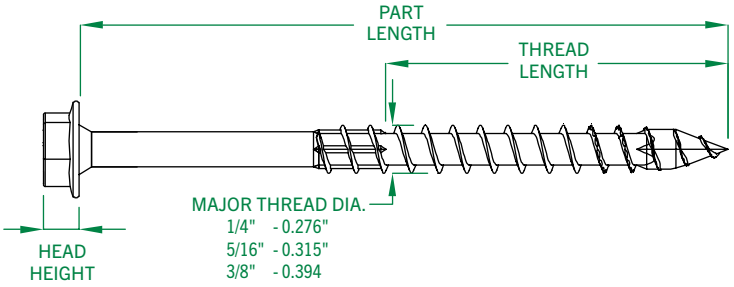
TYPICAL EXTERIOR APPLICATIONS

- Deck ledger to residential band joist attachments
- Exterior treated lumber pergolas and gazebos
- Landscaping timber
- Outdoor furniture
- Exterior fencing posts
- Exterior out buildings

HEX WASHER HEAD HCR®

POWERLAGS® XF

SPAX® ENGINEERED FASTENERS





Dr J

▲ TER No. 2403-114 Deck Ledger Attachment

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
1/4" x 1½"	1.535"	0.545" 0.233"	3/8"	1	Individual*	50	XFH250P112B1
				12	Project Pax	5	XFH250P112B12
1/4" x 2"	1.535"	0.545" 0.233"	3/8"	1	Individual*	50	XFH250P200B1
				12	Project Pax	5	XFH250P200B12
				50	Contractor Pax	4	XFH250P200B50
				500	Bulk Pail	N/A	XFH250P200B500
1/4" x 3"	1.535"	0.545" 0.233"	3/8"	1	Individual*	50	XFH250P300B1
				12	Project Pax	5	XFH250P300B12
				50	Contractor Pax	4	XFH250P300B50
				500	Bulk Pail	N/A	XFH250P300B500
1/4" x 5"	2.755"	0.545" 0.233"	3/8"	1	Individual*	50	XFH250P500B1
				12	Project Pax	5	XFH250P500B12
				50	Contractor Pax	4	XFH250P500B50
1/4" x 6"	2.755"	0.545" 0.233"	3/8"	1	Individual*	50	XFH250P600B1
				12	Project Pax	5	XFH250P600B12
				50	Contractor Pax	4	XFH250P600B50
				500	Bulk Pail	N/A	XFH250P600B500
5/16" x 3"	1.535"	0.590" 0.280"	7/16"	1	Individual*	25	XFH312P300B1
				50	Contractor Pax	4	XFH312P300B50
				250	Bulk Pail	N/A	XFH312P300B250
5/16" x 3½"	2.010"	0.590" 0.280"	7/16"	1	Individual*	25	XFH312P312B1
				50	Contractor Pax	4	XFH312P312B50
				250	Bulk Pail	N/A	XFH312P312B250
5/16" x 4" ▲	2.045"	0.590" 0.280"	7/16"	1	Individual*	25	XFH312P400B1
				12	Project Pax	5	XFH312P400B12
				50	Contractor Pax	4	XFH312P400B50
				250	Bulk Pail	N/A	XFH312P400B250
5/16" x 5" ▲	2.675"	0.590" 0.280"	7/16"	1	Individual*	25	XFH312P500B1
				12	Project Pax	5	XFH312P500B12
				50	Contractor Pax	4	XFH312P500B50
				250	Bulk Pail	N/A	XFH312P500B250

*Bit not included.

HEX WASHER HEAD HCR®

POWERLAGS® XF

SPAX® ENGINEERED FASTENERS

Dr J ▲ TER No. 2403-114 Deck Ledger Attachment

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
3/8" x 5"	3.190"	0.748" 0.339"	1/2"	1	Individual*	15	XFH375P500B1
				25	Contractor Pax*	4	XFH375P500B25
				150	Bulk Pail*	N/A	XFH375P500B150
3/8" x 6"	3.150"	0.748" 0.339"	1/2"	1	Individual*	15	XFH375P600B1
				25	Contractor Pax*	4	XFH375P600B25
				150	Bulk Pail*	N/A	XFH375P600B150

*Bit not included.


Individual


Project Pax®


Contractor Pax®


Bulk Pail


Hex Driver Bit

EXTERIOR

Dr J ▲ TER No. 2403-114 Deck Ledger Attachment

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
1/4" x 1½"			5/16" x 3½"		
1/4" x 2"			5/16" x 4" ▲		
1/4" x 3"			5/16" x 5" ▲		
1/4" x 5"			3/8" x 5"		
1/4" x 6"			3/8" x 6"		
5/16" x 3"					

ICC ES No. ESR-5358

PERFORMANCE SPECIFICATIONS

NOMINAL DIAMETER	ALLOWABLE[1] WITHDRAWAL[2], HEAD PULL-THROUGH[3], SHEAR LOADED PARALLEL TO THE GRAIN[4] (Z_{II}), AND SHEAR LOADED PERPENDICULAR TO THE GRAIN[4] ($Z_{\perp}$)														
	SOUTHERN PINE[5] (G=0.55)					DOUGLAS-FIR[5] (G=0.5)					HEM FIR & SPRUCE-PINE FIR[5] (G=0.42)				
	WITHDRAWAL[2]	HEAD PULL-THROUGH[3]		Z_{II}[4]	$Z_{\perp}$[4]	WITHDRAWAL[2]	HEAD PULL-THROUGH[3]		Z_{II}[4]	$Z_{\perp}$[4]	WITHDRAWAL[2]	HEAD PULL-THROUGH[3]		Z_{II}[4]	$Z_{\perp}$[4]
		PANCAKE	HEX				PANCAKE	HEX				PANCAKE	HEX		
	(LB/IN.)	(LB)	(LB)	(LB)	(LB)	(LB/IN.)	(LB)	(LB)	(LB)	(LB)	(LB/IN.)	(LB)	(LB)	(LB)	(LB)
1/4"	170	620	450	250	220	170	550	400	240	195	140	450	300	210	155
5/16"	167	630	500	280	215	170	530	460	260	190	140	520	360	220	145
3/8"	238	920	620	330	240	205	760	620	305	220	170	610	510	270	185
1/2"	292	-	720	400	280	280	-	660	375	260	210	-	580	330	220

1 Based upon ASD design loads. Values shall be multiplied by the applicable adjustment values provided in the 2024 National Design Specification (NDS) for Wood Construction.
2 Withdrawal values are pounds per inch of thread including the tip but excluding the length of the upper *4CUT*™. Minimum penetration into the main member is 1-1/2" for the 1/4" and 5/16" diameters, 2" for the 3/8" diameter, and 3" for the 1/2" diameter.
3 Head pull-through values are based upon a 1-1/2" side member.
4 Lateral shear capacity is based upon a 1-1/2" side member and at least 1-1/2" penetration into the main member for the 1/4" and 5/16" diameters or 3-1/2" for the 3/8" or 1/2" diameters.
5 Tabulated values are based upon the specific gravities in the NDS. For specific gravities not listed, use the next lower value. When the connection has two different species, use the lower specific gravity.

HEX WASHER HEAD HCR® 1/2" DIA.

POWERLAGS® XS

SPAX® ENGINEERED FASTENERS



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® PowerLags® XS Hex Washer Head construction fasteners with HCR® coating are intended for wood-to-wood connections in exterior structural applications when attaching treated lumber components. These fasteners are designed with a hex head conventional driver system along with a built-on washer for applications requiring additional surface area under the head for superior pull-down force. Ideal for deck ledger attachment. Often used for blind, high torque applications where you need additional engagement from socket to screw head.

MATERIALS & COATING

Cold-rolled carbon steel wire heat treated and plated with an HCR® (High Corrosion Resistance) double barrier coating. HCR is tested and recognized for use in ground contact pressure treated lumber for exterior, freshwater general construction applications (e.g., AWPA UC1-UC4A, UCFA).



BUILT-ON WASHER HEAD

Eliminates the need and cost of a separate washer.



SERRATED THREADS

Allow for quicker, easier fastening.



RELIABLE CONNECTIONS

Heat treated for strength and durability.

Dr J

TER No. 1912-07
Structural Wood
Fastener Properties

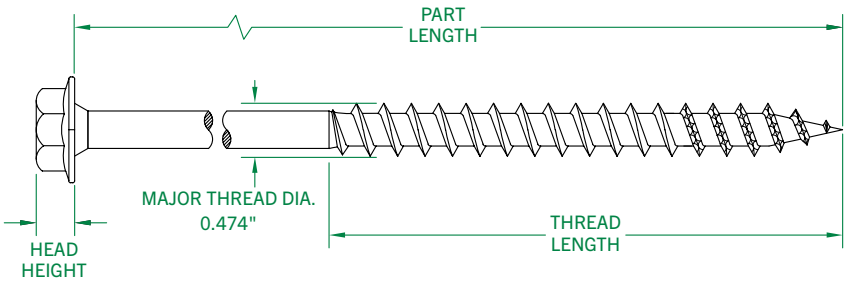


TYPICAL EXTERIOR APPLICATIONS

- Exterior treated lumber pergolas & gazebos
- Landscaping timber
- Outdoor furniture
- Exterior fencing posts
- Exterior out buildings

HEX WASHER HEAD HCR® 1/2" DIA.

POWERLAGS® XS





PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
1/2" x 5"	3.150"	0.861" 0.394"	5/8"	1	Individual*	10	XSH500P500B1
				25	Contractor Pax*	4	XSH500P500B25
				100	Bulk Pail*	N/A	XSH500P500B100
1/2" x 6"	3.150"	0.861" 0.394"	5/8"	25	Contractor Pax*	4	XSH500P600B25
				100	Bulk Pail*	N/A	XSH500P600B100
1/2" x 8"	3.150"	0.861" 0.394"	5/8"	1	Individual*	10	XSH500P800B1
				100	Bulk Pail*	N/A	XSH500P800B100
1/2" x 10"	3.150"	0.861" 0.394"	5/8"	1	Individual*	10	XSH500P1000B1
				100	Bulk Pail*	N/A	XSH500P1000B100
1/2" x 12"	3.150"	0.861" 0.394"	5/8"	100	Bulk Pail*	N/A	XSH500P1200B100

NOTE: Upper *4CUT*™ and *4CUT*™ Point features not available for 1/2" Hex diameters.
*Bit not included.


Individual


Contractor Pax®


Bulk Pail

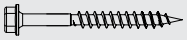
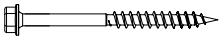
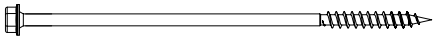
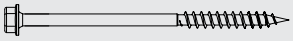
EXTERIOR

HEX WASHER HEAD HCR® 1/2" DIA.

POWERLAGS® XS

SPAX® ENGINEERED FASTENERS

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
1/2" x 5"			1/2" x 10"		
1/2" x 6"			1/2" x 12"		
1/2" x 8"					

ICC ES No. ESR-5358

PERFORMANCE SPECIFICATIONS

NOMINAL DIAMETER	ALLOWABLE[1] WITHDRAWAL[2], HEAD PULL-THROUGH[3], SHEAR LOADED PARALLEL TO THE GRAIN[4] (Z_{II}), AND SHEAR LOADED PERPENDICULAR TO THE GRAIN[4] ($Z_{\perp}$)														
	SOUTHERN PINE[5] (G=0.55)					DOUGLAS-FIR[5] (G=0.5)					HEM FIR & SPRUCE-PINE FIR[5] (G=0.42)				
	WITHDRAWAL[2]	HEAD PULL-THROUGH[3]		Z_{II}[4]	$Z_{\perp}$[4]	WITHDRAWAL[2]	HEAD PULL-THROUGH[3]		Z_{II}[4]	$Z_{\perp}$[4]	WITHDRAWAL[2]	HEAD PULL-THROUGH[3]		Z_{II}[4]	$Z_{\perp}$[4]
		PANCAKE	HEX				PANCAKE	HEX				PANCAKE	HEX		
	(LB/IN.)	(LB)	(LB)	(LB)	(LB)	(LB/IN.)	(LB)	(LB)	(LB)	(LB)	(LB/IN.)	(LB)	(LB)	(LB)	(LB)
1/4"	170	620	450	250	220	170	550	400	240	195	140	450	300	210	155
5/16"	167	630	500	280	215	170	530	460	260	190	140	520	360	220	145
3/8"	238	920	620	330	240	205	760	620	305	220	170	610	510	270	185
1/2"	292	-	720	400	280	280	-	660	375	260	210	-	580	330	220

1 Based upon ASD design loads. Values shall be multiplied by the applicable adjustment values provided in the 2024 National Design Specification (NDS) for Wood Construction.
2 Withdrawal values are pounds per inch of thread including the tip but excluding the length of the upper *4CUT*™. Minimum penetration into the main member is 1-1/2" for the 1/4" and 5/16" diameters, 2" for the 3/8" diameter, and 3" for the 1/2" diameter.
3 Head pull-through values are based upon a 1-1/2" side member.
4 Lateral shear capacity is based upon a 1-1/2" side member and at least 1-1/2" penetration into the main member for the 1/4" and 5/16" diameters or 3-1/2" for the 3/8" or 1/2" diameters.
5 Tabulated values are based upon the specific gravities in the NDS. For specific gravities not listed, use the next lower value. When the connection has two different species, use the lower specific gravity.

T-STAR WAFER HEAD HCR-X™

WINDOW SCREW

SPAX® ENGINEERED FASTENERS



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® T-STAR Wafer Head fasteners with HCR-X™ coating provide a high-performance solution for securing window units to exterior substrates. Specifically engineered for the demands of the envelope, these fasteners feature a low-profile, large-diameter wafer head that delivers superior pull-down force and structural stability without the need for countersinking.

MATERIALS & COATING

Cold-rolled "carbon steel" wire heat treated and plated with a HCR-X™ finish to prevent red rust. "HCR-X™" is tested and recognized for use in ground contact pressure treated lumber for exterior, freshwater general construction applications (e.g., AWPA UC1-UC4A, UCFA). SPAX® recommends stainless steel fasteners for applications with cedar and redwoods.



LOW PROFILE WAFER HEAD

Provides a larger surface area and aesthetically clean look for the reliable installation of fine cabinetry.



UNIQUE *4CUT*™ POINT

Prevents splitting and requires no pre-drilling in wood.



SERRATED THREADS

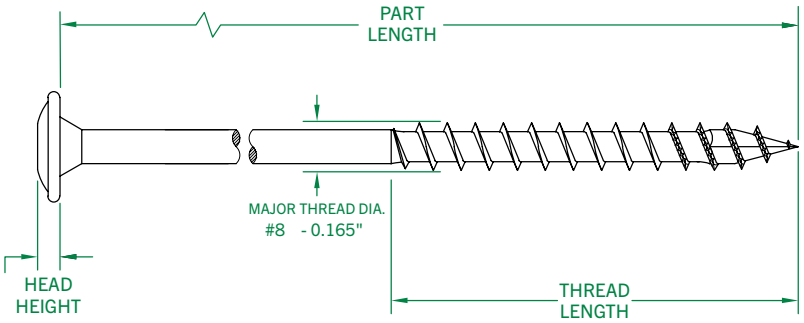
Allow for quicker, easier fastening.



T-STAR WAFER HEAD HCR-X™

WINDOW SCREW

SPAX® ENGINEERED FASTENERS





PRODUCT SELECTION

PART LENGTH	THREAD LENGTH		HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
	FULL	PARTIAL						
#8 x 2"	N/A	1.250"	0.375" 0.080"	T20	80	Project Pax	5	XWT08P200V80
					400	Mini Pail	3	XWT08P200V400
					1000	Mini Bulk Pail	N/A	XWT08P200V1000

NOTE: Only sold in master cartons.



Project Pax

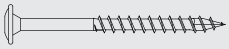


Mini Pail



Mini Bulk Pail

FASTENER LENGTH

PART LENGTH	HEAD	FASTENER
#8 x 2"		

MASONRY & CONCRETE PRE-DRILL SPECIFICATIONS

SCREW DIAMETER	DRILL BIT	WEIGHT
#8	⅛"	Light

NOTE: In masonry/concrete, pre-drill a hole at least ¼" to ½" longer than the length of the screw (refer to chart). No anchor required. In sheet metal, no pre-drilling is required up to 24 gauge.

PERFORMANCE SPECIFICATIONS

DrJ TER No. 2010-02
Construction Screw Properties

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2,3,4]					
	SOUTHERN PINE (SG=0.55)		DOUGLAS-FIR (SG=0.50)		HEM FIR & SPRUCE-PINE-FIR (SG=0.42)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#8	175	335	133	297	127	268

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2]											
	PLYWOOD 15/32" (0.39)		PLYWOOD 19/32" (0.39)		PLYWOOD 23/32" (0.50)		OSB 15/32" (0.50)		OSB 19/32" (0.50)		OSB 23/32" (0.50)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#8	51	146	83	190	162	319	36	86	48	110	52	131

1. Tabulated withdrawal and head pull-through design values (W) and (W_H) are shown at a C_D = 1.0. Tabulated withdrawal and head pull-through values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
2. Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.
3. Head pull-through values for #8 diameter and larger in Southern Pine, Douglas-Fir, Hem-Fir and Spruce-Pine-Fir are minimum 1.5" side member thickness.
4. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.

DIAMETER	BENDING YIELD STRENGTH[1], f_{yb} (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR[2]
#8	187,000	460	345

1. Bending yield strength, f_{yb}, is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.
2. Shear strength is determined in accordance with *AISI S904* using minor thread diameter when fastener is tested in threaded section.

DIAMETER	REFERENCE LATERAL SHEAR VALUE[4,5,6], Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY[2,3])		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#8 x 2"	1¼"	¾"	80	70	55

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N
1. Penetration depth includes the length of tapered tip.
2. The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.
3. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.
4. The fastener orientation shall be perpendicular to the grain, and the underside of the fastener head shall be installed flush with the surface of the side member.
5. Lateral design values apply to both perpendicular grain ($Z_\perp$) and parallel to grain ($Z_\parallel$) orientations.
6. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS 11.3.1.*

DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE[1,3,4], Z (lbf)	
			OSB[5] (0.50)	PLYWOOD[5] (0.39)
#8 x 2"	1 9/16"	7/16"	53	-
#8 x 2"	1 17/32"	15/32"	54	46
#8 x 2"	1 13/32"	19/32"	59	48
#8 x 2"	1 9/32"	23/32"	64	51

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N
1. Reference lateral design values apply to two-member single shear connections where the side member is OSB or plywood, the main member is SPF (SG = 0.42), and the fastener is installed in the face of the member and oriented perpendicular to the grain. The underside of the fastener head shall be installed flush with the surface of the side member.
2. Penetration depth includes the length of the tapered tip.
3. Lateral design values apply to both perpendicular to grain ($Z_\perp$) and parallel to grain ($Z_\parallel$) orientations.
4. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
5. OSB shall comply with *DOC PS 2* and have a minimum specific gravity of 0.50. Plywood shall comply with *DOC PS 1* and have a minimum specific gravity of 0.39.

MULTI-MATERIAL ENGINEERED FASTENERS

SPAX® ENGINEERED FASTENERS

SPAX® Multi-Material Engineered Fasteners are the versatile fastening solution for a wide range of interior and exterior applications in multiple materials including wood, masonry, drywall, plastic and sheet metal.

MULTI-MATERIAL SCREWS ENGINEERED FOR VERSATILITY

German engineered and American made, SPAX® Multi-Material Engineered Fasteners are professional grade and designed to make strong connections — the first time.

- Heat treated for strength and durability
- Serrated threads reduce driving torque to prolong power tool battery life
- Unique *4CUT*™ Point prevents splitting and requires no pre-drilling in wood
- Flat head for counter sinking "flush" applications
- Low-profile wafer head for applications requiring extra clamping force (ex. hanging cabinets plus door and window hardware/brackets)
- Pan head for attaching thin flat materials to wood or concrete (medium service duty)

HEAD STYLES

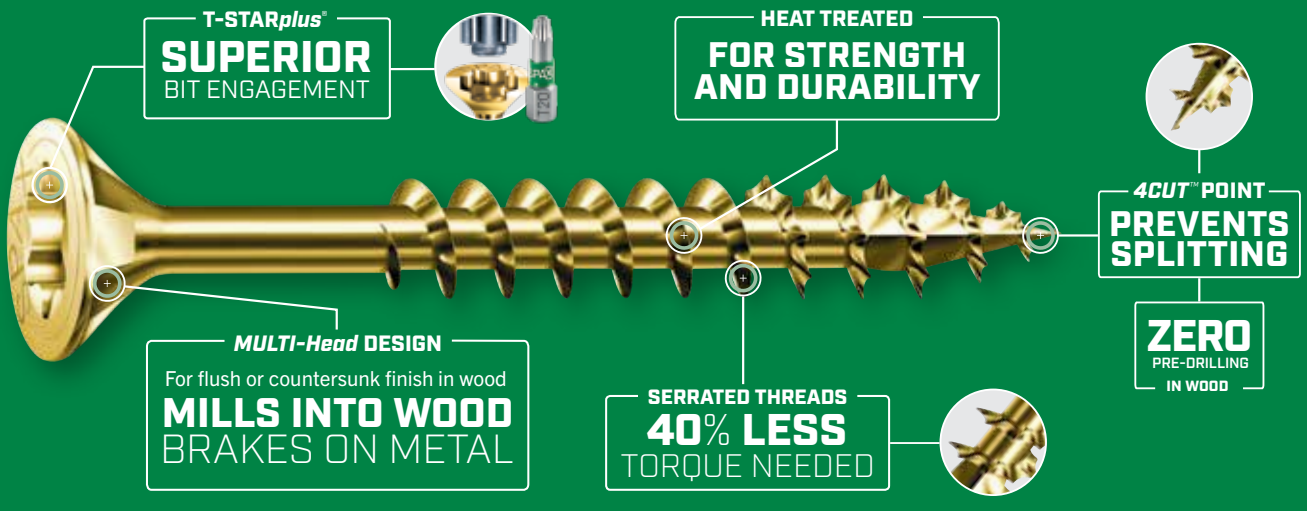
FLAT | WAFER | PAN

DRIVE TYPES

T-STAR *plus*® | UNIDRIVE

COATINGS

ZINC | YELLOW ZINC | HCR-X™

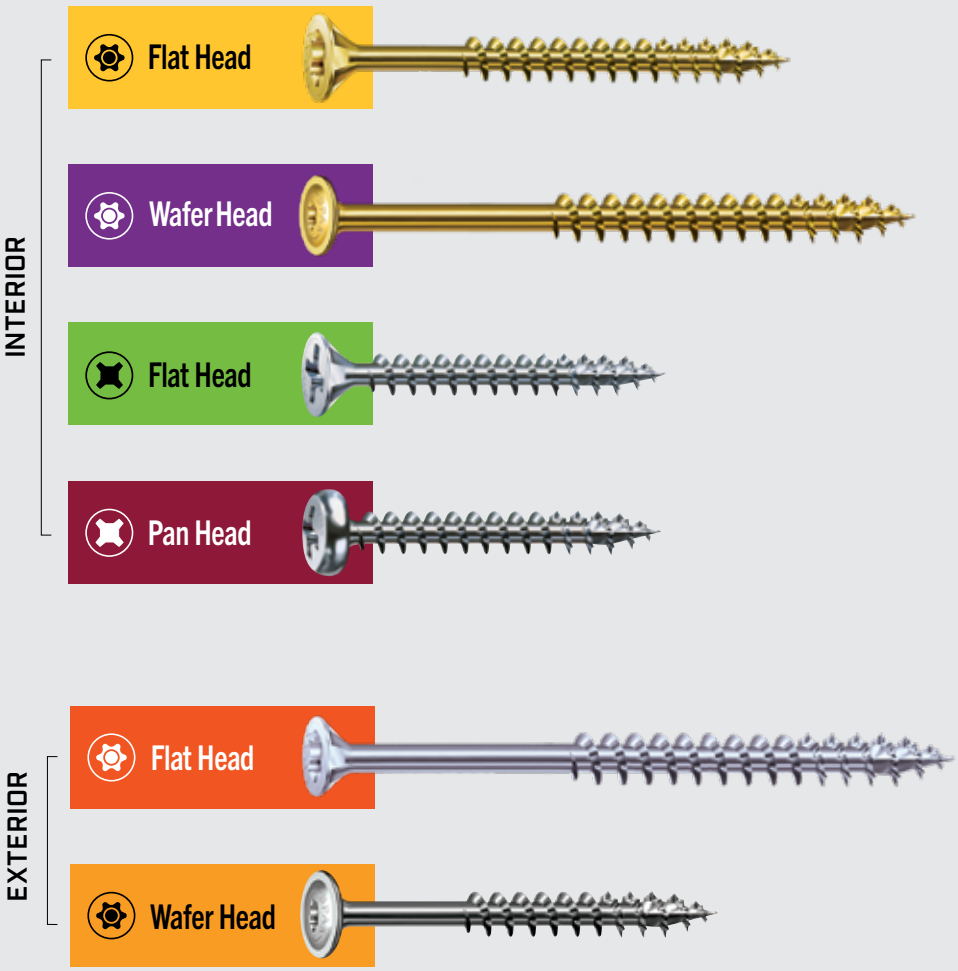


MULTI-MATERIAL ENGINEERED FASTENERS

SPAX® ENGINEERED FASTENERS

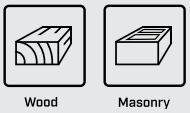
SPAX® – the common denominator that plays well with virtually every material and project type, offering the largest variety of diameters, lengths and head styles in the industry.

DrJ TER No. 2010-02 Construction Screw Properties

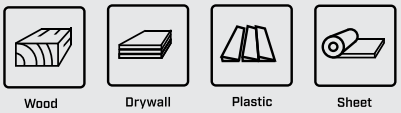




Main Member / Base Material



Side Member / Attached Material



T-STAR*plus*® FLAT HEAD YELLOW ZINC

MULTI-MATERIAL CONSTRUCTION

SPAX® ENGINEERED FASTENERS



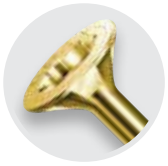
MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® T-STAR*plus*® Flat Head fasteners with yellow zinc coating are designed for use in multiple material connections often found inside residential buildings. These "work horse" construction fasteners are designed to countersink in wood for a clean-flush finish and provides a quick and easy installation. In addition, they provide long-lasting, "contractor proven" secure connections.

MATERIALS & COATING

Cold-rolled carbon steel wire, heat treated and plated with a yellow zinc finish to prevent red rust. Yellow zinc is tested and recognized for use in above ground contact pressure treated lumber for interior dry/damp general construction applications (e.g., AWPA UC1-UC2).



MULTI-HEAD DESIGN

Countersinks screw head flush with material.



SERRATED THREADS

Allow for quicker, easier fastening.



UNIQUE *4CUT*™ POINT

Prevents splitting and requires no pre-drilling in wood.



T-STAR*plus*® DRIVE

"The PRO's Choice" drive system provides superior bit engagement, eliminates camming out and facilitates overhead driving.



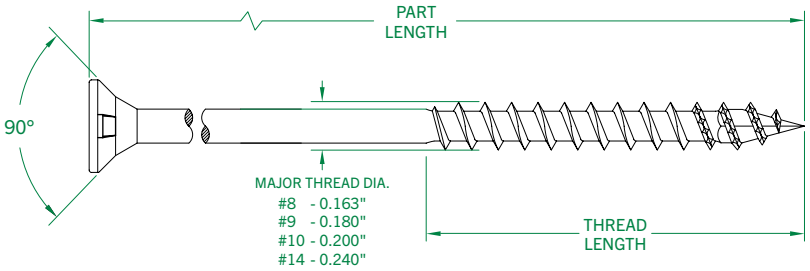
TYPICAL INTERIOR APPLICATIONS

- 2-by framing connections
- Furring strips to concrete
- Cabinet frames
- Stair treads
- Subflooring attachments
- Hinge installation
- Indoor furniture
- Installing plumbing supports

T-STAR*plus*® FLAT HEAD YELLOW ZINC

SPAX® ENGINEERED FASTENERS

MULTI-MATERIAL CONSTRUCTION





PRODUCT SELECTION

PART LENGTH	THREAD LENGTH		HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
	FULL	PARTIAL						
#8 x 1¼"	N/A	0.670"	0.320"	T20+	240	1 lb. Box	5	4191020400324
					675	3 lb. Box	3	41910204003245
					2500	Bulk Pail	N/A	3191020400320
#8 x 1½"	N/A	0.870"	0.320"	T20+	197	1 lb. Box	5	4191020400404
					597	3 lb. Box	3	41910204004045
					2500	Bulk Pail	N/A	3191020400400
#8 x 2"	N/A	1.240"	0.320"	T20+	161	1 lb. Box	5	4191020400504
					465	3 lb. Box	3	41910204005045
					1500	Bulk Pail	N/A	3191020400500
#8 x 2½"	N/A	1.340"	0.320"	T20+	133	1 lb. Box	5	4191020400604
					375	3 lb. Box	3	41910204006045
					1500	Bulk Pail	N/A	3191020400600
#9 x 2½"	N/A	1.655"	0.340"	T20+	116	1 lb. Box	5	4191020450604
					1500	Bulk Pail	N/A	3191020450600
#9 x 3¼"	N/A	1.810"	0.340"	T20+	89	1 lb. Box	5	4191020450804
					1500	Bulk Pail	N/A	3191020450800
#10 x 1½"	N/A	1.000"	0.390"	T20+	133	1 lb. Box	5	4191020500404
					2500	Bulk Pail	N/A	3191020500400
#10 x 2"	N/A	1.250"	0.390"	T20+	107	1 lb. Box	5	4191020500504
					1500	Bulk Pail	N/A	3191020500500
#10 x 2½"	N/A	1.600"	0.390"	T20+	87	1 lb. Box	5	4191020500604
					230	3 lb. Box	3	41910205006045
					1500	Bulk Pail	N/A	3191020500600
#10 x 3"	N/A	1.600"	0.390"	T20+	16	Retail Pax*	10	4191020500752
					72	1 lb. Box	5	4191020500754
					200	3 lb. Box	3	41910205007545
					1500	Bulk Pail	N/A	3191020500750
#10 x 3½"	N/A	2.375"	0.390"	T20+	57	1 lb. Box	5	4191020500904
					170	3 lb. Box	3	41910205009045
					1500	Bulk Pail	N/A	3191020500900

NOTE: Only sold in master cartons.
* Bit not included.

T-STAR*plus*® FLAT HEAD YELLOW ZINC

SPAX® ENGINEERED FASTENERS

MULTI-MATERIAL CONSTRUCTION



1 and 3 lb. Boxes



Retail Pax®



Bulk Pail



T-STAR*plus*® Bit

BIT SELECTION

DRIVE BIT	BIT SIZE	MASTER QTY.	PART NO.
T20+	1"	10	5000009185209
	2"	10	5000009285209

NOTE: Only sold in master cartons. Made in Taiwan.





FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#8 x 1¼"			#10 x 1½"		
#8 x 1½"			#10 x 2"		
#8 x 2"			#10 x 2½"		
#8 x 2½"			#10 x 3"		
#9 x 2½"			#10 x 3½"		
#9 x 3¼"					

MASONRY & CONCRETE PRE-DRILL SPECIFICATIONS

SCREW DIAMETER	DRILL BIT	WEIGHT
#8/9	⅛"	Light
#10	5⁄32"	Medium

NOTE: In masonry/concrete, pre-drill a hole at least ¼" to ½" longer than the length of the screw (refer to chart). No anchor required. In sheet metal, no pre-drilling is required up to 24 gauge.

T-STAR*plus*® FLAT HEAD YELLOW ZINC

SPAX® ENGINEERED FASTENERS

MULTI-MATERIAL CONSTRUCTION

DrJ TER No. 2010-02
Construction Screw Properties

PERFORMANCE SPECIFICATIONS

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2,3,4]					
	SOUTHERN PINE (SG=0.55)		DOUGLAS-FIR (SG=0.50)		HEM FIR & SPRUCE-PINE-FIR (SG=0.42)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#8	175	157	133	157	127	123
#9	190	303	146	211	132	177
#10	190	315	176	238	144	177

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2]											
	PLYWOOD 15/32" (0.39)		PLYWOOD 19/32" (0.39)		PLYWOOD 23/32" (0.50)		OSB 15/32" (0.50)		OSB 19/32" (0.50)		OSB 23/32" (0.50)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#8	51	120	83	120	162	212	36	68	48	78	52	110
#9	51	125	92	145	186	258	54	68	54	78	66	110
#10	90	151	92	177	186	293	54	78	54	78	66	110

1. Tabulated withdrawal and head pull-through design values (W) and (W_H) are shown at a C_D = 1.0. Tabulated withdrawal and head pull-through values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
2. Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.
3. Head pull-through values for #8 diameter and larger in Southern Pine, Douglas-Fir, Hem-Fir and Spruce-Pine-Fir are minimum 1.5" side member thickness.
4. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.

DIAMETER	BENDING YIELD STRENGTH[1] , f_{yb} (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR[2]
#8	187,000	460	345
#9	201,000	540	435
#10	187,000	690	545

1. Bending yield strength, f_{yb}, is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.
2. Shear strength is determined in accordance with *AISI S904* using minor thread diameter when fastener is tested in threaded section.

T-STAR*plus*® FLAT HEAD YELLOW ZINC

MULTI-MATERIAL CONSTRUCTION

SPAX® ENGINEERED FASTENERS

DIAMETER	REFERENCE LATERAL SHEAR VALUE[4,5,6], Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY[2,3])		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#8 x 1½"	¾"	¾"	70	59	43
#8 x 1¾"	1"	¾"	80	69	50
#8 x 2"	1¼"	¾"	80	70	55
#8 x 2½"	1"	1½"	84	75	58
#9 x 2½"	1"	1½"	105	92	73
#9 x 3¼"	1¾"	1½"	116	106	90
#10 x 1½"	¾"	¾"	86	72	53
#10 x 2"	1¼"	¾"	112	99	73
#10 x 2½"	1"	1½"	115	101	81
#10 x 3"	1½"	1½"	132	121	103
#10 x 3½"	1½"	1½"	132	121	103

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N

1. Penetration depth includes the length of tapered tip.
2. The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.
3. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.
4. The fastener orientation shall be perpendicular to the grain, and the underside of the fastener head shall be installed flush with the surface of the side member.
5. Lateral design values apply to both perpendicular grain ($Z_{\perp}$) and parallel to grain ($Z_{\parallel}$) orientations.
6. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS 11.3.1.*

DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE[1,3,4], Z (lbf)	
			OSB[5] (0.50)	PLYWOOD[5] (0.39)
#8 x 1¼"	13/16"	7/16"	40	-
#8 x 1¼"	25/32"	15/32"	40	33
#8 x 1¼"	21/32"	19/32"	42	32
#8 x 1½"	1 1/16"	7/16"	51	-
#8 x 1½"	1 1/32"	15/32"	50	44
#8 x 1½"	29/32"	19/32"	49	41
#8 x 1½"	25/32"	23/32"	51	39
#8 x 1¾"	1 5/16"	7/16"	53	-
#8 x 1¾"	1 9/32"	15/32"	54	46
#8 x 1¾"	1 5/32"	19/32"	59	48
#8 x 1¾"	1 1/32"	23/32"	58	48
#8 x 2"	1 9/16"	7/16"	53	-
#8 x 2"	1 17/32"	15/32"	54	46
#8 x 2"	1 13/32"	19/32"	59	48
#8 x 2"	1 9/32"	23/32"	64	51
#8 x 2½"	1 9/16"	7/16"	53	-
#8 x 2½"	1 17/32"	15/32"	54	46
#8 x 2½"	1 13/32"	19/32"	59	48
#8 x 2½"	1 9/32"	23/32"	64	51
#9 x 2½"	2 1/16"	7/16"	71	-

T-STAR*plus*® FLAT HEAD YELLOW ZINC

SPAX® ENGINEERED FASTENERS

MULTI-MATERIAL CONSTRUCTION

DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE[1,3,4], Z (lbf)	
			OSB[5] (0.50)	PLYWOOD[5] (0.39)
#9 x 2½"	2 1/32"	15/32"	71	62
#9 x 2½"	1 29/32"	19/32"	76	63
#9 x 2½"	1 25/32"	23/32"	81	66
#10 x 1¼"	13/16"	7/16"	48	-
#10 x 1¼"	25/32"	15/32"	48	40
#10 x 1½"	1 1/16"	7/16"	61	-
#10 x 1½"	1 1/32"	15/32"	60	53
#10 x 1½"	29/32"	19/32"	60	49
#10 x 1½"	25/32"	23/32"	63	48
#10 x 2"	1 9/16"	7/16"	80	-
#10 x 2"	1 17/32"	15/32"	81	70
#10 x 2"	1 13/32"	19/32"	85	72
#10 x 2"	1 9/32"	23/32"	83	71
#10 x 2½"	2 1/16"	7/16"	80	-
#10 x 2½"	1 17/32"	15/32"	81	70
#10 x 2½"	1 29/32"	19/32"	85	72
#10 x 2½"	1 25/32"	23/32"	90	74

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N

1. Reference lateral design values apply to two-member single shear connections where the side member is OSB or plywood, the main member is SPF (SG = 0.42), and the fastener is installed in the face of the member and oriented perpendicular to the grain. The underside of the fastener head shall be installed flush with the surface of the side member.
2. Penetration depth includes the length of the tapered tip.
3. Lateral design values apply to both perpendicular to grain ($Z_{\perp}$) and parallel to grain ($Z_{\parallel}$) orientations.
4. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.
5. OSB shall comply with *DOC PS 2* and have a minimum specific gravity of 0.50. Plywood shall comply with *DOC PS 1* and have a minimum specific gravity of 0.39.

T-STAR*plus*® WAFER HEAD YELLOW ZINC

CABINET SCREWS

SPAX® ENGINEERED FASTENERS



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® T-STAR*plus*® Wafer Head fasteners with yellow zinc coating are designed for use in multiple material connections often found inside residential buildings. These fasteners are designed with a low profile, large diameter wafer head for applications requiring additional surface area under the head for superior pull-down force. Ideal for the installation of cabinetry where a flush or countersunk installation is not possible or desired.

MATERIALS & COATING

Cold-rolled "carbon steel" wire, heat treated and plated with a yellow zinc finish to prevent red rust. "Yellow zinc" is tested and recognized for use in above ground contact pressure treated lumber for interior dry/damp general construction applications (e.g., AWPA UC1-UC2).



LOW PROFILE WAFER HEAD

Provides a larger surface area and aesthetically clean look for the reliable installation of fine cabinetry.



PATENTED SERRATIONS

Allow for quicker, easier fastening.



UNIQUE *4CUT*™ POINT

Prevents splitting and requires no pre-drilling in wood.



T-STAR*plus*® DRIVE

"The PRO's Choice" drive system provides superior bit engagement, eliminates camming out and facilitates overhead driving.

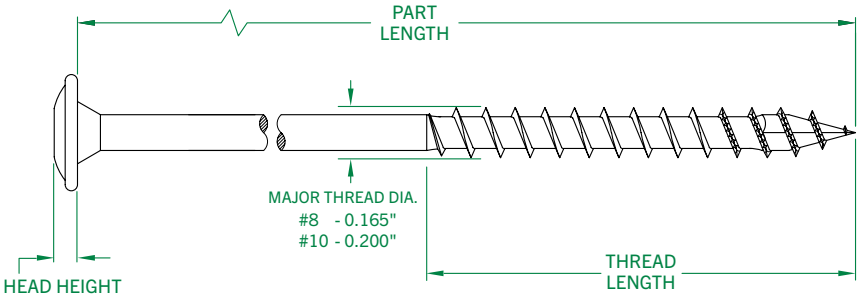


TYPICAL INTERIOR APPLICATIONS

- Cabinet assembly
- Cabinet installation to a stud wall
  - #10 x 3" used for installing or hanging cabinets on a wood stud wall
- Light-duty stud framing applications
- Pocket hole screw application connections
- Other applications requiring a thin substrate to be tightly connected to wood

T-STAR*plus*® WAFER HEAD YELLOW ZINC

CABINET SCREWS





PRODUCT SELECTION

PART LENGTH	THREAD LENGTH		HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
	FULL	PARTIAL						
#8 x 1¼"	N/A	0.670"	0.375" 0.080"	T20+	195	1 lb. Box	5	4281020400324
					2500	Bulk Pail	N/A	3281020400320
#8 x 1½"	N/A	0.875"	0.375" 0.080"	T20+	175	1 lb. Box	5	4281020400404
					2500	Bulk Pail	N/A	3281020400400
#8 x 2"	N/A	1.250"	0.375" 0.080"	T20+	140	1 lb. Box	5	4281020400504
					1500	Bulk Pail	N/A	3281020400500
#8 x 2½"	N/A	1.375"	0.375" 0.080"	T20+	120	1 lb. Box	5	4281020400604
					1500	Bulk Pail	N/A	3281020400600
#10 x 2½"	N/A	1.500"	0.470" 0.085"	T20+	75	1 lb. Box	5	4281020500604
					220	3 lb. Box	3	42810205006045
					1500	Bulk Pail	N/A	3281020500600
#10 x 3"	N/A	1.625"	0.470" 0.085"	T20+	65	1 lb. Box	5	4281020500754
					185	3 lb. Box	3	42810205007545
					1000	Bulk Pail	N/A	3281020500750

NOTE: Only sold in master cartons.



1 and 3 lb. Boxes



Bulk Pail



T-STAR*plus*® Bit

T-STAR*plus*® WAFER HEAD YELLOW ZINC

CABINET SCREWS

SPAX® ENGINEERED FASTENERS

BIT SELECTION

DRIVE BIT	BIT SIZE	MASTER QTY.	PART NO.
T20+	1"	10	5000009185209
	2"	10	5000009285209

NOTE: Only sold in master cartons. Made in Taiwan.



FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#8 x 1¼"			#8 x 2½"		
#8 x 1½"			#10 x 2½"		
#8 x 2"			#10 x 3"		

MASONRY & CONCRETE PRE-DRILL SPECIFICATIONS

SCREW DIAMETER	DRILL BIT	WEIGHT
#8	⅛"	Light
#10	5⁄32"	Medium

NOTE: In masonry/concrete, pre-drill a hole at least ¼" to ½" longer than the length of the screw (refer to chart). No anchor required. In sheet metal, no pre-drilling is required up to 24 gauge.

PERFORMANCE SPECIFICATIONS

DrJ TER No. 2010-02
Construction Screw Properties

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2,3,4]					
	SOUTHERN PINE (SG=0.55)		DOUGLAS-FIR (SG=0.50)		HEM FIR & SPRUCE-PINE-FIR (SG=0.42)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#8	175	335	133	297	127	268
#10	190	461	176	387	144	338

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2]											
	PLYWOOD 15/32" (0.39)		PLYWOOD 19/32" (0.39)		PLYWOOD 23/32" (0.50)		OSB 15/32" (0.50)		OSB 19/32" (0.50)		OSB 23/32" (0.50)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#8	51	146	83	190	162	319	36	86	48	110	52	131
#10	90	183	92	246	186	322	54	87	54	126	66	131

1. Tabulated withdrawal and head pull-through design values (W) and (W_H) are shown at a C_D = 1.0. Tabulated withdrawal and head pull-through values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
2. Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.
3. Head pull-through values for #8 diameter and larger in Southern Pine, Douglas-Fir, Hem-Fir and Spruce-Pine-Fir are minimum 1.5" side member thickness.
4. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.

DIAMETER	BENDING YIELD STRENGTH[1] , f_{yb} (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR[2]
#8	187,000	460	345
#10	187,000	690	545

1. Bending yield strength, f_{yb}, is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.
2. Shear strength is determined in accordance with *AISI S904* using minor thread diameter when fastener is tested in threaded section.

DIAMETER	REFERENCE LATERAL SHEAR VALUE[4,5,6], Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY[2,3])		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#8 x 1½"	¾"	¾"	70	59	43
#8 x 2"	1¼"	¾"	80	70	55
#8 x 2½"	1"	1½"	84	75	58
#10 x 1½"	¾"	¾"	86	72	53
#10 x 2"	1¼"	¾"	112	99	73
#10 x 2½"	1"	1½"	115	101	81
#10 x 3"	1½"	1½"	132	121	103

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N
1. Penetration depth includes the length of tapered tip.
2. The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.
3. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.
4. The fastener orientation shall be perpendicular to the grain, and the underside of the fastener head shall be installed flush with the surface of the side member.
5. Lateral design values apply to both perpendicular grain ($Z_{\perp}$) and parallel to grain ($Z_{\parallel}$) orientations.
6. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS 11.3.1.*

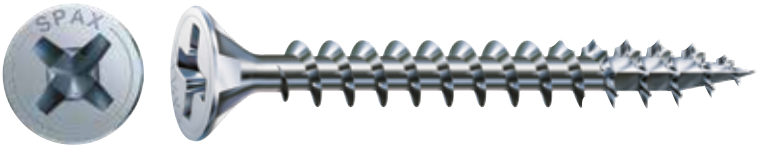
DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE[1,3,4], Z (lbf)	
			OSB[5] (0.50)	PLYWOOD[5] (0.39)
#8 x 1¼"	13⁄16"	7⁄16"	40	-
#8 x 1¼"	25⁄32"	15⁄32"	40	33
#8 x 1¼"	21⁄32"	19⁄32"	42	32
#8 x 1½"	1 1⁄16"	7⁄16"	51	-
#8 x 1½"	1 1⁄32"	15⁄32"	50	44
#8 x 1½"	29⁄32"	19⁄32"	49	41
#8 x 1½"	25⁄32"	23⁄32"	51	39
#8 x 2"	1 9⁄16"	7⁄16"	53	-
#8 x 2"	1 17⁄32"	15⁄32"	54	46
#8 x 2"	1 13⁄32"	19⁄32"	59	48
#8 x 2"	1 9⁄32"	23⁄32"	64	51
#8 x 2½"	1 5⁄16"	7⁄16"	51	46
#8 x 2½"	1 9⁄32"	15⁄32"	52	48
#8 x 2½"	1 5⁄32"	19⁄32"	57	51
#10 x 2½"	2 1⁄16"	7⁄16"	80	-
#10 x 2½"	1 17⁄32"	15⁄32"	81	70
#10 x 2½"	1 29⁄32"	19⁄32"	85	72
#10 x 2½"	1 25⁄32"	23⁄32"	90	74

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N
1. Reference lateral design values apply to two-member single shear connections where the side member is OSB or plywood, the main member is SPF (SG = 0.42), and the fastener is installed in the face of the member and oriented perpendicular to the grain. The underside of the fastener head shall be installed flush with the surface of the side member.
2. Penetration depth includes the length of the tapered tip.
3. Lateral design values apply to both perpendicular to grain ($Z_{\perp}$) and parallel to grain ($Z_{\parallel}$) orientations.
4. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
5. OSB shall comply with *DOC PS 2* and have a minimum specific gravity of 0.50. Plywood shall comply with *DOC PS 1* and have a minimum specific gravity of 0.39.

UNIDRIVE COMBO (PH & SQ) FLAT HEAD ZINC

MULTI-MATERIAL CONSTRUCTION

SPAX® ENGINEERED FASTENERS



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® Unidrive (combination drive — Phillips and Square) Flat Head fasteners with zinc coating are designed for use in multiple material connections often found inside residential buildings. These fasteners are often used by home owners to replace older screw types and the standard full thread design works best when the side member being attached to the main member is pre-drilled. The flat head design provides a countersinking feature for a clean-flush finish.

MATERIALS & COATING

Cold-rolled "carbon steel" wire, heat treated and plated with a zinc finish to prevent red rust. "Clear zinc" is tested and recognized for use in above ground contact pressure treated lumber for interior dry/damp general construction applications (e.g., AWPA UC1-UC2).



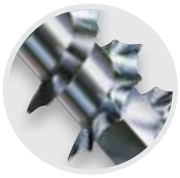
MULTI-HEAD DESIGN

Countersinks screw head flush with material.



UNIQUE *4CUT*™ POINT

Prevents splitting and requires no pre-drilling in wood.



SERRATED THREADS

Allow for quicker, easier fastening.



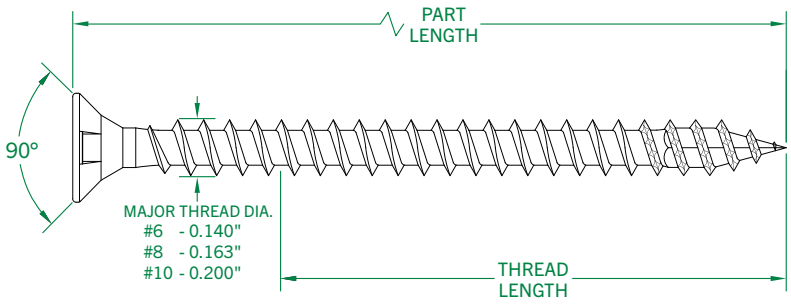
TYPICAL INTERIOR APPLICATIONS

- Replacing loose or stripped screws
- Hanging signs, clocks, and pictures
- Recreational wood crafts
- Cabinet frames
- Subflooring attachments
- Hinge installation
- Indoor furniture
- Installing plumbing supports

UNIDRIVE COMBO (PH & SQ) FLAT HEAD ZINC

SPAX® ENGINEERED FASTENERS

MULTI-MATERIAL CONSTRUCTION





PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD SIZE	PHILLIPS #	SQUARE #	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
#6 x 5/8"	Full	0.270"	2	1	50	Retail Pax*	10	4101010350162
					582	1 lb. Box	5	4101010350164
#6 x 3/4"	Full	0.270"	2	1	45	Retail Pax*	10	4101010350202
					480	1 lb. Box	5	4101010350204
#6 x 1"	Full	0.270"	2	1	40	Retail Pax*	10	4101010350252
					384	1 lb. Box	5	4101010350254
#6 x 1¼"	Full	0.270"	2	1	35	Retail Pax*	10	4101010350322
					335	1 lb. Box	5	4101010350324
#6 x 1½"	Full	0.270"	2	1	30	Retail Pax*	10	4101010350402
					283	1 lb. Box	5	4101010350404
#6 x 1¾"	Full	0.270"	2	1	25	Retail Pax*	10	4101010350452
#8 x 5/8"	Full	0.320"	2	2	40	Retail Pax*	10	4101010400162
					405	1 lb. Box	5	4101010400164
#8 x 3/4"	Full	0.320"	2	2	35	Retail Pax*	10	4101010400202
					100	Large Retail Pax*	10	41010104002042
					350	1 lb. Box	5	4101010400204
#8 x 1"	Full	0.320"	2	2	30	Retail Pax*	10	4101010400252
					75	Large Retail Pax*	10	41010104002542
#8 x 1¼"	Full	0.320"	2	2	30	Retail Pax*	10	4101010400322
					240	1 lb. Box	5	4101010400324
#8 x 1½"	Full	0.320"	2	2	25	Retail Pax*	10	4101010400402
					197	1 lb. Box	5	4101010400404
#8 x 1¾"	Full	0.320"	2	2	20	Retail Pax*	10	4101010400452
#8 x 2"	Full	0.320"	2	2	20	Retail Pax*	10	4101010400502
					161	1 lb. Box	5	4101010400504
#8 x 2½"	1.970"	0.320"	2	2	20	Retail Pax*	10	4101010400602
					133	1 lb. Box	5	4101010400604
					1500	Bulk Pail	N/A	3101010400600
#10 x 3/4"	Full	0.390"	2	2	25	Retail Pax*	10	4101010500202
#10 x 1"	Full	0.390"	2	2	20	Retail Pax*	10	4101010500252

NOTE: Only sold in master cartons.
* Bit not included.

UNIDRIVE COMBO (PH & SQ) FLAT HEAD ZINC

MULTI-MATERIAL CONSTRUCTION

SPAX® ENGINEERED FASTENERS

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD SIZE	PHILLIPS #	SQUARE #	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
#10 x 1¼"	Full	0.390"	2	2	20	Retail Pax®*	10	4101010500322
#10 x 1½"	Full	0.390"	2	2	15	Retail Pax®*	10	4101010500402
					130	1 lb. Box	5	4101010500404
					2500	Bulk Pail	N/A	3101010500400
#10 x 2"	Full	0.390"	2	2	12	Retail Pax®*	10	4101010500502
					105	1 lb. Box	5	4101010500504
					1500	Bulk Pail	N/A	3101010500500
#10 x 2½"	2.275"	0.390"	2	2	12	Retail Pax®*	10	4101010500602
					88	1 lb. Box	5	4101010500604
					1500	Bulk Pail	N/A	3101010500600
#10 x 3"	2.375"	0.390"	2	2	16	Retail Pax®*	10	4101010500752
					72	1 lb. Box	5	4101010500754
					1500	Bulk Pail	N/A	3101010500750
#10 x 3½"	2.375"	0.390"	2	2	57	1 lb. Box	5	4101010500904
					1500	Bulk Pail	N/A	3101010500900

NOTE: Only sold in master cartons.
* Bit not included.



Small Retail Pax®



1 lb. Box



Bulk Pail



#2 Phillips / #2 Square Bit

BIT SELECTION

DRIVE BIT	BIT SIZE	MASTER QTY.	PART NO.
#2 Phillips / #2 Square	1"	10	5000009190009



NOTE: Only sold in master cartons. Made in Taiwan.

UNIDRIVE COMBO (PH & SQ) FLAT HEAD ZINC

MULTI-MATERIAL CONSTRUCTION

SPAX® ENGINEERED FASTENERS

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#6 x 5/8"			#8 x 1¾"		
#6 x ¾"			#8 x 2"		
#6 x 1"			#8 x 2½"		
#6 x 1¼"			#10 x 3/4"		
#6 x 1½"			#10 x 1"		
#6 x 1¾"			#10 x 1¼"		
#8 x 5/8"			#10 x 1½"		
#8 x ¾"			#10 x 2"		
#8 x 1"			#10 x 2½"		
#8 x 1¼"			#10 x 3"		
#8 x 1½"			#10 x 3½"		

MASONRY & CONCRETE PRE-DRILL SPECIFICATIONS

SCREW DIAMETER	DRILL BIT	WEIGHT
#6	Not Recommended	Not Recommended
#8	1/8"	Light
#10	5/32"	Medium

NOTE: In masonry/concrete, pre-drill a hole at least ¼" to ½" longer than the length of the screw (refer to chart). No anchor required. In sheet metal, no pre-drilling is required up to 24 gauge.

PERFORMANCE SPECIFICATIONS

DrJ TER No. 2010-02
Construction Screw Properties

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2,3,4]					
	SOUTHERN PINE (SG=0.55)		DOUGLAS-FIR (SG=0.50)		HEM FIR & SPRUCE-PINE-FIR (SG=0.42)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#6	140	179	133	150	105	125
#8	175	157	133	157	127	123
#10	190	315	176	238	144	177

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2]											
	PLYWOOD 15/32" (0.39)		PLYWOOD 19/32" (0.39)		PLYWOOD 23/32" (0.50)		OSB 15/32" (0.50)		OSB 19/32" (0.50)		OSB 23/32" (0.50)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#6	51	-	83	-	134	-	29	-	36	-	52	-
#8	51	120	83	120	162	212	36	68	48	78	52	110
#10	90	151	92	177	186	293	54	78	54	78	66	110

1. Tabulated withdrawal and head pull-through design values (W) and (W_H) are shown at a C_D = 1.0. Tabulated withdrawal and head pull-through values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
2. Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.
3. Head pull-through values for #6 diameter and larger in Souther pine, Douglas-Fir, Hem Fir and Spruce-Pine-Fir are minimum 1.0" side member thickness.
4. Head pull-through values for #8 diameter and larger in Southern Pine, Douglas-Fir, Hem-Fir and Spruce-Pine-Fir are minimum 1.5" side member thickness.
5. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.

DIAMETER	BENDING YIELD STRENGTH[1] , f_{yb} (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR[2]
#6	198,000	310	265
#8	187,000	460	345
#10	187,000	690	545

1. Bending yield strength, f_{yb}, is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.
2. Shear strength is determined in accordance with *AISI S904* using minor thread diameter when fastener is tested in threaded section.

DIAMETER	REFERENCE LATERAL SHEAR VALUE[4,5,6], Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY[2,3])		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#6 x 1½"	¾"	¾"	57	50	37
#6 x 1¾"	1"	¾"	63	56	44
#6 x 2"	1"	¾"	63	56	44
#8 x 1½"	¾"	¾"	70	59	43
#8 x 1¾"	1"	¾"	80	69	50
#8 x 2"	1¼"	¾"	80	70	55
#8 x 2½"	1"	1½"	84	75	58
#10 x 1½"	¾"	¾"	86	72	53
#10 x 2"	1¼"	¾"	112	99	73
#10 x 2½"	1"	1½"	115	101	81
#10 x 2¾"	1¼"	1½"	132	117	91
#10 x 3"	1½"	1½"	132	121	103
#10 x 3½"	1½"	1½"	132	121	103

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N

1. Penetration depth includes the length of tapered tip.
2. The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.
3. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.
4. The fastener orientation shall be perpendicular to the grain, and the underside of the fastener head shall be installed flush with the surface of the side member.
5. Lateral design values apply to both perpendicular grain ($Z_{\perp}$) and parallel to grain ($Z_{\parallel}$) orientations.
6. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS 11.3.1.*

UNIDRIVE COMBO (PH & SQ) FLAT HEAD ZINC

MULTI-MATERIAL CONSTRUCTION

SPAX® ENGINEERED FASTENERS

INTERIOR

DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE[1,3,4], Z (lbf)	
			OSB[5] (0.50)	PLYWOOD[5] (0.39)
#6 x 1"	9/16"	7/16"	28	-
#6 x 1"	17/32"	15/32"	28	22
#6 x 1¼"	13/16"	7/16"	35	-
#6 x 1¼"	25/32"	15/32"	35	29
#6 x 1¼"	21/32"	19/32"	36	28
#6 x 1¼"	17/32"	23/32"	38	29
#6 x 1½"	1 1/16"	7/16"	41	-
#6 x 1½"	1 1/32"	15/32"	42	35
#6 x 1½"	29/32"	19/32"	42	35
#6 x 1½"	25/32"	23/32"	43	34
#6 x 1¾"	1 5/16"	7/16"	41	-
#6 x 1¾"	1 9/32"	15/32"	42	35
#6 x 1¾"	1 5/32"	19/32"	46	37
#6 x 1¾"	1 1/32"	23/32"	50	40
#6 x 2"	1 9/16"	7/16"	41	-
#6 x 2"	1 17/32"	15/32"	42	35
#6 x 2"	1 13/32"	19/32"	46	37
#6 x 2"	1 9/32"	23/32"	51	40
#8 x 1¼"	13/16"	7/16"	40	-
#8 x 1¼"	25/32"	15/32"	40	33
#8 x 1¼"	21/32"	19/32"	42	32
#8 x 1½"	1 1/16"	7/16"	51	-
#8 x 1½"	1 1/32"	15/32"	50	44
#8 x 1½"	29/32"	19/32"	49	41
#8 x 1½"	25/32"	23/32"	51	39
#8 x 1¾"	1 5/16"	7/16"	53	-
#8 x 1¾"	1 9/32"	15/32"	54	46
#8 x 1¾"	1 5/32"	19/32"	59	48
#8 x 1¾"	1 1/32"	23/32"	58	48
#8 x 2"	1 9/16"	7/16"	53	-
#8 x 2"	1 17/32"	15/32"	54	46
#8 x 2"	1 13/32"	19/32"	59	48
#8 x 2"	1 9/32"	23/32"	64	51
#8 x 2½"	1 9/16"	7/16"	53	-
#8 x 2½"	1 17/32"	15/32"	54	46
#8 x 2½"	1 13/32"	19/32"	59	48
#8 x 2½"	1 9/32"	23/32"	64	51
#10 x 1¼"	13/16"	7/16"	48	-
#10 x 1¼"	25/32"	15/32"	48	40
#10 x 1½"	1 1/16"	7/16"	61	-
#10 x 1½"	1 1/32"	15/32"	60	53
#10 x 1½"	29/32"	19/32"	60	49

DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE[1,3,4], Z (lbf)	
			OSB[5] (0.50)	PLYWOOD[5] (0.39)
#10 x 1½"	25⁄32"	23⁄32"	63	48
#10 x 2"	1 9⁄16"	7⁄16"	80	-
#10 x 2"	1 17⁄32"	15⁄32"	81	70
#10 x 2"	1 13⁄32"	19⁄32"	85	72
#10 x 2"	1 9⁄32"	23⁄32"	83	71
#10 x 2½"	2 1⁄16"	7⁄16"	80	-
#10 x 2½"	1 17⁄32"	15⁄32"	81	70
#10 x 2½"	1 29⁄32"	19⁄32"	85	72
#10 x 2½"	1 25⁄32"	23⁄32"	90	74

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N

1. Reference lateral design values apply to two-member single shear connections where the side member is OSB or plywood, the main member is SPF (SG = 0.42), and the fastener is installed in the face of the member and oriented perpendicular to the grain. The underside of the fastener head shall be installed flush with the surface of the side member.
2. Penetration depth includes the length of the tapered tip.
3. Lateral design values apply to both perpendicular to grain ($Z_{\perp}$) and parallel to grain ($Z_{\parallel}$) orientations.
4. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
5. OSB shall comply with *DOC PS 2* and have a minimum specific gravity of 0.50. Plywood shall comply with *DOC PS 1* and have a minimum specific gravity of 0.39.

UNIDRIVE COMBO (PH & SQ) PAN HEAD ZINC

MULTI-MATERIAL PAN HEAD

SPAX® ENGINEERED FASTENERS



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® Unidrive Pan Head fasteners with zinc coating are designed for use in multiple material connections often found inside residential buildings. Most of these screws are used to attach thin metal fixtures/brackets with pre-drilled holes to wood or concrete/masonry substrates where countersinking the head is not wanted. The wide heads utilize a large bearing surface which allows for a firm hold on the side member and reduces over-penetration of the head in to the main member. These fasteners often replace hex-head type fasteners for better clearance and more aesthetically pleasing finish look.

MATERIALS & COATING

Cold-rolled "carbon steel" wire, heat treated and plated with a zinc finish to prevent red rust. "Clear zinc" is tested and recognized for use in above ground contact pressure treated lumber for interior dry/damp general construction applications (e.g., AWPA UC1-UC2).



PAN HEAD

Provides excellent draw down and holding performance.



UNIQUE *4CUT*™ POINT

Prevents splitting and requires no pre-drilling in wood.



SERRATED THREADS

Allow for quicker, easier fastening.



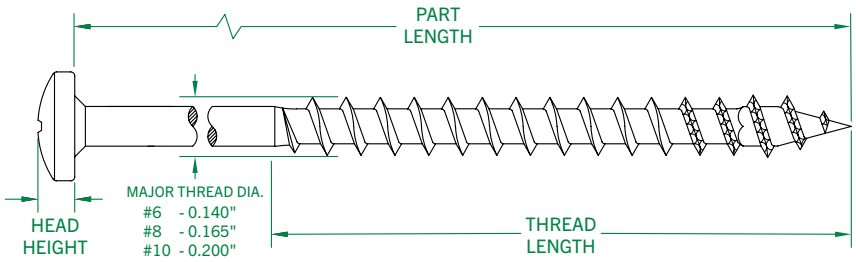
TYPICAL INTERIOR APPLICATIONS

- Attachment of metal conduit straps to wood or concrete/masonry
- Attachment of metal electrical boxes to wood or concrete/masonry
- Medium duty usage for attaching small metal angle brackets

UNIDRIVE COMBO (PH & SQ) PAN HEAD ZINC

SPAX® ENGINEERED FASTENERS

MULTI-MATERIAL PAN HEAD





PRODUCT SELECTION

PART LENGTH	THREAD LENGTH		HEAD DIA. HEAD HT.	PHILLIPS #	SQUARE #	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
	FULL	PARTIAL							
#6 x 1/2"	Full	N/A	0.270" 0.090"	2	1	50	Retail Pax®*	10	4111010350132
						500	1 lb. Box	5	4111010350134
#6 x 5/8"	Full	N/A	0.270" 0.090"	2	1	50	Retail Pax®*	10	4111010350162
						445	1 lb. Box	5	4111010350164
						2500	Mini Pail	3	3111010350168
#6 x 3/4"	Full	N/A	0.270" 0.090"	2	1	400	1 lb. Box	5	4111010350204
#8 x 5/8"	Full	N/A	0.305" 0.105"	2	2	320	1 lb. Box	5	4111010400164
#8 x 3/4"	Full	N/A	0.305" 0.105"	2	2	35	Retail Pax®*	10	4111010400202
						280	1 lb. Box	5	4111010400204
						1500	Mini Pail	3	3111010400208
#8 x 1"	Full	N/A	0.305" 0.105"	2	2	30	Retail Pax®*	10	4111010400252
						225	1 lb. Box	5	4111010400254
#8 x 1¼"	Full	N/A	0.305" 0.105"	2	2	30	Retail Pax®*	10	4111010400322
						200	1 lb. Box	5	4111010400324
#8 x 1½"	Full	N/A	0.305" 0.105"	2	2	25	Retail Pax®*	10	4111010400402
						180	1 lb. Box	5	4111010400404
#8 x 2"	Full	N/A	0.305" 0.105"	2	2	140	1 lb. Box	5	4111010400504
#10 x 5/8"	Full	N/A	0.380" 0.125"	2	2	25	Retail Pax®*	10	4111010500162
						175	1 lb. Box	5	4111010500164
#10 x 3/4"	Full	N/A	0.380" 0.125"	2	2	20	Retail Pax®*	10	4111010500202
						160	1 lb. Box	5	4111010500204
#10 x 1"	Full	N/A	0.380" 0.125"	2	2	20	Retail Pax®*	10	4111010500252
						135	1 lb. Box	5	4111010500254

NOTE: Only sold in master cartons.
* Bit not included.

UNIDRIVE COMBO (PH & SQ) PAN HEAD ZINC

SPAX® ENGINEERED FASTENERS

MULTI-MATERIAL PAN HEAD



Retail Pax®



1 lb. Box



Mini Pail



#2 Phillips / #2 Square Bit

BIT SELECTION

DRIVE BIT	BIT SIZE	MASTER QTY.	PART NO.
#2 Phillips / #2 Square	1"	10	5000009190009



NOTE: Only sold in master cartons. Made in Taiwan.

INTERIOR

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#6 x ½"			#8 x 1¼"		
#6 x ⅝"			#8 x 1½"		
#6 x ¾"			#8 x 2"		
#8 x ⅝"			#10 x ⅝"		
#8 x ¾"			#10 x ¾"		
#8 x 1"			#10 x 1"		

MASONRY & CONCRETE PRE-DRILL SPECIFICATIONS

SCREW DIAMETER	DRILL BIT	WEIGHT
#6	Not Recommended	Not Recommended
#8	⅛"	Light
#10	5⁄32"	Medium

NOTE: In masonry/concrete, pre-drill a hole at least ¼" to ½" longer than the length of the screw (refer to chart). No anchor required. In sheet metal, no pre-drilling is required up to 24 gauge.

PERFORMANCE SPECIFICATIONS

Dr. J TER No. 2010-02
Construction Screw Properties

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2,3,4]					
	SOUTHERN PINE (SG=0.55)		DOUGLAS-FIR (SG=0.50)		HEM FIR & SPRUCE-PINE-FIR (SG=0.42)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#6	140	179	133	150	105	125
#8	175	157	133	157	127	123
#10	190	315	176	238	144	177

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2]											
	PLYWOOD 15/32" (0.39)		PLYWOOD 19/32" (0.39)		PLYWOOD 23/32" (0.50)		OSB 15/32" (0.50)		OSB 19/32" (0.50)		OSB 23/32" (0.50)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#6	46	-	73	-	144	-	36	-	41	-	41	-
#8	51	120	83	120	162	212	36	68	48	78	52	110
#10	90	151	92	177	186	293	54	78	54	78	66	110

1. Tabulated withdrawal and head pull-through design values (W) and (W_H) are shown at a C_D = 1.0. Tabulated withdrawal and head pull-through values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
2. Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.
3. Head pull-through values for #6 diameter and larger in Souther pine, Douglas-Fir, Hem Fir and Spruce-Pine-Fir are minimum 1.0" side member thickness.
4. Head pull-through values for #8 diameter and larger in Southern Pine, Douglas-Fir, Hem-Fir and Spruce-Pine-Fir are minimum 1.5" side member thickness.
5. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.

DIAMETER	BENDING YIELD STRENGTH[1], f_{yb} (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR[2]
#6	198,000	310	265
#8	187,000	460	345
#10	187,000	690	545

1. Bending yield strength, f_{yb}, is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.
2. Shear strength is determined in accordance with *AISI S904* using minor thread diameter when fastener is tested in threaded section.

DIAMETER	REFERENCE LATERAL SHEAR VALUE[4,5,6], Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY[2,3])		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#8 x 1½"	¾"	¾"	70	59	43
#8 x 2"	1¼"	¾"	80	70	55

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N
1. Penetration depth includes the length of tapered tip.
2. The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.
3. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.
4. The fastener orientation shall be perpendicular to the grain, and the underside of the fastener head shall be installed flush with the surface of the side member.
5. Lateral design values apply to both perpendicular grain ($Z_\perp$) and parallel to grain ($Z_\parallel$) orientations.
6. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS 11.3.1.*

UNIDRIVE COMBO (PH & SQ) PAN HEAD ZINC

MULTI-MATERIAL PAN HEAD

SPAX® ENGINEERED FASTENERS

DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE[1,3,4], Z (lbf)	
			OSB[5] (0.50)	PLYWOOD[5] (0.39)
#8 x 1¼"	13⁄16"	7⁄16"	40	-
#8 x 1¼"	25⁄32"	15⁄32"	40	33
#8 x 1¼"	21⁄32"	19⁄32"	42	32
#8 x 1½"	1 1⁄16"	7⁄16"	51	-
#8 x 1½"	1 1⁄32"	15⁄32"	50	44
#8 x 1½"	29⁄32"	19⁄32"	49	41
#8 x 1½"	25⁄32"	23⁄32"	51	39
#8 x 2"	1 9⁄16"	7⁄16"	53	-
#8 x 2"	1 17⁄32"	15⁄32"	54	46
#8 x 2"	1 13⁄32"	19⁄32"	59	48
#8 x 2"	1 9⁄32"	23⁄32"	64	51

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N

1. Reference lateral design values apply to two-member single shear connections where the side member is OSB or plywood, the main member is SPF (SG = 0.42), and the fastener is installed in the face of the member and oriented perpendicular to the grain. The underside of the fastener head shall be installed flush with the surface of the side member.
2. Penetration depth includes the length of the tapered tip.
3. Lateral design values apply to both perpendicular to grain ($Z_{\perp}$) and parallel to grain ($Z_{\parallel}$) orientations.
4. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
5. OSB shall comply with *DOC PS 2* and have a minimum specific gravity of 0.50. Plywood shall comply with *DOC PS 1* and have a minimum specific gravity of 0.39.

T-STAR*plus*® FLAT HEAD HCR-X™

EXTERIOR / DECKING / FRAMING

SPAX® ENGINEERED FASTENERS



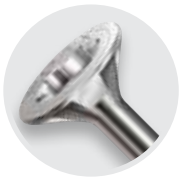
MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® T-STAR*plus*® Flat Head fasteners with HCR-X™ coating are designed for use in multiple material connections often found outside residential domains. These "work horse" construction fasteners are designed to countersink in treated lumber for a clean-flush finish and provides a quick and easy installation. In addition, they provide long-lasting, "contractor proven" secure connections.

MATERIALS & COATING

Cold-rolled "carbon steel" wire, heat treated and plated with a HCR-X™ finish to prevent red rust. "HCR-X™" is tested and recognized for use in ground contact pressure treated lumber for exterior, freshwater general construction applications (e.g., AWPA UC1-UC4A, UCFA). SPAX® recommends stainless steel for cedar and redwood attachment applications.



MULTI-HEAD DESIGN

Countersinks screw head flush with material.



SERRATED THREADS

Allow for quicker, easier fastening.



UNIQUE *4CUT*™ POINT

Prevents splitting and requires no pre-drilling in wood.



T-STAR*plus*® DRIVE

"The PRO's Choice" drive system provides superior bit engagement, eliminates camming out and facilitates overhead driving.



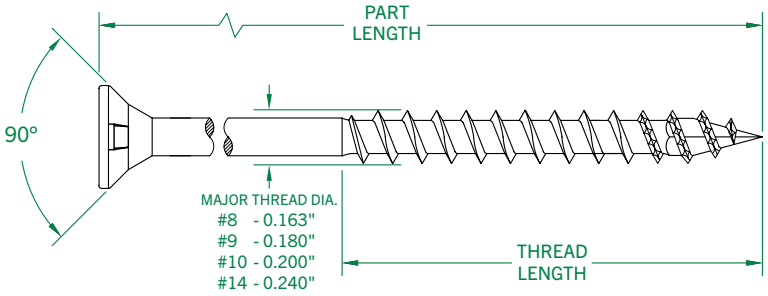
TYPICAL EXTERIOR APPLICATIONS

- 2-by framing connections - treated lumber
- Deck board finishing installation
- Deck railing 2x2 baluster
- Stair treads - treated lumber deck
- Exterior fencing
- Shed construction
- Outdoor furniture

T-STAR*plus*® FLAT HEAD HCR-X™

EXTERIOR / DECKING / FRAMING

SPAX® ENGINEERED FASTENERS





PRODUCT SELECTION

PART LENGTH	THREAD LENGTH		HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
	FULL	PARTIAL						
#8 x 1¼"	N/A	0.670"	0.320"	T20+	230	1 lb. Box	5	4191670400324
					2500	Bulk Pail	N/A	3191670400320
#8 x 1½"	N/A	0.870"	0.320"	T20+	25	Retail Pax*	10	4191670400402
					195	1 lb. Box	5	4191670400404
					550	3 lb. Box	3	41916704004045
					2500	Bulk Pail	N/A	3191670400400
#8 x 2"	N/A	1.240"	0.320"	T20+	154	1 lb. Box	5	4191670400504
					465	3 lb. Box	3	41916704005045
					1500	Bulk Pail	N/A	3191670400500
#8 x 2½"	N/A	1.340"	0.320"	T20+	124	1 lb. Box	5	4191670400604
					375	3 lb. Box	3	41916704006045
					1500	Bulk Pail	N/A	3191670400600
#9 x 2½"	N/A	1.655"	0.340"	T20+	109	1 lb. Box	5	4191670450604
					310	3 lb. Box	3	41916704506045
					1500	Bulk Pail	N/A	3191670450600
#9 x 3¼"	N/A	1.810"	0.340"	T20+	83	1 lb. Box	5	4191670450804
					245	3 lb. Box	3	41916704508045
					1500	Bulk Pail	N/A	3191670450800
#10 x 1½"	N/A	1.000"	0.390"	T20+	125	1 lb. Box	5	4191670500404
					2500	Bulk Pail	N/A	3191670500400
#10 x 2"	N/A	1.250"	0.390"	T20+	99	1 lb. Box	5	4191670500504
					277	3 lb. Box	3	41916705005045
					1500	Bulk Pail	N/A	3191670500500
#10 x 2½"	N/A	1.600"	0.390"	T20+	81	1 lb. Box	5	4191670500604
					235	3 lb. Box	3	41916705006045
					1500	Bulk Pail	N/A	3191670500600

NOTE: Only sold in master cartons.
* Bit not included.

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH		HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
	FULL	PARTIAL						
#10 x 3"	N/A	1.600"	0.390"	T20+	16	Retail Pax*	10	4191670500752
					67	1 lb. Box	5	4191670500754
					200	3 lb. Box	3	41916705007545
					225	Mini Pail	3	4191670500758
					1500	Bulk Pail	N/A	3191670500750
#10 x 3½"	N/A	2.375"	0.390"	T20+	59	1 lb. Box	5	4191670500904
					177	3 lb. Box	3	41916705009045
					1500	Bulk Pail	N/A	3191670500900
#14 x 1"	Full	N/A	0.450"	T30+	115	1 lb. Box	5	4191670600254
					1500	Bulk Pail	N/A	3191670600250
#14 x 1¼"	Full	N/A	0.450"	T30+	97	1 lb. Box	5	4191670600324
					1500	Bulk Pail	N/A	3191670600320
#14 x 1½"	Full	N/A	0.450"	T30+	90	1 lb. Box	5	4191670600404
					1500	Bulk Pail	N/A	3191670600400
#14 x 2"	Full	N/A	0.450"	T30+	65	1 lb. Box	5	4191670600504
					1500	Bulk Pail	N/A	3191670600500
#14 x 2½"	N/A	1.600"	0.450"	T30+	55	1 lb. Box	5	4191670600604
					1000	Bulk Pail	N/A	3191670600600
#14 x 3"	N/A	1.600"	0.450"	T30+	10	Retail Pax*	10	4191670600752
					1000	Bulk Pail	N/A	3191670600750
#14 x 3½"	N/A	2.400"	0.450"	T30+	10	Retail Pax*	10	4191670600902
					1000	Bulk Pail	N/A	3191670600900
#14 x 4"	N/A	2.400"	0.450"	T30+	8	Retail Pax*	10	4191670601002
					1000	Bulk Pail	N/A	3191670601000
#14 x 4¾"	N/A	2.650"	0.450"	T30+	8	Retail Pax*	10	4191670601202
					750	Bulk Pail	N/A	3191670601200

NOTE: Only sold in master cartons.
* Bit not included.



1 and 3 lb. Boxes



Retail Pax®



Mini and Bulk Pails



T-STAR*plus*® Bit

EXTERIOR

T-STAR*plus*® FLAT HEAD HCR-X™

EXTERIOR / DECKING / FRAMING

SPAX® ENGINEERED FASTENERS

BIT SELECTION

DRIVE BIT	BIT SIZE	MASTER QTY.	PART NO.
T20+	1"	10	5000009185209
	2"	10	5000009285209
T30+	1"	10	5000009185309
	2"	10	5000009285309

NOTE: Only sold in master cartons. Made in Taiwan.



FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#8 x 1¼"			#10 x 3½"		
#8 x 1½"			#14 x 1"		
#8 x 2"			#14 x 1¼"		
#8 x 2½"			#14 x 1½"		
#9 x 2½"			#14 x 2"		
#9 x 3¼"			#14 x 2½"		
#10 x 1½"			#14 x 3"		
#10 x 2"			#14 x 3½"		
#10 x 2½"			#14 x 4"		
#10 x 3"			#14 x 4¾"		

MASONRY & CONCRETE PRE-DRILL SPECIFICATIONS

SCREW DIAMETER	DRILL BIT	WEIGHT
#8/9	⅛"	Light
#10	5⁄32"	Medium
#14	3⁄16"	Medium

NOTE: In masonry/concrete, pre-drill a hole at least ¼" to ½" longer than the length of the screw (refer to chart). No anchor required. In sheet metal, no pre-drilling is required up to 24 gauge.

EXTERIOR

PERFORMANCE SPECIFICATIONS

DrJ TER No. 2010-02
Construction Screw Properties

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2,3,4]					
	SOUTHERN PINE (SG=0.55)		DOUGLAS-FIR (SG=0.50)		HEM FIR & SPRUCE-PINE-FIR (SG=0.42)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#8	175	157	133	157	127	123
#9	190	303	146	211	132	177
#10	190	315	176	238	144	177

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2,3,4]					
	SOUTHERN PINE (SG=0.55)		LAMINATED VENEER LUMBER (SG=0.50)		HEM FIR & SPRUCE-PINE-FIR (SG=0.42)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#14 (Dry)	205	240	180	350	130	190
#14 (Wet)	140	155	-	-	95	135

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2]											
	PLYWOOD 15/32" (0.39)		PLYWOOD 19/32" (0.39)		PLYWOOD 23/32" (0.50)		OSB 15/32" (0.50)		OSB 19/32" (0.50)		OSB 23/32" (0.50)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#8	51	120	83	120	162	212	36	68	48	78	52	110
#9	51	125	92	145	186	258	54	68	54	78	66	110
#10	90	151	92	177	186	293	54	78	54	78	66	110

1. Tabulated withdrawal and head pull-through design values (W) and (W_H) are shown at a C_D = 1.0. Tabulated withdrawal and head pull-through values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
2. Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.
3. Head pull-through values for #8 diameter and larger in Southern Pine, Douglas-Fir, Hem-Fir and Spruce-Pine-Fir are minimum 1.5" side member thickness.
4. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.

DIAMETER	BENDING YIELD STRENGTH[1] , f_{yb} (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR[2]
#8	187,000	460	345
#9	201,000	540	435
#10	187,000	690	545

1. Bending yield strength, f_{yb}, is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.
2. Shear strength is determined in accordance with *AISI S904* using minor thread diameter when fastener is tested in threaded section.

DIAMETER	REFERENCE LATERAL SHEAR VALUE[4,5,6], Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY[2,3])		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#8 x 1½"	¾"	¾"	70	59	43
#8 x 1¾"	1"	¾"	80	69	50
#8 x 2"	1¼"	¾"	80	70	55
#8 x 2½"	1"	1½"	84	75	58
#9 x 2½"	1"	1½"	105	92	73
#9 x 3¼"	1¾"	1½"	116	106	90
#10 x 1½"	¾"	¾"	86	72	53
#10 x 2"	1¼"	¾"	112	99	73

DIAMETER	REFERENCE LATERAL SHEAR VALUE[4,5,6], Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY[2,3])		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#10 x 2½"	1"	1½"	115	101	81
#10 x 2¾"	1¼"	1½"	132	117	91
#10 x 3"	1½"	1½"	132	121	103
#10 x 3½"	1½"	1½"	132	121	103
#14 x 2"	1¼"	¾"	145	121	88
#14 x 2½"	1"	1½"	151	134	109
#14 x 3"	1½"	1½"	187	171	133
#14 x 3½"	2"	1½"	187	172	146
#14 x 4"	3"	1⅓"	187	172	146
#14 x 4½"	4"	1¼"	187	172	146

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N

1. Penetration depth includes the length of tapered tip.
2. The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.
3. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.
4. The fastener orientation shall be perpendicular to the grain, and the underside of the fastener head shall be installed flush with the surface of the side member.
5. Lateral design values apply to both perpendicular grain ($Z_{\perp}$) and parallel to grain ($Z_{\parallel}$) orientations.
6. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS 11.3.1.*

DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE[1,3,4], Z (lbf)	
			OSB[5] (0.50)	PLYWOOD[5] (0.39)
#8 x 1¼"	13/16"	7/16"	40	-
#8 x 1¼"	25/32"	15/32"	40	33
#8 x 1¼"	21/32"	19/32"	42	32
#8 x 1½"	1 1/16"	7/16"	51	-
#8 x 1½"	1 1/32"	15/32"	50	44
#8 x 1½"	29/32"	19/32"	49	41
#8 x 1½"	25/32"	23/32"	51	39
#8 x 1¾"	1 5/16"	7/16"	53	-
#8 x 1¾"	1 9/32"	15/32"	54	46
#8 x 1¾"	1 5/32"	19/32"	59	48
#8 x 1¾"	1 1/32"	23/32"	58	48
#8 x 2"	1 9/16"	7/16"	53	-
#8 x 2"	1 17/32"	15/32"	54	46
#8 x 2"	1 13/32"	19/32"	59	48
#8 x 2"	1 9/32"	23/32"	64	51
#8 x 2½"	1 5/16"	7/16"	51	46
#8 x 2½"	1 9/32"	15/32"	52	48
#8 x 2½"	1 5/32"	19/32"	57	51
#9 x 2½"	2 1/16"	7/16"	71	-
#9 x 2½"	2 1/32"	15/32"	71	62
#9 x 2½"	1 29/32"	19/32"	76	63
#9 x 2½"	1 25/32"	23/32"	81	66

DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE[1,3,4], Z (lbf)	
			OSB[5] (0.50)	PLYWOOD[5] (0.39)
#10 x 1¼"	13/16"	7/16"	48	-
#10 x 1¼"	25/32"	15/32"	48	40
#10 x 1½"	1 1/16"	7/16"	61	-
#10 x 1½"	1 1/32"	15/32"	60	53
#10 x 1½"	29/32"	19/32"	60	49
#10 x 1½"	25/32"	23/32"	63	48
#10 x 2"	1 9/16"	7/16"	80	-
#10 x 2"	1 17/32"	15/32"	81	70
#10 x 2"	1 13/32"	19/32"	85	72
#10 x 2"	1 9/32"	23/32"	83	71
#10 x 2½"	2 1/16"	7/16"	80	-
#10 x 2½"	1 17/32"	15/32"	81	70
#10 x 2½"	1 29/32"	19/32"	85	72
#10 x 2½"	1 25/32"	23/32"	90	74

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N

1. Reference lateral design values apply to two-member single shear connections where the side member is OSB or plywood, the main member is SPF (SG = 0.42), and the fastener is installed in the face of the member and oriented perpendicular to the grain. The underside of the fastener head shall be installed flush with the surface of the side member.
2. Penetration depth includes the length of the tapered tip.
3. Lateral design values apply to both perpendicular to grain ($Z_{\perp}$) and parallel to grain ($Z_{\parallel}$) orientations.
4. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
5. OSB shall comply with *DOC PS 2* and have a minimum specific gravity of 0.50. Plywood shall comply with *DOC PS 1* and have a minimum specific gravity of 0.39.

T-STAR*plus*® WAFER HEAD HCR-X™

MULTI-MATERIAL CONSTRUCTION

SPAX® ENGINEERED FASTENERS



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® T-STAR*plus*® Wafer Head fasteners with HCR-X™ coating are designed for use in multiple material connections often found outside residential dwellings. These fasteners are designed with a low profile large diameter wafer head for applications requiring additional surface area under the head for superior pull-down force. Ideal for attaching rail, fencing and out building hardware where a flush or countersunk installation is not possible or desired.

MATERIALS & COATING

Cold-rolled "carbon steel" wire heat treated and plated with a HCR-X™ finish to prevent red rust. "HCR-X™" is tested and recognized for use in ground contact pressure treated lumber for exterior, freshwater general construction applications (e.g., AWPA UC1-UC4A, UCFA). SPAX® recommends stainless steel fasteners for applications with cedar and redwoods.



MULTI-HEAD DESIGN

Countersinks screw head flush with material.



SERRATED THREADS

Allow for quicker, easier fastening.



UNIQUE *4CUT*™ POINT

Prevents splitting and requires no pre-drilling in wood.



T-STAR*plus*® DRIVE

"The PRO's Choice" drive system provides superior bit engagement, eliminates camming out and facilitates overhead driving.



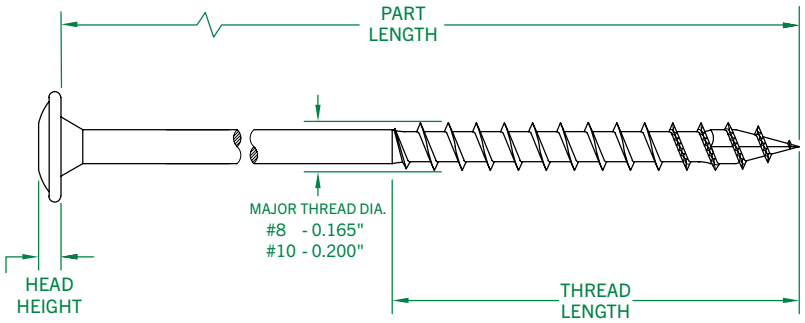
TYPICAL EXTERIOR APPLICATIONS

- Treated lumber rail and gate hardware attachment
- Other exterior applications where substrate must be tightly connected to treated lumber
- Outdoor furniture
- Outdoor play structures
- Window installation

T-STAR*plus*® WAFER HEAD HCR-X™

SPAX® ENGINEERED FASTENERS

MULTI-MATERIAL CONSTRUCTION





PRODUCT SELECTION

PART LENGTH	THREAD LENGTH		HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
	FULL	PARTIAL						
#8 x 1¼"	N/A	0.670"	0.375" 0.080"	T20+	195	1 lb. Box	5	4281670400324
					2500	Bulk Pail	N/A	3281670400320
#8 x 1½"	N/A	0.875"	0.375" 0.080"	T20+	165	1 lb. Box	5	4281670400404
					495	3 lb. Box	3	42816704004045
					2500	Bulk Pail	N/A	3281670400400
#8 x 2"	N/A	1.250"	0.375" 0.080"	T20+	140	1 lb. Box	5	4281670400504
					1500	Bulk Pail	N/A	3281670400500
#8 x 2½"	N/A	1.375"	0.375" 0.080"	T20+	120	1 lb. Box	5	4281670400604
					1500	Bulk Pail	N/A	3281670400600
#10 x 2½"	N/A	1.500"	0.470" 0.085"	T20+	77	1 lb. Box	5	4281670500604
					1200	Bulk Pail	N/A	3281670500600
#10 x 3"	N/A	1.625"	0.470" 0.085"	T20+	63	1 lb. Box	5	4281670500754
					185	3 lb. Box	3	42816705007545
					1000	Bulk Pail	N/A	3281670500750

NOTE: Only sold in master cartons.



1 and 3 lb. Box



Bulk Pail



T-STAR*plus*® Bit

EXTERIOR

T-STAR*plus*® WAFER HEAD HCR-X™

MULTI-MATERIAL CONSTRUCTION

SPAX® ENGINEERED FASTENERS

BIT SELECTION

DRIVE BIT	BIT SIZE	MASTER QTY.	PART NO.
T20+	1"	10	5000009185209
	2"	10	5000009285209

NOTE: Only sold in master cartons. Made in Taiwan.



FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#8 x 1¼"			#8 x 2½"		
#8 x 1½"			#10 x 2½"		
#8 x 2"			#10 x 3"		

MASONRY & CONCRETE PRE-DRILL SPECIFICATIONS

SCREW DIAMETER	DRILL BIT	WEIGHT
#8	⅛"	Light
#10	5⁄32"	Medium

NOTE: In masonry/concrete, pre-drill a hole at least ¼" to ½" longer than the length of the screw (refer to chart). No anchor required. In sheet metal, no pre-drilling is required up to 24 gauge.

PERFORMANCE SPECIFICATIONS

DrJ TER No. 2010-02
Construction Screw Properties

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2,3,4]					
	SOUTHERN PINE (SG=0.55)		DOUGLAS-FIR (SG=0.50)		HEM FIR & SPRUCE-PINE-FIR (SG=0.42)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#8	175	335	133	297	127	268
#10	190	461	176	387	144	338

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2]											
	PLYWOOD 15/32" (0.39)		PLYWOOD 19/32" (0.39)		PLYWOOD 23/32" (0.50)		OSB 15/32" (0.50)		OSB 19/32" (0.50)		OSB 23/32" (0.50)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#8	51	146	83	190	162	319	36	86	48	110	52	131
#10	90	183	92	246	186	322	54	87	54	126	66	131

1. Tabulated withdrawal and head pull-through design values (W) and (W_H) are shown at a C_D = 1.0. Tabulated withdrawal and head pull-through values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
2. Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.
3. Head pull-through values for #8 diameter and larger in Southern Pine, Douglas-Fir, Hem-Fir and Spruce-Pine-Fir are minimum 1.5" side member thickness.
4. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.

DIAMETER	BENDING YIELD STRENGTH[1] , f_{yb} (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR[2]
#8	187,000	460	345
#10	187,000	690	545

1. Bending yield strength, f_{yb}, is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.
2. Shear strength is determined in accordance with *AISI S904* using minor thread diameter when fastener is tested in threaded section.

DIAMETER	REFERENCE LATERAL SHEAR VALUE[4,5,6], Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY[2,3])		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#8 x 1½"	¾"	¾"	70	59	43
#8 x 2"	1¼"	¾"	80	70	55
#8 x 2½"	1"	1½"	84	75	58
#10 x 2½"	1"	1½"	115	101	81
#10 x 3"	1½"	1½"	132	121	103

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N

1. Penetration depth includes the length of tapered tip.
2. The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.
3. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.
4. The fastener orientation shall be perpendicular to the grain, and the underside of the fastener head shall be installed flush with the surface of the side member.
5. Lateral design values apply to both perpendicular grain ($Z_{\perp}$) and parallel to grain ($Z_{\parallel}$) orientations.
6. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS 11.3.1.*

DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE[1,3,4], Z (lbf)	
			OSB[5] (0.50)	PLYWOOD[5] (0.39)
#8 x 1¼"	13⁄16"	7⁄16"	40	-
#8 x 1¼"	25⁄32"	15⁄32"	40	33
#8 x 1¼"	21⁄32"	19⁄32"	42	32
#8 x 1½"	1 1⁄16"	7⁄16"	51	-
#8 x 1½"	1 1⁄32"	15⁄32"	50	44
#8 x 1½"	29⁄32"	19⁄32"	49	41
#8 x 1½"	25⁄32"	23⁄32"	51	39
#8 x 2"	1 9⁄16"	7⁄16"	53	-
#8 x 2"	1 17⁄32"	15⁄32"	54	46
#8 x 2"	1 13⁄32"	19⁄32"	59	48
#8 x 2"	1 9⁄32"	23⁄32"	64	51
#8 x 2½"	1 5⁄16"	7⁄16"	51	46
#8 x 2½"	1 9⁄32"	15⁄32"	52	48
#8 x 2½"	1 5⁄32"	19⁄32"	57	51
#10 x 2½"	2 1⁄16"	7⁄16"	80	-
#10 x 2½"	1 17⁄32"	15⁄32"	81	70
#10 x 2½"	1 29⁄32"	19⁄32"	85	72
#10 x 2½"	1 25⁄32"	23⁄32"	90	74

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N

1. Reference lateral design values apply to two-member single shear connections where the side member is OSB or plywood, the main member is SPF (SG = 0.42), and the fastener is installed in the face of the member and oriented perpendicular to the grain. The underside of the fastener head shall be installed flush with the surface of the side member.
2. Penetration depth includes the length of the tapered tip.
3. Lateral design values apply to both perpendicular to grain ($Z_{\perp}$) and parallel to grain ($Z_{\parallel}$) orientations.
4. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
5. OSB shall comply with *DOC PS 2* and have a minimum specific gravity of 0.50. Plywood shall comply with *DOC PS 1* and have a minimum specific gravity of 0.39.

SPECIALTY FASTENERS

SPAX® ENGINEERED FASTENERS

HARDWOOD/MDF

INTERIOR



APPLICATIONS

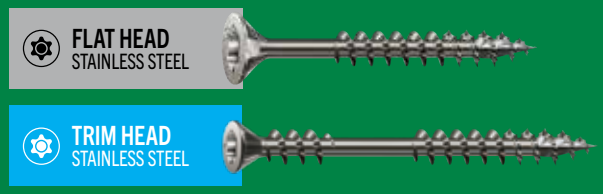
- MDF panels and cabinet frame assembly
- Attaching back panels to bookcases, storage units and cabinetry without deforming

DrJ

TER No. 2010-02 Construction Screw Properties

STAINLESS STEEL

COASTAL



APPLICATIONS

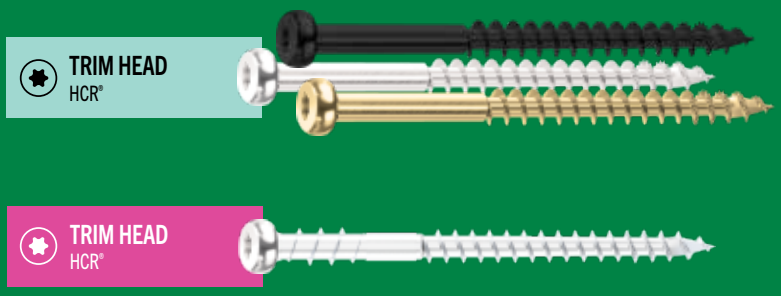
- Wood decks
- Railings
- Fencing
- Other exterior wood applications
- Cedar and redwood applications

DrJ

TER No. 2010-02 Construction Screw Properties

FINISHING TRIM ATTACHMENT

EXTERIOR



APPLICATIONS

- Baseboards
- Window and door trim
- Crown molding
- Cabinetry
- Stairs and railings

DrJ

TER No. 2001-01 PowerTrim® Screw Properties



T-STAR*plus*® TRIM HEAD ZINC HARDWOOD/MDF

FINISHING TRIM

SPAX® ENGINEERED FASTENERS



MADE IN GERMANY

DESCRIPTION

SPAX® Hardwood/MDF T-STAR*plus*® Trim Head fasteners with zinc coating are designed for use in delicate and thin lumber used in interior finishing applications. The unique *CUT*™ Point provides a pre-drilling feature for easy installation in hardwood trim and medium density fiberboards. These fasteners are often used in fine woodworking and cabinet assembly.

MATERIALS & COATING

Cold-rolled "carbon steel" wire, heat treated and plated with a zinc finish to prevent red rust. "Clear zinc" is tested and recognized for use in above ground contact pressure treated lumber for interior dry/damp general construction applications (e.g., AWPA UC1-UC2).



TRIM HEAD WITH CUTTING RIBS

Facilitates a flush or countersunk installation for desired aesthetics.



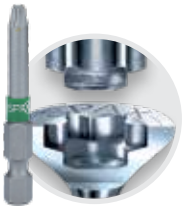
SERRATED THREADS

Allow for quicker, easier fastening.



UNIQUE *4CUT*™ POINT

Prevents splitting and requires no pre-drilling in wood.



T-STAR*plus*® DRIVE

"The PRO's Choice" drive system provides superior bit engagement, eliminates camming out and facilitates overhead driving.



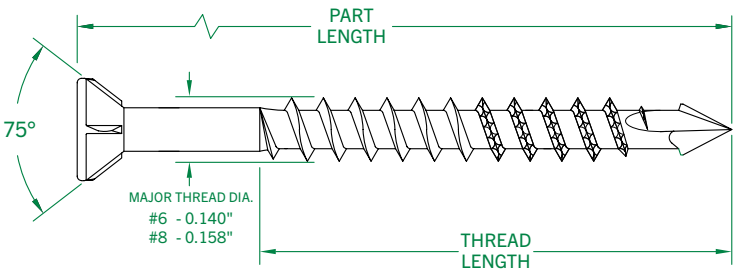
TYPICAL INTERIOR APPLICATIONS

- Hardwood connections for furniture
- Interior finishing with thin lumber
- Cabinet connections with MDF (medium-density fiberboard) and hardwoods
- Wood railing connections
- Installing interior door jambs
- Wood chair spindle connections/repair

T-STAR*plus*® TRIM HEAD ZINC HARDWOOD/MDF

FINISHING TRIM

SPAX® ENGINEERED FASTENERS





PRODUCT SELECTION

PART LENGTH	THREAD LENGTH		HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
	FULL	PARTIAL						
#6 x 1½"	N/A	1.060"	0.230"	T15+	300	1 lb. Box	5	4351010350404
#8 x 1¾"	N/A	1.160"	0.270"	T20+	200	1 lb. Box	5	4351010400454
#8 x 2½"	N/A	1.380"	0.270"	T20+	154	1 lb. Box	5	4351010400604

NOTE: Only sold in master cartons.



1 lb. Box



T-STAR*plus*® Bit

BIT SELECTION

DRIVE BIT	BIT SIZE	MASTER QTY.	PART NO.
T20+	1"	10	5000009185209
	2"	10	5000009285209

NOTE: Only sold in master cartons. Made in Taiwan.



FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#6 x 1½"			#8 x 2½"		
#8 x 1¾"					

T-STAR*plus*® TRIM HEAD ZINC HARDWOOD/MDF

SPAX® ENGINEERED FASTENERS

FINISHING TRIM

PERFORMANCE SPECIFICATIONS

DrJ TER No. 2010-02
Construction Screw Properties

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2,3,4]					
	SOUTHERN PINE (SG=0.55)		DOUGLAS-FIR (SG=0.50)		HEM FIR & SPRUCE-PINE-FIR (SG=0.42)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#6	124	N/A	108	N/A	64	N/A
#8	124	240	114	161	106	149

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2]											
	PLYWOOD 15/32" (0.39)		PLYWOOD 19/32" (0.39)		PLYWOOD 23/32" (0.50)		OSB 15/32" (0.50)		OSB 19/32" (0.50)		OSB 23/32" (0.50)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#6	46	57	73	63	144	114	36	40	41	45	41	45
#8	68	77	75	80	179	139	37	53	41	53	64	56

1. Tabulated withdrawal and head pull-through design values (W) and (W_H) are shown at a C_D = 1.0. Tabulated withdrawal and head pull-through values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
2. Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.
3. Head pull-through values for #6 diameter and larger in Souther pine, Douglas-Fir, Hem Fir and Spruce-Pine-Fir are minimum 1.0" side member thickness.
4. Head pull-through values for #8 diameter and larger in Southern Pine, Douglas-Fir, Hem-Fir and Spruce-Pine-Fir are minimum 1.5" side member thickness.
5. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.

DIAMETER	BENDING YIELD STRENGTH[1] , f_{yb} (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR[2]
#6	196,000	270	270
#8	171,000	340	305

1. Bending yield strength, f_{yb}, is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.
2. Shear strength is determined in accordance with *AISI S904* using minor thread diameter when fastener is tested in threaded section.

DIAMETER	REFERENCE LATERAL SHEAR VALUE[4,5,6], Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY[2,3])		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#6 x 1½"	¾"	¾"	37	50	57
#8 x 1¾"	1"	¾"	51	69	79
#8 x 2½"	1"	1½"	57	74	81

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N

1. Penetration depth includes the length of tapered tip.
2. The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.
3. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.
4. The fastener orientation shall be perpendicular to the grain, and the underside of the fastener head shall be installed flush with the surface of the side member.
5. Lateral design values apply to both perpendicular grain ($Z_\perp$) and parallel to grain ($Z_\parallel$) orientations.
6. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS 11.3.1.*

T-STAR*plus*® TRIM HEAD ZINC HARDWOOD/MDF

FINISHING TRIM

SPAX® ENGINEERED FASTENERS

DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE[1,3,4], Z (lbf)	
			OSB[5] (0.50)	PLYWOOD[5] (0.39)
#6 x 1½"	1 1/16"	7/16"	41	-
#6 x 1½"	1 1/32"	15/32"	42	35
#6 x 1½"	29/32"	19/32"	42	35
#6 x 1½"	25/32"	23/32"	43	34
#8 x 1¾"	1 5/16"	7/16"	51	-
#8 x 1¾"	1 9/32"	15/32"	52	44
#8 x 1¾"	1 5/32"	19/32"	57	46
#8 x 1¾"	1 1/32"	23/32"	59	48
#8 x 2½"	2 1/16"	7/16"	51	-
#8 x 2½"	2 1/32"	15/32"	52	44
#8 x 2½"	1 29/32"	19/32"	57	46
#8 x 2½"	1 25/32"	23/32"	63	49

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N

1. Reference lateral design values apply to two-member single shear connections where the side member is OSB or plywood, the main member is SPF (SG = 0.42), and the fastener is installed in the face of the member and oriented perpendicular to the grain. The underside of the fastener head shall be installed flush with the surface of the side member.
2. Penetration depth includes the length of the tapered tip.
3. Lateral design values apply to both perpendicular to grain ($Z_{\perp}$) and parallel to grain ($Z_{\parallel}$) orientations.
4. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.
5. OSB shall comply with *DOC PS 2* and have a minimum specific gravity of 0.50. Plywood shall comply with *DOC PS 1* and have a minimum specific gravity of 0.39.

POWERTRIM® T-STAR TRIM HEAD HCR® FINISHING SCREWS

FINISHING TRIM

SPAX® ENGINEERED FASTENERS



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® T-STAR Trim Head fasteners with black, white, and yellow HCR® (High Corrosion Resistance) coating are designed for use in both interior and exterior wood connection applications often found around residential dwellings. These finishing trim fasteners are designed to countersink for a clean-flush and near "hidden" finish.

MATERIALS & COATING

Cold-rolled "carbon steel" wire heat treated and coated with a black, white, or yellow HCR® (High Corrosion Resistance) coating system. These products are to be used in both exterior and interior applications fastening materials such as pressure treated lumber and standard general purpose wood trim products (e.g., AWPA UC1-UC4A, UCFA). SPAX® recommends stainless steel for applications including cedar and redwood substrates.



TRIM HEAD/T-STAR DRIVE

Provides superior bit engagement to eliminate camming out and facilitate single hand, overhead driving plus a flush/clean finish installation.



UNIQUE *4CUT*™ POINT

Prevents splitting and requires no pre-drilling in wood.



SERRATED THREADS

Allow for quicker, easier fastening.



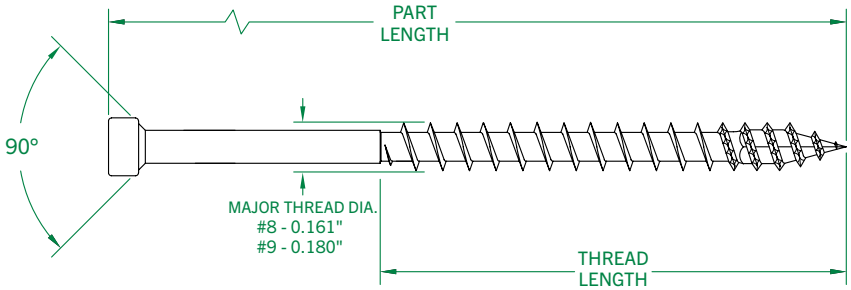
TYPICAL APPLICATIONS

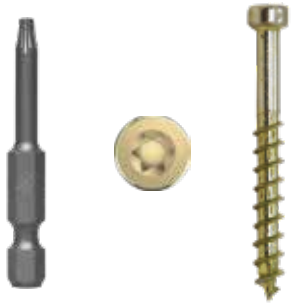
- Window and door casing attachment
- Crown molding
- Baseboards
- Door jambs
- Cabinetry
- Fine carpentry
- Stairs and railings

POWERTRIM® T-STAR TRIM HEAD HCR® FINISHING SCREWS

SPAX® ENGINEERED FASTENERS

FINISHING TRIM





PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	COATING	PART NO.
#8 x 1¼"	0.750"	0.197"	T10	100	Contractor Pax	5	Black HCR	42318204003268
							Yellow HCR	42318704003268
				425	Mini Pail	3	Yellow HCR	3231870400328
#8 x 1½"	1.000"	0.197"	T10	100	Contractor Pax	5	Black HCR	42318204004068
							Yellow HCR	42318704004068
				425	Mini Pail	3	Yellow HCR	3231870400408
#8 x 2"	1.250"	0.197"	T10	100	Contractor Pax	5	Black HCR	42318204005068
							White HCR	42318304005068
							Yellow HCR	42318704005068
				425	Mini Pail	3	Black HCR	3231820400508
							White HCR	3231830400508
							Yellow HCR	3231870400508
#8 x 2½"	1.550"	0.197"	T10	100	Contractor Pax	5	Black HCR	42318204006068
							White HCR	42318304006068
							Yellow HCR	42318704006068
				425	Mini Pail	3	Black HCR	3231820400608
							White HCR	3231830400608
							Yellow HCR	3231870400608
#8 x 3"	1.550"	0.197"	T10	100	Contractor Pax	5	Black HCR	42318204007568
				300	Mini Pail	3	Black HCR	3231820400758
#8 x 3⅛"	1.950"	0.197"	T10	100	Contractor Pax	5	Yellow HCR	42318704003168
				300	Mini Pail	3	Yellow HCR	3231870400318

NOTE: Only sold in master cartons.
* Made in Germany.

POWERTRIM® T-STAR TRIM HEAD HCR® FINISHING SCREWS

SPAX® ENGINEERED FASTENERS

FINISHING TRIM

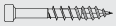
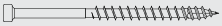
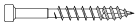
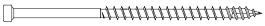
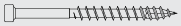
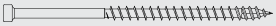


Contractor Pax®



Mini Pail

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#8 x 1¼"	◎		#8 x 2½"	◎	
#8 x 1½"	◎		#8 x 3"	◎	
#8 x 2"	◎		#8 x 3⅛"	◎	

PERFORMANCE SPECIFICATIONS

DrJ TER No. 2001-01
POWERTRIM® Screw Properties

ALLOWABLE STEEL STRENGTH			ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (P) DESIGN VALUES[1,2,3,4] (IN SP)	
DIAMETER	TENSILE STRENGTH (lbs.)	SHEAR STRENGTH (lbs.)	WITHDRAWAL W (lbs./in.)	HEAD PULL-THROUGH (lbs.) P (lbs.)
#8	477	369	134	122
#9	660	504	150	128

1. Main and side member must be wood having a minimum specific gravity of 0.55 for Southern Pine (SP).
2. Reference Withdrawal and Head Pull-Through design values must be multiplied by all applicable adjustment factors in accordance with Section 10.3 of the NDS.
3. Reference Withdrawal design values are to be multiplied by the length of thread penetration into the side grain of the main member. Length includes the tip.
4. Head Pull-Through design values are based on a minimum ¾" side member thickness for the Flat Head #8 diameter screws, ⅞" for the #9, and 1⅛" for the #10.

POWERTRIM® T-STAR TRIM HEAD HCR® COMPOSITE (PVC) SCREWS

FINISHING TRIM

SPAX® ENGINEERED FASTENERS



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® T-STAR Trim Head fasteners with white HCR® (High Corrosion Resistance) coating are designed for use in both interior and exterior composite (PVC) connection applications often found around residential dwellings. These finishing trim fasteners are designed to countersink for a clean-flush and near "hidden" finish.

MATERIALS & COATING

Cold-rolled "carbon steel" wire heat treated and coated with a white HCR® (High Corrosion Resistance) coating system. These products are to be used in both exterior and interior applications fastening materials such as composite wood and PVC trim products (e.g., AWPA UC1-UC4A, UCFA). SPAX® recommends stainless steel for applications including cedar and redwood substrates.



TRIM HEAD/T-STAR DRIVE

Provides superior bit engagement to eliminate camming out and facilitate single hand, overhead driving plus a flush/clean finish installation.



SERRATED THREADS

Allow for quicker, easier fastening.



DOUBLE REVERSE THREAD

Specifically designed for composite (PVC) installation to pull the pigtail shaving down into the hole.



UNIQUE *4CUT*™ POINT

Prevents splitting and requires no pre-drilling in wood.

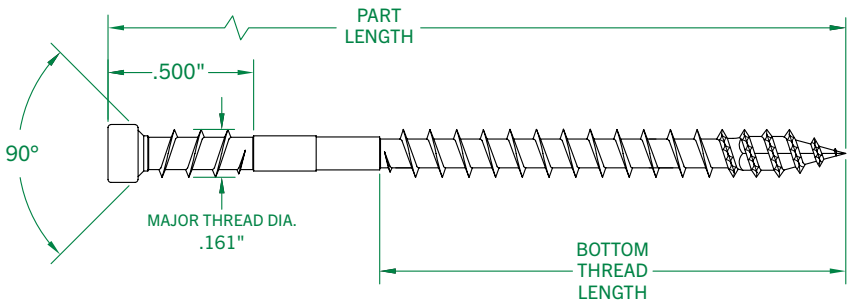


TYPICAL APPLICATIONS

- Exterior PVC trim applications including:
  - Window and door trim
  - Fascia trim
- Kitchen and bath PVC trim attachment including:
  - Window and door trim
  - Baseboards
  - Counter top trim

POWERTRIM® T-STAR TRIM HEAD HCR® COMPOSITE (PVC) SCREWS

FINISHING TRIM





PRODUCT SELECTION

PART LENGTH	BOTTOM THREAD LENGTH	HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	COATING	PART NO.
#8 x 2"	1.250"	0.197"	T10	100	Contractor Pax	5	White HCR	42418304005068
				425	Mini Pail	3	White HCR	3241830400508
#8 x 2½"	1.550"	0.197"	T10	100	Contractor Pax	5	White HCR	42418304006068
				425	Mini Pail	3	White HCR	3241830400608

NOTE: Only sold in master cartons.



Contractor Pax®



Mini Pail

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#8 x 2"			#8 x 2½"		

PERFORMANCE SPECIFICATIONS

DrJ TER No. 2001-01
POWERTRIM® Screw Properties

ALLOWABLE STEEL STRENGTH			ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (P) DESIGN VALUES[1,2,3,4] (IN SP)	
DIAMETER	TENSILE STRENGTH (lbs.)	SHEAR STRENGTH (lbs.)	WITHDRAWAL W (lbs./in.)	HEAD PULL-THROUGH (lbs.) P (lbs.)
#8	477	369	134	122

1. Main and side member must be wood having a minimum specific gravity of 0.55 for Southern Pine (SP).
2. Reference Withdrawal and Head Pull-Through design values must be multiplied by all applicable adjustment factors in accordance with Section 10.3 of the NDS.
3. Reference Withdrawal design values are to be multiplied by the length of thread penetration into the side grain of the main member. Length includes the tip.
4. Head Pull-Through design values are based on a minimum ¾" side member thickness for the Flat Head #8 diameter screws, ⅞" for the #9, and 1⅛" for the #10.

T-STAR*plus*® FLAT HEAD 304 STAINLESS STEEL

STAINLESS STEEL

SPAX® ENGINEERED FASTENERS



MADE IN GERMANY

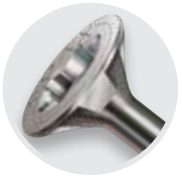
DESCRIPTION

SPAX® T-STAR*plus*® Flat Head fasteners made of 304 stainless steel are designed for use in exterior wood connections often found outside residential domains. These "work horse" construction fasteners are designed to countersink in treated lumber for a clean-flush finish. 304 stainless steel fasteners are well suited for cedar and redwood decking materials and use within 5 miles of coastal environments.

MATERIALS & COATING

Cold-rolled 304 stainless steel wire, with a passivated surface to provide corrosion protection. "Stainless steel" is code compliant for use in ground contact pressure treated and fire-retardant-treated[1] lumber for exterior, coastal general construction applications (e.g., AWPA UC1-UC4B, UCFA and UCFB).

EXTERIOR



MULTI-HEAD DESIGN

Countersinks screw head flush with material.



UNIQUE *4CUT*™ POINT

Prevents splitting and requires no pre-drilling in wood.



SERRATED THREADS

Allow for quicker, easier fastening.



T-STAR*plus*® DRIVE

"The PRO's Choice" drive system provides superior bit engagement, eliminates camming out and facilitates overhead driving.



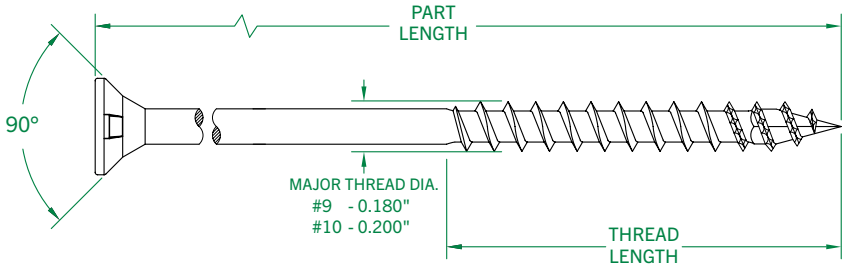
TYPICAL EXTERIOR APPLICATIONS

- 2-by framing connections - coastal environment applications
- Deck board finishing installation, especially cedar and redwoods
- Deck railing 2x2 baluster
- Stair treads - treated lumber deck
- Exterior fencing
- Shed construction
- Outdoor furniture

1. Refer to FRT manufacturer for recommendations on fastener coatings into FRT lumber.

T-STAR*plus*® FLAT HEAD 304 STAINLESS STEEL

STAINLESS STEEL





PRODUCT SELECTION

PART LENGTH	THREAD LENGTH		HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
	FULL	PARTIAL						
#9 x 1½"	N/A	1.000"	0.340"	T20+	155	1 lb. Box	5	4197000450404
					2000	Bulk Pail	N/A	3197000450400
#9 x 2"	N/A	1.280"	0.340"	T20+	125	1 lb. Box	5	4197000450504
					1500	Bulk Pail	N/A	3197000450500
#10 x 2½"	2.275"	1.450"	0.390"	T20+	83	1 lb. Box	5	4197000500604
					1500	Bulk Pail	N/A	3197000500600
#10 x 3"	2.375"	1.600"	0.390"	T20+	68	1 lb. Box	5	4197000500754
					205	3 lb. Box	3	41970005007545
					1500	Bulk Pail	N/A	3197000500750

NOTE: Only sold in master cartons.



1 and 3 lb. Boxes



Bulk Pail



T-STAR*plus*® Bit

BIT SELECTION

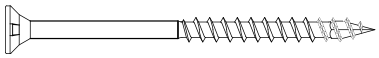
DRIVE BIT	BIT SIZE	MASTER QTY.	PART NO.
T20+	1"	10	5000009185209
	2"	10	5000009285209

NOTE: Only sold in master cartons. Made in Taiwan.



EXTERIOR

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#9 x 1½"			#10 x 2½"		
#9 x 2"			#10 x 3"		

PERFORMANCE SPECIFICATIONS

DrJ TER No. 2010-02
Construction Screw Properties

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2,3,4]					
	SOUTHERN PINE (SG=0.55)		DOUGLAS-FIR (SG=0.50)		HEM FIR & SPRUCE-PINE-FIR (SG=0.42)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#9	190	168	146	143	132	118
#10	190	168	176	143	144	118

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2]											
	PLYWOOD 15/32" (0.39)		PLYWOOD 19/32" (0.39)		PLYWOOD 23/32" (0.50)		OSB 15/32" (0.50)		OSB 19/32" (0.50)		OSB 23/32" (0.50)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#9	51	78	92	130	186	145	54	77	54	91	66	103
#10	90	78	92	130	186	145	54	77	54	91	66	103

1. Tabulated withdrawal and head pull-through design values (W) and (W_H) are shown at a C_D = 1.0. Tabulated withdrawal and head pull-through values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
2. Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.
3. Head pull-through values for #8 diameter and larger in Southern Pine, Douglas-Fir, Hem-Fir and Spruce-Pine-Fir are minimum 1.5" side member thickness.
4. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.

DIAMETER	BENDING YIELD STRENGTH[1] , f_{yb} (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR[2]
#9	129,000	395	380
#10	126,000	480	440

1. Bending yield strength, f_{yb}, is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.
2. Shear strength is determined in accordance with *AISI S904* using minor thread diameter when fastener is tested in threaded section.

DIAMETER	REFERENCE LATERAL SHEAR VALUE[4,5,6], Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY[2,3])		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#9 x 1½"	¾"	¾"	49	67	78
#9 x 2"	1¼"	¾"	62	79	91
#10 x 2½"	1"	1½"	72	92	106
#10 x 3"	1½"	1½"	84	99	108

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N

1. Penetration depth includes the length of tapered tip.
2. The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.
3. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.
4. The fastener orientation shall be perpendicular to the grain, and the underside of the fastener head shall be installed flush with the surface of the side member.
5. Lateral design values apply to both perpendicular grain ($Z_\perp$) and parallel to grain ($Z_\parallel$) orientations.
6. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS 11.3.1.*

DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE[1,3,4], Z (lbf)	
			OSB[5] (0.50)	PLYWOOD[5] (0.39)
#9 x 1½"	1 1/16"	7/16"	57	-
#9 x 1½"	1 1/32"	15/32"	57	50
#9 x 1½"	29/32"	19/32"	56	46
#9 x 1½"	25/32"	23/32"	59	45
#9 x 2"	1 9/16"	7/16"	59	-
#9 x 2"	1 17/32"	15/32"	60	51
#9 x2 "	1 13/32"	19/32"	66	53
#9 x 2"	1 9/32"	23/32"	72	57
#10 x 2½"	2 1/16"	7/16"	68	-
#10 x 2½"	2 1/32"	15/32"	69	59
#10 x 2½"	1 29/32"	19/32"	74	61
#10 x 2½"	1 25/32"	23/32"	81	64
#10 x 3"	2 1/16"	7/16"	68	-
#10 x 3"	2 1/32"	15/32"	69	59
#10 x 3"	1 29/32"	19/32"	74	61
#10 x 3"	1 25/32"	23/32"	81	64

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N

1. Reference lateral design values apply to two-member single shear connections where the side member is OSB or plywood, the main member is SPF (SG = 0.42), and the fastener is installed in the face of the member and oriented perpendicular to the grain. The underside of the fastener head shall be installed flush with the surface of the side member.
2. Penetration depth includes the length of the tapered tip.
3. Lateral design values apply to both perpendicular to grain ($Z_{\perp}$) and parallel to grain ($Z_{\parallel}$) orientations.
4. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
5. OSB shall comply with *DOC PS 2* and have a minimum specific gravity of 0.50. Plywood shall comply with *DOC PS 1* and have a minimum specific gravity of 0.39.

POWERDECK® T-STAR*plus*® TRIM HEAD STAINLESS STEEL

STAINLESS STEEL

SPAX® ENGINEERED FASTENERS



MADE IN GERMANY

DESCRIPTION

SPAX® T-STAR*plus*® Trim Head fasteners made of 304 stainless steel are designed for use in exterior wood connections often found outside residential domains. These "work horse" construction fasteners are designed to countersink in treated lumber for a clean-flush finish. 304 stainless steel fasteners are well suited for cedar and redwood decking materials and use in coastal environments.

MATERIALS & COATING

Cold-rolled 304 stainless steel wire, with a passivated surface to provide corrosion protection. "Stainless steel" is code compliant for use in ground contact pressure treated and fire-retardant-treated[1] lumber for exterior, coastal general construction applications (e.g., AWPA UC1-UC4B, UCFA and UCFB).



COUNTERSINKING HEAD

Countersinks screw head flush with material.



UNIQUE *4CUT*™ POINT / SERRATED THREADS

Prevents splitting and requires no pre-drilling in wood.



UPPER THREAD FEATURE

Fixing thread permits a safe and permanent connection of the two wood substrates.



T-STAR*plus*® DRIVE

"The PRO's Choice" drive system provides superior bit engagement, eliminates camming out and facilitates overhead driving.



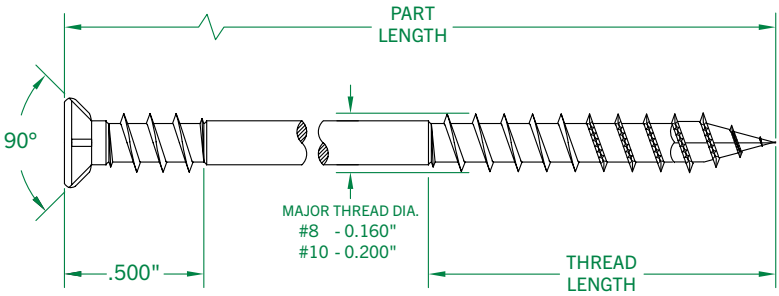
TYPICAL EXTERIOR APPLICATIONS

- 2-by framing connections - coastal environment applications
- Deck board finishing installation, especially cedar and redwoods
- Deck railing 2x2 baluster
- Stair treads - treated lumber deck
- Exterior fencing
- Shed construction
- Outdoor furniture

1. Refer to FRT manufacturer for recommendations on fastener coatings into FRT lumber.

POWERDECK® T-STAR*plus*® TRIM HEAD STAINLESS STEEL

STAINLESS STEEL





PRODUCT SELECTION

PART LENGTH	THREAD LENGTH		HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
	FULL	PARTIAL						
#8 x 1⅝"	N/A	0.700"	0.305"	T20+	170	1 lb. Box	5	45704015401004
					2000	Bulk Pail	N/A	35704015401000
#10 x 2½"	N/A	1.260"	0.310"	T20+	83	1 lb. Box	5	45705008401004
					250	3 lb. Box	3	45705008401045
					1500	Bulk Pail	N/A	35705008401000
#10 x 3"	N/A	1.540"	0.310"	T20+	66	1 lb. Box	5	45705008402004
					200	3 lb. Box	3	45705008402045
					1500	Bulk Pail	N/A	35705008402000
#10 x 3½"	N/A	1.610"	0.310"	T20+	57	1 lb. Box	5	45705008403004
					175	3 lb. Box	3	45705008403045
					1500	Bulk Pail	N/A	35705008403000

NOTE: Only sold in master cartons.



1 and 3 lb. Boxes



Bulk Pail



T-STAR *plus* Bit

BIT SELECTION

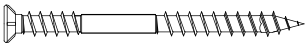
DRIVE BIT	BIT SIZE	MASTER QTY.	PART NO.
T20+	1"	10	5000009185209
	2"	10	5000009285209

NOTE: Only sold in master cartons. Made in Taiwan.



EXTERIOR

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#8 x 1⅝"			#10 x 3"		
#10 x 2½"			#10 x 3½"		

PERFORMANCE SPECIFICATIONS

DrJ TER No. 2010-02
Construction Screw Properties

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2,3,4]					
	SOUTHERN PINE (SG=0.55)		DOUGLAS-FIR (SG=0.50)		HEM FIR & SPRUCE-PINE-FIR (SG=0.42)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#8	106	168	114	143	124	118
#10	144	231	176	165	190	153

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W_H)[1,2]											
	PLYWOOD 15/32" (0.39)		PLYWOOD 19/32" (0.39)		PLYWOOD 23/32" (0.50)		OSB 15/32" (0.50)		OSB 19/32" (0.50)		OSB 23/32" (0.50)	
	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)	WITHDRAWAL W (lbs./inch)	HEAD PULL-THROUGH W_H (lbs.)
#8	68	78	75	130	179	145	37	77	41	91	64	103
#10	90	78	92	126	186	145	54	68	54	81	66	88

1. Tabulated withdrawal and head pull-through design values (W) and (W_H) are shown at a C_D = 1.0. Tabulated withdrawal and head pull-through values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
2. Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.
3. Head pull-through values for #8 diameter and larger in Southern Pine, Douglas-Fir, Hem-Fir and Spruce-Pine-Fir are minimum 1.5" side member thickness.
4. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.

DIAMETER	BENDING YIELD STRENGTH[1] , f_{yb} (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR[2]
#8	110,000	355	340
#10	129,000	485	455

1. Bending yield strength, f_{yb}, is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.
2. Shear strength is determined in accordance with *AISI S904* using minor thread diameter when fastener is tested in threaded section.

DIAMETER	REFERENCE LATERAL SHEAR VALUE[4,5,6], Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY[2,3])		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#8 x 1⅝"	⅞"	¾"	49	65	71
#10 x 2½"	1"	1½"	82	103	118
#10 x 3"	1½"	1½"	100	117	128
#10 x 3½"	1½"	1½"	100	117	128

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N

1. Penetration depth includes the length of tapered tip.
2. The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.
3. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.
4. The fastener orientation shall be perpendicular to the grain, and the underside of the fastener head shall be installed flush with the surface of the side member.
5. Lateral design values apply to both perpendicular grain ($Z_\perp$) and parallel to grain ($Z_\parallel$) orientations.
6. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS 11.3.1.*

DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION[1] (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE[1,3,4], Z (lbf)	
			OSB[5] (0.50)	PLYWOOD[5] (0.39)
#8 x 1⅝"	1 3/16"	7/16"	48	-
#8 x 1⅝"	1 5/32"	15/32"	49	40
#8 x 1⅝"	1 1/32"	19/32"	55	43
#8 x 1⅝"	29/32"	23/32"	55	46
#10 x 2½"	2 1/16"	7/16"	79	-
#10 x 2½"	2 1/32"	15/32"	80	69
#10 x 2½"	1 29/32"	19/32"	85	71
#10 x 2½"	1 25/32"	23/32"	92	74
#10 x 3"	2 1/16"	7/16"	79	-
#10 x 3"	2 1/32"	15/32"	80	69
#10 x 3"	1 29/32"	19/32"	85	71
#10 x 3"	1 25/32"	23/32"	92	74
#10 x 3½"	2 1/16"	7/16"	79	-
#10 x 3½"	2 1/32"	15/32"	80	69
#10 x 3½"	1 29/32"	19/32"	85	71
#10 x 3½"	1 25/32"	23/32"	92	74

SI: 1 in = 25.4 mm, 1 lbf = 4.45 N

1. Reference lateral design values apply to two-member single shear connections where the side member is OSB or plywood, the main member is SPF (SG = 0.42), and the fastener is installed in the face of the member and oriented perpendicular to the grain. The underside of the fastener head shall be installed flush with the surface of the side member.
2. Penetration depth includes the length of the tapered tip.
3. Lateral design values apply to both perpendicular to grain ($Z_{\perp}$) and parallel to grain ($Z_{\parallel}$) orientations.
4. Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1.*
5. OSB shall comply with *DOC PS 2* and have a minimum specific gravity of 0.50. Plywood shall comply with *DOC PS 1* and have a minimum specific gravity of 0.39.

SPAX® ENGINEERED FASTENERS

SPAX SETS THE BAR

AMERICAN-MADE, RIGOROUSLY INSPECTED, BUILT FOR STRENGTH



NOT ALL FASTENERS ARE CREATED EQUAL

Our Green Box Guarantee ensures honest, accurate sizing—not every manufacturer can say the same.

GREENBOX GUARANTEE

When we say 5/16", we mean 5/16"

5/16" **SPAX** = 5/16"

5/16" **COMPETITOR** = 1/4"

ENGINEERED TO DO MORE

We have one purpose—enhance your performance. SPAX fasteners are engineered from head to tip to dramatically cut labor time and help you move on to the next job faster.



T-STAR

REDUCED STRIPPING



HEAT TREATED

FOR STRENGTH AND DURABILITY

ZERO PRE-DRILLING



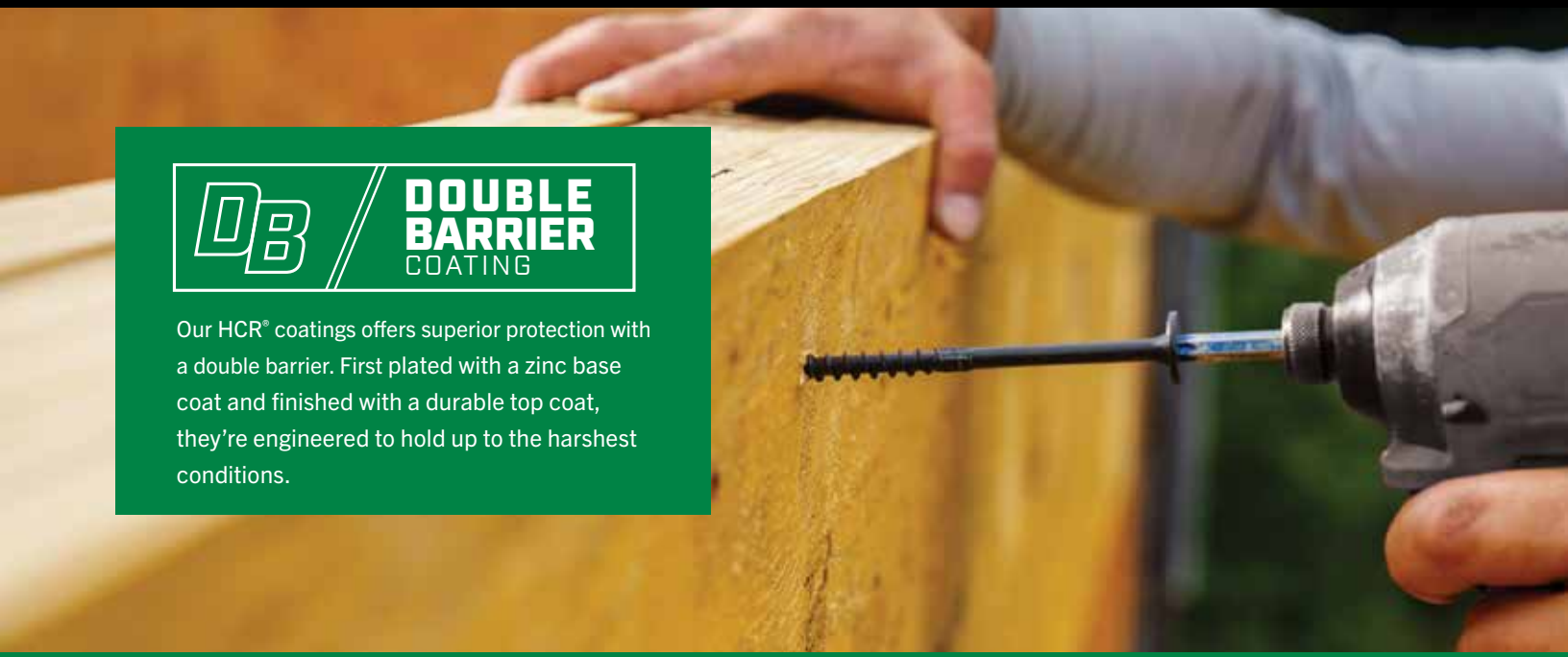
SPAX IS INDEPENDENTLY TESTED AND APPROVED

DrJ Engineering TER reports use specialized testing and industry-approved evaluations to certify that products meet specific performance requirements of the appropriate sections of the appropriate building code. We follow ICC AC257 acceptance criteria for all exterior coated screws.

International Residential Code (IRC)
RESIDENTIAL
IRC applies to detached one-and-two family dwellings and townhouses not more than three stories.

VS

International Building Code (IBC)
BUILDING CODE
IBC applies to all buildings or structures that do not conform to the IRC.



DB / DOUBLE BARRIER COATING

Our HCR® coatings offers superior protection with a double barrier. First plated with a zinc base coat and finished with a durable top coat, they're engineered to hold up to the harshest conditions.

DID YOU KNOW?

Some competitors don't actually test their coatings. They rely on data from their paint company before it makes it onto their screws.

DO YOU KNOW WHERE YOUR FASTENERS WERE MADE?

While most of our competitors ship screws in from overseas, we continuously innovate and make our fasteners from the heart of America to reimagine what structural connections should be.

SPAX
MANUFACTURED IN BRYAN, OH

90% OF STRUCTURAL WOOD-TO-WOOD FASTENERS ARE MANUFACTURED OVERSEAS

MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

The majority of SPAX fasteners are made in America by people that care about getting it right. That means our products are ready to deliver and stock right now from our Ohio HQ to our neighbors across the U.S.

THE SPAX FACTOR™ is a simple formula for working smarter. To multi-ply results and reduce effort — just add SPAX.

SPAX FACTOR™ • SPAX FACTOR™ •

SPAX® ENGINEERED FASTENERS

#SPAXFACTOR



POWERLAGS®

STRUCTURAL WOOD-TO-WOOD CONNECTIONS

SPAX® ENGINEERED FASTENERS

SPAX® PowerLags® are the largest selection of code compliant structural wood-to-wood screws for framing in the industry. Featuring SPAX® proprietary thread technology, they require no pre-drilling, and drive faster and easier than conventional lags and other structural lag screws.

POWERLAGS® FOR STRONG WOOD-TO-WOOD CONNECTIONS

German engineered and American made, SPAX® PowerLags® are professional grade structural screws and sold in job-friendly package quantities, including bulk pails.

- No pre-drilling required (1/4" and 5/16")
- Heat treated for strength and durability
- Independently tested DrJ Engineering Technical Evaluation Reports (TER No. 1912-07; Structural Wood Fastener Properties, TER No. 1711-01; Deck Ledger Attachment and TER No. 1802-03; Multi-ply: Sawn Lumber Assemblies & Engineered Wood Assemblies).
- Serrated threads require up to 40% less driving torque to increase installation speed while helping prevent cracking in logs.
- Built-on washer head designs eliminate the need and extra cost of a separate washer.
- Fastener length stamp on the head provides convenient identification without measuring and aids on-site inspections.

HEAD STYLES



DRIVE TYPES



COATINGS





POWERLAGS®

STRUCTURAL WOOD-TO-WOOD CONNECTIONS

SPAX® ENGINEERED FASTENERS

THE IDEAL REPLACEMENT FOR THE CONVENTIONAL LAG

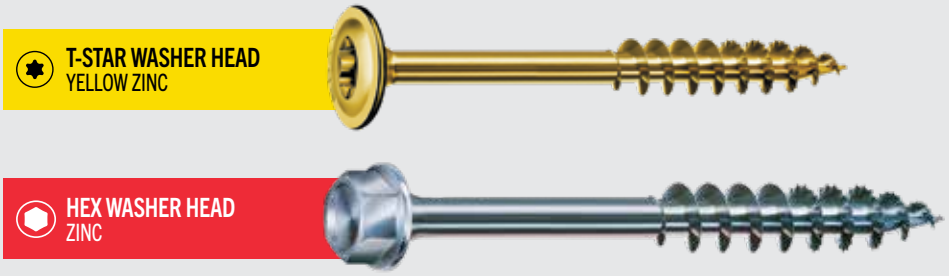
APPLICATIONS

Deck Ledger Attachment
Heavy Carpentry
Multi-Ply – Sawn Lumber and Engineered Wood
Treated Lumber – Decks and Pergolas

EXTERIOR



INTERIOR



Dr J

TER No. 1912-07 Structural Wood Fastener Properties

▲ TER No. 1711-01 Deck Ledger Attachment

■ TER No. 1802-03 Multi-ply Sawn Lumber Assemblies

● TER No. 1802-03 Multi-ply Engineered Wood (LVL, PSL, LSL) Assemblies

PowerLags® for Log Homes

Use for timber frame construction

INTERIOR



T-STAR WASHER HEAD YELLOW ZINC

POWERLAGS®

SPAX® ENGINEERED FASTENERS



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® T-STAR Washer Head construction fasteners with yellow zinc coating are intended for interior structural wood-to-wood connection applications. These fasteners are designed with a low profile, large diameter washer head for applications requiring additional surface area under the head for superior pull-down force. Ideal for framing attachment and multi-ply beam applications.

MATERIALS & COATING

Cold-rolled “carbon steel” wire, heat treated and plated with a yellow zinc finish to prevent red rust. “Yellow zinc” is tested and recognized for use in above ground contact pressure treated lumber for interior dry/damp general construction applications (e.g., AWPA UC1-UC2).



BUILT-ON WASHER HEAD

Eliminates the need and cost of a separate washer.

*T-STAR drive reduces stripping.



SERRATED THREADS

Allow for quicker, easier fastening.

*40% lower driving torque.



RELIABLE CONNECTIONS

Heat treated for strength and durability.

DrJ

TER No. 1912-07
Structural Wood
Fastener Properties



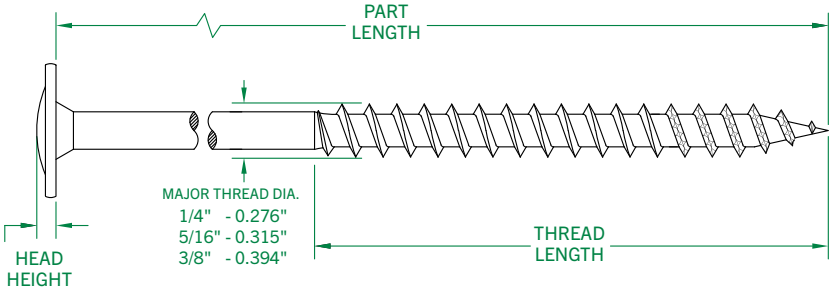
TYPICAL INTERIOR APPLICATIONS

- Multi-ply sawn lumber assemblies
- Multi-ply engineered wood (LVL, PSL, LSL) assemblies
- Interior framing applications
- Shelving applications — interior buildings
- Indoor furniture

T-STAR WASHER HEAD YELLOW ZINC

POWERLAGS®

SPAX® ENGINEERED FASTENERS





DrJ

■ TER No. 1802-03 Multi-ply Sawn Lumber Assemblies

● TER No. 1802-03 Multi-ply Engineered Wood (LVL, PSL, LSL) Assemblies

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
1/4" x 2½"	1.375"	0.697" 0.097"	T30	1	Individual*	50	4581020700637
				12	Project Pax	5	45810207006343
				50	Contractor Pax	4	4581020700635
				500	Bulk Pail	N/A	3581020700630
1/4" x 3"	1.790"	0.697" 0.097"	T30	1	Individual*	50	4581020700767
				12	Project Pax	5	45810207007643
				50	Contractor Pax	4	4581020700765
				500	Bulk Pail	N/A	3581020700760
1/4" x 3½"	1.960"	0.697" 0.097"	T30	1	Individual*	50	4581020700907
				12	Project Pax	5	45810207009043
				50	Contractor Pax	4	4581020700905
				500	Bulk Pail	N/A	3581020700900
1/4" x 4"	2.375"	0.697" 0.097"	T30	1	Individual*	50	4581020701007
				12	Project Pax	5	45810207010043
				50	Contractor Pax	4	4581020701005
				500	Bulk Pail	N/A	3581020701000
1/4" x 4½"	2.375"	0.697" 0.097"	T30	1	Individual*	50	4581020701557
				12	Project Pax	5	45810207015543
				50	Contractor Pax	4	4581020701555
				500	Bulk Pail	N/A	3581020701550
1/4" x 5"	2.375"	0.697" 0.097"	T30	1	Individual*	50	4581020701277
				12	Project Pax	5	45810207012743
				50	Contractor Pax	4	4581020701275
				500	Bulk Pail	N/A	3581020701270
1/4" x 6"	2.375"	0.697" 0.097"	T30	1	Individual*	50	4581020701527
				12	Project Pax	5	45810207015243
				50	Contractor Pax	4	4581020701525
				500	Bulk Pail	N/A	3581020701520

* Bit not included.

T-STAR WASHER HEAD YELLOW ZINC

POWERLAGS®

SPAX® ENGINEERED FASTENERS

DrJ

■ TER No. 1802-03 Multi-ply Sawn Lumber Assemblies

● TER No. 1802-03 Multi-ply Engineered Wood (LVL, PSL, LSL) Assemblies

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
5/16" x 2⅜"	1.375"	0.776" 0.140"	T40	500	Bulk Pail	N/A	3581020800600
5/16" x 3" ■	1.650"	0.776" 0.140"	T40	1	Individual*	25	4581020800767
				12	Project Pax	5	45810208007643
				50	Contractor Pax	4	4581020800765
				250	Bulk Pail	N/A	3581020800760
5/16" x 3½" ●	2.050"	0.776" 0.140"	T40	1	Individual*	25	4581020800907
				50	Contractor Pax	4	4581020800905
				250	Bulk Pail	N/A	3581020800900
5/16" x 4"	2.375"	0.776" 0.140"	T40	1	Individual*	25	4581020801007
				12	Project Pax	5	45810208010043
				50	Contractor Pax	4	4581020801005
				250	Bulk Pail	N/A	3581020801000
5/16" x 4½" ■	2.375"	0.776" 0.140"	T40	1	Individual*	25	4581020801157
				50	Contractor Pax	4	4581020801155
				250	Bulk Pail	N/A	3581020801150
5/16" x 5" ●	2.375"	0.776" 0.140"	T40	1	Individual*	25	4581020801277
5/16" x 6" ■	2.375"	0.776" 0.140"	T40	1	Individual*	25	4581020801527
3/8" x 5"	3.150"	0.970" 0.173"	T50	1	Individual*	15	4581021001277
				25	Contractor Pax	4	4581021001275
				150	Bulk Pail	N/A	3581021001270
3/8" x 6"	3.150"	0.970" 0.173"	T50	1	Individual*	15	4581021001527
				12	Project Pax	5	45810210015243
				25	Contractor Pax	4	4581021001525
				150	Bulk Pail	N/A	3581021001520

NOTE: 3/8" fasteners require 0.175" pilot hole.
* Bit not included.



Individual



Project Pax



Contractor Pax



Bulk Pail



T-STAR Bit

T-STAR WASHER HEAD YELLOW ZINC

POWERLAGS®

SPAX® ENGINEERED FASTENERS

BIT SELECTION

DRIVE BIT	BIT SIZE	MASTER QTY.	PART NO.
T30	1"	10	5000002016309
T40	1"	10	5000002016409
T50	1"	10	5000002016509



NOTE: Only sold in master cartons. Made in Taiwan.

Dr J ■ TER No. 1802-03 Multi-ply Sawn Lumber Assemblies

● TER No. 1802-03 Multi-ply Engineered Wood (LVL, PSL, LSL) Assemblies

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
1/4" x 2½"			5/16" x 3" ■		
1/4" x 3"			5/16" x 3½" ●		
1/4" x 3½"			5/16" x 4"		
1/4" x 4"			5/16" x 4½" ■		
1/4" x 4½"			5/16" x 5" ●		
1/4" x 5"			5/16" x 6" ■		
1/4" x 6"			3/8" x 5"		
5/16" x 2⅜"			3/8" x 6"		

PERFORMANCE SPECIFICATIONS

Dr J TER No. 1912-07 Structural Wood Fastener Properties

DIAMETER	LENGTH	ALLOWABLE WITHDRAWAL (W), HEAD PULL-THROUGH (W_H), LATERAL SHEAR PARALLEL TO GRAIN ($Z_{||}$), AND LATERAL SHEAR PERPENDICULAR TO GRAIN (Z) VALUES[1,2,3,4,5,6,7]											
		SOUTHERN PINE (G=0.55)				DOUGLAS-FIR (G=0.50)				HEM FIR & SPRUCE-PINE-FIR (G=0.42)			
		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR	
		(W)	(W_H)	$Z_{||}$	Z	(W)	(W_H)	$Z_{||}$	Z	(W)	(W_H)	$Z_{||}$	Z
		(lbs./inch)	(lbs.)	(lbf.)	(lbf.)	(lbs./inch)	(lbs.)	(lbf.)	(lbf.)	(lbs./inch)	(lbs.)	(lbf.)	(lbf.)
1/4"	< 3"	375	850	305	285	310	785	265	235	245	585	250	225
	3.5"			390	370			360	340			315	285
	ALL OTHER LENGTHS			400	370			360	335			350	310
5/16"	< 3"	415	965	340	305	300	840	310	280	250	665	265	230
	3.5"			400	380			360	340			325	300
	ALL OTHER LENGTHS			440	405			405	375			380	355
3/8"	ALL	465	1245	530	485	300	1085	475	440	280	880	445	405

1. "Withdrawal", "Head Pull-Through", and "Lateral Shear" design values shall be adjusted by all applicable adjustment factors per *NDS* Table 11.3.1.
2. "Withdrawal" design values are to be multiplied by the length of the thread penetration into the side grain of the main member. Length includes tip.
3. "Withdrawal" design values are from the main member, and "Head Pull-Through" design values are based on a minimum of 1½" side member thickness.
4. Tabulated "Withdrawal" and "Head Pull-Through" design values are for the wood species with the listed assigned specific gravities. Where the wood species assigned specific gravity is not listed, use the next lower assigned specific gravity values.
5. Tabulated "Lateral Shear" design values are for the wood species with the listed assigned specific gravities applied to both the main and side members. Where the members are different assigned specific gravities, use the lower of the two.
6. Tabulated "Lateral Shear" design values require fasteners must be oriented perpendicular to the side grain, and the underside of the fastener head be installed flush with the surface of the side member.
7. Tabulated "Lateral Shear" design values require a minimum fastener penetration into the main member of 1.375" for fasteners less than 4" and 2.375" for all other lengths.

HEX WASHER HEAD ZINC

POWERLAGS®

SPAX® ENGINEERED FASTENERS



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® Hex Washer Head construction fasteners with zinc coating are intended for wood-to-wood connections in interior structural applications. These fasteners are designed with a hex head conventional driver system along with a built-on washer for applications requiring additional surface area under the head for superior pull-down force. Often used for blind, high torque applications where you need additional engagement between socket and head.

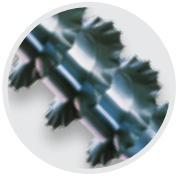
MATERIALS & COATING

Cold-rolled "carbon steel" wire, heat treated and plated with a zinc finish to prevent red rust. "Clear zinc" is tested and recognized for use in untreated and above ground contact pressure treated lumber for interior dry/damp general construction applications (e.g., AWPA UC1-UC2).



BUILT-ON WASHER HEAD

Eliminates the need and cost of a separate washer.



SERRATED THREADS

Allow for quicker, easier fastening.

*40% lower driving torque.



RELIABLE CONNECTIONS

Heat treated for strength and durability.

DrJ

TER No. 1912-07
Structural Wood
Fastener Properties



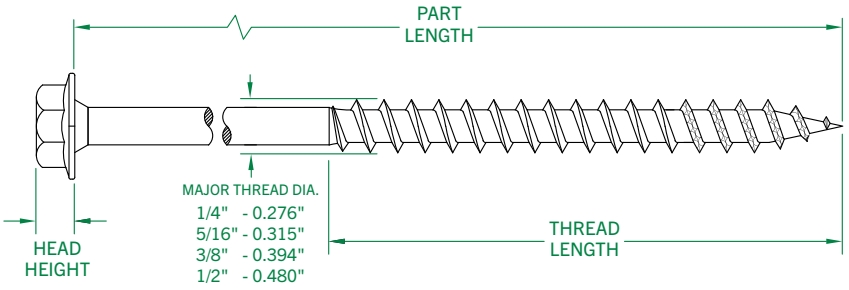
TYPICAL INTERIOR APPLICATIONS

- Wall mount TV
- Stair landings and framing
- Shelving
- Hex drive is very common in them household tool box making it simpler to drive with a power tool or hand ratchet
- Specific fixtures like metal channel requiring a lag but with limited space for the head

HEX WASHER HEAD ZINC

POWERLAGS®

SPAX® ENGINEERED FASTENERS





PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
1/4" x 2"	1.770"	0.545" 0.210"	3/8"	1	Individual*	50	4571010700507
				50	Contractor Pax	4	4571010700505
				500	Bulk Pail	N/A	3571010700500
1/4" x 3"	2.360"	0.545" 0.210"	3/8"	1	Individual*	50	4571010700757
				50	Contractor Pax	4	4571010700755
				500	Bulk Pail	N/A	3571010700750
1/4" x 3½"	2.360"	0.545" 0.210"	3/8"	1	Individual*	50	4571010700907
				50	Contractor Pax	4	4571010700905
				500	Bulk Pail	N/A	3571010700900
1/4" x 4"	2.375"	0.545" 0.210"	3/8"	1	Individual*	50	4571010701007
				50	Contractor Pax	4	4571010701005
				500	Bulk Pail	N/A	3571010701000
1/4" x 4½"	2.375"	0.545" 0.210"	3/8"	1	Individual*	50	4571010701157
				50	Contractor Pax	4	4571010701155
				500	Bulk Pail	N/A	3571010701150
1/4" x 5"	2.375"	0.545" 0.210"	3/8"	1	Individual*	50	4571010701277
				50	Contractor Pax	4	4571010701275
				500	Bulk Pail	N/A	3571010701270
1/4" x 6"	2.375"	0.545" 0.210"	3/8"	1	Individual*	50	4571010701527
				50	Contractor Pax	4	4571010701525
				500	Bulk Pail	N/A	3571010701520
5/16" x 3"	2.360"	0.591" 0.248"	7/16"	50	Contractor Pax	4	4571010800755
				250	Bulk Pail	N/A	3571010800750
5/16" x 4"	2.993"	0.591" 0.248"	7/16"	1	Individual*	25	4571010801007
				50	Contractor Pax	4	4571010801005
				250	Bulk Pail	N/A	3571010801000
3/8" x 5"	3.150"	0.748" 0.307"	1/2"	1	Individual*	15	4571010101277
				25	Contractor Pax*	4	4571011001275
				150	Bulk Pail*	N/A	3571011001270

* Bit not included.

HEX WASHER HEAD ZINC

POWERLAGS®

SPAX® ENGINEERED FASTENERS

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
3/8" x 6"	3.150"	0.748" 0.307"	1/2"	1	Individual*	15	4571010101527
				25	Contractor Pax*	4	4571011001525
				150	Bulk Pail*	N/A	3571011001520
3/8" x 8"	3.150"	0.748" 0.307"	1/2"	150	Bulk Pail*	N/A	3571011002030
1/2" x 5"	3.150"	0.858" 0.394"	5/8"	1	Individual*	10	4571010121277
				25	Contractor Pax*	4	4571011201275
				100	Bulk Pail*	N/A	3571011201270
1/2" x 6"	3.150"	0.858" 0.394"	5/8"	1	Individual*	10	4571010121527
				25	Contractor Pax*	4	4571011201525
				100	Bulk Pail*	N/A	3571011201520

NOTE: 3/8" fasteners require 0.175" pilot hole. 1/2" fasteners require 0.200" pilot hole.
* Bit not included.



Individual



Contractor Pax®



Bulk Pail



Hex Driver Bit

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
1/4" x 2"			5/16" x 3"		
1/4" x 3"			5/16" x 4"		
1/4" x 3½"			3/8" x 5"		
1/4" x 4"			3/8" x 6"		
1/4" x 4½"			3/8" x 8"		
1/4" x 5"			1/2" x 5"		
1/4" x 6"			1/2" x 6"		

HEX WASHER HEAD ZINC

POWERLAGS®

SPAX® ENGINEERED FASTENERS

PERFORMANCE SPECIFICATIONS

DrJ TER No. 1912-07
Structural Wood Fastener Properties

DIAMETER	LENGTH	ALLOWABLE WITHDRAWAL (W), HEAD PULL-THROUGH (W_H), LATERAL SHEAR PARALLEL TO GRAIN ($Z_{||}$), AND LATERAL SHEAR PERPENDICULAR TO GRAIN (Z) VALUES[1,2,3,4,5,6,7]											
		SOUTHERN PINE (G=0.55)				DOUGLAS-FIR (G=0.50)				HEM FIR & SPRUCE-PINE-FIR (G=0.42)			
		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR	
		(W)	(W_H)	$Z_{||}$	Z	(W)	(W_H)	$Z_{||}$	Z	(W)	(W_H)	$Z_{||}$	Z
		(lbs./inch)	(lbs.)	(lbf.)	(lbf.)	(lbs./inch)	(lbs.)	(lbf.)	(lbf.)	(lbs./inch)	(lbs.)	(lbf.)	(lbf.)
1/4"	< 3"	375	700	305	285	310	640	265	235	245	455	250	225
	3.5"			390	370			360	340			315	285
	ALL OTHER LENGTHS			400	370			360	335			350	310
5/16"	< 3"	415	755	340	305	300	680	310	280	250	500	265	230
	3.5"			400	380			360	340			325	300
	ALL OTHER LENGTHS			440	405			405	375			380	355
3/8"	ALL	465	985	530	485	300	825	475	440	280	575	445	405
1/2"	ALL	445	1185	585	475	275	970	550	400	275	865	500	370

1. "Withdrawal", "Head Pull-Through", and "Lateral Shear" design values shall be adjusted by all applicable adjustment factors per *NDS* Table 11.3.1.
2. "Withdrawal" design values are to be multiplied by the length of the thread penetration into the side grain of the main member. Length includes tip.
3. "Withdrawal" design values are from the main member, and "Head Pull-Through" design values are based on a minimum of 1½" side member thickness.
4. Tabulated "Withdrawal" and "Head Pull-Through" design values are for the wood species with the listed assigned specific gravities. Where the wood species assigned specific gravity is not listed, use the next lower assigned specific gravity values.
5. Tabulated "Lateral Shear" design values are for the wood species with the listed assigned specific gravities applied to both the main and side members. Where the members are different assigned specific gravities, use the lower of the two.
6. Tabulated "Lateral Shear" design values require fasteners must be oriented perpendicular to the side grain, and the underside of the fastener head be installed flush with the surface of the side member.
7. Tabulated "Lateral Shear" design values require a minimum fastener penetration into the main member of 1.375" for fasteners less than 4" and 2.375" for all other lengths.

T-STAR WASHER HEAD HCR®

POWERLAGS®

SPAX® ENGINEERED FASTENERS



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® T-STAR Washer Head construction fasteners with HCR® coating are intended for wood-to-wood connections in exterior structural applications when attaching treated lumber components. These fasteners are designed with a low profile, large diameter wafer head for applications requiring additional surface area under the head for superior pull-down force. Ideal for deck ledger attachment and multi-ply beam applications.

MATERIALS & COATING

Cold-rolled "carbon steel" wire heat treated and plated with an HCR® (High Corrosion Resistance) double barrier coating. "HCR" is tested and recognized for use in ground contact pressure treated lumber for exterior, freshwater general construction applications (e.g., AWPA UC1-UC4A, UCFA).



BUILT-ON WASHER HEAD

Eliminates the need and cost of a separate washer.

*T-STAR drive reduces stripping.



SERRATED THREADS

Allow for quicker, easier fastening.

*40% lower driving torque.



RELIABLE CONNECTIONS

Heat treated for strength and durability.

DrJ

TER No. 1912-07
Structural Wood
Fastener Properties



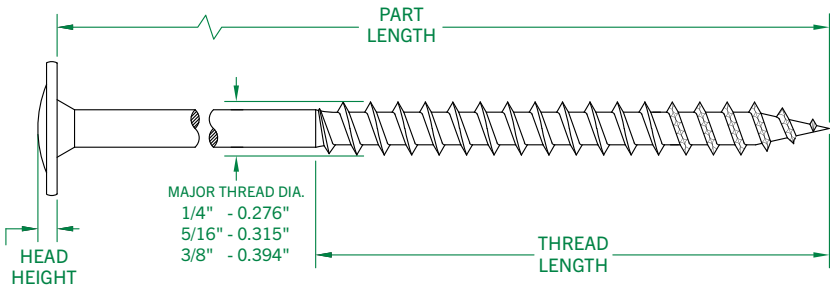
TYPICAL EXTERIOR APPLICATIONS

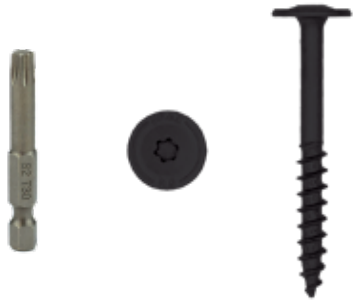
- Multi-ply LVL beam assembly
- Multi-ply girder truss assembly
- Exterior treated lumber pergolas & gazebos
- Landscaping timber
- Outdoor furniture
- Exterior fencing posts
- Exterior out buildings
- Deck ledger to residential band joist attachment

T-STAR WASHER HEAD HCR®

POWERLAGS®

SPAX® ENGINEERED FASTENERS





DrJ

▲ TER No. 1711-01 Deck Ledger Attachment

■ TER No. 1802-03 Multi-ply Sawn Lumber Assemblies

● TER No. 1802-03 Multi-ply Engineered Wood (LVL, PSL, LSL) Assemblies

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
1/4" x 2½"	1.375"	0.697" 0.097"	T30	1	Individual*	50	4581820700637
				12	Project Pax	5	45818207006343
				50	Contractor Pax	4	4581820700635
				500	Bulk Pail	N/A	3581820700630
1/4" x 3"	1.790"	0.697" 0.097"	T30	1	Individual*	50	4581820700767
				12	Project Pax	5	45818207007643
				50	Contractor Pax	4	4581820700765
				200	Mini Bulk Pail	N/A	3581820700761
				500	Bulk Pail	N/A	3581820700760
1/4" x 3½"	1.960"	0.697" 0.097"	T30	1	Individual*	50	4581820700907
				12	Project Pax	5	45818207009043
				50	Contractor Pax	4	4581820700905
				500	Bulk Pail	N/A	3581820700900
1/4" x 4"	2.375"	0.697" 0.097"	T30	1	Individual*	50	4581820701007
				12	Project Pax	5	45818207010043
				50	Contractor Pax	4	4581820701005
				200	Mini Bulk Pail	N/A	3581820701001
				500	Bulk Pail	N/A	3581820701000
1/4" x 4½"	2.375"	0.697" 0.097"	T30	1	Individual*	50	4581820701557
				12	Project Pax	5	45818207015543
				50	Contractor Pax	4	4581820701555
				500	Bulk Pail	N/A	3581820701550
1/4" x 5"	2.375"	0.697" 0.097"	T30	1	Individual*	50	4581820701277
				12	Project Pax	5	45818207012743
				50	Contractor Pax	4	4581820701275
				200	Mini Bulk Pail	N/A	3581820701271
				500	Bulk Pail	N/A	3581820701270

* Bit not included.

T-STAR WASHER HEAD HCR®

POWERLAGS®

SPAX® ENGINEERED FASTENERS

DrJ

▲ TER No. 1711-01 Deck Ledger Attachment

■ TER No. 1802-03 Multi-ply Sawn Lumber Assemblies

● TER No. 1802-03 Multi-ply Engineered Wood (LVL, PSL, LSL) Assemblies

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
1/4" x 6"	2.375"	0.697" 0.097"	T30	1	Individual*	50	4581820701527
				12	Project Pax	5	45818207015243
				50	Contractor Pax	4	4581820701525
				200	Mini Bulk Pail	N/A	3581820701521
				500	Bulk Pail	N/A	3581820701520
5/16" x 3" ■	1.650"	0.776" 0.140"	T40	1	Individual*	25	4581820800767
				12	Project Pax	5	45818208007643
				50	Contractor Pax	4	4581820800765
				250	Bulk Pail	N/A	3581820800760
5/16" x 3½" ●	2.050"	0.776" 0.140"	T40	1	Individual*	25	4581820800907
				12	Project Pax	5	45818208009043
				50	Contractor Pax	4	4581820800905
				250	Bulk Pail	N/A	3581820800900
5/16" x 4" ▲	2.375"	0.776" 0.140"	T40	1	Individual*	25	4581820801007
				12	Project Pax	5	45818208010043
				50	Contractor Pax	4	4581820801005
				150	Mini Bulk Pail	N/A	3581820801001
				250	Bulk Pail	N/A	3581820801000
5/16" x 4½" ■	2.375"	0.776" 0.140"	T40	1	Individual*	25	4581820801157
				12	Project Pax	5	45818208011543
				50	Contractor Pax	4	4581820801155
				250	Bulk Pail	N/A	3581820801150
5/16" x 5" ● ▲	2.375"	0.776" 0.140"	T40	1	Individual*	25	4581820801277
				12	Project Pax	5	45818208012743
				50	Contractor Pax	4	4581820801275
				150	Mini Bulk Pail	N/A	3581820801271
				250	Bulk Pail	N/A	3581820801270
5/16" x 6" ■	2.375"	0.776" 0.140"	T40	1	Individual*	25	4581820801527
				12	Project Pax	5	45818208015243
				50	Contractor Pax	4	4581820801525
				150	Mini Bulk Pail	N/A	3581820801521
				250	Bulk Pail	N/A	3581820801520
5/16" x 6¾" ●	2.375"	0.776" 0.140"	T40	50	Contractor Pax	4	4581820801715
				250	Bulk Pail	N/A	3581820801710

* Bit not included.

T-STAR WASHER HEAD HCR®

POWERLAGS®

SPAX® ENGINEERED FASTENERS

DrJ

▲ TER No. 1711-01 Deck Ledger Attachment

■ TER No. 1802-03 Multi-ply Sawn Lumber Assemblies

● TER No. 1802-03 Multi-ply Engineered Wood (LVL, PSL, LSL) Assemblies

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
5/16" x 8"	2.375"	0.776" 0.140"	T40	1	Individual*	25	4581820802037
				12	Project Pax	5	45818208020343
				50	Contractor Pax	2	4581820802035
				150	Bulk Pail	N/A	3581820802030
5/16" x 10"	2.375"	0.776" 0.140"	T40	1	Individual*	25	4581820802547
				12	Project Pax	5	45818208025443
				50	Contractor Pax	2	4581820802545
				150	Bulk Pail	N/A	3581820802540
5/16" x 12"	2.375"	0.776" 0.140"	T40	1	Individual*	25	4581820803047
				50	Contractor Pax	2	4581820803045
				150	Bulk Pail	N/A	3581820803040
3/8" x 5"	3.150"	0.970" 0.173"	T50	1	Individual*	15	4581821001277
				12	Project Pax	5	45818210012743
				25	Contractor Pax	4	4581821001275
				150	Bulk Pail	N/A	3581821001270
3/8" x 6"	3.150"	0.970" 0.173"	T50	1	Individual*	15	4581821001527
				12	Project Pax	5	45818210015243
				25	Contractor Pax	4	4581821001525
				150	Bulk Pail	N/A	3581821001520
3/8" x 8"	3.150"	0.970" 0.173"	T50	1	Individual*	15	4581821002037
				25	Contractor Pax®	4	4581821002035
				150	Bulk Pail	N/A	3581821002030
3/8" x 10"	3.150"	0.970" 0.173"	T50	1	Individual*	15	4581821002547
				150	Bulk Pail	N/A	3581821002540

NOTE: 3/8" fasteners require 0.175" pilot hole.
* Bit not included.



Individual



Project Pax®


Contractor Pax®


Mini Bulk Pail



Bulk Pail



T-STAR Bit

T-STAR WASHER HEAD HCR®

POWERLAGS®

SPAX® ENGINEERED FASTENERS

BIT SELECTION

DRIVE BIT	BIT SIZE	MASTER QTY.	PART NO.
T30	1"	10	5000002016309
T40	1"	10	5000002016409
T50	1"	10	5000002016509



NOTE: Only sold in master cartons. Made in Taiwan.

Dr J

▲ TER No. 1711-01 Deck Ledger Attachment

■ TER No. 1802-03 Multi-ply Sawn Lumber Assemblies

● TER No. 1802-03 Multi-ply Engineered Wood (LVL, PSL, LSL) Assemblies

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
1/4" x 2½"			5/16" x 5" ●▲		
1/4" x 3"			5/16" x 6" ■		
1/4" x 3½"			5/16" x 6¾" ●		
1/4" x 4"			5/16" x 8"		
1/4" x 4½"			5/16" x 10"		
1/4" x 5"			5/16" x 12"		
1/4" x 6"			3/8" x 5"		
5/16" x 3" ■			3/8" x 6"		
5/16" x 3½" ●			3/8" x 8"		
5/16" x 4" ▲			3/8" x 10"		
5/16" x 4½" ■					

T-STAR WASHER HEAD HCR®

POWERLAGS®

SPAX® ENGINEERED FASTENERS

PERFORMANCE SPECIFICATIONS

DrJ TER No. 1912-07
Structural Wood Fastener Properties

DIAMETER	LENGTH	ALLOWABLE WITHDRAWAL (W), HEAD PULL-THROUGH (W_H), LATERAL SHEAR PARALLEL TO GRAIN ($Z_{||}$), AND LATERAL SHEAR PERPENDICULAR TO GRAIN (Z) VALUES[1,2,3,4,5,6,7]											
		SOUTHERN PINE (G=0.55)				DOUGLAS-FIR (G=0.50)				HEM FIR & SPRUCE-PINE-FIR (G=0.42)			
		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR	
		(W)	(W_H)	$Z_{||}$	Z	(W)	(W_H)	$Z_{||}$	Z	(W)	(W_H)	$Z_{||}$	Z
		(lbs./inch)	(lbs.)	(lbf.)	(lbf.)	(lbs./inch)	(lbs.)	(lbf.)	(lbf.)	(lbs./inch)	(lbs.)	(lbf.)	(lbf.)
1/4"	< 3"	375	850	305	285	310	785	265	235	245	585	250	225
	3.5"			390	370			360	340			315	285
	ALL OTHER LENGTHS			400	370			360	335			350	310
5/16"	< 3"	415	965	340	305	300	840	310	280	250	665	265	230
	3.5"			400	380			360	340			325	300
	ALL OTHER LENGTHS			440	405			405	375			380	355
3/8"	ALL	465	1245	530	485	300	1085	475	440	280	880	445	405

1. "Withdrawal", "Head Pull-Through", and "Lateral Shear" design values shall be adjusted by all applicable adjustment factors per *NDS* Table 11.3.1.
2. "Withdrawal" design values are to be multiplied by the length of the thread penetration into the side grain of the main member. Length includes tip.
3. "Withdrawal" design values are from the main member, and "Head Pull-Through" design values are based on a minimum of 1½" side member thickness.
4. Tabulated "Withdrawal" and "Head Pull-Through" design values are for the wood species with the listed assigned specific gravities. Where the wood species assigned specific gravity is not listed, use the next lower assigned specific gravity values.
5. Tabulated "Lateral Shear" design values are for the wood species with the listed assigned specific gravities applied to both the main and side members. Where the members are different assigned specific gravities, use the lower of the two.
6. Tabulated "Lateral Shear" design values require fasteners must be oriented perpendicular to the side grain, and the underside of the fastener head be installed flush with the surface of the side member.
7. Tabulated "Lateral Shear" design values require a minimum fastener penetration into the main member of 1.375" for fasteners less than 4" and 2.375" for all other lengths.

HEX WASHER HEAD HCR®

POWERLAGS®

SPAX® ENGINEERED FASTENERS



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

DESCRIPTION

SPAX® Hex Washer Head construction fasteners with HCR® coating are intended for wood-to-wood connections in exterior structural applications when attaching treated lumber components. These fasteners are designed with a hex head conventional driver system along with a built-on washer for applications requiring additional surface area under the head for superior pull-down force. Ideal for deck ledger attachment. Often used for blind, high torque applications where you need additional engagement from a socket to screw head.

MATERIALS & COATING

Cold-rolled "carbon steel" wire heat treated and plated with an HCR® (High Corrosion Resistance) double barrier coating. "HCR" is tested and recognized for use in ground contact pressure treated lumber for exterior, freshwater general construction applications (e.g., AWPA UC1-UC4A, UCFA).



BUILT-ON WASHER HEAD

Eliminates the need and cost of a separate washer.



SERRATED THREADS

Allow for quicker, easier fastening.

*40% lower driving torque.



RELIABLE CONNECTIONS

Heat treated for strength and durability.

DrJ

TER No. 1912-07
Structural Wood
Fastener Properties



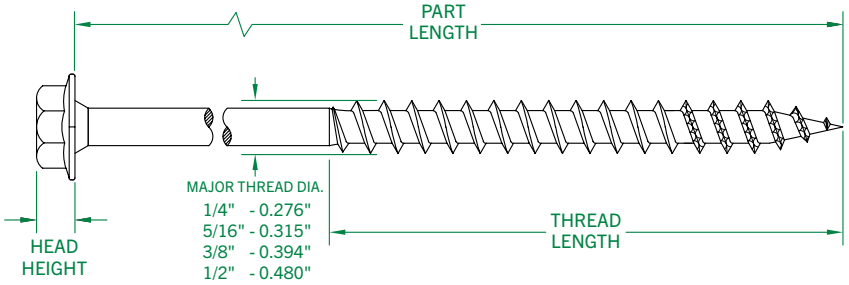
TYPICAL EXTERIOR APPLICATIONS

- Deck ledger to residential band joist attachment
- Exterior treated lumber pergolas & gazebos
- Landscaping timber
- Outdoor furniture
- Exterior fencing posts
- Exterior out buildings

HEX WASHER HEAD HCR®

POWERLAGS®

SPAX® ENGINEERED FASTENERS





▲ TER No. 1711-01
Deck Ledger Attachment

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
1/4" x 1½"	Full	0.545" 0.210"	3/8"	1	Individual*	50	4571820700407
				12	Project Pax	5	45718207004043
				500	Bulk Pail	N/A	3571820700400
1/4" x 2"	1.770"	0.545" 0.210"	3/8"	1	Individual*	50	4571820700507
				12	Project Pax	5	45718207005043
				50	Contractor Pax	4	4571820700505
				500	Bulk Pail	N/A	3571820700500
1/4" x 3"	2.360"	0.545" 0.210"	3/8"	1	Individual*	50	4571820700757
				12	Project Pax	5	45718207007543
				50	Contractor Pax	4	4571820700755
				500	Bulk Pail	N/A	3571820700750
1/4" x 5"	2.375"	0.545" 0.210"	3/8"	1	Individual*	50	4571820701277
				12	Project Pax	5	45718207012743
				50	Contractor Pax	4	4571820701275
				500	Bulk Pail	N/A	3571820701270
1/4" x 6"	2.375"	0.545" 0.210"	3/8"	1	Individual*	50	4571820701527
				12	Project Pax	5	45718207015243
				50	Contractor Pax	4	4571820701525
				500	Bulk Pail	N/A	3571820701520
5/16" x 3"	2.360"	0.591" 0.248"	7/16"	1	Individual*	25	4571820800757
				50	Contractor Pax	4	4571820800755
				250	Bulk Pail	N/A	3571820800750
5/16" x 3½"	2.993"	0.591" 0.248"	7/16"	1	Individual*	25	4571820800907
				50	Contractor Pax	4	4571820800905
				250	Bulk Pail	N/A	3571820800900
5/16" x 4" ▲	2.993"	0.591" 0.248"	7/16"	1	Individual*	25	4571820801007
				12	Project Pax	5	45718208010043
				50	Contractor Pax	4	4571820801005
				250	Bulk Pail	N/A	3571820801000

* Bit not included.

HEX WASHER HEAD HCR®

POWERLAGS®

SPAX® ENGINEERED FASTENERS

Dr J ▲ TER No. 1711-01
Deck Ledger Attachment

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
5/16" x 5" ▲	2.375"	0.591" 0.248"	7/16"	1	Individual*	25	4571820801277
				12	Project Pax	5	45718208012743
				50	Contractor Pax	4	4571820801275
				250	Bulk Pail	N/A	3571820801270
3/8" x 5"	3.150"	0.748" 0.307"	1/2"	1	Individual*	15	4571820101277
				25	Contractor Pax*	4	4571821001275
				150	Bulk Pail*	N/A	3571821001270
3/8" x 6"	3.150"	0.748" 0.307"	1/2"	1	Individual*	15	4571820101527
				25	Contractor Pax*	4	4571821001525
				150	Bulk Pail*	N/A	3571821001520
1/2" x 5"	3.150"	0.858" 0.394"	5/8"	1	Individual*	10	4571820121277
				25	Contractor Pax*	4	4571821201275
				100	Bulk Pail*	N/A	3571821201270
1/2" x 6"	3.150"	0.858" 0.394"	5/8"	25	Contractor Pax*	4	4571821201525
				100	Bulk Pail*	N/A	3571821201520
1/2" x 8"	3.150"	0.858" 0.394"	5/8"	1	Individual*	10	4571820122037
				100	Bulk Pail*	N/A	3571821202030
1/2" x 10"	3.150"	0.858" 0.394"	5/8"	1	Individual*	10	4571820122547
				100	Bulk Pail*	N/A	3571821202540
1/2" x 12"	3.150"	0.858" 0.394"	5/8"	100	Bulk Pail*	N/A	3571821203040

NOTE: 3/8" fasteners require 0.175" pilot hole. 1/2" fasteners require 0.200" pilot hole.
* Bit not included.



Individual



Project Pax®


Contractor Pax®



Bulk Pail


Hex Driver Bit

EXTERIOR

HEX WASHER HEAD HCR®

POWERLAGS®

SPAX® ENGINEERED FASTENERS

DrJ ▲ TER No. 1711-01
Deck Ledger Attachment

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
1/4" x 1½"			5/16" x 5" ▲		
1/4" x 2"			3/8" x 5"		
1/4" x 3"			3/8" x 6"		
1/4" x 5"			1/2" x 5"		
1/4" x 6"			1/2" x 6"		
5/16" x 3"			1/2" x 8"		
5/16" x 3½"			1/2" x 10"		
5/16" x 4" ▲			1/2" x 12"		

EXTERIOR

PERFORMANCE SPECIFICATIONS

DrJ TER No. 1912-07
Structural Wood Fastener Properties

DIAMETER	LENGTH	ALLOWABLE WITHDRAWAL (W), HEAD PULL-THROUGH (W_H), LATERAL SHEAR PARALLEL TO GRAIN (Z_{II}), AND LATERAL SHEAR PERPENDICULAR TO GRAIN (Z) VALUES[1,2,3,4,5,6,7]											
		SOUTHERN PINE (G=0.55)				DOUGLAS-FIR (G=0.50)				HEM FIR & SPRUCE-PINE-FIR (G=0.42)			
		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR	
		(W)	(W_H)	Z_{II}	Z	(W)	(W_H)	Z_{II}	Z	(W)	(W_H)	Z_{II}	Z
		(lbs./inch)	(lbs.)	(lbf.)	(lbf.)	(lbs./inch)	(lbs.)	(lbf.)	(lbf.)	(lbs./inch)	(lbs.)	(lbf.)	(lbf.)
1/4"	< 3"	375	700	305	285	310	640	265	235	245	455	250	225
	3.5"			390	370			360	340			315	285
	ALL OTHER LENGTHS			400	370			360	335			350	310
5/16"	< 3"	415	755	340	305	300	680	310	280	250	500	265	230
	3.5"			400	380			360	340			325	300
	ALL OTHER LENGTHS			440	405			405	375			380	355
3/8"	ALL	465	985	530	485	300	825	475	440	280	575	445	405
1/2"	ALL	445	1185	585	475	275	970	550	400	275	865	500	370

1. "Withdrawal", "Head Pull-Through", and "Lateral Shear" design values shall be adjusted by all applicable adjustment factors per *NDS* Table 11.3.1.
2. "Withdrawal" design values are to be multiplied by the length of the thread penetration into the side grain of the main member. Length includes tip.
3. "Withdrawal" design values are from the main member, and "Head Pull-Through" design values are based on a minimum of 1½" side member thickness.
4. Tabulated "Withdrawal" and "Head Pull-Through" design values are for the wood species with the listed assigned specific gravities. Where the wood species assigned specific gravity is not listed, use the next lower assigned specific gravity values.
5. Tabulated "Lateral Shear" design values are for the wood species with the listed assigned specific gravities applied to both the main and side members. Where the members are different assigned specific gravities, use the lower of the two.
6. Tabulated "Lateral Shear" design values require fasteners must be oriented perpendicular to the side grain, and the underside of the fastener head be installed flush with the surface of the side member.
7. Tabulated "Lateral Shear" design values require a minimum fastener penetration into the main member of 1.375" for fasteners less than 4" and 2.375" for all other lengths.

T-STAR WASHER HEAD BLACK eCOAT

LOG HOME & TIMBER FRAME CONSTRUCTION

SPAX® ENGINEERED FASTENERS

MADE IN USA
WITH GLOBALLY SOURCED MATERIALS



DESCRIPTION

SPAX® T-STAR Washer Head fasteners with eCoat coating are designed for use in wood-to-wood connections often found inside log homes or timber frame applications. These fasteners are designed with a low profile, large diameter wafer head for applications requiring additional surface area under the head for superior pull-down force.

MATERIALS & COATING

Cold-rolled "carbon steel" wire, heat treated and plated with an eCoat finish to prevent red rust. "eCoat" is recognized for use in untreated and above ground contact pressure treated lumber for interior dry/damp general construction applications (e.g., AWPA UC1-UC2).



BUILT-ON WASHER HEAD

Eliminates the need and cost of a separate washer.

*T-STAR drive reduces stripping.



SERRATED THREADS

Allow for quicker, easier fastening.

*40% lower driving torque.



RELIABLE CONNECTIONS

Heat treated for strength and durability.

DrJ

TER No. 1912-07
Structural Wood
Fastener Properties



TYPICAL APPLICATIONS

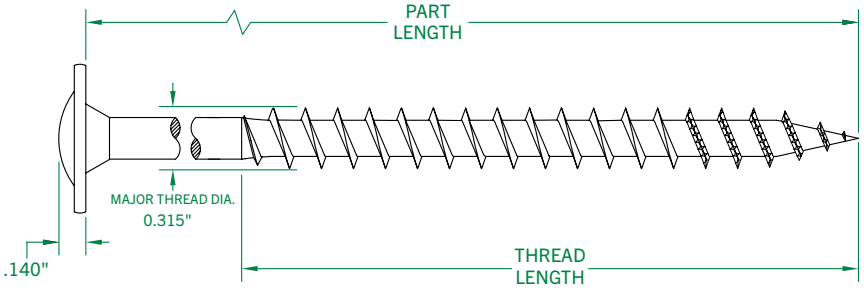
- Log Home & Timber Framing Applications
  - Wall log attachment/assembly (Log Homes)
  - Beams and Engineered Wood connections (Timber Framing)
- General Heavy Construction Applications
  - Job-site built SIP roofing systems
  - Rafter to post connection (Overhanging Porch)
  - Deck ledgers
  - Decorative hangers
  - Landscaping timbers
  - Retainer walls

INTERIOR

T-STAR WASHER HEAD BLACK eCOAT

LOG HOME & TIMBER FRAME CONSTRUCTION

SPAX® ENGINEERED FASTENERS





PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
5/16" x 6"	2.375"	0.776"	T40	250	Bulk Pail	N/A	3581770801500
5/16" x 8"	2.375"	0.776"	T40	250	Bulk Pail	N/A	3581770802000
5/16" x 9"	2.375"	0.776"	T40	250	Bulk Pail	N/A	3581770802200
5/16" x 10"	2.375"	0.776"	T40	250	Bulk Pail	N/A	3581770802500
5/16" x 11"	2.375"	0.776"	T40	250	Bulk Pail	N/A	3581770802700
5/16" x 12"	2.375"	0.776"	T40	250	Bulk Pail	N/A	3581770803000
5/16" x 14"	2.375"	0.776"	T40	250	Bulk Pail	N/A	3581770803500
5/16" x 15"	2.375"	0.776"	T40	250	Bulk Pail	N/A	3581770803800
5/16" x 16"	2.375"	0.776"	T40	250	Bulk Pail	N/A	3581770804000



Bulk Pail

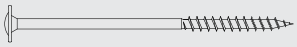
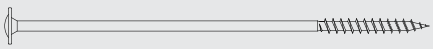
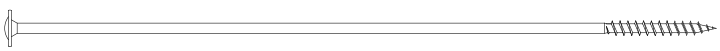
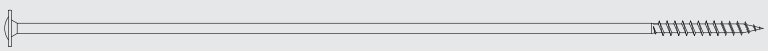
BIT SELECTION

DRIVE BIT	BIT SIZE	MASTER QTY.	PART NO.
T40	1"	10	5000002016409



NOTE: Only sold in master cartons. Made in Taiwan.

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER
5/16" x 6"		
5/16" x 8"		
5/16" x 9"		
5/16" x 10"		
5/16" x 11"		
5/16" x 12"		
5/16" x 14"		
5/16" x 15"		
5/16" x 16"		

PERFORMANCE SPECIFICATIONS

DrJ TER No. 1912-07
Structural Wood Fastener Properties

DIAMETER	ALLOWABLE WITHDRAWAL (W), HEAD PULL-THROUGH (W_H), LATERAL SHEAR PARALLEL TO GRAIN (Z_{II}), AND LATERAL SHEAR PERPENDICULAR TO GRAIN (Z) VALUES[1,2,3,4,5,6,7]											
	SOUTHERN PINE (G=0.55)				DOUGLAS-FIR (G=0.50)				HEM FIR & SPRUCE-PINE-FIR (G=0.42)			
	WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR	
	(W)	(W_H)	Z_{II}	Z	(W)	(W_H)	Z_{II}	Z	(W)	(W_H)	Z_{II}	Z
	(lbs./inch)	(lbs.)	(lbf.)	(lbf.)	(lbs./inch)	(lbs.)	(lbf.)	(lbf.)	(lbs./inch)	(lbs.)	(lbf.)	(lbf.)
5/16"	415	965	440	405	300	840	405	375	250	665	380	355

1. "Withdrawal", "Head Pull-Through", and "Lateral Shear" design values shall be adjusted by all applicable adjustment factors per *NDS* Table 11.3.1.
2. "Withdrawal" design values are to be multiplied by the length of the thread penetration into the side grain of the main member. Length includes tip.
3. "Withdrawal" design values are from the main member, and "Head Pull-Through" design values are based on a minimum of 1½" side member thickness.
4. Tabulated "Withdrawal" and "Head Pull-Through" design values are for the wood species with the listed assigned specific gravities. Where the wood species assigned specific gravity is not listed, use the next lower assigned specific gravity values.
5. Tabulated "Lateral Shear" design values are for the wood species with the listed assigned specific gravities applied to both the main and side members. Where the members are different assigned specific gravities, use the lower of the two.
6. Tabulated "Lateral Shear" design values require fasteners must be oriented perpendicular to the side grain, and the underside of the fastener head be installed flush with the surface of the side member.
7. Tabulated "Lateral Shear" design values require a minimum fastener penetration into the main member of 1.375" for fasteners less than 4" and 2.375" for all other lengths.

T-STAR PANCAKE HEAD BLACK eCOAT

LOG HOME & TIMBER FRAME CONSTRUCTION

SPAX® ENGINEERED FASTENERS

MADE IN USA
WITH GLOBALLY SOURCED MATERIALS

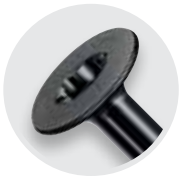


DESCRIPTION

SPAX® T-STAR Pancake Head fasteners with eCoat coating are designed for use in wood-to-wood connections often found inside log homes or timber frame applications. These fasteners are designed with a low profile, large diameter pancake head for applications requiring additional surface area under the head for superior pull-down force.

MATERIALS & COATING

Cold-rolled "carbon steel" wire, heat treated and plated with an eCoat finish to prevent red rust. "eCoat" is recognized for use in untreated and above ground contact pressure treated lumber for interior dry/damp general construction applications (e.g., AWPA UC1-UC2).



PANCAKE HEAD

Offers the ultimate in flush or countersunk installation to help ensure a tight connection between logs.



SERRATED THREADS

Allow for quicker, easier fastening.
*40% lower driving torque.



RELIABLE CONNECTIONS

Heat treated for strength and durability.

Dr J

TER No. 1912-07
Structural Wood
Fastener Properties



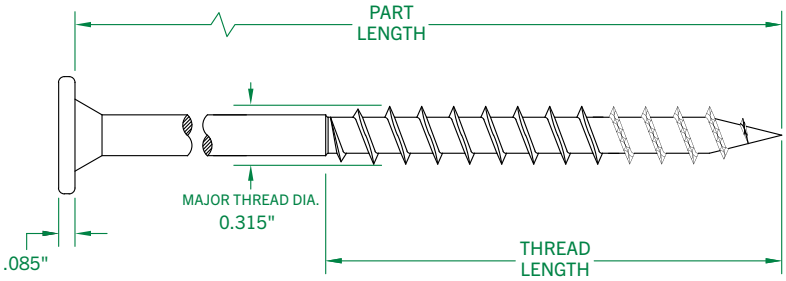
TYPICAL APPLICATIONS

- Log Home & Timber Framing Applications
  - Wall log attachment/assembly (Log Homes)
  - Beams and Engineered Wood connections (Timber Framing)
- General Heavy Construction Applications
  - Job-site built SIP roofing systems
  - Rafter to post connection (Overhanging Porch)
  - Deck ledgers
  - Decorative hangers
  - Landscaping timbers
  - Retainer walls

T-STAR PANCAKE HEAD BLACK eCOAT

LOG HOME & TIMBER FRAME CONSTRUCTION

SPAX® ENGINEERED FASTENERS





PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
5/16" x 4"	2.375"	0.610"	T40	250	Bulk Pail	N/A	3601770801000
5/16" x 6"	2.375"	0.610"	T40	250	Bulk Pail	N/A	3601770801500
5/16" x 8"	2.375"	0.610"	T40	250	Bulk Pail	N/A	3601770802000
5/16" x 9"	2.375"	0.610"	T40	250	Bulk Pail	N/A	3601770802200
5/16" x 10"	2.375"	0.610"	T40	250	Bulk Pail	N/A	3601770802500
5/16" x 11"	2.375"	0.610"	T40	250	Bulk Pail	N/A	3601770802700
5/16" x 12"	2.375"	0.610"	T40	250	Bulk Pail	N/A	3601770803000
5/16" x 14"	2.375"	0.610"	T40	250	Bulk Pail	N/A	3601770803500
5/16" x 15"	2.375"	0.610"	T40	250	Bulk Pail	N/A	3601770803800
5/16" x 16"	2.375"	0.610"	T40	250	Bulk Pail	N/A	3601770804000



Bulk Pail

BIT SELECTION

DRIVE BIT	BIT SIZE	MASTER QTY.	PART NO.
T40	1"	10	5000002016409



NOTE: Only sold in master cartons. Made in Taiwan.

INTERIOR

T-STAR PANCAKE HEAD BLACK eCOAT

LOG HOME & TIMBER FRAME CONSTRUCTION

SPAX® ENGINEERED FASTENERS

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER
5/16" x 4"		
5/16" x 6"		
5/16" x 8"		
5/16" x 9"		
5/16" x 10"		
5/16" x 11"		
5/16" x 12"		
5/16" x 14"		
5/16" x 15"		
5/16" x 16"		

PERFORMANCE SPECIFICATIONS

DrJ TER No. 1912-07
Structural Wood Fastener Properties

DIAMETER	ALLOWABLE WITHDRAWAL (W), HEAD PULL-THROUGH (W_H), LATERAL SHEAR PARALLEL TO GRAIN (Z_{II}), AND LATERAL SHEAR PERPENDICULAR TO GRAIN (Z) VALUES[1,2,3,4,5,6,7]											
	SOUTHERN PINE (G=0.55)				DOUGLAS-FIR (G=0.50)				HEM FIR & SPRUCE-PINE-FIR (G=0.42)			
	WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR	
	(W)	(W_H)	Z_{II}	Z	(W)	(W_H)	Z_{II}	Z	(W)	(W_H)	Z_{II}	Z
	(lbs./inch)	(lbs.)	(lbf.)	(lbf.)	(lbs./inch)	(lbs.)	(lbf.)	(lbf.)	(lbs./inch)	(lbs.)	(lbf.)	(lbf.)
5/16"	415	965	440	405	300	840	405	375	250	665	380	355

1. "Withdrawal", "Head Pull-Through", and "Lateral Shear" design values shall be adjusted by all applicable adjustment factors per *NDS* Table 11.3.1.
2. "Withdrawal" design values are to be multiplied by the length of the thread penetration into the side grain of the main member. Length includes tip.
3. "Withdrawal" design values are from the main member, and "Head Pull-Through" design values are based on a minimum of 1½" side member thickness.
4. Tabulated "Withdrawal" and "Head Pull-Through" design values are for the wood species with the listed assigned specific gravities. Where the wood species assigned specific gravity is not listed, use the next lower assigned specific gravity values.
5. Tabulated "Lateral Shear" design values are for the wood species with the listed assigned specific gravities applied to both the main and side members. Where the members are different assigned specific gravities, use the lower of the two.
6. Tabulated "Lateral Shear" design values require fasteners must be oriented perpendicular to the side grain, and the underside of the fastener head be installed flush with the surface of the side member.
7. Tabulated "Lateral Shear" design values require a minimum fastener penetration into the main member of 1.375" for fasteners less than 4" and 2.375" for all other lengths.

T-STAR*plus*® CYLINDRIC HEAD WIROX®

TRUSS SCREW

SPAX® ENGINEERED FASTENERS



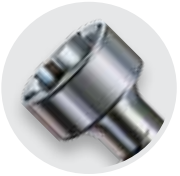
MADE IN GERMANY

DESCRIPTION

SPAX® T-STAR*plus*® Cylindric Head fasteners with WIROX® coating are designed for interior framing applications typically found in residential dwelling truss/rafter attachments.

MATERIALS & COATING

Cold-rolled "carbon steel" wire, heat treated and plated with a WIROX® finish to prevent red rust. "WIROX" is tested and recognized for use in untreated and above ground contact pressure treated lumber for interior dry/damp general construction applications (e.g., AWPA UC1-UC2, UCFA).



CYLINDRIC HEAD

Has a low splitting effect and pulls flush into the wood substrate.



UNIQUE *4CUT*™ POINT

Prevents splitting and requires no pre-drilling in wood.



SERRATED THREADS

Allow for quicker, easier fastening.

U.S. Patent No. 7,101,133



T-STAR*plus*® DRIVE

"The PRO's Choice" drive system provides superior bit engagement, eliminates camming out and facilitates overhead driving.

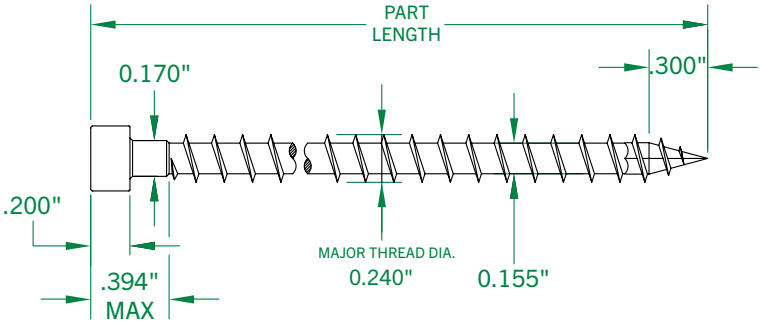


TYPICAL INTERIOR APPLICATIONS

- DrJ TER No. 1910-02
- Truss/Rafter to top wall plate connection
- Ideal replacement for hurricane ties/straps

T-STAR*plus*® CYLINDRIC HEAD WIROX®

TRUSS SCREW





DrJ ◆ TER No. 1910-02
Trusses Properties & Applications

PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD SIZE	DRIVE/BIT SIZE	QTY.	PKG. TYPE	MASTER QTY.	PART NO.
#14 x 6¼" ◆	Full	0.320"	T30+	50	Contractor Pax	N/A	42110106016045
				500	Bulk Pail	N/A	32110106016040



Contractor Pax®



Bulk Pail

BIT SELECTION

DRIVE BIT	BIT SIZE	MASTER QTY.	PART NO.
T30+	1"	10	5000009185309
	2"	10	5000009285309

NOTE: Only sold in master cartons. Made in Taiwan.



DrJ ◆ TER No. 1910-02
Trusses Properties & Applications

FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER
#14 x 6¼" ◆		

PERFORMANCE SPECIFICATIONS

TER No. 1912-07
Structural Wood Fastener Properties

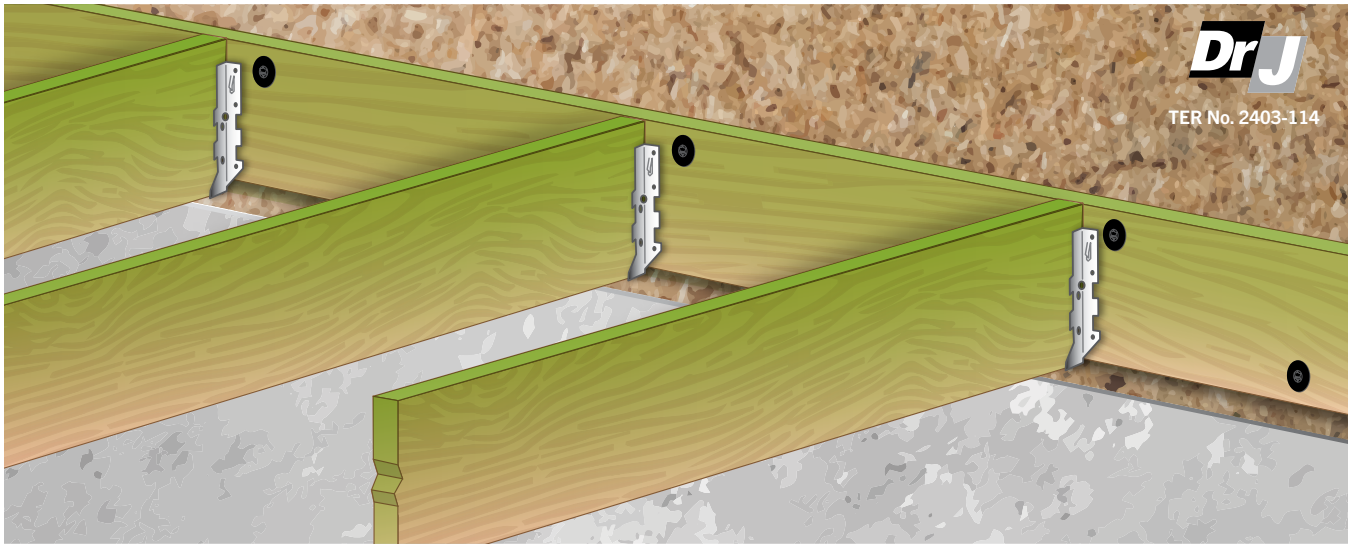
ALLOWABLE STEEL STRENGTH[1]			ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (P) DESIGN VALUES[2,3,4,5]					
			HEM FIR & SPRUCE-PINE-FIR (0.42)		DOUGLAS-FIR (0.50)		SOUTHERN PINE (0.55)	
DIAMETER	TENSILE STRENGTH (lbs.)	SHEAR STRENGTH (lbs.)	WITHDRAWAL W (lbs./in.)	HEAD PULL-THROUGH (lbs.) P (lbs.)	WITHDRAWAL W (lbs./in.)	HEAD PULL-THROUGH (lbs.) P (lbs.)	WITHDRAWAL W (lbs./in.)	HEAD PULL-THROUGH (lbs.) P (lbs.)
#14 x 6¼"	990	750	130	235	130	285	205	285

1. Shear strength is determined in accordance with *AISI S904* using minor thread diameter when fastener is tested in threaded section.
2. Tabulated pull-through values shall be adjusted by all applicable adjustment factors per *NDS* Table 11.3.1.
3. For wood species with an assigned specific gravity greater than 0.50, use the tabulated values for specific gravity of 0.50.
4. Tabulated withdrawal values shall be adjusted by all applicable adjustment factors per *NDS* Table 11.3.1.
5. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.55. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.

DECK LEDGER TECHNICAL BULLETIN

SPAX® ENGINEERED FASTENERS

POWERLAGS® XF | STRUCTURAL APPLICATIONS



DECK LEDGER FASTENING SOLUTION WITH SPAX® POWERLAGS® XF

SPAX® 5/16" PowerLags® XF fasteners have been tested for prescriptive solutions that are equivalent to the International Residential Code for deck ledger attachment. When installed per this technical bulletin, SPAX 5/16" PowerLags XF fasteners can be used in place of 1/2" lag screws as described in Table R507.9.1.3(1)+ of the 2018, 2021, and 2024 IRC.

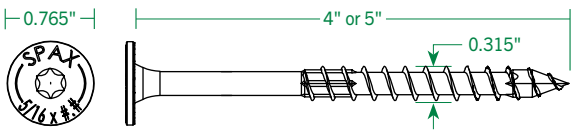
+ 2015 IRC Table R507.2, 2012 IRC Table R507.2

PRODUCT FEATURES

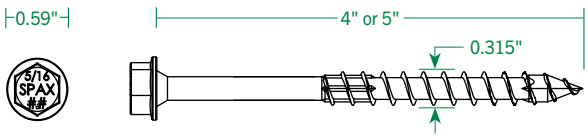
- Code compliant per DrJ TER No. 2403-114.
- Patented thread technology requires no pre-drilling, and drives faster and easier than conventional lag screws.
- Two head types to choose from:
  - Hex Washer Head
  - T-STAR Pancake Head
- HCR® Coating has been tested to ICC-ES standards (AC257) and has proven to be equivalent to code approved hot-dip galvanized coatings. HCR is suitable for many preservative-treated woods and exterior applications.
- Diameter and fastener length on head provides easy identification.

INSTALLATION INSTRUCTIONS

1) Select the preferred head style and appropriate length PowerLag fastener to ensure the threads fully engage the band joist and the fastener tip extends beyond the back face of the band joist.
2) Using an impact driver or a 1/2" low rpm/high torque electric drill and appropriate driver bit, install the PowerLag through the ledger and sheathing into the band joist until the built-in washer is drawn firm and flush to the ledger board. Do not overdrive.
3) Stagger the PowerLag fasteners from top to bottom along the length of the ledger while maintaining the required spacing, edge and end distances as found in Figure 1, 2 and Table 1.



5/16" x 4" or 5" T-STAR Pancake Head PowerLags® XF with HCR® Coating



5/16" x 4" or 5" Hex Washer Head PowerLags® XF with HCR® Coating

DECK LEDGER TECHNICAL BULLETIN

SPAX® ENGINEERED FASTENERS

POWERLAGS® XF STRUCTURAL APPLICATIONS

FIGURE 1

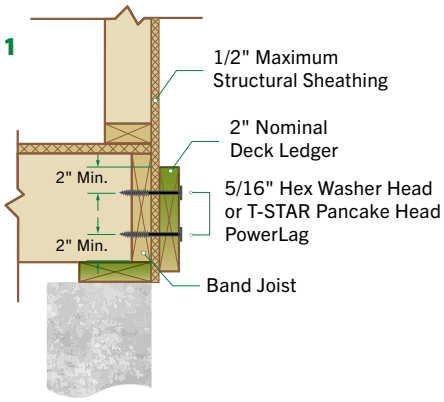
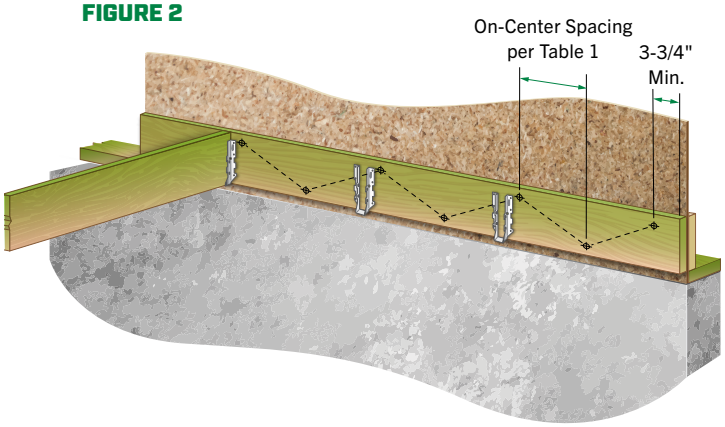


FIGURE 2



DrJ TER No. 2403-114

TABLE 1

LOADING CONDITION (psf)	FASTENER LENGTH[2] (in)	2X NOMINAL LEDGER SPECIES[3,4,5,6,7]	BAND JOIST MATERIAL[8]	MAXIMUM DECK JOIST SPANS						
				UP TO 6'	UP TO 8'	UP TO 10'	UP TO 12'	UP TO 14'	UP TO 16'	UP TO 18'
				MAXIMUM ON-CENTER SPACING (in) OF SPAX XF SERIES 5/16" POWERLAG FASTENERS[1,9]						
LL + DL 40 + 10	4" or 5"	DF/SP/HF/ SPF	Sawn Lumber	18	13	11	9	7	6	6
			1⅛" min EWP*	14	11	8	7	6	5	4
LL + DL 50 + 10		DF/SP/HF/ SPF	Sawn Lumber	15	11	9	7	6	5	5
			1⅛" min EWP*	12	9	7	6	5	4	4
LL + DL 60 + 10		DF/SP/HF/ SPF	Sawn Lumber	13	9	7	6	5	4	4
			1⅛" min EWP*	10	8	6	5	4	4	3
SL + DL 70 + 10		DF/SP/HF/ SPF	Sawn Lumber	11	8	6	5	4	4	3
			1⅛" min EWP*	9	7	5	4	4	3	3

*Engineered Wood Product (EWP)

1. Based on load duration of 1.0.
2. Fasteners are required to have full thread penetration into the main member. Fastener tip must extend beyond the back face of the band joist.
3. Fasteners shall be staggered from the top to the bottom along the length of the ledger with fastener tip extending beyond while maintaining the required edge and end distances as shown in Figures 1 and 2.
4. A maximum 1/2" structural sheathing fastened per code, may be installed between the ledger and the band joist.
5. Minimum ledger board requirements: 1½" thick by 7½" depth. Must be greater than or equal to the depth of the deck joist and no greater than the depth of the band joist.
6. Solid sawn ledger shall be HF/SPF or DF/SP species, designed by others.
7. Ledger materials assumed to be in wet service condition.
8. Minimum band joist requirements: SPF (specific gravity of 0.42) solid-sawn lumber 1½" thick and 7½" depth; Engineered Wood Product (EWP) 1⅛" thick by 7¼" depth.
9. Tabulated on-center spacing values are applicable where a third party tested plastic washer (e.g. Deck2Wall® Spacer) is installed between the ledger board and band joist at each fastener location. The plastic washer shall be installed per the washer manufacturer's instructions and this TER. The plastic washer shall be 2" in diameter, 1/2" thick (max), with an approximate 5/16" hole in the center for the PowerLag and three 3/16" (approx.) holes for the #8 screws. The plastic washer shall be independently fastened to the ledger with three SPAX #8 x 1⅝" or three SPAX #8 x 2" screws.

- For guidance on designing a deck ledger to truss connection where a band joist is not used, see SBCA's Tech Note, "Attachment of Residential Deck Ledger to Metal Plate Connected Wood Truss Floor System" available at www.sbcindustry.com.
- Attachment of a deck ledger to concrete or CMU/masonry using PowerLags® is outside the scope of this technical bulletin.
- This technical bulletin is subject to periodic review and updates. For the most current version, visit www.spax.us.
- For a comprehensive review of SPAX PowerLags for use in deck ledger attachment, please see "DrJ TER No. 2403-114" available at www.drjengineering.com.

MULTI-PLY TECHNICAL BULLETIN

POWERLAGS® XF STRUCTURAL APPLICATIONS

SPAX® ENGINEERED FASTENERS





MULTI-PLY FASTENING SOLUTION WITH SPAX® POWERLAGS® XF

SPAX® PowerLags® XF have been evaluated for single-side fastening of sawn lumber and engineered wood beams. When installed per this technical bulletin, SPAX PowerLags XF can be used to confidently join and secure LVL, PSL, LSL, and Sawn Lumber multi-ply beams that can be loaded on both the head and point side of the fastener.

PRODUCT FEATURES

- Code listed per DrJ TER No. 2410-103.
- Patented thread technology requires no pre-drilling, and drives faster and easier than conventional lag screws.
- T-STAR Pancake Head for a slim, low revealing head option.
- Hex Head for easy insertion and removal.
- Two coatings types to choose from:
  - Yellow Zinc - for use in interior applications
  - HCR® - for use in exterior sawn lumber beams when pressure treated or fire retardant treated (FRT) lumber is specified.
- Fastener length and diameter on head provides easy identification.

INSTALLATION INSTRUCTIONS

1) Select the proper length fastener according to Tables 2 & 3 for the given multi-ply assembly. Ensure the fastener has a minimum of 1" penetration into the last ply (main member) of the assembly.
2) Install using an impact driver or low rpm/high torque electric drill. Pre-drilling is typically not required but can be used when lumber is prone to splitting. When pre-drilling, use a maximum 3/16" bit for 1/4" diameter, 7/32" for 5/16" diameter, or 1/4" for 3/8" diameter fastener.
3) Drive the fastener until the head is drawn firm and flush and all plies are drawn tightly together. Do not overdrive.
4) Install fasteners in either 2 or 3 rows (staggered or in-line) per Tables 2 & 3. For top loaded beams, refer to Figures 3 & 5. Individual screw locations may be adjusted up to 3" to avoid hardware or lumber defects.

FIGURE 1: SPAX T-STAR PANCAKE HEAD FASTENER

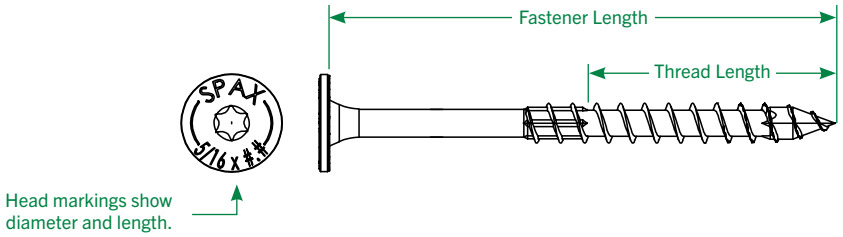


FIGURE 2: MINIMUM SPACING REQUIREMENTS

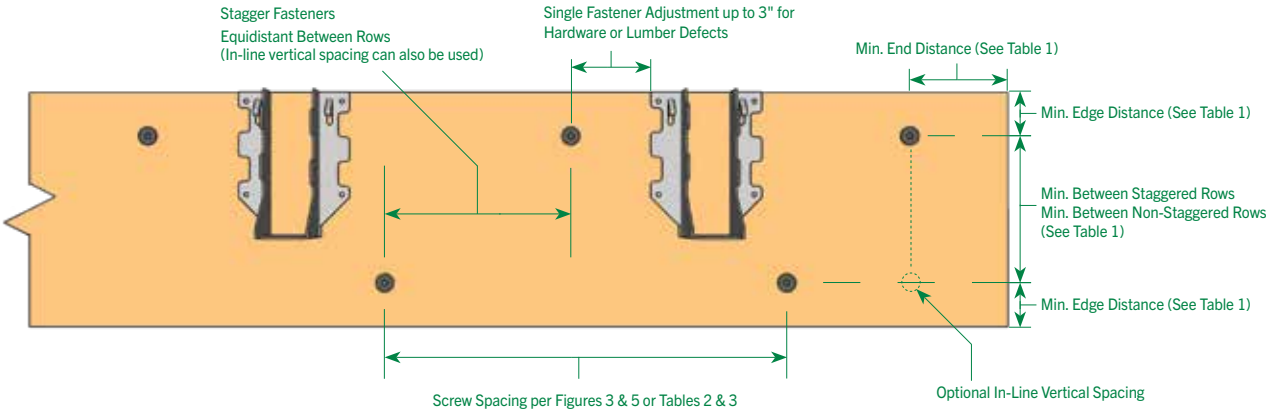


TABLE 1: SPAX® POWERLAGS® XF FASTENER SPECIFICATIONS AND STRENGTH DETAILS

FASTENER NAME	HEAD	DIAMETER[2] (IN)			BENDING YIELD[1], (PSI)	MINIMUM DISTANCES			
		SHANK	MINOR	MAJOR		MIN. END	MIN. EDGE	MIN. BETWEEN STAGGERED ROWS	MIN. BETWEEN NON-STAGGERED ROWS
1/4"	Hex	0.199	0.183	0.276	150,000	3"	1/2"	1/2"	1"
	Pancake								
5/16"	Hex	0.220	0.200	0.315	160,000	3⅜"	5/8"	5/8"	1⅛"
	Pancake								
3/8"	Hex	0.271	0.240	0.394	150,000	4⅛"	3/4"	3/4"	1⅜"
	Pancake								

For SI: 1" = 25.4mm, 1 lbf = 4.45 N, 1 psi = 6.895 kPa.

1. Determine in accordance with methods specified in ASTM F1575, based on minor thread diameter using a 5% offset of the load displacement curves developed from bending tests.
2. Fastener dimensions are as measured on uncoated fasteners.

MULTI-PLY SAWN LUMBER ASSEMBLIES

FIGURE 3: TOP LOADED BEAMS

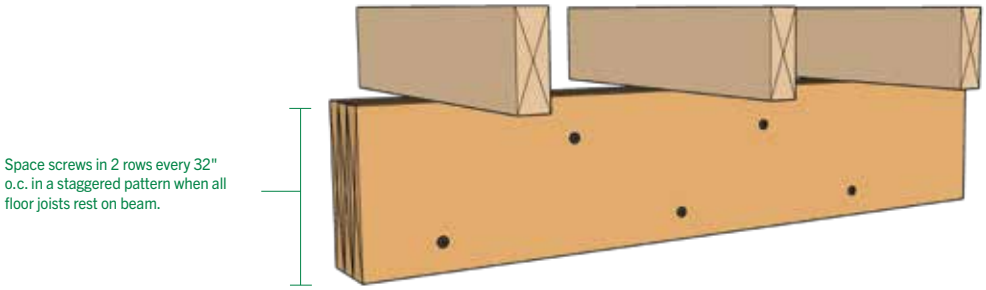


FIGURE 4: SPAX® POWERLAGS® XF FASTENER ASSEMBLIES FOR TRUSS AND SAWN LUMBER

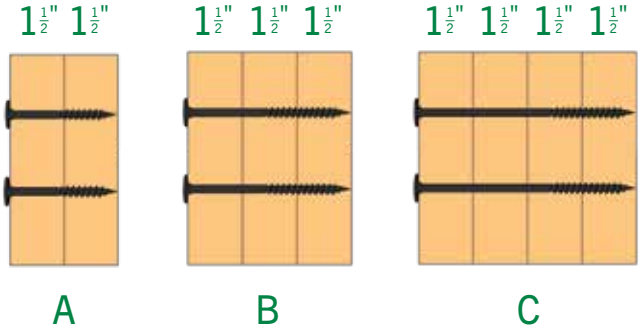


TABLE 2: SPAX® POWERLAGS® XF FASTENER ALLOWABLE DESIGN VALUES (PLF) FOR MULTI-PLY TRUSS AND SAWN LUMBER ASSEMBLIES

MULTIPLE MEMBERS		DIAMETER	FASTENER LENGTH[1,2] (IN.)	LOADED SIDE	SPF/HF (0.42)						DF/SP (0.50)					
					12" O.C.		16" O.C.		24" O.C.		12" O.C.		16" O.C.		24" O.C.	
ASSEMBLY	COMPONENTS				2 ROWS	3 ROWS	2 ROWS	3 ROWS	2 ROWS	3 ROWS	2 ROWS	3 ROWS	2 ROWS	3 ROWS	2 ROWS	3 ROWS
A	2-ply 1½"	1/4"	3"	Either	480	715	360	540	240	360	630	940	470	705	315	470
B	3-ply 1½"		4"	Head	415	620	310	465	205	310	525	790	395	590	265	395
				Point	320	485	240	360	160	240	390	580	290	435	195	290
C	4-ply 1½"		6"	Head	370	555	275	415	185	275	465	700	350	525	235	350
				Point	330	495	250	370	165	250	420	630	315	470	210	315
A	2-ply 1½"	5/16"	3"	Either	480	725	360	545	240	360	665	995	500	750	330	500
B	3-ply 1½"		4"	Head	445	670	335	505	225	335	575	860	430	645	285	430
				Point	365	550	275	410	185	275	435	650	325	490	215	325
C	4-ply 1½"		6"	Head	400	595	300	445	200	300	510	765	380	575	255	380
				Point	360	540	270	405	180	270	450	675	335	505	225	335
C	4-ply 1½"	3/8"	6"	Head	445	670	335	505	225	335	565	845	425	635	280	425
				Point	410	610	305	460	205	305	500	750	375	560	250	375

For SI: 1" = 25.4mm, 1 lbf = 4.45 N, 1 psi = 6.895 kPa.

1. Fastener length is measured from the underside of the head to the tip.
2. Thread length includes tip; see Figure 1.
3. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity greater than 0.50, use the tabulated values for specific gravity of 0.50. DF-L = Douglas Fir-Larch, SP = Southern Pine, SPF = Spruce-Pine-Fir, HF Hem-Fir.
4. Allowable loads are based on a load duration factor C_D = 1.0 and shall be multiplied by all applicable adjustment factors per the NDS.

MULTI-PLY ENGINEERED WOOD ASSEMBLIES

FIGURE 5 : TOP LOADED BEAMS

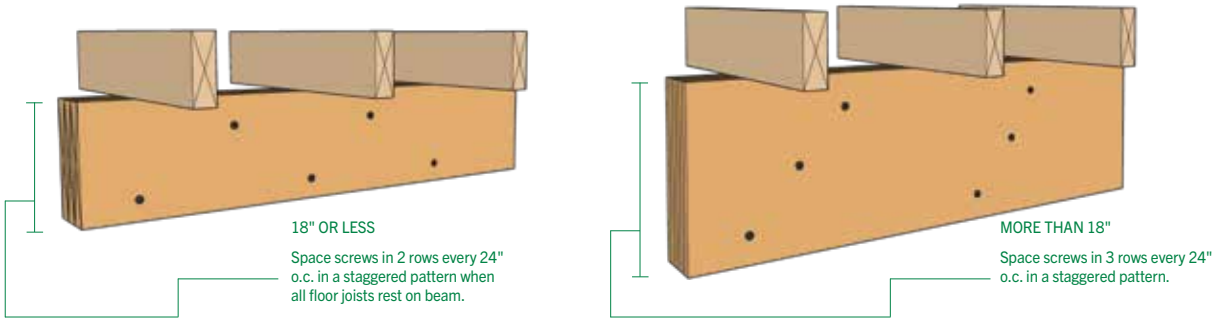


FIGURE 6: SPAX® POWERLAGS® XF FASTENER ASSEMBLIES FOR ENGINEERED WOOD

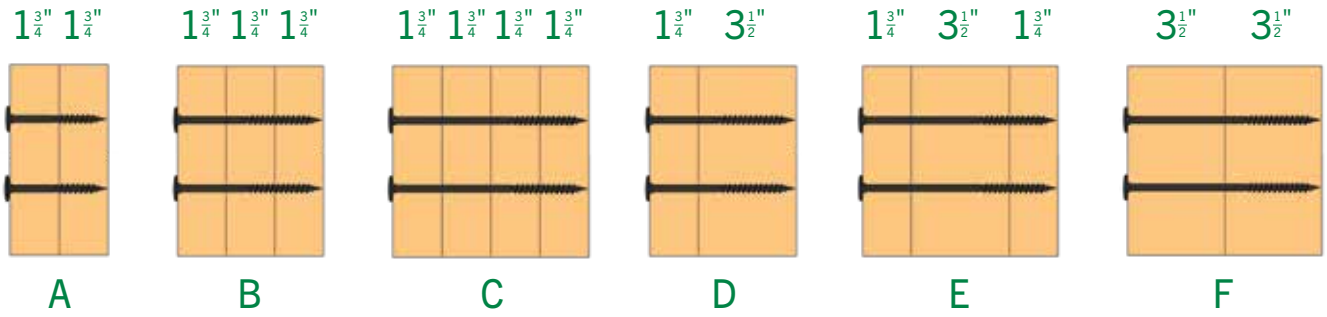


TABLE 3: SPAX® POWERLAGS® XF FASTENER ALLOWABLE DESIGN VALUES (PLF) FOR MULTI-PLY ENGINEERED WOOD (LVL, PSL, LSL) ASSEMBLIES

MULTIPLE MEMBER		DIAMETER	FASTENER LENGTH[1,2] (IN.)	LOADED SIDE	12" O.C.		16" O.C.		24" O.C.	
ASSEMBLY	COMPONENTS				2 ROWS	3 ROWS	2 ROWS	3 ROWS	2 ROWS	3 ROWS
A	2-ply 1¾"	1/4"	3"	Either	700	1,050	525	790	350	525
B	3-ply 1¾"		5"	Head	525	790	395	590	265	395
				Point	470	705	355	530	235	355
C	4-ply 1¾"		6"	Head	465	700	350	525	235	350
				Point	330	495	250	370	165	250
D	2-ply 1¾" & 3½"		5"	Head	700	1,050	525	790	350	525
				Point	630	940	470	705	315	470
E	3-ply 1¾" & 3½"		6"	Head	525	790	395	590	265	395
				Point	370	555	280	420	185	280
F	2-ply 3½"		6"	Either	700	1,050	525	790	350	525
A	2-ply 1¾"	5/16"	3"	Either	740	1,110	555	835	370	555
B	3-ply 1¾"		5"	Head	605	905	455	680	300	455
				Point	505	755	380	565	250	380
C	4-ply 1¾"		6"	Head	535	805	405	605	270	405
				Point	450	675	335	505	225	335
D	2-ply 1¾" & 3½"		5"	Head	805	1,210	605	905	405	605
				Point	675	1,010	505	755	335	505
E	3-ply 1¾" & 3½"		6"	Head	605	905	455	680	300	455
				Point	505	755	380	565	250	380
F	2-ply 3½"		6"	Either	805	1,210	605	905	405	605
B	3-ply 1¾"	3/8"	5"	Head	690	1,035	515	775	345	515
				Point	560	840	420	630	280	420
C	4-ply 1¾"		6"*	Head	615	920	460	690	305	460
D	2-ply 1¾" & 3½"		5"	Head	920	1,380	690	1,035	460	690
				Point	750	1,120	560	840	375	560
E	3-ply 1¾" & 3½"		6"*	Head	690	1,035	515	775	345	515
F	2-ply 3½"		6"	Either	970	1,450	725	1,090	485	725

For SI: 1" = 25.4mm, 1 lbf = 4.45 N, 1 psi = 6.895 kPa.

1. Fastener length is measured from the underside of the head to the tip.
2. Thread length includes tip; see Figure 1.
3. Wood members shall have an equivalent specific gravity of 0.50 or greater.
4. Allowable loads are based on a load duration factor C_D = 1.0 and shall be multiplied by all applicable adjustment factors per the NDS.

* Loading on point-side lamination is not permitted.

TRUSS/RAFTER TO TOP PLATE TECHNICAL BULLETIN

SPAX® ENGINEERED FASTENERS

TRUSS SCREW | STRUCTURAL APPLICATIONS





TRUSS & RAFTER TO TOP PLATE FASTENING SOLUTIONS WITH SPAX® POWERLAGS®

SPAX® #14 Cylindric Head PowerLags® have been evaluated to secure the critical connection between a wall's top plate and a truss or rafter. As an alternative fastening method to hurricane clips, straps and ties, this technical bulletin demonstrates how the #14 Cylindric Head PowerLags® are a quick and easy fastening solution between the top plate and truss or rafter and provides detailed guidelines for code compliance.

PRODUCT FEATURES

- Code listed per DrJ TER No. 1910-02.
- Proprietary thread serrations and Unique *4CUT*™ Point allow for quick and easy installation with no pre-drilling.
- Exclusive T-STAR*plus*® drive provides superior bit engagement to eliminate camming out and to facilitate single hand, overhead driving.
- Cylindric head easily countersinks into the plate and stud and provides a clean finish for drywall and finish trades.
- Proprietary WIROX® coating has been tested and is recognized for use in above ground contact, pressure-treated lumber.

INSTALLATION INSTRUCTIONS

1) Select the proper length fastener according to Table 1 and the wall connection details found in Figures 3 & 4. Ensure the fastener meets the required minimum penetration into the main member as specified in Table 2.
2) Install using a low rpm/high torque electric drill and T30 T-STAR*plus*® driver bit provided. Pre-drilling is typically not required but can be used when lumber is prone to splitting. When pre-drilling, use a 1/8" bit.
3) Drive the fastener until the head is drawn flush to the surface with the wood member being connected. Do not overdrive the fastener.
4) Install the fastener per Figures 3 & 4 while meeting detail requirements for fastener angle and edge/end offset distances.

Figure 1: SPAX® #14 Cylindric Head PowerLags® Fastener

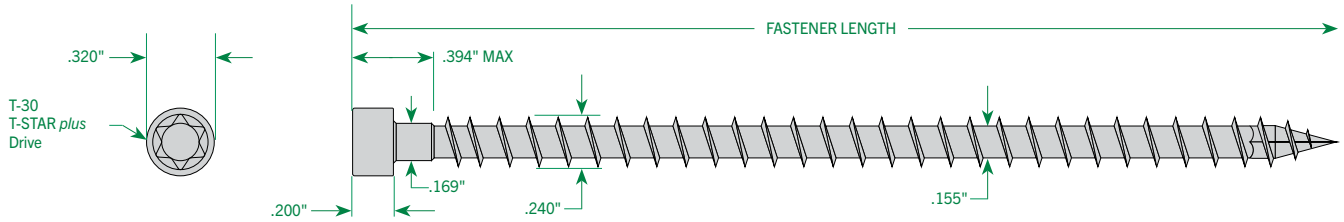


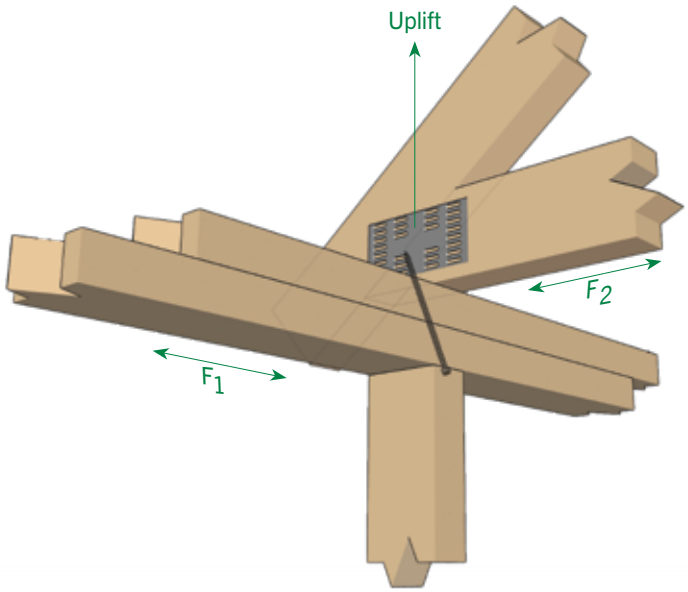
Table 1: SPAX® #14 PowerLags® Fastener Specifications and Strength Details

FASTENER NAME	HEAD (IN)				LENGTH (IN)		DIAMETER (IN)			BENDING YIELD STRENGTH[3], F_{YB} (PSI)	ALLOWABLE STEEL STRENGTH (LB)	
	STYLE	MARKING	DIAMETER	HEIGHT	FASTENER[1]	THREAD[2]	SHANK	MINOR	MAJOR		TENSILE	SHEAR[4]
#14 x 4¾"	T-STAR*plus*® Cylindric Head	None	0.320"	0.200"	4.750"	4.356"	0.169"	0.155"	0.240"	160,000	990	750
#14 x 6¼"					6.250"	5.856"						

SI: 1 in. = 25.4 mm, 1 lb. = 4.45 N, 1 psi = 0.00689 MPa
1. Fastener length is measured from the topside of the head to the tip.
2. Thread length includes tapered tip (see Figure 1).
3. Bending yield strength, F_{yb}, is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in threaded section.
4. Shear strength is determined in accordance with *AISI S904* using minor thread diameter when fastener is tested in threaded section.
5. Tabulated fastener dimensions are measured on uncoated fasteners. Finished dimensions are larger due to the proprietary coatings added.

TRUSS/RAFTER/JOIST TO TOP PLATE CONNECTION

Figure 2: Uplift & Lateral Load (F1 and F2) Directions (Single and Double Top Plate Applications)



TRUSS/RAFTER/JOIST TO TOP PLATE CONNECTION (CONT.)

Figure 3: Installation of Fasteners at an Angle in Single and Double Top Plate to Truss/Rafter When Stud is Aligned

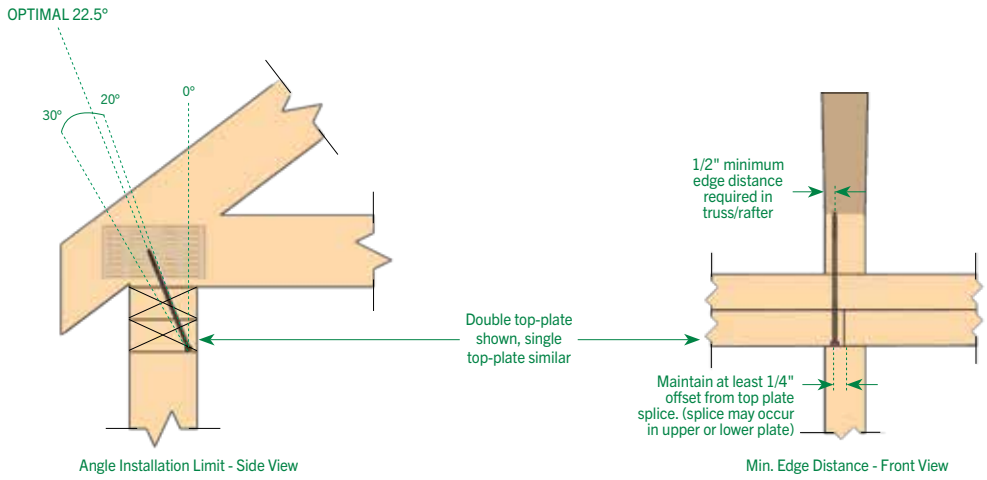


Figure 4: Installation of Fasteners Perpendicular in Single and Double Top Plate to Truss/Rafter When Stud is Offset

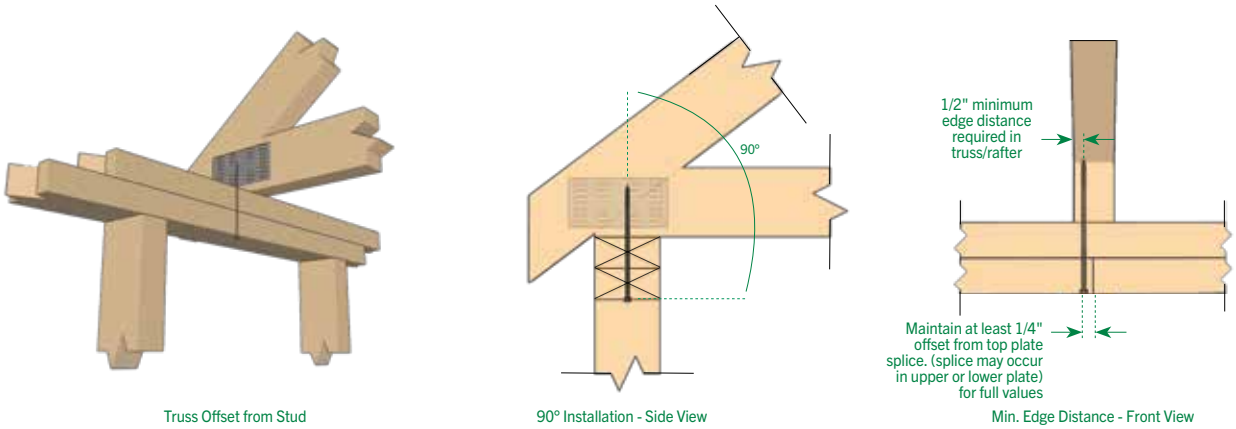


Table 2: Allowable Uplift & Lateral Loads for Fasteners in Truss/Rafter/Joist to Top Plate Connections

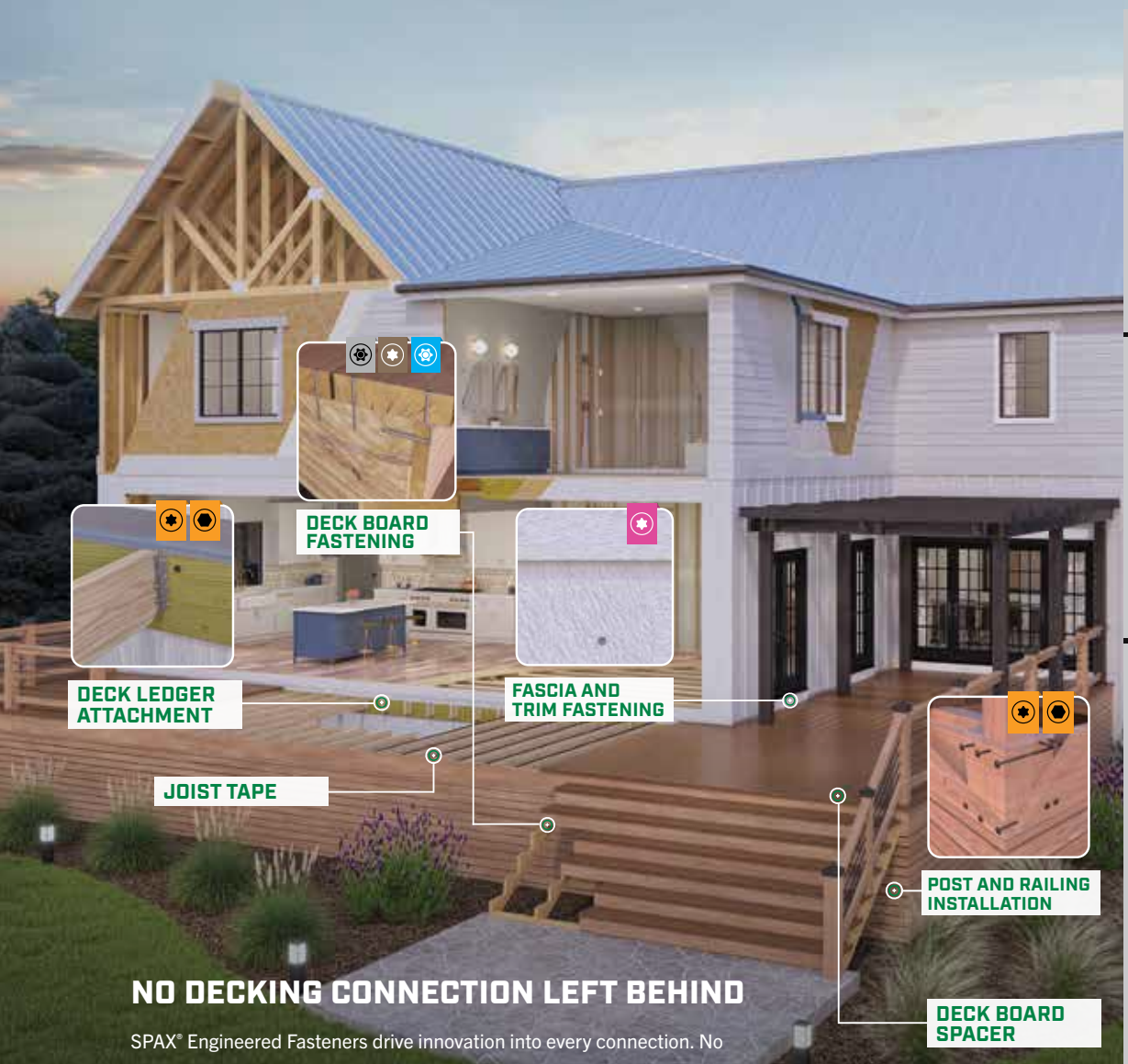
FASTENER LENGTH	MIN. PENETRATION INTO TRUSS/RAFTER/ JOIST[1] (IN)	TOP PLATE(S)	FASTENER ANGLE TO VERTICAL[7]	ALLOWABLE LOADS[2,3,4,5,6] (LB)					
				DF-L/SP (0.50)			SPF/HF (0.42)		
				UPLIFT	F1	F2	UPLIFT	F1	F2
4.75"	2½"	Single	22.5°	550	285	285	510	240	240
			90°	580			540		
6.25"		Double	22.5°	880	285	515	650	240	435
			90°	990	355	350	990	315	275

S1: 1 in. = 25.4 mm, 1 lb. = 4.45 N

1. Wood truss, rafter, or floor joist members shall be a minimum of 2" nominal thickness. Design of truss, rafter, or floor joist is by others.
2. Includes 1.6 duration of load increase for wind and seismic. No further duration of load increases permitted. Reduce design values for other load durations as applicable.
3. Equivalent specific gravity of structural composite lumber (SCL) shall be equal to or greater than the specific gravities provided in this table. Refer to product information from SCL manufacturer.
4. For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for a specific gravity of 0.42. For wood species with an assigned specific gravity greater than or equal to 0.50, use the tabulated value for specific gravity of 0.50.
5. For applications involving members with different specific gravities, use the allowable load corresponding to the lowest specific gravity.
6. See figure 2 for load directions. See Figure 3 and Figure 4 installation details.
7. Install fastener at an upward angle from the vertical of 20° to 30° (22.5° is optimal) as shown in Figure 3, or 90° as shown in Figure 4. For installation between 20° and 30°, design values for 22.5° may be used.

SPAX® ENGINEERED FASTENERS

BUILDING THE STRONGEST, LONGEST-LASTING DECKS



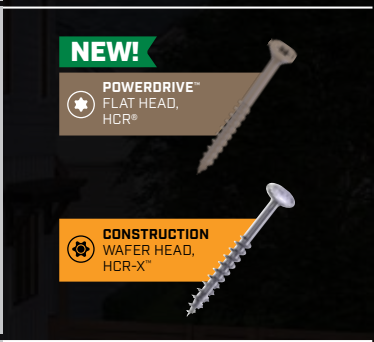
NO DECKING CONNECTION LEFT BEHIND

SPAX® Engineered Fasteners drive innovation into every connection. No matter the decking application, our screws and lags help you achieve greater speed, more strength and superior fastener durability. Amplify your craft with SPAX.

STRUCTURAL LAGS



MULTI-MATERIAL FASTENERS



SPECIALTY FASTENERS



EVERYTHING BUT THE LUMBER

SPAX HAS YOU COVERED.

SPAX® Engineered Fasteners require no pre-drilling, drive faster and hold stronger for longer. Want to build a deck of incomparable strength? Our expert guide helps you find the perfect products and lengths for every square foot of your deck project with pro tips from the SPAX Crew™ included.

PowerLags® XF

The ideal replacement for conventional lags, PowerLags XF offer the perfect solution for structural wood-to-wood connections and are code compliant for deck ledger attachment.



T-STAR, Partial Thread **PANCAKE HEAD, HCR®** | HEX, Partial Thread **HEX WASHER HEAD, HCR®**

▲ Deck Ledger Attachment (TER No. 2403-114) ■ Multi-Ply (TER No. 2410-103)

1/4"		5/16"			3/8"	1/4"		5/16"	3/8"
T40		T40			T50	3/8"		7/16"	1/2"
2½"	4½"	3" ■	5" ▲■	10" ■	5"	1½"	5"	3"	5"
3" ■	5" ■	3½" ■	6" ■	12" ■	6"	2"	6"	3½"	6"
3½"	6" ■	4" ▲■	6¾" ■		8"	3"		4" ▲	
4" ■		4½"	8"		10"			5" ▲	

For 1/2" diameter lengths, see PowerLags® XS.

Deck Construction

The versatile fastening solution, our multi-material fasteners with proprietary HCR® coating are code compliant for use in treated lumber and provide superior corrosion resistance.



T-STAR, Partial Thread **FLAT HEAD, HCR®** | T-STAR*plus*®, Partial Thread **WAFER HEAD, HCR-X™**

#8		#10		#8		#10	
1¼"	2"	2½"	3½"	1¼"	2"	2½"	
1⅝"		3"	4"	1½"	2½"	3"	

T-STAR*plus*®, Partial Thread **FLAT HEAD, 304 SERIES STAINLESS STEEL**

#9		#10	
1½"	2"	2½"	3"

PowerDeck®

For unmatched pulling power and perpetual hold, SPAX PowerDeck 304 Series stainless steel fasteners offer premium corrosion resistance for coastal environments and use in redwood and cedar.



T-STAR*plus*®, Double ThreadLok™ **FLAT HEAD, 304 SERIES STAINLESS STEEL**

#8	#10		
1⅝"	2½"	3"	3½"

PowerTrim®

Available in black, white, or yellow HCR® coating, the PowerTrim virtually disappears for clean exterior trim and spindle applications in treated lumber, PVC and wood composite.



T-STAR, Partial Thread **TRIM HEAD, HCR®**

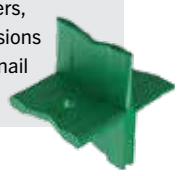
WHITE HCR®	YELLOW HCR®			BLACK HCR®		
#8	#8			#8		
2"	1¼"	2"	3⅛"	1¼"	2"	3"
2½"	1½"	2½"		1½"	2½"	

T-STAR, Double Thread **TRIM HEAD, HCR®**

WHITE HCR®	#8	2"	2½"

Deck Board Spacers

Achieve perfectly spaced boards with SPAX Deck Board Spacers, offering four common dimensions in one convenient tool — no nail or speed squares required.



Deck Tape

True protection is more than surface deep. Flexible, waterproof SPAX Deck Joist and Beam Tape creates a tight seal over the substructure to help prevent premature wood rot.





INDEPENDENTLY TESTED AND CODE COMPLIANT

POWERLAGS® XF

DECK LEDGER ATTACHMENT
(TER No. 2403-114)

MULTI-PLY
(TER No. 2410-103)

SPAX Engineered Fasteners receive independent evaluation and specialized testing through DrJ Engineering TER reports to ensure their certification for performance requirements in accordance with industry building codes. SPAX follows ICC-ES AC257 acceptance criteria for all exterior coated screws.

Our industry-leading fasteners meet International Residential Code (IRC) standards for one- and two-family dwellings not more than three stories high and International Building Code (IBC) standards for structures not covered by the IRC.

KNOW YOUR COATINGS

HCR® DB DOUBLE BARRIER COATING

HCR is a dual-barrier coating system designed to extend the longevity of SPAX® fasteners in ground-contact, treated lumber and exterior freshwater applications. Plated with a zinc base coat and finished with a durable top coat, they are engineered to withstand the toughest conditions.



HCR-X™ DB DOUBLE BARRIER COATING

HCR-X is a SPAX-developed, proprietary, dual-barrier coating system with superior corrosion protection against red rust, designed for use in both treated lumber and freshwater environments.



STAINLESS STEEL

304 stainless steel fasteners provide code compliant use in ground-contact, pressure-treated, and fire-retardant treated lumber in general and coastal construction projects. They're well-suited for use with cedar and redwood decking.



QUICK REFERENCE CALCULATOR

For easy reference, we've calculated the number of deck board fasteners you'll need for 5 popular deck sizes, depending on the joist spacing you choose.

DECK DIMENSIONS

JOIST SPACING	144 sq. ft.	240 sq. ft.	256 sq. ft.	320 sq. ft.	416 sq. ft.
12" *4.3 fasteners per sq. ft.*	**620**	**1032**	**1100**	**1376**	**1790**
16" *3.6 fasteners per sq. ft.*	**520**	**720**	**864**	**1152**	**1498**

OF FASTENERS

FASTENER OPTIONS

- PowerDrive™ T-STAR Flat Head HCR®
- T-STAR*plus*® Flat Head 304 Series Stainless Steel
- PowerDeck® T-STAR*plus*® Trim Head 304 Series Stainless Steel

Note: The ideal size and length of fastener for deck board installation is #10 x 3"

ACCESS OUR ONLINE CALCULATOR

Scan the QR code for instant access to fastener needs based on deck size and joist spacing.

PRO TIPS FROM MARK CLEMENT @MYFIXITUPLIFE

TIP #1
Save time and don't pre-cut your deck boards. Run them long and cut them all at once to get a perfect overhang.

TIP #2
Consider reinforcing your ledger board by butting up a 2'×6' under it and then securing it with a 2'×4' over top of both. This cleat is a great belt-and-suspenders approach to safety.

FRAMING AND RENOVATION PROJECT GUIDE

Every connection matters when you're building a home's foundation—from the framing to the trim. SPAX® has your back at every turn. Use this guide to discover what products you'll need for your framing and renovation projects. Regardless of the type of construction, make sure to check with local building authorities for regulations pertaining to construction and framing, as well as to obtain any needed permits.

Multi-Material

T-STAR, Partial Thread — FLAT HEAD, YELLOW ZINC

#8		#10	
1¼"	2"	2½"	3½"
1⅝"	2½"	3"	

T-STAR*plus*®, Partial Thread — WAFER HEAD, YELLOW ZINC

#8		#10
1¼"	2"	2½"
1½"	2½"	3"

T-STAR, Partial Thread — FLAT HEAD, HCR®

#8		#10	
1¼"	2"	2½"	3½"
1⅝"		3"	4"

T-STAR*plus*®, Partial Thread — WAFER HEAD, HCR-X™

#8		#10
1¼"	2"	2½"
1½"	2½"	3"

Structural / PowerLags® XF

T-STAR, Partial Thread — PANCAKE HEAD, HCR®

● Multi-Ply – Engineered Wood ■ Multi-Ply – Sawn Lumber ▲ Deck Ledger Attachment

DIA.	5/16"			1/4"		5/16"		3/8"	1/2"	
	T40			⅜"		7⁄16"		½"	⅝"	
	3" ■	4½"	6¾" ● 12"	1½"	5"	3"	4" ▲	5"	5"	10"
	3½" ●	5" ▲●	8"	2"	6"	3½"	5" ▲	6"	6"	12"
	4" ▲■	6" ■	10"	3"					8"	

HEX, Partial Thread — HEX WASHER HEAD, HCR®

● Multi-Ply – Engineered Wood ■ Multi-Ply – Sawn Lumber ▲ Deck Ledger Attachment

DIA.	5/16"			1/4"		5/16"		3/8"	1/2"	
	T40			⅜"		7⁄16"		½"	⅝"	
	3" ■	4½"	6¾" ● 12"	1½"	5"	3"	4" ▲	5"	5"	10"
	3½" ●	5" ▲●	8"	2"	6"	3½"	5" ▲	6"	6"	12"
	4" ▲■	6" ■	10"	3"					8"	

T-STAR, Partial Thread — PANCAKE HEAD, YELLOW ZINC

● Multi-Ply – Engineered Wood ■ Multi-Ply – Sawn Lumber

DIA.	1/4"			5/16"			3/8"
	T40			T40			T50
	2½"	4" ■	6" ■●	3"	4" ■	6" ■	5" ●
	3" ■●	4½"		3" ■	4½"		6" ■●
	3½"	5" ●		3½" ●	5" ●		

T-STAR*plus*®, Full Thread — CYLINDRIC HEAD

♦ Truss/Rafter/Joist to Wall Plate

#14
T30 *plus*
6¼" ♦

TESTED AND CODE COMPLIANT

All SPAX structural fasteners and PowerLags® XF have been comprehensively tested to ensure only the highest quality engineered fasteners make it to market.

ICC ES

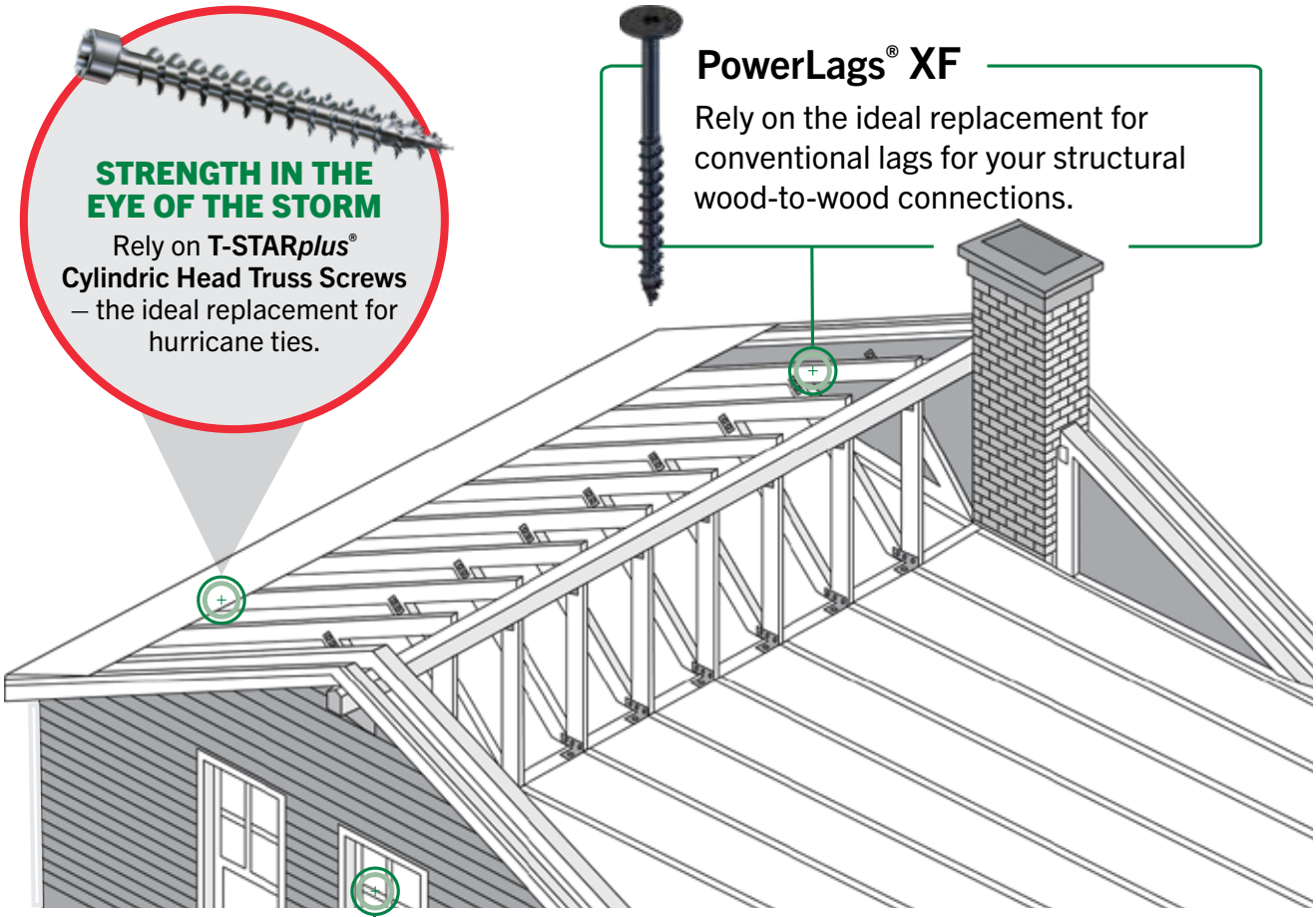
PowerLags® XF: ICC ES No. ESR-5358

Multi-ply Sawn Lumber and Engineered Wood (LVL, PSL, LSL): DrJ TER No. 2410-103

Truss/Rafter/Joist to Wall Plate: DrJ TER No. 1910-02

Exterior Deck Ledger Attachment: DrJ TER No. 2403-114

ACHIEVE ULTIMATE STRUCTURAL STRENGTH THAT LASTS



STRENGTH IN THE EYE OF THE STORM

Rely on **T-STAR*plus*® Cylindric Head Truss Screws** – the ideal replacement for hurricane ties.

PowerLags® XF

Rely on the ideal replacement for conventional lags for your structural wood-to-wood connections.

Window Screw

Mitigate corrosion with our proprietary HCR-X™ coating when installing windows and other ventilation.

PRO TIPS FROM SHRIEF MANDOUR @MANDOURCONSTRUCTION

TIP #1
When building jambs, it's great to clamp them together first. Because of the no pre-drill convenience of using SPAX, just clamp and go.

TIP #2
When reinforcing joists, it's important to sister the joists no less than 48" on center sandwiching the compromised joist. Using SPAX PowerLags on a staggered pattern every 12" is the most secure way to repair a joist.

KITCHEN AND BATH PROJECT GUIDE

A home's kitchen and bathroom serve dramatically different purposes, but both spaces share the same goal—pairing functionality with serenity. SPAX® Engineered Fasteners help you create strong connections for virtually every part of your kitchen and bathroom remodels. Use this guide to find the right products for your connections and get tips from the SPAX Crew to amplify your results.

Multi-Material

T-STAR, Partial Thread — FLAT HEAD, YELLOW ZINC

#8		#10	
1¼"	2"	2½"	3½"
1⅝"	2½"	3"	

T-STAR*plus*®, Partial Thread — WAFER HEAD, YELLOW ZINC

#8		#10
1¼"	2"	2½"
1½"	2½"	3"

T-STAR, Partial Thread — FLAT HEAD, HCR®

#8		#10	
1¼"	2"	2½"	3½"
1⅝"		3"	4"

T-STAR*plus*®, Partial Thread — WAFER HEAD, HCR-X™

#8		#10
1¼"	2"	2½"
1½"	2½"	3"

Specialty

T-STAR*plus*®, Partial Thread — HARDWOOD/MDF TRIM HEAD

#6	#8
1½"	1¾"
	2½"

PowerTrim®

T-STAR, Partial Thread — TRIM HEAD, HCR®

WHITE HCR®	YELLOW HCR®			BLACK HCR®		
#8	#8			#8		
2"	1¼"	2"	3⅛"	1¼"	2"	3"
2½"	1½"	2½"		1½"	2½"	

T-STAR, Double Thread — TRIM HEAD, HCR®

WHITE HCR®
#8
2"
2½"

PRO TIPS FROM KEN HARRIS @KH_WOODWORKING

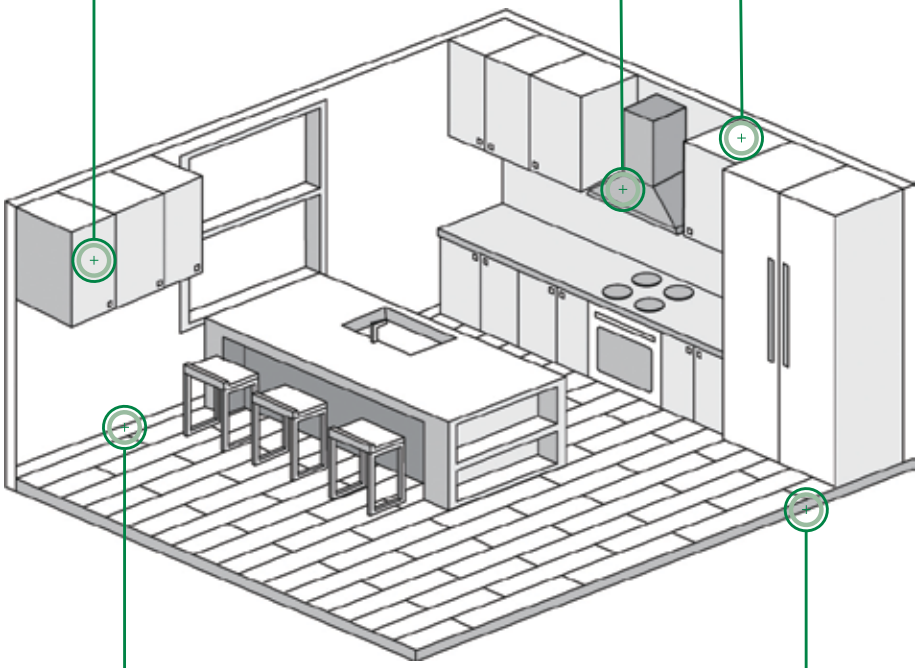
CONNECTING AND SECURING CABINETRY

TIP #1
Always start from the high point on the floor (you can find with a laser level).

TIP #2
Invest in the Pony-Jorgensen cabinet claws, or something similar— they allow you to pull two cabinet faces together and flush the faces together, all at the same time. Use T-STAR*plus*® Hardwood/MDF screws to fasten them together.

TIP #3
Use T-STAR*plus*® Wafer Head Cabinet Screws to secure the rear panels to the wall.

DRIVE CONFIDENCE INTO EVERY CONNECTION



Hardwood/MDF

#8 x 2½" MDF engineered fasteners deliver a clean, flush finish for cabinetry.

Multi-Material (HCR-X™)

Mitigate moisture issues in ventilation installation with HCR-X Multi-Material fasteners.

Cabinet Screw

Choose high-strength, low-profile #10 x 3" Wafer Head fasteners for hanging cabinets.

PowerTrim®

Virtually disappears in wood and PVC—the perfect choice for finish carpentry.

Multi-Material

Multi-Material engineered fasteners ensures subfloor installation with long-term reliability.

PRO TIPS FROM OSCAR LOZA @KNOTTYDOGWOODSHOP

KITCHEN & BATHROOM REMODELING TIPS

TIP #1
Avoid hitting electrical or plumbing lines by choosing the right length for your fasteners.

TIP #2
Don't be afraid to use shims. If you need a bunch of shims, it's not your install work, it's the walls. Plus, they get covered anyways.

SPAX® ENGINEERED FASTENERS

NOT YOUR ORDINARY WOOD SCREWS

The SPAX® brand of high performance construction screws includes several fastener solutions for the installation and construction of fine cabinetry. Featuring German-engineered patented thread technology, SPAX construction screws help ensure reliable, professional-looking installations in less time.

BASE & WALL CABINET INSTALLATION

T-STAR*plus*® WAFER HEAD YELLOW ZINC

Low profile, wafer head design offers an attractive larger surface area to securely attach cabinetry.



#8
#10
1¼"-3"



FACE FRAME ATTACHMENT

T-STAR*plus*® TRIM HEAD HARDWOOD/MDF

Ideal for fastening cabinet frames together through the stiles without pre-drilling. Their unique *CUT*™ Point guards against splitting in both hardwoods and MDF.



#6
#8
1½"-2½"



FRAMING & ASSEMBLING

T-STAR FLAT HEAD YELLOW ZINC

Designed to countersink in lumber for a clean-flush finish and provides a quick and easy installation.



#8
#10
1¼"-3½"



TRIM APPLICATIONS

T-STAR TRIM HEAD BLACK, WHITE, OR YELLOW HCR®

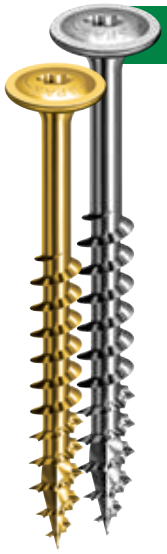
Perfect finish solution that virtually disappear for clean interior and exterior trim applications.



#8
1¼"-3⅛"



WINDOW INSTALLATION



T-STAR*plus*® WAFER HEAD HCR-X™

#8 x 1½", 2", or #10 x 2½"

Also available in yellow zinc and other sizes!

FEATURES

- T-STAR*plus*® Drive
- Low Profile Wafer Head
- Serrated Threads
- Unique *4CUT*™ Point

APPLICATIONS

- Window attachment - Flange to exterior side of residential structure
- Treated lumber rail & gate hardware attachment
- Outdoor furniture
- Outdoor play structures
- Other exterior applications where substrate must be tightly connected to treated lumber



INTERIOR TRIM



T-STAR TRIM HEAD BLACK, WHITE, & YELLOW HCR® PARTIAL THREAD

#8 x 1½" or 2"

Other sizes available!

FEATURES

- T-STAR Drive
- Trim Head
- Serrated Threads
- Unique *4CUT*™ Point

APPLICATIONS

- Window & door casing attachment
- Crown molding
- Baseboards
- Door jambs
- Cabinetry
- Fine carpentry
- Stairs & railings



EXTERIOR TRIM



T-STAR TRIM HEAD WHITE HCR® DOUBLE THREAD

#8 x 1½" or 2"

Other sizes available!

FEATURES

- T-STAR Drive
- Trim Head
- Double Reverse Thread
- Serrated Threads
- Unique *4CUT*™ Point

APPLICATIONS

- Exterior PVC trim applications
  - Window & door trim
  - Fascia trim
- Kitchen & bath PVC trim attachments
  - Baseboards
  - Counter top trim

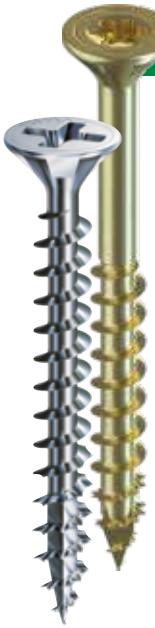


DOOR INSTALLATION

Use SPAX® fasteners to build door frames & hang doors. Available in 1 lb. boxes and bulk pails.







DOOR INSTALLATION

T-STAR FLAT HEAD YELLOW ZINC

#8 x 2" or 2½"

Also available in Unidrive and zinc coatings

FEATURES

- T-STAR Drive
- *MULTI-Head* Design
- Serrated Threads
- Unique *4CUT*™ Point

APPLICATIONS

- 2-by framing connections
- Hinge installation



EXTERIOR INSTALLATION



T-STAR FLAT HEAD HCR®

#10 x 2½" or 3"

Other sizes available!

FEATURES

- T-STAR Drive
- *MULTI-Head* Design
- Serrated Threads
- Unique *4CUT*™ Point

APPLICATIONS

- 2-by framing connections - treated lumber



TOP HINGE TO STUDS



T-STAR FLAT HEAD YELLOW ZINC & HCR®

#10 x 2½"

Other sizes available!

FEATURES

- T-STAR Drive
- *MULTI-Head* Design
- Serrated Threads
- Unique *4CUT*™ Point

APPLICATIONS

- 2-by framing connections
- Hinge installation



INTERIOR & EXTERIOR TRIM



T-STAR TRIM HEAD WHITE HCR® PARTIAL & DOUBLE THREAD

#8 x 1¼" - 3⅛"

Also available in black and yellow HCR®

FEATURES

- T-STAR Drive
- Trim Head
- Double Reverse Thread
- Serrated Threads
- Unique *4CUT*™ Point

APPLICATIONS

- Exterior PVC trim applications
  - Door trim
  - Door jambs
- Kitchen & bath PVC trim attachments
  - Door trim



SPAX® ENGINEERED FASTENERS



TRUSS/RAFTER APPLICATIONS

T-STAR*plus*® CYLINDRIC HEAD WIROX®

#14 x 6-1/4"

FEATURES

- T-STAR*plus*® Drive
- Cylindric Head
- Serrated Threads
- Unique *4CUT*™ Point

APPLICATIONS

- Truss/Rafter to top wall plate connection
- Ideal replacement for hurricane clips





HEX WASHER HEAD HCR®

1/4" x 6"

Other sizes available!

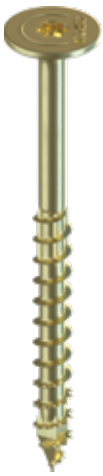
FEATURES

- Hex Drive
- Built-On Washer Head
- Reliable Connections
- Serrated Threads

APPLICATIONS

- Stair landings and framing
- Shelving
- Specific fixtures like metal channel requiring a lag but with limited space for the head





T-STAR WASHER HEAD YELLOW ZINC

1/4" x 4-1/2"

Other sizes available!

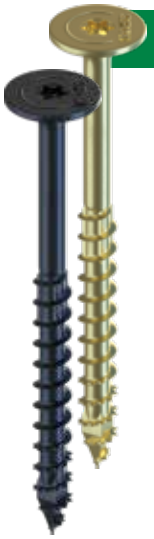
FEATURES

- T-STAR Drive
- Built-On Washer Head
- Reliable Connections
- Serrated Threads

APPLICATIONS

- Multi-ply LVL beam assembly
- Multi-ply girder truss assembly
- Interior framing applications
- Shelving applications – interior buildings
- Indoor furniture





FLOOR APPLICATIONS

T-STAR PANCAKE HEAD HCR® & YELLOW ZINC

1/4" x 4" or 6"

Other sizes available!

FEATURES

- T-STAR Drive
- Pancake Head
- Serrated Threads
- Unique *4CUT*™ Point

APPLICATIONS

- 2x6 to 4x4 runner attachment
- Multi-ply LVL beam assembly
- Multi-ply girder truss assembly
- Exterior treated lumber pergolas & gazebos
- Exterior fencing posts
- Outdoor or indoor furniture
- Shelving applications





SUBFLOOR APPLICATIONS

T-STAR FLAT HEAD HCR® & YELLOW ZINC

#10 x 3"

Other sizes available!

FEATURES

- T-STAR Drive
- *MULTI-Head* Design
- Serrated Threads
- Unique *4CUT*™ Point

APPLICATIONS

- 2-by framing connections
- Deck board finishing installation
- Deck railing 2x2 baluster
- Stair treads
- Subflooring attachments
- Shed construction
- Cabinet frames
- Hinge installation



SPAX® ENGINEERED FASTENERS

BUILD STRONGER CRATES WITH SPAX® FASTENERS

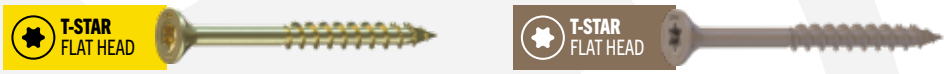
SPAX Fasteners bring efficiency, strength, and reliability when constructing anything, including shipping crates. Our patented thread serrations and *4CUT*™ Point eliminate the need for pre-drilling and allow for faster, easier driving in wood. SPAX Fasteners come in a variety of lengths and diameters so you can choose the perfect fastener for the job.



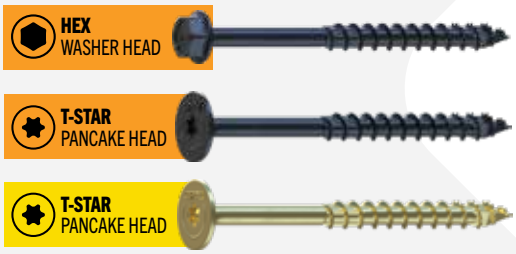
BENEFITS OF ASSEMBLING CRATES WITH SPAX SCREWS

- Strong, durable connection, ensuring the crate can withstand the rigors of shipping
- Can be easily removed without damaging the wood, allowing for easy disassembly and reuse of the crate
- Come in various types and sizes
- No pre-drilling on 1/4" and 5/16" diameters

POWERDRIVE® CONSTRUCTION SCREWS



POWERLAGS® XF



BULK OPTIONS AVAILABLE



T-STAR PANCAKE HEAD

YELLOW ZINC - INTERIOR	HCR® - EXTERIOR				
DIAMETER	LENGTHS				
1/4"	2½"	3"	3½"	4"	4½"
	5"	6"			
5/16"	3"	3½"	4"	4½"	5"
	6"	6¾"	8"	10"	12"
3/8"	5"	6"	8"	10"	

HEX WASHER HEAD

HCR® - EXTERIOR					
DIAMETER	LENGTHS				
1/4"	1½"	2"	3"	3½"	5"
	6"				
5/16"	3"	3½"	4"	5"	
3/8"	5"	6"			

T-STAR FLAT HEAD

YELLOW ZINC - INTERIOR	HCR® - EXTERIOR			
DIAMETER	LENGTHS			
#8	1¼"	1⅝"	2"	2½"
#10	2½"	3"	3½"	4"

TRUFAST® SIP FASTENERS

STRUCTURAL INSULATED PANELS

SPAX® ENGINEERED FASTENERS



DESCRIPTION

TRUFAST® SIP Fasteners are specifically engineered for attaching structural insulated panels (SIPs) and nailable insulation panels to wood and steel substrates. Featuring a large, pancake head style with a 6-lobe drive, TRUFAST SIP Fasteners drive quickly and smoothly, and draw panels securely without the need of a washer. Only TRUFAST offers three fastener styles for use in wood, corrugated steel and cold-form steel members without pre-drilling!

MATERIALS & COATING

Case-hardened and tempered carbon steel. TRU-KOTE™ Epoxy E-coat (black).

CODE APPROVALS & LISTINGS

FM Global; Miami-Dade County; State of Florida-FL#: 4500; DrJ Certification Technical Evaluation Reports: TER No. 1909-04, TER No. 2101-01; SIPTP: CE 2809-CPR-M0035, SIPLD: CE 2809-CPR-M0034, European Technical Assessment ETA 19/0616, DOP No. DoPTru02-2022-01-03.



SIPTP

Thread point for wood, timber, and concrete/CMU applications



SIPHD

Heavy-duty drill point for cold-form steel member applications



SIPLD

Light-duty drill point for corrugated steel deck, wood, & concrete/CMU applications



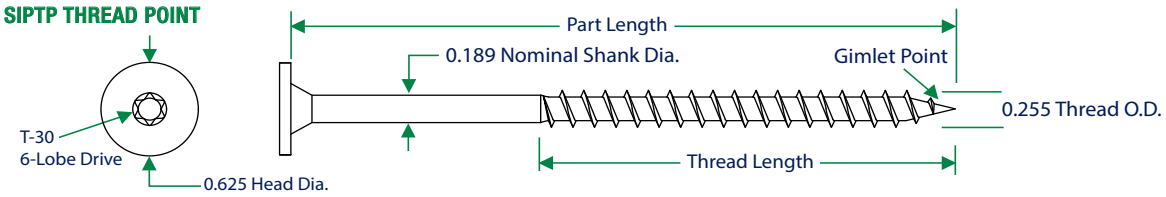
PRODUCT FEATURES

- Case-hardened and tempered for easy installation and long-term durability
- Large diameter, low profile pancake head provides excellent pull-through resistance without the need for a washer while eliminating “telegraphing” on shingles, metal panels, and other roof surface materials
- 6-lobe internal drive offers excellent bit engagement during installation, especially in high torque applications

TRUFAST® SIP FASTENERS

STRUCTURAL INSULATED PANELS

SPAX® ENGINEERED FASTENERS



PRODUCT SELECTION - SIPTP

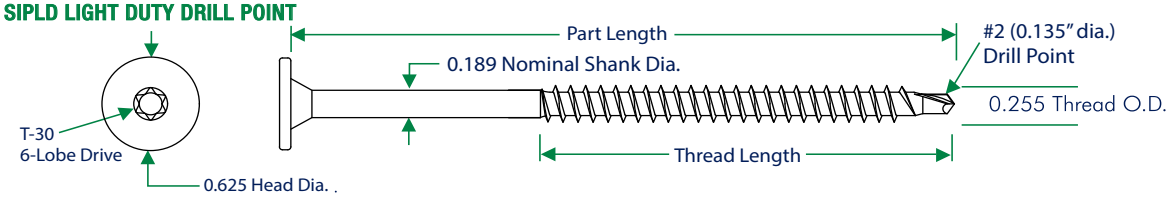
LENGTH	THREAD LENGTH	SIPTP WITH E-COAT PART NO.	SIPTP WITH HCR COATING PART NO.	PKG. QTY.
2" (51 mm)	1.75"	SIPTP-2000	SIPTP-2000-HCR	500/Pail
2½" (64 mm)	1.75"	SIPTP-2500	SIPTP-2500-HCR	500/Pail
3" (76 mm)	2.0"	SIPTP-3000	SIPTP-3000-HCR	500/Pail
3½" (89 mm)	2.0"	SIPTP-3500	SIPTP-3500-HCR	500/Pail
4" (102 mm)	2.75"	SIPTP-4000	SIPTP-4000-HCR	500/Pail
4½" (114 mm)	2.75"	SIPTP-4500	SIPTP-4500-HCR	500/Pail
5" (140 mm)	2.75"	SIPTP-5000	SIPTP-5000-HCR	500/Pail
5½" (140 mm)	2.75"	SIPTP-5500	SIPTP-5500-HCR	500/Pail
6" (152 mm)	2.75"	SIPTP-6000	SIPTP-6000-HCR	500/Pail
6½" (165 mm)	2.75"	SIPTP-6500	SIPTP-6500-HCR	500/Pail
7" (191 mm)	2.75"	SIPTP-7000	SIPTP-7000-HCR	500/Pail
7½" (191mm)	2.75"	SIPTP-7500	N/A	500/Pail
8" (216 mm)	2.75"	SIPTP-8000	SIPTP-8000-HCR	500/Pail
8½" (216 mm)	2.75"	SIPTP-8500	N/A	250/Pail
9" (229 mm)	2.75"	SIPTP-9000	SIPTP-9000-HCR	250/Pail
10" (254 mm)	2.75"	SIPTP-10000	SIPTP-10000-HCR	250/Pail
11" (279 mm)	2.75"	SIPTP-11000	N/A	250/Pail
12" (305 mm)	2.75"	SIPTP-12000	N/A	250/Pail
13" (330 mm)	2.75"	SIPTP-13000	N/A	250/Box
14" (356 mm)	2.75"	SIPTP-14000	N/A	250/Box
15" (381 mm)	2.75"	SIPTP-15000	N/A	250/Box
16" (406 mm)	2.75"	SIPTP-16000	N/A	250/Box
18" (483 mm)	2.75"	SIPTP-18000	N/A	250/Box

TRUFAST® SIP FASTENERS

STRUCTURAL INSULATED PANELS

SPAX® ENGINEERED FASTENERS

SIPLD LIGHT DUTY DRILL POINT



NOTE: For part lengths 2.25", 3.25", and 4.25", drill point is 0.125" dia.

PRODUCT SELECTION - SIPLD

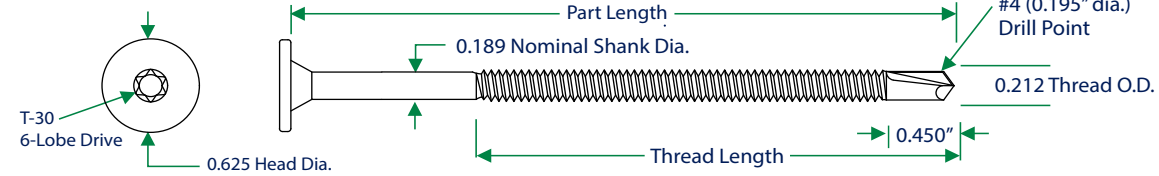
LENGTH	THREAD LENGTH	SIPLD WITH E-COAT PART NO.	SIPLD WITH HCR COATING PART NO.	PKG. QTY.
2¼" (57 mm)	1.0"	SIPLD-2250	N/A	500/Pail
3" (76 mm)	2.75"	SIPLD-3000	SIPLD-3000-HCR	500/Pail
3¼" (83 mm)	1.50"	SIPLD-3250	N/A	500/Pail
3½" (89 mm)	2.75"	SIPLD-3500	SIPLD-3500-HCR	500/Pail
4" (102 mm)	2.75"	SIPLD-4000	SIPLD-4000-HCR	500/Pail
4¼" (108 mm)	2.0"	SIPLD4250	N/A	500/Pail
4½" (114 mm)	2.75"	SIPLD-4500	SIPLD-4500-HCR	500/Pail
5" (140 mm)	2.75"	SIPLD-5000	SIPLD-5000-HCR	500/Pail
5½" (140 mm)	2.75"	SIPLD-5500	SIPLD-5500-HCR	500/Pail
6" (152 mm)	2.75"	SIPLD-6000	SIPLD-6000-HCR	500/Pail
6½" (165 mm)	2.75"	SIPLD-6500	SIPLD-6500-HCR	500/Pail
7" (191 mm)	2.75"	SIPLD-7000	SIPLD-7000-HCR	500/Pail
7½" (191 mm)	2.75"	SIPLD-7500	N/A	500/Pail
8" (216 mm)	2.75"	SIPLD-8000	SIPLD-8000-HCR	500/Pail
8½" (216 mm)	2.75"	SIPLD-8500	N/A	250/Pail
9" (229 mm)	2.75"	SIPLD-9000	SIPLD-9000-HCR	250/Pail
10" (254 mm)	2.75"	SIPLD-10000	SIPLD-10000-HCR	250/Pail
11" (279 mm)	2.75"	SIPLD-11000	N/A	250/Pail
12" (305 mm)	2.75"	SIPLD-12000	N/A	250/Pail
13" (330 mm)	2.75"	SIPLD-13000	N/A	250/Box
14" (356 mm)	2.75"	SIPLD-14000	N/A	250/Box
15" (381 mm)	2.75"	SIPLD-15000	N/A	250/Box
16" (406 mm)	2.75"	SIPLD-16000	N/A	250/Box
18" (483 mm)	2.75"	SIPLD-18000	N/A	250/Box

TRUFAST® SIP FASTENERS

STRUCTURAL INSULATED PANELS

SPAX® ENGINEERED FASTENERS

SIPHD HEAVY DUTY DRILL POINT



NOTE: For part lengths 2.25", 3.25", and 4.25", drill point is 0.125" dia.

PRODUCT SELECTION - SIPHD

LENGTH	THREAD LENGTH	SIPHD WITH E-COAT PART NO.	PKG. QTY.
2¼" (57 mm)	1.00"	SIPHD-2250	500/Pail
3¼" (83 mm)	1.50"	SIPHD-3250	500/Pail
4¼" (108 mm)	2.00"	SIPHD-4250	500/Pail
4½" (114 mm)	3.19"	SIPHD-4500	500/Pail
5¼" (133 mm)	2.50"	SIPHD-5250	500/Pail
6" (152 mm)	3.88"	SIPHD-6000	500/Pail
8" (203 mm)	3.88"	SIPHD-8000	250/Pail
9¾" (248 mm)	3.88"	SIPHD-9750	250/Pail
11¾" (298 mm)	3.88"	SIPHD-11750	250/Pail
13¾" (349 mm)	3.88"	SIPHD-13750	250/Box

PERFORMANCE SPECIFICATIONS

Note: All values provided are allowable values. For ultimate values, please contact us at 1-800-443-9602. For additional engineering performance values, please refer to DrJ TER No. 1909-04 available at https://www.drjengineering.org/. For additional information on the use of TRUFAST SIP fasteners in vented and non-vented nailable insulation panels in roofing applications, please refer to DrJ TER No. 2101-01.

FASTENER	PROPERTY			
	TENSILE (LBS.) AISI S904	SHEAR (LBS.) AISI S904	BENDING YIELD STRENGTH - FYB (PSI) ASTM F1575	CORROSION RESISTANCE ASTM D6294, ETAG 006
SIPTP	1185	860	185,000	<15% Red Rust after 30 cycles
SIPLD	1130	830		
SIPHD	1285	875		

TRUFAST® SIP FASTENERS

STRUCTURAL INSULATED PANELS

SPAX® ENGINEERED FASTENERS

SIP (LD, TP, HD) FASTENER HEAD PULL-THROUGH VALUES		
SIDE MEMBER TYPE	SIDE MEMBER NOMINAL THICKNESS	HEAD PULL-THROUGH (LB.)
OSB	23/32"	345
	19/32"	145
	1/2"	100
	7/16"	85
Plywood	23/32"	380
	19/32"	265
	15/32"	175
SPF	Dry Service Condition	380
DF-L	Dry Service Condition	555

SIP LD PULLOUT VALUES IN CORRUGATED STEEL DECK (LBS.)					
TENSILE STRENGTH	24 GA.	22 GA.	20 GA.	18 GA.	16 GA.
45 ksi	65	95	115	180	230
70 ksi	95	135	165	250	330
90 ksi	115	145	190	285	375
110 ksi	140	175	225	320	415

SIP HD PULLOUT VALUES IN STRUCTURAL STEEL DECK (LBS.)						
TENSILE STRENGTH	16 GA.	14 GA.	12 GA.	1/8"	3/16"	1/4"
45 ksi	145	200	290	375	610	820
70 ksi	225	310	450	585	1030	1270
90 ksi	290	395	575	755	1245	1635
110 ksi	355	485	700	920	1460	2000

WITHDRAWAL VALUES IN LUMBER AND ENGINEERED WOOD, EDGE GRAIN (LBS./IN.)			
WOOD TYPE (SPECIFIC GRAVITY)	SPF (0.42)	DF-L (0.50)	LVL (0.50)
SIP TP	120	140	125
SIP LD	100	155	115

WITHDRAWAL VALUES IN LUMBER AND ENGINEERED WOOD, FACE GRAIN (LBS./IN.)				
WOOD TYPE (SPECIFIC GRAVITY)	SPF (0.42)	DF-L (0.50)	LVL (0.50)	LSL (0.50)
SIP TP	175	195	140	135
SIP LD	140	150	135	140

TRUFAST® SIP FASTENERS

STRUCTURAL INSULATED PANELS

SPAX® ENGINEERED FASTENERS

LATERAL LOAD RESISTANCE (LBS.)			
FASTENER	MAIN MEMBER	SIDE MEMBER	LOAD PER FASTENER (LB.)
SIP TP	SPF	8¼" SIP Panel	365
SIP LD	22 ga. Steel Deck	8¼" SIP Panel	115
		14" Nailbase Insulation (includes base layer(s) of insulation)	55
		14" Vented Nailable Insulation (2" vent layer and 12" polyiso)	40
SIP LD SIP TP	7⁄16" OSB	10½" Nailbase Insulation (includes base layer(s) of insulation)	45
		10½" Vented Nailbase Insulation (2" ventilation and 8½" polyiso)	50
	½" Plywood	10½" Nailbase Insulation (includes base layer(s) of insulation)	80
		10½" Nailable Insulation (2" ventilation and 8½" polyiso)	80
	19⁄32" minimum SPF	10½" Nailbase Insulation Panel (includes base layer(s) of insulation)	90
		10½" Nailable Insulation (2" ventilation and 8½" polyiso)	90
	1" minimum SPF	10½" Nailbase Insulation Panel (includes base layer(s) of insulation)	90
		10½" Nailable Insulation (2" ventilation and 8½" polyiso)	90
	⅛" Structural Steel	8¼" SIP Panel	370

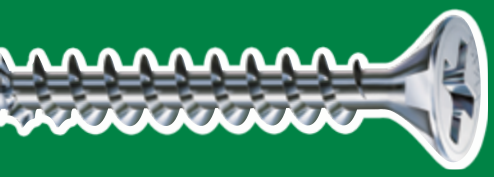
WITHDRAWAL VALUES IN ENGINEERED WOOD SUBSTRATES (LBS.)*							
WOOD TYPE	OSB				PLYWOOD		
THICKNESS	7/16"	1/2"	19/32"	23/32"	15/32"	19/32"	23/32"
SIPTP	45	40	60	110	85	130	155
SIPLD	45	50	70	155	80	120	180

*Fastener penetrates through bottom side of the board by ¾"

TENSION VALUES IN CONCRETE & CMU (LBS.)				
COMPRESSION STRENGTH	2500 PSI CONCRETE	4000 PSI CONCRETE	5000 PSI CONCRETE	CMU
SIP LD	70	155	160	80
SIP TP	100	165	165	175

MATERIALS & COATINGS

Coatings are applied to “carbon steel” fasteners, heat treated for strength and durability. In addition, SPAX® offers fasteners in 304 stainless steel.







INTERIOR
(Low Corrosion Resistance)

ZINC

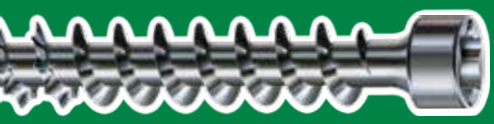
“Clear zinc” is tested and recognized for use in untreated and above ground contact pressure treated lumber for interior dry/damp general construction applications (e.g., AWPA UC1-UC2).

YELLOW ZINC

“Yellow zinc” is tested and recognized for use in untreated and above ground contact pressure treated lumber for interior dry/damp general construction applications (e.g., AWPA UC1-UC2).

eCOAT

“eCoat” is recognized for use in untreated and above ground contact pressure treated lumber for interior dry/damp general construction applications (e.g., AWPA UC1-UC2).



WIROX®

“WIROX” is tested and recognized for use in untreated and above ground contact pressure treated lumber for interior dry/damp general construction applications (e.g., AWPA UC1-UC2, UCFA).

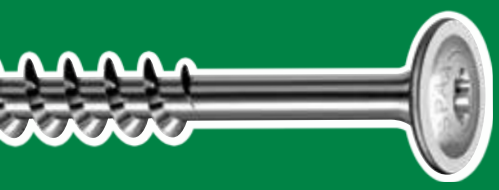


EXTERIOR — TREATED LUMBER
(Medium Corrosion Resistance)

HCR®

“HCR” is tested and recognized for use in ground contact pressure treated lumber for exterior, freshwater general construction applications (e.g., AWPA UC1-UC4A, UCFA).

NOTE: HCR® coating comes in black and white.



HCR-X™

“HCR-X” is tested and recognized for use in ground contact pressure treated lumber for exterior, freshwater general construction applications (e.g., AWPA UC1-UC4A, UCFA).



EXTERIOR — TREATED LUMBER
(High Corrosion Resistance)

STAINLESS STEEL

“304 stainless steel” is code compliant for use in ground contact pressure treated and fire-retardant-treated[1] lumber for exterior, coastal general construction applications (e.g., AWPA UC1-UC4B, UCFA and UCFB).

1. Refer to FRT manufacturer for recommendations on fastener coatings into FRT lumber.

NOTE: SPAX® recommends stainless steel for cedar & redwood applications.

MATERIALS & COATINGS

Building code officials are required to have in-depth knowledge of all types of construction methods and thousands of different products used in modern buildings. The International Code Council's committees recognize AWPA as the authority on treated wood and have directly referenced AWPA Standards in the International Building Code and International Residential Code in applications where preservative treated wood is required.

The Use Categories are a shorthand method of describing the various hazards to which wood products may be exposed. A brief description of the Use Categories is shown:

USE CATEGORY	BRIEF DESCRIPTION
UC1	Interior Dry
UC2	Interior Damp
UC3A	Exterior Above Ground, Coated with Rapid Water Runoff
UC3B	Exterior Above Ground, Uncoated or Poor Water Runoff
UC4A	Ground Contact, General Use
UC4B	Ground Contact, Heavy Duty
UC4C	Ground Contact, Extreme Duty
UC5A	Marine Use, Northern Waters (Salt or Brackish Water)
UC5B	Marine Use, Central Waters (Salt or Brackish Water)
UC5C	Marine Use, Southern Waters (Salt or Brackish Water)
UCFA	Interior Above Ground Fire Protection
UCFB	Exterior Above Ground Fire Protection

Information referenced from the AWPA site: https://awpa.com/info/technical/codes



For a visual layout of exterior home applications according to the AWPA UC codes, please visit the following page on the AWPA website: https://awpa.com/standards/ucs



WOOD SCREW FINISHES WITH WOOD TYPES

FASTENER COATING & FINISH	INTERIOR / EXTERIOR			WOOD TYPES				EXAMPLES
	INTERIOR RATED / TREATED LUMBER	EXTERIOR RATED / PRESSURE TREATED LUMBER	MARINE / COASTAL	HARDWOODS (Oak, Maple, Hickory)	SOFTWOODS		ENGINEERED WOOD (Plywood, LVL, Etc)	
					Pine, Douglas Fir	Cedar, Redwoods (High Tannin)		
ZINC & YELLOW ZINC	√	X	X	√	√	√**	√	Interior applications like subfloors, framing, cabinets, hanging doors, furniture/crafts
BLACK E-COAT	√	X	X	√	√	√**	√	Log Home & Timber Framing Applications
WIROX	√	X	X	√	√	√**	√	Interior applications like truss framing, subfloors, cabinets, hanging doors, furniture/crafts
HCR (High Corrosion Resistant)	√	√	X	√	√	√**	√	Exterior applications like framing, decks, fencing, play structures, landscaping and treated lumber projects
HCR-X™ (High Corrosion Resistant)	√	√	X	√	√	√**	√	Exterior applications like framing, decks, fencing, play structures, landscaping and treated lumber projects
STAINLESS STEEL (304)	√	√	√*	√	√	√	√	Exterior, high moisture applications. Applications using high tannin lumber like cedar or redwood

*For coastal exterior applications, SPAX recommends the use of 304 or 316 series stainless steel within 5 miles of coastal salt water.
** Use of non-stainless steel products in high tannin lumber may result in tannin streaking.

COMPETITOR SIZE CROSS REFERENCE

GRK® TO SPAX®

SPAX® ENGINEERED FASTENERS

GRK Part #	GRK Description	GRK PKG/CT	SPAX® Part #	SPAX® Description	SPAX® PKG/CT
10133	10 x 2½″ RSS Structural Screw	1000	3281670500600	#10 x 2½″ Multi-Material T20+ Wafer Head HCR-X™ Pail	1200
12133	10 x 2½″ RSS Structural Screw	50	4281670500604	#10 x 2½″ Multi-Material T20+ Wafer Head HCR-X™ 1LB	77
10137	10 x 3⅛″ RSS Structural Screw	800	3281670500750	#10 x 3″ Multi-Material T20+ Wafer Head HCR-X™ Pail	1000
11137	10 x 3⅛″ RSS Structural Screw	236	N/A	N/A	N/A
12137	10 x 3⅛″ RSS Structural Screw	50	4281670500754	#10 x 3″ Multi-Material T20+ Wafer Head HCR-X™ 1LB	63
10151	1/4″ x 1½″ RSS Structural Screw	1000	N/A	N/A	N/A
12151	1/4″ x 1½″ RSS Structural Screw	50	N/A	N/A	N/A
10155	1/4″ x 2″ RSS Structural Screw	800	N/A	N/A	N/A
12155	1/4″ x 2″ RSS Structural Screw	50	N/A	N/A	N/A
10157	1/4″ x 2½″ RSS Structural Screw	700	N/A	N/A	N/A
10161	1/4″ x 3⅛″ RSS Structural Screw	500	N/A	N/A	N/A
12161	1/4″ x 3⅛″ RSS Structural Screw	50	N/A	N/A	N/A
10217	5/16″ x 2½″ RSS Structural Screw	600	3581820700630	1/4″ x 2½″ PowerLags® T-STAR Washer Head HCR® Pail	500
12217	5/16″ x 2½″ RSS Structural Screw	100	4581820700635	1/4″ x 2½″ PowerLags® T-STAR Washer Head HCR® Contractor Pax®	50
10219	5/16″ x 2¾″ RSS Structural Screw	500	N/A	N/A	N/A
12219	5/16″ x 2¾″ RSS Structural Screw	100	N/A	N/A	N/A
10221	5/16″ x 3⅛″ RSS Structural Screw	500	3581820700760	1/4″ x 3″ PowerLags® T-STAR Washer Head HCR® Pail	500
12221	5/16″ x 3⅛″ RSS Structural Screw	100	4581820700765	1/4″ x 3″ PowerLags® T-STAR Washer Head HCR® Contractor Pax®	50
14221	5/16″ x 3⅛″ RSS Structural Screw	25	45818207007643	1/4″ x 3″ PowerLags® T-STAR Washer Head HCR® Project Pax®	12
10223	5/16″ x 3½″ RSS Structural Screw	500	3581820700900	1/4″ x 3½″ PowerLags® T-STAR Washer Head HCR® Pail	500
12223	5/16″ x 3½″ RSS Structural Screw	100	4581820700905	1/4″ x 3½″ PowerLags® T-STAR Washer Head HCR® Contractor Pax®	50
10225	5/16″ x 4″ RSS Structural Screw	400	3581820701000	1/4″ x 4″ PowerLags® T-STAR Washer Head HCR® Pail	500
12225	5/16″ x 4″ RSS Structural Screw	100	4581820701005	1/4″ x 4″ PowerLags® T-STAR Washer Head HCR® Contractor Pax®	50
14225	5/16″ x 4″ RSS Structural Screw	25	45818207010043	1/4″ x 4″ PowerLags® T-STAR Washer Head HCR® Project Pax®	12
10231	5/16″ x 5⅛″ RSS Structural Screw	300	3581820701270	1/4″ x 5″ PowerLags® T-STAR Washer Head HCR® Pail	500
12231	5/16″ x 5⅛″ RSS Structural Screw	50	4581820701275	1/4″ x 5″ PowerLags® T-STAR Washer Head HCR® Contractor Pax®	500
14231	5/16″ x 5⅛″ RSS Structural Screw	20	45818207012743	1/4″ x 5″ PowerLags® T-STAR Washer Head HCR® Project Pax®	12
10235	5/16″ x 6″ RSS Structural Screw	300	3581820701520	1/4″ x 6″ PowerLags® T-STAR Washer Head HCR® Pail	500
12235	5/16″ x 6″ RSS Structural Screw	50	4581820701525	1/4″ x 6″ PowerLags® T-STAR Washer Head HCR® Contractor Pax®	50
14235	5/16″ x 6″ RSS Structural Screw	20	45818207015243	1/4″ x 6″ PowerLags® T-STAR Washer Head HCR® Project Pax®	12
10273	3/8″ x 3⅛″ RSS Structural Screw	400	3581820800760	■ 5/16″ x 3″ PowerLags® T-STAR Washer Head HCR® Pail	250
10275	3/8″ x 4″ RSS Structural Screw	400	3581820801000	▲ 5/16″ x 4″ PowerLags® T-STAR Washer Head HCR® Pail	250
12275	3/8″ x 4″ RSS Structural Screw	50	4581820801005	▲ 5/16″ x 4″ PowerLags® T-STAR Washer Head HCR® Contractor Pax®	50
10281	3/8″ x 6″ RSS Structural Screw	300	3581820801520	■ 5/16″ x 6″ PowerLags® T-STAR Washer Head HCR® Pail	250
12281	3/8″ x 6″ RSS Structural Screw	50	4581820801525	■ 5/16″ x 6″ PowerLags® T-STAR Washer Head HCR® Contractor Pax®	50
10285	3/8″ x 7¼″ RSS Structural Screw	200	N/A	N/A	N/A
12285	3/8″ x 7¼″ RSS Structural Screw	50	N/A	N/A	N/A
10287	3/8″ x 8″ RSS Structural Screw	300	3581820802030	5/16″ x 8″ PowerLags® T-STAR Washer Head HCR® Pail	150
12287	3/8″ x 8″ RSS Structural Screw	50	4581820802035	5/16″ x 8″ PowerLags® T-STAR Washer Head HCR® Contractor Pax®	50
10293	3/8″ x 10″ RSS Structural Screw	300	3581820802540	5/16″ x 10″ PowerLags® T-STAR Washer Head HCR® Pail	150
12293	3/8″ x 10″ RSS Structural Screw	50	4581820802545	5/16″ x 10″ PowerLags® T-STAR Washer Head HCR® Contractor Pax®	50
10299	3/8″ x 12″ RSS Structural Screw	300	3581820803040	5/16″ x 12″ PowerLags® T-STAR Washer Head HCR® Pail	150
12299	3/8″ x 12″ RSS Structural Screw	50	4581820803045	5/16″ x 12″ PowerLags® T-STAR Washer Head HCR® Contractor Pax®	50
12307	3/8″ x 14⅛″ RSS Structural Screw	50	N/A	N/A	N/A
10311	3/8″ x 16″ RSS Structural Screw	100	N/A	N/A	N/A
12311	3/8″ x 16″ RSS Structural Screw	50	N/A	N/A	N/A

COMPETITOR SIZE CROSS REFERENCE

GRK® TO SPAX®

SPAX® ENGINEERED FASTENERS

Alternative SPAX® Part #	Alternative SPAX® Description	Alternative SPAX® PKG/CT
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
3571820700500	1/4″ x 2″ PowerLags® Hex Head HCR® Pail	500
4571820700505	1/4″ x 2″ PowerLags® Hex Head HCR® Contractor Pax®	50
3581820700630	1/4″ x 2½″ PowerLags® T-STAR Washer Head HCR® Pail	500
3581820700760	1/4″ x 3″ PowerLags® T-STAR Washer Head HCR® Pail	500
N/A	N/A	N/A
N/A	N/A	N/A
3581820801710	● 5/16″ x 6¾″ PowerLags® T-STAR Washer Head HCR® Pail	250
4581820801715	● 5/16″ x 6¾″ PowerLags® T-STAR Washer Head HCR® Contractor Pax®	50
3581770803500	5/16″ x 14″ PowerLags® T-STAR Washer Head Black eCOAT Pail	250
3581770804000	5/16″ x 16″ PowerLags® T-STAR Washer Head Black eCOAT Pail	250
3581770804000	5/16″ x 16″ PowerLags® T-STAR Washer Head Black eCOAT Pail	250

▲ TER No. 1711-01
Deck Ledger Attachment

● TER No. 1802-03
Multi-ply: Engineered Wood Assemblies

■ TER No. 1802-03
Multi-ply: Sawn Lumber Assemblies

SPAX® PowerLags® to GRK RSS Sizing

SPAX® PowerLags® Diameter	GRK RSS Diameter
1/2″ (.480)	N/A
3/8″ (.394)	N/A
5/16″ (.315)	3/8″ (.313)
1/4″ (.276)	5/16″ (.276)
N/A	1/4″ (.236)

NOTE: Major diameter lengths in parentheses.

Cross Reference Clarification

This is a size cross reference. Application cross reference must be confirmed by Manufacturer Technical Evaluation Report.

Reference for Information

SPAX® ICC Report: https://icc-es.org/wp-content/uploads/report-directory/ESR-1782.pdf

GRK ICC Report: https://icc-es.org/wp-content/uploads/report-directory/ESR-2442.pdf

COMPETITOR SIZE CROSS REFERENCE

FASTENMASTER® TO SPAX®

SPAX® ENGINEERED FASTENERS

FM Part #	FM Description	FM PKG/CT	SPAX® Part #	SPAX® PowerLags® Description	SPAX® PKG/CT	Alternative SPAX® Part #
FMFL278-50	2⅞″ FlatLok 50 CT	50	N/A	N/A	N/A	4581820800765
FMFL278B-500	2⅞″ FlatLok 500 CT	500	N/A	N/A	N/A	3581820800760
FMFL312-50	3½″ FlatLok 50 CT	50	4581820800905	● 5/16″ x 3½″ T-STAR Washer Head HCR® Contractor Pax®	50	
FMFL312B-250	3½″ FlatLok 250 CT	250	3581820800900	● 5/16″ x 3½″ T-STAR Washer Head HCR® Pail	250	
FMFL004-50	4 FlatLok 250 CT	50	3581820801000	▲ 5/16″ x 4″ T-STAR Washer Head HCR® Pail	250	
FMFL004B-250	4″ FlatLok 50 CT	250	4581820801005	▲ 5/16″ x 4″ T-STAR Washer Head HCR® Contractor Pax®	50	
FMFL412-50	4½″ FlatLok 50 CT	50	4581820801155	■ 5/16″ x 4½″ T-STAR Washer Head HCR® Contractor Pax®	50	
FMFL412B-250	4½″ FlatLok 250 CT	250	3581820801150	■ 5/16″ x 4½″ T-STAR Washer Head HCR® Pail	250	
FMFL005-50	5″ FlatLok 50 CT	50	4581820801275	▲● 5/16″ x 5″ T-STAR Washer Head HCR® Contractor Pax®	50	
FMFL005B-250	5″ FlatLok 250 CT	250	3581820801270	▲● 5/16″ x 5″ T-STAR Washer Head HCR® Pail	250	
FMFL006-50	6″ FlatLok 50 CT	50	4581820801525	■ 5/16″ x 6″ T-STAR Washer Head HCR® Contractor Pax®	50	
FMFL006B-250	6″ FlatLok 250 CT	250	3581820801520	■ 5/16″ x 6″ T-STAR Washer Head HCR® Pail	250	
FMFL634-50	6¾″ FlatLok 50 CT	50	4581820801715	● 5/16″ x 6¾″ T-STAR Washer Head HCR® Contractor Pax®	50	
FMFL634B-200	6¾″ FlatLok 200 CT	200	3581820801710	● 5/16″ x 6¾″ T-STAR Washer Head HCR® Pail	250	
FMLL350-12	3⅝″ LedgerLok 12 CT	12	N/A	N/A	N/A	45818208009043
FMLL358-50	3⅝″ LedgerLok 50 CT	50	N/A	N/A	N/A	4571820800905
FMLL358B-250	3⅝″ LedgerLok 250 CT	250	N/A	N/A	N/A	3571820800900
FMLL005-12	5″ LedgerLok 12 CT	12	45718208012743	▲ 5/16″ x 5″ Hex Head HCR® Project Pax®	12	
FMLL005-50	5″ LedgerLok 50 CT	50	4571820801275	▲ 5/16″ x 5″ Hex Head HCR® Contractor Pax®	50	
FMLL005B-250	5″ LedgerLok 250 CT	250	3571820801270	▲ 5/16″ x 5″ Hex Head HCR® Pail	250	
FMLLF358-12	3⅝″ LedgerLok Flat Head 12 CT	12	N/A	N/A	N/A	45818208009043
FMLLF358-50	3⅝″ LedgerLok Flat Head 50 CT	50	N/A	N/A	N/A	4581820800905
FMLLF358B-250	3⅝″ LedgerLok Flat Head 250 CT	250	N/A	N/A	N/A	3581820800900
FMLLF005-12	5″ LedgerLok Flat Head 12 CT	12	45818208012743	▲● 5/16″ x 5″ T-STAR Washer Head HCR® Project Pax®	12	
FMLLF005-50	5″ LedgerLok Flat Head 50 CT	50	4581820801275	▲● 5/16″ x 5″ T-STAR Washer Head HCR® Contractor Pax®	50	
FMLLF005B-250	5″ LedgerLok Flat Head 250 CT	250	3581820801270	▲● 5/16″ x 5″ T-STAR Washer Head HCR® Pail	250	
FMTLOK212-12	2½″ TimberLok 12 CT	12	N/A	N/A	N/A	45818207006343
FMTLOK212-50	2½″ TimberLok 50 CT	50	N/A	N/A	N/A	4581820700635
FMTLOK212-500	2½″ TimberLok 500 CT	500	N/A	N/A	N/A	3581820700630
FMTLOK04-12	4″ TimberLok 12 CT	12	N/A	N/A	N/A	45818207010043
FMTLOK04-50	4″ TimberLok 50 CT	50	N/A	N/A	N/A	4581820701005
FMTLOK04-250	4″ TimberLok 250 CT	250	N/A	N/A	N/A	3581820701000
FMTLOK06-12	6″ TimberLok 12 CT	12	45718207015243	1/4″ x 6″ Hex Washer Head HCR® Project Pax®	12	
FMTLOK06-50	6″ TimberLok 50 CT	50	4571820701525	1/4″ x 6″ Hex Washer Head HCR® Contractor Pax®	50	
FMTLOK06-250	6″ TimberLok 250 CT	250	3571820701520	1/4″ x 6″ Hex Washer Head HCR® Pail	500	
FMTLOK08-12	8″ TimberLok 12 CT	12	N/A	N/A	N/A	45818208020343
FMTLOK08-50	8″ TimberLok 50 CT	50	N/A	N/A	N/A	4581820802035
FMTLOK08-250	8″ TimberLok 250 CT	250	N/A	N/A	N/A	3581820802030
FMTLOK10-12	10″ TimberLok 12 CT	12	N/A	N/A	N/A	45818208025443
FMTLOK10-50	10″ TimberLok 50 CT	50	N/A	N/A	N/A	4581820802545
FMTLOK10-250	10″ TimberLok 250 CT	250	N/A	N/A	N/A	3581820802540
FMHLGM158-500	1⅝″ HeadLok 500 CT	500	N/A	N/A	N/A	N/A
FMHLGM278-12	2⅞″ HeadLok 12 CT	12	N/A	N/A	N/A	45818207007643
FMHLGM278-50	2⅞″ HeadLok 50 CT	50	N/A	N/A	N/A	4581820700765
FMHLGM278-500	2⅞″ HeadLok 500 CT	500	N/A	N/A	N/A	3581820700760
FMHLGM334-500	3¾″ HeadLok 500 CT	500	N/A	N/A	N/A	3581820700900
FMHLGM412-12	4½″ HeadLok 12 CT	12	45818207015543	1/4″ x 4½″ T-STAR Washer Head HCR® Project Pax®	12	
FMHLGM412-50	4½″ HeadLok 50 CT	50	4581820701555	1/4″ x 4½″ T-STAR Washer Head HCR® Contractor Pax®	50	
FMHLGM005-250	4½″ HeadLok 250 CT	250	3581820701550	1/4″ x 4½″ T-STAR Washer Head HCR® Pail	500	
FMHLGM512-250	5½″ HeadLok 250 CT	250	N/A	N/A	N/A	N/A
FMHLGM006-12	6″ HeadLok 12 CT	12	45818207015243	1/4″ x 6″ T-STAR Washer Head HCR® Project Pax®	12	
FMHLGM006-50	6″ HeadLok 50 CT	50	4581820701525	1/4″ x 6″ T-STAR Washer Head HCR® Contractor Pax®	50	
FMHLGM006-250	6″ HeadLok 250 CT	250	3581820701520	1/4″ x 6″ T-STAR Washer Head HCR® Pail	500	
FMHLGM612-250	6½″ HeadLok 250 CT	250	N/A	N/A	N/A	N/A
FMHLGM007-250	7″ HeadLok 250 CT	250	N/A	N/A	N/A	N/A
FMHLGM712-250	7½″ HeadLok 250 CT	250	N/A	N/A	N/A	N/A
FMHLGM008-250	8″ HeadLok 250 CT	250	N/A	N/A	N/A	3601770802000
FMHLGM812-250	8½″ HeadLok 250 CT	250	N/A	N/A	N/A	N/A
FMHLGM009-250	9″ HeadLok 250 CT	250	N/A	N/A	N/A	3601770802200
FMHLGM912-250	9½″ HeadLok 250 CT	250	N/A	N/A	N/A	N/A
FMHLGM010-250	10″ HeadLok 250 CT	250	N/A	N/A	N/A	3601770802500
FMHLGM011-250	11″ HeadLok 250 CT	250	N/A	N/A	N/A	3601770802700
FMHLGM012-250	12″ HeadLok 250 CT	250	N/A	N/A	N/A	3601770803000
FMHLGM013-250	13″ HeadLok 250 CT	250	N/A	N/A	N/A	N/A
FMHLGM014-250	14″ HeadLok 250 CT	250	N/A	N/A	N/A	3601770803500
FMHLGM015-250	15″ HeadLok 250 CT	250	N/A	N/A	N/A	3601770803800
FMHLGM016-250	16″ HeadLok 250 CT	250	N/A	N/A	N/A	3601770804000
FMHLGM018-250	18″ HeadLok 250 CT	250	N/A	N/A	N/A	N/A

COMPETITOR SIZE CROSS REFERENCE

FASTENMASTER® TO SPAX®

SPAX® ENGINEERED FASTENERS

Alternative SPAX® PowerLags® Description	Alternative SPAX® PKG/CT	TRUFAST® Part #	TRUFAST® Description	TRUFAST® PKG/CT
■ 5/16″ x 3″ T-STAR Washer Head HCR® Contractor Pax®	50			
■ 5/16″ x 3″ T-STAR Washer Head HCR® Pail	250			
● 5/16″ x 3½″ T-STAR Washer Head HCR® Project Pax®	12			
5/16″ x 3½″ Hex Washer Head HCR® Contractor Pax®	50			
5/16″ x 3½″ Hex Head HCR® Pail	250			
● 5/16″ x 3½″ T-STAR Washer Head HCR® Project Pax®	12			
● 5/16″ x 3½″ T-STAR Washer Head HCR® Contractor Pax®	50			
● 5/16″ x 3½″ T-STAR Washer Head HCR® Pail	250			
1/4″ x 2½″ T-STAR Washer Head HCR® Project Pax®	12			
1/4″ x 2½″ T-STAR Washer Head HCR® Contractor Pax®	50			
1/4″ x 2½″ T-STAR Washer Head HCR® Pail	500	SIPTP-2500	2½″ SIP TP Fastener	500
1/4″ x 4″ T-STAR Washer Head HCR® Project Pax®	12			
1/4″ x 4″ T-STAR Washer Head HCR® Contractor Pax®	50			
1/4″ x 4″ T-STAR Washer Head HCR® Pail	500	SIPTP-4000	4″ SIP TP Fastener	500
		SIPTP-6000	6″ SIP TP Fastener	500
5/16″ x 8″ T-STAR Washer Head HCR® Project Pax®	12			
5/16″ x 8″ T-STAR Washer Head HCR® Contractor Pax®	50			
5/16″ x 8″ T-STAR Washer Head HCR® Pail	150	SIPTP-8000	8″ SIP TP Fastener	500
5/16″ x 10″ T-STAR Washer Head HCR® Project Pax®	12			
5/16″ x 10″ T-STAR Washer Head HCR® Contractor Pax®	50			
5/16″ x 10″ T-STAR Washer Head HCR® Pail	150	SIPTP-10000	10″ SIP TP Fastener	250
N/A	N/A	N/A	N/A	N/A
1/4″ x 3″ T-STAR Washer Head HCR® Project Pax®	12	N/A	N/A	N/A
1/4″ x 3″ T-STAR Washer Head HCR® Contractor Pax®	50	N/A	N/A	N/A
1/4″ x 3″ T-STAR Washer Head HCR® Pail	500	SIPTP-3000	3″ SIP TP Fastener	500
1/4″ x 3½″ T-STAR Washer Head HCR® Pail	500	SIPTP-3500	3½″ SIP TP Fastener	500
		N/A	N/A	N/A
		N/A	N/A	N/A
		SIPTP-4500	4½″ SIP TP Fastener	500
N/A	N/A	SIPTP-5500	5½″ SIP TP Fastener	500
		N/A	N/A	N/A
		N/A	N/A	N/A
		SIPTP-6000	6″ SIP TP Fastener	500
N/A	N/A	SIPTP-6500	6½″ SIP TP Fastener	500
N/A	N/A	SIPTP-7000	7″ SIP TP Fastener	500
N/A	N/A	SIPTP-7500	7½″ SIP TP Fastener	500
5/16″ x 8″ PowerLags® T-STAR Pancake Head Black eCOAT Pail	250	SIPTP-8000	8″ SIP TP Fastener	500
N/A	N/A	SIPTP-8500	8½″ SIP TP Fastener	250
5/16″ x 9″ PowerLags® T-STAR Pancake Head Black eCOAT Pail	250	SIPTP-9000	9″ SIP TP Fastener	250
N/A	N/A	N/A	N/A	N/A
5/16″ x 10″ PowerLags® T-STAR Pancake Head Black eCOAT Pail	250	SIPTP-10000	10″ SIP TP Fastener	250
5/16″ x 11″ PowerLags® T-STAR Pancake Head Black eCOAT Pail	250	SIPTP-11000	11″ SIP TP Fastener	250
5/16″ x 12″ PowerLags® T-STAR Pancake Head Black eCOAT Pail	250	SIPTP-12000	12″ SIP TP Fastener	250
N/A	N/A	SIPTP-13000	13″ SIP TP Fastener	250
5/16″ x 14″ PowerLags® T-STAR Pancake Head Black eCOAT Pail	250	SIPTP-14000	14″ SIP TP Fastener	250
5/16″ x 15″ PowerLags® T-STAR Pancake Head Black eCOAT Pail	250	SIPTP-15000	15″ SIP TP Fastener	250
5/16″ x 16″ PowerLags® T-STAR Pancake Head Black eCOAT Pail	250	SIPTP-16000	16″ SIP TP Fastener	250
N/A	N/A	SIPTP-18000	18″ SIP TP Fastener	250

▲ TER No. 1711-01
Deck Ledger Attachment

● TER No. 1802-03
Multi-ply: Engineered Wood Assemblies

■ TER No. 1802-03
Multi-ply: Sawn Lumber Assemblies

SPAX® PowerLags® to FastenMaster® Sizing

SPAX® PowerLags® Diameter	FastenMaster® Diameter	Trufast® Diameter
5/16″ (.315)	FlatLOK, LedgerLOK and LedgerLOK Flat Head (.305)	N/A
1/4″ (.276)	TimberLOK (.260) and HeadLOK (.260)	SIP TP Fastener

NOTE: Major diameter lengths in parentheses.

Cross Reference Clarification

This is a size cross reference. Application cross reference must be confirmed by Manufacturer Technical Evaluation Report.

Reference for Information

SPAX® ICC Report: https://icc-es.org/wp-content/uploads/report-directory/ESR-1782.pdf

FastenMaster® ICC Report: https://icc-es.org/report-listing/esr-1078/

COMPETITOR SIZE CROSS REFERENCE

SIMPSON STRONG-TIE® TO SPAX®

SPAX® ENGINEERED FASTENERS

Simpson Part #	Simpson Description	Simpson PKG/CT	SPAX® Part #	SPAX® PowerLags® Description	SPAX® PKG/CT
SDWS22300DB	3″ SDWS Timber Screw	950	N/A	N/A	N/A
SDWS22300DB-R50	3″ SDWS Timber Screw	50	4581820800765	■ 5/16″ x 3″ T-STAR Washer Head HCR® Contractor Pax®	50
SDWS22300DBMB	3″ SDWS Timber Screw	250	3581820800760	■ 5/16″ x 3″ T-STAR Washer Head HCR® Pail	250
SDWS22400DB	4″ SDWS Timber Screw	600	N/A	N/A	N/A
SDWS22400DB-R50	4″ SDWS Timber Screw	50	4581820801005	▲ 5/16″ x 4″ T-STAR Washer Head HCR® Contractor Pax®	50
SDWS22400DBMB	4″ SDWS Timber Screw	250	3581820801000	▲ 5/16″ x 4″ T-STAR Washer Head HCR® Pail	250
SDWS22500DB	5″ SDWS Timber Screw	600	N/A	N/A	N/A
SDWS22500DB-R50	5″ SDWS Timber Screw	50	4581820801275	▲ ● 5/16″ x 5″ T-STAR Washer Head HCR® Contractor Pax®	50
SDWS22500DBMB	5″ SDWS Timber Screw	250	3581820801270	▲ ● 5/16″ x 5″ T-STAR Washer Head HCR® Pail	250
SDWS22600DB	6″ SDWS Timber Screw	500	N/A	N/A	N/A
SDWS22600DB-R50	6″ SDWS Timber Screw	50	4581820801525	■ 5/16″ x 6″ T-STAR Washer Head HCR® Contractor Pax®	50
SDWS22600DBMB	6″ SDWS Timber Screw	250	3581820801520	■ 5/16″ x 6″ T-STAR Washer Head HCR® Pail	250
SDWS22800DB	8″ SDWS Timber Screw	400	N/A	N/A	N/A
SDWS22800DB-R50	8″ SDWS Timber Screw	50	4581820802035	5/16″ x 8″ T-STAR Washer Head HCR® Contractor Pax®	50
SDWS22800DBMB	8″ SDWS Timber Screw	250	3581820802030	5/16″ x 8″ T-STAR Washer Head HCR® Pail	150
SDWS221000DB	10″ SDWS Timber Screw	250	3581820802540	5/16″ x 10″ T-STAR Washer Head HCR® Pail	150
SDWS221000DB-R50	10″ SDWS Timber Screw	50	4581820802545	5/16″ x 10″ T-STAR Washer Head HCR® Contractor Pax®	50
SDWS19600	6″ SDWS Timber Screw (Interior Grade)	250	N/A	N/A	N/A
SDWS19600-R50	6″ SDWS Timber Screw (Interior Grade)	50	N/A	N/A	N/A
SDWS19712	7½″ SDWS Timber Screw (Interior Grade)	250	N/A	N/A	N/A
SDWS19712-R50	7½″ SDWS Timber Screw (Interior Grade)	50	N/A	N/A	N/A
SDWS22400	4″ SDWS Timber Screw (Interior Grade)	250	N/A	N/A	N/A
SDWS22400-R50	4″ SDWS Timber Screw (Interior Grade)	50	N/A	N/A	N/A
SDWS22500	5″ SDWS Timber Screw (Interior Grade)	250	N/A	N/A	N/A
SDWS22500-R50	5″ SDWS Timber Screw (Interior Grade)	50	N/A	N/A	N/A
SDWS22600	6″ SDWS Timber Screw (Interior Grade)	250	3581770801500	5/16″ x 6″ T-STAR Washer Head Black eCOAT Pail	250
SDWS22600-R50	6″ SDWS Timber Screw (Interior Grade)	50	N/A	N/A	N/A
SDWS22800	8″ SDWS Timber Screw (Interior Grade)	250	3581770802000	5/16″ x 8″ T-STAR Washer Head Black eCOAT Pail	250
SDWS22800-R50	8″ SDWS Timber Screw (Interior Grade)	50	N/A	N/A	N/A
SDWS22900	9″ SDWS Timber Screw (Interior Grade)	250	3581770802200	5/16″ x 9″ T-STAR Washer Head Black eCOAT Pail	250
SDWS22900-R50	9″ SDWS Timber Screw (Interior Grade)	50	N/A	N/A	N/A
SDWS221000	10″ SDWS Timber Screw (Interior Grade)	250	3581770802500	5/16″ x 10″ T-STAR Washer Head Black eCOAT Pail	250
SDWS221000-R50	10″ SDWS Timber Screw (Interior Grade)	50	N/A	N/A	N/A
SDWS221100	11″ SDWS Timber Screw (Interior Grade)	250	3581770802700	5/16″ x 11″ T-STAR Washer Head Black eCOAT Pail	250
SDWS221100-R50	11″ SDWS Timber Screw (Interior Grade)	50	N/A	N/A	N/A
SDWS221200	12″ SDWS Timber Screw (Interior Grade)	250	3581770803000	5/16″ x 12″ T-STAR Washer Head Black eCOAT Pail	250
SDWS221200-R50	12″ SDWS Timber Screw (Interior Grade)	50	N/A	N/A	N/A
SDWS221500	15″ SDWS Timber Screw (Interior Grade)	250	3581770803800	5/16″ x 15″ T-STAR Washer Head Black eCOAT Pail	250
SDWS221500-R50	15″ SDWS Timber Screw (Interior Grade)	50	N/A	N/A	N/A

COMPETITOR SIZE CROSS REFERENCE

SIMPSON STRONG-TIE® TO SPAX®

Alternative SPAX® Part #	Alternative SPAX® PowerLags® Description	Alternative SPAX® PKG/CT
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
3581020701520	1/4″ x 6″ T-STAR Washer Head Yellow Zinc Pail	500
4581020701525	1/4″ x 6″ T-STAR Washer Head Yellow Zinc Contractor Pax®	50
N/A	N/A	N/A
N/A	N/A	N/A
3601770801000	5/16″ x 4″ T-STAR Pancake Head Black eCOAT Pail	250
4581020801005	5/16″ x 4″ T-STAR Washer Head Yellow Zinc Contractor Pax®	50
N/A	N/A	N/A
N/A	N/A	N/A
3601770801500	5/16″ x 6″ T-STAR Pancake Head Black eCOAT Pail	250
N/A	N/A	N/A
3601770802000	5/16″ x 8″ T-STAR Pancake Head Black eCOAT Pail	250
N/A	N/A	N/A
3601770802200	5/16″ x 9″ T-STAR Pancake Head Black eCOAT Pail	250
N/A	N/A	N/A
3601770802500	5/16″ x 10″ T-STAR Pancake Head Black eCOAT Pail	250
N/A	N/A	N/A
3601770802700	5/16″ x 11″ T-STAR Pancake Head Black eCOAT Pail	250
N/A	N/A	N/A
3601770803000	5/16″ x 12″ T-STAR Pancake Head Black eCOAT Pail	250
N/A	N/A	N/A
3601770803800	5/16″ x 15″ T-STAR Pancake Head Black eCOAT Pail	250
N/A	N/A	N/A

▲ TER No. 1711-01
Deck Ledger Attachment

● TER No. 1802-03
Multi-ply: Engineered Wood Assemblies

■ TER No. 1802-03
Multi-ply: Sawn Lumber Assemblies

SPAX® PowerLags® to Simpson Strong-Tie® Sizing

SPAX® PowerLags® Diameter	Simpson Diameter
5/16″ (.315)	0.22 Shank (.305)
1/4″ (.276)	0.196 Shank (.268)

NOTE: Major diameter lengths in parentheses.

Cross Reference Clarification

This is a size cross reference. Application cross reference must be confirmed by Manufacturer Technical Evaluation Report.

Reference for Information

SPAX® ICC Report: https://icc-es.org/wp-content/uploads/report-directory/ESR-1782.pdf

Simpson UES Report: https://embed.widencdn.net/pdf/plus/ssttoolbox/96lrxjfxjn/IAPMO_UES_ER192.pdf?u=cjmyin

ACCESSORIES

SPAX® Bit Center



UNIDRIVE: #2 Phillips / #2 Square
Use with SPAX Multi-Material screws: #8, #10, and #12

Part No. 5000009190009
Size: 1" - 1/4" hex
Only sold in master cartons of 10.



T-STAR*plus*®: T20 *plus*
Use with SPAX Multi-Material screws: #8, #9, and #10

Part No. 5000009185209
Size: 1" - 1/4" hex
Only sold in master cartons of 10.



T-STAR*plus*®: T30 *plus*
Use with SPAX Multi-Material screws: #14

Part No. 5000009185309
Size: 1" - 1/4" hex
Only sold in master cartons of 10.



T-STAR*plus*®: T20 *plus* (2 pack)
Use with SPAX Multi-Material screws: #8, #9, and #10

Part No. 5000009285209
Size: 2" - 1/4" hex
Only sold in master cartons of 10.



T-STAR*plus*®: T30 *plus* (2 pack)
Use with SPAX Multi-Material screws: #14

Part No. 5000009285309
Size: 2" - 1/4" hex
Only sold in master cartons of 10.



T-STAR: T30
Use with SPAX PowerLags® T-STAR Washer Heads: 1/4"

Part No. 5000002016309
Size: 1" - 1/4" hex
Only sold in master cartons of 10.



T-STAR: T40
Use with SPAX PowerLags T-STAR Washer Heads: 5/16"

Part No. 5000002016409
Size: 1" - 1/4" hex
Only sold in master cartons of 10.



T-STAR: T50
Use with SPAX PowerLags T-STAR Washer Heads: 3/8"

Part No. 5000002016509
Size: 1" - 1/4" hex
Only sold in master cartons of 10.

BIT FEATURES

- Machined perfectly to work with our T-STAR recess drive reducing wobble / superior bit fit
- Made from S2 material for extreme durability
- Impact rated
- Made in Taiwan

ACCESSORIES

Deck Board Spacers

FOR PERFECTLY SPACED DECK BOARDS

SPAX® Deck Board Spacers are designed with ease of use in mind, ensuring uniform spaces between deck boards in four common sizes, so you're guaranteed a professional-looking finish without the hassle of nail or speed squares.

- Most common spacing dimensions in deck construction
- Spacer notch provides consistent screw alignment
- Versatile – works with wood and synthetic deck boards
- Prevents denting and marring of deck boards



PRODUCT SELECTION

PART DESCRIPTION	QTY.	PKG. TYPE	MASTER QTY.	PART NO.
Deck Board Spacers	3	Retail Pax	10	5100007193091

Deck Joist & Beam Tape

FOR PROTECTION AGAINST WATER DAMAGE

SPAX® Deck Joist and Beam Tape optimizes the life of the deck and ensures a long-lasting, professional installation by protecting fasteners from water damage.

- Protects deck substructure from rot and decay
- Seals fasteners, preventing moisture penetration
- Black to hide joists and drillable for ease of use
- Moisture-resistant, slip and tear resistant
- Materials warranty for a period of 10 years



PRODUCT SELECTION

PART DESCRIPTION	QTY.	PKG. TYPE	MASTER QTY.	PART NO.
Joist Tape	1	Individual	16	5100007193071
Beam Tape	1	Individual	8	5100007193081

ACCESSORIES

PLASTI-GRIP® ci Prong Insulation Washer



MADE IN USA
WITH GLOBALLY SOURCED MATERIALS



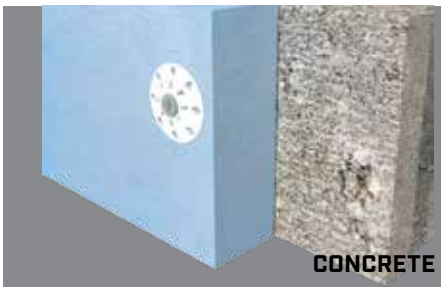
SHOOT IT, SCREW IT, NAIL IT!

FOR RIGID INSULATION ATTACHMENT TO WOOD, STEEL, OR CONCRETE.

The SPAX® 1¾" diameter Plasti-Grip® ci Prong Insulation Washer is the perfect solution to attach rigid insulation. Patented prongs enable pre-spotting for easy on-the-wall fastening. Appropriate for all substrates including masonry/foundation walls, wood and steel. Recommended for use with SPAX #8 or #10 diameter construction screws. Energy efficient and labor-saving attachment of all types of rigid insulation.







SHOOT IT, SCREW IT, NAIL IT!

- Compatible with nails and screws. Recommended SPAX #8 or #10 construction screws with minimum fastener head of 1/4" diameter
- Rigid insulation attachment solutions for foundation and basement walls, garages, barns, crawl spaces, attics, and all interior/exterior walls and ceilings
- 1¾" diameter plastic washer provides superior holding power
- Designed to reduce thermal bridging and air infiltration
- Recommended by leading insulation manufacturers

PRODUCT SELECTION

PART DESCRIPTION	QTY.	PKG. TYPE	MASTER QTY.	PART NO.
PLASTI-GRIP® ci Prong Insulation Washer	75	Bag	4	5019677517509
	400	Bulk Pail	N/A	3019677517500

Contact SPAX Sales for more information about this rack display.





Pre-spotting prongs for on-the-wall fastener assembly; no hand assembly required.



ACCESSORIES

PLASTI-GRIP® CBW Insulation Washer

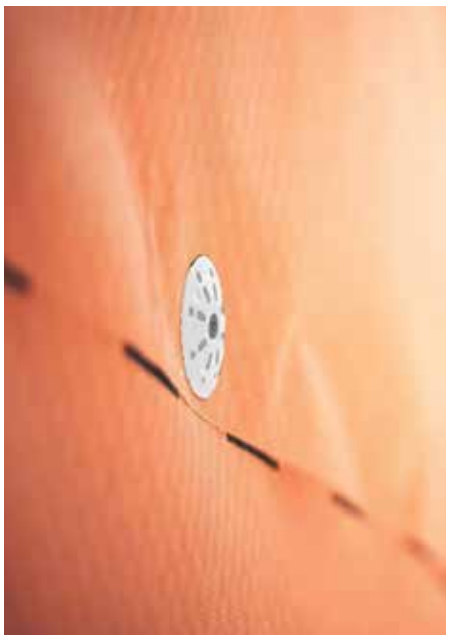




MADE IN USA
WITH GLOBALLY
SOURCED MATERIALS

FOR ATTACHING BUILDING WRAP, INSULATION, AND LATH.

- Round 1¾" diameter plastic tapered plate
- Attaches rigid insulation, commercial building wrap, EIFS (PM) systems, or fiberglass lath
- Keyholes for base coat bonding
- Flat bottom for flush mounting
- Flexible perimeter reduces tearing of facer
- Made in U.S.A.



PRODUCT SELECTION

PART DESCRIPTION	QTY.	PKG. TYPE	MASTER QTY.	PART NO.
PLASTI-GRIP® CBW Insulation Washer	100	Mini Pail	3	5019600517508

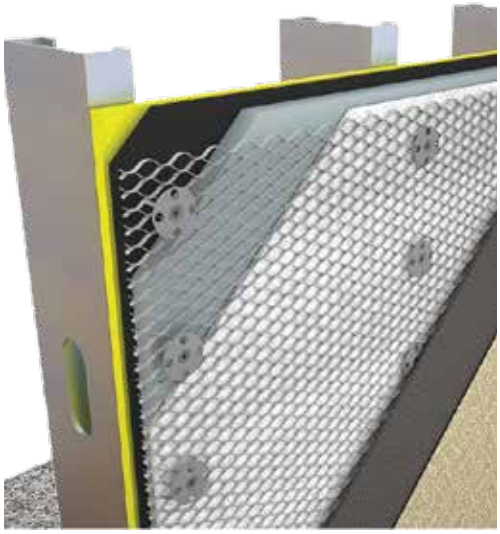
GRIP-PLATE® Galvanized Steel Washer



MADE IN USA
WITH GLOBALLY
SOURCED MATERIALS

FOR ATTACHING LATH AND PLASTER.

- 1¼" diameter galvanized steel
- Use as tested or recommended to support heavy adhered masonry cladding over layers of continuous insulation
- Keyholes for plaster/basecoat bonding
- Attaches exterior gypsum sheathing in high wind load areas
- Compatible with screws or pins



PRODUCT SELECTION

PART DESCRIPTION	QTY.	PKG. TYPE	MASTER QTY.	PART NO.
GRIP-PLATE® Galvanized Steel Washer	80	Contractor Pax	5	5019500312508

ACCESSORIES

THERMAL-GRIP® Flat Plastic Washer

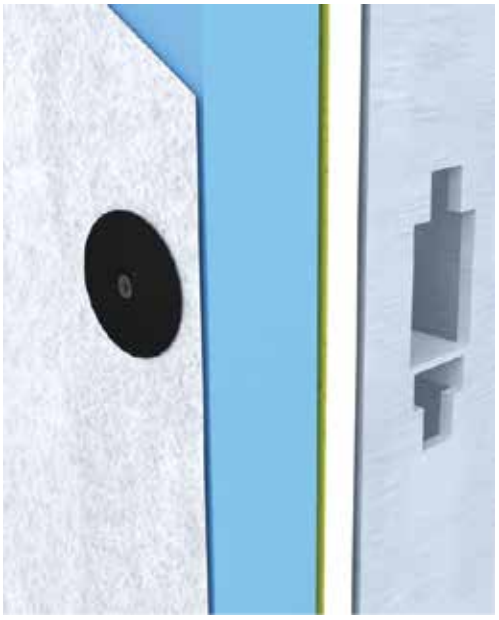




MADE IN USA
WITH GLOBALLY
SOURCED MATERIALS

FOR ATTACHING COMMERCIAL BUILDING WRAP APPLICATIONS.

- 2" diameter washer with solid cap design (no keyholes)
- Flat bottom for flush mounting
- Stiffened center “Bullseye” ring prevents fastener pull-through
- Flexible perimeter compresses on surface and reduces tearing of wrap
- Carbon Black UV stabilizers
- Air barrier / building wrap manufacturer approved



PRODUCT SELECTION

PART DESCRIPTION	QTY.	PKG. TYPE	MASTER QTY.	PART NO.
THERMAL-GRIP® Flat Plastic Washer	80	Mini Pail	3	5019677420008

PACKAGING TYPES



SMALL PLASTIC (SP)

Lengths: 1/2" - 2½"
Retail Container

MASTER CARTON: 10 (Boxed)
H: 4.25" / W: 2.4" / D: 15.5"



LONG PLASTIC (LP)

Lengths: 3" - 3¾"
Retail Container

MASTER CARTON: 10 (Boxed)
H: 6" / W: 2.4" / D: 15.5"



TRIM SCREW CLAM

Retail Container

MASTER CARTON: 5
H: 5.3" / W: 3.3" / D: 7.9"



READY PAX (1LB)

Retail Container

MASTER CARTON: 5
H: 5" / W: 3.6" / D: 11.8"



3 POUND (3LB)

Retail Container

MASTER CARTON: 3
H: 5" / W: 4.7" / D: 12.9"



MINI PAIL

Retail Container

MASTER CARTON: 3
H: 5.8" / W: 5" / D: 16.7"



BIT CUTCASE

Retail Container / Cutcase

MASTER CARTON: 10
H: 6.5" / W: 1.75" / D: 6.2"



MULTI-MATERIAL BULK PAIL

Bulk Container

NO MASTER CARTON: Sold EA
H: 7.9" / W: 10.3" / D: 9.8"



FLAGGED POWERLAGS®

Individually Flagged Lags

MASTER CARTON: Varies by length
H: 3" / W: 4.2" / D: 8.3"



PROJECT PAX (PP)

Retail Container / Clam Shell

MASTER CARTON: 5
H: 6.5" / W: 4.2" / D: 10.8"



CONTRACTOR PAX (CP)

Retail Container

MASTER CARTON: 4
MASTER CARTON LONG LENGTHS (8" & UP): 2
H: 7.3" / W: 3.7" / D: 15"



MINI BULK PAIL

Bulk Container

NO MASTER CARTON: Sold EA
H: 4.5" / W: 9.7" / D: 9.7"



LAG BULK PAIL

Bulk Container

NO MASTER CARTON: Sold EA
H: 7.9" / W: 10.3" / D: 9.8"

BULK PACKAGING

SPAX® ENGINEERED FASTENERS

SPAX® is proud to offer bulk packaging options for multi-material construction screws and PowerLags®.



MULTI-MATERIAL CONSTRUCTION

INTERIOR

T-STAR Flat Head Yellow Zinc



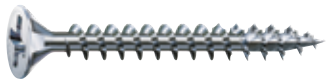


T-STAR*plus*® Wafer Head Yellow Zinc





Unidrive Flat Head Zinc





INTERIOR/EXTERIOR

T-STAR*plus*® Cylindric Head HCR®





EXTERIOR

T-STAR Flat Head HCR®





T-STAR*plus*® Wafer Head HCR-X™





POWERLAGS®

INTERIOR

T-STAR Pancake Head Yellow Zinc





Hex Washer Head Zinc





T-STAR*plus*® Cylindric Head WIROX®





EXTERIOR

T-STAR Pancake Head HCR®





Hex Washer Head HCR®





LIMITED LIFETIME WARRANTY

ALTENLOH, BRINCK & CO. US, INC.

SPAX® CONSTRUCTION SCREWS AND POWERLAGS® LIMITED WARRANTY

WHAT DOES THIS WARRANTY COVER?

This warranty covers against breakage or loss of satisfactory holding ability of SPAX® Construction Screws and PowerLags® ("Covered Fasteners") as a result of defects in materials or workmanship.

HOW LONG DOES THE COVERAGE LAST?

This warranty lasts as long as the original purchaser owns the property to which the Covered Fasteners are attached. This warranty is not transferable.

WHAT DOES THIS WARRANTY NOT COVER?

This warranty does not cover any product failure caused by the improper use or installation of the Covered Fasteners. This warranty does not cover damage as a result of alteration, accident, misuse, neglect, or reuse. This warranty is limited to the replacement of defective Covered Fasteners and the shipping cost of replacement fasteners to the original purchaser.

HOW DO YOU GET SERVICE?

To obtain service under this warranty, the original purchaser must sent (1) the defective Covered Fasteners, (2) one or more clear photographs of the Covered Fasteners attached to the property in which the failure occurred, (3) a detailed written description of how the Covered Fasteners were attached to the property in which the failure occurred, and (4) a copy of the original purchase receipt from the retailer at which the Covered Fasteners were purchased to:

ALTENLOH, BRINCK & CO. US, INC.
Att: Quality Control
2105 County Rd. 12C
Bryan, OH 43506

Upon receipt of all of the above-identified items, we will examine, or cause to be examined, the Covered Fasteners in question, without unreasonable delay. If we find that the Covered Fasteners are defective, we will send replacement fasteners to the original purchaser.

HOW DOES STATE LAW APPLY?

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This Limited Warranty is exclusive and in lieu of any other warranty, written or oral, including but not limited to any express warranty of merchantability or fitness for a particular purpose. The duration of any implied warranties, including any implied warranty of merchantability or fitness for a particular purpose, is expressly limited to this limited warranty period.

Some states do not allow limitations on how long an implied warranty lasts. Therefore, the above limitations and exclusions may not apply to you.

The original purchaser's exclusive remedy for breach of this Limited Warranty or any implied warranty or of any other obligation arising by operation of law or otherwise shall be limited as specified herein to replacement of the Covered Fasteners. In any event, responsibility for special, incidental and consequential damages is expressly excluded.

Some states do not allow an exclusion or limitation of special, incidental or consequential damages. Therefore, the above limitations and exclusions may not apply to you.



TRUFAST®

FASTENING SOLUTIONS THAT PUSH THE ENVELOPE

TRUFAST.COM

SPAX® ENGINEERED FASTENERS



DRIVING INNOVATION INTO EVERY CONNECTION

For any home project, SPAX® Engineered Fasteners help you drive with more speed, greater strength and lasting beauty. Rely on us to amplify your craft. **Find the right fastener for your job at SPAX.us/Products.**

ALTENLOH, BRINCK & CO. US, INC.
has been assessed by NSF-ISR and found to be in conformance to the following standard(s):

ISO 9001:2015
Cert. No. C0095070-IS7

Scope of Registration: Design, Manufacture, and Distribution of Roofing, Building and Industrial Fastening Systems in Bryan, OH. Also included is the Fastener Heat Treating process in Pioneer, OH.

Connect with us!

SPAX® is a brand of ALTENLOH, BRINCK & CO. US, INC.
2105 County Rd. 12C
Bryan, OH 43506, USA
(419) 630-2490 | info@spax.us | www.spax.us

S-2103 Rev 8/26